



NLS-HR32

Hand-held Barcode Scanner

User Guide

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Revision History

Version	Description	Date
V1.0.0	Initial release.	June 26, 2013
V1.0.1	Updates: 1. Added the Germany keyboard, Emulate Alt+Keypad, Function Key Mapping and Emulate Numeric Keypad features in Chapter 4. 2. Added ASCII Function Key Mapping Table in Appendix .	April 16, 2014
V1.0.2	Modified the default length range of Code 39, PDF417, QR Code and Data Matrix.	March 27, 2015
V1.0.3	Updates: 1. Deleted the EzSet123 Programming section in Chapter 2. 2. Added “Note: Maximum barcode length supported by the scanner is 1024 bytes.” in the Introduction section of Chapter 5.	May 12, 2015
V1.0.4	Added the following keyboard types: Belgium, Russia, Sweden and Portugal in Chapter 4.	December 2, 2015
V1.0.5	Added the Examine KBW Connection feature in Chapter 4.	April 29, 2016
V1.0.6	Updates: 1. Added the Pair Cradle with Zigbee Router section and the Timeout between Decodes (Same Barcode) for the Manual mode in Chapter 2. 2. Added two options of 60ms and 80ms for inter-keystroke delay and the USB HID-POS feature in Chapter 4. Note: You must have firmware version V1.2.11 or higher to use the new features above.	June 2, 2016

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Preface

Introduction

This manual provides detailed instructions for setting up and using the NLS-HR3260 Series cordless 2D barcode scanner (hereinafter referred to as “**HR32 cordless scanner**” or “**the scanner**”).

Chapter Description

- | | |
|--|--|
| ✧ <i>Chapter 1, Getting Started</i> | Gives a general description of HR32 cordless scanner. |
| ✧ <i>Chapter 2, System Settings</i> | Introduces three configuration methods and describes how to configure general parameters of HR32 cordless scanner. |
| ✧ <i>Chapter 3, Inquiry Command</i> | Describes how to obtain the information of HR32 cordless scanner by scanning programming barcodes. |
| ✧ <i>Chapter 4, Communication Settings</i> | Describes how to configure communication mode, serial port parameters and USB function. |
| ✧ <i>Chapter 5, Symbologies</i> | Lists all compatible symbologies and describes how to configure the relevant parameters. |
| ✧ <i>Chapter 6, Prefix & Suffix</i> | Describes how to use prefix and suffix to customize scanned data. |
| ✧ <i>Chapter 7, Ambient Illumination</i> | Describes how to configure the scanner to adapt it to ambient light of different intensity. |
| ✧ <i>Appendix</i> | Provides factory defaults table and a bunch of frequently used programming barcodes. |

Explanation of Icons



This icon indicates something relevant to this manual.



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



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



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

Chapter 1 Getting Started

Introduction

The HR32 cordless scanner reads a 1D or 2D barcode by capturing its image. Adopting the advanced **UIMG** technology independently developed by Newland Auto-ID Tech, it provides users with three scan modes, including Manual Mode, Sense Mode and Continuous Mode, tailored to different scanning needs.

An illustrated introduction to the HR32 cordless scanner is included in this chapter. If you have an HR32 cordless 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.

Features of the HR32

- Comprehensive data capture: most 1D and 2D barcodes.
- Fast and accurate decoding capability: integrates high-performance processor and barcode decoder board.
- Easy to configure and update.

Unpacking

Open the package and take out HR32 cordless 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-sale service.

Note: CD32, the cradle for HR32 cordless scanner is individually wrapped.

Scanner

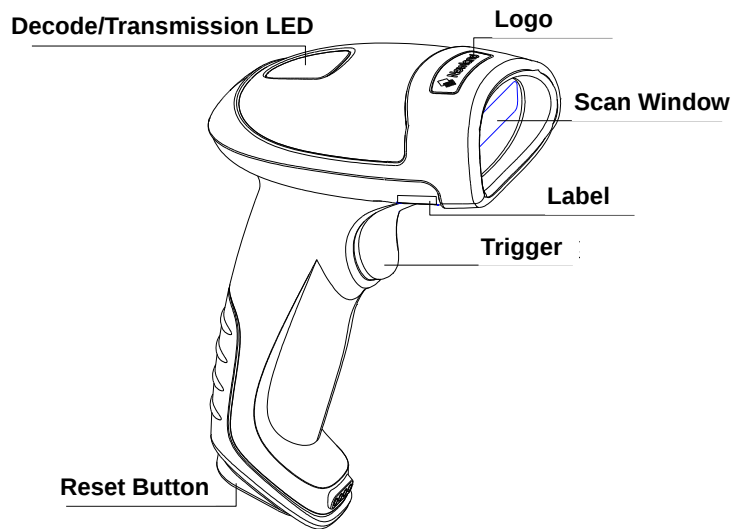


Fig. 1-1

Decode/Transmission LED:

Green: Barcode decoded successfully.

Battery is fully charged.

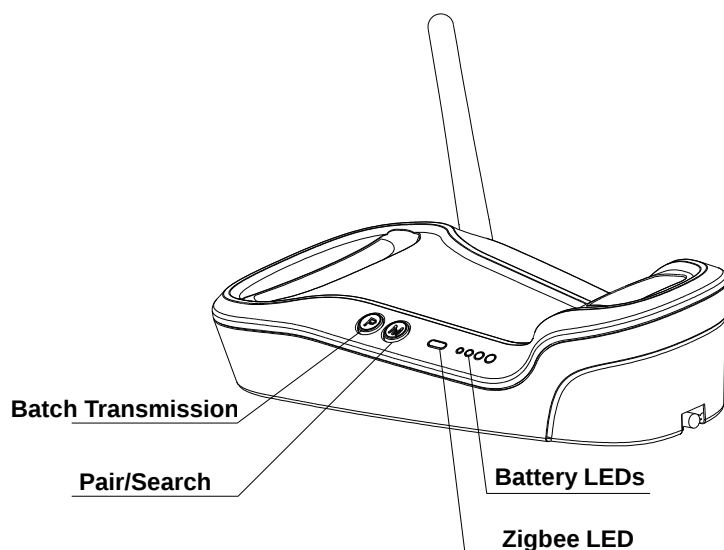
Blue: Zigbee is available.

Red: Data transmission failed.

Device is charging.

Purple: Firmware update is in progress.
There is data in FLASH memory.

CD32 Cradle



Buttons:

P: Batch Transmission

M: Pair/Search

LEDs:

Zigbee LED (blue):

Zigbee is available.

Battery LEDs (green):

Indicates battery level (four levels)

Fig. 1-2

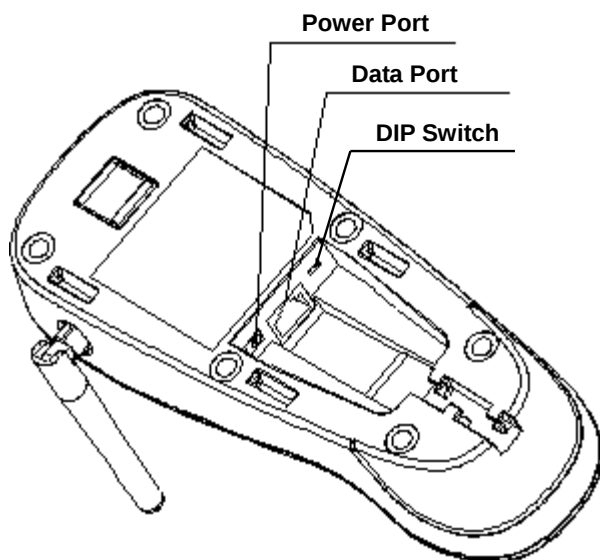


Fig. 1-3

Communication Mode

Communication modes: synchronous mode (default), asynchronous mode and batch mode.

- ✧ **Synchronous Mode:** If Zigbee is available, scanned data will be transferred to the cradle immediately after a good read; if Zigbee is unavailable, the transmission of decoded data cannot be accomplished.
- ✧ **Asynchronous Mode:** If Zigbee is available, scanned data will be transferred to the cradle immediately after a good read; if Zigbee is unavailable, the decoded data will be first stored in the flash memory in a FIFO (first in first out) manner, and be sent automatically to the cradle when Zigbee becomes available.
- ✧ **Batch Mode:** The decoded data will be stored in the flash memory no matter whether Zigbee is available or not. To send the stored data to the cradle, you need to insert the scanner in the cradle and then press “P” button on the cradle.

CD32 Data Port

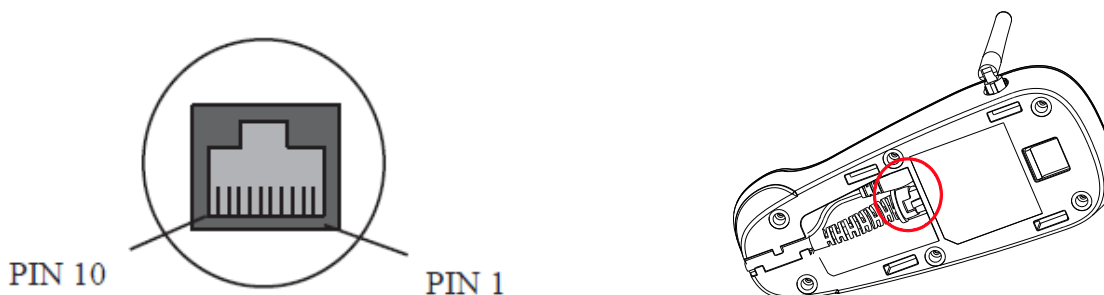


Fig. 1-4

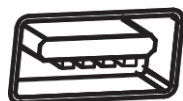
PIN	Signal	Type	Function
1	NC	-	No connection
2	NC	-	No connection
3	VCC	P	Power+ (+5V)
4	TXD	O	RS-232 output
5	RXD	I	RS-232 input
6	CTS	I	Flow control signal
7	RTS	O	
8	GND	P	Ground
9	D-	I/O	USB signal
10	D+	I/O	

USB/RS-232 Port

CD32 cradle must be connected to a Host in actual application, such as PC, POS or any intelligent terminal with USB or RS-232 port, via a communication cable, either USB or RS-232 cable.

USB

USB port on the Host



RS-232

RS-232 port on the Host



Note: Please check the port on the Host and purchase the right cable.

