Newland AIDC

SCANNING MADE SIMPLE

BS80

PIRANHA II 2D

Handheld Scanners

Version: V1.0.2

User Guide

Disclaimer

© 2023 Newland Europe BV. All rights reserved.

Please read the manual carefully before using the product and operate it according to the manual. It is advised that you keep this manual for future reference.

Do not disassemble the device or remove the seal label from the device; doing so will void the product warranty provided by Newland Europe BV.

All pictures in this manual are for reference only, and the actual product may differ.

Regarding product modification and update, Newland Europe BV reserves the right to make changes to any software or hardware to improve reliability, function, or design at any time without notice. The information contained herein is subject to change without prior notice.

The products depicted in this manual may include software copyrighted by Newland Europe BV or a third party. The user, corporation or individual shall not duplicate, in whole or in part, distribute, modify, decompile, disassemble, decode, reverse engineer, rent, transfer, or sublicense such software without prior written consent from the copyright holders.

This manual is copyrighted. No part of this publication may be reproduced, distributed, or used in any form without Newland Europe BV's written permission.

Risk Warning Regarding Unauthorized System Updates:
You should use the Newland-provided tool to update this product's system. Modifying system files by installing a third-party ROM system or using any cracking method may result in product malfunction or data loss and void your warranty.

Newland Europe BV reserves the right to make a final interpretation of the statement above.

Newland Europe BV
Rolweg 25, 4104 AV, Culemborg,
The Netherlands
www.newland-id.com

Newland Europe BV is a subsidiary of Newland Digital Technology Co., Ltd. Our general conditions of Purchase, Sale and Delivery are filed with the Record Office of the Chamber of Commerce of Utrecht, The Netherlands.

K.v.K. H.R. Utrecht / Chamber of Commerce Utrecht:
Reg. nr. 17109876

Revision History

Version	Description	Date
1.0.0	Initial release.	Oct 19, 2022
1.0.1	1, Added **Enable/ Disable Buttons; Transmit GS1 Application Identifier (GS1 AIs); Transmit GS1 Check Character** in the Chapter 3 and updated the Factory Default Table accordingly 2, Adjust the description of **Delete/Reset Button; Delete/Reset Button + Function Button; BS80 Scanner** in the Chapter 1 3, Added **Caps Lock OFF (Japanese keyboard) & Caps Lock ON (Japanese keyboard)** in Chapter 4	Oct 27, 2022
1.0.2	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

Table of Contents

Revision History **3**

Preface **1**

Introduction 1

Chapter Description 1

Explanation of Icons 2

Chapter 1 Getting Started **3**

Introduction 3

Unpacking 3

BS80 Scanner 4

Button Functions 5

Charging the Battery 6

Connecting the BS80 to Smartphone/Tablet 7

LED Notifications 10

Turning the BS80 On/Off 11

Scanning Instructions 11

Scanning 1D Barcode 11

Scanning 2D Barcode 12

Chapter 2 Easyset **13**

Chapter 3 System Setting **14**

Introduction 14

Barcode Programming 14

Command Programming 14

EasySet Programming 14

Programming Barcode/ Programming Command/Function 15

Use of Programming Command 15

Use of Programming Barcodes 15

Illumination 16

Aiming 17

Power On Beep 17

Good Read Beep 18

Good Read Beep Duration 19

Good Read Beep Frequency 20
Good Read Beep Volume 21
Vibration 22
Good Read Vibration 22
Good Read Vibration Duration 22
Vibration Duration 22
Scan Mode 23
Decode Session Timeout 25
Image Stabilization Timeout (Sense Mode) 26
Reread Timeout 27
Good Read Delay 29
Image Decoding Timeout 30
Surround GS1 Application Identifiers (AI's) with Parentheses 31
GS1 Application Identifiers (AI's) 32
GS1-128(UCC/EAN-128) 33
GS1 Databar(RSS) 33
GS1 Composite (EAN·UCC Composite) 33
GS1 QR 34
GS1 Data Matrix 34
Transmit GS1 Check Character 35
GS1-128(UCC/EAN-128) 36
GS1 Databar(RSS) 36
GS1 Composite (EAN·UCC Composite) 37
GS1 QR 37
GS1 Data Matrix 37
Sensitivity 38
Trigger Commands 39
Modify Start Scanning Command 39
Modify Stop Scanning Command 40
Scanning Preference 41
Read Barcode On/Off 41
Decode Area 42
Image Flipping 45
Bad Read Message 46
Set Bad Read Message 46
Power Off 47

Default Settings 47
Factory Defaults 47
Custom Defaults 47
Enable/Disable Buttons 49
Query Product Information 49
Query Product Name 49
Query Firmware Version 50
Query Decoder Version 50
Query Bluetooth Version 50
Query Hardware Version 50
Query Product Serial Number 51
Query OEM Serial Number 51
Query Manufacturing Date 51
Query Data Formatter Version 51
Query Battery Level 51
Scanner Time 52
Time Stamp 52
Set Date Format 52
Set Date & Time 53
Chapter 4 USB Interface 55
Introduction 55
USB HID Keyboard 55
USB Country Keyboard Types 56
Beep on Unknown Character 60
Emulate ALT+Keypad 60
Function Key Mapping 65
ASCII Function Key Mapping Table 66
ASCII Function Key Mapping Table (Continued) 67
Inter-Keystroke Delay 68
Caps Lock 69
Convert Case 70
Emulate Numeric Keypad 70
Fast Mode 73
Polling Rate 73
USB CDC 76
VID/PID 76

Chapter 5 Wireless Communication **77**
Operating Modes 77
Clear Pairing Info on Scanner 78
Batch Mode 78
Batch Mode Options 78
Transmit Stored Data 79
Query/Clear Stored Data in Flash 80
Prevent Same Barcode Storage 81
Batch Mode Transmit Delay 82
End of Transmission Message for Batch Mode 84
Set Scanner Name 85
Auto Power-Off Timeout 86
Chapter 6 Symbologies **87**
Introduction 87
Global Settings 87
Enable/Disable All Symbologies 87
Enable/Disable 1D Symbologies 87
Enable/Disable 2D Symbologies 87
Enable/Disable Postal Symbologies 88
Code 128 89
Restore Factory Defaults 89
Enable/Disable Code 128 89
Set Length Range for Code 128 89
EAN-8 91
Restore Factory Defaults 91
Enable/Disable EAN-8 91
Transmit Check Character 91
2-Digit Add-On Code 91
5-Digit Add-On Code 92
Add-On Code Required 94
Convert EAN-8 to EAN-13 94
EAN-13 95
Restore Factory Defaults 95
Enable/Disable EAN-13 95
Transmit Check Character 95
2-Digit Add-On Code 96

5-Digit Add-On Code 96
EAN-13 Beginning with 290 Add-On Code Required 98
EAN-13 Beginning with 378/379 Add-On Code Required 99
EAN-13 Beginning with 414/419 Add-On Code Required 100
EAN-13 Beginning with 434/439 Add-On Code Required 101
EAN-13 Beginning with 977 Add-On Code Required 102
EAN-13 Beginning with 978 Add-On Code Required 103
EAN-13 Beginning with 979 Add-On Code Required 104
UPC-E 105
Restore Factory Defaults 105
Enable/Disable UPC-E 105
Transmit Check Character 107
2-Digit Add-On Code 107
5-Digit Add-On Code 108
Add-On Code Required 109
Transmit Preamble Character 109
Convert UPC-E to UPC-A 110
UPC-A 111
Restore Factory Defaults 111
Enable/Disable UPC-A 111
Transmit Check Character 111
2-Digit Add-On Code 111
5-Digit Add-On Code 112
Add-On Code Required 113
Transmit Preamble Character 113
Coupon 115
UPC-A/EAN-13 with Extended Coupon Code 115
Coupon GS1 Databar Output 115
Interleaved 2 of 5 117
Restore Factory Defaults 117
Enable/Disable Interleaved 2 of 5 117
Set Length Range for Interleaved 2 of 5 118
Check Character Verification 119
ITF-14 120
Restore Factory Defaults 120
Enable/Disable ITF-14 120

ITF-6 121
Restore Factory Defaults 121
Enable/Disable ITF-6 121
Matrix 2 of 5 122
Restore Factory Defaults 122
Enable/Disable Matrix 2 of 5 122
Set Length Range for Matrix 2 of 5 123
Check Character Verification 124
Code 39 125
Restore Factory Defaults 125
Enable/Disable Code 39 125
Set Length Range for Code 39 125
Check Character Verification 127
Transmit Start/Stop Character 128
Enable/Disable Code 39 Full ASCII 128
Enable/Disable Code 32 (Italian Pharma Code) 128
Code 32 Prefix 130
Transmit Code 32 Start/Stop Character 130
Transmit Code 32 Check Character 131
Codabar 132
Restore Factory Defaults 132
Enable/Disable Codabar 132
Set Length Range for Codabar 133
Check Character Verification 134
Start/Stop Character 135
Code 93 136
Restore Factory Defaults 136
Enable/Disable Code 93 136
Set Length Range for Code 93 136
Check Character Verification 137
China Post 25 139
Restore Factory Defaults 139
Enable/Disable China Post 25 139
Set Length Range for China Post 25 139
Check Character Verification 140
GS1-128 (UCC/EAN-128) 142

