Area Imager Bar Code Scanner

2D CONFIGURATION GUIDE

FCCID : WOIIG820BT

The Federal Communication Commission Statement

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

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

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that change or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

THIS DEVICE COMPLIES WITH PART 15 OF FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

1 This device may not cause harmful interference and
2 This device must accept any interference received, including interference that may cause undesired operation.

The antenna used for this transmitter must not be collocated or operation in conjunction with any other antenna or transmitter.

Notice : The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

Note: Due to product improvement programs, specifications and features are subject to change without prior notice.

Table of Contents

Chapter 1 General Description

Thank you for purchasing this barcode scanner with an advanced and versatile decoder. The decoder works with variety of barcode types, reading devices, and computer interfaces. It discriminates over twenty different symbologies automatically.

This menu provides an easy way to configure the decoding options and interface selections by scanning bar codes listed in the menu.

FCC Approval

This device had been tested in accordance with the procedures and in compliance with Part 15 Subpart B of FCC Rules and keeps all requirements, according ANSI C63.4 & FCC Part 15 B Regulation and CISPR22 Class B.

CE Standards

The CE mark as shown here indicates this product had been tested in accordance with the procedures given in European Council Directive.

LEGISLATION AND WEEE SYMBOL

This marking shown on the product or its literature, indicates that it should not be disposed with other households wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable re-use of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase.

Chapter 2 Introduction

This document provides an easy way to program the decoding options and interface selections by scanning bar codes listed in this guide.

Important Notice

1. This document is in A6 size. Please check your printing setting before printing it out.

2. When printing barcodes for programming, the use of a high-resolution laser printer is strongly suggested for the best scan result.

3. The settings shall be updated periodically without prior notice. For the latest version, please contact your authorized distributor.

Factory Default Settings

The factory default settings are shown with **< >** and bold in the following sections.
By scanning “Set All Defaults” label, the settings will go back to the factory default settings which are shown as Appendix A.

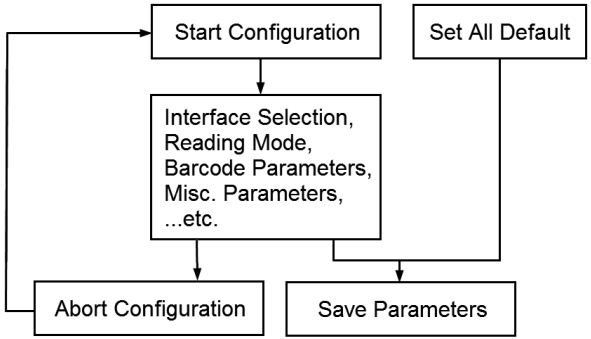
Settings and Programming

Scan a series of selected barcode patches in this manual to affect setup and programming of 2D Image Reader. Decoding options and interface protocols can be tailored to a specific application.

Note: It may need to hide adjacent code patches with hand when doing programming scanning.

Chapter 3 Main Configuration

A. PROGRAMMING FLOW CHART



The programming flow is:

1. Scan **"Start Configuration**" to enter programming status.
2. Looping: Scan all necessary setting parameters that meet your application.
3. Scan **"Save Parameters"** to permanently save the programmed settings.
4. To exit programming status without saving the settings, scan "**Abort Configuration**".
5. To set all settings back default, scan "**Set All Default**" and "**Save Parameters**".

B. MAIN PAGE OF CONFIGURATION

Start Configuration

To enter program status, scan “Start Configuration”.

Start Configuration

%$+/3

Save Parameters

All settings will be saved and taken effect immediately. The scanner exits programming status.

Save Parameters

%$+/0

Abort Configuration

To terminate current programming status without saving the settings, scan “Abort Configuration”.

Abort Configuration

%$+/6

Set All Default

Restore factory-configured default (listed in Appendix A) by scanning “Set All Default” followed by “Save Parameters”.

Set All Default

%$+/2

Version Information

Scan this barcode without general programming procedure to display decoder version and date code.

Version Information

%$+/5

C. IMAGER DECODING SETTING

<Standard 1D & 2D Barcodes>

1D Barcodes Only

2D Barcodes Only

Chapter 4 Interface Selection

RS232 Mode

%00U8

USB Mode

%0XO8

Virtual COM Mode

%0088

<USB HID Keyboard OFF>

USB HID Keyboard ON

Chapter 5 Reading Mode Selection

Good Read OFF

Feature: When press the trigger button, the illumination light turns on to read barcode. When the scanner reads barcode (good read), the illumination light turns off.
a. If a barcode is read, the illumination light turns off immediately.
b. If no barcode is read within a certain period, the illumination light turns off.

Trigger ON/OFF

Feature: Trigger to turn on illumination light, release to turn off light.
Normal Status: The illumination light is normally off. When press and hold the trigger button, the light turns on to read barcodes.
a. If a barcode is read, the illumination light turns off immediately.
b. If no barcode is read and the trigger button is released, the illumination light turns off.

Flash/Trigger OFF

Feature: The illumination light is flashing.
Normal Status: The illumination light always keeps flashing for reading barcodes.
a. If a barcode is read, the illumination light turns solid on for a period for another reading.
b. If no barcode is read within the period, the illumination light returns flashing.
c. When press the trigger button, the illumination light turns off. Press the trigger again, the light returns flashing.

Flash/Auto Power ON

Feature: The illumination light is flashing. It is always auto powered on to flash.

Normal Status: The illumination light always keeps flashing.

a. If a barcode is read, the illumination light turns solid on for a period for another reading.

b. If no barcode is read within the period, the light returns flashing.

c. The trigger button is disabled.

Auto Sense

Feature: Automatically detects the existing of goods.

Normal Status: The illumination light is normally off. It will switch on the illumination to decode when detects a goods in front of it under normal light environment.

a. When a barcode is detected in front of scanner, the illumination light turns on for a period for read barcodes.

b. If a barcode is read within the period, the illumination light turns off immediately

c. If no barcode is read within the period, the light turns off.

d. If pressing the trigger button, the light turns on immediately for a period for read barcodes.

Auto Sense/Aimer Detection

Feature: Automatically detects the existing of goods by Aimer.