Connecting Cradle to a Host

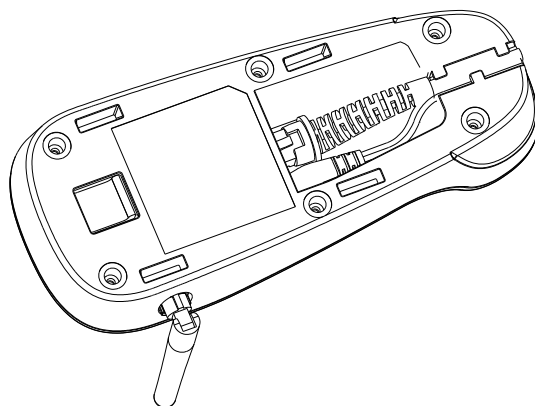


Fig. 1-5

Use USB Cable

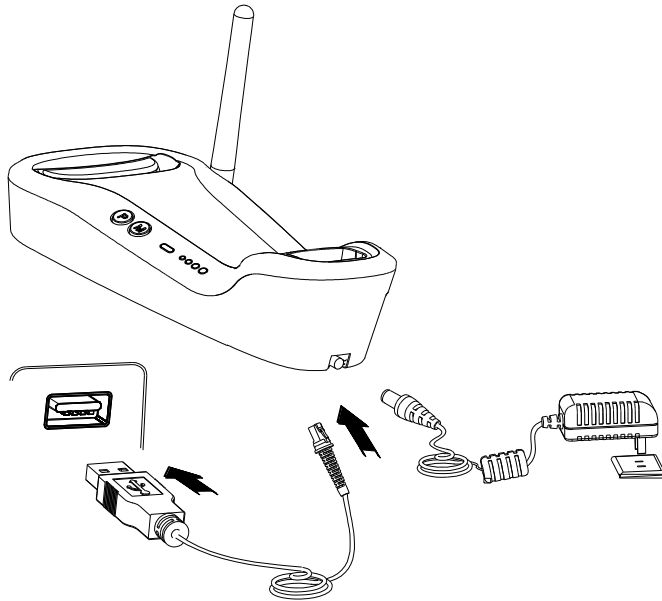


Fig. 1-6

Connect the CD32 cradle to a Host through a USB cable with RJ45 and USB connectors:

1. Plug the RJ45 connector into the data port (see Fig.1-3) on the cradle.
2. Plug the USB connector into the USB port on the Host.
3. Plug the supplied power adapter into the power port (see Fig.1-3) on the cradle.

Use RS-232 Cable

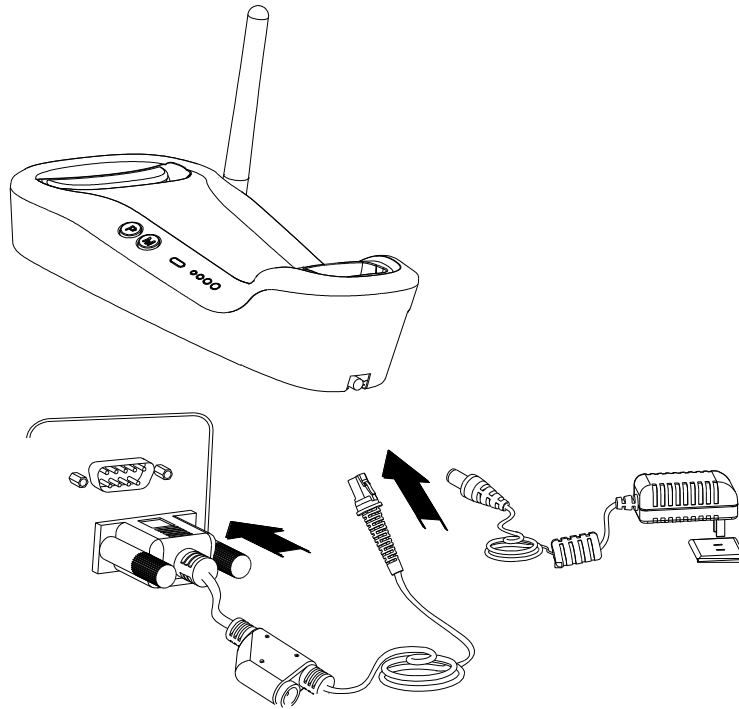


Fig. 1-7

Connect the CD32 cradle to a Host through an RS-232 cable with RJ45 and RS-232 connectors:

1. Plug the RJ45 connector into the data port (see Fig.1-3) on the cradle.
2. Plug the RS-232 connector into the RS-232 port on the Host.
3. Plug the supplied power adapter into the power port (see Fig.1-3) on the cradle.

Power On, Sleep, Power Off, Reboot

Powering on the scanner

Hold down the trigger on the scanner for 1 second or longer.

Entering the sleep mode

If no operation is performed on the scanner for 5 seconds, it will automatically enter the sleep mode. (Applicable to the Manual mode only)

Powering off the scanner

Scan the **Power Off** barcode. (See the **Operating Mode Options** in Chapter 2)

Note: The scanner that has remained in sleep mode for a specific time period (default: 5 minutes, programmable) will be automatically turned off. (To change the time period, see the **Power-Off Timeout** in Chapter 2).

Rebooting the scanner

If the scanner stops responding to input or runs abnormally, press the Reset button on the scanner to reboot it.

Maintenance

1. The scan window should be kept clean.
2. Do not scratch the scan window.
3. Use soft brush to remove the stain from the scan window.
4. Use the soft cloth to clean the window, such as eyeglass cleaning cloth.
5. Do not spray any liquid on the scan window.
6. Only use water to clean other parts of the device.



The warranty **DOES NOT** cover damages caused by inappropriate care and maintenance.

Dimensions of Scanner

Side View

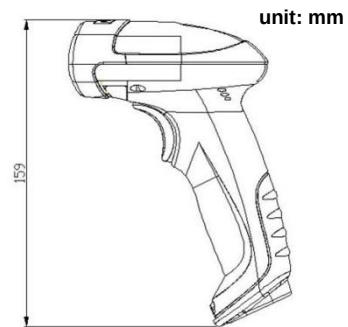


Fig. 1-8

Front View

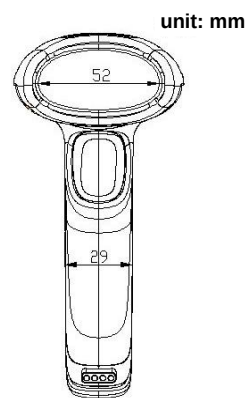


Fig. 1-9

Top View

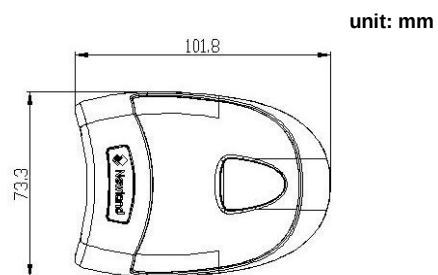


Fig. 1-10

Dimensions of CD32 Cradle

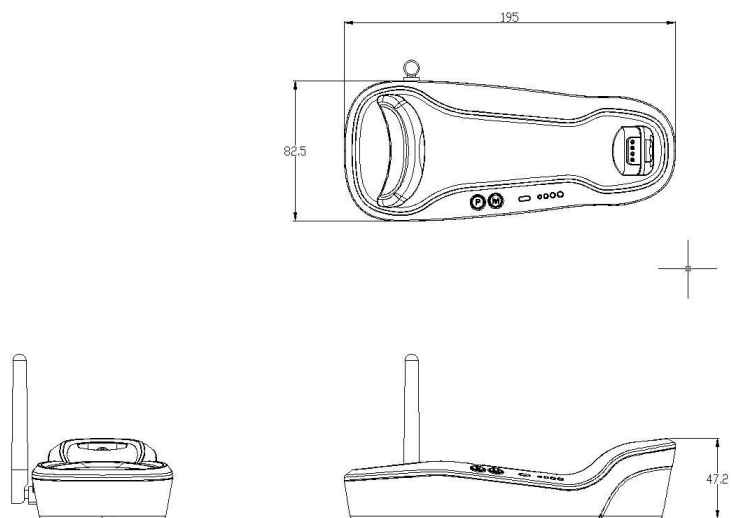


Fig. 1-11

Scanning Instructions

When the scanner is in the Manual scan mode, you can follow the steps below to scan a barcode:

1. Press and hold the trigger. Then the scanner will project a red aiming beam.
2. Aim the red beam across the center of barcode, as shown in Fig.1-12.
3. Release the trigger when the red beam goes off. If the barcode is decoded successfully, the scanner will beep and the decoded data will be sent to the Host.

Note: For the same batch of barcodes, the scanner will keep a very high success ratio in certain distance which can be regarded as the optimal scanning distance.

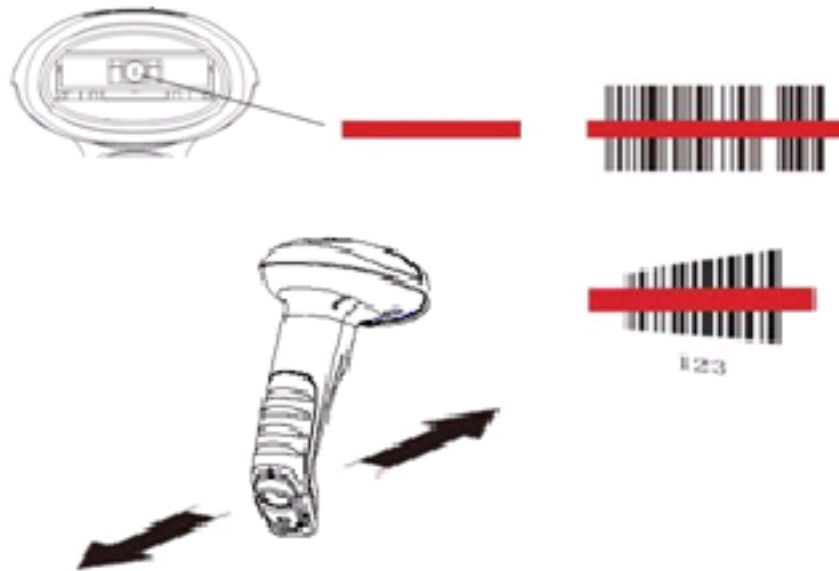


Fig. 1-12

Scan Angle

The scanner is designed to function within a certain range of scan angles. Any unreasonable deviation may cause decoding failure.

