Leitor Compex QC75

O Leitor de Bolso QC75 Compex soma confiabilidade, versatilidade e praticidade. Perfeitamente compacto, o leitor é ideal para os usuários transportarem para onde os negócios os levam.

QC 1D Series :

QC510X , 511X

QC620X , 621X

QC630X , 631X

QC710X , 711X

QC720X , 721X

QC7506 , 7516

User Guide

Revision History

Version	Description	Date
V1.0.0	Initial release.	June 23, 2015

Table of Contents

W010F01

** Enter Setup

Chapter 1 Getting Started

Introduction

The QC 1D SERIES supports EAN-13, EAN-8, UPC-A, UPC-E, ISSN, ISBN, Codabar, Code 128, Code 93, ITF-6, ITF-14, Interleaved 2 of 5, Industrial 2 of 5, Standard 2 of 5, Matrix 2 of 5, GS1 Databar, Code 39, Code 11, MSI-Plessey, Plessey.

W010F01

** Enter Setup

About This Guide

This guide provides programming instructions for the QC 1D SERIES. Users can configure the scanner by scanning the programming barcodes included in this manual or by sending host commmands to the device.

The QC 1D SERIES has been properly configured for most applications and can be put into use without further configuration. Users may check the ***Factory Defaults Table*** in Appendix for reference. Throughout the manual, programming barcodes marked with asterisks (**) are factory default values.

Barcode Scanning

The QC 1D SERIES features fast scanning and accurate decoding. Barcodes rotated at any angle can still be read with ease. When scanning a barcode, simply center the aiming beam projected by the QC 1D SERIES over the barcode.

W010F00

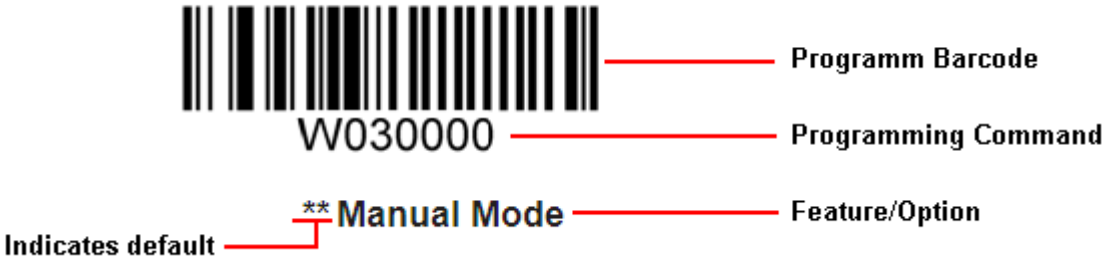
Exit Setup

W010F01

** Enter Setup

Barcode Programming

The QC 1D SERIES can be configured by scanning programming barcodes. All user programmable features/options are described along with their programming barcodes/commands in the following sections.



Enter/Exit Setup

W010F01

** Enter Setup

W010F00

Exit Setup

Programming Barcode Data

W060F00

** Do Not Transmit Programming Barcode Data

W060F06

Transmit Programming Barcode Data

W010F01

**** Enter Setup**

Factory Defaults

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

You may need to reset your scanner when:

1. scanner is not properly configured so that it fails to decode barcodes;

2. you forget previous configuration and want to avoid its impact;

3. functions that are rarely used have been enabled for the time being.

WFFD980

Restore All Factory Defaults

W010F01

** Enter Setup

Chapter 2 Scan Mode

Manual Mode

Manual Mode (default): A trigger pull activates a decode session. The decode session continues until the barcode is decoded or the trigger is released or the decode session timeout expires.

W030000

**** Manual Mode**

Decode Session Timeout: This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 1s increments from 1s to 255s. The default timeout is 15s. If the parameter is set to 0, the decode session timeout is infinite.

M00031D

Decode Session Timeout

Example: Set the decode session timeout to 5s

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

W010F01

**** Enter Setup**

Continuous Mode

Continuous Mode: A trigger press activates the scanner to scan and decode at user-specified intervals, i.e. the timeout between decodes. Each decode session lasts until barcode is decoded or the decode session timeout expires. To suspend/resume the operation, simply press the trigger.

W030002

Continuous Mode

Decode Session Timeout: This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 1s increments from 1s to 255s. The default timeout is 15s. If the parameter is set to 0, the decode session timeout is infinite.

M00031D

Decode Session Timeout

Example: Set the decode session timeout to 5s

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

W010F00

Exit Setup

W010F01

**** 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 0.1s increments from 0.0s to 25.5s. The default timeout is 1.0s.

M00031C

Timeout between Decodes

Example: Set the timeout between decodes to 5s

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

W010F00

Exit Setup

W010F01

**** Enter Setup**

Timeout between Decodes (Same Barcode) can avoid undesired rereading of same barcode in a given period of time. This parameter sets the timeout between decodes for same barcode. It is programmable in 0.1s increments from 0.1s to 25.5s. The default timeout is 3.0s. If the parameter is set to 0, the timeout between decodes (same barcode) is infinite.

Note: This parameter is only valid when the **Disallow Rereading Same Barcode** is enabled.

M00031E

Timeout between Decodes (Same Barcode)

Allow Rereading Same Barcode: The scanner is allowed to re-read same barcode, ignoring the timeout between decodes (same barcode).

Disallow Rereading Same Barcode: The scanner is not allowed to re-read same barcode before the timeout between decodes (same barcode) expires.

W100A00

Allow Rereading Same Barcode

W100A10

**** Disallow Rereading Same Barcode**

Example: Set the timeout between decodes (same barcode) to 5s

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

W010F00

Exit Setup

W010F01

**** Enter Setup**

Sense Mode

Sense Mode: The scanner activates a decode session every time when it detects a change in ambient illumination and meets the requirement of the image stabilization timeout. Decode session continues until barcode is decoded or the decode session timeout expires.

W030003

Sense Mode

Decode Session Timeout: This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 1s increments from 1s to 255s. The default timeout is 15s. If the parameter is set to 0, the decode session timeout is infinite.

M00031D

Decode Session Timeout

Example: Set the decode session timeout to 5s

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

W010F00

Exit Setup

W010F01

** 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. This parameter is programmable in 0.1s increments from 0.0s to 25.5s.

M00031B

Image Stabilization Timeout

Example: Set the Image Stabilization Timeout to 5s

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

W010F01

**** Enter Setup**

Timeout between Decodes (Same Barcode) can avoid undesired rereading of same barcode in a given period of time. This parameter sets the timeout between decodes for same barcode. It is programmable in 0.1s increments from 0.1s to 25.5s. The default timeout is 3.0s. If the parameter is set to 0, the timeout between decodes (same barcode) is infinite.

Note: This parameter is only valid when the **Disallow Rereading Same Barcode** is enabled.

M00031E

Timeout between Decodes (Same Barcode)

Allow Rereading Same Barcode: The scanner is allowed to re-read same barcode, ignoring the timeout between decodes (same barcode).

Disallow Rereading Same Barcode: The scanner is not allowed to re-read same barcode before the timeout between decodes (same barcode) expires.

W100A00

Allow Rereading Same Barcode

W100A10

**** Disallow Rereading Same Barcode**

Example: Set the timeout between decodes (same barcode) to 5s

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

W010F00

Exit Setup

W010F01

**** Enter Setup**

Sensitivity: This parameter 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.

WFF0305

High Sensitivity

WFF0310

**** Medium Sensitivity**

WFF0330

**** Medium Sensitivity**

M00031A

Custom Sensitivity

Sensitivity levels range from 0 to 255. The smaller the number, the higher the sensitivity.

Example: Set the sensitivity level to 10

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

W010F00

Exit Setup

W010F01

** Enter Setup

Command Trigger Mode

Command Trigger Mode: Decode session is activated by a host command. The decode session continues until the barcode is decoded or the decode session timeout expires.

W030001

Command Trigger Mode

Decode Session Timeout: This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 1s increments from 1s to 255s. The default timeout is 15s. If the parameter is set to 0, the decode session timeout is infinite.

M00031D

Decode Session Timeout

Example: Set the decode session timeout to 5s

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

W010F00

Exit Setup

W010F01

** Enter Setup

Chapter 3 Notification

Good Read Beep

** Good Read Beep On

Good Read Beep Off

Low Frequency

** Medium Frequency

High Frequency

Beep Duration: 40ms

** Beep Duration: 80ms

Beep Duration: 120ms

W010F00

Exit Setup

W010F01

**** Enter Setup**

Decode Result Notification

When enabled, if a barcode does not decode, “F” is transmitted; if a barcode is decoded, “S” is appended to the barcode data as the most left character.

W203120

Enable Decode Result Notification

W203100

**** Disable Decode Result Notification**

W010F00

Exit Setup

W010F01

**** Enter Setup**

Other Settings

You can change the following parameter settings temporarily and the changes will be lost when you power down or reboot the scanner.

Silent Mode

W400000

Silent Mode On

W400040

**** Silent Mode Off**

Note: This feature is only applicable to decode beep and will be automatically disabled when the scanner is powered down or rebooted.

Illumination

W0C0000

Off

W0C0008

Always On

W0C0004

**** On When Scanning**

** Enter Setup

Chapter 4 Communication Settings

The scanner provides an RS-232 interface and a USB interface to communicate with the host device. The host device can receive scanned data and send commands to control the scanner or to access/alter the configuration information of the scanner via the RS-232 or USB interface.

Exit Setup

W010F01

** Enter Setup

RS-232 Interface

Baud Rate

When the scanner is connected to a host device through its RS-232 interface, you need to set communication parameters (including baud rate) to match the host device.

Baud rate is the number of bits of data transmitted per second. Set the scanner's baud rate to match the Host requirements.

WFFD9D3

**** 9600**

WFFD9D0

1200

WFFD9D1

2400

WFFD9D2

4800

WFFD9D4

14400

WFFD9D5

19200

WFFD9D6

38400

WFFD9D7

57600

WFFD9D8

115200

W010F00

Exit Setup

W010F01

** Enter Setup

Parity Check

W062900

** None

W062906

Even Parity

W062904

Odd Parity

Stop Bit

W012900

** 1 Stop Bit

W012901

2 Stop Bits

W010F00

Exit Setup

W010F01

** Enter Setup

Data Bit

W082908

8 Data Bits

W0F2908

** 8 Data Bits, No Parity, 1 Stop Bit

W0F290E

8 Data Bits, Even Parity, 1 Stop Bit

W0F290C

8 Data Bits, Odd Parity, 1 Stop Bit

W0F2909

8 Data Bits, No Parity, 2 Stop Bits

W0F290F

8 Data Bits, Even Parity , 2 Stop Bits

W0F290D

8 Data Bits, Odd Parity, 2 Stop Bits

W082900

7 Data Bits

W010F00

Exit Setup

W010F01

**** Enter Setup**

W0F2906

7 Data Bits, Even Parity, 1 Stop Bit

W0F2904

7 Data Bits, Odd Parity, 1 Stop Bit

W0F2907

7 Data Bits, Even Parity, 2 Stop Bits

W0F2905

7 Data Bits, Odd Parity, 2 Stop Bits

W010F00

Exit Setup

W010F01

** Enter Setup

USB Interface

USB HID-KBW

When enabled, the scanner’s transmission is simulated as USB keyboard input. It works on a Plug and Play basis and no driver is required.

W070901

** USB HID-KBW

W010F00

Exit Setup

W010F01

** Enter Setup

Standard Keyboard

W031A00

**** Standard Keyboard**

Emulate ALT+Keypad

When **Emulate ALT+Keypad** is enabled, any ASCII character (0x00 - 0xFF) is 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.

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

W031A03

Emulate ALT+Keypad

Note: It is recommended to turn on the Num Lock light on the host when using this feature.

W010F01

** Enter Setup

Function Key Mapping

When **Function Key Mapping** is enabled, function character (0x00 - 0x1F) are sent as ASCII sequences over the numeric keypad.

1. CTRL Make
2. Press function key (Refer to the **ASCII Function Key Mapping Table** on the following page)
3. CTRL Break

W031A01

Function Key Mapping

** Enter Setup

ASCII Function Key Mapping Table

ASCII Value （HEX）	Function Key	ASCII Value （HEX）	Function Key
00	2	10	P
01	A	11	Q
02	B	12	R
03	C	13	S
04	D	14	T
05	E	15	U
06	F	16	V
07	G	17	W
08	H	18	X
09	I	19	Y
0A	J	1A	Z
0B	K	1B	[
0C	L	1C	\
0D	M	1D	]
0E	N	1E	6
0F	O	1F	.

Exit Setup

W010F01

** Enter Setup

USB Country Keyboard Types

Keyboard layouts vary from country to country. All supported keyboard types are listed below.

