

MT851

2D Wireless Scanner

User's Manual

Table of Content

CHAPTER 1 INTRODUCTION 7

SPECIFICATIONS 7

BEEPER INDICATION..... 9

LED INDICATION 10

CHAPTER 2 GENERAL SETTINGS..... 11

BARCODE CONFIGURABILITY (SETUP CODE)..... 11

FACTORY DEFAULT 11

CHECK VERSION 11

GOOD READ INDICATOR 12

Beep Tone 12

Beep Mode 12

Vibrator..... 12

DATA FORMAT..... 13

UTF-8 to Unicode Conversion 13

Country Code Page..... 13

HT/CR/ESC Converts to TAB/ENTER/ESCAPE 14

Function Code Conversion..... 14

Control Code Output Method..... 14

Numeric Key..... 16

Capital Lock Mode..... 17

IMAGING SETTINGS 17

Centering..... 17

CHAPTER 3 INTERFACE..... 18

BT HID..... 18

Getting Connected..... 18

BT SPP..... 19

Getting Connected..... 19

Set SPP Pincode 19

GENERAL BLUETOOTH SETTINGS..... 20

Power Off Timeout..... 20

Shut Down 20

Set Bluetooth Device ID..... 21

Check Bluetooth Firmware Version 21

Check Device MAC Address..... 22

Check Host MAC Address..... 22

Check Battery Life 22

ScanLink 23

MEMORY MODE 24

Delete Last Record..... 24

Clear All Record.....	24
Data Format.....	25
Field Separator.....	25
Date Format.....	26
Time Format.....	26
Date & Time Setup.....	27
USB HID.....	27
Keyboard Layout.....	28
Intercharacter Delay.....	30
Interblock Delay.....	30
USB VCP.....	31
BCC (Binary Check Character).....	31
CHAPTER 4 READING MODE	32
TRIGGER MODE	32
CONTINUOUS MODE	32
AUTO-SENSING MODE	32
<i>Continuous / Auto-sensing Mode – Identical Read Interval</i>	33
ACCURACY ADJUSTMENT	33
CHAPTER 5 DATA FORMAT.....	34
CODE ID.....	34
SET ID.....	34
DATA LENGTH	37
PREAMBLE.....	37
POSTAMBLE.....	37
<i>Clear Preamble/Postamble</i>	38
TERMINATOR.....	38
CHAPTER 6 SYMBOLOGIES	39
GENERAL SETTINGS	39
UPC-A.....	39
<i>Enable/Disable UPC-A</i>	39
<i>Lead Digit</i>	40
<i>Check Digit</i>	40
<i>UPC-A Expand to EAN-13</i>	40
<i>Add On Supplement</i>	40
UPC-E.....	41
<i>Enable/Disable UPC-E</i>	41
<i>Lead Digit</i>	41
<i>Check Digit</i>	41
<i>UPC-E Expand to UPC-A</i>	42
<i>Add On Supplement</i>	42

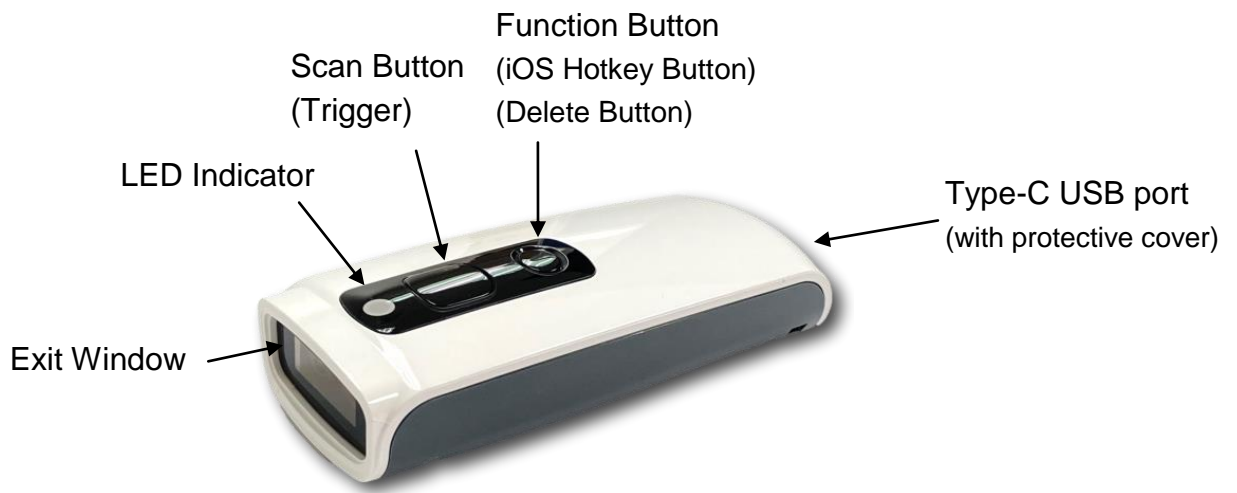
EAN-8.....	43
<i>Enable/Disable EAN-8</i>	43
<i>Check Digit</i>	43
<i>EAN-8 Expand to EAN-13 (Zero Extension)</i>	43
<i>Add On Supplement</i>	43
EAN-13.....	45
<i>Enable/Disable EAN-13</i>	45
<i>Check Digit</i>	45
<i>Add On Supplement</i>	45
<i>ISBN</i>	46
<i>ISSN</i>	46
CODE 128.....	47
<i>Enable/Disable Code 128</i>	47
<i>Code 128 Min/Max Length</i>	47
CODE 39.....	48
<i>Enable/Disable Code 39</i>	48
<i>Verification</i>	48
<i>Start/Stop</i>	48
<i>Full ASCII Code39</i>	49
<i>Code39 Min/Max Length</i>	49
CODE 32.....	50
<i>Enable/Disable Code 32</i>	50
<i>Leading/Tailing</i>	50
CODE 93.....	51
<i>Enable/Disable Code 93</i>	51
<i>Code 93 Min/Max Length</i>	51
CODE 11.....	52
<i>Enable/Disable Code 11</i>	52
<i>Verification</i>	52
<i>Check Digit</i>	52
<i>Code 11 Min/Max Length</i>	53
CODABAR (NW-7).....	54
<i>Enable/Disable Codabar</i>	54
<i>Start/Stop</i>	54
<i>Verification</i>	54
<i>Codabar Min/Max Length</i>	55
INTERLEAVED 2 OF 5.....	56
<i>Enable/Disable Interleaved 2 of 5</i>	56
<i>Verification</i>	56
<i>Interleaved 2 of 5 Min/Max Length</i>	57
IATA (STANDARD 2 OF 5).....	58
<i>Enable/Disable IATA</i>	58