Scan angles of the scanner:

- ◇ Pitch: $\pm 55^\circ$, 0° Roll and 0° Skew (Fig. 1-13)
- ◇ Roll: 360° , 0° Pitch and 0° Skew (Fig. 1-14)
- ◇ Skew: $\pm 55^\circ$, 0° Roll and 0° Pitch (Fig. 1-15)

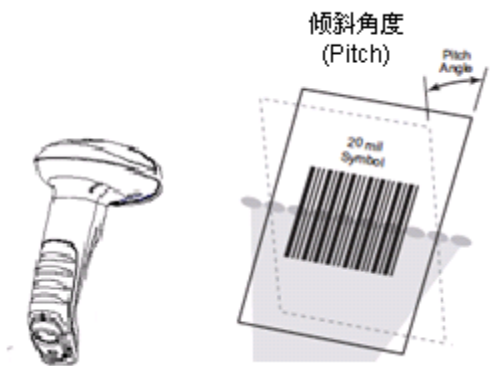


Fig. 1-13

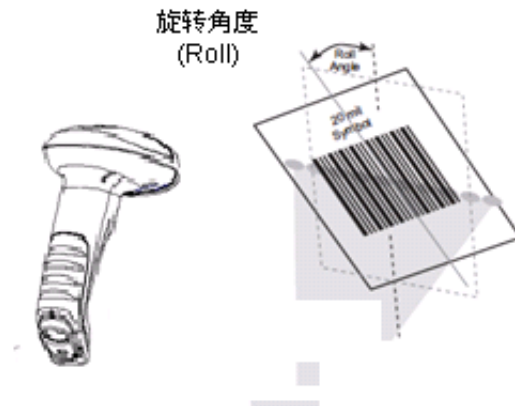


Fig. 1-14



Fig. 1-15



0006010

【Enter Setup】

Chapter 2 System Settings

Introduction

There are two ways to configure the scanner: barcode programming and command programming.

Barcode Programming

The scanner can be configured through scanning programming barcodes. In the following sections, we will explain the available options and features and provide the barcodes to program them.

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 command strings sent from the Host. In the following sections, the commands will be provided along with programming barcodes.

Users can also design an application to send those command strings to their scanners.

Note: All settings except temporary ones are stored in non-volatile memory of the scanner and will not be lost by removing power from the scanner.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Programming Barcode/Command/Function



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

1. The **Exit Setup** barcode
2. The **Exit Setup** command
3. The function/feature that can be enabled by using the programming barcode or command listed above.
4. ** indicates factory default setting.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Use of Programming Barcodes

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

After scanning the **Exit Setup** barcode, only some special programming barcodes, such as the **Enter Setup** barcode, can be read.



0006000

** 【Exit Setup】



0006010

【Enter Setup】



0006000

** 【Exit Setup】



0006010

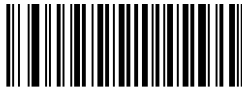
【Enter Setup】

Factory Defaults

Scanning the **Reset Scanner** barcode/the **Reset Cradle** barcode can restore the scanner/cradle to the factory default settings.

You may need to reset your scanner/cradle when:

1. scanner/cradle is not properly configured so that the scanner fails to decode barcodes or to communicate with cradle;
2. you forget previous configuration and want to avoid its impact;
3. functions that are rarely used have been enabled for the time being.



EM00230

【Reset Scanner】



EC00044

【Reset Cradle】



0006000

**【Exit Setup】



【Enter Setup】

Pairing Settings

Pair Scanner with Cradle

A cradle with its DIP switch (see Fig. 1-3) in the “C” position works as a normal cradle.

The scanner and cradle must be paired for communication to occur. A cradle can be paired with multiple scanners.

You need to perform this operation manually: After the scanner and cradle are powered on, insert the scanner in the cradle and then press the “M” button on the cradle. The scanner beeps on a successful pairing.

Pair Cradle with Zigbee Router

A cradle with its DIP switch (see Fig. 1-3) in the “R” position functions as a Zigbee router. You can extend communication distance of the cradle by pairing multiple Zigbee routers with it.

To pair a cradle (DIP switch in the “C” position) with a Zigbee router (DIP switch in the “R” position):

- a. Pair a scanner with the cradle by following the instructions above.
- b. Insert the paired scanner in the Zigbee router and then press the “M” button on the router.

The scanner beeps on a successful pairing.

Search Paired Scanners

When scanner(s) and cradle are powered on, press the “M” button on the cradle and the paired scanner(s) will beep.





0006010

【Enter Setup】

Operating Mode Options



EM00200

【Power Off】



EM00204

【Reboot Scanner】



EC00105

【Reboot Scanner】



0006000

****【Exit Setup】**



0006010

【Enter Setup】

Power-Off Timeout

Power-off timeout specifies the amount of time the scanner remains in sleep mode before it powers off automatically. Scan the barcode below to set this parameter.



EM00270

**** 【5 Minutes】**



EM00271

【10 Minutes】



EM00272

【20 Minutes】



EM00273

【30 Minutes】



EM00274

【60 Minutes】



EM00275

【Disable Auto Power Off】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Illumination

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

- ✧ **Normal:** Illumination LEDs are turned on only when scanner is reading barcode.
- ✧ **Always ON:** Illumination LEDs keep ON after scanner is powered on.
- ✧ **OFF:** Illumination LEDs are OFF all the time.



0200000

** 【Normal】



0200010

【Always ON】



0200020

【OFF】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Aiming

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

- ✧ **Normal:** The scanner projects an aiming pattern only during barcode scanning/capture.
- ✧ **Always ON:** Aiming pattern is constantly ON after the scanner is powered on.
- ✧ **OFF:** Aiming pattern is OFF all the time.



0201000

** 【Normal】



0201020

【OFF】



0201010

【Always ON】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Beep

Good Read Beep

Scan the appropriate barcode below to enable or disable the emission of beep when a non-programming barcode is decoded.



0203010

**** 【Good Read Beep On】**



0203000

【Good Read Beep Off】

Good Read Beep Type



0203020

【Type 1】



0203022

**** 【Type 3】**



0203021

【Type 2】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Good Read Beep Volume



0203030

**** 【Loud】**



0203032

【Low】



0203031

【Medium】

Startup Beep



EM00261

**** 【Startup Beep On】**



EM00260

【Startup Beep Off】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Transmit NGR Message

Scan a barcode below to select whether or not to transmit a user-defined NGR (Not Good Read) message when a barcode is not decoded.



0320010

【Transmit NGR Message】



0320000

** 【Do Not Transmit NGR Message】

Edit NGR Message

To edit an NGR message, scan the **Edit NGR Message** barcode and the numeric barcodes corresponding to the ASCII values (decimal) of desired character(s) and then scan the **Save** barcode.

An NGR message can contain 0-7 characters (ASCII value of character: 0-255).



0320020

【Edit NGR Message】

E
xample

Set the NGR message to “!ERR” (0x21, 0x45, 0x52, 0x52):

1. Scan the **Enter Setup** barcode.
2. Scan the **Edit NGR Message** barcode.
3. Scan the numeric barcodes “2”, “1”, “4”, “5”, “5”, “2”, “5” and “2”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Scan Mode

Manual Mode

A trigger pull activates a decode session. The decode session continues until the barcode is decoded or you release the trigger or decode session timeout expires.



0302000

** 【Manual Mode】

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.



0313000

【Decode Session Timeout】

E
xample

Set the Decode Session Timeout to 1,500ms:

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



0006000

** 【Exit Setup】



0006010

【Enter Setup】**Timeout between Decodes (Same Barcode)**

Timeout between Decodes (Same Barcode) can avoid undesired rereading of same barcode in a given period of time.

To enable/disable the Timeout between Decodes (Same Barcode), scan the appropriate barcode below.

Enable Timeout between Decodes: Do not allow the scanner to re-read same barcode before the timeout between decodes (same barcode) expires.

Disable Timeout between Decodes: Allow the scanner to re-read same barcode.



0313161

**** 【Disable Timeout between Decodes】**

0313171

【Enable Timeout between Decodes】

The following parameter sets the timeout between decodes for same barcode. It is programmable in 1ms increments from 0ms to 65,535ms. The default setting is 1,500ms.



0313010

【Timeout between Decodes (Same Barcode) 】**E**
*sample***Set the Timeout between Decodes (Same Barcode) to 2,500ms:**

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



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Sense Mode

The scanner waits for the image stabilization timeout to expire before activating a decode session every time it detects a change in ambient illumination. Decode session continues until the barcode is decoded or the decode session timeout expires.

In the Sense mode, a trigger pull can also activate a decode session. The decode session continues until the barcode is decoded or the trigger is released. When the session ends, the scanner continues to monitor ambient illumination.



0302010

【Sense Mode】

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.



0313000

【Decode Session Timeout】

E
xample

Set the Decode Session Timeout to 1,500ms:

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



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Image Stabilization Timeout

The scanner waits for the image stabilization timeout to expire before activating a decode session every time it detects a change in ambient illumination. The image stabilization timeout is programmable in 1ms increments from 0ms to 1,600ms. The default setting is 500ms.



0313120

【Image Stabilization Timeout】**E**
*xample***Set the Image Stabilization Timeout to 1,500ms:**

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

Continue after Good Read

Continue after Good Read: The scanner starts next decode session after good read.

Pause after Good Read: The scanner starts another round of illumination monitoring and image stabilization after good read.



0313130

**** 【Pause after Good Read】**

0313131

【Continue after Good Read】

0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Timeout between Decodes (Same Barcode)

Timeout between Decodes (Same Barcode) can avoid undesired rereading of same barcode in a given period of time.

To enable/disable the Timeout between Decodes (Same Barcode), scan the appropriate barcode below.

Enable Timeout between Decodes: Do not allow the scanner to re-read same barcode before the timeout between decodes (same barcode) expires.

Disable Timeout between Decodes: Allow the scanner to re-read same barcode.



0313020

【Disable Timeout between Decodes】



0313030

** 【Enable Timeout between Decodes】

The following parameter sets the timeout between decodes for same barcode. It is programmable in 1ms increments from 0ms to 65,535ms. The default setting is 1,500ms.



0313010

【Timeout between Decodes (Same Barcode)】

E
xample

Set the Timeout between Decodes (Same Barcode) to 2,500ms:

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



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Sensitivity

Sensitivity specifies the degree of acuteness of the scanner's response to changes in ambient illumination. The higher the sensitivity, the lower requirement in illumination change to trigger the scanner. You can select an appropriate degree of sensitivity that fits the ambient environment.



0312010

【Medium Sensitivity】

0312000

【Low Sensitivity】

0312020

【High Sensitivity】

0312030

【Enhanced Sensitivity】

If the above four options fail to meet your needs, you may program the threshold value of illumination change.

Illumination changes that reaches or surpasses the predefined threshold value will cause the scanner to start a decode session. The lower the threshold value, the greater the sensitivity of the scanner. The default threshold value is 2.



