BS-4802

Presentation 2D Scanner

V3.6

USER GUIDE

BIRCH ®
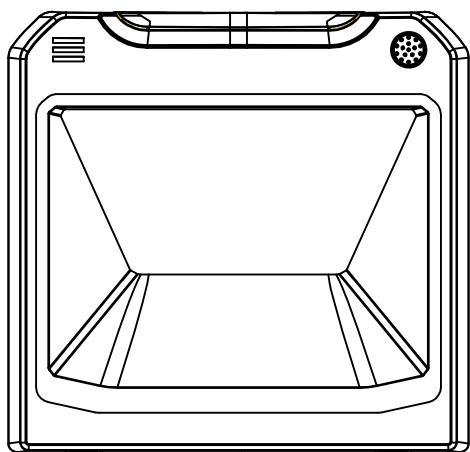
Contents

Factory Defaults

Start / End

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

Factory Defaults
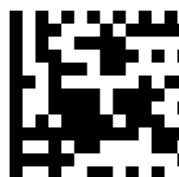
Reports Firmware Version

Custom Defaults
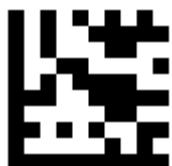
Start / End

Scanning the **Save as Custom Defaults** barcode can save the settings as custom defaults.

Scanning the **Restore Custom Defaults** barcode can reset all parameters to the custom defaults.

Save as Custom Defaults

Restore Custom Defaults

Chapter 1 Basic Settings

Start / End

Interface Selection

Scan the appropriate programming bar code to select the

interface type for your system.

** USB Keyboard

RS232 COM Port

USB Virtual COM Port

Start / End

Sensitivity

Low Sensitivity

** Medium Sensitivity

High Sensitivity

.

Decode Redundancy

The scanner offers three levels of decode redundancy. Select higher redundancy levels for decreasing levels of bar code quality.

As redundancy levels increase, the scanner's aggres-siveness decreases. Select the redundancy level appropriate for the bar code quality.

Redundancy Level 1

All code types just read one time.

Redundancy Level 2

All code types must be successfully read two times before being decoded.

Redundancy Level 3

All code types must be successfully read three times before being decoded.

Decode Redundancy - Continued

** 1 time

2 times

3 times

Start / End

Decode Session Timeout

This parameter sets the maximum time decode session continues during a scan attempt. This feature is only applicable to the **Trigger** and **Sense** modes. It is programmable in 1ms increments from 1ms to 60,000 ms. When it is set to 0 , the timeout is infinite. The default setting is 5,000 ms.

 Set the decode session timeout to 1,500 ms

1. Scan the **Start** barcode.

2. Scan the **Decode Session Timeout** barcode.

3. Scan the "1", "5", "0" and "0" barcodes from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

Time to Read Same Barcode

● Timeout between Decodes

Timeout between Decodes (Same Barcode) can avoid undesired rereading of same barcode in a given period of time. This feature is only applicable to **Continuous** mode.

It is programmable in 1ms increments from 1ms to 5,000 ms. When it is set to 0, the timeout is disable.

● Ignore Same Code

Time to ignore the barcode when read same barcode in a given period of time. This feature is only applicable to the **Sense** and **Continuous** modes. The default setting is 300 ms.

Set the timeout between decodes to 500ms

1. Scan the **Start** barcode.

2. Scan the **Timeout between Decodes** barcode

3. Scan the "5", "0" and "0" barcodes from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

Set the ignore same barcode to 250 ms

1. Scan the **Start** barcode.

2. Scan the **Ignore Same Barcode**

3. Scan the "2", "5" and "0" barcodes from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

Start / End

Time to Read Same Barcode - Continued

Timeout between Decodes

** Ignore Same Barcode

Time to Suspend State

This parameter sets the time to enter to suspend state when the decoder is idle. This feature is only applicable to **Trigger** mode. It is programmable in 1 ms increments from 1ms to 36,00,000 ms. When it is set to 0, the timeout is disable. The default setting is 15,000 ms.

Set the time to suspend state to 2,500 ms

1. Scan the **Start** barcode.

2. Scan the **Time to Suspend State** barcode

3. Scan the "2", "5", "0" and "0" barcodes from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

Start / End

Time to Suspend State

Start / End

Good Read Beep

Disable

** Enable
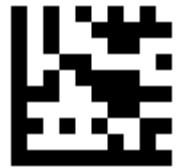
Start / End

Good Read Beep Frequency

Low

** Medium

High

Start / End

Emulate ALT+Keypad

When **Emulate ALT+Keypad** is turned on, any character whose ASCII value is greater than or equal to 0x20 is sent over the numeric keypad no matter which keyboard type is selected.

** Disable

Enable

Supposing **Emulate ALT+Keypad** is Enable , barcode data "WNA" (87/78/65) is sent as below:

"W" – "ALT Make" + "0087" + "ALT Break"

"N" -- "ALT Make" + "0078" + "ALT Break"

"A" -- "ALT Make" + "0065" + "ALT Break"
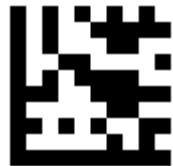
Keyboard Layout

Keyboard layouts vary from country to country. The default

setting is U.S. keyboard.