MATRIX 2 OF 5	58
<i>Enable/Disable Matrix 2 of 5</i>	58
<i>Matrix2 of 5 Min/Max Length</i>	58
INDUSTRIAL 2 OF 5	59
<i>Enable/Disable Industrial 2 of 5</i>	59
MSI PLESSEY.....	59
<i>Enable/Disable MSI Plessey</i>	59
<i>Verification</i>	59
<i>MSI Plessey Min/Max Length</i>	60
UK PLESSEY	60
<i>Enable/Disable UK Plessey</i>	60
GS1 DATABAR (RSS-14)	61
<i>Enable/Disable GS1 DataBar</i>	61
<i>Prefix AI</i>	61
<i>Enable/Disable GS1 DataBar Stacked / Omnidirectional</i>	61
GS1 DATABAR LIMITED (RSS-LIMITED).....	61
<i>Enable/Disable GS1 DataBar Limited</i>	61
<i>Prefix AI</i>	62
GS1 DATABAR EXPANDED (RSS-EXPANDED).....	62
<i>Enable/Disable GS1 DataBar Expanded</i>	62
<i>Enable/Disable GS1 DataBar Expanded Stacked</i>	62
GS1 COMPOSITE CC-A	63
<i>Enable/Disable GS1 Composite CC-A</i>	63
GS1 COMPOSITE CC-B	63
<i>Enable/Disable GS1 Composite CC-B</i>	63
GS1 COMPOSITE CC-C	63
<i>Enable/Disable GS1 Composite CC-C</i>	63
QR CODE	64
<i>Enable/Disable QR Code</i>	64
MICRO QR CODE.....	64
<i>Enable/Disable Micro QR Code</i>	64
DATA MATRIX.....	64
<i>Enable/Disable Data Matrix</i>	64
PDF417	65
<i>Enable/Disable PDF417</i>	65
MICROPDF417.....	65
<i>Enable/Disable MicroPDF417</i>	65
AZTEC.....	65
<i>Enable/Disable Aztec</i>	65
MAXICODE	66
<i>Enable/Disable MaxiCode</i>	66
DOTCODE	66

<i>Enable/Disable DotCode</i>	66
CHAPTER 7 APPENDIX	67
APPENDIX – NUMBERS	67
APPENDIX – UPPER CASE ALPHABETS	68
APPENDIX – LOWER CASE ALPHABETS.....	70
APPENDIX – CONTROL CODES	72
APPENDIX – SYMBOLS	74
APPENDIX – FUNCTION KEYS	77
APPENDIX – NAVIGATION KEYS	78
APPENDIX – MODIFIER KEYS.....	79
APPENDIX – ABORT	80
APPENDIX – DEFAULT TABLE	81
APPENDIX - FACTORY ID AND AIM ID TABLE.....	86
APPENDIX – ASCII TABLE	88
VERSION HISTORY	92

Chapter 1 Introduction

This user's manual is dedicated to MT851, a 2D handheld pocket-size scanner perfect for error-free, on-the-go, wireless scanning. Its durable housing and compact size make MT851 the ideal pocket scanner for the mobile workforce. Compatible with iPhone, iPad, Android devices, and Windows smartphones and tablets, MT851 allows you to streamline business processes, maximize efficiency, and eliminate costly data entry errors on nearly any platform.



Specifications

Optic & Performance	
Light Source	White LED, Visible red LED
Sensor	1280 x 800
Scan Rate	70 Frames/Sec
Resolution	3mil/ 0.075mm
Scan Angle	Horizontal 46° Vertical 29°
Pitch Angle	±60°
Skew Angle	±60°
Roll Angle	360°
Print Contrast Ratio	20%
Width of Field	250mm (13Mil Code39)
Memory	2MB (20,000 barcodes)

Typical D.O.F (Environment : 800 lux)	4 Mil Code 39 : 45 ~ 170mm
	13 Mil UPC/EAN : 45 ~ 440mm
	9 Mil QR Code : 50 ~ 160mm
Physical Characteristics	
Dimension	W42.5 x L102 x H21.5 mm
Weight	70g
Color	Black
Material	PC
Connector	Type-C USB
Cable	Type-C(M) to USB A(M) Cable, 1.5M
Trigger	Scan Button (Trigger) Function Button (iOS Hotkey/Delete Button)
Indicator	LED, Buzzer, Vibrator
Electrical	
Operation Voltage	3.7 VDC ± 5%
Working Current	< 330mA
Standby Current	< 60mA
Battery	3.7V, 1000mAh, Li-Polymer Battery
Number of Scan (per full charge)	> 10000 scans (1 scan/ 5 secs, Bluetooth connected)
Connectivity	
Radio	Bluetooth 5.0 dual mode (Class 2)
Range	66 ft/ 20m (line of sight)
Interface/ Profile	BT HID BT SPP USB HID USB VCP Memory
User Environment	
Operating Temperature	-10 ~ 50°C
Storage Temperature	-20 ~ 60°C
Humidity	0% ~ 95%RH (Non-condensing)
Drop Durability	1.5M
Sealing	IP55
Ambient Light	100,000 Lux (Sunlight)
1D Symbolologies	UPC A, UPC E, EAN 8, EAN 13, Code 128, Code 39, Code 93, Code 32, Code11, Codabar, UK Plessey, MSI Plessey, Interleaved 2 of 5, IATA 2 of 5, Matrix 2 of 5, Straight 2 of 5, Pharmacode , GS1 Databar,