WFF1900

** 1 - U.S.

WFF1901

2 - Belgium

WFF1902

3 - Brazil

WFF1903

4 - Canada

WFF1904

5 - Czech

WFF1905

6 - Denmark

WFF1906

7 - Finland

WFF1907

8 - France

W010F00

Exit Setup

W010F01

**** Enter Setup**

WFF1908

9 - Austria

WFF1909

10 - Greece

WFF190A

11 - Hungary

WFF190B

12 - Israel

WFF190C

13 - Italy

WFF190D

14 - Latin America

WFF190E

15 - Netherland

WFF190F

16 - Norway

WFF1910

17 - Poland

WFF1911

18 - Portugal

W010F00

Exit Setup

W010F01

** Enter Setup

WFF1912

19 - Romania

WFF1913

20 - Russia

WFF1915

21 - Slovakia

WFF1916

22 - Spain

WFF1917

23 - Sweden

WFF1918

24 - Switzerland

WFF1919

25 - Turkey1

WFF191A

26 - Turkey 2

WFF191B

27 - UK

WFF191C

28 - Japan

W010F00

Exit Setup

W010F01

** Enter Setup

Inter-Keystroke Delay

This parameter specifies the delay between emulated keystrokes.

WC01A00

** No Delay

WC01A40

Short Delay (5ms)

WC01A80

Medium Delay (10ms)

WC01AC0

Long Delay (15ms)

W010F01

**** Enter Setup**

Convert Case

This parameter is valid when the **Standard Keyboard** or **Function Key Mapping** is enabled.

W381A00

**** No Case Conversion**

W381A20

Convert All to Upper Case

W381A30

Convert All to Lower Case

W381A08

Invert Upper and Lower Case Characters

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

W010F01

**** 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 on numeric keypad, whereas sending other character like “+”, “_”, “*” , “/” and “.” is still emulated as keystroke on main keyboard. However, this feature is influenced by the state of the Num Lock key on the host: if the Num Lock light on the host is ON, numbers are sent over numeric keypad, if it is OFF, numbers are sent over main keyboard.

W041A04

Emulate Numeric Keypad

W041A00

**** Do Not Emulate Numeric Keypad**

Note: Make sure the Num Lock light of the Host is turned ON when using this feature.
Emulate ALT+Keypad ON prevails over **Emulate Numeric Keypad**.

W010F01

** Enter Setup

USB DataPipe

A driver is required when using this protocol to communicate with the scanner.

USB DataPipe

USB COM Port Emulation

This feature allows the host to receive data in the way as a serial port does. However, you need to set communication parameters on the scanner to match the Host requirements. A driver is required for this feature.

USB COM Port Emulation

W010F01

** Enter Setup

HID-POS

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

Features:

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

Note: 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.

W070903

HID-POS

W010F01

** Enter Setup

Access the Scanner with Your Program

1. Use CreateFile to access the scanner as a HID device.
2. Use ReadFile to deliver the scanned data to the application program.
3. Use WriteFile to send data to the scanner.

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

Acquire Scanned Data

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

	Bit							
Byte	7	6	5	4	3	2	1	0
0	Report ID = 0x02							
1	Barcode Length							
2-57	Decoded Data (1-56)							
58-61	Reserved (1-4)							
62	0x00							
63	00 (no data continued) or 01 (data continued)							

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

Product	Interface	PID (Hex)	PID (Dec)
QC 1D SERIES	USB DataPipe	8001	32769
	USB HID-KBW	8003	32771
	USB COM Port Emulation	8006	32774
	HID-POS	8010	32784

W010F00

Exit Setup

** Enter Setup

Chapter 5 Data Formatting

Introduction

After a successful barcode read, a string containing numbers, letters or symbols will be returned.

In real applications, barcode data may be found insufficient for your needs. You may wish to include additional information such as barcode type, data acquisition time or delimiter in data being scanned.

Adding extra information to printed barcodes does not seem like a sensible solution since that will increase the barcode size and make them inflexible. Instead, we come up with the idea of appending prefix and suffix to the data without making any change to barcodes. We will show you how to conduct the configuration in the following sections.

Note: Customized data: <Prefix> <Data><Suffix><Terminating Character>

Exit Setup

W010F01

** Enter Setup

Prefix Sequence

W013100

** Code ID+Custom+AIM ID

W013101

Custom+Code ID+ AIM ID

W010F00

Exit Setup

W010F01

** 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 5 characters.

For example, if barcode data is “123” and custom prefix is “AB”, the host will receive “AB123”.

W043104

Enable Custom Prefix

W043100

**** Disable Custom Prefix**

Set Custom Prefix

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

Note: A custom prefix cannot exceed 5 characters.

M000100

Set Custom Prefix

Example: 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**section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Enable Custom Prefix** barcode.

**** Enter Setup**

6. Scan the **Exit Setup** barcode.

Exit Setup

W010F01

** Enter Setup

AIM ID Prefix

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

W186018

Enable AIM ID Prefix

W186000

**** Disable AIM ID Prefix**

W010F01

** Enter Setup

CODE ID Prefix

Code ID can also be used to identify barcode type. Unlike AIM ID, Code ID is user programmable. For the information of default Code ID, see the **Code ID Table** section in Appendix.

W023102

Enable CODE ID Prefix

W023100

**** Disable CODE ID Prefix**

Restore All Default Code IDs

WFFD9C2

Restore All Default Code IDs

Set Code ID

Code ID can only consist of one or two English letters. To set a Code ID, scan a **Set Code ID** barcode, the numeric barcodes corresponding to the hexadecimal value of a desired ID and the **Save** barcode.

Example: Set the Code ID of Code 128 to "p" (its hexadecimal value is 0x70)

1. Scan the **Enter Setup** barcode.
2. Scan the **Set Code 128 Code ID** barcode. (See the barcode on the following page)
3. Scan the numeric barcodes "7" and "0". (See the **Digit Barcodes** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Exit Setup** barcode.

W010F00

Exit Setup

W010F01

** Enter Setup

Set Code ID Barcodes

M000200

Set Code 128 Code ID

M000201

Set UCC/EAN-128 Code ID

M000202

Set AIM 128 Code ID

M000204

Set EAN-8 Code ID

M000205

Set EAN-13 Code ID

M000206

Set ISSN Code ID

M000207

Set ISBN Code ID

M000208

Set UPC-E Code ID

W010F00

Exit Setup

W010F01

** Enter Setup

Set Code ID Barcodes (continued)

M000209

Set UPC-A Code ID

M00020A

Set Interleaved 2 of 5 Code ID

M00020B

Set ITF-6 Code ID

M00020C

Set ITF-14 Code ID

M00020D

Set Deutsche 14 Code ID

M00020E

Set Deutsche 12 Code ID

M00020F

Set Matrix 2 of 5 Code ID

M000210

Set Industrial 25 Code ID

W010F00

Exit Setup

W010F01

** Enter Setup

Set Code ID Barcodes (continued)

M000211

Set Standard 25 Code ID

M000212

Set Code 39 Code ID

M000213

Set Codabar Code ID

M000214

Set Code 93 Code ID

M000215

Set Code 11 Code ID

M000216

Set Plessey Code ID

M000217

Set MSI-Plessey Code ID

M000218

Set RSS-14 Code ID

M000219

Set RSS-Limited Code ID

M00021A

Set RSS-Expand Code ID

W010F00

Exit Setup

W010F01

** 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 5 characters.

For example, if barcode data is “123” and custom suffix is “AB”, the host will receive “123AB”.

W083108

Enable Custom Suffix

W083100

**** Disable Custom Suffix**

W010F00

Exit Setup

W010F01

**** Enter Setup**

Set Custom Suffix

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

Note: A custom suffix cannot exceed 5 characters.

M000101

Set Custom Suffix

Example: 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**section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Enable Custom Suffix** barcode.
6. Scan the **Exit Setup** barcode.

W010F00

Exit Setup

W010F01

** Enter Setup

Terminating Character Suffix

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

A terminating character suffix cannot exceeed 5 characters.

Enable/Disable Terminating Character Suffix

This parameter determines whether to append predefined terminating character suffix to the data.

W103110

Enable Terminating Character Suffix

W103100

**** Disable Terminating Character Suffix**

W010F00

Exit Setup

**** Enter Setup**

Set Terminating Character Suffix

The scanner provides a shortcut for setting the terminating character suffix to **0x0D (CR)** or **0x0D,0x0A (CRLF)** or **0x09 (Horizontal Tab)**, and enabling it by scanning the appropriate barcode below.

Terminating Character 0x0D

Terminating Character 0x0D,0x0A

Terminating Character 0x09

Set Terminating Character Suffix

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

Note: A terminating character suffix cannot exceed 5 characters.

Example: Set the terminating character suffix to 0x0A (LF)

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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Enable Terminating Character Suffix** barcode.
6. Scan the **Exit Setup** barcode.

Exit Setup

W010F01

** Enter Setup

Chapter 6 Symbologies

Introduction

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

Global Settings

Enable/Disable All Symbologies

If all symbologies are disabled, the scanner can only identify programming barcodes.

WFFD981

Enable All Symbologies

WFFD982

Disable All Symbologies

W010F01

** Enter Setup

Code 128

Restore Factory Defaults

WFFD990

Restore the Factory Defaults of Code 128

Enable/Disable Code 128

W016101

**** Enable Code 128**

W016100

Disable Code 128

W010F00

Exit Setup

W010F01

** 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.

The supported maximum length is 255 characters. 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.

M000301

Set the Minimum Length

M000300

Set the Maximum Length

Example: Set the scanner to decode Code128 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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2”.
7. Scan the **Save** barcode.
8. Scan the **Exit Setup** barcode.

W010F00

Exit Setup

W010F01

** Enter Setup

UCC/EAN-128

Restore Factory Defaults

WFFD991

Restore the Factory Defaults of UCC/EAN-128

Enable/Disable UCC/EAN-128

W036203

**** Enable UCC/EAN-128**

W036200

Disable UCC/EAN-128

W036201

Decode as Code 128

W010F00

Exit Setup

W010F01

** 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.

The supported maximum length is 255 characters. 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.

M000303

Set the Minimum Length

M000302

Set the Maximum Length

Example: 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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2”.
7. Scan the **Save** barcode.
8. Scan the **Exit Setup** barcode.

W010F01

** Enter Setup

AIM 128

Restore Factory Defaults

WFFD992

Restore the Factory Defaults of AIM 128

Enable/Disable AIM 128

W036302

Enable AIM 128

W036300

**** Disable AIM 128**

W036301

Decode as Code 128

W010F00

Exit Setup

W010F01

** 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.

The supported maximum length is 255 characters. 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.

M000305

Set the Minimum Length

M000304

Set the Maximum Length

Example: Set the scanner to decode AIM128 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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2”.
7. Scan the **Save** barcode.
8. Scan the **Exit Setup** barcode.

W010F01

** Enter Setup

EAN-8

Restore Factory Defaults

WFFD994

Restore the Factory Defaults of EAN-8

Enable/Disable EAN-8

W016501

**** Enable EAN-8**

W016500

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.

W046504

W046500

W010F00

Exit Setup

**** Enter Setup**

**** Transmit EAN-8 Check Digit**

Do Not Transmit EAN-8 Check Digit

Exit Setup

W010F01

** 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.

W106510

Enable 2-Digit Add-On Code

W106500

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

W206520

Enable 5-Digit Add-On Code

W206500

**** Disable 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.

W010F01

**** Enter Setup**

Add-On Code Required

This parameter is only valid when **Enable 2-Digit Add-On Code** and/or **Enable 5-Digit Add-On Code** is selected.

W086508

EAN-8 Add-On Code Required

W086500

**** 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 to13 digits.

Convert EAN-8 to EAN-13: Add five leading zeros to decoded EAN-8 barcodes to make them compatible in format to EAN-13 barcodes.

WC06540

Enable EAN-8 Zero Extend

WC06500

**** Disable EAN-8 Zero Extend**

WC06580

Convert EAN-8 to EAN-13

W010F00

Exit Setup

W010F01

** Enter Setup

EAN-13

Restore Factory Defaults

' WFFD995

Restore the Factory Defaults of EAN-13

Enable/Disable EAN-13

W016601

**** Enable EAN-13**

W016600

Disable EAN-13

Transmit Check Digit

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

W046604

**** Transmit EAN-13 Check Digit**

W046600

Do Not Transmit EAN-13 Check Digit

W010F00

Exit Setup

W010F01

** 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.

W106610

Enable 2-Digit Add-On Code

W106600

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

W206620

Enable 5-Digit Add-On Code

W206600

**** Disable 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.

W010F01

** Enter Setup

Add-On Code Required

This parameter is only valid when **Enable 2-Digit Add-On Code** and/or **Enable 5-Digit Add-On Code** is selected.