Normal Status: The illumination light is normally off, but the Aimer keeps flushing for barcode detection under dimming or extremely low light environment.

a. When a barcode is detected in front of scanner, the illumination light turns on for a period for read barcodes.

b. If a barcode is read within the period, the illumination light turns off immediately

c. If no barcode is read within the period, the light turns off.

d. If pressing the trigger button, the light turns on immediately for a period for read barcodes.

Good Read OFF
(Default for HandHeld Models)
(Inapplicable to AutoSense Models)

%0271

Trigger ON/OFF
(Inapplicable to AutoSense Models)

%0270

Flash/Trigger OFF

%0274

Flash/Auto Power On


%0276

Auto Sense
(Default for AutoSense Models)


%09F8

Auto Sense/Aimer Detection


%09FC

Chapter 6 Reading Surface Selection

A. READING SURFACE

<General>

Screen

Mixed

Chapter 7 RS232 Parameters

B. SETUP BAUD RATE

9600

19200

38400

57600


%0Y78

<115200>


%0Y79

B. SETUP DATA BITS

7 Data Bits

<8 Data Bits>

0

C. SETUP STOP BITS

<1 Bit>

2 Bits

D. SETUP PARITY

<None>


%0YN7

Even


%0YN2

Odd


%0YN3

E. HANDSHAKING

RTS/CTS Enable

<RTS/CTS Disable>

ACK/NAK Enable


%0144

<ACK/NAK Disable>


%0140

XON/XOFF Enable


%03K4

<XON/XOFF Disable>


%03K0

Chapter 8 Keyboard Parameters

A. UPPER/LOWER CASE

<Normal>


%0330

Upper Case


%0331

Lower Case


%0332

B. CAPS LOCK DETECTION

Enable

<Disable>

C. SEND CHARACTER BY ALT METHOD

Enable

<Disable>

D. SELECT NUMERIC PAD

ON

<OFF>

Chapter 9 Output Characters

A. SELECT TERMINATOR

<CR+LF>

%7S2+

None

%7S7+

CR

%7S0+

LF


%7S1+

Space


%7S4+

HT (TAB)


%7S3+

STX-ETX


%7S5+

B. TIME-OUT BETWEEN CHARACTERS

<0 ms>

5 ms

10 ms

25 ms

50 ms


%0074

100 ms


%0075

200 ms


%0076

300 ms


%0077

Chapter 10 Symbology Selection

A. 1D SYMBOLOGY SELECTION

<UPC-A ON>

%0A44

UPC-A OFF

%0A40

<UPC-E ON>

UPC-E OFF

<EAN-13/JAN-13/ISBN-13 ON>

EAN-13/JAN-13/ISBN-13 OFF

<EAN-8/JAN-8 ON>

%0A11

EAN-8/JAN-8 OFF

%0A10

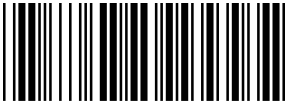
<CODE 39 ON>

%0EO8

CODE 39 OFF

%0EO0

<CODE 128 ON>



CODE 128 OFF

<CODABAR/NW7 ON>

CODABAR/NW7 OFF

<Interleaved 25 ON>

Interleaved 25 OFF

Industrial 25 ON

<Industrial 25 OFF>

Matrix 25 ON

<Matrix 25 OFF>

CODE 93 ON

<CODE 93 OFF>

CODE 11 ON


%0LO8

<CODE 11 OFF>


%0LO0

China Post ON


%0MO8

<China Post OFF>


%0MO0

MSI/PLESSEY ON

<MSI/PLESSEY OFF>

Telepen ON

<Telepen OFF>

GS1 DataBar Omnidirectional ON

<GS1 DataBar Omnidirectional OFF>

GS1 DataBar Limited ON

<GS1 DataBar Limited OFF>

GS1 DataBar Expanded ON

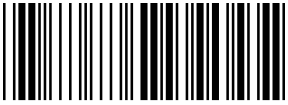
<GS1 DataBar Expanded OFF>

B. 2D SYMBOLOGY SELECTION

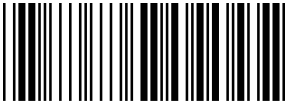
Select All Bar Codes

%1A/+

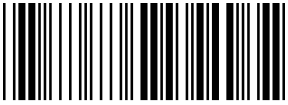
Aztec ON



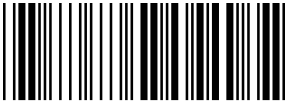
<Aztec OFF>



<Data Matrix ON>



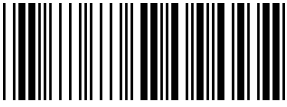
Data Matrix OFF



MicroPDF417 ON (Optional)

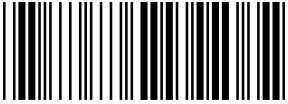
%%01D

<MicroPDF417 OFF>

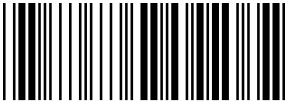


%%02D

<PDF417 ON>

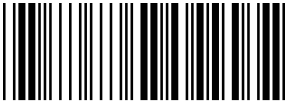


PDF417 OFF

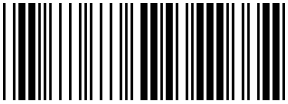


<QR Code ON>

QR Code OFF

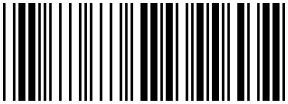


Micro QR Code ON

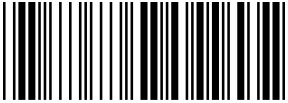


<Micro QR OFF>

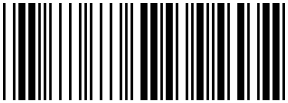
Han Xin Code ON (Optional)



<Han Xin Code OFF>



Grid Matrix Code ON (Optional)