Restore Factory Defaults 142
Enable/Disable GS1-128 142
Set Length Range for GS1-128 142
GS1 Databar (RSS) 144
Restore Factory Defaults 144
Enable/Disable GS1 Databar 144
Transmit Application Identifier “01” 144
GS1 Composite (EAN·UCC Composite) 144
Restore Factory Defaults 145
Enable/Disable GS1 Composite 145
Enable/Disable UPC/EAN Composite 145
Code 11 146
Restore Factory Defaults 146
Enable/Disable Code 11 146
Set Length Range for Code 11 146
Check Character Verification 147
Transmit Check Character 148
ISBN 150
Restore Factory Defaults 150
Enable/Disable ISBN 150
Set ISBN Format 150
ISSN 151
Restore Factory Defaults 151
Enable/Disable ISSN 151
Industrial 25 152
Restore Factory Defaults 152
Enable/Disable Industrial 25 152
Set Length Range for Industrial 25 152
Check Character Verification 153
Standard 25 155
Restore Factory Defaults 155
Enable/Disable Standard 25 155
Set Length Range for Standard 25 155
Check Character Verification 156
Plessey 158
Restore Factory Defaults 158

Enable/Disable Plessey 158
Set Length Range for Plessey 158
Check Character Verification 159
MSI-Plessey 161
Restore Factory Defaults 161
Enable/Disable MSI-Plessey 161
Set Length Range for MSI-Plessey 161
Check Character Verification 162
Transmit Check Character 163
AIM 128 164
Restore Factory Defaults 164
Enable/Disable AIM 128 164
Set Length Range for AIM 128 164
ISBT 128 166
Restore Factory Defaults 166
Enable/Disable ISBT 128 166
PDF417 167
Restore Factory Defaults 167
Enable/Disable PDF417 167
Set Length Range for PDF417 167
PDF417 Twin Code 168
PDF417 Inverse 169
Character Encoding 170
PDF417 ECI Output 170
Micro PDF417 171
Restore Factory Defaults 171
Enable/Disable Micro PDF417 171
Set Length Range for Micro PDF417 171
QR Code 173
Restore Factory Defaults 173
Enable/Disable QR Code 173
Set Length Range for QR Code 173
QR Twin Code 175
QR Inverse 175
Character Encoding 176
QR ECI Output 176

Micro QR Code 177
Restore Factory Defaults 177
Enable/Disable Micro QR 177
Set Length Range for Micro QR 177
Aztec 179
Restore Factory Defaults 179
Enable/Disable Aztec Code 179
Set Length Range for Aztec Code 179
Read Multi-barcodes on an Image 180
Set the Number of Barcodes 181
Character Encoding 182
Aztec ECI Output 183
Data Matrix 184
Restore Factory Defaults 184
Enable/Disable Data Matrix 184
Set Length Range for Data Matrix 184
Data Matrix Twin Code 185
Rectangular Barcode 186
Data Matrix Inverse 187
Character Encoding 187
Data Matrix ECI Output 188
Maxicode 189
Restore Factory Defaults 189
Enable/Disable Maxicode 189
Set Length Range for Maxicode 190
Chinese Sensible Code 191
Restore Factory Defaults 191
Enable/Disable Chinese Sensible Code 191
Set Length Range for Chinese Sensible Code 192
Chinese Sensible Twin Code 193
Chinese Sensible Code Inverse 194
GM Code 195
Restore Factory Defaults 195
Enable/Disable GM 195
Set Length Range for GM 196
USPS Postnet 197

Restore Factory Defaults 197
Enable/Disable USPS Postnet 197
Transmit Check Character 197
USPS Intelligent Mail 198
Restore Factory Defaults 198
Enable/Disable USPS Intelligent Mail 198
Royal Mail 199
Restore Factory Defaults 199
Enable/Disable Royal Mail 199
USPS Planet 200
Restore Factory Defaults 200
Enable/Disable USPS Planet 200
Transmit Check Character 200
KIX Post 201
Restore Factory Defaults 201
Enable/Disable KIX Post 201
Australian Postal 202
Restore Factory Defaults 202
Enable/Disable Australian Postal 202
Japan Post 203
Restore Factory Defaults 203
Enable/Disable Japan Post 203
Chapter 7 Data Formatter 204
Introduction 204
Add a Data Format 204
Programming with Barcodes 204
Programming with Serial Commands 206
Enable/Disable Data Formatter 207
Non-Match Error Beep 209
Data Format Selection 209
Change Data Format for a Single Scan 210
Clear Data Format 210
Query Data Formats 211
Chapter 8 Prefix & Suffix 212
Introduction 212
Global Settings 212

Enable/Disable All Prefixes/Suffixes 212
Prefix Sequence 213
Custom Prefix 213
Enable/Disable Custom Prefix 213
Set Custom Prefix 213
AIM ID Prefix 215
Code ID Prefix 216
Restore All Default Code IDs 217
Modify Code ID 217
Modify 1D symbologies 218
Modify 2D symbologies 222
Custom Suffix 223
Enable/Disable Custom Suffix 223
Set Custom Suffix 223
Data Packing 224
Introduction 224
Data Packing Options 224
Terminating Character Suffix 225
Enable/Disable Terminating Character Suffix 225
Set Terminating Character Suffix 225
Chapter 9 Batch Programming 227
Introduction 227
Create a Batch Command 227
Create a Batch Barcode 228
Use Batch Barcode 228
Appendix 230
Digit Barcodes 230
Save/Cancel Barcodes 233
Factory Defaults Table 234
AIM ID Table 243
Code ID Table 245
Symbology ID Number 247
ASCII Table 249
Unicode Key Maps 254

#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 canner 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

Explanation of Icons

This icon indicates something relevant to this manual.

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

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

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

Chapter 1 Getting Started

Introduction

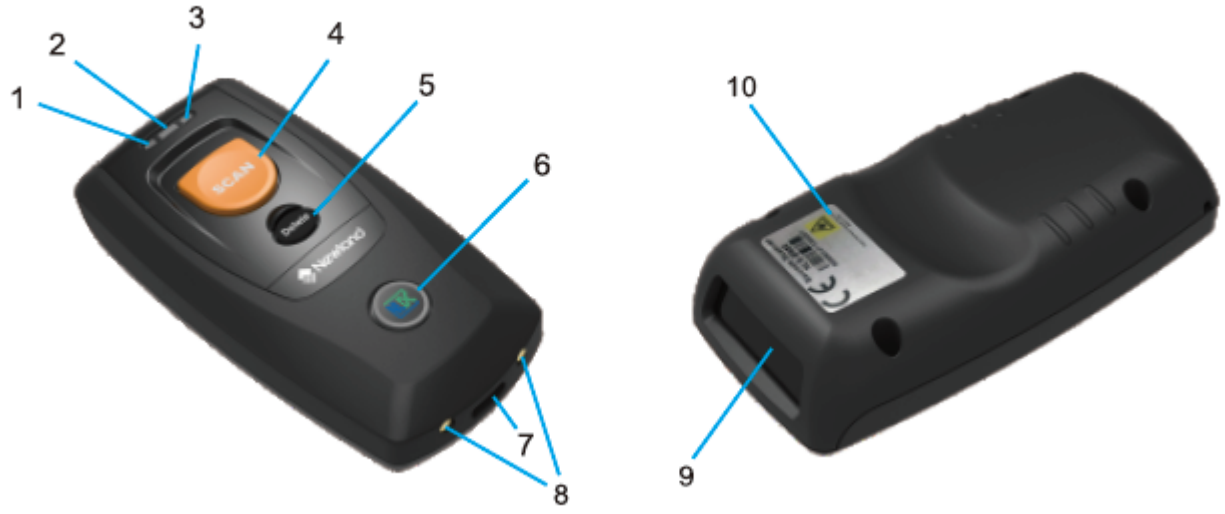
The BS80 is a wireless pocket barcode scanner equipped with 1D or 2D scan engine to meet different needs. It is a great space-saver for busy or limited workspaces. It also supports iOS, Android, and Windows devices through Bluetooth HID or SPP or BLE communication.

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.

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

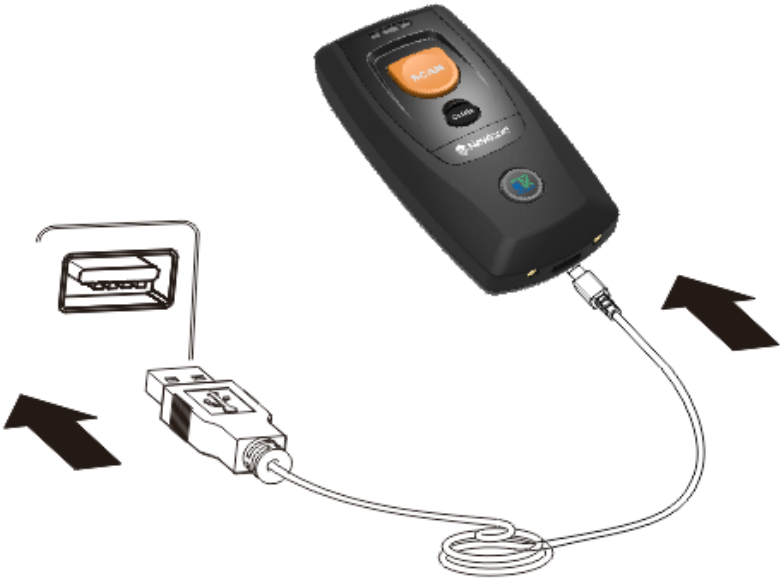
*Note: Please peel off the protective film from the scan window before reading barcodes

Button Functions

Scan/Power Button
*Press the button to scan barcode. *Hold down the button for 3 seconds to power the scanner on.
Delete/Reset Button
*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 & Batch Transmission enabled; (iii) USB mode enabled but no USB cable connection made; or (iv) USB mode & Batch Transmission enabled. *Hold down the button for 7 seconds to power off it.
Function Button
*Press the button to turn on or off the HID keyboard of the connected iOS device in the Bluetooth mode. *Hold down the button for 3s to start data transmission in either of the following conditions: (i) Bluetooth mode & Batch Transmission enabled; or (ii) USB mode enabled and the scanner connected to PC via USB cable.
Scan/Power Button + Function Button
*Hold down the two buttons at the same time for 3 seconds to toggle between the Bluetooth mode and USB mode.
Delete/Reset Button + Function Button
*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.
Scan/Power Button + Delete/Reset Button
*Press the two buttons at the same time to check the battery level with the Charging/Battery LED. *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 & Require Data Transmission Confirmation enabled; or (ii) USB mode enabled, the scanner connected to PC via USB cable and Require Data Transmission Confirmation enabled.