W086608

EAN-13 Add-On Code Required

W086600

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

W010F00

Exit Setup

W010F01

** Enter Setup

ISSN

Restore Factory Defaults

WFFD996

Restore the Factory Defaults of ISSN

Enable/Disable ISSN

W036702

Enable ISSN

W036700

**** Disable ISSN**

W036701

Decode as EAN-13

W010F00

Exit Setup

W010F01

** Enter Setup

ISBN

Restore Factory Defaults

WFFD997

Restore the Factory Defaults of ISBN

Enable/Disable ISBN

W036802

Enable ISBN

W036800

**** Disable ISBN**

W036801

Decode as EAN-13

W010F00

Exit Setup

W010F01

** Enter Setup

Set ISBN Format

W086800

** ISBN-13

W086808

ISBN-10

W010F00

Exit Setup

W010F01

** Enter Setup

UPC-E

Restore Factory Defaults

WFFD998

Restore the Factory Defaults of UPC-E

Enable/Disable UPC-E

W016901

**** Enable UPC-E**

W016900

Disable UPC-E

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.

W046904

**** Transmit UPC-E Check Digit**

W046900

Do Not Transmit UPC-E Check Digit

W010F00

Exit Setup

W010F01

** 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.

W106910

Enable 2-Digit Add-On Code

W106900

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

W206920

Enable 5-Digit Add-On Code

W206900

**** Disable 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

** Enter Setup

barcodes without add-on codes.

Exit Setup

W010F01

**** Enter Setup**

Add-On Code Required

This parameter is only valid when **Enable 2-Digit Add-On Code** and/or **Enable 5-Digit Add-On Code** is selected.

W086908

UPC-E Add-On Code Required

W086900

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

Transmit System Character

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

W306A10

**** Do Not Transmit System Character**

W306A20

Transmit System Character

W010F01

** 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.

Convert UPC-E to UPC-A: Extend UPC-E barcodes to make them compatible in format to UPC-A.

WC06940

Enable UPC-E Extend

WC06900

****Disable UPC-E Extend**

WC06980

Convert UPC-E to UPC-A

W010F00

Exit Setup

W010F01

** Enter Setup

UPC-A

Restore Factory Defaults

WFFD999

Restore the Factory Defaults of UPC-A

Enable/Disable UPC-A

W036B02

** Enable UPC-A

W036B00

Disable UPC-A

W036B01

Decode as EAN-13

W010F00

Exit Setup

**** Enter Setup**

Transmit Check Digit

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

**** Transmit UPC-A Check Digit**

Do Not Transmit UPC-A Check Digit

Transmit Preamble Character

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

No Preamble

**** System Character**

System Character & Country Code

Exit Setup

W010F01

** 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.

W206B20

Enable 2-Digit Add-On Code

W206B00

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

W406B40

Enable 5-Digit Add-On Code

W406B00

**** Disable 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

** Enter Setup

barcodes without add-on codes.

Exit Setup

W010F01

**** Enter Setup**

Add-On Code Required

This parameter is only valid when **Enable 2-Digit Add-On Code** and/or **Enable 5-Digit Add-On Code** is selected.

W106B10

UPC-A Add-On Code Required

W106B00

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

W010F00

Exit Setup

W010F01

** Enter Setup

Interleaved 2 of 5

Restore Factory Defaults

WFFD99A

Restore the Factory Defaults of Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5

W016C01

**** Enable Interleaved 2 of 5**

W016C00

Disable Interleaved 2 of 5

W010F00

Exit Setup

W010F01

** Enter Setup

Check Digit Verification

A check digit is optional for Interleaved 2 o 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.

W0C6C00

Disable

W0C6C04

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

W0C6C0C

Transmit Check Digit After Verification

W010F00

Exit Setup

W010F01

**** 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.

The supported maximum length is 255 characters. 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.

M000307

Set the Minimum Length

M000306

Set the Maximum Length

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

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

W010F00

Exit Setup

W010F01

** 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.

Restore Factory Defaults

WFFD99B

Restore the Factory Defaults of ITF-6

Enable/Disable ITF-6

By default, ITF-6 is decoded as Interleaved 2 of 5.

W036D01

Disable ITF-6

W0B6D02

Enable ITF-6 But Do Not Transmit Check Digit

W0B6D0A

Enable ITF-6 and Transmit Check Digit

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

W010F01

**** 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.

Restore Factory Defaults

WFFD99C

Restore the Factory Defaults of ITF-14

Enable/Disable ITF-14

By default, ITF-14 is decoded as Interleaved 2 of 5.

W036E01

Disable ITF-14

W0B6E02

Enable ITF-14 But Do Not Transmit Check Digit

W0B6E0A

Enable ITF-14 and Transmit Check Digit

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

W010F00

Exit Setup

W010F01

** Enter Setup

Deutsche 14

Restore Factory Defaults

WFFD99D

Restore the Factory Defaults of Deutsche 14

Enable/Disable Deutsche 14

By default, Deutsche 14 is decoded as Interleaved 2 of 5.

W036F01

Disable Deutsche 14

W0B6F02

Enable Deutsche 14 But Do Not Transmit Check Digit

W0B6F0A

Enable Deutsche 14 and Transmit Check Digit

Note: It is advised not to enable Deutsche 14 unless necessary, because Deutsche 14, ITF-14 and Interleaved 2 of 5 use the same encoding method and enabling them at the same time can easily cause confusion with

W010F01

** Enter Setup

each other when decoding.

Deutsche 12

Restore Factory Defaults

WFFD99E

Restore the Factory Defaults of Deutsche 12

Enable/Disable Deutsche 12

By default, Deutsche 12 is decoded as Interleaved 2 of 5.

W037001

Disable Deutsche 12

W0B7002

Enable Deutsche 12 But Do Not Transmit Check Digit

W0B700A

Enable Deutsche 12 and Transmit Check Digit

Note: It is advised not to enable Deutsche 12 unless necessary, because Deutsche 12, ITF-12 and Interleaved

W010F00

Exit Setup

W010F01

** Enter Setup

2 of 5 use the same encoding method and enabling them at the same time can easily cause confusion with each other when decoding.

Matrix 2 of 5 (European Matrix 2 of 5)

Restore Factory Defaults

WFFD99F

Restore the Factory Defaults of Matrix 2 of 5

Enable/Disable Matrix 2 of 5

W017101

**** Enable Matrix 2 of 5**

W017100

Disable Matrix 2 of 5

W010F01

** 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.

W0C7100

** Disable

W0C7104

Do Not Transmit Check Digit After Verification

W0C710C

Transmit Check Digit After Verification

W010F00

Exit Setup

W010F01

** 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.

The supported maximum length is 255 characters. 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.

M000309

Set the Minimum Length

M000308

Set the Maximum Length

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

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

W010F00

Exit Setup

W010F01

** Enter Setup

Industrial 25

Restore Factory Defaults

WFFD9A0

Restore the Factory Defaults of Industrial 25

Enable/Disable Industrial 25

W017201

** Enable Industrial 25

W017200

Disable Industrial 25

W010F00

Exit Setup

W010F01

** 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.

W0C7200

** Disable

W0C7204

Do Not Transmit Check Digit After Verification

W0C720C

Transmit Check Digit After Verification

W010F00

Exit Setup

W010F01

**** 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.

The supported maximum length is 255 characters. 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.

M00030B

Set the Minimum Length

M00030A

Set the Maximum Length

Example: 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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2”.
7. Scan the **Save** barcode.
8. Scan the **Exit Setup** barcode.

W010F01

** Enter Setup

Standard 25

Restore Factory Defaults

WFFD9A1

Restore the Factory Defaults of Standard 25

Enable/Disable Standard 25

W017301

**** Enable Standard 25**

W017300

Disable Standard 25

W010F00

Exit Setup

W010F01

** 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.

W0C7300

**** Disable**

W0C7304

Do Not Transmit Check Digit After Verification

W0C730C

Transmit Check Digit After Verification

W010F00

Exit Setup

W010F01

** 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.

The supported maximum length is 255 characters. 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.

M00030D

Set the Minimum Length

M00030C

Set the Maximum Length

Example: 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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section in Appendix)
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2”.
7. Scan the **Save** barcode.
8. Scan the **Exit Setup** barcode.

W010F01

** Enter Setup

Code 39

Restore Factory Defaults

WFFD9A2

Restore the Factory Defaults of Code 39

Enable/Disable Code 39

W017401

**** Enable Code 39**

W017400

Disable Code 39

W010F00

Exit Setup

W010F01

** 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.

W187400

**** Disable**

W187408

Do Not Transmit Check Digit After Verification

W187418

Transmit Check Digit After Verification

W010F01

** Enter Setup

Transmit Start/Stop Character

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

W047404

** Transmit Start/Stop Character

W047400

Do Not Transmit Start/Stop Character

Enable/Disable Code 39 Full ASCII

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

W207420

** Enable Code 39 Full ASCII

W207400

Disable Code 39 Full ASCII

W010F01

**** 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.

The supported maximum length is 255 characters. 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.

M00030F

Set the Minimum Length

MM00030E

Set the Maximum Length

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

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

W010F00

Exit Setup

W010F01

** Enter Setup

Codabar

Restore Factory Defaults

WFFD9A3

Restore the Factory Defaults of Codabar

Enable/Disable Codabar

W017501

**** Enable Codabar**

W017500

Disable Codabar

W010F00

Exit Setup

W010F01

** 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.

W607500

**** Disable**

W607520

Do Not Transmit Check Digit After Verification

W607560

Transmit Check Digit After Verification

W010F01

** Enter Setup

Start/Stop Character

W047504

** Transmit Start/Stop Character

W047500

Do Not Transmit Start/Stop Character

W187500

** ABCD/ABCD as the Start/Stop Character

W187508

ABCD/TN*E as the Start/Stop Character

W187510

abcd/abcd as the Start/Stop Character

W187518

abcd/tn*e as the Start/Stop Character

W010F00

Exit Setup

W010F01

** 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.

The supported maximum length is 255 characters. 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.

M000311

Set the Minimum Length

M000310

Set the Maximum Length

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

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

W010F00

Exit Setup

W010F01

** Enter Setup

Code 93

Restore Factory Defaults

WFFD9A4

Restore the Factory Defaults of Code 93

Enable/Disable Code 93

W017601

**** Enable Code 93**

W017600

Disable Code 93

W010F00

Exit Setup

W010F01

** 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.

W0C7600

Disable

W0C7604

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

W0C760C

Transmit Check Digit After Verification

W010F01

** 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.

The supported maximum length is 255 characters. 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.

M000313

Set the Minimum Length

M000312

Set the Maximum Length

Example: 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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section 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.

W010F00

Exit Setup

W010F01

** Enter Setup

Code 11

Restore Factory Defaults

WFFD9A5

Restore the Factory Defaults of Code 11

Enable/Disable Code 11

W017701

Enable Code 11

W017700

**** Disable Code 11**

W010F00

Exit Setup

W010F01

** 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.

W1C7700

Disable

W1C7704

**** One Check Digit, MOD11**

W1C7708

Two Check Digits, MOD11/MOD11

W1C770C

Two Check Digits, MOD11/MOD9

W1C7710

One Check Digit, MOD11 (Len <= 10)

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

W1C7714

One Check Digit, MOD11 (Len <= 10)

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

W207720

W207700

W010F00

Exit Setup

** Enter Setup

Transmit Check Digit	** Do Not Transmit Check Digit

Exit Setup

W010F01

** 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.

The supported maximum length is 255 characters. 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 Minimum Length

Set the Maximum Length

Example: 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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section 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.

W010F00

Exit Setup

W010F01

** Enter Setup

Plessey

Restore Factory Defaults

WFFD9A6

Restore the Factory Defaults of Plessey

Enable/Disable Plessey

W017801

Enable Plessey

W017800

**** Disable Plessey**

W010F01

** Enter Setup

Check Digit Verification

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

W0C7800

Disable

W0C7804

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

W0C780C

Transmit Check Digit After Verification

W010F00

Exit Setup

W010F01

** 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.

The supported maximum length is 255 characters. 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.

M000317

Set the Minimum Length

M000316

Set the Maximum Length

Example: 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** section in Appendix)
4. Scan the **Save** barcode. (See the **Save/Cancel Barcodes** section 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.

W010F00

Exit Setup

W010F01

** Enter Setup

MSI-Plessey

Restore Factory Defaults

WFFD9A7

Restore the Factory Defaults of MSI-Plessey

Enable/Disable MSI-Plessey

W017901

Enable MSI-Plessey

W017900

** Disable MSI-Plessey

W010F00

Exit Setup

W010F01

** 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.

W0C7900

Disable

W0C7904

**** One Check Digit, MOD10**

W0C7908

Two Check Digits, MOD10/MOD10

W0C790C

Two Check Digits, MOD10/MOD11

W107910

Transmit Check Digit

W107900

**** Do Not Transmit Check Digit**

W010F01

**** 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.

The supported maximum length is 255 characters. 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.