%%01N

<Grid Matrix Code OFF>


%%02N

Chapter 11 UPC/EAN/JAN

A. READING TYPE

UPCA=EAN13 ON

<UPCA=EAN13 OFF>

ISBN-10 Enable

<ISBN-13 Enable>

ISSN Enable


%0B44

<ISSN Disable>


%0B40

Decode with Supplemental


%01O0

<Auto discriminate Supplemental>


%01O8

Expand UPC-E Enable


%0BH1

<Expand UPC-E Disable>


%0BH0

EAN8=EAN13 Enable


%0AO8

<EAN8=EAN13 Disable>


%0AO0

UCC Coupon Extended Code Enable


%0DI2

<UCC Coupon Extended Code Disable>


%0DI0

GTIN Format Enable


%0X44

<GTIN Format Disable>


%0X40

B. SUPPLEMENTAL SETUP

<Not Transmit>


%0B33

Transmit Supplemental 2 Digits


%0B31

Transmit Supplemental 5 Digits


%0B32

Transmit Supplemental 2&5 Digits

C. CHECK DIGIT TRANSMISSION

<UPC-A Check Digit Transmission ON>

UPC-A Check Digit Transmission OFF

<UPC-E Check Digit Transmission ON >

UPC-E Check Digit Transmission OFF

<EAN-8 Check Digit Transmission ON>

EAN-8 Check Digit Transmission OFF

<EAN-13 Check Digit Transmission ON>

EAN-13 Check Digit Transmission OFF

ISSN Check Transmission ON

<ISSN Check Transmission OFF>

Chapter 12 Code 39

A. TYPE OF CODE

<Standard>

Full ASCII

<Italian Pharmacy/Code 32 OFF>

Italian Pharmacy/Code 32 ON

B. CHECK DIGIT TRANSMISSION

<Do Not Calculate Check Digit>

Calculate Check Digit & Transmit

Calculate Check Digit & Not Transmit

C. OUTPUT START/STOP CHARACTER

Enable


%0E44

<Disable>


%0E40

D. DECODE ASTERISK

Enable


%0E22

<Disable>


%0E20

E. SETUP CODE LENGTH

<Variable>


%4E1+

1. Fix Length 1st Set Begin


%4E00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Set Complete

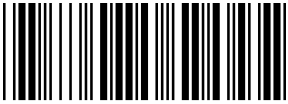

%4E01

1. Fix Length 2nd Set Begin


%4E00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Set Complete


%4E02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

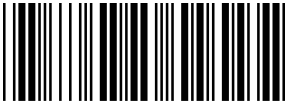
3. Minimum Length Complete


%2C0+

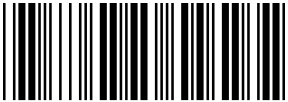
Chapter 13 Code 128

A. READING TYPE

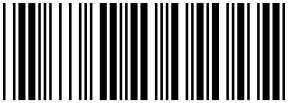
UCC/EAN-128 Enable



<UCC/EAN-128 Disable>



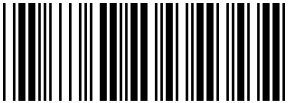
Code ID]C1 Enable


%0F22

<Code ID]C1 Disable>


%0F20

Group Separators (GS) Enable


%0F11

<Group Separators (GS) Disable>


%0F10

B. CHECK DIGIT TRANSMISSION

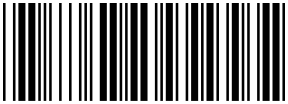
<Do Not Calculate Check Digit>

Calculate Check Digit & Transmit

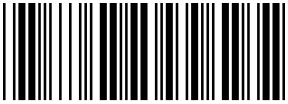
Calculate Check Digit & Not Transmit

C. APPEND FNC2

ON

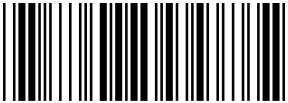


<OFF>

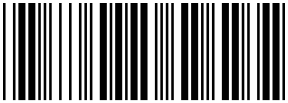


D. SETUP CODE LENGTH

<Variable>

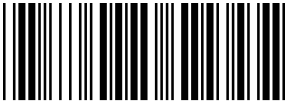

%4F1+

1. Fix Length 1st Set Begin

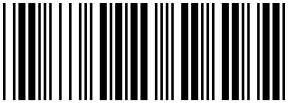

%4F00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Set Complete

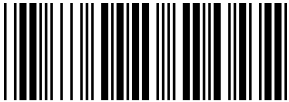

%4F01

1. Fix Length 2nd Set Begin


%4F00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Set Complete

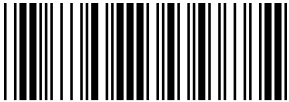

%4F02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2C1+

Chapter 14 Interleaved 25

A. CHECK DIGIT TRANSMISSION

<Do Not Calculate Check Digit>

Calculate Check Digit & Transmit

Calculate Check Digit & Not Transmit

B. SETUP NUMBER OF CHARACTERS

<Even>


%0G88

Odd


%0G80

C. BRAZILLIAN BANKING CODE

<Disable>


%0G40

Enable


%0G44

D. SETUP CODE LENGTH

<Variable>


%4G1+

1. Fix Length 1st Begin


%4G00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%4G01

1. Fix Length 2nd Begin


%4G00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%4G02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2C2+

Chapter 15 Industrial 25

A. READING TYPE

IATA25 ENABLE

<IATA25 DISABLE>

B. CHECK DIGIT TRANSMISSION

<Do Not Calculate Check Digit>

Calculate Check Digit & Transmit

Calculate Check Digit & Not Transmit

C. SETUP CODE LENGTH

<Variable>

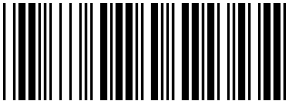

%4H1+

1. Fix Length 1st Begin


%4H00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%4H01

1. Fix Length 2nd Begin


%4H00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%4H02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2C3+

Chapter 16 Matrix 25

A. CHECK DIGIT TRANSMISSION

<Do Not Calculate Check Digit>

Calculate Check Digit & Transmit

Calculate Check Digit & Not Transmit

B. SETUP CODE LENGTH

<Variable>

1. Fix Length 1st Begin

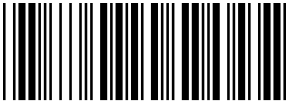
2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete

