

Programming Guide

Advanced 2D Image Scanner

This Programming Guide is intended for:

- 2D Image Gun-Type Handheld Scanner: Z-3572

Revision History

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	2026-03-24	Initial release

Important Notice

No warranty of any kind is made in regard to this material, including, but not limited to, implied warranties of merchantability or fitness for any particular purpose. We are not liable for any errors contained herein nor for incidental or consequential damages in connection with furnishing, performance or use of this material. We shall be under no liability in respect of any defect arising from fair wear and tear, willful damage, negligence, abnormal working conditions, failure to follow the instructions and warnings, or misuse or alteration or repair of the products without written approval. No part of this document may be reproduced, transmitted, stored in a retrieval system, transcribed, or translated into any human or computer or other language in any form or by any means electronic, mechanical, magnetic, optical, chemical, biological, manual or otherwise, except for brief passages which may be quoted for purposes of scholastic or literary review, without express written consent and authorization. We reserve the right to make changes in product design without reservation and without notification. The material in this guide is for information only and is subject to change without notice. All trademarks mentioned herein, registered or otherwise, are the properties of their various, ill, assorted owners.

General Handling Precautions

Do not dispose the scanner in fire.
Do not put the scanner directly in the sun or by any heat source.
Do not use or store the scanner in a very humid place.
Do not drop the scanner or allow it to collide violently with other objects.
Do not take the scanner apart without authorization

Guidance for Printing

This manual is in A5 size. Please double check your printer setting before printing it out. When the barcodes are to be printed out for programming, the use of a high-resolution laser printer is strongly suggested for the best scan result.

Firmware Notice

To use all functions in this guide please update to the latest firmware.

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Default Parameters

The factory default setting table gives the default settings of all the programmable parameters. The default settings will be restored whenever the "Reset" programming label is scanned and the scanner is in programming mode. Default values are highlighted in grey background in the settings.

Factory Default Setting

Scanner Operation

User Preferences	
Parameter	Default
Baud Rate	9600 BPS
Interface	USB Keyboard
Good read beep length	250 msec
Terminal character	CR(Carriage Return)
Country code	US

Symbologies

Symbology	Default Status
UPC A	Enabled
UPC E	Enabled
EAN 8	Enabled
EAN 13	Enabled
Code 128 / GS1-128	Enabled
Code 39	Enabled
Code 93	Disabled
Code 32	Disabled
Code 11	Disabled
Codabar	Disabled
Plessey	Disabled

Symbology	Default Status
MSI Plessey	Disabled
Interleaved 2 of 5	Enabled
IATA 2 of 5	Disabled
Matrix 2 of 5	Disabled
Straight 2 of 5	Disabled
Pharmacode	Disabled
GS1 DataBar 14	Disabled
GS1 DataBar 14 Stacked	Disabled
GS1 DataBar Expanded	Disabled
GS1 DataBar Expanded Stacked	Disabled
GS1 DataBar Limited	Disabled
Composite Code-A	Disabled

Symbology	Default Status
Composite Code-B	Disabled
Composite Code-C	Disabled
PDF417	Disabled
Micro PDF417	Disabled
Data Matrix	Enabled
QR	Enabled
Micro QR	Disabled
Aztec	Disabled
MaxiCode	Disabled

Settings and Programming

Scan selected barcodes in this manual to affect setup and programming of your 2D image barcode scanner. Decoding options and interface protocols can be tailored to a specific application.

Setup parameters are stored in non-volatile memory in the scanner and are retained even when power is off. Setup parameters change only when you reset them. You may need to hide adjacent code patches with your hand when scanning.

Program Set Up Flow

Scan "Set" to set up --> Scan selected barcode --> Scan "End" to confirm the setup.

System Settings

Restore default settings

Restore default settings: This will restore all properties of the scanner to their factory settings.



Set



Restore default settings



End

Custom Settings

Save custom settings: Save frequently used settings

Load custom Settings: Set saved custom settings.



Set



Save custom settings



Load custom settings



End

Scan Modes

Continuous Scanning:

The device continuously reads single or multiple barcodes. The decoding sequence is defined through the "Same Barcode Read Interval" setting. Scanning begins or ends by pressing and releasing the scan button.

Pulse Trigger / External Trigger:

Scanning initiates upon receiving a pulse signal. By default, scanning is triggered on a High-to-Low transition, though this can be modified via the "Trigger Level" setting. Scanning terminates if the reading time is exceeded (the default decoding time is 3 seconds, but it can be customized in the settings).

Continuous Scan Mode



Set



Continuous scan (default)



End

Pulse Trigger Mode



Set



Pulse triggering (external triggering)



End

Pulse Trigger Level



Set



Trigger scan on High-to-Low transition (Default)



Trigger scan on Low-to-High transition



End

Auto-Sensing Mode



Set



Auto-Sensing



End

Auto-Sensing Sensitivity



Set



Low Sensitivity



Medium Sensitivity (Default)



High Sensitivity



End

Same Barcode Reading Mode

This setting determines how the device handles identical barcodes when operating in **Auto-Sensing**, **Continuous Scanning**, or **Pulse Trigger** modes. By default, the scanner will not re-read the same barcode within a 500ms interval. This interval is customizable from 0 to 5000ms, where "0" indicates no delay.

Option 1: Ignore Identical Barcodes within a Specified Interval

If the same barcode is scanned continuously within the set time limit, the data will be ignored and not output to prevent redundant entries.

Example: To ignore duplicate barcodes within a 100ms interval:

Scan the **"Start Setup"** code.

Scan the **"Ignore identical barcodes within interval"** setting code.

Scan the **"Reading Interval Time"** setting code.

Scan the decimal digit **"1"** from Appendix 1.

Scan the decimal digit **"0"** from Appendix 1.

Scan the decimal digit **"0"** from Appendix 1.

Scan the **"End Setup"** code.

Option 2: Do Not Re-read the Last Barcode

The scanner will not output the most recently read barcode if scanned again immediately.

Option 3: Do Not Re-read the Last Two Barcodes

The scanner will not output either of the last two unique barcodes read if scanned again immediately.

Same Barcode Reading Mode



Set



Do not read identical barcodes within the specified interval (Default)



Do not read the last barcode scanned



Do not read the last two barcodes scanned



End

Same Barcode Reading Interval



Set



Reading Interval Time (ms)



End

Decoding Time

This setting defines the duration the scanner remains active after being triggered in **Trigger (Manual)**, **Pulse**, or **Auto-Sensing** modes. If a barcode is not successfully read within this timeframe, the scanner will stop decoding and enter standby mode. The default value is **3000 ms**, and it can be customized from **0 to 3,600,000 ms**. Setting this value to **0** means the scanner will continue decoding indefinitely until a barcode is read.

Example: Setting the maximum reading time to 5 seconds (5000 ms):

Scan the **"Start Setup"** barcode.

Scan the **"Decoding Time"** setting barcode.

Scan the decimal digit **"5"** from Appendix 1.

Scan the decimal digit **"0"** from Appendix 1.

Scan the decimal digit **"0"** from Appendix 1.

Scan the decimal digit **"0"** from Appendix 1.

Scan the **"End Setup"** barcode.

Decoding Time



Set



Decoding Time (ms)



End

Reset Decoding Time

In Trigger (Manual), Pulse, or Auto-Sensing modes, this setting determines if the decoding timer resets and scanning continues after a successful read. If the decoding time is set to 0, the scanner will stop decoding immediately after a successful read.



Set



Immediately stop scanning after successful decoding (Default)



Reset decoding time after success to continue scanning different barcodes



End

Decoding Area

Full Area Decoding: The entire area of the image (the full frame) is used for decoding.

Center Area Decoding: The center point of the barcode must be within the designated area to be successfully read.