M000319

Set the Minimum Length

M000318

Set the Maximum Length

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

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

W010F00

Exit Setup

W010F01

** Enter Setup

RSS-14

Restore Factory Defaults

WFFD9A8

Restore the Factory Defaults of RSS-14

Enable/Disable RSS-14

W017A01

** Enable RSS-14

W017A00

Disable RSS-14

Transmit Application Identifier “01”

W047A04

** Transmit Application Identifier “01”

W047A00

Do Not Transmit Application Identifier “01”

W010F00

Exit Setup

W010F01

** Enter Setup

RSS-Limited

Restore Factory Defaults

WFFD9A9

Restore the Factory Defaults of RSS-Limited

Enable/Disable RSS-Limited

W017B01

** Enable RSS-Limited

W017B00

Disable RSS-Limited

Transmit Application Identifier “01”

W047B04

** Transmit Application Identifier “01”

W047B00

Do Not Transmit Application Identifier “01”

W010F00

Exit Setup

W010F01

** Enter Setup

RSS-Expand

Restore Factory Defaults

WFFD9AA

Restore the Factory Defaults of RSS-Expand

Enable/Disable RSS-Expand

W017C01

** Enable RSS-Expand

W017C00

Disable RSS-Expand

W010F00

Exit Setup

Appendix

Factory Defaults Table

Parameter		Factory Default	Remark
System Settings			
Barcode Programming		Enabled	
Programming Barcode Data		Do not send	
Scan Mode		Manual Mode	
Manual Mode	Decode Session Timeout	15s	1-255s; 0: infinite.
Continuous Mode	Decode Session Timeout	15s	1-255s; 0: infinite.
	Timeout between Decodes	1.0s	0.0-25.5s
	Reread Same Barcode	Disallowed	
	Timeout between Decodes (Same Barcode)	3.0s	0.1-25.5s
Sense Mode	Decode Session Timeout	15s	1-255s; 0: infinite.
	Reread Same Barcode	Disallowed	
	Timeout between Decodes (Same Barcode)	3.0s	0.1-25.5s
	Sensitivity	Medium	
Command Trigger Mode	Decode Session Timeout	15s	1-255s; 0: infinite.
Security Level		0	
Good Read Beep		Enabled	
Good Read Beep Frequency		Medium	
Good Read Beep Duration		80ms	
Decode Result Notification		Disabled	
Silent Mode		Disabled	Temporary setting
Illumination		On When Scanning	Temporary setting

Parameter		Factory Default	Remark
Communication Interfaces			
RS-232 Interface	Baud Rate	9600	
	Parity Check	None	
	Number of Data Bits	8	
	Number of Stop Bits	1	
	Flow Control	None	
USB Interface		USB HID-KBW	Other Options: DataPipe, USB COM Port Emulation, HID-POS
USB HID-KBW	Input Mode	Standard Keyboard	
	USB Country Keyboard Type	U.S.	
	Inter-Keystroke Delay	No delay	
	Convert Case	No Conversion	
	Emulate Numeric Keypad	Disabled	
Data Formatting			
Prefix Sequence		Code ID+Custom+AIM ID	
Custom Prefix		Disabled	
AIM ID Prefix		Disabled	
Code ID Prefix		Disabled	
Custom Suffix		Disabled	
Terminating Character Suffix		Disabled	

Parameter	Factory Default	Remark
Code 128		
Code 128	Enabled	
Minimum Length	1	No less than 1 (including check digit)
Maximum Length	80	
UCC/EAN-128（GS1-128）		
UCC/EAN-128	Enabled	
Minimum Length	1	No less than 1 (including check digit)
Maximum Length	80	
AIM 128		
AIM 128	Disabled	
Minimum Length	1	No less than 1 (including check digit)
Maximum Length	80	
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	
ISBN		
ISBN	Disabled	
ISBN Format	ISBN-13	

Parameter	Factory Default	Remark
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	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	System Character	
Interleaved 2 of 5		
Interleaved 2 of 5	Enbled	
Check Digit Verification	Enabled	
Check Digit	Do not transmit	
Minimum Length	6	No less than 3 (including check digit)
Maximum Length	100	
ITF-6		
ITF-6	Decode as I25	
Check Digit	Transmit	
ITF-14		
ITF-14	Decode as I25	
Check Digit	Transmit	
Deutsche 14		
Deutsche 14	Decode as I25	
Check Digit	Transmit	
Deutsche 12		
Deutsche 12	Decode as I25	
Check Digit	Transmit	

Parameter	Factory Default	Remark
Matrix 2 of 5		
Matrix 2 of 5	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Minimum Length	6	No less than 2 (including check digit)
Maximum Length	80	
Industrial 25		
Industrial 25	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Minimum Length	6	No less than 2 (including check digit)
Maximum Length	80	
Standard 25		
Standard 25	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Minimum Length	6	No less than 2 (including check digit)
Maximum Length	80	
Code 39		
Code 39	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Start/Stop Character	Transmit	
Code 39 Full ASCII	Enabled	
Minimum Length	4	No less than 2 (including check digit)
Maximum Length	50	

Parameter	Factory Default	Remark
Codabar		
Codabar	Enabled	
Check Digit Verification	Disabled	
Check Digit	Do not transmit	
Start/Stop Character	Transmit	
Start/Stop Character Format	ABCD/ABCD	
Minimum Length	4	No less than 1 (including check digit)
Maximum Length	60	
Code 93		
Code 93	Enabled	
Check Digit Verification	Enabled	
Check Digit	Do not transmit	
Minimum Length	2	No less than 1 (including check digit)
Maximum Length	80	
Code 11		
Code 11	Disabled	
Check Digit Verification	One check digit, MOD11	
Check Digit	Do not transmit	
Minimum Length	4	No less than 2 (including check digit)
Maximum Length	80	
Plessey		
Plessey	Disabled	
Check Digit Verification	Enabled	
Check Digit	Do not transmit	
Minimum Length	4	No less than 3 (including check digit)
Maximum Length	60	

Parameter	Factory Default	Remark
MSI-Plessey		
MSI-Plessey	Disabled	
Check Digit Verification	One check digit, MOD10	
Check Digit	Do not transmit	
Minimum Length	4	No less than 2 (including check digit)
Maximum Length	60	
RSS-14		
RSS-14	Enabled	
AI (Application Identifier)	Transmit	
RSS-Limited		
RSS-Limited	Enabled	
AI (Application Identifier)	Transmit	
RSS-Expand		
RSS-Expand	Enabled	

AIM ID Table

Symbology	AIM ID	Remark
Code 128	]C0	Standard Code 128
UCC/EAN 128 (GS1-128)	]C1	FNC1 is the character right after the start character
AIM 128	]C2	FNC1 is the 2nd character after the start character
EAN-8	]E4	Standard EAN-8
	]E4….]E1…	EAN-8 + 2-Digit Add-On Code
	]E4….]E2…	EAN-8 + 5-Digit Add-On Code
EAN-13	]E0	Standard EAN-13
	]E3	EAN-13 + 2/5-Digit Add-On Code
ISSN	]X5	
ISBN	]X4	
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
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
Deutsche 14 Deutsche 12	]X0	
Matrix 2 of 5	]X1	No check digit verification
	]X2	Transmit check digit after verification
	]X3	Do not transmit check digit after verification
Industrial 25	]S0	Not specified
Standard 25	]R0	No check digit verification
	]R8	One check digit, MOD 7; do not transmit check digit

Symbology	AIM ID	Remark
	]R9	One check digit, MOD 7; transmit check digit
Code 39	]A0	Transmit barcodes as is; Full ASCII disabled; no check digit verification
	]A1	One check digit, MOD 43; transmit check digit
	]A3	One check digit, MOD 43; do not transmit check digit
	]A4	Full ASCII enabled; no check digit verification
	]A5	Full ASCII enabled; MOD43; transmit check digit
	]A7	Full ASCII enabled; MOD43; do not transmit check digit
Codabar	]F0	Standard Codabar
	]F1	ABC Codabar
	]F2	Transmit check digit after verification
	]F4	Do not transmit check digit after verification
Code 93	]G0	Not specified
Code 11	]H0	One check digit, MOD11; transmit check digit
	]H1	Two check digits, MOD11/MOD11; transmit check digit
	]H3	Do not transmit check digit after verification
	]H8	Two check digits, MOD11/MOD9; transmit check digit
	]H9	No check digit verification
Plessey	]P0	Not specified
MSI Plessey	]M0	One check digit, MOD10; transmit check digit
	]M1	One check digit, MOD10; do not transmit check digit
	]M7	Two check digits, MOD10 /MOD11; do not transmit check digit
	]M8	Two check digits, MOD10 /MOD11; transmit check digit
	]M9	No check digit verification
RSS-14/RSS-Limited RSS-Expand	]e0	Standard
	]e1	User-defined
	]e2	User-defined
	]e3	User-defined

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	u
AIM 128	f
SETTING 128	t
EAN-8	g
EAN-13	d
ISSN	n
ISBN	B
UPC-E	h
UPC-A	c
Interleaved 2 of 5	e
ITF-6	r
ITF-14	q
Deutsche 14	w
Deutsche 12	l
Matrix 2 of 5(European Matrix 2 of 5)	v
Industrial 25	i
Standard 25	s
Code 39	b
Codabar	a
Code 93	y
Code 11	z
Plessey	p
MSI-Plessey	m
RSS-14	D
RSS-Limited	C
RSS-Expand	R

ASCII Table

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

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

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)

Digit Barcodes

0 ~ 5

0

1

2

3

4

5

6~ 9

6

7

8

9

A ~ F

A

B

C

D

E

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 the Last Digit** barcode and then the correct digit, or scan the **Cancel All Digits** barcode and then the digits you want.

For instance, after reading the **Decode Session Timeout** barcode and numeric barcodes “1”, “2” and “3”, you scan:

Cancel the Last Digit: The last digit “3” will be removed.

Cancel All Digits: All digits “123” will be removed.

Save

Cancel the Last Digit

Cancel All Digits

F1~F12

When the USB HID-KBW feature is enabled, scanning one of the following barcodes will send the corresponding function key.

F1~F6

F000000

F1

F000001

F2

F000002

F3

F000003

F4

F000004

F5

F000005

F6

F7~F12

F000006

F7

F000007

F8

F000008

F9

F000009

F10

F00000A

F11

F00000B

F12

AdvanCode Technology Co., Ltd.
6F-5, No.81, Sec. 1, Xintai 5th Rd., Xishi Dist., New Taipei City, 221, Taiwan
TEL : 886-2-7708-1569 FAX : 886-2-8698-4093
E-mail: info_adv@advancode.us
www.advancode.com.tw

QC 2D Series :

QC625X

QC635x

QC715X

QC725X

QC755X

User Guide

Disclaimer

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

Do not disassemble the device or remove the seal label from the device. Otherwise, AdvanCode Technology Co., Ltd. does not assume responsibility for the warranty or replacement.

All pictures in this manual are for reference only and actual product may differ. Regarding to the product modification and update, AdvanCode Technology Co., Ltd. reserves the right to make changes to any software or product to improve reliability, function, or design at any time without notice. Besides, the information contained herein is subject to change without prior notice.

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

This manual is copyrighted. No part of this publication may be reproduced or distributed in any form without written permission from AdvanCode.

AdvanCode Technology Co., Ltd. reserves the right to make final interpretation of the statement above.

Table Of Contents

Enter Setup

Chapter 1 Getting Started

Introduction

The ADVANCODE 2D BARCODE SCANNER armed with the computerized image recognition system, bring about a new era of 2D barcode scanner.

The ADVANCODE 2D BARCODE SCANNER advanced chip design & manufacturing, which significantly simplifies application design and delivers superior performance and solid reliability with low power consumption.

The ADVANCODE 2D BARCODE SCANNER support all mainstream 1D and standard 2D barcode symbologies (e.g., PDF417, QR Code M1/M2/Micro and Data Matrix) as well as GS1-DataBarTM(RSS) (Limited/Stacked/Expanded versions). It can read barcodes on virtually any medium - paper, plastic card, mobile phones and LCD displays.

About This Guide

This guide provides programming instructions for the ADVANCODE 2D BARCODE SCANNER. Users can configure the ADVANCODE 2D BARCODE SCANNER by scanning the programming barcodes included in this manual.

The ADVANCODE 2D BARCODE SCANNER has been properly configured for most applications and can be put into use without further configuration. Users may check the **Factory Defaults Table** in **Appendix** for reference. Throughout the manual, asterisks (**) indicate factory default values.

*** Exit Setup**

Enter Setup

Barcode Scanning

Powered by area-imaging technology, the ADVANCODE 2D BARCODE SCANNER features fast scanning and accurate decoding. Barcodes rotated at any angle can still be read with ease. When scanning a barcode, simply center the aiming beam or pattern projected by the ADVANCODE 2D BARCODE SCANNER over the barcode.

Barcode Programming

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.

If the scanner has exited the setup mode, only some special programming barcodes, such as the **Enter Setup** barcode and **Restore All Factory Defaults** barcode, can be read.

Enter Setup

**** Exit Setup**

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

Restarting the scanner will automatically disable the transmisison of programming barcode data to the Host.

Transmit Programming Barcode Data

**** Do Not Transmit Programming Barcode Data**

0006010
Enter Setup

Factory Defaults

Scanning the following barcode can restore the scanner to the factory defaults. See **Appendix 1: Factory Defaults Table** for more information.

Note: Use this feature with discretion.