	GS1 Databar Expanded, GS1 Databar Limited, GS1 Composite Code CC-A/CC-B/CC-C
2D Symbologies	PDF417, MicroPDF417, Data Matrix, QR Code, Micro QR Code, Aztec, MaxiCode, DotCode
Regulatory	
ESD	Functional after 4KV contact, 8KV air discharge
EMC/RF	FCC Part15C, TELEC
Safety Approval	EN/IEC62471 (Exempt Group)
Environmental	WEEE, RoHS 2.0

Beeper Indication

Beeper	Status
Single beep	Good read
Single short beep	The scanner reads a Code39 ASCII during multi-step configuration
Two beeps	Wireless connection
	The scanner successfully reads a configuration barcode
Three beeps	Wireless disconnection
Three short beeps	The scanner reads a barcode while disconnected
	The scanner reads an unexpected barcode during multi-step configuration. (Please scan " Abort " and start over)
	Memory Full
Four beeps (Hi-Lo-Hi-Lo)	Out of range / Poor connection
Five beeps	Low power

LED Indication

LED	Status
Off	Power off / Standby / Connected
Flashing blue	Disconnected / Discoverable
One green flash	Good read
Flashing red	Low power
Solid red	Charging

Chapter 2 General Settings

Barcode Configurability (Setup Code)

Scanning below configuration barcodes will allow/prohibit user to change settings by scanning configuration barcodes in this manual.



.B015\$

Enable Barcode Configurability*



.B016\$

Disable Barcode Configurability

Factory Default

Scanning below configuration barcode will reset all parameters to factory default settings (the ones with * asterisk mark)



.A001\$

Factory Default

Check Version

To check firmware version, please scan below configuration barcode.



.A007\$

Check Version

Good Read Indicator

Beep Tone



.F012\$

Off



.F022\$

Beep Low (2.0KHz)



.F018\$

Beep Medium (2.7KHz)



.F019\$

Beep High (4.0KHz)*

Beep Mode



.F023\$

Normal*



.F024\$

Warning Beep Only



.F025\$

Mute

Vibrator



.D035\$

Off*



.D034\$

On

Data Format

UTF-8 to Unicode Conversion



.C044\$

Disable UTF-8 to Unicode*



.C045\$

**Enable UTF-8 to Unicode
(Word)**

Country Code Page



.C070\$

West European Latin*



.C054\$

**Japanese, Shift-JIS
(Notepad / Excel)**



.C055\$

**Japanese, Shift-JIS
(Word)**

Note: Code pages define the mapping of character codes to characters. To display the proper characters for the barcode being scanned, please select the appropriate code page. For Shift-JIS and Big5 to output properly, please make sure to disable UTF-8 to Unicode Conversion.

HT/CR/ESC Converts to TAB/ENTER/ESCAPE



.D026\$

Off*



.D025\$

On

Note:

1. By default, HT [\$I], CR [\$M] and ESC [%A] is transmitted as <0x09>, <0x0D> and <0x1B> respectively.
2. When enabled, HT [\$I], CR [\$M] and ESC [%A] is transmitted as <TAB>, <ENTER> and <ESCAPE> on keyboard respectively.

Function Code Conversion



.C020\$

Off



.C019\$

On*

Note:

Once disabled, the scanner will output the original encoded data of the barcodes in Appendix – Function/Navigation/Modifier Keys.

Control Code Output Method



.D028\$

Ctrl Mode*



.D029\$

Alt Mode



.D027\$

Disable Output

Note:

Control code (0x01 ~ 0x1F) can be sent by two methods:

1 Ctrl Mode:

A barcode of "A<HT>F" (0x41/0x09/0x46) is scanned, the output sequence is:

- a. Enter "A" – Press A key
- b. Enter "Ctrl + I" – Since 0x09 corresponds to "Ctrl + I", virtual keyboard will press and hold Ctrl key, press I key, and release Ctrl key and I key
- c. Enter "F" – Press F key

Since "Ctrl+I" is shortcut for italicizing text in some software applications, the result of above output sequence can be a regular A plus an italic F.

(2) Alt Mode:

For <HT>, the output sequence of virtual keyboard is:

Enter "Alt + 0 + 0 + 0 + 9" – Virtual keyboard will press and hold Alt key, press "0", "0", "0" and "9" on numeric keypad respectively, and release Alt key.