Set



Full Area Decoding (Default)

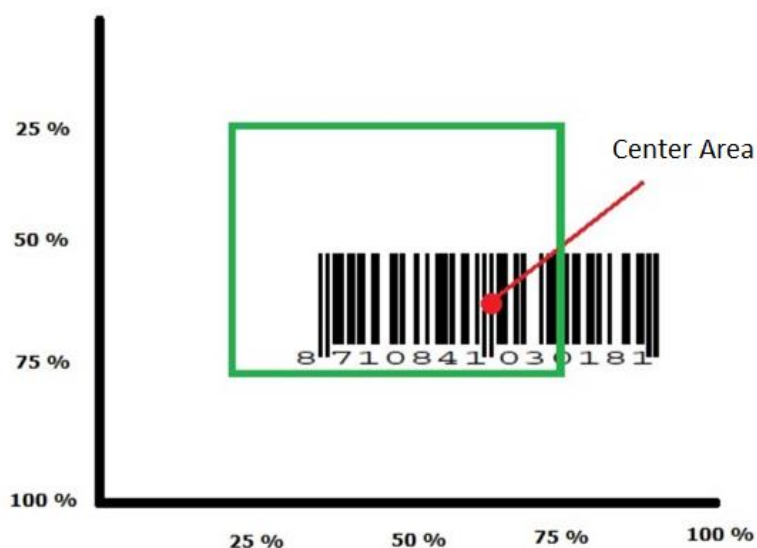
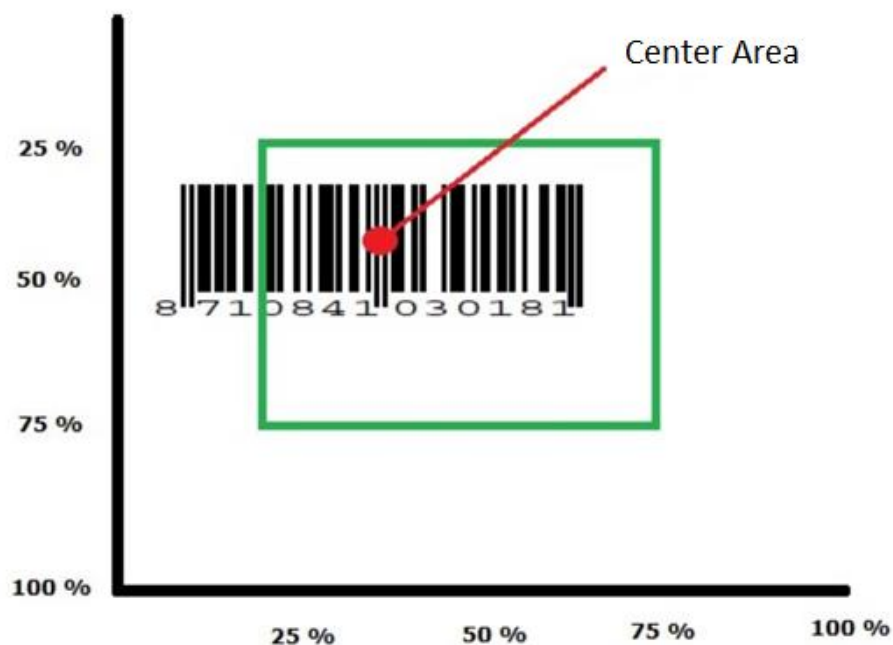


Center Area Decoding

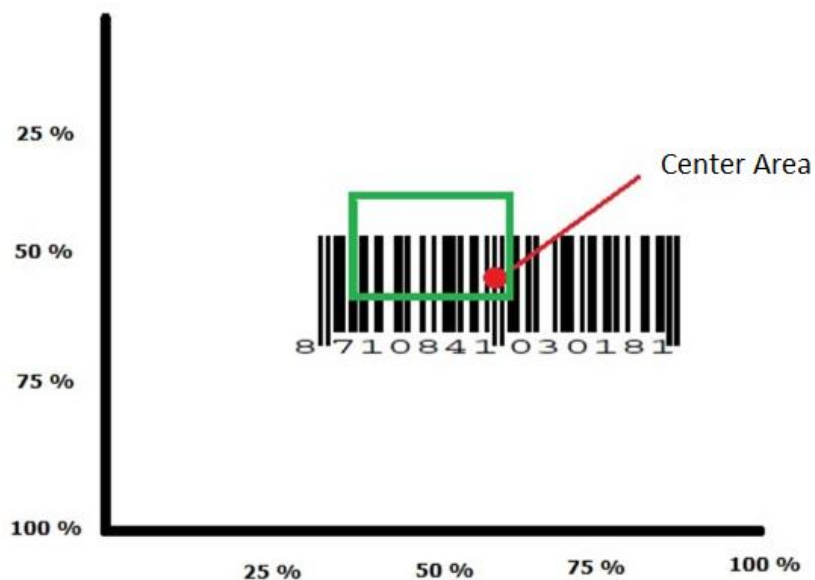
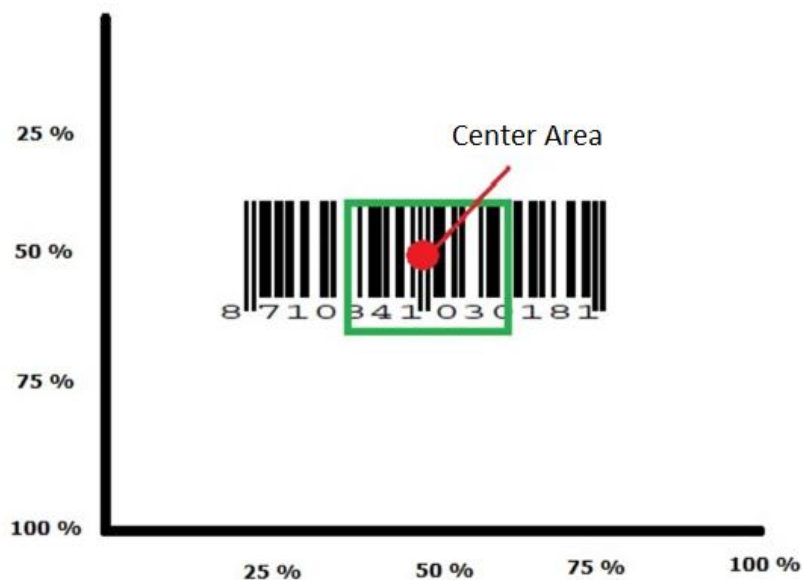


End

75% Center Area



25% Center Area



Center Area Decoding



Set



75% Center Area (Default)



50% Center Area



25% Center Area



End

Decoding Data Validation



Set



Disabled (Default)



Output after two successful reads



Output after three successful reads



End

Read Failure Message

Output Failure Message: In Serial (RS232) mode, the device can output a message if a barcode is not read before the scanning session ends.

Customization: The default failure message is **"NG"**. You can customize this message with up to 8 ASCII characters.

Example: Setting the failure message to "Bad"

Scan the **"Start Setup"** barcode.

Scan the **"Set Read Failure Message"** barcode.

Scan the character **"B"** from the ASCII Code Table (Appendix 3).

Scan the character **"a"** from the ASCII Code Table (Appendix 3).

Scan the character **"d"** from the ASCII Code Table (Appendix 3).

Scan the **"End Setup"** barcode.

Read Failure Message



Set



Disable Read Failure Message (Default)



Enable Read Failure Message



Set Read Failure Message



End

Good/NG Signal Output Duration

In **Trigger (Manual)**, **Pulse**, or **Auto-Sensing** modes, this setting defines the output duration for successful decoding (Good) or failed reading (NG) signals. The default is **250 ms**, and it can be customized from **1 to 500 ms**.