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

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

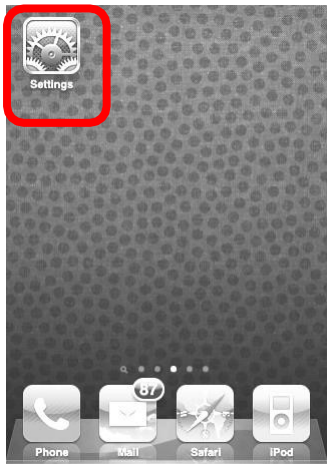
Exit Setup

#SETUPE1

Enter Setup

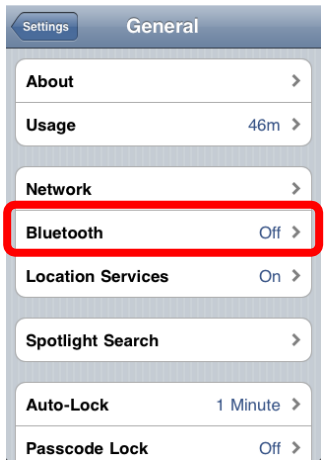
4. Complete the following connection procedure (example: pairing with iPhone).

(1) Click “Settings”.



(2) Click “General”.

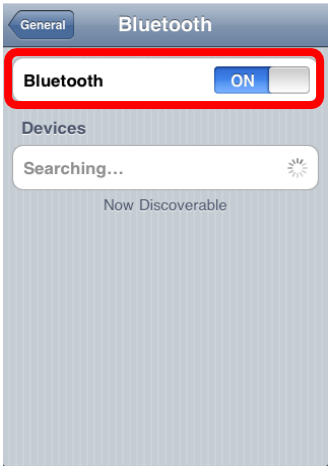
(3) Click “Bluetooth”.

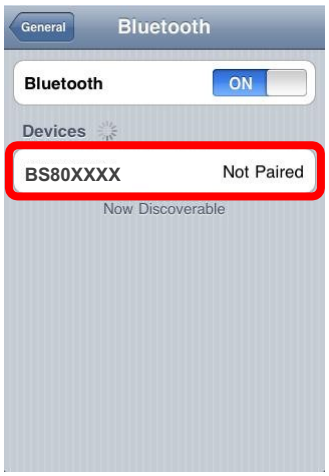


(4) Turn it on and search the devices.

(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

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.
When the scanner is on, pressing the Scan/Power button and Delete/Reset button at the same time for 3 seconds can display the battery level with the Charging/Battery LED.	
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 OFF state	Bluetooth mode enabled, but no Bluetooth connection established and the BS80 undiscoverable.
Blue LED flashes slowly with long 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.

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

Scanning 2D Barcode

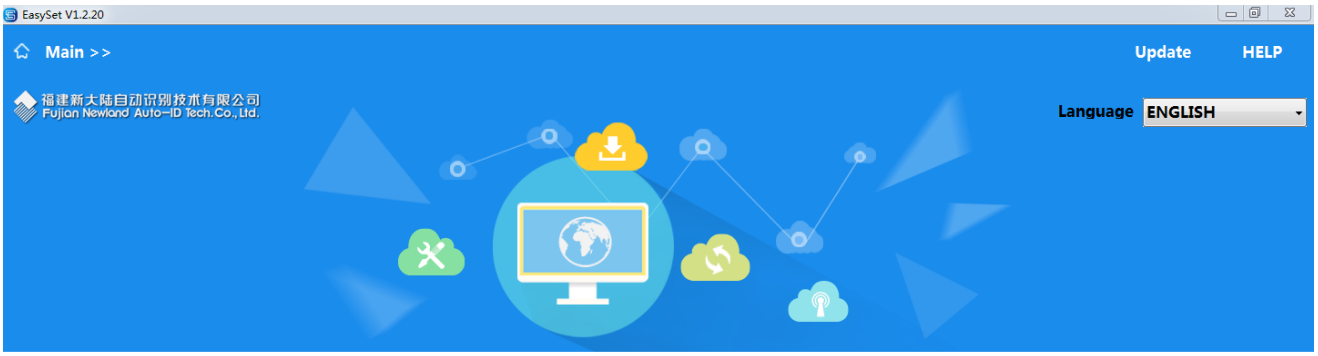
Adjust the scan angle and the distance between barcode and the scanner to make them fall into the following ranges:

1. Aim the scan line across the center of the barcode.
2. Optimum scan distances: 5-20cm.

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



#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

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-programing barcode, or reboot the scanner.

@SETUPE0
**** Exit Setup**

@SETUPE1
Enter 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

Illumination

@ILLSCN1

**** On**

@ILLSCN0

Off

#SETUPE0

Exit Setup

Aiming

@AMLENA1
**** On**

@AMLENA0
Off

@AMLENA2
Always lighting

Power On Beep

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

@PWBENA1
**** On**

@PWBENA0
Off

Good Read Beep

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

@GRBENA1
**** On**

@GRBENA0
Off

#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)

Example

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 4000Hz

@GRBFRQ800

Extra Low (800Hz)

@GRBFRQ1600

****Medium (2620Hz)**

@GRBFRQ

Custom (20 - 20,000Hz)

@GRBFRQ1600

Low (1600Hz)

@GRBFRQ4200

High (4200Hz)

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

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)

#SETUPE1

Enter Setup

Vibration

Good Read Vibration

@GRVENA1

On

@GRVENA0

****Off**

Good Read Vibration Duration

This parameter is programmable in 1**ms** increments from **100ms** to 20**00ms**. The default setting is 300ms

@GRVDUR

Vibration Duration

#SETUPE0

Exit Setup

Scan Mode

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

- **Sense Mode:** The scanner waits for the image stabilization timeout to expire before activating a decode session everytime it detects a change in ambient illumination. Decode session continues until a barcode is decoded or the decode session timeout expires. In this mode, a trigger pull can also activate a decode session. The decode session continues until a barcode is decoded or the trigger is released. When the session ends, the scanner continues to monitor ambient illumination. **Timeout between Decodes (Same Barcode)** can avoid undesired rereading of same barcode in a given period of time. **Sensitivity** can change the Sense Mode's sensibility to changes in ambient illumination.

- **Continuous Mode**: The scanner automatically starts one decode session after another. To suspend/resume barcode reading, simply press the trigger. **Timeout between Decodes (Same Barcode)** can avoid undesired rereading of same barcode in a given period of time.

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

- **Batch Mode:** When the trigger is pulled and released, scanning is activated until the trigger is released. During pulling the trigger, good read barcodes will beep and output barcode information. As long as unrelease the trigger, it will continues decoding. During pulling the trigger, same code can be read only once.

#SETUPE1

Enter Setup

@SCNMOD0

** **Level Mode**

@SCNMOD2

Sense Mode

@SCNMOD3

Continuous Mode

@SCNMOD4

Pulse Mode

@SCNMOD7

Batch 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

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

Image Stabilization Timeout (Sense Mode)

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

@SENIST

Image Stabilization Timeout

Example

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.

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.

@RRDDUR
Set Reread Timeout

Example

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.

#SETUPE1

Enter Setup

@RRDREN1

Reread Timeout Reset On

@RRDREN0

**** Reread Timeout Reset Off**

#SETUPE0

Exit Setup

Good Read Delay

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

@GRDENA1
Enable Good Read Delay

@GRDENA0
**** Disable Good Read Delay**

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

@GRDDUR
Good Read Delay

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.

Image Decoding Timeout

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

@DETSET

Image Decoding Timeout

Example

Set the image decoding timeout to 1,000ms:

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

#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

Example

(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 0100614141999996101 0ABCEDF123456.

#SETUPE0
Exit Setup

GS1 Application Identifiers (AI's)

@GS1OAI0
Disable GS1 Application Identifiers (AI's)

@GS1OAI1
**** Enable GS1 Application Identifiers (AI's)**

Example

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

If **Enable GS1 Application Identifiers (AI's)s** selected, the barcode above is output as 0100614141999996101 0ABCEDF123456.

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

#SETUPE1
Enter Setup

GS1-128(UCC/EAN-128)

@GS1OA10
Do not Transmit GS1 Application Identifier (GS1 AIs)

@GS1OA11
**** Transmit GS1 Application Identifier (GS1 AIs)**

GS1 Databar(RSS)

@GS1OAR0
Do not Transmit GS1 Application Identifier (GS1 AIs)

@GS1OAR1
**** Transmit GS1 Application Identifier (GS1 AIs)**

GS1 Composite (EAN·UCC Composite)

@GS1OAC0
Do not Transmit GS1 Application Identifier (GS1 AIs)

@GS1OAC1
**** Transmit GS1 Application Identifier (GS1 AIs)**

#SETUPE0
Exit Setup

#SETUPE1

Enter Setup

GS1 QR

@GS1OAQ0

Do not Transmit GS1 Application Identifier (GS1 AIs)

@GS1OAQ1

** **Transmit GS1 Application Identifier (GS1 AIs)**

GS1 Data Matrix

@GS1OAD0

Do not Transmit GS1 Application Identifier (GS1 AIs)

@GS1OAD1

** **Transmit GS1 Application Identifier (GS1 AIs)**

#SETUPE0

Exit Setup

Transmit GS1 Check Character

@GS1OCK0
Do not transmit GS1 Check Character

@GS1OCK1
**** Transmit GS1 Check Character**

Example

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

If **Transmit GS1 Check Character** selected, the barcode above is output as
0100614141999961010ABCEDF123456
If **Do notTransmit GS1 Check Character** selected, the barcode above is output as
0100614141999991010ABCEDF123456

#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

GS1 Composite (EAN·UCC Composite)

@GS1OCC0
Do not Transmit GS1 Check character

@GS1OCC1
** **Transmit GS1 Check character**

GS1 QR

@GS1OCQ0
Do not Transmit GS1 Check character

@GS1OCQ1
** **Transmit GS1 Check character**

GS1 Data Matrix

@GS1OCD0
Do not Transmit GS1 Check character

@GS1OCD1
** **Transmit GS1 Check character**

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)

Example

Set the sensitivity to Level 10:

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

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

Example

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.