1. Fix Length 2nd Begin

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete



1. Minimum Length Begin

2. Decimal Value
(Appendix C)

3. Minimum Length Complete

Chapter 17 Codabar/NW7

A. START/STOP CHARACTERS

ON


%0JH1

<OFF>


%0JH0

B. TRANSMISSION TYPE OF START/STOP

<A/B/C/D Start>

%04VF

<A/B/C/D Stop>

%04FF

A Start

%04V1

A Stop

%04F1

B Start

%04V2

B Stop

%04F2

C Start

%04V4

C Stop

%04F4

D Start

%04V8

D Stop

%04F8

C. SETUP CODE LENGTH

<Variable>


%4J1+

1. Fix Length 1st Begin

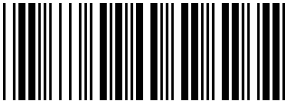

%4J00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete

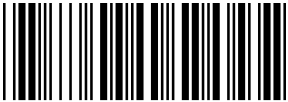

%4J01

1. Fix Length 2nd Begin


%4J00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%4J02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2C5+

Chapter 18 Code 93

A. CHECK DIGIT TRANSMISSION

Do Not Calculate Check Digit

<Calculate 2 Check Digits & Not Transmit>

B. SETUP CODE LENGTH

<Variable>


%4K1+

1. Fix Length 1st Begin


%4K00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete

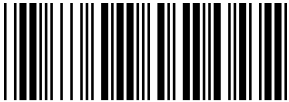

%4K01

1 .Fix Length 2nd Begin


%4K00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%4K02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2C6+

Chapter 19 Code 11

A. CHECK DIGIT TRANSMISSION

<Do Not Calculate Check Digit>

Calculate 1 Check Digit & Transmit

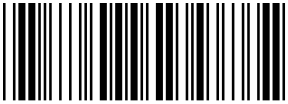
Calculate 1 Check Digit & Not Transmit

Calculate 2 Check Digit & Transmit

Calculate 2 Check Digit & Not Transmit

B. SETUP CODE LENGTH

<Variable>

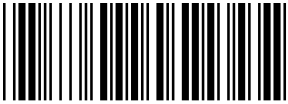

%4L1+

1. Fix Length 1st Begin


%4L00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%4L01

1. Fix Length 2nd Begin


%4L00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%4L02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2C7+

Chapter 20 MSI/PLESSEY

A. CHECK DIGIT TRANSMISSION

<Do Not Calculate Check Digit>

Calculate Check Digit & Transmit

Calculate Check Digit & Not Transmit

B. SETUP CODE LENGTH

<Variable>


%4N1+

1. Fix Length 1st Begin


%4N00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete

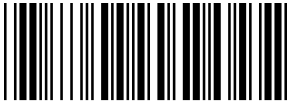

%4N01

1. Fix Length 2nd Begin


%4N00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%4N02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2C9+

Chapter 21 Telepen

A. TYPE OF CODE

<Full ASCII Mode>

Compressed Numeric Mode

B. CHECK DIGIT TRANSMISSION

<Do Not Calculate Check Digit>

Calculate Check Digit & Transmit

Calculate Check Digit & Not Transmit

C. SETUP CODE LENGTH

<Variable>


%4T1+

1. Fix Length 1st Begin


%4T00

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete

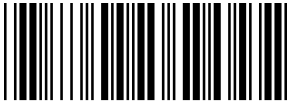

%4T01

1. Fix Length 2nd Begin


%4T00

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%4T02

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2CF+

Chapter 22 GS1 DataBar

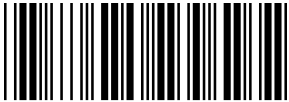
A. GS1 DATABAR OMNIDIRECTIONAL

<Transmit Check Digit>

Don't Transmit Check Digit

<Transmit Application ID>

Don't Transmit Application ID



<Transmit Symbology ID>

Don't Transmit Symbology ID

B. GS1 DATABAR LIMITED

<Transmit Check Digit>

Don't Transmit Check Digit

<Transmit Application ID>

Don't Transmit Application ID

<Transmit SymbologyID>

Don't Transmit Symbology ID

C. GS1 DATABAR EXPANDED

< Transmit Symbology ID>

Don't Transmit Symbology ID

Chapter 23 Aztec

A. SETUP CODE LENGTH

<Variable>


%%22+

1. Fix Length 1st Begin


%%22L

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%%22Y

1. Fix Length 2nd Begin

%%22L

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete

%%22Z

1. Minimum Length Begin

%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete

%2CA+

Chapter 24 Data Matrix

A. SETUP CODE LENGTH

<Variable>


%%26+

1. Fix Length 1st Begin


%%26L

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%%26Y

1. Fix Length 2nd Begin

%%26L

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete

%%26Z

1. Minimum Length Begin

%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete

%2CC+

B. READING TYPE

GS1-Data Matrix Enable

<GS1-Data Matrix Disable>

Code ID]d2 Enable

<Code ID]d2 Disable>

Group Separator (GS) Enable

<Group Separators (GS) Disable>

Chapter 25 PDF417

A. SETUP CODE LENGTH

<Variable>


%%2F+

1. Fix Length 1st Begin


%%2FL

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%%2FY

1. Fix Length 2nd Begin


%%2FL

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%%2FZ

1. Mnimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Mnimum Length Complete


%2CJ+

Chapter 26 Micro PDF417 (Optional)

A. SETUP CODE LENGTH

<Variable>


%%2D+

1. Fix Length 1st Begin


%%2DL

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%%2DY

1. Fix Length 2nd Begin

%%2DL

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete

%%2DZ

1. Minimum Length Begin

%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete

%2CE+

Chapter 27 QR Code

A. SETUP CODE LENGTH

<Variable>


%%2I+

1. Fix Length 1st Begin


%%2IL

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%%2IY

1. Fix Length 2nd Begin

%%2IL

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete

%%2IZ

1. Minimum Length Begin

%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete

%2CG+

A. READING TYPE

GS1-QR Code Enable

<GS1-QR Code Disable>

Code ID]Q3 Enable

<Code ID]Q3 Disable>

Group Separator (GS) Enable

<Group Separator (GS) Disable>

Chapter 28 Micro QR Code

A. SETUP CODE LENGTH

<Variable>


%%2N+

1. Fix Length 1st Begin


%%2NL

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%%2NY

1. Fix Length 2nd Begin


%%2NL

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%%2NZ

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2CH+

Chapter 29 Han Xin Code (Optional)