Example: Setting the signal output duration to 500 ms:

Scan the "**Start Setup**" barcode.

Scan the "**Signal Output Duration (ms)**" setting barcode.

Scan the decimal digit "**5**" from Appendix 1.

Scan the decimal digit "**0**" from Appendix 1.



Set



Signal Output Duration (ms)



End

Aiming Light



Set



Always On (Default)



On During Scan



Off



End

Fill Light Operating Mode



Set



On During Scan (Default)



Always On



Fade Up



Off



End

Fill Light Intensity



Set



Low Brightness



Medium Brightness



High Brightness (Default)



End

Fill Light Source



Set



Intelligent Source Switching (Default)



White Light Source



Red Light Source



Blue Light Source (Optional)



End

Startup Prompt Tone



Set



On (Default)



Off



End

Decoding Prompt Tone Frequency



Set



Lowest - 800 Hz



Low - 1600 Hz



Medium - 2730 Hz (Default)



High - 4200 Hz



End

Debug Button



Set



On (Default)



Off



End

Output Modes

USB Keyboard Mode



Set



USB Keyboard Output (Default)



End

Serial Port



Set



Serial Port Output



End

Serial Baud Rate



Set



9600 (Default)



19200



38400



57600



115200



230400



End

Serial Data Bits



Set



7 Data Bits



8 Data Bits (Default)



End

Serial Parity



Set



None (Default)



Odd Parity



Even Parity



End

Serial Stop Bits



Set



1 Stop Bit (Default)



2 Stop Bits



End

Code Page Character Encoding



Set



Simplified Chinese (GB2312) – Unicode / Excel; Notepad



Simplified Chinese (GB2312) – Code Page / Word



End

Symbology Settings

Enable All Symbologies



Set



Enable All Symbologies



End

Enable 1D Barcodes Only



Set



Enable 1D Barcodes Only



End

Enable 2D Barcodes Only



Set



Enable 2D Barcodes Only



End

Disable All Symbolologies



Set



Disable All Symbolologies



End

Disable 1D Barcodes



Set



Disable 1D Barcodes



End

Disable 2D Barcodes



Set



Disable 2D Barcodes



End

UPC A



Set



Enable UPC A (Default))



Disable UPC A



End

Transmit Lead Digit



Set



Transmit Lead Digit (Default)



Do Not Transmit Lead Digit



End

Check Digit



Set



Enable Check Digit (Default)



Disable Check Digit



End

Convert to EAN 13



Set



Enable EAN 13 Conversion



Disable EAN 13 Conversion (Default)



End

Enable/Disable 2/5 Digit Add-on Code



Set



Enable UPC A 2/5 Digit Add-on Code



Disable UPC A 2/5 Digit Add-on Code (Default)



End

Limit Reading 2/5 Digit Add-on Code



Set



Read Only UPC A 2/5 Digit Add-on Code



Read UPC A and UPC A 2/5 Digit Add-on Code (Default)



End

UPC E



Set



Enable UPC E (Default)



Disable UPC E



End

Transmit Lead Digit



Set



Transmit Lead Digit (Default)



Do Not Transmit Lead Digit



End

Check Digit



Set



Enable Check Digit (Default)



Disable Check Digit



End

Convert to UPC A



Set



Enable UPC A Conversion



Disable UPC A Conversion (Default)



End

Enable/Disable 2/5 Digit Add-on Code



Set



Enable UPC E 2/5 Digit Add-on Code



Disable UPC E 2/5 Digit Add-on Code (Default)



End

Limit Reading 2/5 Digit Add-on Code



Set



Read Only UPC E 2/5 Digit Add-on Code



Read UPC E and UPC E 2/5 Digit Add-on Code (Default)



End

EAN 8



Set



Enable EAN 8 (Default)



Disable EAN 8



End

Transmit Check Digit



Set



Transmit Check Digit (Default)



Do Not Transmit Check Digit



End

Convert to EAN 13



Set



Enable EAN 13 Conversion



Disable EAN 13 Conversion (Default)



End

Enable/Disable 2/5 Digit Add-on Code



Set



Enable EAN 8 2/5 Digit Add-on Code



Disable EAN 8 2/5 Digit Add-on Code (Default)



End

Limit Reading 2/5 Digit Add-on Code



Set



Read Only EAN 8 2/5 Digit Add-on Code



Read EAN 8 and EAN 8 2/5 Digit Add-on Code (Default)



End

EAN 13



Set



Enable EAN 13 (Default)



Disable EAN 13



End

Transmit Check Digit



Set



Transmit Check Digit (Default)



Do Not Transmit Check Digit



End

ISBN Conversion



Set



Enable ISBN Conversion



Disable ISBN Conversion (Default)



End

ISSN Conversion



Set



Enable ISSN Conversion



Disable ISSN Conversion (Default)



End

Enable/Disable 2/5 Digit Add-on Code



Set



Enable EAN 13 2/5 Digit Add-on Code



Disable EAN 13 2/5 Digit Add-on Code (Default)



End

Limit Reading 2/5 Digit Add-on Code



Set



Read Only EAN 13 2/5 Digit Add-on Code



Read EAN 13 and EAN 13 2/5 Digit Add-on Code (Default)



End

Code 128 / GS1-128



Set



Enable Code 128 / GS1-128 (Default)



Disable Code 128 / GS1-128



End

Code 128 Decoding Length Settings

Setting Example:

To restrict the reading length to **5 - 18 characters** for Code 128:

Scan **Start Setup**

Scan **Code 128 Length Range Setting Code**

Scan **0** from the ASCII Code Table

Scan **5** from the ASCII Code Table

Scan **1** from the ASCII Code Table

Scan **8** from the ASCII Code Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **Code 128 Any Length Setting Code**

Scan **End Setup**

Code 128 Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

Code 39



Set



Enable Code 39 (Default)



Disable Code 39



End

Full ASCII



Set



Enable Code 39 Full ASCII



Disable Code 39 Full ASCII (Default)



End

Start/Stop Characters



Set



Transmit Start/Stop Characters



Do Not Transmit Start/Stop Characters (Default)



End

Check Digit (Verification)



Set



No Verification (Default)



Verify and Transmit



Verify and Do Not Transmit



End

Code 39 Decoding Length Settings

Setting Example:

To restrict the reading length to **5 - 18 characters** for Code 39:

Scan **Start Setup**

Scan **Code 39 Length Range Setting Code**

Scan **0** from the ASCII Code Table

Scan **5** from the ASCII Code Table

Scan **1** from the ASCII Code Table

Scan **8** from the ASCII Code Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **Code 39 Any Length Setting Code**

Scan **End Setup**

Code 39 Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

Code 32



Set



Enable Code 32



Disable Code 32 (Default)



End

Start/Stop Characters



Set



Transmit Start/Stop Characters



Do Not Transmit Start/Stop Characters (Default)



End

Code 93



Set



Enable Code 93



Disable Code 93 (Default)



End

Code 93 Decoding Length Settings

Setting Example:

To restrict the reading length to **5 - 18 characters** for Code 93:

Scan **Start Setup**

Scan **Code 93 Length Range Setting Code**

Scan **0** from the ASCII Code Table

Scan **5** from the ASCII Code Table

Scan **1** from the ASCII Code Table

Scan **8** from the ASCII Code Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **Code 93 Any Length Setting Code**

Scan **End Setup**

Code 93 Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

Code 11



Set



Enable Code 11



Disable Code 11 (Default)



End

Transmit Check Digit



Set



Transmit Check Digit (Default)



Do Not Transmit Check Digit



End

Code 11 Decoding Length Settings

Setting Example:

To restrict the reading length to **5 - 18 characters** for Code 11:

Scan **Start Setup**

Scan **Code 11 Length Range Setting Code**

Scan **0** from the ASCII Code Table

Scan **5** from the ASCII Code Table

Scan **1** from the ASCII Code Table

Scan **8** from the ASCII Code Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **Code 11 Any Length Setting Code**

Scan **End Setup**

Code 11 Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

Codabar



Set



Enable Codabar



Disable Codabar (Default)



End

Verification (Check Digit)



Set



No Verification (Default)



Verify and Transmit



Verify and Do Not Transmit



End

Start/Stop Characters



Set



Transmit Start/Stop Characters



Do Not Transmit Start/Stop Characters (Default)



End

Codabar Decoding Length Settings

Setting Example:

To restrict the reading length to **5 - 18 characters** for Codabar:

Scan **Start Setup**

Scan **Codabar Length Range Setting Code**

Scan **0** from the ASCII Code Table

Scan **5** from the ASCII Code Table

Scan **1** from the ASCII Code Table

Scan **8** from the ASCII Code Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **Codabar Any Length Setting Code**

Scan **End Setup**

Codabar Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

Plessey



Set



Enable Plessey



Disable Plessey (Default)



End

Plessey Decoding Length Settings

Setting Example: Restrict length to 5 - 18 characters

Scan **Start Setup**

Scan **Plessey Length Range Setting Code**

Scan **0, 5, 1, 8** from ASCII Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **Plessey Any Length Setting Code**

Scan **End Setup**

Start Setup

Limit to Single Length

Limit to Two Different Lengths

Limit to Length Range

No Length Restriction (Default) End Setup

Plessey Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

MSI Plessey



Set



Enable MSI Plessey



Disable MSI Plessey (Default)



End

Verification



Set



No Verification



Mod 10 Verification (Default)



End

Verification (Advanced)



Set



Mod 10/10 Verification



Mod 11/10 Verification



End

Transmit Check Digit



Set



Transmit Check Digit (Default)



Do Not Transmit Check Digit



End

MSI Plessey Decoding Length Settings

Setting Example: Restrict length to 5 - 18 characters

Scan **Start Setup**

Scan **MSI Plessey Length Range Setting Code**

Scan **0, 5, 1, 8** from ASCII Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **MSI Plessey Any Length Setting Code**

Scan **End Setup**

Start Setup

Limit to Single Length

Limit to Two Different Lengths

Limit to Length Range

No Length Restriction (Default) End Setup

MSI Plessey Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

Interleaved 2 of 5 (ITF)



Set



Enable Interleaved 2 of 5 (Default)



Disable Interleaved 2 of 5



End

Verification



Set



No Verification (Default)



Verify and Transmit



End

Interleaved 2 of 5 Decoding Length Settings

Setting Example: Restrict length to 5 - 18 characters

Scan **Start Setup**

Scan **Interleaved 2 of 5 Length Range Setting Code**

Scan **0, 5, 1, 8** from ASCII Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **Interleaved 2 of 5 Any Length Setting Code**

Scan **End Setup**

Start Setup

Limit to Single Length

Limit to Two Different Lengths

Limit to Length Range

No Length Restriction (Default) End Setup

Interleaved 2 of 5 Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

Matrix 2 of 5



Set



Enable Matrix 2 of 5



Disable Matrix 2 of 5 (Default)



End

Matrix 2 of 5 Decoding Length Settings

Setting Example: Restrict length to 5 - 18 characters

Scan **Start Setup**

Scan **Matrix 2 of 5 Length Range Setting Code**

Scan **0, 5, 1, 8** from ASCII Table

Scan **End Setup**

No Length Restriction

Scan **Start Setup**

Scan **Matrix 2 of 5 Any Length Setting Code**

Scan **End Setup**

Start Setup

Limit to Single Length

Limit to Two Different Lengths

Limit to Length Range

No Length Restriction (Default) End Setup

Matrix 2 of 5 Decoding Length Settings



Set



Limit to Single Length



Limit to Two Different Lengths



Limit to Length Range



No Length Restriction (Default)



End

IATA 2 of 5



Set



Enable IATA 2 of 5



Disable IATA 2 of 5 (Default)



End

Straight 2 of 5



Set



Enable Straight 2 of 5



Disable Straight 2 of 5 (Default)



End

Pharmacode



Set



Enable Pharmacode



Disable Pharmacode (Default)



End

GS1 DataBar 14



Set



Enable GS1 DataBar 14



Disable GS1 DataBar 14 (Default)



End

GS1 DataBar 14 Stacked



Set



Enable GS1 DataBar 14 Stacked



Disable GS1 DataBar 14 Stacked (Default)



End

AI (01) Character Transmission Settings



Set



Output AI (01) Character (Default)



Do Not Output AI (01) Character



End

GS1 DataBar Expanded



Set



Enable GS1 DataBar Expanded



Disable GS1 DataBar Expanded (Default)



End

GS1 DataBar Expanded Stacked



Set



Enable GS1 DataBar Expanded Stacked



Disable GS1 DataBar Expanded Stacked (Default)



End

AI (01) Character Transmission Settings



Set



Output AI (01) Character (Default)



Do Not Output AI (01) Character



End

GS1 DataBar Limited



Set



Enable GS1 DataBar Limited



Disable GS1 DataBar Limited (Default)



End

AI (01) Character Transmission Settings



Set



Output AI (01) Character (Default)



Do Not Output AI (01) Character



End

Composite Code-A



Set



Enable Composite Code-A



Disable Composite Code-A (Default)



End

Composite Code-B



Set



Enable Composite Code-B



Disable Composite Code-B (Default)



End

Composite Code-C



Set



Enable Composite Code-C



Disable Composite Code-C (Default)



End

PDF417



Set



Enable PDF417



Disable PDF417 (Default)



End

Micro PDF417



Set



Enable Micro PDF417



Disable Micro PDF417 (Default)



End

Data Matrix



Set



Enable Data Matrix (Default)



Disable Data Matrix



End

Rectangular Data Matrix



Set



Enable Rectangular Data Matrix (Default)



Disable Rectangular Data Matrix



End

Mirror Decoding



Set



Enable Mirror Decoding (Default)



Disable Mirror Decoding



End

QR



Set



Enable QR (Default)



Disable QR



End

Mirror Decoding



Set



Enable Mirror Decoding (Default)



Disable Mirror Decoding



End

Micro QR



Set



Enable Micro QR



Disable Micro QR (Default)



End

Aztec



Set



Enable Aztec



Disable Aztec (Default)



End

Mirror Decoding



Set



Enable Mirror Decoding (Default)



Disable Mirror Decoding



End

MaxiCode



Set



Enable MaxiCode



Disable MaxiCode (Default)



End

Data Editing

Output Format

The following is the data output format:

Barcode Information (4 bytes)

Prefix (4 bytes)

AIM ID

Barcode Content

Suffix (4 bytes)

Terminating Character (1 byte)

Barcode Information

The default setting is **Do Not Output Barcode Information**.

Barcode information output can be enabled or disabled via serial commands or by scanning setup barcodes.

This feature only supports **Serial Port Mode**; it is not supported in USB Keyboard mode.