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

#SETUPE1
Enter Setup

Scanning Preference

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

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

@EXPLVL0
**** Normal Mode**

@EXPLVL2
Screen Mode

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

Decode Area

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

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

@CADENA0

**** Whole Area Decoding**

@CADENA1

Specific Area Decoding

@CADENA2

Aimed Area Decoding (only BS80-SR supports)

If **Specific Area Decoding** is enabled, the scanner only reads barcodes that intersect the predefined decoding area. The default decoding area is an area of 40% top, 60% bottom, 40% left and 60% right of the scanner's field of view

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

@CADTOP

Top of Decoding Area

@CADBOT

Bottom of Decoding Area

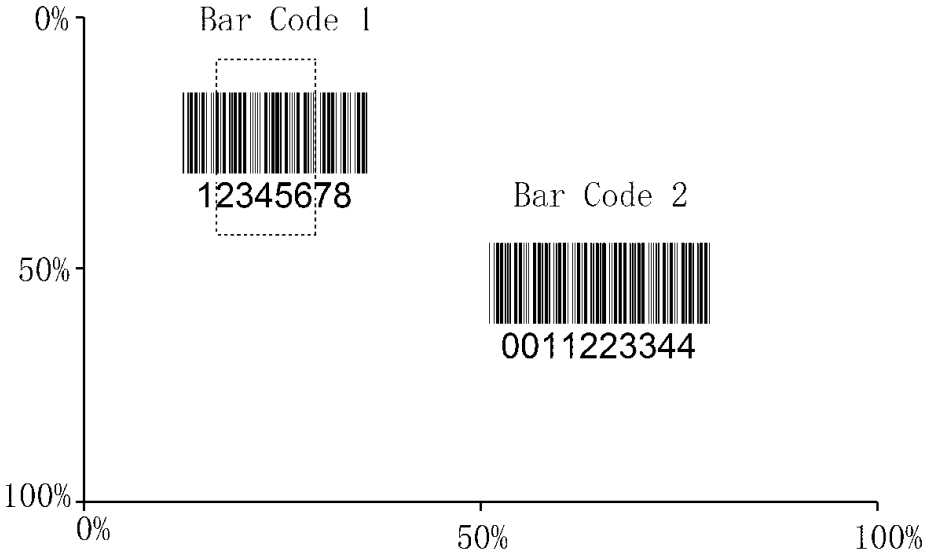
#SETUPE0

Exit Setup

#SETUPE1
Enter Setup

@CADLEF
Left of Decoding Area

@CADRIG
Right of Decoding Area



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

1. Scan the **Enter Setup** barcode.
2. Scan the **Top of Decoding Area** barcode.
3. Scan the numeric barcode “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Bottom of Decoding Area** barcode.
6. Scan the numeric barcodes “4” and “5” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Top of Decoding Area** barcode.
9. Scan the numeric barcodes “1” and “0” from the “Digit Barcodes” section in Appendix.
10. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
11. Scan the **Left of Decoding Area** barcode.
12. Scan the numeric barcode “0” from the “Digit Barcodes” section in Appendix.

#SETUPE0
Exit Setup

#SETUPE1

Enter Setup

13. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
14. Scan the **Right of Decoding Area** barcode.
15. Scan the numeric barcodes “3” and “0” from the “Digit Barcodes” section in Appendix.
16. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
17. Scan the **Left of Decoding Area** barcode.
18. Scan the numeric barcodes “1” and “5” from the “Digit Barcodes” section in Appendix.
19. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
20. Scan the **Exit Setup** barcode.

#SETUPE0

Exit Setup

Image Flipping

@MIRROR0

**** Do Not Flip**

@MIRROR1

Flip Horizontally

@MIRROR2

Flip Vertically

@MIRROR3

Flip Horizontally & Vertically

Example of image not flipped

Example of image flipped horizontally

Example of image flipped vertically

Example of image flipped horizontally & vertically

Bad Read Message

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

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

@NGRENA1
Bad Read Message ON

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

Example

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.

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
Save as Custom Defaults

#SETUPE1

Enter Setup

@CUSDEF

Restore All Custom Defaults

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

#SETUPE0

Exit 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

@QRYPDN
Query Product Name

Query Firmware Version

@QRYFWV
Query Firmware Version

Query Decoder Version

@QRYDCV
Query Decoder Version

Query Bluetooth Version

#QRYBFW
Query Bluetooth Version

Query Hardware Version

@QRYHWV
Query Hardware Version

Query Product Serial Number

@QRYPSN
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

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.

@WLSTSE0
****Disable Time Stamp**

@WLSTSE1
Enable Time Stamp

Set Date Format

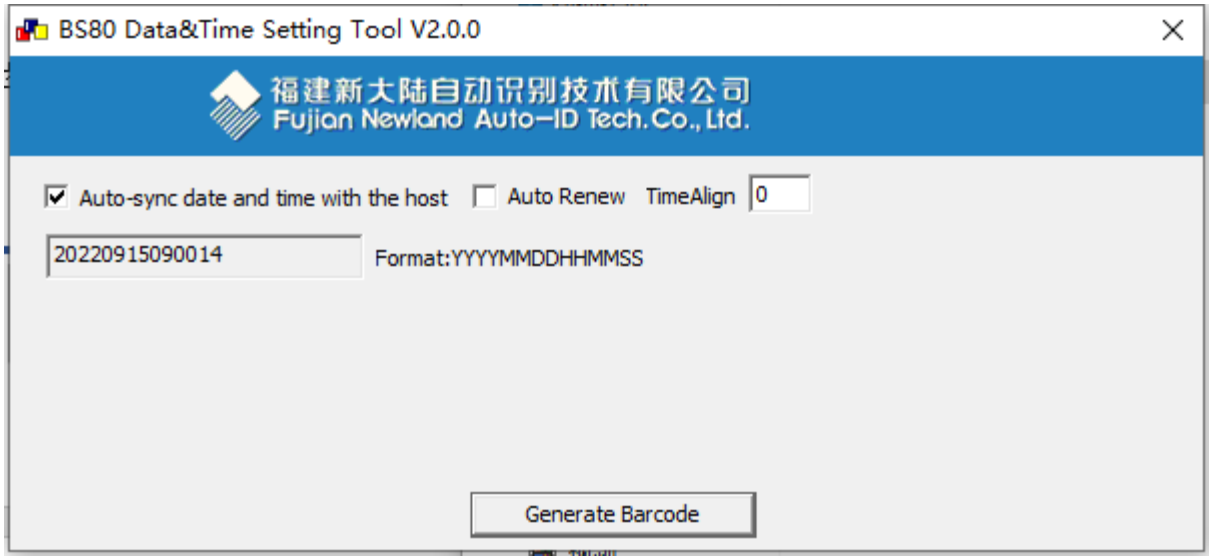
@WLSTSF0
** **Format 1**
(YYYY/MM/DD,HH:MM:SS)

@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.



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

#SETUPE1

Enter Setup

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

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.

#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

@KBWCTY8
Germany/ Australia

@KBWCTY9
Greece

@KBWCTY10
Hungary

@KBWCTY11
Israel (Hebrew)

@KBWCTY12
Italy

@KBWCTY13
Latin America/ South America

@KBWCTY14
Netherlands (Dutch)
France

@KBWCTY15
Norway

#SETUPE1

Enter Setup

@KBWCTY16

Poland

@KBWCTY17

Portugal

@KBWCTY18

Romania

@KBWCTY19

Russia

@KBWCTY21

Slovakia

@KBWCTY22

Spain

@KBWCTY23

Sweden

#SETUPE0

Exit Setup

@KBWCTY24
Switzerland (German)

@KBWCTY25
Turkey F

@KBWCTY26
Turkey Q

@KBWCTY27
Britain

@KBWCTY28
Japan

Beep on Unknown Character

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

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

@KBWBUC0
**** Do Not Beep on Unknown Character**

@KBWBUC1
Beep on Unknown Character

Supposing French keyboard (Country Code: 7) is selected and barcode data ”AÐF” 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.

@KBWALT0

**** Emulate ALT+Keypad OFF**

@KBWALT1

Emulate ALT+Keypad ON

ASCII characters between 0x00~0x1Fwill be input in way of Function Key Mapping Set.

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

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

“A” – “ALT Make” + “065” + “ALT

Break” “Ð” -- “ALT Make” + “208”

+ “ALT Break”

“F” -- “ALT Make” + “070” + “ALT Break”

#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

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

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

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 “A*F*”.

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”

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+-

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+-	

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)

Caps Lock

The **Caps Lock ON** option can invert upper and lower case characters contained in barcode data. This inversion occurs regardless of the state of Caps Lock key on the host device's keyboard.

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

@KBWCAP1
Caps Lock ON (Non-Japanese keyboard)

@KBWCAP2
Caps Lock OFF (Japanese keyboard)

@KBWCAP3
Caps Lock ON (Japanese keyboard)

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

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

#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

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.