** U.S.

Belgium

Britain

Brazil

Start / End

Keyboard Layout - Continued

Czech Republic

Denmark

France

Germany

Keyboard Layout - Continued

Hungary

Italy

Japan

Norway

Keyboard Layout - Continued

Poland

Portugal

Romania

Spain

Keyboard Layout - Continued

Sweden

Slovakia

Switzerland

Turkish Q

Start / End

Keyboard Layout - Continued

Russia

Vietnam

Start / End

Unicode/Code Page

** Unicode

Microsoft Office Word / Codepage

Big 5 - Unicode

Big 5 - Microsoft Office Word

Unicode/Code Page - Continued

Shift JIS - Unicode

Shift JIS - Microsoft Office Word

Korean - Unicode

Korean - Microsoft Office Word

Unicode/Code Page - Continued

West European Latin

Central and East European Latin

Arabic

Baltic

Start / End

Unicode/Code Page - Continued

Cyrillic

Hebrew

Turkish

Greek

Start / End

Unicode/Code Page - Continued

Thai

Vietnamese

Chapter 3 RS-232 Interface
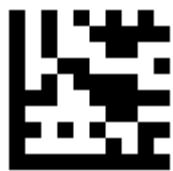
Start / End

RS232 Data Bits

7 data bits

** 8 data bits

Start / End

RS232 Parity

No Parity

Odd Parity

Even Parity
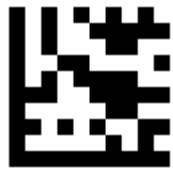
Start / End

RS232 Stop Bits

** 1 Stop bit

2 Stop bit

Start / End

RS232 Baud Rate

** 9600

19200

38400

57600

115200

230400

Chapter 4 Symbologies
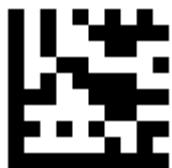
Start / End

Enable/Disable All Symbologies

Enable All Symbologies

Disable All Symbologies

Start / End

Enable 1D/2D Symbologies

Enable 1D Symbologies

Enable 2D Symbologies

UPC-A
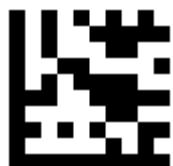
Start / End

Enable/Disable UPC-A

** Enable UPC-A

Disable UPC-A

Start / End

Number System Transmission

** Enable Number System Transmission

Disable Number System Transmission

Start / End

Check Digit Transmission

** Send Check Digit

Don't Send Check Digit

Start / End

Expand UPC-A to EAN13

** Don't Expand to EAN13

Expand to EAN13

Start / End

UPC-A 2/5-Digit Add-ons

** Disable UPC-A Add-ons

Enable UPC-A 2/5-Digit Add-ons

UPC-A 2/5-Digit Add-ons - Continued

Enable UPC-A 2-Digit Add-ons

Enable UPC-A 5-Digit Add-ons

UPC-A 2/5-Digit Add-ons - Continued

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

** Disable UPC-A Add-ons Only

Enable UPC-A Add-ons Only

UPC-E
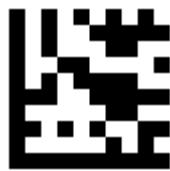
Start / End

Enable/Disable UPC-E

** Enable UPC-E

Disable UPC-E

Start / End

Number System Transmission

** Enable Number System Transmission**

Disable Number System Transmission

Start / End

Check Digit Transmission

** Send Check Digit

Don't Send Check Digit

Start / End

Expand UPC-E to UPC-A

Don't Expand to UPC-A

Expand to UPC-A

Start / End

UPC-E 2/5-Digit Add-ons

Disable UPC-E Add-ons

Enable UPC-E 2/5-Digit Add-ons

Start / End

UPC-E 2/5-Digit Add-ons - Continued

Enable UPC-E 2-Digit Add-ons

Enable UPC-E 5-Digit Add-ons

UPC-E 2/5-Digit Add-ons - Continued

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

** Disable UPC-E Add-ons Only

Enable UPC-E Add-ons Only

EAN 13
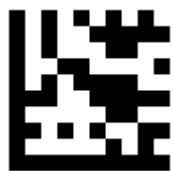
Start / End

Enable/Disable EAN 13

** Enable EAN 13

Disable EAN 13

Start / End

Check Digit Transmission

** Send Check Digit

Don't Send Check Digit

Start / End

ISBN

** Disable ISBN**

Enable ISBN

Japanese 978/192 Book Code

When **Japanese 978/192 Book Code** is selected, the scanner will only read EAN 13 barcodes that contain 978/192 flags.

** Disable Japanese 978/192 Book Code

Enable Japanese 978/192 Book Code

Start / End

EAN 13 2/5-Digit Add-ons

** Disable EAN 13 Add-ons

Enable EAN 13 2/5-Digit Add-ons

EAN 13 2/5-Digit Add-ons - Continued

Enable EAN 13 2-Digit Add-ons

Enable EAN 13 5-Digit Add-ons

EAN 13 2/5-Digit Add-ons - Continued

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

** Disable EAN 13 Add-ons Only

Enable EAN 13 Add-ons Only

EAN 8
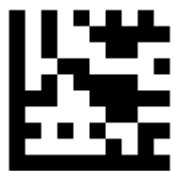
Start / End

Enable/Disable EAN 8

** Enable EAN 8

Disable EAN 8

Start / End

Check Digit Transmission

** Send Check Digit

Don't Send Check Digit

Start / End

Expand EAN 8 to EAN 13

** Don't Expand to EAN 13

Expand to EAN 13
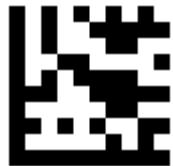
Start / End

EAN 8 2/5-Digit Add-ons

** Disable EAN 8 Add-ons

Enable EAN 8 2/5-Digit Add-ons

Start / End

EAN 8 2/5-Digit Add-ons - Continued

Enable EAN 8 2-Digit Add-ons

Enable EAN 8 5-Digit Add-ons
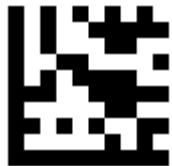
EAN 8 2/5-Digit Add-ons - Continued

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

** Disable EAN 8 Add-ons Only

Enable EAN 8 Add-ons Only

Code 128 / GS1-128
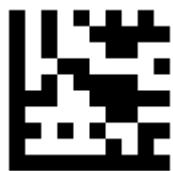
Start / End

Enable/Disable Code 128 / GS1-128

** Enable Code 128 / GS1-128

Disable Code 128 / GS1-128

Start / End

GS1-128 AIM ID

** Do Not Transmit GS1-128 AIM ID

Transmit GS1-128 AIM ID
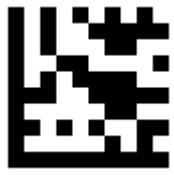
Start / End

GS1-128 Application Identifier Transmission

** AI Transmission

(AI) Transmission

Set Lengths for Code 128

- **One Discrete Length**

Select this option to decode the symbol containing a selected length.