Format Definition

Start Flag: 0x03 (1 byte)

Barcode Symbology Code: (1 byte, Hexadecimal)

Barcode Length: (2 bytes, 0x0001 ~ 0xFFFF)

Barcode Symbology Codes

Code	2D Barcode	Code	1D Barcode	Code	1D Barcode
0x41	PDF417	0x61	UPC A	0x71	Pharmacode
0x42	Micro PDF417	0x62	UPC E	0x72	GS1 DataBar 14
0x43	Data Matrix	0x63	EAN 8	0x73	GS1 DataBar Expanded
0x44	QR	0x64	EAN 13	0x74	GS1 DataBar Limited
0x45	Micro QR	0x65	Code 128	0x75	Composite Code-A
0x46	Aztec	0x66	Code 39	0x76	Composite Code-B
0x47	MaxiCode	0x67	Code 93	0x77	Composite Code-C
0x48	DotCode	0x68	Code 32		
		0x69	Code 11		
		0x6A	Codabar		
		0x6B	Plessey		
		0x6C	MSI Plessey		
		0x6D	Interleaved 2 of 5		
		0x6E	IATA 2 of 5		
		0x6F	Matrix 2 of 5		
		0x70	Straight 2 of 5		

Barcode Information



Set



Disable (Default)



Enable



End

Barcode Identifier (ID)



Set



Disable Barcode ID (Default)



Enable AIM ID



Enable ZEBEX ID



End

Symbology	ZEBEX ID	AIM ID
UPC-A	A	E
UPC-E	E	E
EAN-8	FF	E
EAN-13	F	E
Code 128	K	C
Code 39	M	A
Code 93	L	G
Code 32	M	A
Code 11	O	H
Codabar	N	F
Plessey	P	P

Symbology	ZEBEX ID	AIM ID
MSI / Plessey	a	M
Interleaved 2 of 5	I	I
IATA 2 of 5	Z	R
Matrix 2 of 5	G	X
Straight 2 of 5	S	S
Pharmacode	H	X
GS1 DataBar 14	RS	e
GS1 DataBar Expanded	RX	e
GS1 DataBar Limited	RL	e
Composite CC-A	m	e
Composite CC-B	n	e
Composite CC-C	i	e

Symbology	ZEBEX ID	AIM ID
PDF417	r	L
Micro PDF417	s	L
Data Matrix	t	d
QR	u	Q
Micro QR	j	Q
Aztec	e	Z
MaxiCode	v	U

Prefix

Add output characters before the barcode data. A maximum of 4 characters can be set.

Example: Add character "a" before all barcode data:

Scan **"Start Setup"**

Scan **"Set Global Prefix"**

Scan **"a"** from the Appendix III ASCII Code Table

Scan **"End Setup"**

Remove all barcode prefixes:

Scan **"Start Setup"**

Scan **"Clear Global Prefix"**

Scan **"End Setup"**

Example: Add "&1" before EAN 13 barcode data:

Scan **"Start Setup"**

Scan **"Set Symbology Prefix"**

Scan **"EAN 13 Symbology Code"** from Appendix II

Scan **"&"** from the Appendix III ASCII Code Table

Scan **"1"** from the Appendix III ASCII Code Table

Scan **"End Setup"**

Remove EAN 13 prefix:

Scan **"Start Setup"**

Scan **"Set Symbology Prefix"**

Scan **"EAN 13 Symbology Code"** from Appendix II

Scan **"End Setup"**

Prefix Settings



Set



Clear Global Prefix (Default)



Set Global Prefix



Set Symbology Prefix



Clear Symbology Prefix



End

Suffix

Add output characters after the barcode data. A maximum of 4 characters can be set.

Example: Add character "S" after all barcode data:

Scan **"Start Setup"**

Scan **"Set Global Suffix"**

Scan **"S"** from the Appendix III ASCII Code Table

Scan **"End Setup"**

Remove all barcode suffixes:

Scan **"Start Setup"**

Scan **"Clear Global Suffix"**

Scan **"End Setup"**

Example: Add "+2" after Code 128 barcode data:

Scan **"Start Setup"**

Scan **"Set Symbology Suffix"**

Scan **"Code 128 Symbology Code"** from Appendix II

Scan **"+"** from the Appendix III ASCII Code Table

Scan **"2"** from the Appendix III ASCII Code Table

Scan **"End Setup"**

Remove Code 128 suffix:

Scan **"Start Setup"**

Scan **"Set Symbology Suffix"**

Scan **"Code 128 Symbology Code"** from Appendix II

Scan **"End Setup"**

Suffix Settings



Set



Clear Global Suffix (Default)



Set Global Suffix



Set Symbology Suffix



Clear Symbology Suffix



End

Character Removal (Front)

Remove leading characters from the barcode data. A maximum of 20 characters can be removed.

Example: Remove the first 3 characters from all barcode data:

Scan **"Start Setup"**

Scan **"Remove Global Front Characters"**

Scan **"3"** from Appendix I Decimal Numbers

Scan **"End Setup"**

Do not remove any leading characters from all barcodes:

Scan **"Start Setup"**

Scan **"Remove Global Front Characters"**

Scan **"0"** from Appendix I Decimal Numbers

Scan **"End Setup"**

Example: Remove the first 2 characters from QR code data:

Scan **"Start Setup"**

Scan **"Remove Symbology Front Characters"**

Scan **"QR Symbology Code"** from Appendix II

Scan **"2"** from Appendix I Decimal Numbers

Scan **"End Setup"**

Clear QR leading character removal:

Scan **"Start Setup"**

Scan **"Remove Symbology Front Characters"**

Scan **"QR Symbology Code"** from Appendix II

Scan **"0"** from Appendix I Decimal Numbers

Scan **"End Setup"**

Character Removal (Front)



Set



Remove Global Front Characters



Remove Symbology Front Characters



End

Character Removal (End)

Remove trailing characters from the barcode data. A maximum of 20 characters can be removed.

Example: Remove the last 5 characters from all barcode data:

Scan **"Start Setup"**

Scan **"Remove Global End Characters"**

Scan **"5"** from Appendix I Decimal Numbers

Scan **"End Setup"**

Do not remove any trailing characters from all barcodes:

Scan **"Start Setup"**

Scan **"Remove Global End Characters"**

Scan **"0"** from Appendix I Decimal Numbers

Scan **"End Setup"**

Example: Remove the last 2 characters from Code 39 data:

Scan **"Start Setup"**

Scan **"Remove Symbology End Characters"**

Scan **"Code 39 Symbology Code"** from Appendix II

Scan **"2"** from Appendix I Decimal Numbers

Scan **"End Setup"**

Clear Code 39 trailing character removal:

Scan **"Start Setup"**

Scan **"Remove Symbology End Characters"**

Scan **"Code 39 Symbology Code"** from Appendix II

Scan **"0"** from Appendix I Decimal Numbers

Scan **"End Setup"**

Character Removal (End)



Set



Remove Global End Characters



Remove Symbology End Characters



End

Terminating Character



Set



None



CR (Default)



End

Terminating Character



Set



CR / LF



TAB



End

Caps Lock



Set



Disable Caps Lock (Default)



Enable Caps Lock



End

GS Character Conversion

Convert GS characters to other ASCII codes in Keyboard Mode.

Example: Set GS character to output as "#":

Scan **"Start Setup"**

Scan **"Convert GS Character"**

Scan **"#"** from the ASCII Code Table

Scan **"End Setup"**

Example: Set GS character to output as Enter (CR):

Scan **"Start Setup"**

Scan **"Convert GS Character"**

Scan **"Enter"** from the ASCII Code Table

Scan **"End Setup"**

Restore GS character default value:

Scan **"Start Setup"**

Scan **"Disable GS Character Conversion"**

Scan **"End Setup"**

GS Character Conversion



Set



Disable GS Character Conversion (Default)



Convert GS Character



End

Function Key Mapping



Set



Disable



Enable (Default)



End

Function Key Mapping



Set



Ctrl Char Mode (Default)



Alt + Unicode Mode



End

Serial Port Commands

Transmission and Reception Format, Feedback Messages

Command Format

Data Length	Sender	Identifier	Command	Data	Checksum (High Byte)	Checksum (Low Byte)
1 byte	1 byte	1 byte	1 byte	Up to 32 bytes	1 byte	1 byte

Data Length: The length of the data excluding the Checksum (Minimum 5 bytes; Maximum 36 bytes).

Sender: * 0x57 (Hex): Sent from the Terminal to the Decoder.