0001000
Restore All Factory Defaults

Custom Defaults

Custom defaults make it possible to save the frequently-used settings on the scanner.

Scanning the **Save as Custom Defaults** barcode can save the current settings as custom defaults. Once custom default settings are stored, they can be recovered at any time by scanning the **Restore All Custom Defaults** barcode.

Custom defaults are stored in the non-volatile memory. Restoring the scanner to the factory defaults will not remove the custom defaults from the scanner.

0001150
Save as Custom Defaults

0001160
Restore All Custom Defaults

Enter Setup

Chapter 2 Communication Interfaces

The ADVANCODE 2D BARCODE SCANNER provides a RS-232 interface and a USB interface to communicate with the host device. The host device can receive scanned data and send commands to control the scanner or to access/alter the configuration information of the scanner via the interface.

Power-Saving Mode

By default, the scanner adopts the Power-Saving Mode to conserve power. However, if this mode is selected, you can only use RS-232 communication. If the Normal Mode is selected, you can use either RS-232 or USB.

Normal Mode

(RS-232 & USB supported)

**** Power-Saving Mode**

(RS-232 supported)

*** Exit Setup**

0006010
Enter Setup

RS-232 Interface

Serial communication interface is usually used when connecting the scanner to a host device (like PC, POS). However, to ensure smooth communication and accuracy of data, you need to set communication parameters (including baud rate, parity check, data bit and stop bit) to match the host device.

The serial communication interface provided by the scanner is based on TTL-level signals. RS-232 can be used for most application architectures. For those requiring RS-232, an external conversion circuit is needed. The conversion circuit is available only to some models.

1100000
**** Serial Communication**

Default serial communication parameters are listed below. Make sure all parameters match the host requirements.

Parameter	Factory Default
Serial Communication	Standard RS-232
Baud Rate	9600
Parity Check	None
Data Bits	8
Stop Bits	1
Hardware Flow Control	None

0006010
Enter Setup

Baud Rate

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

0100030
**** 9600**

0100000
1200

0100050
19200

0100010
2400

0100060
38400

0100020
4800

0100070
57600

0100040
14400

0100080
115200

0006000
***** Exit Setup**

0006010
Enter Setup

Parity Check

When the number of data bits is set to 7, you can only select either **Even Parity** or **Odd Parity**. The **None** option will be regarded as **Even Parity** in this case.

0101000
**** None**

0101010
Even Parity

0101020
Odd Parity

Data Bit

When the number of data bits is set to 7, you can only select either **Even Parity** or **Odd Parity**.

0103020
7 Data Bits

0103030
**** 8 Data Bits**

0006010
Enter Setup

Data Bit & Parity Check

0105010
7 Data Bits/Even Parity

0105020
7 Data Bits/Odd Parity

0105030
**** 8 Data Bits/ No Parity**

0105040
8 Data Bits/Even Parity

0105050
8 Data Bits/Odd Parity

Stop Bit

0102000
**** 1 Stop Bit**

0102010
2 Stop Bits

0006000
***** Exit Setup**

0006010
Enter Setup

USB Interface

USB Enumeration

If the scanner is connected to the Host via a USB connection, the scanner will be enumerated using S/N or “00000000” after power-up. **Enumeration using S/N** enables the Host to distinguish even between scanners of same model. **Enumeration using “00000000”** disables the Host from distinguishing between scanners of same model.

Driver installation is required for each USB device distinguished from others by the Host in the process of enumeration.

1100210
Enumeration Using S/N

1100200
**** Enumeration Using “00000000”**

USB HID-KBW

When you connect the scanner to the Host via a USB connection, you can enable the **USB HID-KBW** feature by scanning the barcode below. Then scanner’s transmission will be simulated as USB keyboard input. The Host receives keystrokes on the virtual keyboard. It works on a Plug and Play basis and no driver is required.

1100020
USB HID-KBW

0006010
Enter Setup

USB Country Keyboard Types

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

1103001
**** U.S.**

1103002
Japan

1103003
Denmark

1103004
Finland

1103005
France

1103006
Turkey_F

1103007
Italy

1103008
Norway

0006010

Enter Setup

1103222

Spain

1103226

Turkey_Q

1103227

UK

1103209

Austria, Germany

1103202

Belgium

1103220

Russia

1103223

Sweden

1103218

Portugal

0006000

*** Exit Setup**

0006010
Enter Setup

Beep on Unknown Character

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

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

1103031
Beep on Unknown Character

1103030
** **Do Not Beep on Unknown Character**

Inter-Keystroke Delay

This parameter specifies the delay between emulated keystrokes.

1103050
** **No Delay**

1103051
Short Delay (20ms)

1103052
Long Delay (40ms)

0006010
Enter Setup

Convert Case

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

1103040
**** No Case Conversion**

1103043
Invert Upper and Lower Case Characters

1103041
Convert All to Upper Case

1103042
Convert All to Lower Case

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

USB COM Port Emulation

If you connect the scanner to the Host via a USB connection, the **USB COM Port Emulation** feature allows the Host to receive data in the way as a serial port does. A driver is required for this feature.

1100060
USB COM Port Emulation

0006010
Enter Setup

Chapter 3 Scan Mode

Batch Mode

If the Batch Mode is enabled, driving the TRIG pin on the host interface connector low activates a round of multiple decode sessions. This round of multiple scans continues until the active trigger signal is no longer present. Rereading the same barcode is not allowed if it was decoded previously in the same round. For good decode, the scanner transmits decoded data via communication port. To activate another round of multiple scans, the Host needs to first negate the trigger, waits 20ms or longer and then drive the TRIG pin low.

0302003
**** Batch Mode**

0006010
Enter Setup

Trigger Mode

If the Trigger Mode is enabled, driving the TRIG pin on the host interface connector low activates a decode session. The session continues until the barcode is decoded or decode session timeout expires or the active trigger signal is no longer present. For good decode, the scanner transmits decoded data via communication port. To activate another session, the Host needs to first negate the trigger, waits 20ms or longer and then drive the TRIG pin low.

0302000
Trigger Mode

Decode Session Timeout

This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 1ms increments from 0ms to 3,600,000ms. The default setting is 3,000ms. To learn how to program this parameter, see **Appendix 5**.

0313000
Decode Session Timeout

0006010
Enter Setup

Level Trigger/Pulse Trigger

Level trigger: Decode session is activated and continued by constant active trigger signal. The decode session ends once the barcode is decoded or decode session timeout expires.

Pulse trigger: Decode session is activated by electric pulse of trigger signal. The decode session continues until the barcode is decoded or decode session timeout expires.

0313090
**** Level Trigger**

0313091
Pulse Trigger

Auto Sleep

Auto Sleep allows the scanner in the Trigger Mode to automatically enter the sleep or low power mode if no operation or communication is performed for a time period (user programmable). When the scanner is in the sleep mode, receiving trigger signal or communication from the Host can awake the scanner. The scanner returns to full operation within 100ms.

0313060
**** Enable Auto Sleep**

0313070
Disable Auto Sleep

The parameter below specifies how long the scanner remains idle (no operation or communication occurs) before it is put into sleep mode. It is programmable in 1ms increments from 0ms to 65,535ms. The default setting is 500ms. To learn how to program this parameter, see **Appendix 5**.

0313050
Time Period from Idle to Sleep

0006010
Enter Setup

Sense Mode

If the Sense Mode is enabled, the scanner activates a decode session every time it detects a change in ambient illumination. The decode session continues until the barcode is decoded or the decode session timeout expires.

Driving the TRIG pin on the host interface connector low can also activate a decode session. The decode session continues until the active trigger signal is no longer present or the barcode is decoded or the decode session timeout expires. The trigger signal needs to be negated before the scanner is able to monitor ambient illumination again.

Sense Mode

Decode Session Timeout

This parameter sets the maximum time decode session continues during a scan attempt. If the timeout expires or the barcode is decoded, the scanner goes back to monitoring ambient illumination. It is programmable in 1ms increments from 0ms to 3,600,000ms. The default setting is 3,000ms. To learn how to program this parameter, see **Appendix 5**.

Decode Session Timeout

Image Stabilization Timeout

The image stabilization timeout is programmable in 1ms increments from 0ms to 1,600ms. The default setting is 500ms.To learn how to program this parameter, see **Appendix 5**.

Image Stabilization Timeout

0006000
*** Exit Setup**

0006010
Enter Setup

Continue after Good Decode

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

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

0313130
**** Pause after Good Decode**

0313131
Continue after Good Decode

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

0006010
Enter Setup

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.

To learn how to program this parameter, see **Appendix 5**.

Timeout between Decodes (Same Barcode)

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.

Medium Sensitivity

Low Sensitivity

High Sensitivity

Enhanced Sensitivity

*** Exit Setup**

0006010
Enter Setup

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.

To learn how to program this parameter, see **Appendix 5**.

0312040
Threshold Value of Illumination Change (1-20)

0006000
*** Exit Setup**

0006010
Enter Setup

Continuous Mode

This mode enables the scanner to scan/capture, decode and transmit over and over again.

When the scanner is operating in Continuous Mode, barcode reading can be suspended/resumed through control over the trigger signal. When barcode reading is in progress, negating the trigger signal after having maintained it for 30ms or longer will suspend barcode reading; when barcode reading is suspended, performing the same control over the trigger signal will resume barcode reading.

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 0ms to 3,600,000ms. The default setting is 3,000ms. To learn how to program this parameter, see **Appendix 5**.

Decode Session Timeout

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. To learn how to program this parameter, see **Appendix 5**.

Timeout between Decodes

0006010
Enter Setup

Cellphone Read Mode


0313140

****Disable Cellphone Read Mode**


0313142

Enable Cellphone Read Mode

0006000
*** Exit Setup**

0006010
Enter Setup

Chapter 4 Scanning Preferences

Introduction

This chapter contains information as to how to adapt your scanner to various applications with preference setting. For instance, to narrow the field of view of the scanner to make sure it reads only those barcodes intended by the user.

Decode Area

Whole Area Decoding

When this option is enabled, the scanner attempts to decode barcode(s) within its field of view, from the center to the periphery, and transmits the barcode that has been first decoded.

0322000
**** Whole Area Decoding**

Central Area Decoding

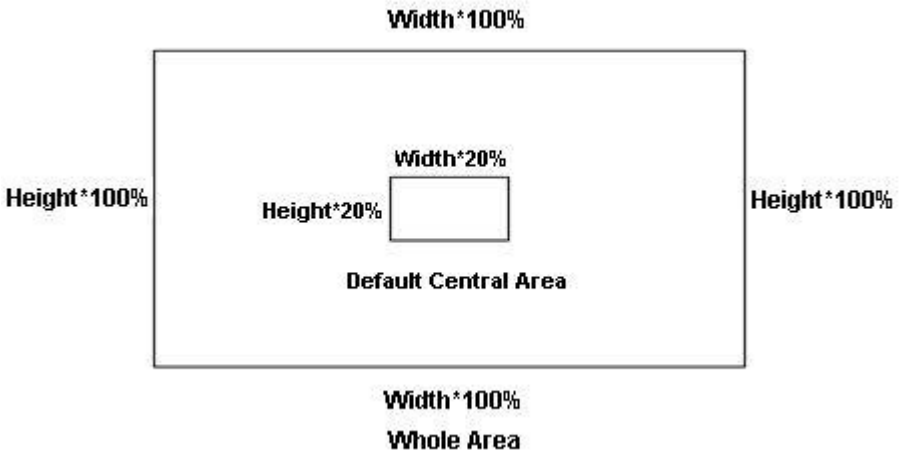
The scanner attempts to decode barcode(s) within a specified central area and transmits the barcode that has been first decoded. This option allows the scanner to narrow its field of view to make sure it reads only those barcodes intended by the user. For instance, if multiple barcodes are placed closely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

0322010
Central Area Decoding

0006010
Enter Setup

Specify Central Area

The default central area is a (Width*20%) by (Height*20%) area in the center of the scanner's field of view, as shown in the figure below. You can define the central area by scanning the **Specify Central Area** barcode and numeric barcode(s) corresponding to a desired percentage (1-100). If Central Area Decoding is enabled by scanning the **Central Area Decoding** barcode, the scanner only reads barcodes that intersect the predefined central area.



To learn how to program this parameter, see the **"Appendix 5: Parameter Programming Examples".**

0322020
Specify Central Area

0006000
*** Exit Setup**

0006010
Enter Setup

Chapter 5 Illumination & Aiming

Illumination

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

Normal: Illumination LEDs are turned on during image capture.

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

OFF: Illumination LEDs are OFF all the time.

0200000
**** Normal**

0200020
OFF

0200010
Always ON

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.

**** Normal**

OFF

Always ON

0006010
Enter Setup

Chapter 6 Beep & LED Indications

Startup Beep

If startup beep is enabled, the scanner will beep after being turned on.