Emulate Numeric Keypad

#SETUPE0

Exit Setup

#SETUPE1
Enter Setup

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

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

@KBWNCH1
Emulate Numeric Keypad 2

#SETUPE0
Exit Setup

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

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”

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

@KBWNCH0
**** Off**

@KBWNCH1
On

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

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

#SETUPE1

Enter Setup

@KBWPOR1

2ms

@KBWPOR2

3ms

@KBWPOR3

**** 4ms**

@KBWPOR4

5ms

@KBWPOR5

6ms

@KBWPOR6

7ms

@KBWPOR7

8ms

@KBWPOR8

9ms

#SETUPE0

Exit Setup

#SETUPE1

Enter Setup

@KBWPOR9

10ms

#SETUPE0

Exit 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.

@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	USB HID Keyboard	1322	4898
	USB CDC	0C06	3078

#SETUPE1
Enter Setup

Chapter 5 Wireless Communication

Operating Modes

The scanner provides the following operating modes. Scanning the Enter Setup Barcode to change the operating mode.

Bluetooth HID Mode allows your scanner to communicate with a remote host using Bluetooth. You must first pair your scanner to the host before these two Bluetooth devices can communicate with each other. All features available for USB HID Keyboard are applicable to Bluetooth HID.

Note: The pairing information in the scanner and the host need to be cleared before connecting with other Bluetooth devices

Bluetooth BLE Mode is Bluetooth low power consumption communication mode that communicates with the applications in the host based on Bluetooth SDK. In this mode, the scanner provides a serial transparent transmission service based on GATT service.

@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

Batch Mode

@WLSSBT
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 urned on.

@WLSBAT0
**** Off**

@WLSBAT1
Automatic Batch Mode

@WLSBAT2
Manual Batch Mode

#SETUPE0
Exit 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

Query/Clear Stored Data in Flash

@WLSQFC
Query the Number of Stored Barcodes

@WLSCLF
Clear All Stored Data

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.

@WLSSSE0
**** Off**

@WLSSSE1
On

#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

Example

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.

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

Example

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

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.

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

Example

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

#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

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

Enable/Disable 1D Symbologies

@ALL1DC1
Enable 1D Symbologies

@ALL1DC0
Disable 1D Symbologies

Enable/Disable 2D Symbologies

@ALL2DC1
Enable 2D Symbologies

@ALL2DC0
Disable 2D Symbologies

Enable/Disable Postal Symbologies

@ALLPST1
Enable Postal Symbologies

@ALLPST0
Disable Postal Symbologies

#SETUPE1
Enter Setup

Code 128

Restore Factory Defaults

@128DEF
Restore the Factory Defaults of Code 128

Enable/Disable Code 128

@128ENA1
** **Enable Code 128**

@128ENA0
Disable Code 128

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

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)

#SETUPE0
Exit Setup

@128MAX

Set the Maximum Length (Default: 48)

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

Set the scanner to decode Code 128 barcodes containing between 8 and12 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.

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

2-Digit Add-On Code

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

@EA8AD20
**** Disable 2-Digit Add-On Code**

@EA8AD21
Enable 2-Digit Add-On Code

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

5-Digit Add-On Code

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

#SETUPE1
Enter Setup

@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

Add-On Code Required

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

@EA8REQ0

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

@EA8REQ1

EAN-8 Add-On Code Required

Convert EAN-8 to EAN-13

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

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

@EA8EXP0

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

@EA8EXP1

Convert EAN-8 to EAN-13

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**

#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

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

@E13AD51
Enable 5-Digit Add-On Code

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

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

#SETUPE1
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

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

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

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

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

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

@E134140
** **Do Not Require Add-On Code**

@E134141
Require Add-On Code

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

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

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

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

@E134340

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

@E134341

Require Add-On Code

EAN-13 Beginning with 977 Add-On Code Required

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

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

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

@E139770

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

@E139771

Require Add-On Code

EAN-13 Beginning with 978 Add-On Code Required

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

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

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

@E139780
** **Do Not Require Add-On Code**

@E139781
Require Add-On Code

#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

UPC-E

Restore Factory Defaults

@UPEDEF
Restore the Factory Defaults of UPC-E

Enable/Disable UPC-E

@UPEENA1
**** Enable UPC-E**

@UPEEN01
**** Enable UPC-E0**

@UPEEN11
Enable UPC-E1

@UPEENA0
Disable UPC-E

@UPEEN00
Disable UPC-E0

@UPEEN10
****Disable UPC-E1**

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

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.

#SETUPE1

Enter Setup

5-Digit Add-On Code

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

@UPEAD50

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

@UPEAD51

Enable 5-Digit Add-On Code

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

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

#SETUPE0

Exit 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

#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

2-Digit Add-On Code

#SETUPE0
Exit Setup

#SETUPE1

Enter Setup

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

@UPAAD20

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

@UPAAD21

Enable 2-Digit Add-On Code

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

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

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

@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**

@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

#SETUPE1
Enter Setup

Coupon

UPC-A/EAN-13 with Extended Coupon Code

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

1. UPC-A (starting with “5”) + GS1-128
2. UPC-A (starting with “5”) + GS1 Databar
3. EAN-13 (starting with “99”) + GS1-128

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

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

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

@CPNENA0
**** Off**

@CPNENA1
Allow Concatenation

@CPNENA2
Require Concatenation

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

Coupon GS1 Databar Output

#SETUPE0
Exit Setup

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

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

@CPNGS10
**** GS1 Output Off**

@CPNGS11
GS1 Output On

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

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.

#SETUPE1

Enter Setup

Set Length Range for Interleaved 2 of 5

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

@I25MIN

Set the Minimum Length (Default: 6)

@I25MAX

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 and12 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

Check Character Verification

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

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

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

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

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

@I25CHK0
****Disable**

@I25CHK1
Do Not Transmit Check Character After Verification

@I25CHK2
Transmit Check Character After Verification

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

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.

#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

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.

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 and12 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 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.)

#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

@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.

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.

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.)

Transmit Start/Stop Character

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

@C39TSC0
**** Do Not Transmit Start/Stop Character**

@C39TSC1
Transmit Start/Stop Character

Enable/Disable Code 39 Full ASCII

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

@C39ASC0
**** Disable Code 39 Full ASCII**

@C39ASC1
Enable Code 39 Full ASCII

Enable/Disable Code 32 (Italian Pharma Code)

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

@C39E320

**** Disable Code 32**

@C39E321

Enable Code 32

Code 32 Prefix

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

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

@C39S321
Enable Code 32 Prefix

Transmit Code 32 Start/Stop Character

Code 32 must be enabled for this parameter to function.

@C39T320
**** Do Not Transmit Code 32 Start/Stop Character**

@C39T321
Transmit Code 32 Start/Stop Character

Transmit Code 32 Check Character

Code 32 must be enabled for this parameter to function.

@C39C320
**** Do Not Transmit Code 32 Check Character**

@C39C321
Transmit Code 32 Check Character

#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

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.

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.)

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

#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

#SETUPE0

Exit Setup

#SETUPE1

Enter Setup

Set the Minimum Length (Default: 1)

@C93MAX

Set the Maximum Length (Default: 48)

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

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

#SETUPE0

Exit Setup

those failing them will not be transmitted.

@C93CHK0
Disable

@C93CHK1
**** Do Not Transmit Check Character After Verification**

@C93CHK2
Transmit Check Character After Verification

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

China Post 25

Restore Factory Defaults

@CHPDEF

Restore the Factory Defaults of China Post 25

Enable/Disable China Post 25

@CHPENA1

Enable China Post 25

@CHPENA0

**** Disable China Post 25**

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

Set Length Range for China Post 25

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

#SETUPE1

Enter Setup

@CHPMIN

Set the Minimum Length (Default: 1)

@CHPMAX

Set the Maximum Length (Default: 48)

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

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

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

Check Character Verification

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

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

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all China Post 25 barcodes

#SETUPE0

Exit 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 China Post 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

@CHPCHK0
**** Disable**

@CHPCHK1
Do Not Transmit Check Character After Verification

@CHPCHK2
Transmit Check Character After Verification

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

#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

@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.

#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”

GS1 Composite (EAN·UCC Composite)

#SETUPE0

Exit Setup

Restore Factory Defaults

@CPTDEF

Restore the Factory Defaults of GS1 Composite

Enable/Disable GS1 Composite

@CPTENA1

Enable GS1 Composite

@CPTENA0

**** Disable GS1 Composite**

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

Enable/Disable UPC/EAN Composite

@CPTUPC1

Enable UPC/EAN Composite

@CPTUPC0

**** Disable UPC/EAN Composite**

#SETUPE1

Enter Setup

Code 11

Restore Factory Defaults

@C11DEF

Restore the Factory Defaults of Code 11

Enable/Disable Code 11

@C11ENA1

**** Enable Code 11**

@C11ENA0

Disable Code 11

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

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.

#SETUPE0

Exit Setup

#SETUPE1
Enter Setup

@C11MIN
Set the Minimum Length (Default: 4)

@C11MAX
Set the Maximum Length (Default: 48)

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

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.

#SETUPE0
Exit Setup

@C11CHK0
Disable

@C11CHK1
**** One Check Character, MOD11**

@C11CHK2
Two Check Characters, MOD11/MOD11

@C11CHK3
Two Check Characters, MOD11/MOD9

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

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

Transmit Check Character

@C11TCK0
**** Do Not Transmit Code 11 Check Character**

#SETUPE1

Enter Setup

@C11TCK1

Transmit Code 11 Check Character

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

#SETUPE0

Exit Setup

#SETUPE1

Enter Setup

ISBN

Restore Factory Defaults

@ISBDEF

Restore the Factory Defaults of ISBN

Enable/Disable ISBN

@ISBENA1

****Enable ISBN**

@ISBENA0

Disable ISBN

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

Set ISBN Format

@ISBT101

**** ISBN-10**

@ISBT100

ISBN-13

#SETUPE0

Exit 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.

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.

@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.

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

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.)

#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

@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.

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.)

#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

@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

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.)