0312040

【Threshold Value of Illumination Change (1~20)】**E**
*xample***Set the threshold value of illumination change to 4:**

1. Scan the **Enter Setup** barcode.
2. Scan the **Threshold Value of Illumination Change** barcode.
3. Scan the numeric barcode "4". (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Exit Setup** barcode.



0006000

****【Exit Setup】**



0006010

【Enter Setup】

Continuous Mode

If the Continuous mode is enabled, the scanner automatically starts one decode session after another. To suspend/resume barcode reading, simply press the trigger.



0302020

【Continuous Mode】

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.



0313000

【Decode Session Timeout】

E
xample

Set the Decode Session Timeout to 1,500ms:

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



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Timeout between Decodes

This parameter sets the timeout between decode sessions. When a decode session ends, next session will not happen until the timeout between decodes expires. It is programmable in 1ms increments from 0ms to 65,535ms. The default setting is 1,000ms.



0313040

【Timeout between Decodes】

E
xample

Set the Timeout between Decodes to 1,500ms:

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



0006000

**【Exit Setup】



0006010

【Enter Setup】

Chapter 3 Inquiry Command

Introduction

This chapter provides programming barcodes you may need to obtain device information.

Obtain Scanner Information

You can scan the barcode below to inquire the scanner information (such as model number, serial number, manufacture date and firmware version). The result will be sent to the Host.



EM00300

【Inquire All Information About Scanner】

Obtain Cradle Information

You can scan the barcode below to inquire the cradle information (such as model number, serial number, manufacture date and firmware version). The result will be sent to the Host.



EC00320

【Inquire All Information About Cradle】



0006000

****【Exit Setup】**



0006010

【Enter Setup】

Obtain FLASH Information

To inquire the number of the barcodes stored in flash memory or empty the memory, scan the appropriate barcode below.



EM04301

【Inquire the Number of Barcodes in Flash Memory】



EM04303

【Delete All Barcodes in Flash Memory】



0006000

****【Exit Setup】**



0006010

【Enter Setup】

Chapter 4 Communication Settings

Introduction

Three types of wireless communication between scanner and cradle: synchronous, asynchronous and batch modes.

Two types of wired communication between cradle and the Host: RS-232 and USB.

Wireless Communication

Wireless communication modes include Synchronous (default), Asynchronous and Batch modes.

- ✧ **Synchronous Mode:** If Zigbee is available, scanned data will be transferred to the cradle immediately after a good read; if Zigbee is unavailable, the transmission of decoded data cannot be accomplished.
- ✧ **Asynchronous Mode:** If Zigbee is available, scanned data will be transferred to the cradle immediately after a good read; if Zigbee is unavailable, the decoded data will be first stored in the flash memory in a FIFO (first in first out) manner, and be sent automatically to the cradle when Zigbee becomes available.
- ✧ **Batch Mode:** The decoded data will be stored in the flash memory no matter whether Zigbee is available or not. To send the stored data to the cradle, you need to insert the scanner in the cradle and then press “P” button on the cradle.



EM04310

** 【Synchronous Mode】



EM04311

【Asynchronous Mode】



EM04312

【Batch Mode】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

RS-232 Interface

Baud Rate

When the CD32 cradle is connected to the Host via serial port, you need to set communication parameters (including baud rate, parity check, data bit and stop bit) to match the host device.

Baud rate is the number of bits of data transmitted per second. Set the cradle's baud rate to match the Host requirements. Otherwise, data may not reach the Host or may reach it in distorted form. The default baud rate is 115200.



EC02103

【Baud Rate 4800】



EC02104

【Baud Rate 9600】



EC02105

【Baud Rate 14400】



EC02106

【Baud Rate 19200】



EC02107

【Baud Rate 38400】



EC02110

【Baud Rate 57600】



EC02111

**** 【Baud Rate 115200】**



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Parity Check

By default, the **None** option is enabled.



EC02120

** 【None】



EC02122

【Even】



EC02121

【Odd】

Stop Bit

By default, the **1 Stop Bit** option is enabled.



EC02131

** 【1 Stop Bit】



EC02133

【2 Stop Bits】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Hardware Flow Control

By default, the hardware flow control is disabled.



EC02140

**** 【Disable Hardware Flow Control】**



EC02143

【Enable Hardware Flow Control】



Before enabling hardware flow control, make sure that RTS/CTS signal line is contained in RS-232 cable. Without the signal line, RS-232 communication errors will occur.

Data Bit

8 data bits are used and cannot be altered.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

USB Interface

Two communication options are provided when the cradle is connected to the Host via USB interface:
USB HID-KBW and USB COM Port Emulation

USB HID-KBW



EC02300

**** 【USB HID-KBW】**

Examine KBW Connection

By default, the scanner examines whether KBW connection is available before data transmission by sending the Caps Lock key to the host device first.



EC02223

**** 【Examine KBW Connection】**



EC02224

【Do Not Examine KBW Connection】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

USB Country Keyboard Types

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



EC02201

****【U.S.】**



EC02202

【Japanese】



EC02203

【Denmark】



EC02204

【Finland】



EC02205

【France】



EC02206

【Turkey F】



EC02207

【Italy】



EC02210

【Norway】



0006000

****【Exit Setup】**



0006010

【Enter Setup】



EC02211

【Spain】



EC02212

【Turkey Q】



EC02213

【UK】



EC02214

【Germany】



EC02215

【Belgium】



EC02216

【Russia】



EC02217

【Sweden】



EC02200

【Portugal】



0006000

****【Exit Setup】**



0006010

【Enter Setup】

Inter-Keystroke Delay

This parameter specifies the delay between emulated keystrokes.



EC02220

**** 【No Delay】**



EC02222

【40ms】



EC02221

【20ms】



EC02225

【60ms】



EC02226

【80ms】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Convert Case

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



EC02230

** 【No Case Conversion】



EC02232

【Convert All to Lower Case】



EC02231

【Convert All to Upper Case】



EC02233

【Invert Upper and Lower Case Characters】

E
xample

When the **Invert Upper and Lower Case Characters** feature is enabled, barcode data “AbC” is transmitted as “aBc”.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Emulate ALT+Keypad

This feature allows any ASCII character (0x00 - 0xFF) to be sent over the numeric keypad no matter which keyboard type is selected. Since sending a character involves multiple keystroke emulations, this method appears less efficient.

The following options are available:

- **Disable:** No ASCII character is sent in the ALT+Keypad way.
- **Mode 1:** ASCII characters not supported by the selected keyboard type but falling into 0x20~0xFF are sent in the ALT+Keypad way.
- **Mode 2:** ASCII characters falling into 0x20~0xFF are sent in the ALT+Keypad way.
- **Mode 3:** All ASCII characters (0x00~0xFF) are sent in the ALT+Keypad way.

Note: In the event of a conflict between **Function Key Mapping** and **Mode 3, Function Key Mapping** shall govern.



EC02260

**** 【Disable】**

EC02261

【Mode 1】

EC02262

【Mode 2】

EC02263

【Mode 3】

Example: Supposing US keyboard is selected, barcode data "ADF" (65/208/70) is sent as below:

(1) **Mode 1** is enabled:

"A" -- Keystroke "A"

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

"F" -- Keystroke "F"

(2) **Mode 3** is enabled:

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

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

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



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Function Key Mapping

When Function Key Mapping is enabled, function characters (0x00 - 0x1F) are sent as ASCII sequences over the keypad. For more information, see **ASCII Function Key Mapping Table** in **Appendix**.



EC02265

【Enable Function Key Mapping】



EC02264

** 【Disable Function Key Mapping】

Example: Barcode data 0x16

 T	Enable Function Key Mapping	Ctrl+V
	Disable Function Key Mapping	F1



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Emulate Numeric Keypad

When this feature is disabled, sending barcode data is emulated as keystroke(s) on main keyboard.

To enable this feature, scan the Emulate Numeric Keypad barcode. Sending a number (0-9) is emulated as keystroke(s) on numeric keypad, whereas sending other character like “+”, “_”, “*”, “/” and “.” is still emulated as keystrokes on main keyboard.



EC02251

**** 【Do Not Emulate Numeric Keypad】**



EC02250

【Emulate Numeric Keypad】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

USB COM Port Emulation

To use this feature, a driver is required.



EC02301

【USB COM Port Emulation】

USB HID-POS

Introduction

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

Features:

- ✧ HID based, no custom driver required.
- ✧ Way more efficient in communication than keyboard emulation and traditional RS-232 interface.

Note: USB HID-POS does not require a custom driver. However, a HID interface on Windows 98 does. All HID interfaces employ standard driver provided by the operating system. Use defaults when installing the driver.



EC02302

【USB HID-POS】

Access the Scanner with Your Program

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

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



0006000

**【Exit Setup】



0006010

【Enter Setup】

Acquire Scanned Data

After scanning and decoding a barcode, the scanner sends the following input report:

	Bit							
Byte	7	6	5	4	3	2	1	0
0	Report ID = 0x02							
1	Length of the barcode							
2-57	Decoded data (1-56)							
58-60	AIM ID							
61-62	Reserved							
63	-	-	-	-	-	-	-	Decoded Data Continued

Send Data to the Scanner

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

	Bit							
Byte	7	6	5	4	3	2	1	0
0	Report ID = 0x04							
1	Length of the output data							
2-63	Output data (1-62)							

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 PID is assigned to each interface.

Product	Interface	PID (Hex)	PID (Dec)
HR3260 Cordless	USB HID-KBW	0C03	3075
	USB COM Port Emulation	0C06	3078
	USB HID-POS	0C10	3088



0006000

****【Exit Setup】**



0006010

【Enter Setup】

Chapter 5 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 barcode symbologies. The more symbologies you enable, the slower your scanner decodes. It is recommended to disable those that are rarely used to improve the performance of the scanner.

Note: Maximum barcode length supported by the scanner is 1024 bytes.

General Settings

Disable All Symbologies

If the **Disable All Symbologies** feature is enabled, the scanner can only identify the programming barcodes.



0001010

【Disable All Symbologies】

Enable All Symbologies

If the **Enable All Symbologies** feature is enabled, the scanner can read all compatible barcode symbologies as well as the programming barcodes.