A. SETUP CODE LENGTH

<Variable>


%%2L+

1. Fix Length 1st Begin


%%2LL

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete


%%2LY

1. Fix Length 2nd Begin


%%2LL

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete


%%2LZ

1. Minimum Length Begin


%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete


%2CI+

Chapter 30 Grid Matrix (Optional)

A. SETUP CODE LENGTH

<Variable>

1. Fix Length 1st Begin

2. Decimal Value
(Appendix C)

3. Fix Length 1st Complete

1. Fix Length 2nd Begin

%%2OL

2. Decimal Value
(Appendix C)

3. Fix Length 2nd Complete

%%2OZ

1. Minimum Length Begin

%2+-/

2. Decimal Value
(Appendix C)

3. Minimum Length Complete

%2CK+

Chapter 31 Language Selection

This language selection applies only to the USB HID (Human Interface Device Keyboard Emulation) devices.

<US English Keyboard >


%0ZV0

UK English Keyboard


%0ZV1

Italian Keyboard


%0ZV2

Spanish Keyboard

French Keyboard

German Keyboard

Swedish Keyboard

Swiss Keyboard

Hungarian Keyboard

Japanese Keyboard


%0ZV9

Belgian Keyboard


%0ZVA

Portuguese Keyboard


%0ZVB

Danish Keyboard

Dutch Keyboard

Turkish Keyboard

Reserved

Chapter 32 Bar Code ID

Code ID identifies the code type of a scanned bar code. This is useful when the decoder is decoding more than one code type. In addition to any single prefix already added, the code ID characters are inserted between the prefix and the decoded data.

Select no Code ID, default Code ID, AIM Code ID, or user defined Code ID to meet required application.

For default Code Identifiers and AIM Code Identifiers, see Appendix B.

A. IDENTIFIER FORMAT

ON


%00H1

<OFF>


%00H0

<Default Code Identifiers>


%913+

AIM Code Identifiers


%00H2

B. USER DEFINE CODE ID

To set the user define code ID:

1. Scan symbology “Begin”.
2. Go to ASCII Characters in Appendix D. Scan the barcode(s) that represents the desired code ID.
3. Scan symbology “Complete”.

Note: The maximum defined characters for Code ID are 3.

1. UPC-A Begin

2. ASCII Characters
(Appendix D)

3. UPC-A Complete

1. UPC-E Begin


%91B+

2. ASCII Characters
(Appendix D)

3. UPC-E Complete


%91B0

1. EAN-13/JAN-13 Begin


%91Y+

2. ASCII Characters
(Appendix D)

3. EAN-13/JAN-13 Complete


%91Y0

1. EAN-8/JAN-8 Begin


%91Z+

2. ASCII Characters
(Appendix D)

3. EAN-8/JAN-8 Complete


%91Z0

1. CODE 39 Begin


%91E+

2. ASCII Characters
(Appendix D)

3. CODE 39 Complete


%91E0

1. CODE 128 Begin


%91F+

2. ASCII Characters
(Appendix D)

3. CODE 128 Complete


%91F0

1. CODABAR/NW7 Begin


%91J+

2. ASCII Characters
(Appendix D)

3. CODABAR/NW7 Complete


%91J0

1. Interleaved 25 Begin


%91G+

2. ASCII Characters
(Appendix D)

3. Interleaved 25 Complete


%91G0

1. Industrial 25 Begin

2. ASCII Characters
(Appendix D)

3. Industrial 25 Complete

1. Matrix 25 Begin

2. ASCII Characters
(Appendix D)

3. Matrix 25 Complete

1. CODE 93 Begin

2. ASCII Characters
(Appendix D)

3. CODE 93 Complete

1. CODE 11 Begin

2. ASCII Characters
(Appendix D)

3. CODE 11 Complete

1. China Post Begin


%91M+

2. ASCII Characters
(Appendix D)

3. China Post Complete


%91M0

1. MSI/PLESSEY Begin


%91N+

2. ASCII Characters
(Appendix D)

3. MSI/PLESSEY Complete


%91N0

1. Telepen Begin

%91T+

2. ASCII Characters
(Appendix D)

3. Telepen Complete

%91T0

1. GS1 Databar Omnidirectional Begin

2. ASCII Characters
(Appendix D)

3. GS1 Databar Omnidirectional Complete

1. GS1 Databar Limited Begin

2. ASCII Characters
(Appendix D)

3. GS1 Databar Limited Complete

1. GS1 Databar Expanded Begin

2. ASCII Characters
(Appendix D)

3. GS1 Databar Expanded Complete

1. UCC/EAN-128 Begin


%91R+

2. ASCII Characters
(Appendix D)

3. UCC/EAN-128 Complete


%91R0

1. Reserved Begin


%91S+

2. ASCII Characters
(Appendix D)

3. Reserved Complete


%91S0

1. Aztec Begin

2. ASCII Characters
(Appendix D)

3. Aztec Complete

1. Data Matrix Begin

2. ASCII Characters
(Appendix D)

3. Data Matrix Complete

1. PDF417 Begin

2. ASCII Characters
(Appendix D)

3. PDF417 Complete

1. Micro PDF417 Begin (Optional)

%%03E

2. ASCII Characters
(Appendix D)

3. Micro PDF417 Complete

%%03R

1. QR Code Begin

%%03G

2. ASCII Characters
(Appendix D)

3. QR Code Complete

%%03T

1. Micro QR code Begin

2. ASCII Characters
(Appendix D)

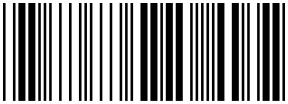
3. Micro QR code Complete

1. Han Xin Code Begin (Optional)

2. ASCII Characters
(Appendix D)

3. Han Xin Code Complete

1. Grid Matrix Code Begin (Optional)


%%03J

2. ASCII Characters
(Appendix D)

3. Grid Matrix Code Complete


%%03W

Chapter 33 Accuracy

ACCURACY

<1 Time>

2 Times

3 Times

4 Times

Chapter 34 Beep

A. BEEP TONE

<High>


%01J3

Medium


%01J2

Low


%01J1

Off


%01J0

B. BEEP DURATION

The value is from 1 - 255. (Default is 10). Each level=10ms, e.g. 1=10ms, 2=20ms, 10=100ms…, 255=2550ms=2.55sec.