Select the length using the numeric bar codes in ASCII Code. For example, to decode only Code 128 symbols with 14 characters, scan **Code 128 One Discrete Length**, then scan **1** followed by **4**.

- **Two Discrete Lengths**

Select this option to decode the symbol containing either of two selected lengths.

Select lengths using the numeric bar codes in ASCII Code. For example, to decode only Code 128 symbols containing either 2 or 14 characters, select **Code 128 Two Discrete Lengths**, then scan **0**, **2**, **1**, and then **4**.

- **Length Within Range**

Select this option to decode the symbol with a specific length range.

Select lengths using numeric bar codes in ASCII Code. For example, to decode Code 128 symbols containing between 4 and 12 characters, first scan **Code 128 Length Within Range**. Then scan **0**, **4**, **1,** and **2**.

- **Any Length**

Select this option to decode the symbol containing any number of characters within the digital scanner's capability.

Set Lengths for Code 128 - Continued

One Discrete Length

Two Discrete Lengths

Length Within Range

** **Any Length**

Code 39
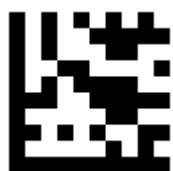
Start / End

Enable/Disable Code 39

** Enable Code 39

Disable Code 39

Start / End

Code 39 Full ASCII

** Disable Code 39 Full ASCII

Enable Code 39 Full ASCII
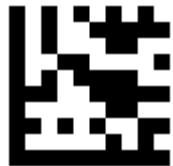
Start / End

Check Character Calculation

** Disable Check Char Calculation

Enable Check Char Calculation
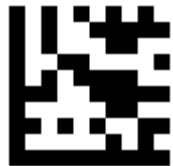
Start / End

Check Character Transmission

** Disable Check Char Transmission

Enable Check Char Transmission
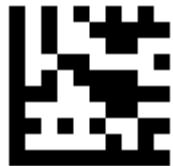
Start / End

Start / Stop Character

** Don't Transmit Start / Stop Character

Transmit Start / Stop Character

Set Lengths for Code 39

- **One Discrete Length**

Select this option to decode the symbol containing a selected length.

Select the length using the numeric bar codes in ASCII Code. For example, to decode only Code 39 symbols with 14 characters, scan **Code 39 One Discrete Length**, then scan **1** followed by **4**.

- **Two Discrete Lengths**

Select this option to decode the symbol containing either of two selected lengths.

Select lengths using the numeric bar codes in ASCII Code. For example, to decode only Code 39 symbols containing either 2 or 14 characters, select **Code 39 Two Discrete Lengths**, then scan **0**, **2**, **1**, and then **4**.

- **Length Within Range**

Select this option to decode the symbol with a specific length range.

Select lengths using numeric bar codes in ASCII Code. For example, to decode Code 39 symbols containing between 4 and 12 characters, first scan **Code 39 Length Within Range**. Then scan **0**, **4**, **1,** and **2**.

- **Any Length**

Select this option to decode the symbol containing any number of characters within the digital scanner's capability.

Set Lengths for Code 39 - Continued

One Discrete Length

Two Discrete Lengths

Length Within Range

** Any Length

Code 32
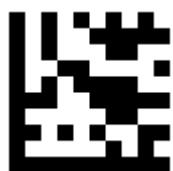
Start / End

Enable/Disable Code 32

Enable Code 32

** Disable Code 32

Start / End

Start / Stop Character

** Don't Transmit Start / Stop Character

Transmit Start / Stop Character

Code 93
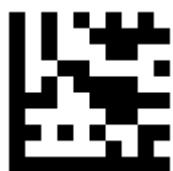
Start / End

Enable/Disable Code 93

** Enable Code 93

Disable Code 93

Set Lengths for Code 93

- **One Discrete Length**

Select this option to decode the symbol containing a selected length.

Select the length using the numeric bar codes in ASCII Code. For example, to decode only Code 93 symbols with 14 characters, scan **Code 93 One Discrete Length**, then scan **1** followed by **4**.

- **Two Discrete Lengths**

Select this option to decode the symbol containing either of two selected lengths.

Select lengths using the numeric bar codes in ASCII Code. For example, to decode only Code 93 symbols containing either 2 or 14 characters, select **Code 93 Two Discrete Lengths**, then scan **0**, **2**, **1**, and then **4**.

- **Length Within Range**

Select this option to decode the symbol with a specific length range.

Select lengths using numeric bar codes in ASCII Code. For example, to decode Code 93 symbols containing between 4 and 12 characters, first scan **Code 93 Length Within Range**. Then scan **0**, **4**, **1,** and **2**.

- **Any Length**

Select this option to decode the symbol containing any number of characters within the digital scanner's capability.

Set Lengths for Code 93 - Continued

One Discrete Length

Two Discrete Lengths

Length Within Range

** Any Length

Pharmacode
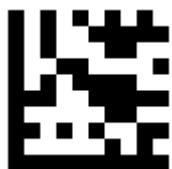
Start / End

Enable/Disable Pharmacode

Enable Pharmacode

** Disable Pharmacode

Codabar

Start / End

Enable/Disable Codabar

** Enable Codabar

Disable Codabar

Check Character Verification

** Disable Check Char Verification

Enable Check Char Verification

Start / End

Check Character Transmission

** Disable Check Char Transmission

Enable Check Char Transmission

Start / End

Start / Stop Characters

Transmit Start / Stop Characters

** Don't Transmit Start / Stop Characters

Set Lengths for Codabar

- **One Discrete Length**

Select this option to decode the symbol containing a selected length.