Control Code Table

ASCII	Hex	Dec	Ctrl Mode	Alt Mode
NUL	00	0	Ctrl+Shift+2	Alt+0+0+0+0
SOH	01	1	Ctrl+a	Alt+0+0+0+1
STX	02	2	Ctrl+b	Alt+0+0+0+2
ETX	03	3	Ctrl+c	Alt+0+0+0+3
EOT	04	4	Ctrl+d	Alt+0+0+0+4
ENQ	05	5	Ctrl+e	Alt+0+0+0+5
ACK	06	6	Ctrl+f	Alt+0+0+0+6
BEL	07	7	Ctrl+g	Alt+0+0+0+7
BS	08	8	Ctrl+h	Alt+0+0+0+8
HT	09	9	Ctrl+i	Alt+0+0+0+9
LF	0A	10	Ctrl+j	Alt+0+0+1+0
VT	0B	11	Ctrl+k	Alt+0+0+1+1

FF	0C	12	Ctrl+l	Alt+0+0+1+2
CR	0D	13	Ctrl+m	Alt+0+0+1+3
SO	0E	14	Ctrl+n	Alt+0+0+1+4
SI	0F	15	Ctrl+o	Alt+0+0+1+5
DLE	10	16	Ctrl+p	Alt+0+0+1+6
DC1	11	17	Ctrl+q	Alt+0+0+1+7
DC2	12	18	Ctrl+r	Alt+0+0+1+8
DC3	13	19	Ctrl+s	Alt+0+0+1+9
DC4	14	20	Ctrl+t	Alt+0+0+2+0
NAK	15	21	Ctrl+u	Alt+0+0+2+1
SYN	16	22	Ctrl+v	Alt+0+0+2+2
ETB	17	23	Ctrl+w	Alt+0+0+2+3
CAN	18	24	Ctrl+x	Alt+0+0+2+4
EM	19	25	Ctrl+y	Alt+0+0+2+5
SUB	1A	26	Ctrl+z	Alt+0+0+2+6
ESC	1B	27	Ctrl+[	Alt+0+0+2+7
FS	1C	28	Ctrl+\	Alt+0+0+2+8
GS	1D	29	Ctrl+]	Alt+0+0+2+9
RS	1E	30	Ctrl+Shift+6	Alt+0+0+3+0
US	1F	31	Ctrl+Shift+-	Alt+0+0+3+1

Numeric Key



.D017\$

Numeric Key



.D018\$

Alphanumeric Key*

Note:

1. By default, the alphanumeric key is used for transmitting digits. Scan NUMERIC KEY if you want to use the keys on the numeric keypad.
2. If you select NUMERIC KEY, the Num Lock status of the physical keyboard should be ON.

Capital Lock Mode



.A005\$
Capslock Off*



.A004\$
Capslock On



.A006\$
Capslock Free

Note:

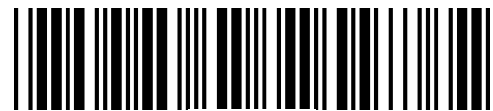
When barcode scanner is set to Capslock Free mode, no matter keyboard Capslock LED indicator is ON or OFF, output will be always the same as the Original barcode. In other words, what you see is what output is.

Imaging Settings

Centering



.F073\$
Disable Centering*



.F074\$
Enable Centering

Note:

When enabled, the scanner only decodes the barcodes marked by aimer dot.

Chapter 3 Interface

BT HID

Getting Connected

1. Press the scan button to power up the scanner.
2. Scan "**Disconnect**", the scanner will emit two beeps.



.E031\$

Disconnect

3. Scan "**BT HID**", the scanner will emit two beeps.



.E043\$

BT HID

4. Select "Wireless Scanner" from discovered device list.
5. The scanner will emit two beeps as indication that the Bluetooth connection has established successfully.
6. While conneted with the scanner as physical keyboard, the touch keyboard on iOS/Android device might disappear. To resolve this issue please do the following:
 - (1) For iOS device, simply press the function button once.
 - (2) For Android device, go to "Settings" > "Language & Input", tap on "Default keyboard" and turn off "Physical keyboard" or turn on "On-screen keyboard".

BT SPP

Getting Connected

1. Press the scan button to power up the scanner.
2. Scan "**Disconnect**", the scanner will emit two beeps.



.E031\$

Disconnect

3. Scan "**BT SPP**", the scanner will emit two beeps..



.E042\$

BT SPP

4. Select "Wireless Scanner" from discovered device list.
5. Enter serial communication software on your host and open the port occupied by the scanner.
6. The scanner will emit two beeps as indication that the Bluetooth connection has established successfully.

Set SPP Pincode

By default, the pincode under BT SPP profile for the scanner is "1234". It is configurable up to 8 numbers.



.B024\$

Set SPP Pincode

Example: Set SPP Pincode to 0000.

Step1: Scan "**Set SPP Pincode**"

Step2: Scan "**0**" "**0**" "**0**" "**0**" in Appendix - Numbers

Step3: Scan "**Set SPP Pincode**"

General Bluetooth Settings

Power Off Timeout

The power off timeout is 3 minutes & 0 second by default. They are configurable from a minimum of 10 seconds (00:10) to a maximum of 60 minutes and 59 seconds (60:59)



.B030\$

Set Minute
(Default = 03)



.B029\$

Set Second
(Default = 00)

Example: Set Power Off Timeout to 5 minutes and 30 seconds.

Step1: Scan "Set Minute"

Step2: Scan "0" "5" in Appendix - Numbers

Step3: Scan "Set Minute"

Step4: Scan "Set Second"

Step5: Scan "3" "0" in Appendix - Numbers

Step6: Scan "Set Second"

To disable Power Off Timeout (make scanner always on), scan below barcode:



.B021\$

Disable Timeout

Shut Down

To shut down the scanner immediately, please scan below configuration barcode.