0001020

【Enable All Symbologies】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Enable 1D Symbologies



0001040

【Enable 1D Symbologies】

Disable 1D Symbologies



0001030

【Disable 1D Symbologies】

Enable 2D Symbologies



0001060

【Enable 2D Symbologies】

Disable 2D Symbologies



0001050

【Disable 2D Symbologies】



0006000

****【Exit Setup】**



0006010

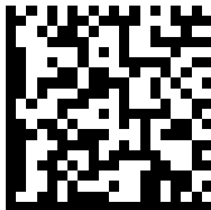
【Enter Setup】

Video Reverse

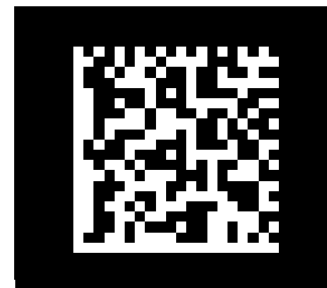
Regular barcode: Dark image on a bright background.

Inverse barcode: Bright image on a dark background.

The examples of regular barcode and inverse barcode are shown below.



Regular Barcode



Inverse Barcode

Video Reverse is used to allow the scanner to read barcodes that are inverted.

Video Reverse ON: Read both regular barcodes and inverse barcodes.

Video Reverse OFF: Read regular barcodes only.

The scanner shows a slight decrease in scanning speed when Video Reverse is ON.



0001021

【Video Reverse ON】



0001011

** 【Video Reverse OFF】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Code 128

Restore Factory Defaults



0400000

【Restore the Factory Defaults of Code 128】

Enable/Disable Code 128



0400020

** 【Enable Code 128】



0400010

【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for Code 128

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



0400030

【Set the Minimum Length (Default: 1)】



0400040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. If minimum length is set to be greater than maximum length, the scanner only decodes Code 128 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 128 barcodes with that length are to be decoded.



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

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

EAN-8

Restore Factory Defaults



0401000

【Restore the Factory Defaults of EAN-8】

Enable/Disable EAN-8



0401020

**** 【Enable EAN-8】**



0401010

【Disable EAN-8】

Transmit Check Digit

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



0401040

**** 【Transmit EAN-8 Check Digit】**



0401030

【Do Not Transmit EAN-8 Check Digit】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Add-On Code

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



0401050

** 【Disable 2-Digit Add-On Code】



0401060

【Enable 2-Digit Add-On Code】



0401070

** 【Disable 5-Digit Add-On Code】



0401080

【Enable 5-Digit Add-On Code】



Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code: The scanner decodes a mix of EAN-8 barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-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 add-on barcode. It can also decode EAN-8 barcodes without add-on codes.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Add-On Code Required

EAN-8 Add-On Code Required: The scanner only decodes EAN-8 barcodes that contain add-on codes.

EAN-8 Add-On Code Not Required: The scanner decodes a mix of EAN-8 barcodes with and without add-on codes.



0401110

【EAN-8 Add-On Code Required】



0401120

** 【EAN-8 Add-On Code Not Required】

EAN-8 Extension

Disable EAN-8 Zero Extend: Transmit EAN-8 barcodes as is.

Enable EAN-8 Zero Extend: Add five leading zeros to decoded EAN-8 barcodes to extend to 13 digits.



0401090

** 【Disable EAN-8 Zero Extend】



0401100

【Enable EAN-8 Zero Extend】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

EAN-13

Restore Factory Defaults



0402000

**** 【Restore the Factory Defaults of EAN-13】**

Enable/Disable EAN-13



0402020

**** 【Enable EAN-13】**



0402010

【Disable EAN-13】

Transmit Check Digit



0402040

**** 【Transmit EAN-13 Check Digit】**



0402030

【Do Not Transmit EAN-13 Check Digit】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Add-On Code

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



0402050

**** 【Disable 2-Digit Add-On Code】**

0402060

【Enable 2-Digit Add-On Code】

0402070

**** 【Disable 5-Digit Add-On Code】**

0402080

【Enable 5-Digit Add-On Code】

Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code: The scanner decodes a mix of EAN-13 barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-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 add-on barcode. It can also decode EAN-13 barcodes without add-on codes.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Add-On Code Required

EAN-13 Add-On Code Required: The scanner only decodes EAN-13 barcodes that contain add-on codes.

EAN-13 Add-On Code Not Required: The scanner decodes a mix of EAN-13 barcodes with and without add-on codes.



0402090

【EAN-13 Add-On Code Required】



0402100

** 【EAN-13 Add-On Code Not Required】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

UPC-E

Restore Factory Defaults



0403000

**** 【Restore the Factory Defaults of UPC-E】**

Enable/Disable UPC-E



0403020

**** 【Enable UPC-E】**



0403010

【Disable UPC-E】



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

Transmit Check Digit

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



0403040

**** 【Transmit UPC-E Check Digit】**



0403030

【Do Not Transmit UPC-E Check Digit】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Add-On Code

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



0403050

** 【Disable 2-Digit Add-On Code】



0403060

【Enable 2-Digit Add-On Code】



0403070

** 【Disable 5-Digit Add-On Code】



0403080

【Enable 5-Digit Add-On Code】



Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code: The scanner decodes a mix of UPC-E barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-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 add-on barcode. It can also decode UPC-E barcodes without add-on codes.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Add-On Code Required

UPC-E Add-On Code Required: The scanner only decodes UPC-E barcodes that contain add-on codes.

UPC-E Add-On Code Not Required: The scanner decodes a mix of UPC-E barcodes with and without add-on codes.



0403130

【UPC-E Add-On Code Required】



0403140

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

Transmit System Character “0”

The first character of UPC-E barcode is the system character “0”.



0403090

**** 【Do Not Transmit System Character “0”】**



0403100

【Transmit System Character “0”】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

UPC-E Extension

Disable UPC-E Extend: Transmit UPC-E barcodes as is.

Enable UPC-E Extend: Extend UPC-E barcodes to make them compatible in length to UPC-A.



0403110

**** 【Disable UPC-E Extend】**



0403120

【Enable UPC-E Extend】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

UPC-A

Restore Factory Defaults



0404000

Restore the Factory Defaults of UPC-A】

Enable/Disable UPC-A



0404020

**** 【Enable UPC-A】**

0404010

【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 Digit

UPC-A is 12 digits in length with the last one as its check digit used to verify the integrity of the data.



0404040

**** 【Transmit UPC-A Check Digit】**

0404030

【Do Not Transmit UPC-A Check Digit】

0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Add-On Code

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



0404050

** 【Disable 2-Digit Add-On Code】



0404060

【Enable 2-Digit Add-On Code】



0404070

** 【Disable 5-Digit Add-On Code】



0404080

【Enable 5-Digit Add-On Code】



Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code: The scanner decodes a mix of UPC-A barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-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 add-on barcode. It can also decode UPC-A barcodes without add-on codes.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Add-On Code Required

UPC-A Add-On Code Required: The scanner only decodes UPC-A barcodes that contain add-on codes.

UPC-A Add-On Code Not Required: The scanner decodes a mix of UPC-A barcodes with and without add-on codes.



0404110

【UPC-A Add-On Code Required】



0404120

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

Transmit Preamble Character “0”

The preamble character “0” is part of the UPC-A barcode.



0404090

**** 【Do Not Transmit Preamble Character “0”】**



0404100

【Transmit Preamble Character “0”】



The preamble character “0” usually does not appear in printed UPC-A barcodes.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Interleaved 2 of 5

Restore Factory Defaults



0405000

【Restore the Factory Defaults of Interleaved 2 of 5】

Enable/Disable Interleaved 2 of 5



0405020

** 【Enable Interleaved 2 of 5】



0405010

【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.



0006000

** 【Exit Setup】



0006010

【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.



0405030

【Set the Minimum Length (Default: 6)】



0405040

【Set the Maximum Length (Default: 100)】



Maximum length of a 1D barcode should not exceed 127 bytes. If minimum length is set to be greater than maximum length, the scanner only decodes Interleaved 2 of 5 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Interleaved 2 of 5 barcodes with that length are to be decoded.



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

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

A check digit is optional for Interleaved 2 of 5 and can be added as the last digit. 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 Digit After Verification: The scanner checks the integrity of all Interleaved 2 of 5 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Digit After Verification: The scanner checks the integrity of all Interleaved 2 of 5 barcodes to verify that the data complies with the check digit 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 digit is added. The check digit is automatically generated when making Interleaved 2 of 5 barcodes.



0405050

** 【Disable】



0405060

【Do Not Transmit Check Digit After Verification】



0405070

【Transmit Check Digit After Verification】



If the **Do Not Transmit Check Digit 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 digit excluded will not be decoded. (For example, when the **Do Not Transmit Check Digit 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 digit cannot be read.)



0006000

** 【Exit Setup】



0006010

【Enter Setup】

ITF-14

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



0405260

【Restore the Factory Defaults of ITF-14】



0405080

**** 【Disable ITF-14】**



0405090

【Enable ITF-14 But Do Not Transmit Check Digit】



0405100

【Enable ITF-14 and Transmit Check Digit】



It is advisable not to enable ITF-14 and Interleaved 2 of 5 at the same time.



0006000

**** 【Exit Setup】**



0006010

【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.



0405270

【Restore the Factory Defaults of ITF-6】



0405110

**** 【Disable ITF-6】**



0405120

【Enable ITF-6 But Do Not Transmit Check Digit】



0405130

【Enable ITF-6 and Transmit Check Digit】



It is advisable not to enable ITF-6 and Interleaved 2 of 5 at the same time.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Matrix 2 of 5

Restore Factory Defaults



0406000

【Restore the Factory Defaults of Matrix 2 of 5】

Enable/Disable Matrix 2 of 5



0406020

【Enable Matrix 2 of 5】



0406010

**** 【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.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Set Length Range for Matrix 2 of 5

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



0406030

【Set the Minimum Length (Default: 6)】



0406040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. If minimum length is set to be greater than maximum length, the scanner only decodes Matrix 2 of 5 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Matrix 2 of 5 barcodes with that length are to be decoded.



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

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8”. (See the ***Digit Barcodes*** in **Appendix**)
4. Scan the **Save** barcode. (See the ***Save/Cancel Barcodes*** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

A check digit is optional for Matrix 2 of 5 and can be added as the last digit. 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 Digit After Verification: The scanner checks the integrity of all Matrix 2 of 5 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Digit After Verification: The scanner checks the integrity of all Matrix 2 of 5 barcodes to verify that the data complies with the check digit 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 digit is added. The check digit is automatically generated when making Matrix 2 of 5 barcodes.



0406050

【Disable】

0406060

**** 【Do Not Transmit Check Digit After Verification】**

0406070

【Transmit Check Digit After Verification】

If the **Do Not Transmit Check Digit 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 digit excluded will not be decoded. (For example, when the **Do Not Transmit Check Digit 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 digit cannot be read.)