MSI-Plessey

Restore Factory Defaults

@MSIDEF

Restore the Factory Defaults of MSI-Plessey

Enable/Disable MSI-Plessey

@MSIENA1

Enable MSI-Plessey

@MSIENA0

****Disable MSI-Plessey**

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

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.

@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.

@MSICHK0
Disable

@MSICHK1
**** One Check Character, MOD10**

@MSICHK2
Two Check Characters, MOD10/MOD10

@MSICHK3
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.)

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

#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.

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

ISBT 128

Restore Factory Defaults

@IBTDEF

Restore the Factory Defaults of ISBT 128

Enable/Disable ISBT 128

@IBTENA1

Enable ISBT 128

@IBTENA0

**** Disable ISBT 128**

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

#SETUPE1
Enter Setup

PDF417

Restore Factory Defaults

@PDFDEF
Restore the Factory Defaults of PDF417

Enable/Disable PDF417

@PDFENA1
**** Enable PDF417**

@PDFENA0
Disable PDF417

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

Set Length Range for PDF417

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

#SETUPE0
Exit Setup

#SETUPE1

Enter Setup

@PDFMIN

Set the Minimum Length (Default: 1)

@PDFMAX

Set the Maximum Length (Default: 2710)

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

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

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

PDF417 Twin Code

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

There are 3 options for reading PDF417 twin codes:

- **Single PDF417 Only:** Read either PDF417 code.

#SETUPE0

Exit Setup

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

@PDFDOU0
**** Single PDF417 Only**

@PDFDOU1
Twin PDF417 Only

@PDFDOU2
Both Single & Twin

PDF417 Inverse

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

@PDFINV0
**** Decode Regular PDF417 Barcodes Only**

@PDFINV2
Decode Both

#SETUPE1

Enter Setup

Character Encoding

@PDFENC0

**** Default Character Encoding**

@PDFINV1

Decode Inverse PDF417 Barcodes Only

@PDFENC1

UTF-8

PDF417 ECI Output

@PDFECI0

Disable PDF417 ECI Output

@PDFECI1

**** Enable PDF417 ECI Output**

#SETUPE0

Exit Setup

Micro PDF417

Restore Factory Defaults

@MPDDEF

Restore the Factory Defaults of Micro PDF417

Enable/Disable Micro PDF417

@MPDENA1

Enable Micro PDF417

@MPDENA0

**** Disable Micro PDF417**

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

Set Length Range for Micro PDF417

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

@MPDMIN

#SETUPE1

Enter Setup

Set the Minimum Length (Default: 1)

@MPDMAX

Set the Maximum Length (Default: 366)

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

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

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

#SETUPE0

Exit Setup

#SETUPE1
Enter Setup

QR Code

Restore Factory Defaults

@QRCDEF
Restore the Factory Defaults of QR Code

Enable/Disable QR Code

@QRCENA1
**** Enable QR Code**

@QRCENA0
Disable QR Code

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

Set Length Range for QR Code

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

@QRCMIN

#SETUPE0
Exit Setup

#SETUPE1

Enter Setup

Set the Minimum Length (Default: 1)

@QRCMAX

Set the Maximum Length (Default: 7089)

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

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

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

#SETUPE0

Exit Setup

QR Twin Code

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

There are 3 options for reading QR twin codes:

Single QR Only: Read either QR code.

Twin QR Only: Read both QR codes. Transmission sequence: left (upper) QR code followed by right (lower) QR code.

Both Single & Twin: Read both QR codes. If successful, transmit as twin QR only. Otherwise, try single QR only.

@QRCDOU0
**** Single QR Only**

@QRCDOU1
Twin QR Only

@QRCDOU2
Both Single & Twin

QR Inverse

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

@QRCINV0
**** Decode Regular QR Barcodes Only**

@QRCINV2
Decode Both

Character Encoding

@QRCENC0
**** Default Character Encoding**

@QRCINV1
Decode Inverse QR Barcodes Only

@QRCENC1
UTF-8

QR ECI Output

@QRCECI0
Disable QR ECI Output

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

#SETUPE1
Enter Setup

Micro QR Code

Restore Factory Defaults

@MQRDEF
Restore the Factory Defaults of Micro QR

Enable/Disable Micro QR

@MQRENA1
**** Enable Micro QR**

@MQRENA0
Disable Micro QR

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

Set Length Range for Micro QR

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

#SETUPE0
Exit Setup

#SETUPE1

Enter Setup

@MQRMIN

Set the Minimum Length (Default: 1)

@MQRMAX

Set the Maximum Length (Default: 35)

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

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

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

#SETUPE0

Exit Setup

Aztec

Restore Factory Defaults

@AZTDEF

Restore the Factory Defaults of Aztec Code

Enable/Disable Aztec Code

@AZTENA1

Enable Aztec Code

@AZTENA0

**** Disable Aztec Code**

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

Set Length Range for Aztec Code

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

@AZTMIN

#SETUPE1

Enter Setup

Set the Minimum Length (Default: 1)

@AZTMAX

Set the Maximum Length (Default: 3832)

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

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

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

Read Multi-barcodes on an Image

There are three options:

Mode 1: Read one barcode only.

Mode 2: Read fixed number of barcodes only.

Mode 3: Composite Reading. Read fixed number of barcodes first. If unsuccessful, read one barcode only.

@AZTMOD1

**** Mode 1**

#SETUPE0

Exit Setup

#SETUPE1
Enter Setup

@AZTMOD2
Mode 2

@AZTMOD3
Mode 3

Set the Number of Barcodes

@AZTMUL1
**** 1**

@AZTMUL2
2

@AZTMUL3
3

@AZTMUL4
4

@AZTMUL5
5

@AZTMUL6
6

@AZTMUL7

#SETUPE0
Exit Setup

7

@AZTMUL8

8

Character Encoding

@AZTENC0

** Default Character Encoding

@AZTENC1

UTF-8

Aztec ECI Output

@AZTECI0
Disable Aztec ECI Output

@AZTECI1
**** Enable Aztec ECI Output**

Data Matrix

Restore Factory Defaults

@DMCDEF

Restore the Factory Defaults of Data Matrix

Enable/Disable Data Matrix

@DMCENA1

**** Enable Data Matrix**

@DMCENA0

Disable Data Matrix

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

Set Length Range for Data Matrix

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

@DMCMIN
Set the Minimum Length (Default: 1)

@DMCMAX
Set the Maximum Length (Default: 3116)

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

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

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

Data Matrix Twin Code

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

There are 3 options for reading Data Matrix twin codes:

Single Data Matrix Only: Read either Data Matrix code.

Twin Data Matrix Only: Read both Data Matrix codes. Transmission sequence: left (upper) Data Matrix code followed by right (lower) Data Matrix code.

Both Single & Twin: Read both Data Matrix codes. If successful, transmit as twin Data Matrix only. Otherwise, try single Data Matrix only.

@DMCDOU0
**** Single Data Matrix Only**

@DMCDOU1
Twin Data Matrix Only

@DMCDOU2
Both Single & Twin

Rectangular Barcode

Data Matrix has two formats:

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

144*144. Rectangular barcodes having different amounts of models in length and width: 6*16,

6*14...14*22.

@DMCREC1
**** Enable Rectangular Barcode**

@DMCREC0
Disable Rectangular Barcode

Data Matrix Inverse

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

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

@DMCINV1
Decode Inverse Data Matrix Barcodes Only

@DMCINV2
Decode Both

Character Encoding

@DMCENC0
**** Default Character Encoding**

@DMCENC1
UTF-8

#SETUPE1

Enter Setup

Data Matrix ECI Output

@DMCECI0

Disable Data Matrix ECI Output

@DMCECI1

** **Enable Data Matrix ECI Output**

#SETUPE0

Exit Setup

Maxicode

Restore Factory Defaults

@MXCDEF

Restore the Factory Defaults of Maxicode

Enable/Disable Maxicode

@MXCENA1

Enable Maxicode

@MXCENA0

**** Disable Maxicode**

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

Set Length Range for Maxicode

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

@MXCMIN
Set the Minimum Length (Default: 1)

@MXCMAX
Set the Maximum Length (Default:150)

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

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

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

Chinese Sensible Code

Restore Factory Defaults

@CSCDEF

Restore the Factory Defaults of Chinese Sensible Code

Enable/Disable Chinese Sensible Code

@CSCENA1

Enable Chinese Sensible Code

@CSCENA0

**** Disable Chinese Sensible Code**

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

Set Length Range for Chinese Sensible Code

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

@CSCMIN
Set the Minimum Length (Default: 1)

@CSCMAX
Set the Maximum Length (Default: 7827)

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

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

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

Chinese Sensible Twin Code

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

There are 3 options for reading Chinese Sensible twin codes:

Single Chinese Sensible Code Only: Read either Chinese Sensible code.

Twin Chinese Sensible Code Only: Read both Chinese Sensible codes. Transmission sequence: left (upper) Chinese Sensible code followed by right (lower) Chinese Sensible code.

Both Single & Twin: Read both Chinese Sensible codes. If successful, transmit as twin Chinese Sensible Code only. Otherwise, try single Chinese Sensible Code only.

@CSCDOU0
**** Single Chinese Sensible Code Only**

@CSCDOU1
Twin Chinese Sensible Code Only

@CSCDOU2
Both Single & Twin

#SETUPE1

Enter Setup

Chinese Sensible Code Inverse

Regular barcode: Dark bars on a bright background.

Inverse barcode: Bright bars on a dark background.