.E255\$

Shut Down

Set Bluetooth Device ID

Bluetooth device name is configurable up to 16 alphanumeric characters:



Set Bluetooth Device ID

Example: Set XYZ123 as Bluetooth Device ID

Step 1: Scan “Set Bluetooth Device ID”

Step 2: Scan “X” “Y” “Z” “1” “2” “3” in Appendix - Upper Case Alphabets & Numbers

Step 3: Scan “Set Bluetooth Device ID”

To reset Bluetooth Device ID to “Wireless Scanner”, scan below barcode:



Reset Bluetooth Device ID

To add the last 6 digits of MAC address to Bluetooth Device ID (“Wireless-xxxxxx”), scan below barcode:



Add MAC Address to Bluetooth Device ID

Check Bluetooth Firmware Version

To check scanner’s Bluetooth firmware version, please connect to a host device via BT HID or BT SPP and scan below configuration barcode.



.E037\$

Check Bluetooth Firmware Version

Check Device MAC Address

To check scanner's MAC address, please connect to a host device via BT HID or BT SPP and scan below configuration barcode.



.E038\$

Check Device MAC Address

Check Host MAC Address

To check scanner's MAC address, please connect to a host device and scan below configuration barcode.



.E039\$

Check Host MAC Address

Check Battery Life

To check scanner's battery life, please connect to a host device and scan below configuration barcode.



.E250\$

Check Battery Life

ScanLink

ScanLink is a connection method that turns the scanner into a master device, which initiates the Bluetooth connection with the target host device (now a slave device). This, as a result, saves user the trouble of going through numerous setup procedures on the host device to establish connection.

Simply generate ScanLink barcode for the target slave device in below rule:

For BT HID profile, please encode:

HID<MAC Address> in Code39 without checksum or QR Code.

For BT SPP profile, please encode:

SPP<MAC Address> in Code39 without checksum or QR Code.

Example: Target Slave Device MAC Address = 00:15:83:52:2C:3B, Profile = BT HID

Encode **HID001583522C3B** in Code39 without checksum or QR Code.

Memory Mode



.C035\$

Memory Mode

After scanning the above barcode, the scanner will be able to collect barcode data off-line. The barcode data will be stored in the format of:

<Date>, <Time>, <Barcode Data> <CR>

To retrieve stored data, please connect the scanner to the host with USB cable, access removable storage device "**MiniScan**" from which you may open or copy the file "**BARCODE.txt**" to your computer.

To exit Memory Mode, simply scan any interface barcode (e.g. "**BT HID**", "**BT SPP**", "**USB HID**", "**USB VCP**") other than memory mode.

Delete Last Record

To delete last memory data, please scan below barcode or press function button once when the scanner is in memory mode.



.R005\$

Delete Last Record

Clear All Record

To delete all memory data, please connect the scanner to the host with USB cable, access removable storage device "**MiniScan**", and delete the file "**BARCODE.txt**". The scanner will emit two beeps as indication that the file has been successfully deleted.

Data Format

The default Data Format in memory mode is <Date>, <Time>, <Barcode Data>.



Data Format

Below are configurable items and their setup codes:

Code	Item
2	Date
3	Time
4	Barcode Data

Example: Set Data Format as <Barcode Data>, <Date>, <Time>

Step1: Scan “**Data Format**”

Step2: Scan “**4**” “**3**” “**2**” respectively in Appendix - Numbers

Step3: Scan “**Data Format**”

Field Separator

The field separator in memory mode is comma (,) by default. It can be replaced by any alphanumeric characters.



Field Separator

Example: Set Field Separator as Semicolon (;)

Step1: Scan “**Field Separator**”

Step2: Scan “ ; ” in Appendix - Symbols

Step3: Scan “**Field Separator**”

Date Format

The default Date Format is **DD/MM/YYYY** (Code = 09)



Date Format

Below are available Date Format and their setup codes:

Code	Date Format	Code	Date Format
01	DD-MM-YYYY	09	DD/MM/YYYY
02	MM-DD-YYYY	10	MM/DD/YYYY
03	DD-MM-YY	11	DD/MM/YY
04	MM-DD-YY	12	MM/DD/YY
05	YYYY-MM-DD	13	YYYY/MM/DD
06	YY-MM-DD	14	YY/MM/DD
07	DD-MM	15	DD/MM
08	MM-DD	16	MM/DD

Example: Set Date Format as MM/DD/YY (Code = 12)

Step1: Scan "Date Format"

Step2: Scan "1" "2" respectively in Appendix - Numbers

Step3: Scan "Date Format"

Time Format

The default Time Format is HH:MM:SS (Code = 01)



Time Format

Below are available Time Format and their setup codes:

Code	Time Format
01	HH:MM:SS
02	HH:MM

Example: Set Time Format as HH:MM (Code = 02)

Step1: Scan "Time Format"

Step2: Scan "0" "2" respectively in Appendix – Numbers

Step3: Scan "Time Format"

Date & Time Setup



.R006\$

Set Date



.R007\$

Set Time

Example: Set date as 2023-12-27, set time as 08:10:30 am (HH:MM:SS)

Step1: Scan "Set Date"

Step2: Scan "2" "3" "1" "2" "2" "7" in Appendix - Numbers

Step3: Scan "Set Date"

Step4: Scan "Set Time"

Step5: Scan "0" "8" "1" "0" "3" "0" in Appendix - Numbers

Step6: Scan "Set Time"

USB HID

Scanning below configuration barcode will configure the scanner to USB HID interface, in which the scanner becomes an HID keyboard device.



.C008\$

USB HID

Keyboard Layout



.C010\$

English (US)*



.C018\$

English (UK)



.C027\$

Danish



.C013\$

Spanish



.C021\$

Hungarian (QWERTZ)



.C024\$

Hungarian (QWERTY)



.C025\$

Canadian French



.C028\$

Dutch



.C014\$

Italian



.C012\$

French



.C011\$

German



.C016\$

Swiss German



.C023\$



.C026\$

Swiss French



Czech (QWERTZ)



Norwegian



Portuguese



Brazilian (QWERTY)



Japanese

Swedish



Czech (QWERTY)



Belgian



Slovak



Canadian (Traditional)



Alt Code

Intercharacter Delay

The configurable range is from 0 to 255ms. The larger the number, the longer the delay.