0204001
**** Enable Startup Beep**


0204000
Disable Startup Beep

0006000
***** Exit Setup**

0006010
Enter Setup

Beep after Good Decode (Non-programming Barcode)

The scanner can provide a PWM output to an external driver circuit to drive a beeper after decoding a non-programming barcode. Scan the appropriate barcode below to enable or disable the emission of good decode beep. Beep type (frequency) and volume are also user programmable.

0203010
**** Beep after Good Decode,Non-programming barcode**

0203000
Do Not Beep after Good Decode,Non-programming barcode

Beep Type

0203020
Type 1

0203022
**** Type 3**

0203021
Type 2

0006000
*** Exit Setup**

0006010
Enter Setup

Beep Volume


0203030
**** Loud**


0203032
Low


0203031
Medium

Beep on Unknown Character

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

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


1103031
Beep on Unknown Character


1103030
**** Do Not Beep on Unknown Character**

0006010
Enter Setup

Beep after Good Decode (Programming Barcode)

**** Beep after Good Decode, Programming Barcode**

Do Not Beep after Good Decode, Programming Barcode

LED Notification for Good Decode

**** Good Decode LED Notification ON**

Good Decode LED Notification OFF


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 characters and then scan the **Save** barcode.

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


0320020

Edit NGR Message


0006000

***** Exit Setup**

0006010

Enter Setup

Chapter 7 Data Formatting

In many applications, barcode data needs to be edited and distinguished from one another.

Usually AIM ID and Code ID can be used as identifiers, but in some special cases customized prefix and terminating character suffix like Carriage Return or Line Feed can also be the alternatives.

Data formatting may include:

- ✧ Append AIM ID/Code ID/custom prefix before the decoded data
- ✧ Append custom suffix after the decoded data
- ✧ Append terminating character to the end of the data

The following formats can be used when editing barcode data:

- ✧ [Code ID] + [Custom Prefix] + [AIM ID] + [DATA] + [Custom Suffix] + [Terminating Character]
- ✧ [Custom Prefix] + [Code ID] + [AIM ID] + [DATA] + [Custom Suffix] + [Terminating Character]

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.

0311010
Enable All Prefix/Suffix

0311000
Disable All Prefix/Suffix

Prefix Sequences

0317010
Code ID+Custom Prefix+AIM ID

0317040
**** Custom Prefix+Code ID+AIM ID**

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.

Enable Custom Prefix

**** Disable Custom Prefix**

Set Custom Prefix

To set a custom prefix, scan the **Set Custom Prefix** barcode and the numeric barcodes representing the hexadecimal values of a desired prefix and then scan the **Save** barcode. Refer to **Appendix 4: ASCII Table** for hexadecimal values of characters.

Note: A custom prefix cannot exceed 10 characters.

Set Custom Prefix

Example: Set the custom prefix to "CODE"

1. Check the hex values of "CODE" in the ASCII Table. ("CODE": 43, 4F, 44, 45)
2. Scan the **Enter Setup** barcode.
3. Scan the **Set Custom Prefix** barcode.
4. Scan the numeric barcodes "4", "3", "4", "F", "4", "4", "4" and "5".
5. Scan the **Save** barcode.
6. Scan the **Exit Setup** barcode.

*** Exit Setup**

0006010
Enter Setup

AIM ID Prefix

AIM (Automatic Identification Manufacturers) IDs and ISO/IEC 15424 standards define symbology identifiers and data carrier identifiers. (For the details, see the **"Appendix 2: AIM ID Table"** section). If AIM ID prefix is enabled, the scanner will add the symbology identifier before the scanned data after decoding.

0308030
Enable AIM ID Prefix

0308000
**** Disable AIM ID Prefix**

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.

0307010
Enable Code ID Prefix

0307000
**** Disable Code ID Prefix**

Restore All Default Code IDs

For the information of default Code IDs, see the **"Appendix 3: Code ID Table"** section.

0307020
Restore All Default Code IDs


0006010

Enter Setup

Modify Code ID

Code ID of each symbology can be programmed separately. See the following example to learn how to program a Code ID.

Example: Set the Code ID of PDF417 to “p”

1. Check the hex value of “p” in the ASCII Table. (“p”: 70)
2. Scan the **Enter Setup** barcode.
3. Scan the **Modify PDF417 Code ID** barcode.
4. Scan the numeric barcodes “7” and “0”.
5. Scan the **Save** barcode.
6. Scan the **Exit Setup** barcode.


0005000

Modify PDF417 Code ID


0005030

Modify Data Matrix Code ID


0005010

Modify QR Code Code ID


0004020

Modify Code 128 Code ID


0004030

Modify GS1-128 Code ID


0004210

Modify AIM-128 Code ID


0006000

*** Exit Setup**

0006010
Enter Setup

0004040
Modify EAN-8 Code ID

0004050
Modify EAN-13 Code ID

0004060
Modify UPC-E Code ID

0004070
Modify UPC-A Code ID

0004240
Modify ISBN Code ID

0004230
Modify ISSN Code ID

0004130
Modify Code 39 Code ID

0004170
Modify Code 93 Code ID

0004080
Modify Interleaved 2 of 5 Code ID

0004090
Modify ITF-14 Code ID

0006000
*** Exit Setup**

0006010
Enter Setup

0004100
Modify ITF-6 Code ID

0004150
Modify Codabar Code ID

0004250
Modify Industrial 25 Code ID

0004260
Modify Standard 25 Code ID

0004110
Modify Matrix 25 Code ID

0004220
Modify COOP 25 Code ID

0004280
Modify Code 11 Code ID

0004270
Modify Plessey Code ID

0004290
Modify MSI/Plessey Code ID

0004310
Modify GS1 Databar Code ID

0006000
*** Exit Setup**

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.

Enable Custom Suffix

** **Disable Custom Suffix**

Set Custom Suffix

To set a custom suffix, scan the **Set Custom Suffix** barcode and the numeric barcodes representing the hexadecimal values of a desired suffix and then scan the **Save** barcode. Refer to **Appendix 4: ASCII Table** for hexadecimal values of characters.

Note: A custom suffix cannot exceed 10 characters.

Set Custom Suffix

Example: Set the custom suffix to "CODE"

1. Check the hex values of "CODE" in the ASCII Table. ("CODE": 43, 4F, 44, 45)
2. Scan the **Enter Setup** barcode.
3. Scan the **Set Custom Suffix** barcode.
4. Scan the numeric barcodes "4", "3", "4", "F", "4", "4", "4" and "5".
5. Scan the **Save** barcode.
6. Scan the **Exit Setup** barcode.

*** Exit Setup**

Enter Setup

Terminating Character Suffix

A terminating character can be used to mark the end of data, which means nothing can be added after it.

A terminating character suffix can contain one or two characters.

Enable/Disable Terminating Character Suffix

To enable/disable terminating character suffix, scan the appropriate barcode below.

** **Enable Terminating Character Suffix**

Disable Terminating Character Suffix

*** Exit Setup**


0006010

Enter Setup

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**

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 **Appendix 4: ASCII Table** for hexadecimal values of terminating characters.

Note: A terminating character suffix cannot exceed 2 characters.


0310000

Set Terminating Character Suffix

Example: Set the terminating character suffix to 0x0D

1. Scan the **Enter Setup** barcode.
2. Scan the **Set Terminating Character Suffix** barcode.
3. Scan the numeric barcodes “0” and “D”.
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode.


0006000

*** Exit Setup**

0006010
Enter Setup

Chapter 8 Symbologies

General Settings

Enable/Disable All Symbologies

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

0001020
Enable All Symbologies

0001010
Disable All Symbologies

Enable/Disable 1D Symbologies

If the **Disable 1D Symbologies** feature is enabled, the scanner will not be able to read any 1D barcodes.

0001040
Enable 1D Symbologies

0001030
Disable 1D Symbologies

Enable/Disable 2D Symbologies

If the **Disable 2D Symbologies** feature is enabled, the scanner will not be able to read any 2D barcodes.

0001060
Enable 2D Symbologies

0001050
Disable 2D Symbologies

0006000
*** Exit Setup**

0006010
Enter Setup

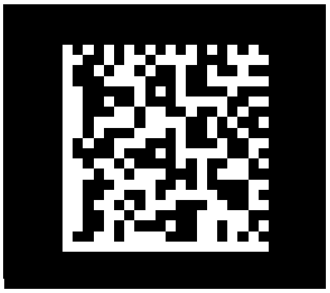
Video Reverse

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**

0006010
Enter Setup

1D Symbologies

Code 128

Restore Factory Defaults

Restore the Factory Defaults of Code 128

Enable/Disable Code 128

**** Enable Code 128**

Disable Code 128

Set Length Range for Code 128

Set the Minimum Length

Set the Maximum Length

0006010
Enter Setup

GS1-128 (UCC/EAN-128)

Restore Factory Defaults

0412000
Restore the Factory Defaults of GS1-128

Enable/Disable GS1-128

0412020
** **Enable GS1-128**

0412010
Disable GS1-128

Set Length Range for GS1-128

0412030
Set the Minimum Length

0412040
Set the Maximum Length

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

Set Length Range for AIM-128

0423030
Set the Minimum Length

0423040
Set the Maximum Length

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

0006010
Enter Setup

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

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.

0401060
Enable 2-Digit Add-On Code

0401050
**** Disable 2-Digit Add-On Code**

0401080
Enable 5-Digit Add-On Code

0401070
**** Disable 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.

0006010
Enter Setup

Add-On Code Required

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

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 to13 digits.

0401100
Enable EAN-8 Zero Extend

0401090
**** Disable EAN-8 Zero Extend**

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.

0402060
Enable 2-Digit Add-On Code

0402050
**** Disable 2-Digit Add-On Code**

0402080
Enable 5-Digit Add-On Code

0402070
**** Disable 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.

Add-On Code Required

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

0402090
EAN-13 Add-On Code Required

0402100
**** EAN-13 Add-On Code Not Required**

0006010
Enter Setup

ISSN

Restore Factory Defaults


0421000

Restore the Factory Defaults of ISSN

Enable/Disable ISSN


0421020

Enable ISSN


0421010

**** Disable ISSN**

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.

Add-On Code Required

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

0421070
ISSN Add-On Code Required

0421080
**** ISSN Add-On Code Not Required**

0006010
Enter Setup

ISBN

Restore Factory Default


0416000

Restore the Factory Defaults of ISBN

Enable/Disable ISBN


0416020

**** Enable ISBN**


0416010

Disable ISBN

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.

Add-On Code Required

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

0416090
ISBN Add-On Code Required

0416100
**** ISBN Add-On Code Not Required**

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

Transmit Check Digit


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.

0403060
Enable 2-Digit Add-On Code

0403050
Enable 2-Digit Add-On Code

0403080
Enable 5-Digit Add-On Code

0403070
**** Disable 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.

Add-On Code Required

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

0403130
UPC-E Add-On Code Required

0403140
**** UPC-E Add-On Code Not Required**

0006010
Enter Setup

Transmit System Character “0”

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

0403100
Transmit System Character “0”

0403090
**** Do Not Transmit System Character “0”**

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.

0403120
Enable UPC-E Extend

0403110
**** Disable UPC-E Extend**

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

Transmit Check Digit

0404040

**** Transmit UPC-A Check Digit**

0404030

Do Not Transmit UPC-A Check Digit

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.

0404060
Enable 2-Digit Add-On Code

0404050
**** Disable 2-Digit Add-On Code**

0404080
Enable 5-Digit Add-On Code

0404070
**** Disable 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.

Add-On Code Required

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

0404110
UPC-A Add-On Code Required

0404120
**** UPC-A Add-On Code Not Required**

0006010
Enter Setup

Transmit Preamble Character “0”


0404100

Transmit Preamble Character “0”


0404090

**** Do not Transmit Preamble Character “0”**

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

0006010
Enter Setup

Interleaved 2 of 5

Restore Factory Defaults

Restore the Factory Defaults of Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5

**** Enable Interleaved 2 of 5**

Disable Interleaved 2 of 5

Set Length Range for Interleaved 2 of 5

Set the Minimum Length

Set the Maximum Length

*** Exit Setup**

0006010
Enter Setup

Check Digit Verification

A check digit is optional for Interleaved 2 o 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.

0405050
**** Disable**

0405060
Do Not Transmit Check Digit After Verification

0405070
Transmit Check Digit After Verification

Note: 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.)