0x52 (Hex): Sent from the Decoder to the Terminal.

Identifier: Command identification code.

Command: Setup command.

Data: Setup content.

Checksum Calculation: $\$0x10000 - [\text{Data Length}] - [\text{Sender}] - [\text{Identifier}] - [\text{Command}] - [D1 + D2 + D3 + \dots]\$$

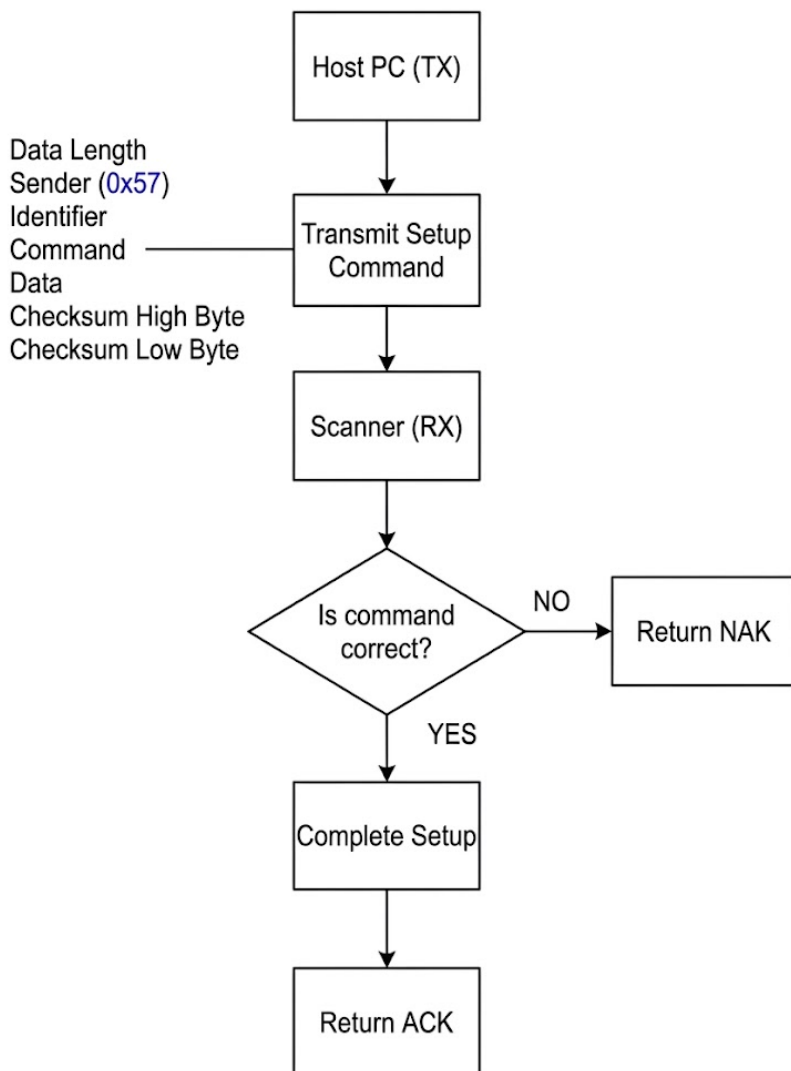
Feedback Messages

After the Terminal sends a command to the device, the device will return the following messages so the Terminal can determine if the command succeeded or failed.

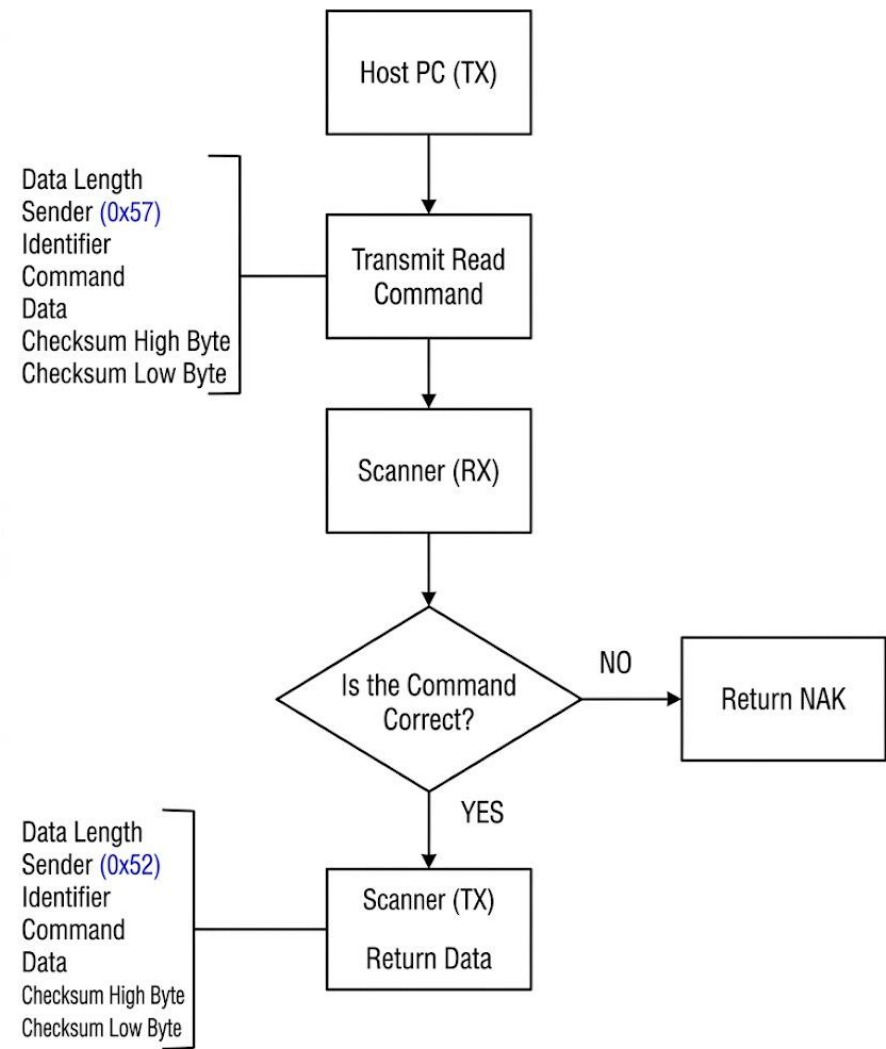
If setup is successful (ACK): The device transmits the following 5 bytes of hexadecimal data in sequence to the Terminal: 52 A0 EC FE 74

If setup fails (NAK): The device transmits the following 5 bytes of hexadecimal data in sequence to the Terminal: 52 A0 E0 FE 80

Setup Flowchart



Read Process Flowchart



Command Setup Examples

Start Scanning

Data Length	Sender	Identifier	Command	Data	Checksum (High)	Checksum (Low)
05	57	A0	01	01	FF	02

Checksum = \$0x10000 - 0x05 - 0x57 - 0xA0 - 0x01 - 0x01 = 0xFF02\$ (Hex)

Stop Scanning

Data Length	Sender	Identifier	Command	Data	Checksum (High)	Checksum (Low)
05	57	A0	01	00	FF	03

Checksum = \$0x10000 - 0x05 - 0x57 - 0xA0 - 0x01 - 0x00 = 0xFF03\$ (Hex)

Enable Scanning Command ACK Feedback

Data Length	Sender	Identifier	Command	Data	Checksum (High)	Checksum (Low)
05	57	A0	00	01	FF	03

Set Decoding Time to 1 Second (1000ms)

(Data length is two bytes)

Data Length	Sender	Identifier	Command	Data	Checksum (High)	Checksum (Low)
06	57	A1	16	03E8 (1000ms)	FE	01