.B009\$

Set Intercharacter Delay

(Default = 4ms)

Example: Set Intercharacter Delay to 8ms

Step1: Scan Set Intercharacter Delay

Step2: Scan "0" "0" "8" in Appendix – Numbers

Step3: Scan Set Intercharacter Delay

Interblock Delay

The configurable range is from 0 to 2550ms. The larger the number, the longer the delay.



.B007\$

Set Interblock Delay

(Default = 0ms)

Example: Set Interblock Delay to 20ms

Step1: Scan Set Interblock Delay

Step2: Scan "0" "0" "2" in Appendix – Numbers

Step3: Scan Set Interblock Delay

USB VCP

Scanning below configuration barcode will configure the scanner to USB VCP interface. The scanner will be able communicate with the host via USB Virtual COM. Normally virtual COM port can be recognized by the host. If it is not recognizable by the host, please contact your local distributor for VCP driver.



.C006\$

USB VCP

BCC (Binary Check Character)



.E029\$

On



.E030\$

Off*

Note:

Once enabled, 1 byte of checksum will be added to the end of each data to conduct Xor calculation for Bluetooth SPP & USB VCP.

Example:

The barcode data is "TEST" with terminator <CR><LF>

Data Format = <T> + <E> + <S> + <T> + <CR> + <LF> + <BCC>.

BCC = 54h ^ 45h ^ 53h ^ 54h ^ 0Dh ^ 0Ah = 11h

Chapter 4 Reading Mode

Trigger Mode

In Trigger Mode the LED will stay on once trigger is pressed and held, and will turn off automatically once a barcode is read or a 5-second timeout expires.



Trigger Mode

Continuous Mode

In Continuous Mode the LED will stay on.



Continuous Mode

Auto-sensing Mode

In Auto-sensing Mode the LED will turn off automatically after LED Auto-Off timeout expires. Any change detected in image will make LED turn on again



Auto-sensing Mode*

Continuous / Auto-sensing Mode – Identical Read Interval

A barcode (or an identical one) can be re-scanned only after the defined amount of Identical Read Interval expires.

The configurable range is 0.1 ~ 2.0 sec. 3 digits must be programmed during the multi-step configuration. (001 = 0.1 sec, 002 = 0.2 sec, 003 = 0.3 sec, 004 = 0.4 sec, 005 = 0.5 sec, 0.6 = 1 sec, 007 = 1.5 sec, 008 = 2.0 sec)



Identical Read Interval
(Default = 0.4 sec)

Example: Set Identical Read Interval as 2 sec

Step1: Scan “**Identical Read Interval**”

Step2: Scan “**0**” “**0**” “**8**” in Appendix - Numbers

Step3: Scan “**Identical Read Interval**”

Accuracy Adjustment

Accuracy Adjustment assures a more reliable decoded output. The higher the number, the greater the accuracy, yet with slower speed.

The configurable range is 1 ~ 3. 1 digit must be programmed during the multi-step configuration.



Accuracy Adjustment
(Default = 1)

Example: Set Accuracy Adjustment as 2

Step1: Scan “**Accuracy Adjustment**”

Step2: Scan “**2**” in Appendix - Numbers

Step3: Scan “**Accuracy Adjustment**”

Chapter 5 Data Format

By default data format is as follows:

<Preamble> <Code ID> <Barcode Length> <Barcode Data> <Postamble> <Terminator>

Code ID



Disable Code ID*



Enable Factory ID



Enable AIM ID



Enable Set ID

Set ID

Set ID can be 0 ~ 2 alphanumeric for each symbology.



Set ID – Code39



Set ID – Full ASCII Code39



Set ID – Code32



Set ID – Codabar



.P010\$

Set ID – Code128



.P001\$

Set ID – EAN-13



.P002\$

Set ID – EAN-8



.P004\$

Set ID – UPC-A



.P003\$

Set ID – UPC-E



.P006\$

Set ID – Interleaved 2 of 5



.P017\$

Set ID – Matrix 2 of 5



.P018\$

Set ID – Industrial 2 of 5



.P021\$

Set ID – IATA



.P015\$

Set ID – UK Plessey



.P014\$

Set ID – MSI Plessey



.P009\$

Set ID – Code11



.P013\$

Set ID – Code93



.P024\$

Set ID – GS1 Databar



.P019\$

Set ID – GS1 Databar Limited



.P020\$

Set ID – GS1 Databar Expanded



.P025\$

Set ID – PDF417



.P029\$

Set ID – MicroPDF417



.P026\$

Set ID – QR Code



.P027\$

Set ID – Data Matrix



.P033\$

Set ID – Aztec



.P030\$

Set ID – MaxiCode



.P048\$

Set ID – DotCode

Example: Set Code39 Set ID as XY”

Step1: Scan “**Set ID – Code39**”

Step2: Scan “**X**” “**Y**” in Appendix – Upper Case Alphabets

Step3: Scan “**Set ID – Code39**”

Data Length



.D020\$

Send Data Length Off*



.D019\$

Send Data Length On

Preamble

Preamble can be up to 16 bytes of data.



.A012\$

Set Preamble

Example: Set XYZ123 as Preamble

Step 1: Scan "Set Preamble"

Step 2: Scan "X" "Y" "Z" "1" "2" "3" in Appendix – Upper Case Alphabets & Numbers

Step 3: Scan "Set Preamble"

Postamble

Postamble can be up to 16 bytes of data.