Select the length using the numeric bar codes in ASCII Code. For example, to decode only Codabar symbols with 14 characters, scan **Codabar One Discrete Length**, then scan **1** followed by **4**.

- **Two Discrete Lengths**

Select this option to decode the symbol containing either of two selected lengths.

Select lengths using the numeric bar codes in ASCII Code. For example, to decode only Codabar symbols containing either 2 or 14 characters, select **Codabar Two Discrete Lengths**, then scan **0**, **2**, **1**, and then **4**.

- **Length Within Range**

Select this option to decode the symbol with a specific length range.

Select lengths using numeric bar codes in ASCII Code. For example, to decode Codabar symbols containing between 4 and 12 characters, first scan **Codabar Length Within Range**. Then scan **0**, **4**, **1,** and **2**.

- **Any Length**

Select this option to decode the symbol containing any number of characters within the digital scanner's capability.

Start / End

Set Lengths for Codabar - Continued

One Discrete Length

Two Discrete Lengths

Length Within Range

** Any Length

MSI
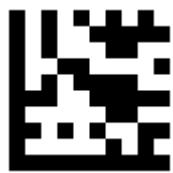
Start / End

Enable/Disable MSI

Enable MSI

** Disable MSI

Start / End

Check Character Calculation

ʰ* Enable Check Char Calculation

Disable Check Char Calculation

Start / End

Check Character Transmission

** Enable Check Char Transmission

Disable Check Char Transmission
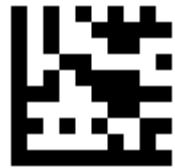
Start / End

Check Character Algorithm

** MOD 10

MOD 10 / MOD 10

MOD 10 / MOD 11

Set Lengths for MSI

- **One Discrete Length**

Select this option to decode the symbol containing a selected length.

Select the length using the numeric bar codes in ASCII Code. For example, to decode only MSI symbols with 14 characters, scan **MSI One Discrete Length**, then scan **1** followed by **4**.

- **Two Discrete Lengths**

Select this option to decode the symbol containing either of two selected lengths.

Select lengths using the numeric bar codes in ASCII Code. For example, to decode only MSI symbols containing either 2 or 14 characters, select **MSI Two Discrete Lengths**, then scan **0**, **2**, **1**, and then **4**.

- **Length Within Range**

Select this option to decode the symbol with a specific length range.

Select lengths using numeric bar codes in ASCII Code. For example, to decode MSI symbols containing between 4 and 12 characters, first scan **MSI Length Within Range**. Then scan **0**, **4**, **1,** and **2**.

- **Any Length**

Select this option to decode the symbol containing any number of characters within the digital scanner's capability.

Set Lengths for MSI - Continued

One Discrete Length

Two Discrete Lengths

Length Within Range

** Any Length**

Interleaved 2 of 5
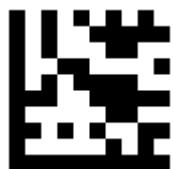
Start / End

Enable/Disable Interleaved 2 of 5

** Enable Interleaved 2 of 5

Disable Interleaved 2 of 5

Start / End

Check Character Calculation

** Disable Check Char Calculation

Enable Check Char Calculation

Check Character Transmission

** Disable Check Char Transmission

Enable Check Char Transmission

Set Lengths for Interleaved 2 of 5

- ## One Discrete Length

Select this option to decode the symbol containing a selected length.

Select the length using the numeric bar codes in ASCII Code. For example, to decode only Interleaved 2 of 5 symbols with 14 characters, scan **Interleaved 2 of 5 One Discrete Length**, then scan **1** followed by **4**.

- ## Two Discrete Lengths

Select this option to decode the symbol containing either of two selected lengths.

Select lengths using the numeric bar codes in ASCII Code. For example, to decode only Interleaved 2 of 5 symbols containing either 2 or 14 characters, select **Interleaved 2 of 5 Two Discrete Lengths**, then scan **0**, **2**, **1**, and then **4**.

- ## Length Within Range

Select this option to decode the symbol with a specific length range.

Select lengths using numeric bar codes in ASCII Code. For example, to decode Interleaved 2 of 5 symbols containing between 4 and 12 characters, first scan **Interleaved 2 of 5 Length Within Range**. Then scan **0**, **4**, **1,** and **2**.

- ## Any Length

Select this option to decode the symbol containing any number of characters within the digital scanner's capability.

Set Lengths for Interleaved 2 of 5 - Continued

One Discrete Length

Two Discrete Lengths

Length Within Range

** Any Length

GS1 DataBar 14
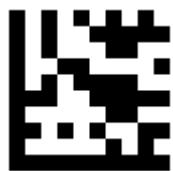
Start / End

Enable/Disable GS1 DataBar 14

** Enable GS1 DataBar 14

Disable GS1 DataBar 14

Start / End

GS1 Application Identifier Transmission

Disable

** AI Transmission

(AI) Transmission

GS1 DataBar 14 Stacked
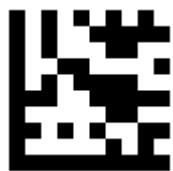
Start / End

Eeable/Disable GS1 DataBar 14 Stacked

** Enable GS1 DataBar 14 Stacked

Disable GS1 DataBar 14 Stacked
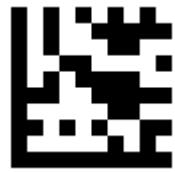
Start / End

GS1 Application Identifier Transmission

Disable

** AI Transmission

(AI) Transmission

GS1 DataBar Expanded

Start / End

Enable/Disable GS1 DataBar Expanded

** Enab GS1 DataBar Expanded

Disable GS1 DataBar Expanded
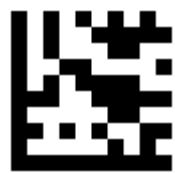
Start / End