Checksum = \$0x10000 - 0x06 - 0x57 - 0xA1 - 0x15 - 0x03 - 0xE8 = 0xFE01\$ (Hex)

Save Settings

Data Length	Sender	Identifier	Command	Data	Checksum (High)	Checksum (Low)
05	57	A0	08	01	FE	FB

Checksum = \$0x10000 - 0x05 - 0x57 - 0xA0 - 0x08 - 0x01 = 0xFEFB\$ (Hex)

Set Scan Trigger String



Set



Disable

(Can set 1–8 ASCII characters)

Example: Set Scan Trigger String to "TRG"

Scan "Set Scan Trigger String"

Scan "T" from the ASCII Code Table

Scan "R" from the ASCII Code Table

Scan "G" from the ASCII Code Table

Scan "End Setup"



Set Scan Trigger String



End

Command Set

Function	Identifier	Command	Data
Confirm Communication Status	0E	0D	01
Read Version	0E	0D	02
Read Scanning Mode	0E	0D	03
Read Scanning Status	0E	0D	04
Read Decoding Result	0E	0D	05
Scanning ACK/NAK Response			
Enable	A0	00	01
Disable	A0	00	00
Command ACK/NAK Response			
Enable	A0	00	10
Disable	A0	00	11

Function	Identifier	Command	Data
Scanning Control			
Start Scanning	A0	01	01
Stop Scanning	A0	01	00
Save Settings	A0	08	01
Restore Defaults	A1	01	0F
Save Customized Settings	A1	01	08
Load Customized Settings	A1	01	CF
Scanning Mode			
Manual Trigger (Button)	A1	02	01
Auto-Scan	A1	02	02
Continuous Scan	A1	02	03
Pulse Mode	A1	02	04

Function	Identifier	Command	Data
Infrared (IR) Trigger	A1	02	11
Image Trigger	A1	02	12
Image & IR Trigger	A1	02	13
Aimer Light			
Disable	A1	03	00
Enable during scanning	A1	03	01
Always On	A1	03	02
Illumination Light Mode			
Disable	A1	04	00
Enable during scanning	A1	04	01
Always On	A1	04	02
Illumination Intensity			

Function	Identifier	Command	Data
Low Brightness	A1	04	11
Medium Brightness	A1	04	12
High Brightness	A1	04	13
Decoding Beep			
Enable	A1	05	0E
Disable	A1	05	0D
1. Decoding Time (Data: 2 bytes) 2. 0 = Continuous decoding until read	A1	16	00~FFFF
Duplicate Read Mode			
No Duplicate Read	A1	08	01
Interval Read	A1	08	02
Same Barcode Read Mode			

Function	Identifier	Command	Data
Do Not Read Same Barcode	A1	08	03
Do Not Read Same Barcode	A1	08	04
3. Same Barcode Read Time (Data: 2 bytes)	A1	18	00~FFFF
4. <i>0 = No interval</i>			
Auto-Induction Sensitivity			
Low Sensitivity	A1	0A	01
Medium Sensitivity	A1	0A	02
High Sensitivity	A1	0A	03
Decoding Data Check			
Disable	A1	0B	01
Read Twice	A1	0B	02
Read Three Times	A1	0B	03

Function	Identifier	Command	Data
Decoding Information			
Enable	A2	01	0E
Disable	A2	01	0D
Barcode Identifier (ID)			
Disable	A2	02	00
AIM ID	A2	02	01
MEXXEN ID	A2	02	02
Terminating Character			
None	A2	03	01
CR/LF	A2	03	02
CR	A2	03	03
TAB	A2	03	04

Function	Identifier	Command	Data
Symbology Global Control			
Enable All Symbologies	B0	01	0E
Disable All Symbologies	B0	01	0D
Enable 1D Only	B0	01	01
Enable 2D Only	B0	01	02
Disable 1D	B0	01	03
Disable 2D	B0	01	04
UPC/EAN Add-on Code			
Enable	B0	02	0E
Disable	B0	02	0D
UPC-A			
Enable	B1	01	0E

Function	Identifier	Command	Data
Disable	B1	01	0D
Transmit Leading Digit	B1	02	0E
Do Not Transmit Leading Digit	B1	02	0D
Enable Check Digit	B1	03	0E
Disable Check Digit	B1	03	0D
Enable EAN-13 Conversion	B1	04	0E
Disable EAN-13 Conversion	B1	04	0D
UPC-E			
Enable	B2	01	0E
Disable	B2	01	0D
Transmit Leading Digit	B2	02	0E
Do Not Transmit Leading Digit	B2	02	0D

Function	Identifier	Command	Data
Enable Check Digit	B2	03	0E
Disable Check Digit	B2	03	0D
Enable UPC-A Conversion	B2	04	0E
Disable UPC-A Conversion	B2	04	0D
EAN-8			
Enable	B3	01	0E
Disable	B3	01	0D
Transmit Check Digit	B3	02	0E
Do Not Transmit Check Digit	B3	02	0D
Enable EAN-13 Conversion	B3	03	0E
Disable EAN-13 Conversion	B3	03	0D
EAN-13			

Function	Identifier	Command	Data
Enable	B4	01	0E
Disable	B4	01	0D
Transmit Check Digit	B4	02	0E
Do Not Transmit Check Digit	B4	02	0D
Enable ISBN Conversion	B4	03	0E
Disable ISBN Conversion	B4	03	0D
Enable ISSN Conversion	B4	04	0E
Disable ISSN Conversion	B4	04	0D
Code 128			
Enable	B5	01	0E
Disable	B5	01	0D
Code 39			

Function	Identifier	Command	Data
Enable	B6	01	0E
Disable	B6	01	0D
Enable Full ASCII	B6	02	0E
Disable Full ASCII	B6	02	0D
Transmit Start/Stop Character	B6	03	0E
Do Not Transmit Start/Stop Char	B6	03	0D
No Verification	B6	04	01
Verify and Transmit	B6	04	02
Verify and Do Not Transmit	B6	04	03
Code 93			
Enable	B7	01	0E
Disable	B7	01	0D

Function	Identifier	Command	Data
Code 32			
Enable	B8	01	0E
Disable	B8	01	0D
Code 11			
Enable	B9	01	0E
Disable	B9	01	0D
Codabar			
Enable	BA	01	0E
Disable	BA	01	0D
No Verification	BA	02	01
Verify and Transmit	BA	02	02
Verify and Do Not Transmit	BA	02	03

Function	Identifier	Command	Data
Transmit Start/Stop Character	BA	03	0E
Do Not Transmit Start/Stop Char	BA	03	0D
Plessey			
Enable	BB	01	0E
Disable	BB	01	0D
MSI Plessey			
Enable	BC	01	0E
Disable	BC	01	0D
No Verification	BC	02	01
Mod 10 Verification	BC	02	02
Mod 10/10 Verification	BC	02	03
Mod 11/10 Verification	BC	02	04

Function	Identifier	Command	Data
Transmit Check Digit	BC	03	0E
Do Not Transmit Check Digit	BC	03	0D
Interleaved 2 of 5			
Enable	BD	01	0E
Disable	BD	01	0D
No Verification	BD	02	01
Verify and Transmit	BD	02	02
Verify and Do Not Transmit	BD	02	03
IATA 2 of 5			
Enable	BE	01	0E
Disable	BE	01	0D
Matrix 2 of 5			

Function	Identifier	Command	Data
Enable	BF	01	0E
Disable	BF	01	0D
Straight 2 of 5			
Enable	D0	01	0E
Disable	D0	01	0D
Pharmacode			
Enable	D1	01	0E
Disable	D1	01	0D
GS1 DataBar 14			
Enable	D2	01	0E
Disable	D2	01	0D
GS1 DataBar 14 Stacked			