To configure beep duration, scan:
1. Scan "Begin".
2. Go to Decimal Value Table in Appendix C. Scan barcode(s) that represents the duration value.
3. Scan "Complete".

1. Begin


%%371

2. Decimal Value (1-255)
(Appendix C)

3. Complete


%%372

C. SILENT TIME BETWEEN BEEPS

The value is from 1 - 255. (Default is 3). Each level=10ms, e.g. 1=10ms, 2=20, 3=30ms…, 255==2550ms=2.55sec.

To configure the value, scan:
1. Scan "Begin".
2. Go to Decimal Value Table in Appendix C. Scan barcode(s) that represents the value.
3. Scan "Complete"

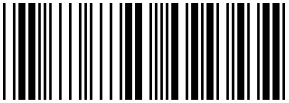
1. Begin

2. Decimal Value (1-255)
(Appendix C)

3. Complete

D. BEEP OPTIONS

<Good Read Beep ON>



%%391

Good Read Beep OFF

%%39A

<Error Beep ON>

%%392

Error Beep OFF

%%39B

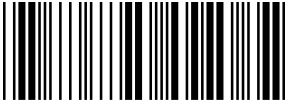
<Power up Beep ON>

%0C44

Power up Beep OFF

%0C40

<Configure Beep ON>



%%393

Configure Beep OFF

%%39C

Chapter 35 Sensitivity of Continuous Reading

A. QUICK SETTING

<Fast>

Slow

B. AVOID SAME CODE DOUBLE READING

Enable


%0244

<Disable>


%0240

C. SAME CODE DELAY INTERVAL

This is to configure the length of delay time prior to an identical barcode can be rescanned. The value is defined from 1 - 50 that represents 100ms - 5 seconds in 100ms interval. The default value is 5 (0.5 seconds). This setting is only applicable to continuous and flash reading modes.

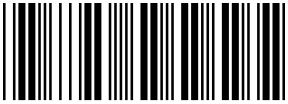
To setup same code delay reading interval:

1. Scan "Begin".

2. Go to Decimal Value Table in Appendix C. Scan barcode(s) that represents the delay reading interval. The range is from 1 to 50. An interval represents 0.1 second. Therefore, the available range is from 0.1 to 5 seconds.

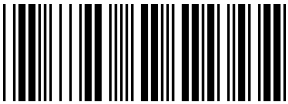
3. Scan "Complete".

1. Begin



2. Decimal Value (1-50)
(Appendix C)

3. Complete



Chapter 36 Indicator/Aimer/Illumination

A. INDICATOR

<Enable>

%02O8

Disable

%02O0

B. AIMER

<Enable>

%02K4

Disable

%02K0

C. ILLUMINATION

<Enable>

Disable

D. AUTOMATIC ILLUMINATION BRIGHTNESS

<Enable>

%02H1

Disable

%02H0

E. ILLUMINATION BRIGHTNESS

This setting is activated when 'Automatic Illumination Brightness' is disabled. The brightness value is from 1 - 100. (Default is 50)

To configure fixed brightness, scan:
1. Scan "Begin".
2. Go to Decimal Value Table in Appendix C. Scan barcode(s) that represents the brightness value.
3. Scan "Complete"

1. Begin

2. Decimal Value (1-100)
(Appendix C)

3. Complete

F. INDICATOR AFTER GOOD READ

<Normal OFF>

Normal ON

G. INDICATOR FLASHING

Enable

<Disable>

H. ILLUMINATION FLASHING AFTER GOOD READ

Enable

%%3J1

<Disable>

%%3J0

I. AIMER ALWAYS ON

Enable

<Disable>

Chapter 37 Image Type

J. INVERSED IMAGE

<Disable>

%%3B0

Inversed Image Only

%%3B1

Both

%%3B2

K. MIRRORED IMAGE

<Disable>

%%3B3

Mirrored Image Only

%%3B4

Both

%%3B5

Chapter 38 Miscellaneous

A. AUTOSENSE SENSITIVITY

The sensitivity value is from 80 to 90. (Default is 85.)

To configure sensitivity, scan:
1. Scan "Begin".
2. Go to Decimal Value Table in Appendix C. Scan barcode(s) that represents the sensitivity value.
3. Scan "Complete"

1.Begin


%%301

2. Decimal Value (80-90)
(Appendix C)

3. Complete


%%302

B. REVERSE OUTPUT CHARACTERS

<Disable>

Enable

C. POWER SAVING MODE

<Disable>

%%3D0

Enable

%%3D1

D. TIME TO ENTER POWER SAVING

The value is from 1 to 120. (Default is 20). Each level=0.5min, e.g. 1=0.5min, 2=1min, 20=10min…, 120=60min.

1. Begin

%%3D2

2. Decimal Value (1-120)
(Appendix C)

3. Complete

%%3D3

E. OUTPUT NON-PRINTABLE CHARS

<Disable>

Enable

Chapter 39 Multi-Byte Character Output

A. CODEPAGES

Scan corresponding codepage to read multi-byte encoded barcodes. Only **ONE codepage** is activated at a time. “Send Character by ALT Methods” should be enabled simultaneously.

Scan: “Send Character by ALT Method -> (codepage)”

<None>

BIG-5 Traditional Chinese

GB2312 Simplified Chinese

Shift-JIS Japanese

%%3C3

KSC5601 Korean

%%3C4

UTF8 Traditional Chinese

%%3C5

UTF8 Simplified Chinese

%%3C6

UTF8 Japanese

UTF8 Korean

UTF8 Cyrillic

UTF8 Central European

Chapter 40 Bluetooth (For BT Scanner)

A. SET BT PARAMETER DEFAULT

BT Parameter Default.

Scan: “BT Parameter Default -> Save Parameters”

B. BLUETOOTH PROFILE

When connected via Bluetooth, select one of the following Bluetooth predefined profiles.

SPP Slave Mode

Follow the steps below to setup the connection between scanner and host in SPP Slave Mode.