GS1 Application Identifier Transmission

Disable

** AI Transmission

(AI) Transmission

GS1 DataBar Expanded Stacked
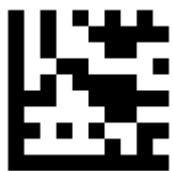
Start / End

Enable/Disable GS1 DataBar Expanded Stacked

** Enable GS1 DataBar Expanded Stacked

Disable GS1 DataBar Expanded Stacked
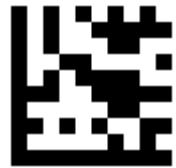
Start / End

GS1 Application Identifier Transmission

Disable

** AI Transmission

(AI) Transmission

GS1 DataBar Limited
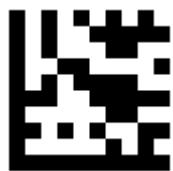
Start / End

Enable/Dsiable GS1 DataBar Limited

** Enable GS1 DataBar Limited

Disable GS1 DataBar Limited

Start / End

GS1 Application Identifier Transmission

Disable

** AI Transmission

(AI) Transmission

GS1 Composite Component A
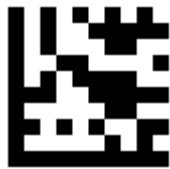
Start / End

Enable/Disable GS1 Composite Component A

Enable CC-A

Disable CC-A

GS1 Composite Component B
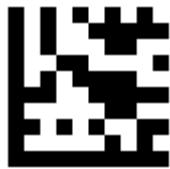
Start / End

Enable/Disable GS1 Composite Component B

Enable CC-B

Disable CC-B

GS1 Composite Component C
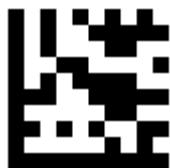
Start / End

Enable/Disable GS1 Composite Component C

Enable CC-C

** Disable CC-C

PDF417
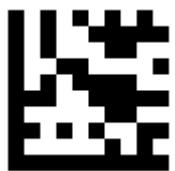
Start / End

Enable/Disable PDF417

** Enable PDF417

Disable PDF417

Micro PDF417
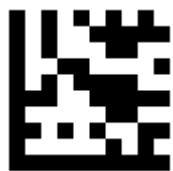
Start / End

Enable/Disable Micro PDF417

Enable Micro PDF417

** Disable Micro PDF417

Data Matrix

Start / End

Enable/Disable Data Matrix

** Enable Data Matrix

Disable Data Matrix
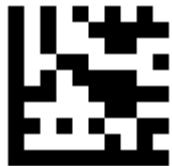
Start / End

GS1 Data Matrix AIM ID

** Do Not Transmit GS1 Data Matrix AIM ID

Transmit GS1 Data Matrix AIM ID

Start / End

GS1 Data Matrix Application Identifier Transmission

** AI Transmission

(AI) Transmission

QR
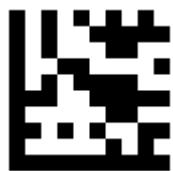
Start / End

Enable/Disable QR

** Enable QR

Disable QR

Start / End

GS1 QR AIM ID

** Do Not Transmit GS1 QR AIM ID

Transmit GS1 QR AIM ID

Start / End

GS1 QR Application Identifier Transmission

** AI Transmission

(AI) Transmission

Start / End

Structured Appending QR Code

When the scanner encounters a structured appending QR barcode , it buffers the data until it reads all the barcode of structured appending QR. The data is transmitted in the order of sequence of data. (Maximum up to 6 QR symbols)
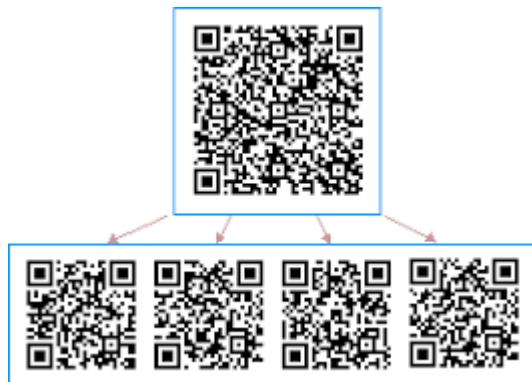
** Disable

Enable

Micro QR
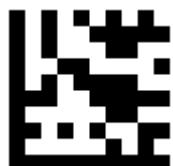
Start / End

Enable/Disable Micro QR

Enable Micro QR

** Disable Micro QR

Aztec
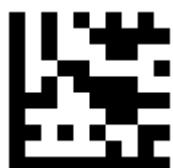
Start / End

Enable/Disable Aztec

Enable Aztec

** Disable Aztec

MaxiCode
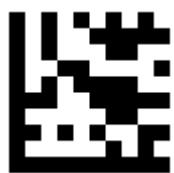
Start / End

Enable/Disable MaxiCode

Enable MaxiCode

** Disable MaxiCode

DotCode
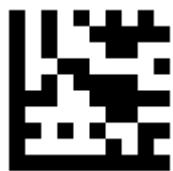
Start / End

Enable/Disable DotCode

Enable DotCode

** Disable DotCode
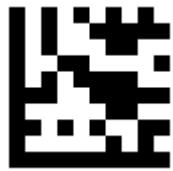
Start / End

GS1 DotCode AIM ID

** Do Not Transmit GS1 DotCode AIM ID

Transmit GS1 DotCode AIM ID

Start / End

GS1 DotCode Application Identifier Transmission

** AI Transmission

(AI) Transmission

Chapter 5 Data Editing

Data Format

The scan data is transmitted as below format.

Prefix	AIM ID	Scan Data	Suffix

Prefix/Suffix

   One to six prefixes and/or suffixes can be appended to scan data for use in data editing.