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Code 39

Restore Factory Defaults



0408000

【Restore the Factory Defaults of Code 39】

Enable/Disable Code 39



0408020

** 【Enable Code 39】



0408010

【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.

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.



0408090

** 【Transmit Start/Stop Character】



0408080

【Do Not Transmit Start/Stop Character】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for Code 39

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



0408030

【Set the Minimum Length (Default: 1)】



0408040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

A check digit is optional for Code 39 and can be added as the last digit. 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 Digit After Verification: The scanner checks the integrity of all Code 39 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

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



0408050

** 【Disable】



0408060

【Do Not Transmit Check Digit After Verification】



0408070

【Transmit Check Digit After Verification】



If the **Do Not Transmit Check Digit After Verification** option is enabled, Code 39 barcodes with a length that is less than the configured minimum length after having the check digit excluded will not be decoded. (For example, when the **Do Not Transmit Check Digit 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 digit cannot be read.)



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Enable/Disable Code 39 Full ASCII

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



0408100

【Disable Code 39 Full ASCII】



0408110

**** 【Enable Code 39 Full ASCII】**



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Codabar

Restore Factory Defaults



0409000

【Restore the Factory Defaults of Codabar】

Enable/Disable Codabar



0409020

** 【Enable Codabar】



0409010

【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for Codabar

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



0409030

【Set the Minimum Length (Default: 1)】



0409040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

A check digit is optional for Codabar and can be added as the last digit. 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 Digit After Verification: The scanner checks the integrity of all Codabar barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

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



0409050

** 【Disable】



0409060

【Do Not Transmit Check Digit After Verification】



0409070

【Transmit Check Digit After Verification】



If the **Do Not Transmit Check Digit After Verification** option is enabled, Codabar barcodes with a length that is less than the configured minimum length after having the check digit excluded will not be decoded. (For example, when the **Do Not Transmit Check Digit 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 digit cannot be read.)



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Start/Stop Character

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



0409090

【Transmit Start/Stop Character】



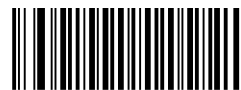
0409080

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



0409100

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



0409120

【Start/Stop Character in Uppercase】



0409110

【ABCD/TN*E as the Start/Stop Character】



0409130

【Start/Stop Character in Lowercase】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Code 93

Restore Factory Defaults



0410000

【Restore the Factory Defaults of Code 93】

Enable/Disable Code 93



0410020

** 【Enable Code 93】



0410010

【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for Code 93

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



0410030

【Set the Minimum Length (Default: 3)】



0410040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the *Digit Barcodes* in **Appendix**)
4. Scan the **Save** barcode. (See the *Save/Cancel Barcodes* in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

Check digits are optional for Code 93 and can be added as the last two digits, 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 Digit After Verification: The scanner checks the integrity of all Code 93 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the checks will be transmitted except the last two digits, whereas those failing them will not be transmitted.

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



0410050

【Disable】



0410060

** 【Do Not Transmit Check Digit After Verification】



0410070

【Transmit Check Digit After Verification】



If the **Do Not Transmit Check Digit After Verification** option is enabled, Code 93 barcodes with a length that is less than the configured minimum length after having the two check digits excluded will not be decoded. (For example, when the **Do Not Transmit Check Digit 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 digits cannot be read.)



0006000

** 【Exit Setup】



0006010

【Enter Setup】

UCC/EAN-128

Restore Factory Defaults



0412000

【Restore the Factory Defaults of UCC/EAN-128】

Enable/Disable UCC/EAN-128



0412020

**** 【Enable UCC/EAN-128】**



0412010

【Disable UCC/EAN-128】



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



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Set Length Range for UCC/EAN-128

The scanner can be configured to only decode UCC/EAN-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.



0412030

【Set the Minimum Length (Default: 1)】



0412040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. If minimum length is set to be greater than maximum length, the scanner only decodes UCC/EAN-128 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only UCC/EAN-128 barcodes with that length are to be decoded.



Set the scanner to decode UCC/EAN-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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

GS1 Databar

Restore Factory Defaults



0413000

【Restore the Factory Defaults of GS1 Databar】

Enable/Disable GS1 Databar



0413020

**** 【Enable GS1 Databar】**



0413010

【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”



0413060

**** 【Transmit Application Identifier “01”】**



0413050

【Do Not Transmit Application Identifier “01”】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Code 11

Restore Factory Defaults



0415000

【Restore the Factory Defaults of Code 11】

Enable/Disable Code 11



0415020

**** 【Enable Code 11】**



0415010

【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.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Set Length Range for Code 11

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



0415030

【Set the Minimum Length (Default: 2)】



0415040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the ***Digit Barcodes*** in **Appendix**)
4. Scan the **Save** barcode. (See the ***Save/Cancel Barcodes*** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

Check digits are optional for Code 11 and can be added as the last one or two digits, 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.



0415050

【Disable】



0415090

【One Check Digit, MOD11 (Len<=10)】

【Two Check Digits, MOD11/MOD11(Len>10)】



0415060

** 【One Check Digit, MOD11】



0415100

【One Check Digit, MOD11 (Len<=10)】

【Two Check Digits, MOD11/MOD9 (Len>10)】



0415070

【Two Check Digits, MOD11/MOD11】



0415110

** 【Do Not Transmit Check Digit】



0415080

【Two Check Digits, MOD11/MOD9】



0415120

【Transmit Check Digit】



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



0006000

** 【Exit Setup】



0006010

【Enter Setup】

ISBN

Restore Factory Defaults



0416000

【Restore the Factory Defaults of ISBN】

Enable/Disable ISBN



0416020

【Enable ISBN】



0416010

**** 【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



0416030

**** 【ISBN-13】**



0416040

【ISBN-10】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Add-On Code

An ISBN barcode can be augmented with a two-digit or five-digit add-on code to form a new one.



0416050

【Enable 2-Digit Add-On Code】



0416060

** 【Disable 2-Digit Add-On Code】



0416070

【Enable 5-Digit Add-On Code】



0416080

** 【Disable 5-Digit Add-On Code】



Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code: The scanner decodes a mix of ISBN barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-Digit Add-On Code/ Disable 5-Digit Add-On Code: The scanner decodes ISBN and ignores the add-on code when presented with an ISBN plus add-on barcode. It can also decode ISBN barcodes without add-on codes.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Add-On Code Required

ISBN Add-On Code Required: The scanner only decodes ISBN barcodes that contain add-on codes.

ISBN Add-On Code Not Required: The scanner decodes a mix of ISBN barcodes with and without add-on codes.



0416090

【ISBN Add-On Code Required】



0416100

** 【ISBN Add-On Code Not Required】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

ISSN

Restore Factory Defaults



0421000

【Restore the Factory Defaults of ISSN】

Enable/Disable ISSN



0421020

【Enable ISSN】



0421010

** 【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Add-On Code

An ISSN barcode can be augmented with a two-digit or five-digit add-on code to form a new one.



0421030

【Enable 2-Digit Add-On Code】



0421040

**** 【Disable 2-Digit Add-On Code】**



0421050

【Enable 5-Digit Add-On Code】



0421060

**** 【Disable 5-Digit Add-On Code】**



Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code: The scanner decodes a mix of ISSN barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-Digit Add-On Code/ Disable 5-Digit Add-On Code: The scanner decodes ISSN and ignores the add-on code when presented with an ISSN plus add-on barcode. It can also decode ISSN barcodes without add-on codes.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Add-On Code Required

ISSN Add-On Code Required: The scanner only decodes ISSN barcodes that contain add-on codes.

ISSN Add-On Code Not Required: The scanner decodes a mix of ISSN barcodes with and without add-on codes.



0421070

【ISSN Add-On Code Required】



0421080

** 【ISSN Add-On Code Not Required】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

AIM-128

Restore Factory Defaults



0423000

【Restore the Factory Defaults of AIM-128】

Enable/Disable AIM-128



0423020

** 【Enable AIM-128】



0423010

【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for AIM-128

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



0423030

【Set the Minimum Length (Default: 1)】



0423040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Industrial 25

Restore Factory Defaults



0417000

【Restore the Factory Defaults of Industrial 25】

Enable/Disable Industrial 25



0417020

** 【Enable Industrial 25】



0417010

【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for Industrial 25

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



0417030

【Set the Minimum Length (Default: 6)】



0417040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

A check digit is optional for Industrial 25 and can be added as the last digit. 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 Digit After Verification: The scanner checks the integrity of all Industrial 25 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

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



0417050

** 【Disable】



0417060

【Do Not Transmit Check Digit After Verification】



0417070

【Transmit Check Digit After Verification】



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



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Standard 25

Restore Factory Defaults



0418000

【Restore the Factory Defaults of Standard 25】

Enable/Disable Standard 25



0418020

** 【Enable Standard 25】



0418010

【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for Standard 25

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



0418030

【Set the Minimum Length (Default: 6)】



0418040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

A check digit is optional for Standard 25 and can be added as the last digit. 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 Digit After Verification: The scanner checks the integrity of all Standard 25 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

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



0418050

** 【Disable】



0418060

【Do Not Transmit Check Digit After Verification】



0418070

【Transmit Check Digit After Verification】



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



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Plessey

Restore Factory Defaults



0419000

【Restore the Factory Defaults of Plessey】

Enable/Disable Plessey



0419020

【Enable Plessey】



0419010

** 【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for Plessey

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



0419030

【Set the Minimum Length (Default: 1)】



0419040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the ***Digit Barcodes*** in **Appendix**)
4. Scan the **Save** barcode. (See the ***Save/Cancel Barcodes*** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

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

Disable: The scanner transmits Plessey barcodes as is.

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

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



0419050

【Disable】

0419060

**** 【Do Not Transmit Check Digit After Verification】**

0419070

【Transmit Check Digit After Verification】

If the **Do Not Transmit Check Digit After Verification** option is enabled, Plessey barcodes with a length that is less than the configured minimum length after having the check digits excluded will not be decoded. (For example, when the **Do Not Transmit Check Digit 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 digits cannot be read.)



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

MSI-Plessey

Restore Factory Defaults



0420000

【Restore the Factory Defaults of MSI-Plessey】

Enable/Disable MSI-Plessey



0420020

【Enable MSI-Plessey】



0420010

** 【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for MSI-Plessey

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



0420030

【Set the Minimum Length (Default: 2)】



0420040

【Set the Maximum Length (Default: 127)】



Maximum length of a 1D barcode should not exceed 127 bytes. 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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Check Digit Verification

Check digits are optional for MSI-Plessey and can be added as the last one or two digits, 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.