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

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

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

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

0006010
Enter Setup

Matrix 2 of 5

Restore Factory Defaults

Restore the Factory Defaults of Matrix 2 of 5

Enable/Disable Matrix 2 of 5

Enable Matrix 2 of 5

**** Disable Matrix 2 of 5**

Set Length Range for Matrix 2 of 5

Set the Minimum Length

Set the Maximum Length

*** Exit Setup**

0006010
Enter Setup

Check Digit Verification

Disable

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

Transmit Check Digit After Verification

*** Exit Setup**

0006010
Enter Setup

Industrial 2 of 5

Restore Factory Defaults

0417000

Restore the Factory Defaults of Industrial 2 of 5

Enable/Disable Industrial 2 of 5

0417020

**** Enable Industrial 2 of 5**

0417010

Disable Industrial 2 of 5

Set Length Range for Industrial 2 of 5

0417030

Set the Minimum Length

0417040

Set the Maximum Length

0006010
Enter Setup

Check Digit Verification

0417050
**** Disable**

0417070
Transmit Check Digit After Verification

0417060
Do Not Transmit Check Digit After Verification

0006010
Enter Setup

Standard 2 of 5（IATA 2 of 5）

Restore Factory Defaults

0418000
Restore the Factory Defaults of Standard 25

Enable/Disable Standard 25

0418020
**** Enable Standard 25**

0418010
Disable Standard 25

Set Length Range for Standard 25

0418030
Set the Minimum Length

0418040
Set the Maximum Length

0006010
Enter Setup

Check Digit Verification

0418050
**** Disable**

0418070
Transmit Check Digit After Verification

0418060
Do Not Transmit Check Digit After Verification

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

Transmit Start/Stop Character

0408090

**** Transmit Start/Stop Character**

0408080

Do not Transmit Start/Stop Character

0006010
Enter Setup

Set Length Range for Code 39

0408030
Set the Minimum Length

0408040
Set the Maximum Length

Check Digit Verification

0408050
**** Disable**

0408070
Transmit Check Digit After Verification

0408060
Do Not Transmit Check Digit After Verification

Enable/Disable Code 39 Full ASCII

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

0408110
**** Enable Code 39 Full ASCII**

0408100
Disable Code 39 Full ASCII

0006010
Enter Setup

Codabar

Restore Factory Defaults

Restore the Factory Defaults of Codabar

Enable/Disable Codabar

**** Enable Codabar**

Disable Codabar

Set Length Range for Codabar

Set the Minimum Length

Set the Maximum Length

0006010
Enter Setup

Check Digit Verification

0409050
**** Disable**

0409070
Transmit Check Digit After Verification

0409060
Do Not Transmit Check Digit After Verification

Transmit Start/Stop Character

0409090
**** Transmit Start/Stop Character**

0409080
Do not Transmit Start/Stop Character

0006010
Enter Setup

Start/Stop Character Format

You can choose your desired start/stop character format by scanning the appropriate barcode below.

0409100
**** ABCD/ABCD as the Start/Stop Character**

0409110
ABCD/TN*E as the Start/Stop Character

0409120
Start/Stop Character in Uppercase

0409130
Start/Stop Character in Lowercase

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

Set Length Range for Code 93

0410030
Set the Minimum Length

0410040
Set the Maximum Length

0006010
Enter Setup

Check Digit Verification

0410050
Disable

0410060
**** Do Not Transmit Check Digit After Verification**

0410070
Transmit Check Digit After Verification

0006000
***** Exit Setup**

0006010
Enter Setup

GS1-Databar (RSS)

Restore Factory Defaults

0413000
Restore the Factory Defaults of GS1-Databar

Enable/Disable GS1 Databar

0413020
**** Enable GS1-DataBar**

0413010
Disable GS1-DataBar

Transmit Application Identifier “01”

0413060
**** Transmit Application Identifier “01”**

0413050
Do Not Transmit Application Identifier “01”

0006010
Enter Setup

Code 11

Restore Factory Defaults

Restore the Factory Defaults of Code 11

Enable/Disable Code 11

**** Enable Code 11**

Disable Code 11

Set Length Range for Code 11

Set the Minimum Length

Set the Maximum Length

*** Exit Setup**

0006010
Enter Setup

Transmit Check Digit

0415120
Transmit Check Digit

0415110
**** Do Not Transmit Check Digit**

Check Digit Verification

0415050
Disable

0415060
**** One Check Digit, MOD11**

0415070
Two Check Digits, MOD11/MOD11

0415080
Two Check Digits, MOD11/MOD9

0415090
One Check Digit, MOD11 (Len<=10)
Two Check Digits, MOD11/MOD11 (Len>10)

0415100
One Check Digit, MOD11 (Len<=10)
Two Check Digits, MOD11/MOD9 (Len>10)

0006000
***** Exit Setup**

0006010
Enter Setup

Plessey

Restore Factory Defaults

Restore the Factory Defaults of Plessey

Enable/Disable Plessey

**** Enable Plessey**

Disable Plessey

Set Length Range for Plessey

Set the Minimum Length

Set the Maximum Length

*** Exit Setup**

0006010
Enter Setup

Check Digit Verification

0419050
Disable

0419060
**** Do Not Transmit Check Digit After Verification**

0419070
Transmit Check Digit After Verification

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

Set Length Range for MSI-Plessey

0420030
Set the Minimum Length

0420040
Set the Maximum Length

0006010
Enter Setup

Transmit Check Digit


0420100

Transmit Check Digit


0420090

**** Do Not Transmit Check Digit**

Check Digit Verification


0420050

Disable


0420060

**** One Check Digit, MOD10**


0420070

Two Check Digits, MOD10/MOD10


0420080

Two Check Digits, MOD10/MOD11


0006000

***** Exit Setup**

0006010
Enter Setup

2D Symbologies

PDF 417

Restore Factory Defaults

Restore the Factory Defaults of PDF 417

Enable/Disable PDF 417

**** Enable PDF 417**

Disable PDF 417

Set Length Range for PDF 417

Set the Minimum Length

Set the Maximum Length

0006010
Enter Setup

PDF 417 Twin Code

PDF417 twin code is 2 PDF417 barcodes paralleled vertically or horizontally. Two of them must have the same direction and similar specifications and be placed closely together.

There are 3 options for reading PDF417 twin codes:

Single PDF417 Only: Read either PDF417 code.

Twin PDF417 Only: Read both PDF417 codes.

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

0501070
**** Single PDF417 Only**

0501080
Twin PDF417 Only

0501090
Both Single & Twin

Transmission order of twin code

Order 1: Transmit the one containing more information first.

Order 2: Transmit the one containing less information first.

0501110
**** Order 1**

0501100
Order 2

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

Set Length Range for QR Code


0502030

Set the Minimum Length


0502040

Set the Maximum Length

Micro QR


0502110

**** Enable Micro QR**


0502100

Disable Micro QR


0006000
*** Exit Setup**

0006010
Enter Setup

QR Twin Code

QR twin code is 2 QR barcodes paralleled vertically or horizontally. Two of them must have the same direction and similar specifications and be placed closely together.

There are 3 options for reading QR twin codes:

Single QR Only: Read either QR code.

Twin QR Only: Read both QR codes.

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

0502070
**** Single QR Only**

0502080
Twin QR Only

0502090
Both Single & Twin

0006010
Enter Setup

Transmission order of twin code

Order 1: Transmit the one containing more information first.

Order 2: Transmit the one containing less information first.

Order 3: If the twin code is paralleled horizontally, transmite the one on the left first; if it is paralleled vertically, transmit the one in the upper position first.

0502140
Order 1

0502130
Order 2

0502120
**** Order 3**

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

Set Length Range for Data Matrix

0504030
Set the Minimum Length

0504040
Set the Maximum Length

0006010
Enter Setup

Rectangular Barcode


0504110

**** Enable Rectangular Barcode**


0504100

Disable Rectangular Barcode

Mirror Image


0504331

**** Decode Mirror Images**


0504330

Do Not Decode Mirror Images

0006010
Enter Setup

Data Matrix Twin Code

Data Matrix twin code is 2 Data Matrix barcodes paralleled vertically or horizontally. Two of them must have the same direction and similar specifications and be placed closely together.

There are 3 options for reading Data Matrix twin codes:

Single Data Matrix Only: Read either Data Matrix code.

Twin Data Matrix Only: Read both Data Matrix codes. Transmission order: Data Matrix code on the left (in the upper position) followed by the one on the right (in the lower position).

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

0504070
**** Single Data Matrix Only**

0504080
Twin Data Matrix Only

0504090
Both Single & Twin

0006010
Enter Setup

Chapter 9 Image Control

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 enviroments with super-intense light source.

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

0313150
**** Normal Illuminance (0~60000lux)**

0313151
High Illuminance (60000~120000lux)

0006000
*** Exit Setup**

0006010
Enter Setup

Image Flipping

The user may get reversed images when the scanner is installed in non-standard ways. When it happens, image flipping can be used to right the “wrong”.

The following figures illustrate standard image and three flipped images.

- ✧ Fig.8-1 Standard Image: Image the scanner should get when it is installed properly and no reflector is used in its optical imaging system.
- ✧ Fig.8-2 Horizontal Flipped Image: It happens when horizontal reflection occurs along the optical path. To get standard images, enable the **Flip Horizontally** option.
- ✧ Fig.8-3 Vertical Flipped Image: It happens when vertical reflection occurs along the optical path. To get standard images, enable the **Flip Vertically** option.
- ✧ Fig.8-4 Horizontal and Vertical Flipped Image: It happens when the scanner is installed upside down. To get standard images, enable the **Flip Horizontally and Vertically** option.

Fig.8-1 Standard Image

Fig.8-2 Horizontal Flipped Image

Fig.8-3 Vertical Flipped Image

Fig.8-4 Horizontal and Vertical Flipped Image

0006010
Enter Setup

Flip

0202000
**** Do Not Flip**

0202030
Flip Vertically

0202031
Flip Horizontally

0202032
Flip Horizontally and Vertically

Flip Vertically

0202033
Flip Vertically

0202034
Do Not Flip Vertically

Flip Horizontally

0202035
Flip Horizontally

0202036
Do Not Flip Horizontally

0006000
***** Exit Setup**

Chapter 10 Troubleshooting

FAQ

Problem: Barcodes cannot be read.

Solution:

1. Find out the barcode type and verify that the barcode type is enabled. If the barcode parameters include check digit verification, select the Disable option.
2. If you do not know the barcode type, enable all symbologies.
3. If they are inverse barcodes (bright images on a dark background), enable the Video Reverse feature.

Problem: Incorrect output.

Solution:

1. If this problem happens to all barcodes and additional characters appear before/after barcode data, disable all prefix/suffix.
2. If this problem only happens to some barcodes and matches one of the following situations:

a) incomplete barcode data: Enable the check digit verification.

b) both the first and last characters are asterisks (*): Disable the transmission of start/stop characters of Code 39.

c) “a” transmitted as “+A”: Enable Code 39 Full ASCII.

Problem: Barcodes can be read, but cannot be displayed.

Solution: Verify that the serial port parameter (such as baud rate, data bit and stop bit) settings match the host requirements.

Problem: Illumination and aiming beams are OFF.

Solution:

1. Verify that the scanner is properly powered up.
2. Send “?” to the scanner. If the scanner returns a reply of “!”, then send programming commands to turn on illumination and aimer.

Problem: Carriage Return/Line Feed settings.

Solution: See the **“Terminating Character Suffix”** section in Chapter 7.

Appendix

Appendix 1: Factory Defaults Table

Parameter		Factory Default	Remark
Programming Barcode			
Barcode Programming		Disabled	
Programming Barcode Data		Do not send	
Communication Settings			
Power-Saving Mode (Only RS-232 supported)		Enabled	Normal Mode: RS-232 & USB supported
RS-232	Baud Rate	9600	
	Parity Check	None	
	Data Bit	8	
	Stop Bit	1	
	Hardware Flow Control	No flow control	
HID-KBW	USB Country Keyboard Type	U.S.	
	Convert Case	No conversion	
	Inter-Keystroke Delay	No delay	
	Beep on Unknown Character	Do not beep	
Scan Mode			
Scan Mode		Batch mode	Options: Batch mode, Trigger mode, Sense mode, Continuous mode.
Trigger Mode	Decode Session Timeout	3,000ms	Applicable to a Trigger mode, Sense mode, Continuous mode. 0~3,600,000ms
	Trigger Condition	Electric level	
	Auto Sleep	Enabled	
	Time Period from Idle to Sleep	500ms	0~65,535ms
Sense Mode	Decode Session Timeout	3,000ms	Applicable to Trigger mode, Sense mode, Continuous mode. 0~3,600,000ms
	Image Stabilization Timeout	500ms	0~1,600ms
	Operation after Good Decode	Pause after good decode	
	Timeout between Decodes (Same Barcode)	Disabled	
		1,500ms	0~65,535ms
	Threshold Value of Illumination Change	2	1~20

Parameter		Factory Default	Remark
Continuous Mode	Decode Session Timeout	3,000ms	Applicable to Trigger mode, Sense mode, Continuous mode. 0~3,600,000ms
	Timeout between Decodes	1000ms	0~65,535ms
Cellphone Read Mode		Disabled	
Scanning Preferences			
Decode Area		Whole Area Decoding	
Central Area		20%	
Illumination & Aiming			
Illumination		Normal	
Aiming		Normal	
Beep & LED Indications			
Startup Beep		Enabled	
Beep after Good Decode (Non-Programming Barcode)	Notification	Enabled	
	Beep Type	Type 3	
	Beep Volume	Loud	
Beep after Good Decode (Programming Barcode)		Enabled	
LED Notification for Good Decode		Enabled	
NGR (Not Good Read) Message		Do not transmit	
		None	
Data Formatting			
Prefix Sequence		Custom Prefix+Code ID+AIM ID	
Custom Prefix		Disabled	
		None	
AIM ID Prefix		Disabled	
Code ID Prefix		Disabled	
Custom Suffix		Disabled	
		None	
Terminating Character Suffix		Enabled	
		0x0D, 0x0A	Carriage Return /Line Feed
Image Control			
Ambient Illumination		Normal illuminance	
Image Flipping		Do not flip	