Example:

Set two Prefixes/Suffixes for all codes

   <Enter programming Mode>

   <Set Prefix> or <Set Suffix>

   <Set All Codes>

   <Set first code of **ASCII Codes** or **Direct Keys** >

   <Set second code of **ASCII Codes** or **Direct Keys** >

   <Exit programming Mode>

Disable Prefixes/Suffixes for all codes

   <Enter programming Mode>

   <Disable Prefix> or <Disable Suffix>

   <Set All Codes>

   <Exit programming Mode>

Set Prefix - Continued

Set Prefix

** **Disable Prefix**

Set Suffix - Continued

Set Suffix
(Default CR for all codes)

Disable Suffix

Truncate Data

This parameter sets the number of leading or ending data to be truncated. It is programmable in 1 increment from 1 to 255 characters. The default setting is 0.

Truncate 5 characters of leading for all codes

1. Scan the **Start** barcode.

2. Scan the **Truncate Leading** barcode.

2. Scan the **All Codes** barcode.

3. Scan the "5" barcode from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

Truncate 10 characters of Ending for QR

1. Scan the **Start** barcode.

2. Scan the **Truncate Ending** barcode.

2. Scan the **QR** barcode.

3. Scan the "1" and "0" barcodes from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

Output 1~15 characters of QR

1. Scan the **Start** barcode.

2. Scan the **Ending character** barcode.

2. Scan the **QR** barcode.

3. Scan the "1" and "5" barcodes from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

Output 20~99 characters of QR

1. Scan the **Start** barcode.

2. Scan the **Truncate Leading** barcode.

2. Scan the **QR** barcode.

3. Scan the "2" and "0" barcodes from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

5. Scan the **Start** barcode.

6. Scan the **Ending character** barcode.

7. Scan the **QR** barcode.

8. Scan the "9" and "9" barcodes from the **Digit Number** in Appendix C.

4. Scan the **End** barcode.

Start / End

Truncate Data - Continued

Truncate Leading

Truncate Ending

Ending Character

Start / End

Set Data for Codes

Set All Codes

UPC-A

UPC-E

EAN 13

Start / End

Set Data for Codes - Continued

EAN 8

Code 128

Code 39

Code 93
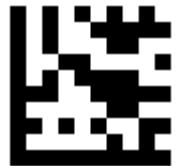
Set Data for Codes - Continued

Code 32

Pharmacode

Codabar

MSI

Set Data for Codes - Continued

Interleaved 2 of 5

GS1 DataBar 14

GS1 DataBar 14 Stacked

GS1 DataBar Expanded

Set Data for Codes - Continued

GS1 DataBar Expanded Stacked

GS1 DataBar Limited

CC-A

CC-B

Set Data for Codes - Continued

CC-C

PDF417

Micro PDF417

Data Matrix

Set Data for Codes - Continued

QR

Micro QR

Aztec

MaxiCode

Start / End

Set Data for Codes - Continued

DotCode
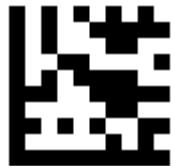
Start / End

AIM ID

** Disable Transmission of AIM ID

Enable Transmission of AIM ID

Start / End

Keyboard Function Key Mapping

Ctrl + ASCII Mode:

Control Characters (0x00 - 0x1F) are sent as ASCII sequences.

Alt + Numeric Keypad Mode:
Control Characters (0x00 - 0x1F) are sent as Unicode code sequences

** Ctrl + ASCII Mode

Alt + Numeric Keypad Mode
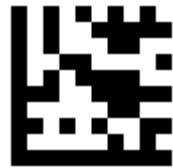
Start / End

Keyboard Caps Lock State

** Caps Lock Off

Caps Lock On
Non-Japanese Keyboard

Caps Lock On
Japanese Keyboard
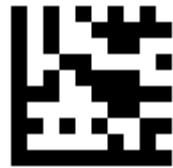
Start / End

Case Conversion

** Disable

Convert to Upper Case

Convert to Lower Case

Note: Case Conversion does not affect AIM ID , Prefix , Suffix.

Control Characters Conversion

Convert Control Characters (0x00 - 0x1F) to other keystroke.

Set ASCII value 29 [GS] to #

1. Scan the **Start** barcode.

2. Scan the **GS Conversion** barcode.

3. Scan the **#** barcode from the **ASCII Code** in Appendix A.

4. Scan the **End** barcode.

Disable ASCII value 29 [GS] conversion

1. Scan the **Start** barcode.

2. Scan the **Disable GS Conversion** barcode.

4. Scan the **End** barcode.

Control Characters Conversion - Continued

NUL Conversion

Disable NUL Conversion

SOH Conversion

Disable SOH Conversion

Control Characters Conversion - Continued

STX Conversion

Disable STX Conversion

ETX Conversion

Disable ETX Conversion

Start / End

Control Characters Conversion - Continued

EOT Conversion

Disable EOT Conversion

ENQ Conversion

Disable ENQ Conversion

Control Characters Conversion - Continued

ACK Conversion

Disable ACK Conversion

BEL Conversion

Disable BEL Conversion

Control Characters Conversion - Continued

BS Conversion

Disable BS Conversion

HT Conversion

Disable HT Conversion

Control Characters Conversion - Continued

LF Conversion

Disable LF Conversion

VT Conversion

Disable VT Conversion

Control Characters Conversion - Continued

FF Conversion

Disable FF Conversion

CR Conversion

Disable CR Conversion

Control Characters Conversion - Continued

SO Conversion

Disable SO Conversion

SI Conversion

Disable SI Conversion

Control Characters Conversion - Continued

DLE Conversion

Disable DLE Conversion

DC1 Conversion

Disable DC1 Conversion

Control Characters Conversion - Continued

DC2 Conversion

Disable DC2 Conversion

DC3 Conversion

Disable DC3 Conversion

Control Characters Conversion - Continued

DC4 Conversion

Disable DC4 Conversion

NAK Conversion

Disable NAK Conversion

Control Characters Conversion - Continued

SYN Conversion

Disable SYN Conversion

ETB Conversion

Disable ETB Conversion

Control Characters Conversion - Continued

CAN Conversion

Disable CAN Conversion

EM Conversion

Disable EM Conversion

Control Characters Conversion - Continued

SUB Conversion

Disable SUB Conversion

ESC Conversion

Disable ESC Conversion

Control Characters Conversion - Continued

FS Conversion

Disable FS Conversion

GS Conversion

Disable GS Conversion

Control Characters Conversion - Continued

RS Conversion

Disable RS Conversion

US Conversion

Disable US Conversion

Application Identifier Conversion

Convert Application Identifier (AI) to other keystroke.