1) Scan "**SPP Slave Mode**".
2) Search the scanner by host. Enter the pin codes (default 00:00:00) to setup the pairing when prompt.
3) When paired, build up the connection by application program on host.
4) When the connection is successful, the scanner sounds an ascending tone with blue LED flashes slowly.

HID Slave Mode

Follow the steps below to setup the connection between scanner and host in HID Slave Mode.

1) Scan "**HID Slave Mode**".
2) Search the scanner by host. Enter the pin codes to setup the pairing when prompt. Go to NUMERIC KEYPAD TABLE in **Appendix E** to scan number 0-9 for pin codes.
3) When connection is successful, the scanner sounds an ascending tone with blue LED flashes slowly

C. OUT OF RANGE

When BT signal is out of transmission range, the BT connection will be lost. While “Out of Range” is enabled, the scanned data will be stored in out-of-range memory. All the stored data will be transmitted to host upon the BT is reconnected, and the data stored in out-of-range memory will be cleared. While “Out of Range” is disabled and the BT signal is out of transmission range, the scanned data will be discarded.

<Enable>

Disable

E. AUTO RECONNECT

When scanner is back from out-of-BT-connection distance to BT-connection range, the scanner automatically resumes BT connection to host.

<Enable>

%A188

Disable

%A180

F. BACK TO RANGE AND SEND DATA

When scanner is back to BT connection range, it automatically resumes connection and the stored data will be sent to host. Ensure the connection quality is secured and press trigger to start sending data by setting “Trigger to Send”. The scanner automatically sends data upon the connection is resumed by setting “Auto Send”.

<Trigger to Send>

Auto Send

G. VIRTUAL KEYBOARD

When connect to iOS in HID Slave Mode, double click trigger button to pop up/dismiss the virtual keyboard.

<Enable>

%A4O8

Disable

%A4O0

H. SLEEP MODE

The scanner is equipped with sleep mode function to save battery energy when the scanner is not used for 1 minute or 10 minutes. During sleep mode, all the functions and connection will be halted until pressing the trigger button.

1 min

%A272

10 min

%A273

<OFF >

%A270

I. BATCH MODE

ON

<OFF>

"*" indicates "Quick Setting Barcode".**

The function can be executed directly by scanning barcode instead of doing the general programming process.

***Delete Last Data

***Batch Data Read

***Batch Data Clear

J. FIRMWARE VERSION

Display the firmware version of scanner. Scan below barcodes directly without general programming process.

Scanner

Cradle

K. MAC ADDRESS

Display the firmware version of scanner. Scan below barcodes directly without general programming process.

Scanner MAC Address

Chapter 41 Data Editing

A. IDC COMPOSITE CODE

The scanned data can be edited by Intelligent Data Composer (IDC) as required output format. The data editing rules can be generated by IDC as a composite QR code. Simply scan this QR code to apply all editing rules to output data.

<Disable>

%%3A0

Enable

%%3A1

Chapter 42 Customer Define Strings

A. READ STRINGS

The customers can define their own strings and simply read the following barcodes to directly output the pre-defined strings. The strings should be pre-configured by software. 10 strings are available.

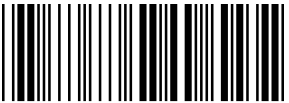
Read String 0

Read String 1

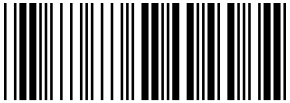
Read String 2

Read String 3

Read String 4



Read String 5



Read String 6

Read String 7

Read String 8

Read String 9

APPENDIX A: Default Parameters

Interface Selection	
USB HID Keyboard Mode	Disable
Reading Surface	General
RS232 Parameter	
BAUD Rate	115200
Data Bits	8 Data Bits
Stop Bits	1 Bit
Parity	None
Handshaking	RTS/CTS Disable
	ACK/NAK Disable
	XON/XOFF Disable
Keyboard Parameter	
Upper/Lower Case	Normal
Caps Lock Detection	Disable
Send Character By ALT Method	Disable
Select Numerical Pad	OFF
Output Characters	
Terminator	CR + LF
Time-out Between Characters	0 ms
Symbologies	
1D Symbology Selection	
UPC-A	ON
UPC-E	ON
EAN-13/JAN-13/ISBN-13	ON
EAN-8/JAN-8	ON
Code 39	ON
Code 128	ON
Codabar/NW7	ON
Interleaved 25	ON
Industrial 25	OFF

Matrix 25	OFF
CODE 93	OFF
CODE 11	OFF
China Post	OFF
MSI/PLESSEY	OFF
Telepen	OFF
GS1 DataBar Omnidirectional	OFF
GS2 DataBar Limited	OFF
GS2 DataBar Expanded	OFF
2D Symbology Selection	
Aztec	OFF
Data Matrix	ON
PDF417	ON
MicroPDF417 (Optional)	OFF
QR Code	ON
Micro QR Code	OFF
Han Xin Code (Optional)	OFF
Grid Matrix (Optional)	OFF
UPC/EAN/JAN	
UPCA=EAN13	Disable
ISBN-10	Disable
ISBN-13	Enable
ISSN	Disable
Auto discriminate Supplemental	Enable
Expand UPC-E	Disable
EAN8=EAN13	Disable
UCC Coupon Extended Code	Disable
GTIN Format	Disable
Supplemental	Not Transmit
Check Digit Transmission	
UPC-A Check Digit Transmission	ON
UPC-E Check Digit Transmission	ON
EAN-8 Check Digit Transmission	ON

EAN-13 Check Digit Transmission	ON
ISSN Check Transmission	OFF
Code 39	
Italian Pharmacy/Code 32	OFF
Check Digit Transmission	Not Calculate Check Digit
Output Start/Stop Character	Disable
Decode Asterisk	Disable
Code 128	
UCC/EAN-128	Disable
']C1' Code	Disable
Group Separators (GS)	Disable
Check Digit Transmission	Not Calculate Check Digit
Append FNC2	OFF
Interleaved 25	
Check Digit Transmission	Not Calculate Check Digit
Number of Character	Even
Brazilian Banking Code	Disable
Industrial 25	
IATA25	Disable
Check Digit Transmission	Not Calculate Check Digit
Matrix 25	
Check Digit Transmission	Not Calculate Check Digit
CODABAR/NW7	
Start/Stop Characters	OFF
Start/Stop Transmission Type	A/B/C/D Start
	A/B/C/D Stop
Code 93	
Check Digit Transmission	Calculate 2 Check Digits & Not Transmit
CODE 11	
Check Digit Transmission	Not Calculate Check Digit
MSI/PLESSEY	
Check Digit Transmission	Not Calculate Check Digit