Parameter	Factory Default	Remark
Symbologies		
Video Reverse	Disabled	Applicable to all symbologies.
Code 128		
Code 128	Enabled	
Maximum Length	127	
Minimum Length	1	
GS1-128（UCC/EAN-128）		
GS1-128	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	Enabled	
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	Enabled	
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	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	Enabled	
Check Digit Verification	Enabled	
Check Digit	Do not transmit	
Maximum Length	127	
Minimum Length	1	

Parameter	Factory Default	Remark
MSI-*Plessey*		
MSI-Plessey	Enabled	
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	2710	
Minimum Length	1	
PDF 417 Twin Code	Read single PDF417 only	
Transmission Order of Twin Code	Order 1	
QR Code		
QR Code	Enabled	
Micro QR	Enabled	
Maximum Length	7089	
Minimum Length	1	
QR Twin Code	Read single QR only	
Transmission Order of Twin Code	Order 3	
Data Matrix		
Data Matrix	Enabled	
Rectangular Barcode	Enabled	
Mirror Image	Decode	
Maximum Length	3116	
Minimum Length	1	
DM Twin Code	Read single DM only	

Appendix 2: 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
GS1-128 (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
Codabar	]F0	Standard Codabar
	]F2	Transmit check digit after verification
	]F4	Do not transmit check digit after verification

Symbology	AIM ID	Remark
Code 93	]G0	Standard Code 93
Code 11	]H0	One check digit MOD11; transmit check digit
	]H1	Two check digits, MOD11/MOD11; transmit check digit
	]H3	Do not transmit check digit after verification
	]H9	No check digit verification
GS1-DataBar (RSS)	]e0	Standard GS1-DataBar
Plessey	]P0	Standard Plessey
MSI-Plessey	]M0	One check digit, MOD10; transmit check digit
	]M1	One check digit, MOD10; do not transmit check digit
	]M8	Two check digits
	]M9	No check digit verification
Matrix 2 of 5	]X0	Specified by the manufacturer
	]X1	No check digit verification
	]X2	One check digit, MOD10; transmit check digit
	]X3	One check digit, MOD11; do not transmit check digit
ISBN	]X4	Standard ISBN
ISSN	]X5	Standard ISSN
PDF417	]L0	Comply with 1994 PDF417 specifications
Data Matrix	]d0	ECC000 - ECC140
	]d1	ECC200
	]d2	ECC200, FNC1 is the 1st or 5th character after the start character
	]d3	ECC200, FNC1 is the 2nd or 6th character after the start character
	]d4	ECC200, ECI included
	]d5	ECC200, FNC1 is the 1st or 5th character after the start character,ECI included
	]d6	ECC200, FNC1 is the 2nd or 6th character after the start character,ECI included
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).

Appendix 3: Code ID Table

Symbology	Code ID
Code 128	j
GS1-128(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

Appendix 4: ASCII Table

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

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

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)

Appendix 5: Parameter Programming Examples

The following examples show you how to program parameters by scanning programming barcodes.

a. Program the Decode Session Timeout

Example: Set the decode session timeout to 1500ms

1. Scan the **Enter Setup** barcode.
2. Scan the **Decode Session Timeout** barcode. (See the **"Decode Session Timeout"** section in Chapter 3)
3. Scan the numeric barcodes "1", "5", "0" and "0".
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

b. Program the Time Period from Idle to Sleep

Example: Set the time period from idle to sleep to 500ms

1. Scan the **Enter Setup** barcode.
2. Scan the **Time Period from Idle to Sleep** barcode. (See the **"Auto Sleep"** section in Chapter 3)
3. Scan the numeric barcodes "5", "0" and "0".
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

c. Program the Image Stabilization Timeout

Example: Set the image stabilization timeout to 500ms

1. Scan the **Enter Setup** barcode.
2. Scan the **Image Stabilization Timeout** barcode. (See the **"Image Stabilization Timeout"** section in Chapter 3)
3. Scan the numeric barcodes "5", "0" and "0".
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

d. Program the Timeout between Decodes (Same Barcode)

Example: Set the timeout between decodes (same barcode) to 1000ms

1. Scan the **Enter Setup** barcode.
2. Scan the **Timeout between Decodes (Same Barcode)** barcode. (See the **"Timeout between Decodes (Same Barcode)"** section in Chapter 3)
3. Scan the numeric barcodes "1", "0", "0" and "0".
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

e. Program the Threshold Value of Illumination Change

Example: Set the threshold value of illumination change to 4

1. Scan the **Enter Setup** barcode.
2. Scan the **Threshold Value of Illumination Change** barcode. (See the **"Sensitivity"** section in Chapter 3)
3. Scan the numeric barcode "4".
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

f. Program the Timeout between Decodes

Example: Set the timeout between decodes to 500ms

1. Scan the **Enter Setup** barcode.
2. Scan the **Timeout between Decodes** barcode. (See the **"Timeout between Decodes"** section in Chapter 3)
3. Scan the numeric barcodes "5","0" and "0".
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

g. Program the Central Area

Example: Set the percentage of central area to 20%

1. Scan the **Enter Setup** barcode.
2. Scan the **Specify Central Area** barcode.
3. Scan the numeric barcodes “2” and “0”.
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

h. Program the Custom Prefix/Suffix

Example: Set the custom prefix to “CODE”

1. Check the hex values of “CODE” in the ASCII Table. (“CODE”: 43, 4F, 44, 45)
2. Scan the **Enter Setup** barcode.
3. Scan the **Set Custom Prefix** barcode. (See the **“Set Custom Prefix”** section in Chapter 6)
4. Scan the numeric barcodes “4”, “3”, “4”, “F”, “4”, “4”, “4” and “5”.
5. Scan the **Save** barcode.
6. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

i. Program the Terminating Character Suffix

Example: Set the terminating character suffix to 0x0D

1. Scan the **Enter Setup** barcode.
2. Scan the **Set Terminating Character Suffix** barcode. (See the **“Set Terminating Character Suffix”** section in Chapter 6)
3. Scan the numeric barcodes “0” and “D”.
4. Scan the **Save** barcode.
5. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

j. Program the Code ID

Example: Set the Code ID of PDF 417 to "p"

1. Check the hex value of "p" in the ASCII Table. ("p": 70)
2. Scan the **Enter Setup** barcode.
3. Scan the **Modify PDF417 Code ID** barcode. (See the **"Modify Code ID"** section in Chapter 6)
4. Scan the numeric barcodes "7" and "0".
5. Scan the **Save** barcode.
6. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

k. Program the NGR Message

Example: Set the NGR message to "!ERR"

1. Check the hex values of "!ERR" in the ASCII Table. ("!ERR": 21, 45, 52, 52)
2. Scan the **Enter Setup** barcode.
3. Scan the **Edit NGR Message** barcode. (See the **"Edit NGR Message"** section in Chapter 5)
4. Scan the numeric barcodes "2", "1", "4", "5", "5", "2", "5" and "2".
5. Scan the **Save** barcode.
6. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

l. Program the Length Range (Maximum/Minimum Lengths) for a Symbology

Note: If minimum length is set to be greater than maximum length, the scanner only decodes barcodes with either the minimum or maximum length. If you only want to read barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Example: 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. (See the **"Set Length Range for Code 128"** section in Chapter 7)
3. Scan the numeric barcode "8".
4. Scan the **Save** barcode.
5. Scan the **Set the Maximum Length** barcode. (See the **"Set Length Range for Code 128"** section in Chapter 7)
6. Scan the numeric barcodes "1" and "2".
7. Scan the **Save** barcode.
8. Scan the **Exit Setup** barcode. (If you still need to program other parameter/feature, skip this step.)

Appendix 6: Digit Barcodes

0-9

0

5

1

6

2

7

3

8

4

9

A-F

A

B

C

D

E

F

Appendix 7: 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.

Save

Delete the Last Digit

Delete All Digits

Cancel

AdvanCode Technology Co., Ltd.

6F-5, No.81, Sec. 1, Xintai 5th Rd., Xishi Dist., New Taipei City, 221, Taiwan

TEL : 886-2-7708-1569 FAX : 886-2-8698-4093

E-mail: info_adv@advancode.us

www.advancode.com.tw

Q Code 75

Bluetooth Series

- Intuitive, versatile and ergonomic design makes it ideal for retail environments.
- Tough ABS/PC Composite Housing.
- 1.5m drop test resistance.

- Precise trigger to compliment high responsiveness

- Rapid charge delivery with micro-USB 3.0. interface. USB, OTG, RS232 and VCOM also supported.

- FCC and CE EMC Class B Certification.

- Scan rate of 300 times per second at a precision of 3mil (1D) or 5mil (2D).

- Industry leading AWG-24 rating cable and high swing test rating.

- On board 1MB (1D) or 4MB (2D) Flash memory. Data automatically saved to this memory in the event of battery depletion.

- Built-in ESD protection IC on PCB.
- Reliable voltage tolerance of 5-14V ensures a long life span.

- Bluetooth Class 2 V2.1 with EDR for superb performance with mobility. Includes 3.7V 2200mAh Li-ion battery.

ADVANCODE

www.advancode.us

Q Code75 Bluetooth Series

SPECIFICATIONS

	QC7506	QC7516	QC7556
Category	CCD Linear Imager	Laser	2D Imager
Housing	ABS with PC		
Performace			
Interface	Bluetooth® Class 2(2.4GHz) Version 2.1 +EDR		
Connected Power Consumptions	Typical 3 mA, Max 8 mA		
Data Transfer Power Consumptions	Typical 15 mA ¸Max 20 mA		
Scan rate	SPP / HID		
Batch Scanning	300 Scans per sec		–
Memory	1MB / 4MB (upon request)		
1D Symbologies	EAN-13, EAN-8, UPC-A, UPC-E, ISSN, ISBN, Codabar, Code 128, Code 93, ITF-6, ITF-14, Interleaved 2 of 5, Industrial 2 of 5, Standard 2 of 5, Matrix 2 of 5, GS1 Databar, Code 39, Code 11, MSI-Plessey, Plessey		
2D Symbologies	None		PDF 417, Data Matrix(ECC200,ECC000,050,080,100,140), QR Code
Hands-free Scanning	Trigger / Auto-Sense / Continuous Modes		
Reading Precision	≥ 3mil		≥ 5mil
Light Source	610nm-640nm	648nm-660nm	Red Led 625±10nm
Depth of Field	UPCA(13mil):50-620mm EAN13(13mil):50-610mm		EAN13(13mil):50-195mm Code 39(5mil):50~105mm PDF417 (6.67mil):35~135mm Data Matrix (10mil):35~140mm QR Code(15mil):30~165mm
Symbol Contrast	≥ 30% Reflectance Difference		
Scan Angle	Pitch ±60° @ 0°Roll and 0°Skew Roll ±30° @ 0°Pitch and 0°Skew Skew ±60° @ 0°Roll and 0°Pitch		Pitch ±55° Roll ±360° Skew ±55°
Field of View	–		Horizontal 36° / Vertical 23°
Mechanical/Electrcal			
Maximum Power Consumption	0.28W	0.33W	0.76W
Battery Capacity	Maxell 3.7V 2200 mAh Li-ion Battery		
Working Hour	15hr (@ 5s / scan)		8hr (@ 5s / scan)
Input Voltage	DC 5V ± 0.5V		
Operating Current	85 mA	100 mA	230 mA
Standby Current	25 mA		7 mA
Dimension	100 mm x 46 mm x 23mm (LxWxH)		
Weight	150g±10(W/O Cable)		
Environmental			
Operating Temperature	-20°C ~ +60°C		
Storage Temperature	-40°C ~ +85°C		
Humidity	5% -95% (non-condensing)		
Ambient Light	0 ~100,000 LUX		
Certifications	FCC Class B, CE EMC Class B, RoHs		
Accessories			
Cables	Micro USB 2.0 Charge 1.8M Cable / OTG Cable		

APPLICATION:

- Point of Sale
- Price Comparison
- Ordering via Scanner
- Logistics
- Inventory Checking
- Healthcare: Admission/Discharge, Pharmacy, Patient ID.
- Ticket and Access Management

ACCESSORIES


Removable Cover


USB / RS232 /OTG Cable


Strap

ADVANCODE
www.advancode.us

Posmart Corporation
6F-6, No.81, Sec. 1, Xintai 5th Rd., Xishi Dist., New Taipei City, 221, Taiwan
TEL: 886-2-7708-1569 FAX: 886-2-8698-4093
Mail： info_adv@advancode.us