Convert application identifier to

1. Scan the **Start** barcode.

2. Scan the **AI Conversion** barcode.

3. Scan the **#** barcode from the **ASCII Code** in Appendix A.

4. Scan the **End** barcode.

Convert application identifier to (#)

1. Scan the **Start** barcode.

2. Scan the **(AI) Conversion** barcode.

3. Scan the **#** barcode from the **ASCII Code** in Appendix A.

4. Scan the **End** barcode.

Disable application identifier conversion

1. Scan the **Start** barcode.

2. Scan the **Disable AI Conversion** barcode.

4. Scan the **End** barcode.

Application Identifier Conversion - Continued

** Disable

AI Conversion

(AI) Conversion

Appendix A - ASCII Codes

ASCII (hex)	Serial	Keystroke	
00	NUL	**CTRL+@** / Alt + 000	
01	SOH	**CTRL+a** / Alt + 001	
02	STX	**CTRL+b** / Alt + 002	
03	ETX	**CTRL+c** / Alt + 003	

The keystroke in bold is sent only if **Ctrl + ASCII Mode** is enabled. Otherwise, the unbolded keystroke is sent.

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
04	EOT	**CTRL+d** / Alt + 004	
05	ENQ	**CTRL+e** / Alt + 005	
06	ACK	**CTRL+f** / Alt + 006	
07	BEL	**CTRL+g** / Alt + 007	

The keystroke in bold is sent only if **Ctrl + ASCII Mode** is enabled. Otherwise, the unbolded keystroke is sent.

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
08	BACKSPACE	BACKSPACE	
09	TAB	TAB	
0A	LF	**CTRL+j** / Alt + 010	
0B	VT	**CTRL+k** / Alt + 011	

The keystroke in bold is sent only if **Ctrl + ASCII Mode** is enabled. otherwise, the unbolded keystroke is sent.

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
0C	FF	**CTRL+l** / Alt + 012	
0D	CR	ENTER	
0E	SO	**CTRL+n** / Alt + 014	
0F	SI	**CTRL+o** / Alt + 015	

The keystroke in bold is sent only if **Ctrl + ASCII Mode** is enabled. Otherwise, the unbolded keystroke is sent.

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
10	DLE	**CTRL+p** / Alt + 016	
11	DC1	**CTRL+q** / Alt + 017	
12	DC2	**CTRL+r** / Alt + 018	
13	DC3	**CTRL+s** / Alt + 019	

The keystroke in bold is sent only if **Ctrl + ASCII Mode** is enabled. Otherwise, the unbolded keystroke is sent.

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
14	DC4	**CTRL+t** / Alt + 020	
15	NAK	**CTRL+u** / Alt + 021	
16	SYN	**CTRL+v** / Alt + 022	
17	ETB	**CTRL+w** / Alt + 023	

The keystroke in bold is sent only if **Ctrl + ASCII Mode** is enabled. Otherwise, the unbolded keystroke is sent.

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
18	CAN	**CTRL+x** / Alt + 024	
19	EM	**CTRL+y** / Alt + 025	
1A	SUB	**CTRL+z** / Alt + 026	
1B	ESC	**CTRL+[**	

The keystroke in bold is sent only if **Ctrl + ASCII Mode** is enabled. Otherwise, the unbolded keystroke is sent.

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
1C	FS	**CTRL+**	
1D	GS	**CTRL+]**	
1E	RS	**CTRL+^**	
1F	US	**CTRL+_**	

The keystroke in bold is sent only if **Ctrl + ASCII Mode** is enabled. Otherwise, the unbolded keystroke is sent.

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
20	SPACE	SPACE	
21	!	!	
22	"	"	
23	#	#	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
24	$	$	
25	%	%	
26	&	&	
27	'	'	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
28	(	(	
29	)	)	
2A	*	*	
2B	+	+	

ASCII Codes - Continued			
ASCII (hex)	Serial	Keystroke	
2C	,	,	
2D	-	-	
2E	.	.	
2F	/	/	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
30	0	0	
31	1	1	
32	2	2	
33	3	3	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
34	4	4	
35	5	5	
36	6	6	
37	7	7	

ASCII Codes - Continued			
ASCII (hex)	Serial	Keystroke	
38	8	8	
39	9	9	
3A	:	:	
3B	;	;	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
3C	<	<	
3D	=	=	
3E	>	>	
3F	?	?	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
40	@	@	
41	A	A	
42	B	B	
43	C	C	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
44	D	D	
45	E	E	
46	F	F	
47	G	G	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
48	H	H	
49	I	I	
4A	J	J	
4B	K	K	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
4C	L	L	
4D	M	M	
4E	N	N	
4F	O	O	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
50	P	P	
51	Q	Q	
52	R	R	
53	S	S	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
54	T	T	
55	U	U	
56	V	V	
57	W	W	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
58	X	X	
59	Y	Y	
5A	Z	Z	
5B	[	[	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
5C	\	\	
5D	]	]	
5E	^	^	
5F	_	_	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
60	'	'	
61	a	a	
62	b	b	
63	c	c	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
64	d	d	
65	e	e	
66	f	f	
67	g	g	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
68	h	h	
69	i	i	
6A	j	j	
6B	k	k	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
6C	l	l	
6D	m	m	
6E	n	n	
6F	o	o	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
70	p	p	
71	q	q	
72	r	r	
73	s	s	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
74	t	t	
75	u	u	
76	v	v	
77	w	w	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
78	x	x	
79	y	y	
7A	z	z	
7B	{	{	