.A013\$

Set Postamble

Example: Set XYZ123 as Postamble

Step 1: Scan "Set Postamble"

Step 2: Scan "X" "Y" "Z" "1" "2" "3" in Appendix – Upper Case Alphabets & Numbers

Step 3: Scan "Set Postamble"

Clear Preamble/Postamble



Clear Preamble/Postamble

Terminator



None



<LF>



<CR>*



<CR><LF>



<TAB>



<Space>



<ESC>

Note:

1. For USB HID/BT HID interface the default terminator is CR.
2. For USB VCP/BT SPP interface the default terminator is CR+LF

Chapter 6 Symbologies

General Settings



.A002\$

Enable All Symbologies



.A003\$

Disable All Symbologies



.G036\$

Enable All 1D Symbologies



.G035\$

Disable All 1D Symbologies



.G038\$

Enable All 2D Symbologies



.G037\$

Disable All 2D Symbologies

Note: When all symbologies are disabled, configuration barcodes are still readable.

UPC-A

Enable/Disable UPC-A



.H001\$

Enable UPC-A*



.H002\$

Disable UPC-A

Lead Digit



.H004\$

Not Send Lead Digit



.H003\$

Send Lead Digit*

Check Digit



.H005\$

Send Check Digit*



.H006\$

Not Send Check Digit

UPC-A Expand to EAN-13



.H068\$

Enable UPC-A Expand to EAN-13



.H067\$

Disable UPC-A Expand to EAN-13*

Add On Supplement



.H033\$

Enable 5-digit Supplement



.H034\$

Disable 5-digit Supplement*



.H035\$

Enable 2-digit Supplement



.H036\$

Disable 2-digit Supplement*



.H060\$

Enable Addenda Required



.H059\$

Disable Addenda Required*

Note:

When Addenda Required is enabled, the scanner will only read an UPC-A barcode that has 2-digit or 5-digit addenda/supplement.

UPC-E

Enable/Disable UPC-E



.H007\$

Enable UPC-E*



.H008\$

Disable UPC-E

Lead Digit



.H010\$

Not Send Lead Digit



.H009\$

Send Lead Digit*

Check Digit



.H011\$

Send Check Digit*



.H012\$

Not Send Check Digit

UPC-E Expand to UPC-A



.H053\$

Enable UPC-E Expand to UPC-A



.H054\$

Disable UPC-E Expand to UPC-A*

Add On Supplement



.H037\$

Enable 5-digit Supplement



.H038\$

Disable 5-digit Supplement*



.H039\$

Enable 2-digit Supplement



.H040\$

Disable 2-digit Supplement*



.H056\$

Enable Addenda Required



.H055\$

Disable Addenda Required*

Note:

When Addenda Required is enabled, the scanner will only read an UPC-E barcode that has 2-digit or 5-digit addenda/supplement.

EAN-8

Enable/Disable EAN-8



.H019\$

Enable EAN-8*



.H020\$

Disable EAN-8

Check Digit



.H024\$

Not Send Check Digit



.H023\$

Send Check Digit*

EAN-8 Expand to EAN-13 (Zero Extension)



.H076\$

Enable EAN-8 Expand to EAN-13



.H075\$

Disable EAN-8 Expand to EAN-13*

Add On Supplement



.H029\$

Enable 5-digit Supplement



.H030\$

Disable 5-digit Supplement*



.H031\$

Enable 2-digit Supplement



.H032\$

Disable 2-digit Supplement*



.H062\$

Enable Addenda Required



.H061\$

Disable Addenda Required*

Note:

When Addenda Required is enabled, the scanner will only read an EAN-8 barcode that has 2-digit or 5-digit addenda/supplement.

EAN-13

Enable/Disable EAN-13



.H013\$

Enable EAN-13*



.H014\$

Disable EAN-13

Check Digit



.H018\$

Not Send Check Digit



.H017\$

Send Check Digit*

Add On Supplement



.H025\$

Enable 5-digit Supplement



.H026\$

Disable 5-digit Supplement*



.H027\$

Enable 2-digit Supplement



.H028\$

Disable 2-digit Supplement*



.H058\$

Enable Addenda Required



.H057\$

Disable Addenda Required*

Note:

When Addenda Required is enabled, the scanner will only read an EAN-13 barcode that has 2-digit or 5-digit addenda/supplement.

ISBN



On



Off*

ISSN



On



Off*

Code 128

Enable/Disable Code 128



.J010\$

Enable Code 128*



.J011\$

Disable Code 128

Code 128 Min/Max Length



.J012\$

Set Min Length

(Default = 01)



.J013\$

Set Max Length

(Default = 99)

Example: Set Min Length as 8, Max Length as 12 for Code128

Step1: Scan "Set Min Length"

Step2: Scan "0" "8" in Appendix - Numbers

Step3: Scan "Set Min Length"

Step4: Scan "Set Max Length"

Step5: Scan "1" "2" in Appendix - Numbers

Step6: Scan "Set Max Length"

Note: Configurable range for Min/Max Length is 01 ~ 99.

Code 39

Enable/Disable Code 39



.G008\$

Enable Code 39*



.G009\$

Disable Code 39

Verification



.G003\$

Disable CDV*



.G004\$

CDV & Send CD



.G005\$

CDV & Not Send CD

Start/Stop



.G015\$

Not Send Start/Stop*



.G014\$

Send Start/Stop

Full ASCII Code39



.G001\$

Enable Full ASCII Code39*



.G002\$

Disable Full ASCII Code39

Code39 Min/Max Length



.G006\$

Set Min Length

(Default = 01)



.G007\$

Set Max Length

(Default = 99)

Example: Set Min Length as 8, Max Length as 12 for Code39

Step1: Scan "**Set Min Length**"

Step2: Scan "0" "8" in Appendix – Numbers

Step3: Scan "**Set Min Length**"

Step4: Scan "**Set Max Length**"

Step5: Scan "1" "2" in Appendix – Numbers

Step6: Scan "**Set Max Length**"

Note: Configurable range for Min/Max Length is 01 ~ 99.