0420050

【Disable】



0420080

【Two Check Digits, MOD10/MOD11】



0420060

** 【One Check Digit, MOD10】



0420090

** 【Do Not Transmit Check Digit】



0420070

【Two Check Digits, MOD10/MOD10】



0420100

【Transmit Check Digit】



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



0006000

** 【Exit Setup】



0006010

【Enter Setup】

PDF417

Restore Factory Defaults



0501000

**** 【Restore the Factory Defaults of PDF417】**

Enable/Disable PDF417



0501020

**** 【Enable PDF417】**



0501010

【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.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Set Length Range for PDF417

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



0501030

【Set the Minimum Length (Default: 1)】



0501040

【Set the Maximum Length (Default: 1024)】



Maximum length of a 2D barcode should not exceed 1024 bytes. 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 bytes:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

QR Code

Restore Factory Defaults



0502000

【Restore the Factory Defaults of QR Code】

Enable/Disable QR Code



0502020

**** 【Enable QR Code】**



0502010

【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.



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Set Length Range for QR Code

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



0502030

【Set the Minimum Length (Default: 1)】



0502040

【Set the Maximum Length (Default: 1024)】



Maximum length of a 2D barcode should not exceed 1024 bytes. 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 bytes:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Micro QR



0502110

**** 【Enable Micro QR】**



0502100

【Disable Micro QR】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Data Matrix

Restore Factory Defaults



0504000

【Restore the Factory Defaults of Data Matrix】

Enable/Disable Data Matrix



0504020

** 【Enable Data Matrix】



0504010

【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.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Set Length Range for Data Matrix

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



0504030

【Set the Minimum Length (Default: 1)】



0504040

【Set the Maximum Length (Default: 1024)】



Maximum length of a 2D barcode should not exceed 1024 bytes. 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 bytes:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8”. (See the ***Digit Barcodes*** in **Appendix**)
4. Scan the **Save** barcode. (See the ***Save/Cancel Barcodes*** in **Appendix**)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcode “1”.
7. Scan the numeric barcode “2”.
8. Scan the **Save** barcode.
9. Scan the **Exit Setup** barcode.



0006000

**【Exit Setup】



0006010

【Enter Setup】

Rectangular Barcode

Data Matrix has two formats:

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

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



0504110

**** 【Enable Rectangular Barcode】**



0504100

【Disable Rectangular Barcode】

Mirror Image



0504331

**** 【Decode Mirrored DM】**



0504330

【Do Not Decode Mirrored DM】



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

Chapter 6 Prefix & Suffix

Introduction

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

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



0006000

****【Exit Setup】**



0006010

【Enter Setup】

General Settings

Enable/Disable All Prefix/Suffix

Disable All Prefix/Suffix: Transmit barcode data with no prefix/suffix.

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



0311000

【Disable All Prefix/Suffix】



0311010

【Enable All Prefix/Suffix】

Prefix Sequences

2 prefix sequence options:



0317010

【Code ID + Custom + AIM ID】



0317040

** 【Custom + Code ID + AIM ID】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Custom Prefix

Enable/Disable Custom Prefix

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



0305000

** 【Disable Custom Prefix】



0305010

【Enable Custom Prefix】

Set Custom Prefix

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

Note: A custom prefix cannot exceed 10 characters.



0300000

【Set Custom Prefix】

E
xample

Set the custom prefix to “CODE” (its hexadecimal value is 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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Enable Custom Prefix** barcode.
6. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

AIM ID Prefix

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



0308000

** 【Disable AIM ID Prefix】



0308030

【Enable AIM ID Prefix】



AIM ID is not user programmable.

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.



0307000

** 【Disable Code ID Prefix】



0307010

【Enable Code ID Prefix】



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Restore All Default Code IDs

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



0307020

【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.

E
xample

Modify PDF417 Code ID to be “p” (its hexadecimal value is 0x70):

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



0006000

** 【Exit Setup】



0006010

【Enter Setup】



0005000

【Modify PDF417 Code ID】



0005030

【Modify Data Matrix Code ID】



0005010

【Modify QR Code ID】



0004110

【Modify Matrix 25 Code ID】



0004230

【Modify ISSN Code ID】



0004210

【Modify AIM-128 Code ID】



0004040

【Modify EAN-8 Code ID】



0004100

【Modify ITF-6 Code ID】



0006000

****【Exit Setup】**



0006010

【Enter Setup】



0004050

【Modify EAN-13 Code ID】



0004130

【Modify Code 39 Code ID】



0004060

【Modify UPC-E Code ID】



0004150

【Modify Codabar Code ID】



0004070

【Modify UPC-A Code ID】



0004170

【Modify Code 93 Code ID】



0004080

【Modify Interleaved 2 of 5 Code ID】



0004020

【Modify Code 128 Code ID】



0006000

****【Exit Setup】**



0006010

【Enter Setup】



0004090

【Modify ITF-14 Code ID】



0004240

【Modify ISBN Code ID】



0004030

【Modify UCC/EAN-128 Code ID】



0004250

【Modify Industrial 25 Code ID】



0004280

【Modify Code 11 Code ID】



0004260

【Modify Standard 25 Code ID】



0004270

【Modify Plessey Code ID】



0004290

【Modify MSI-Plessey Code ID】



0004310

【Modify GS1 Databar Code ID】



0006000

****【Exit Setup】**



0006010

【Enter Setup】

Custom Suffix

Enable/Disable Custom Suffix

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



0306000

** 【Disable Custom Suffix】



0306010

【Enable Custom Suffix】

Set Custom Suffix

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

Note: A custom suffix cannot exceed 10 characters.



0301000

【Set Custom Suffix】

E
xample

Set the custom suffix to “CODE” (its hexadecimal value is 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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Enable Custom Suffix** barcode.
6. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Terminating Character Suffix

Enable/Disable Terminating Character Suffix

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



0309000

【Disable Terminating Character Suffix】



0309010

**** 【Enable Terminating Character Suffix】**

Set Terminating Character Suffix

The scanner provides a shortcut for setting the terminating character suffix to 0x0D or 0x0D,0x0A by scanning the following barcode.



0310010

【Terminating Character 0x0D】



0310020

**** 【Terminating Character 0x0D,0x0A】**



0006000

**** 【Exit Setup】**



0006010

【Enter Setup】

To set a terminating character suffix, scan the **Set Terminating Character Suffix** barcode and the numeric barcodes representing the hexadecimal value of a desired terminating character and then scan the **Save** barcode. Refer to the **ASCII Table** in **Appendix** for hexadecimal values of terminating characters.

Note: A terminating character suffix cannot exceed 2 characters.



0310000

【Set Terminating Character Suffix】

E
xample

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”. (See the **Digit Barcodes** in **Appendix**)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** in **Appendix**)
5. Scan the **Exit Setup** barcode.



0006000

** 【Exit Setup】



0006010

【Enter Setup】

Chapter 7 Ambient Illumination

Ambient lighting conditions may vary from one operating environment to another, such as fluorescent lit warehouses or sunlit open spaces. Fluorescent lights may flicker when using AC power source in 50-60Hz. Usually indoor illuminance is around 1,000 lux while outdoor illuminance may reach 60,000 lux or even over 100,000 lux.

Two options are provided for ambient illumination settings:

Normal Illuminance: applicable to most indoor/outdoor environments.

High Illuminance: applicable to special environments with super-intense light source.

Change to this settings will not take effect until the scanner reboots or wakes from sleep.



0313150

**** 【Normal Illuminance (0~60000lux)】**



0313151

【High Illuminance (60000~120000lux)】



0006000

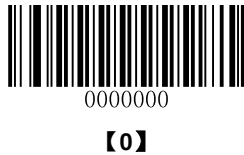
**** 【Exit Setup】**

Appendix

Digit Barcodes

After scanning numeric barcode(s), you need to scan the **Save** barcode to save the data.

0~5



6~9



0000060

【6】



0000070

【7】



0000080

【8】



0000090

【9】

A~F



0000100

【A】



0000110

【B】



0000120

【C】



0000130

【D】



0000140

【E】



0000150

【F】

Save/Cancel Barcodes

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

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

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



Factory Defaults Table

Parameter		Factory Default	Remark
System Settings			
Barcode Programming		Disabled	
Auto Power-Off Timeout		5 minutes	Applicable to Manual mode only
Illumination		Normal	
Aiming		Normal	
Startup Beep		Enabled	
Good Read Beep	Notification	Enabled	
	Beep Type	Type 3	
	Beep Volume	Loud	
NGR (Not Good Read) Message		Do not transmit	
		Null	
Scan Mode		Manual mode	
Manual Mode	Decode Session Timeout	3,000ms	Applicable to Trigger mode, Sense mode and Continuous mode 1~3,600,000ms; 0: Infinite.
	Timeout between Decodes (Same Barcode)	Disabled	
		1,500ms	0~65,535ms
Sense Mode	Decode Session Timeout	3,000ms	Applicable to Trigger mode, Sense mode and Continuous mode 1~3,600,000ms; 0: Infinite.
	Image Stabilization Timeout	500ms	0~1,600ms
	Operation after Good Decode	Pause after good decode	
	Timeout between Decodes (Same Barcode)	Enabled	
		1,500ms	0~65,535ms
	Threshold Value of Illumination Change	2	1~20
Continuous Mode	Decode Session Timeout	3,000ms	Applicable to Trigger mode, Sense mode and Continuous mode 1~3,600,000ms; 0: Infinite.
	Timeout between Decodes	1,000ms	0~65,535ms

Parameter		Factory Default	Remark
Communication Settings			
Wireless Communication Mode		Synchronous Mode	
USB HID-KBW		USB HID-KBW	
RS-232	Baud Rate	115200	
	Parity Check	None	
	Number of Data Bits	8	
	Number of Stop Bits	1	
	Hardware Flow Control	Disabled	
USB HID-KBW	Examine KBW Connection	Enabled	
	USB Country Keyboard Type	U.S.	
	Inter-Keystroke Delay	No delay	
	Convert Case	No conversion	
	Emulate ALT + Keypad	Disabled	
	Function Key Mapping	Disabled	
	Emulate Numeric Keypad	Disabled	
Prefix & Suffix			
Prefix Sequence		Custom+Code ID+AIM ID	
Custom Prefix		Disabled	
		Null	
AIM ID Prefix		Disabled	
Code ID Prefix		Disabled	
Custom Suffix		Disabled	
		Null	
Terminating Character Suffix		Enabled	
		0x0D, 0x0A	Carriage Return/Line Feed
Ambient Illumination			
Ambient Illumination		Normal illuminance	