ASCII Codes - Continued

ASCII (hex)	Serial	Keystroke	
7C	|	|	
7D	}	}	
7E	~	~	
7F	7F (Hex NO.)	DELETE	

Appendix B - Direct Keys

F1

F2

F3

F4

F5

F6

Direct Keys - Continued

F7

F8

F9

F10

F11

F12

Direct Keys - Continued

INSERT

DELETE

HOME

END

Arrow Up

Arrow Down

Direct Keys - Continued

Arrow Left

Arrow Right

CTRL

ALT

SHIFT

Page Up

Direct Keys - Continued

Page Down

ALT+a

ALT+b

ALT+c

ALT+d

ALT+e

Direct Keys - Continued

ALT+f

ALT+g

ALT+h

ALT+i

ALT+j

Ctrl+k

Direct Keys - Continued

ALT+l

ALT+m

ALT+n

ALT+o

ALT+p

ALT+q

Direct Keys - Continued

ALT+r

ALT+s

ALT+t

ALT+u

ALT+v

ALT+w

Direct Keys - Continued

ALT+x

ALT+y

ALT+z

Appendix C - Digit Number

0

1

2

3

4

5

Digit Number - Continued

6

7

8

9

Revision History

Version 1.0

Initial release

Version 1.1

1. Added settings for Standby Time

Version 1.2

1. Added settings for Decode Redundancy

2. Added settings for Decode Area

Version 1.3

1. Added settings for Illumination

2. Added settings for Aiming Pattern

3. Updated the setting barcode for Disable Prefix

Version 1.4

1. Added settings for Disable All Codes

2. Added settings for Only Enable 1D Codes

3. Added settings for Only Enable 2D Codes

4. Added settings for Enable All Codes

5. Added settings for Aztec

Version 1.5

1. Changed the setting barcode for following codes

    Interleaved 2 of 5 ; MSI ; Code 32 ; Pharmacode ; PDF417

    Micro PDF417 ; Data Matrix ; QR ; Micro QR ; Aztec

2. Added settings for following codes

    GS1 DataBar 14

    GS1 DataBar 14 Stacked

    GS1 DataBar Expanded

    GS1 DataBar Expanded Stacked

    GS1 DataBar Limited

    GS1 Composite Component A

    GS1 Composite Component B

    GS1 Composite Component C

 3. Added settings for GS1-Codes ASCII 29 Conversion

Version 1.6

1. Added settings for illumination level

2. Added settings for GS1-Codes ASCII 04 [EOT] Conversion

3. Added settings for GS1-Codes ASCII 30 [RS] Conversion

Version 1.7

1. Added settings for Customer Defaults

2. Added settings for Timeout between Decodes

3. Added settings for Time to suspend state

4. Added Ctrl + ASCII Mode for Function Key Mapping

5. Added Alt + Numeric Keypad Mode for Function Key Mapping

6. Added settings for Control characters Conversion

Version 1.8

1. Added settings for Turkish Q Keyboard

2. Added settings for Sense Mode Sensitivity

3. Added settings for GS1-128

4. Added settings for GS1 Data Matrix

5. Added settings for GS1 QR

Version 1.9

1. Added settings to enable UPC/EAN 2/5-Digit Add-ons

Version 2.0

1. Added settings for Maxicode

2. Added settings for Time to Read Same Barcode

Version 2.1

1. Added setting for Brazil keyboard

2. Added following settings for 2/5-Digit Add-ons

   Enable/Disable UPC-A 2/5-Digit Add-ons Only

   Enable/Disable UPC-E 2/5-Digit Add-ons Only

   Enable/Disable EAN 13 2/5-Digit Add-ons Only

   Enable/Disable EAN 8 2/5-Digit Add-ons Only

3. Added following settings for UTF8 QR Keyboard Output

   Turkish - UTF8 QR Keyboard Output

   Italian - UTF8 QR Keyboard Output

   German - UTF8 QR Keyboard Output

Version 2.2

1. Added setting for **Arabic -** UTF8 QR Keyboard Output

Version 2.3

1. Added setting for Russia keyboard

2. Added settings for Truncate Leading / Ending Data

Version 2.4

1. Updated the setting barcode for Case Conversion

Version 2.5

1. Added settings for DotCode

Version 2.6

1. Added settings for RS232 Data Bits ; Parity ; Stop Bits

2. Added settings for Good Read Beep Frequency

Version 2.7

1. Timeout between Decodes is only applicable to Continuous mode.

Version 2.8

1. Added 00 and 7F for ASCII Code settings

2. Added aiming barcode for decode area

3. Added settings for Emulate ALT+Keypad

Version 2.9

1. Added enable/disable leading A for code 32

2. Added settings for Switzerland ; Vietnam keyboard

Version 3.0

1. To enable Codabar for default setting

2. Added Caps Lock On setting for Japanese Keyboard

Version 3.1

1. Corrected documentation errors for **Keyboard Function Key Mapping**.

2. Corrected documentation errors for Control Characters (0x00 - 0x1F) in Appendix A - ASCII Codes

Version 3.2

1. Added Application Identifier Transmission settings for GS1 barcodes

2. Added Ending Data setting for Truncate Data.

Version 3.3

1. Added setting for Structured Appending QR Code

Version 3.4

1. Added **Application Identifier Conversion** setting for GS1 barcodes

Version 3.5

1. Added **(AI) Conversion** setting for GS1 barcodes

Version 3.6

1. Added settings for **Japanese 918/192 Book Code**