@CSCINV0

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

@CSCINV1

Decode Inverse Chinese Sensible Barcodes Only

@CSCINV2

Decode Both

#SETUPE0

Exit Setup

#SETUPE1
Enter Setup

GM Code

Restore Factory Defaults

@GMCDEF
Restore the Factory Defaults of GM

Enable/Disable GM

@GMCENA1
Enable GM

@GMCENA0
**** Disable GM**

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

#SETUPE0
Exit Setup

#SETUPE1

Enter Setup

Set Length Range for GM

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

@GMCMIN

Set the Minimum Length (Default: 1)

@GMCMAX

Set the Maximum Length (Default: 2751)

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

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

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

#SETUPE0

Exit Setup

USPS Postnet

Restore Factory Defaults

@PNTDEF
Restore the Factory Defaults of USPS Postnet

Enable/Disable USPS Postnet

@PNTENA1
Enable USPS Postnet

@PNTENA0
**** Disable USPS Postnet**

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

Transmit Check Character

@PNTCHK1
Do Not Transmit USPS Postnet Check Character

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

USPS Intelligent Mail

Restore Factory Defaults

@ILGDEF

Restore the Factory Defaults of USPS Intelligent Mail

Enable/Disable USPS Intelligent Mail

@ILGENA1

Enable USPS Intelligent Mail

@ILGENA0

**** Disable USPS Intelligent Mail**

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

#SETUPE1
Enter Setup

Royal Mail

Restore Factory Defaults

@ROYDEF
Restore the Factory Defaults of Royal Mail

Enable/Disable Royal Mail

@ROYENA1
Enable Royal Mail

@ROYENA0
**** Disable Royal Mail**

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

#SETUPE0
Exit Setup

#SETUPE1
Enter Setup

USPS Planet

Restore Factory Defaults

@PLADEF
Restore the Factory Defaults of USPS Planet

Enable/Disable USPS Planet

@PLAENA1
Enable USPS Planet

@PLAENA0
**** Disable USPS Planet**

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

Transmit Check Character

@PLACHK1
Do Not Transmit USPS Planet Check Character

@PLACHK2
**** Transmit USPS Planet Check Character**

#SETUPE0
Exit Setup

KIX Post

Restore Factory Defaults

@KIXDEF
Restore the Factory Defaults of KIX Post

Enable/Disable KIX Post

@KIXENA1
Enable KIX Post

@KIXENA0
**** Disable KIX Post**

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

Australian Postal

Restore Factory Defaults

@APLDEF
Restore the Factory Defaults of Australian Postal

Enable/Disable Australian Postal

@APLENA1
Enable Australian Postal

@APLENA0
**** Disable Australian Postal**

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

Japan Post

Restore Factory Defaults

@JPPDEF
Restore the Factory Defaults of Japan Post

Enable/Disable Japan Post

@JPPENA1
Enable Japan Post

@JPPENA0
**** Disable Japan Post**

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.

@DFMDEF

****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.

@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.

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**

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.

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

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

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

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.

@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

#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.

Preffix 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

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

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.

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.

#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

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):

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.

#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

@CID009
Modify ITF-14 Code ID

@CID010
Modify ITF-6 Code ID

@CID011
Modify Matrix 2 of 5 Code ID

@CID013
Modify Code 39

@CID015
Modify Codabar Code ID

@CID017
Modify Code 93 Code ID

@CID019
Modify China Post 25 Code ID

@CID020
Modify AIM 128 Code ID

#SETUPE0
Exit Setup

#SETUPE1
Enter Setup

@CID021
Modify ISBT 128 Code ID

@CID023
Modify ISSN Code ID

@CID024
Modify ISBN Code ID

@CID025
Modify Industrial 25 Code ID

@CID026
Modify Standard 25 Code ID

@CID027
Modify Plessey Code ID

@CID028
Modify Code 11 Code ID

@CID029
Modify MSI Plessy Code ID

#SETUPE0
Exit Setup

@CID030
Modify GS1 Composite Code ID

@CID031
Modify GS1 Databar (RSS) Code ID

#SETUPE1
Enter Setup

Modify 2D symbologies

@CID032
Modify PDF417 Code ID

@CID033
Modify QR Code ID

@CID034
Modify Aztec Code ID

@CID035
Modify Data Matrix Code ID

@CID036
Modify Maxicode Code ID

@CID039
Modify Chinese Sensible Code ID

@CID041
Modify GM Code ID

@CID042
Modify Micro PDF417 Code ID

@CID043
Modify Micro QR Code ID

#SETUPE0
Exit 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

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.

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 (unpacketed).

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.

@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.

#SETUPE1

Enter Setup

@TSUSET

Set Terminating Character Suffix

@TSUSET0D

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

@TSUSET0D0A

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

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

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.

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

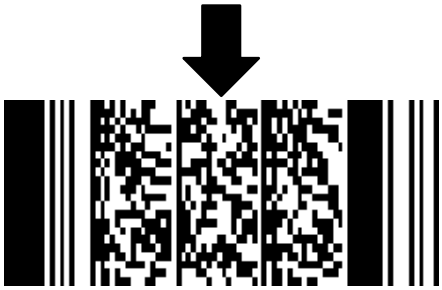
To put a batch barcode into use, scan the following barcodes. (Use the example above.)

@SETUPE1
Enter Setup

@BATCHS
Enable Batch Barcode

#SETUPE1

Enter Setup



Batch Barcode

Exit Setup

#SETUPE0

Exit Setup

Appendix

Digit Barcodes

0~9

@DIGIT0
0

@DIGIT1
1

@DIGIT2
2

@DIGIT3
3

@DIGIT4
4

@DIGIT5
5

@DIGIT6
6

@DIGIT7
7

@DIGIT8
8

@DIGIT9
9

A~F

@DIGITA
A

@DIGITB
B

@DIGITC
C

@DIGITD

#SETUPE1

Enter Setup

D

@DIGITE

E

@DIGITF

F

@DIGIVB

'|'

#SETUPE0

Exit 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

Factory Defaults Table

Parameter	Factory Default	Remark
System Settings		
Barcode Programming	Disabled (Exit Setup)	
Programming Barcode Data	Do not transmit	
Illumination	On	
Aiming	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	
Image Decoding Timeout	500ms	1-3,000ms
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)	
GS1 Composite(EAN UCC Composite)	Transmit GS1 Application Identifier (GS1 AIs)	
GS1 QR	Transmit GS1 Application Identifier (GS1 AIs)	
GS1 Data Matrix	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	
GS1 Composite(EAN UCC Composite)	Transmit GS1 Check Character	

GS1 QR	Transmit GS1 Check Character	
GS1 Data Matrix	Transmit GS1 Check Character	
Sensitivity	Medium Sensitivity	
Trigger Commands	Disabled	
Scanning Preference	Normal	
Read Barcode	On	
Decode Area	Whole Area Decoding	
Image Flipping	Do Not Flip	
Bad Read Message	Off	
	NG	
Default Interface	Bluetooth HID Keyboard	
USB Interface		
USB Country Keyboard	US keyboard	USB HID Keyboard
Beep on Unknown Character	Off	USB HID Keyboard
Emulate ALT+Keypad	Off	USB HID Keyboard
Code Page	Code Page 1252 (West European Latin)	USB HID Keyboard
Unicode Encoding	Off	USB HID Keyboard
Emulate Keypad with Leading Zero	On	USB HID Keyboard
Function Key Mapping	Disable	USB HID Keyboard
Inter-Keystroke Delay	No Delay	USB HID Keyboard
Caps Lock	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
Wireless Communication		
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	
Symbologies		
Code 128		
Code 128	Enabled	
Maximum Length	48	
Minimum Length	1	
EAN-8		
EAN-8	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code Required	Not Required	
Convert EAN-8 to EAN-13	Disabled	
EAN-13		
EAN-13	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code 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	
UPC-E		
UPC-E	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	
UPC-A		
UPC-A	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code Required	Not Required	
Transmit Preamble Character	Do not transmit	
Coupon		
UPC-A/EAN-13 with Extended Coupon Code	Off	
Coupon GS1 DataBar Output	Off	
Interleaved 2 of 5		
Interleaved 2 of 5	Enabled	
Maximum Length	80	
Minimum Length	6	
Check Character Verification	Disabled	
ITF-14		
ITF-14	Disabled	
ITF-6		
ITF-6	Disabled	
Matrix 2 of 5		
Matrix 2 of 5	Enabled	
Maximum Length	80	
Minimum Length	4	No less than 4
Check Character Verification	Disable	
Code 39		
Code 39	Enabled	
Maximum Length	48	

Minimum Length	1	
Check Character Verification	Disabled	
Start/Stop Character	Do not transmit	
Code 39 Full ASCII	Disabled	
Code 32 Pharmaceutical (PARAF)	Disabled	
Code 32 Prefix	Disabled	
Code 32 Start/Stop Character	Do not transmit	
Code 32 Check Character	Do not transmit	
Codabar		
Codabar	Enabled	
Maximum Length	60	
Minimum Length	2	
Check Character Verification	Disabled	
Start/Stop Character	Do not transmit	
	ABCD/ABCD	All capital
Code 93		
Code 93	Disabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Do Not Transmit Check Character After Verification	
China Post 25		
China Post 25	Disabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Disabled	
UCC/EAN-128		
UCC/EAN-128	Enabled	
Maximum Length	48	
Minimum Length	1	
GS1 Databar		
GS1 Databar	Enabled	
Application Identifier “01”	Transmit	
EAN•UCC Composite		
GS1 Composite	Disabled	
UPC/EAN Composite	Disabled	
Code 11		

Code 11	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	One Check Character, MOD11	
Check Character	Transmit Check Character	
ISBN		
ISBN	Enabled	
Set ISBN Format	ISBN-10	
ISSN		
ISSN	Disabled	
Industrial 25		
Industrial 25	Enabled	
Maximum Length	48	
Minimum Length	6	No less than 4
Check Character Verification	Disabled	
Standard 25		
Standard 25	Enabled	
Maximum Length	48	
Minimum Length	6	No less than 4
Check Character Verification	Disabled	
Plessey		
Plessey	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	Disabled	
MSI-Plessey		
MSI-Plessey	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	One Check Character, MOD10	
Check Character	Transmit	
AIM 128		
AIM 128	Disabled	
Maximum Length	48	
Minimum Length	1	
ISBT 128		
ISBT 128	Disabled	