Parameter	Factory Default	Remark
Symbologies		
Video Reverse	Disabled	Applicable to all symbologies.
Code 128		
Code 128	Enabled	
Maximum Length	127	
Minimum Length	1	
UCC/EAN-128		
UCC/EAN-128	Enabled	
Maximum Length	127	
Minimum Length	1	
AIM-128		
AIM-128	Enabled	
Maximum Length	127	
Minimum Length	1	
EAN-8		
EAN-8	Enabled	
Check Digit	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not required	
Extend to EAN-13	Disabled	
EAN-13		
EAN-13	Enabled	
Check Digit	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not required	
ISSN		
ISSN	Disabled	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not required	

Parameter	Factory Default	Remark
ISBN		
ISBN	Disabled	
ISBN Format	ISBN-13	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not required	
UPC-E		
UPC-E	Enabled	
Check Digit	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not required	
Extend to UPC-A	Disabled	
System Character "0"	Do not transmit	
UPC-A		
UPC-A	Enabled	
Check Digit	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not required	
Preamble Character "0"	Do not transmit	
Interleaved 2 of 5		
Interleaved 2 of 5	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Maximum Length	100	
Minimum Length	6	
ITF-6		
ITF-6	Disabled	
Check Digit	Do not transmit	

Parameter	Factory Default	Remark
ITF-14		
ITF-14	Disabled	
Check Digit	Do not transmit	
Matrix 2 of 5		
Matrix 2 of 5	Disabled	
Check Digit Verification	Enabled	
Check Digit	Do not transmit	
Maximum Length	127	
Minimum Length	6	
Industrial 2 of 5		
Industrial 2 of 5	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Maximum Length	127	
Minimum Length	6	
Standard 2 of 5		
Standard 2 of 5	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Maximum Length	127	
Minimum Length	6	
Code 39		
Code 39	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Start/Stop Character	Transmit	
Code 39 Full ASCII	Enabled	
Maximum Length	127	
Minimum Length	1	

Parameter	Factory Default	Remark
Codabar		
Codabar	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Start/Stop Character	Do not transmit	
Start/Stop Character Format	ABCD/ABCD	
Maximum Length	127	
Minimum Length	1	
Code 93		
Code 93	Enabled	
Check Digit Verification	Enabled	
Check Digit	Do not transmit	
Maximum Length	127	
Minimum Length	3	
GS1 Databar		
GS1 Databar	Enabled	
Application Identifier "01"	Transmit	
Code 11		
Code 11	Enabled	
Check Digit Verification	One check digit, MOD11	
Check Digit	Do not transmit	
Maximum Length	127	
Minimum Length	2	
Plessey		
Plessey	Disabled	
Check Digit Verification	Enabled	
Check Digit	Do not transmit	
Maximum Length	127	
Minimum Length	1	

Parameter	Factory Default	Remark
MSI-Plessey		
MSI-Plessey	Disabled	
Check Digit Verification	One check digit, MOD10	
Check Digit	Do not transmit	
Maximum Length	127	
Minimum Length	2	
PDF 417		
PDF 417	Enabled	
Maximum Length	1024	
Minimum Length	1	
QR Code		
QR Code	Enabled	
Micro QR	Enabled	
Maximum Length	1024	
Minimum Length	1	
Data Matrix		
Data Matrix	Enabled	
Rectangular Barcode	Enabled	
Mirror Image	Decode	
Maximum Length	1024	
Minimum Length	1	

AIM ID Table

Symbology	AIM ID	Remark
EAN-13	]E0	Standard EAN-13
	]E3	EAN-13 + 2/5-Digit Add-On Code
EAN-8	]E4	Standard EAN-8
	]E4...]E1...	EAN-8 + 2-Digit Add-On Code
	]E4...]E2...	EAN-8 + 5-Digit Add-On Code
UPC-E	]E0	Standard UPC-E
	]E3	UPC-E + 2/5-Digit Add-On Code
UPC-A	]E0	Standard UPC-A
	]E3	UPC-A + 2/5-Digit Add-On Code
Code 128	]C0	Standard Code 128
UCC/EAN-128	]C1	FNC1 is the character right after the start character
AIM-128	]C2	FNC1 is the 2nd character after the start character
ISBT-128	]C4	
Interleaved 2 of 5	]I0	No check digit verification
	]I1	Transmit check digit after verification
	]I3	Do not transmit check digit after verification
ITF-6	]I1	Transmit check digit
	]I3	Do not transmit check digit
ITF-14	]I1	Transmit check digit
	]I3	Do not transmit check digit
Industrial 2 of 5	]S0	Not specified
Standard 2 of 5	]R0	No check digit verification
	]R8	One check digit, MOD10; do not transmit check digit
	]R9	One check digit, MOD10; transmit check digit
Code 39	]A0	Transmit barcodes as is; Full ASCII disabled; no check digit verification
	]A1	One check digit, MOD43; transmit check digit
	]A3	One check digit, MOD43; do not transmit check digit
	]A4	Full ASCII enabled; no check digit verification
	]A5	Full ASCII enabled; transmit check digit
	]A7	Full ASCII enabled; do not transmit check digit

Symbology	AIM ID	Remark
Codabar	JF0	Standard Codabar
	JF2	Transmit check digit after verification
	JF4	Do not transmit check digit after verification
Code 93	JG0	Standard Code 93
Code 11	JH0	One check digit MOD11; transmit check digit
	JH1	Two check digits, MOD11/MOD11; transmit check digit
	JH3	Do not transmit check digit after verification
	JH9	No check digit verification
GS1-DataBar (RSS)	Je0	Standard GS1-DataBar
Plessey	JP0	Standard Plessey
MSI-Plessey	JM0	One check digit, MOD10; transmit check digit
	JM1	One check digit, MOD10; do not transmit check digit
	JM8	Two check digits
	JM9	No check digit verification
Matrix 2 of 5	JX0	Specified by the manufacturer
	JX1	No check digit verification
	JX2	One check digit, MOD10; transmit check digit
	JX3	One check digit, MOD11; do not transmit check digit
ISBN	JX4	Standard ISBN
ISSN	JX5	Standard ISSN
PDF417	JL0	Comply with 1994 PDF417 specifications
Data Matrix	jd0	ECC000 - ECC140
	jd1	ECC200
	jd2	ECC200, FNC1 is the 1st or 5th character after the start character
	jd3	ECC200, FNC1 is the 2nd or 6th character after the start character
	jd4	ECC200, ECI included
	jd5	ECC200, FNC1 is the 1st or 5th character after the start character, ECI included
	jd6	ECC200, FNC1 is the 2nd or 6th character after the start character, ECI included

Symbology	AIM ID	Remark
QR Code	]Q0	QR1
	]Q1	2005 version, ECI excluded
	]Q2	2005 version, ECI included
	]Q3	QR Code 2005, ECI excluded, FNC1 is the 1st character after the start character
	]Q4	QR Code 2005, ECI included, FNC1 is the 1st character after the start character
	]Q5	QR Code 2005, ECI excluded, FNC1 is the 2nd character after the start character
	]Q6	QR Code 2005, ECI included, FNC1 is the 2nd character after the start character

Reference: ISO/IEC 15424:2008 Information technology – Automatic identification and data capture techniques – Data Carrier Identifiers (including Symbology Identifiers).

Code ID Table

Symbology	Code ID
Code 128	j
UCC/EAN-128	j
AIM-128	f
EAN-8	d
EAN-13	d
ISSN	n
ISBN	B
UPC-E	c
UPC-A	c
Interleaved 2 of 5	e
ITF-6	e
ITF-14	e
Matrix 2 of 5	v
Industrial 2 of 5	D
Standard 2 of 5	s
Code 39	b
Codabar	a
Code 93	i
Code 11	H
Plessey	p
MSI-Plessey	m
GS1 Databar	R
PDF417	r
QR Code	Q
Data Matrix	u

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 Acknowledgement)
16	22	SYN (Synchronous Idle)
17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1a	26	SUB (Substitute)
1b	27	ESC (Escape)
1c	28	FS (File Separator)
1d	29	GS (Group Separator)

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

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

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

ASCII Function Key Mapping Table

ASCII Function	ASCII Value (HEX)	No Function Key Mapping	Function Key Mapping
NUL (Null char.)	00	Null	Ctrl+2
SOH (Start of Header)	01	Keypad Enter	Ctrl+A
STX (Start of Text)	02	Caps Lock	Ctrl+B
ETX (End of Text)	03	Null	Ctrl+C
EOT (End of Transmission)	04	Null	Ctrl+D
ENQ (Enquiry)	05	Null	Ctrl+E
ACK (Acknowledgment)	06	Null	Ctrl+F
BEL (Bell)	07	Enter	Ctrl+G
BS (Backspace)	08	Left Arrow	Ctrl+H
HT (Horizontal Tab)	09	Horizontal Tab	Ctrl+I
LF (Line Feed)	0A	Down Arrow	Ctrl+J
VT (Vertical Tab)	0B	Vertical Tab	Ctrl+K
FF (Form Feed)	0C	Delete	Ctrl+L
CR (Carriage Return)	0D	Enter	Ctrl+M
SO (Shift Out)	0E	Insert	Ctrl+N
SI (Shift In)	0F	Esc	Ctrl+O
DLE (Data Link Escape)	10	F11	Ctrl+P
DC1 (XON) (Device Control 1)	11	Home	Ctrl+Q
DC2 (Device Control 2)	12	Print Screen	Ctrl+R
DC3 (XOFF) (Device Control 3)	13	Backspace	Ctrl+S
DC4 (Device Control 4)	14	tab+shift	Ctrl+T
NAK (Negative Acknowledgment)	15	F12	Ctrl+U
SYN (Synchronous Idle)	16	F1	Ctrl+V
ETB (End of Trans. Block)	17	F2	Ctrl+W
CAN (Cancel)	18	F3	Ctrl+X
EM (End of Medium)	19	F4	Ctrl+Y
SUB (Substitute)	1A	F5	Ctrl+Z
ESC (Escape)	1B	F6	See the following table
FS (File Separator)	1C	F7	
GS (Group Separator)	1D	F8	
RS (Request to Send)	1E	F9	
US (Unit Separator)	1F	F10	

ASCII Function Key Mapping Table (Continued)

The function key mappings of the last five characters in the previous table differ from one keyboard layout to another.

Country/ Keyboard Layout	Function Key Mapping				
	1B	1C	1D	1E	1F
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+-

Warning Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.



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