Telepen	
Type of Code	Full ASCII Mode
Check Digit Transmission	Not Calculate Check Digit
GS1 DataBar	
GS1 Databar Omnidirectional	
Transmit Check Digit	Enable
Transmit Application ID	Enable
Transmit Symbology ID	Enable
GS1 Databar Limited	
Transmit Check Digit	Enable
Transmit Application ID	Enable
Transmit Symbology ID	Enable
GS1 Databar Expanded	
Transmit Symbology ID	Enable
Aztec	
Data Matrix	
GS1-Data Matrix	Disable
Code ID]d2	Disable
Group Separator (GS)	Disable
PDF417	
Micro PDF417 (Optional)	
QR Code	
GS1-QR Code	Disable
Code ID]Q3	Disable
Group Separator (GS)	Disable
Micro QR Code	
Han Xin (Optional)	
Grid Matrix (Optional)	
Code Length for All Symbologies	Variable
Language Selection	US English Keyboard
Bar Code ID	
Identifier Format	OFF
Code Identifiers-Default/AIM	Default

Accuracy	1 Time
Beep	
Beep Tone	High
Beep Duration	10=100ms
Silent Time Between Beeps	3=30ms
Good Read Beep	ON
Error Beep	ON
Power up Beep	ON
Configure Command Beep	ON
INDICATOR/AIMER/ILLUMINATION	
Indicator	Enable
Aimer	Enable
Illumination	Enable
Automatic illumination Brightness	Enable
Illumination Brightness	Default 50
Indicator After Good Read	Normal OFF
Indicator Flashing	Disable
Illumination Flashing After Good Read	Disable
Aimer Always ON	Disable
Image Type	
Inversed image	Disable
Mirrored image	Disable
Miscellaneous	
Autosense Sensitivity	85
Reverse Output Characters	Disable
Power Saving Mode	Disable
Time to Enter Power Saving	20=10min
Output Non-Printable Chars	Disable
Multi-Byte Character Output	None
Bluetooth (For BT Scanner)	
Bluetooth Profile	SPP Master Mode
Out of Range	Enable

Auto Reconnect	Enable
Back to Range and Send Data	Trigger to Send
Virtual Keyboard	Enable
Sleep Mode	OFF
Batch Mode	OFF

APPENDIX B: Code Identifiers

1. Default Code Identifiers

Code ID	Bar Code Type
A	UPC-A
B	UPC-E
C	EAN8/JAN8
D	EAN13/JAN13
E	Code 39
F	Code 128
G	Interleaved 25
H	Industrial 25
I	Matrix 25
J	Codabar
K	Code 93
M	China Post
N	MSI/Plessey
T	Telepen
U	GS1-Databar Omnidirectional

V	GS1-Databar Limited
W	GS1-Databar Expanded
R	UCC/EAN128
XA	Aztec
XB	Aztec Mesas
XC	Data Matrix
XD	Maxicode
XE	Micro PDF417
XF	PDF417
XG	QR Code
XH	Micro QR Code
XI	Han Xin Code

2. AIM Code Identifiers

Each AIM Code Identifier contains the three-character string]cm where:
] = Flag Character (ASCII 93)
c = Code Character
m = Modifier Character

AIM Code Character

Code Character	Bar Code Type
A	Code 39, Code 39 Full ASCII, Code 32
C	Code 128
d	Data Matrix
E	UPC/EAN
e	RSS Family
F	Codabar
G	Code 93
H	Code 11
I	Interleaved 2 of 5
L	PDF417, Micro PDF417, Micro PDF417
M	MSI
Q	QR Code
S	Discrete 2 of 5, IATA 2 of 5
X	Bookland EAN, Trioptic Code 39, US Postnet, US Planet, UK Postal, Japan Postal, Australian Postal, Dutch Postal

APPENDIX C: Decimal Value Table

0

1

2

3

4

5

6

7

8

9

APPENDIX D: ASCII Characters

NULL

00

SOH

01

STX

02

ETX

03

EOT

04

ENQ

05

ACK

06

BEL

07

BS

08

HT

09

LF

0A

VT

0B

FF

0C

CR

0D

SO

0E

SI

0F

DLE

10

DC1

11

DC2

12

DC3

13

DC4

14

NAK

15

SYN

16

ETB

17

CAN

18

EM

19

SUB

1A

ESC

1B

FS

1C

GS

1D

RS

1E

US

1F

SPACE

20

!

21

“

22

#

23

$

24

%

25

&

26

‘

27

(

28

)

29

*

2A

+

2B

’

2C

-

2D

.

2E

/

2F

0

30

1

31

2

32

3

33

4

34

5

35

6

36

7

37

8

38

9

39

:

3A

;

3B

<

3C

=

3D

>

3E

?

3F

@

40

A

41

B

42

C

43

D

44

E

45

F

46

G

47

H

48

I

49

J

4A

K

4B

L

4C

M

4D

N

4E

O

4F

P

50

Q

51

R

52

S

53

T

54

U

55

V

56

W

57

X

58

Y

59

Z

5A

[

5B

\

5C

]

5D

^

5E

_

5F

`

60

a

61

b

62

c

63

d

64

e

65

f

66

g

67

h

68

i

69

j

6A

k

6B

l

6C

m

6D

n

6E

o

6F

p

70

q

71

r

72

s

73

t

74

u

75

v

76

w

77

x

78

y

79

z

7A

{

7B

|

7C

}

7D

~

7E

DEL

7F

APPENDIX E: Numeric Keypad Table

The table is for Bluetooth PIN code input.

0		**1**	
2		**3**	
4		**5**	
6		**7**	
8		**9**	
Enter			

Start Configuration

%$+/3

Save Parameters

%$+/0

Abort Configuration

%$+/6

Set All Default

%$+/2

Version Information

%$+/5