PDF417		
PDF417	Enabled	
Maximum Length	2710	
Minimum Length	1	
PDF417 Twin Code	Single PDF417 Only	
PDF417 Inverse	Decode Regular PDF417 Barcodes Only	
Character Encoding	Default Character Encoding	
PDF417 ECI Output	Enabled	
Micro PDF 417		
Micro PDF417	Disabled	
Maximum Length	366	
Minimum Length	1	
QR Code		
QR Code	Enabled	
Maximum Length	7089	
Minimum Length	1	
QR Twin Code	Single QR Only	
QR Inverse	Decode Regular QR Barcodes Only	
Character Encoding	Default Character Encoding	
QR ECI Output	Enabled	
Micro QR Code		
Micro QR Code	Enable	
Maximum Length	35	
Minimum Length	1	
Aztec		
Aztec Code	Disabled	
Maximum Length	3832	
Minimum Length	1	
Read Multi-barcodes on an Image	Mode 1	
Character Encoding	Default Character Encoding	
Aztec ECI Output	Enable	
Data Matrix		
Data Matrix	Enabled	
Maximum Length	3116	
Minimum Length	1	
Data Matrix Twin Code	Single Data Matrix Only	

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

#SETUPE1

Enter Setup

Data Format Selection	Format_0	
Non-Match Error Beep	On	
Prefix & Suffix		
All Prefixes/Suffixes	Disabled	
Prefix Sequence	Code ID+ Custom +AIM ID	
Custom Prefix	Disabled	
AIM ID Prefix	Disabled	
Code ID Prefix	Disabled	
Custom Suffix	Disabled	
Data Packing	Disable Data Packing	
Terminating Character Suffix	Enable, <CR>（0x0D）	

#SETUPE0

Exit 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	
China Post 25	]X0	
AIM 128	]C2	
ISBT 128	]C4	
ISSN	]X0	
ISBN	]X0	
Industrial 25	]S0	
Standard 25	]R0	
Plessey	]P0	
Code 11	]Hm	0，1，3
MSI Plessey	]Mm	0，1
GS1 Composite	]em	0-3
GS1 Databar （RSS）	]e0	
PDF417	]Lm	0-2
QR Code	]Qm	0-6

Aztec	]zm	0-9, A-C
Data Matrix	]dm	0-6
Maxicode	]Um	0-3
Chinese Sensible Code	]X0	
GM	]gm	(0~9)
Micro PDF417	]L0	
Micro QR	]Q1	
USPS Postnet	]X0	
USPS Inteligent Mail	]X0	
Royal Mail	]X0	
USPS Planet	]X0	
KIX Post	]X0	
Australian Postal	]X0	
Japan Post	]X0	

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

Code ID Table

Symbology	Code ID
Code128	j
GS1-128 (UCC/EAN-128)	j
EAN-8	d
EAN-13	d
UPC-E	c
UPC-A	c
Interleaved 2 of 5	e
ITF-14	e
ITF-6	e
Deutsche 14	w
Deutsche 12	l
Matrix 2 of 5	v
Code 39	b
Codabar	a
Code 93	i
China Post 25	X
AIM 128	X
ISBT 128	X
ISSN	g
ISBN	B
Industrial 25	I
Standard 25	f
Plessey	n
Code 11	H
MSI Plessey	m
GS1 Composite	y
GS1 Databar (RSS)	R
PDF417	r
QR Code	s
Aztec	z
Data Matrix	u
MaxiCode	x
Chinese Sensible Code	h

GM Code	x
Micro PDF417	R
Micro QR	X
USPS Postnet	P
USPS Intelligent Mail	M
Royal Mail	x
USPS Planet	L
KIX Post	K
Australian Postal	A
Japan Post	J

Symbology ID Number

Symbology	ID Number
Code 128	002
GS1-128 (UCC/EAN-128)	003
EAN-8	004
EAN-13	005
UPC-E	006
UPC-A	007
Interleaved 2 OF 5	008
ITF-14	009
ITF-6	010
Matrix 2 of 5	011
Code 39	013
Codabar	015
Code 93	017
China Post 25	019
AIM 128	020
ISBT 128	021
ISSN	023
ISBN	024
Industrial25	025
Standard25	026
Plessey	027
Code11	028
MSI-Plessey	029
GS1 Composite	030
GS1 Databar (RSS)	031
PDF417	032
QR Code	033
Aztec	034
Data Matrix	035
Maxicode	036
Chinese Sensible Code	039
Deutsche 14	128
Deutsche 12	129

GM Code	040
Micro PDF417	042
Micro QR	043
USPS Postnet	096
USPS Inteligent Mail	097
Royal Mail	098
USPS Planet	099
KIX Post	100
Australian Postal	101
Japan Post	102

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)

Hex	Dec	Char
1d	29	GS (Group Separator)

#SETUPE1

Enter Setup

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)
3f	63	? (Question Mark)
40	64	@ (AT Symbol)

#SETUPE0

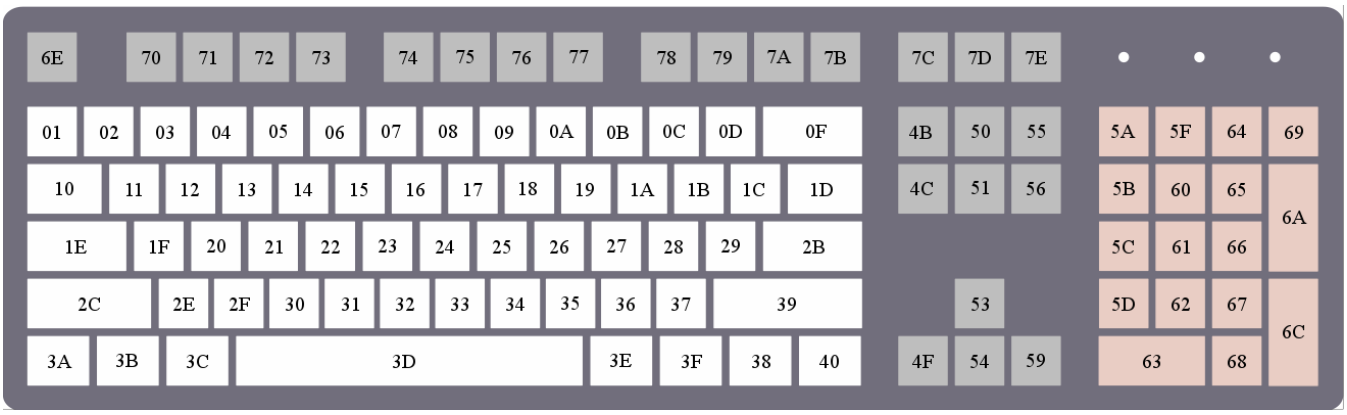
Exit Setup

41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	J
4b	75	K
4c	76	L
4d	77	M
4e	78	N
4f	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5a	90	Z
5b	91	[(Left/ Opening Bracket)
5c	92	\ (Back Slash)
5d	93	] (Right/ Closing Bracket)
5e	94	^ (Caret/ Circumflex)
5f	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d

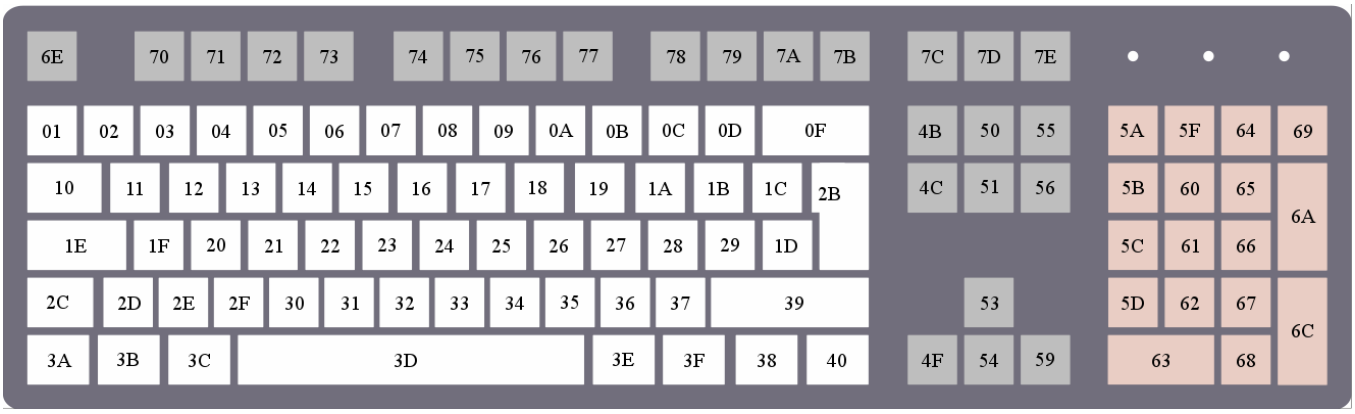
65	101	e
66	102	f
67	103	g
68	104	h
69	105	i
6a	106	j
6b	107	k
6c	108	l
6d	109	m
6e	110	n
6f	111	o
70	112	p
71	113	q
72	114	r
73	115	s
74	116	t
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7a	122	z
7b	123	{ (Left/ Opening Brace)
7c	124	| (Vertical Bar)

7d	125	} (Right/ Closing Brace)
7e	126	~ (Tilde)
7f	127	DEL (Delete)

Unicode Key Maps



104 Key U.S. Style Keyboard



105 Key European Style Keyboard

SCANNING MADE SIMPLE

Newland AIDC EMEA
+31 (0) 345 87 00 33
info@newland-id.com

Rolweg 25
4104 AV Culemborg
The Netherlands