Function	Identifier	Command	Data
Enable	D2	02	0E
Disable	D2	02	0D
GS1 DataBar Expanded			
Enable	D3	01	0E
Disable	D3	01	0D
GS1 DataBar Expanded Stacked			
Enable	D3	02	0E
Disable	D3	02	0D
GS1 DataBar Limited			
Enable	D4	01	0E
Disable	D4	01	0D
Composite Code-A (CC-A)			

Function	Identifier	Command	Data
Enable	D5	01	0E
Disable	D5	01	0D
Composite Code-B (CC-B)			
Enable	D6	01	0E
Disable	D6	01	0D
Composite Code-C (CC-C)			
Enable	D7	01	0E
Disable	D7	01	0D
PDF 417			
Enable	D8	01	0E
Disable	D8	01	0D
Micro PDF 417			

Function	Identifier	Command	Data
Enable	D9	01	0E
Disable	D9	01	0D
Data Matrix			
Enable	DA	01	0E
Disable	DA	01	0D
Enable Rectangular DM	DA	03	0E
Disable Rectangular DM	DA	03	0D
QR Code			
Enable	DB	01	0E
Disable	DB	01	0D
Micro QR Code			
Enable	DC	01	0E

Function	Identifier	Command	Data
Disable	DC	01	0D
Aztec Code			
Enable	DD	01	0E
Disable	DD	01	0D
MaxiCode			
Enable	DE	01	0E
Disable	DE	01	0D

Appendix I: Decimal Numbers



0



1



2



3



4



5



6



7



8



9

Appendix II: Symbology Setup Codes



UPC A



UPC E



EAN 8



EAN 13



Code 128



Code 39



Code 93



Code 32



Code 11



Codabar



Plessey



MSI Plessey



Interleaved 2 of 5



IATA 2 of 5



Matrix 2 of 5



Straight 2 of 5



Pharmacode



GS1 DataBar 14



GS1 DataBar Expanded



GS1 DataBar Limited



GS1 DataBar 14 Stacked



GS1 DataBar Expanded Stacked



Composite Code-A



Composite Code-B



Composite Code-C



PDF417



Micro PDF417



Data Matrix



QR



Micro QR



Aztec



MaxiCode

Appendix III: ASCII Code Table

Hex	Dec	ASCII	Off (Default)	Ctrl Char Mode	Alt + Unicode
00	0	 NUL	Disable	Ctrl + @	Alt + 000
01	1	 SOH	Home	Ctrl + A	Alt + 001
02	2	 STX	End	Ctrl + B	Alt + 002
03	3	 ETX	Up Arrow	Ctrl + C	Alt + 003
04	4		Down Arrow	Ctrl + D	Alt + 004

Hex	Dec	ASCII	Off (Default)	Ctrl Char Mode	Alt + Unicode
		EOT			
05	5	 ENQ	Left Arrow	Ctrl + E	Alt + 005
06	6	 ACK	Right Arrow	Ctrl + F	Alt + 006
07	7	 BEL	Null	Ctrl + G	Alt + 007
08	8	 BS	Backspace	Backspace	Alt + 008
09	9	 TAB	TAB	TAB	Alt + 009

Hex	Dec	ASCII	Off (Default)	Ctrl Char Mode	Alt + Unicode
0A	10	 LF	Null	Ctrl + J	Alt + 010
0B	11	 VT	Null	Ctrl + K	Alt + 011
0C	12	 FF	Null	Ctrl + L	Alt + 012
0D	13	 CR	Enter	Enter	Enter
0E	14	 SO	Page Up	Ctrl + N	Alt + 014

Hex	Dec	ASCII	Off (Default)	Ctrl Char Mode	Alt + Unicode
0F	15	 SI	Page Down	Ctrl + O	Alt + 015
10	16	 DLE	F11	Ctrl + P	Alt + 016
11	17	 DC1	Null	Ctrl + Q	Alt + 017
12	18	 DC2	Null	Ctrl + R	Alt + 018
13	19	 DC3	Null	Ctrl + S	Alt + 019

Hex	Dec	ASCII	Off (Default)	Ctrl Char Mode	Alt + Unicode
14	20	 DC4	Null	Ctrl + T	Alt + 020
15	21	 NAK	F12	Ctrl + U	Alt + 021
16	22	 SYN	F1	Ctrl + V	Alt + 022
17	23	 ETB	F2	Ctrl + W	Alt + 023
18	24	 CAN	F3	Ctrl + X	Alt + 024

Hex	Dec	ASCII	Off (Default)	Ctrl Char Mode	Alt + Unicode
19	25	 EM	F4	Ctrl + Y	Alt + 025
1A	26	 SUB	F5	Ctrl + Z	Alt + 026
1B	27	 ESC	F6	Ctrl + [	Alt + 027
1C	28	 FS	F7	Ctrl + \	Alt + 028
1D	29	 GS	F8	Ctrl +]	Alt + 029

Hex	Dec	ASCII	Off (Default)	Ctrl Char Mode	Alt + Unicode
1E	30	 RS	F9	Ctrl + ^	Alt + 030
1F	31	 US	F10	Ctrl + _	Alt + 031

Hex	Dec	ASCII	
20	32	SPACE	
21	33	!	

Hex	Dec	ASCII	
22	34	"	
23	35	#	
24	36	\$	
25	37	%	
26	38	&	
27	39	'	

Hex	Dec	ASCII	
28	40	(	
29	41	)	
2A	42	*	
2B	43	+	
2C	44	,	
2D	45	-	

Hex	Dec	ASCII	
2E	46	.	
2F	47	/	
30	48	0	
31	49	1	
32	50	2	
33	51	3	

Hex	Dec	ASCII	
34	52	4	
35	53	5	
36	54	6	
37	55	7	
38	56	8	
39	57	9	

Hex	Dec	ASCII	
3A	58	:	
3B	59	;	
3C	60	<	
3D	61	=	
3E	62	>	
3F	63	?	

Hex	Dec	ASCII	
40	64	@	
41	65	A	
42	66	B	
43	67	C	
44	68	D	
45	69	E	

Hex	Dec	ASCII	
46	70	F	
47	71	G	
48	72	H	
49	73	I	
4A	74	J	
4B	75	K	

Hex	Dec	ASCII	
4C	76	L	
4D	77	M	
4E	78	N	
4F	79	O	
50	80	P	
51	81	Q	

Hex	Dec	ASCII	
52	82	R	
53	83	S	
54	84	T	
55	85	U	
56	86	V	
57	87	W	

Hex	Dec	ASCII	
58	88	X	
59	89	Y	
5A	90	Z	
5B	91	[	
5C	92	\	
5D	93	]	

Hex	Dec	ASCII	
5E	94	^	
5F	95	_	
60	96	`	
61	97	a	
62	98	b	
63	99	c	

Hex	Dec	ASCII	
64	100	d	
65	101	e	
66	102	f	
67	103	g	
68	104	h	
69	105	i	

Hex	Dec	ASCII	
6A	106	j	
6B	107	k	
6C	108	l	
6D	109	m	
6E	110	n	
6F	111	o	

Hex	Dec	ASCII	
70	112	p	
71	113	q	
72	114	r	
73	115	s	
74	116	t	
75	117	u	

Hex	Dec	ASCII	
76	118	v	
77	119	w	
78	120	x	
79	122ER	y	
7A	122	z	
7B	123	{	

Hex	Dec	ASCII	
7C	124		
7D	125	}	
7E	126	~	
7F	127	DEL	

Appendix IV: Function Keys



Insert



Delete



Home



End



Up Arrow



Down Arrow



Left Arrow



Right Arrow



Shift



ESC



Ctrl



Alt



Page Up



Page Down



F1



F2



F3



F4



F5



F6



F7



F8



F9



F10



F11



F12