Code 32

Enable/Disable Code 32



.K010\$

Enable Code 32



.K011\$

Disable Code 32*

Notw: Please make sure Code39 is enabled with verification disabled before enabling Code32.

Leading/Tailing



.K012\$

Not Send Leading & Tailing



.K013\$

Send Leading Only



.K014\$

Send Tailing Only



.K015\$

Send Leading & Tailing*

Code 93

Enable/Disable Code 93



.G010\$

Enable Code 93*



.G011\$

Disable Code 93

Code 93 Min/Max Length



.G012\$

Set Min Length

(Default = 01)



.G013\$

Set Max Length

(Default = 99)

Example: Set Min Length as 8, Max Length as 12 for Code93

Step1: Scan "**Set Min Length**"

Step2: Scan "**0**" "**8**" in Appendix – Numbers

Step3: Scan "**Set Min Length**"

Step4: Scan "**Set Max Length**"

Step5: Scan "**1**" "**2**" in Appendix – Numbers

Step6: Scan "**Set Max Length**"

Note: Configurable range for Min/Max Length is 01 ~ 99.

Code 11

Enable/Disable Code 11



.I010\$

Enable Code 11



.I011\$

Disable Code 11*

Verification



.I012\$

Disable CDV*



.I042\$

Single Digit



.I043\$

Double Digits

Check Digit



.I013\$

Send Check Digit



.I014\$

Not Send Check Digit*

Code 11 Min/Max Length



.I015\$

Set Min Length

(Default = 01)



.I016\$

Set Max Length

(Default = 99)

Example: Set Min Length as 8, Max Length as 12 for Code11

Step1: Scan **"Set Min Length"**

Step2: Scan **"0" "8"** in Appendix – Numbers

Step3: Scan **"Set Min Length"**

Step4: Scan **"Set Max Length"**

Step5: Scan **"1" "2"** in Appendix – Numbers

Step6: Scan **"Set Max Length"**

Note: Configurable range for Min/Max Length is 01 ~ 99.

Codabar (NW-7)

Enable/Disable Codabar



.1001\$

Enable Codabar*



.1002\$

Disable Codabar

Start/Stop



.1003\$

Send Start/Stop



.1004\$

Not Send Start/Stop*

Verification



.1005\$

Disable CDV*



.1006\$

CDV & Send CD



.1007\$

CDV & Not Send CD

Codabar Min/Max Length



Set Min Length
(Default = 01)



Set Max Length
(Default = 99)

Example: Set Min Length as 8, Max Length as 12 for Codabar

- Step1: Scan "Set Min Length"
- Step2: Scan "0" "8" in Appendix – Numbers
- Step3: Scan "Set Min Length"
- Step4: Scan "Set Max Length"
- Step5: Scan "1" "2" in Appendix – Numbers
- Step6: Scan "Set Max Length"

Note: Configurable range for Min/Max Length is 01 ~ 99.

Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5



.J001\$

Enable Interleaved 2 of 5*



.J002\$

Disable Interleaved 2 of 5

Verification



.J003\$

Disable CDV*



.J004\$

CDV & Send CD



.J005\$

CDV & Not Send CD

Interleaved 2 of 5 Min/Max Length



Set Min Length
(Default = 01)



Set Max Length
(Default = 99)

Example: Set Min Length as 8, Max Length as 12 for Interleaved 2 of 5

- Step1: Scan "Set Min Length"
- Step2: Scan "0" "8" in Appendix – Numbers
- Step3: Scan "Set Min Length"
- Step4: Scan "Set Max Length"
- Step5: Scan "1" "2" in Appendix – Numbers
- Step6: Scan "Set Max Length"

Note: Configurable range for Min/Max Length is 01 ~ 99.

IATA (Standard 2 of 5)

Enable/Disable IATA



.N017\$

Enable IATA



.N018\$

Disable IATA*

Matrix 2 of 5

Enable/Disable Matrix 2 of 5



.M010\$

Enable Matrix 2 of 5



.M011\$

Disable Matrix 2 of 5*

Matrix2 of 5 Min/Max Length



.M015\$

Set Min Length

(Default = 01)



.M016\$

Set Max Length

(Default = 99)

Example: Set Min Length as 8, Max Length as 12 for Matrix 2 of 5

Step1: Scan "Set Min Length"

Step2: Scan "0" "8" in Appendix – Numbers

Step3: Scan "Set Min Length"

Step4: Scan "Set Max Length"

Step5: Scan "1" "2" in Appendix – Numbers

Step6: Scan "Set Max Length"

Note: Configurable range for Min/Max Length is 01 ~ 99.

Industrial 2 of 5

Enable/Disable Industrial 2 of 5



.N001\$

Enable Industrial 2 of 5



.N002\$

Disable Industrial 2 of 5*

MSI Plessey

Enable/Disable MSI Plessey



.L001\$

Enable MSI Plessey*



.L002\$

Disable MSI Plessey

Verification



.L004\$

Send Check Digit*



.L003\$

Not Send Check Digit



.L009\$

Single Check Digit MOD10*



.L007\$

Double Check Digits MOD10



Double Check Digits MOD10/MOD11

MSI Plessey Min/Max Length



Set Min Length
(Default = 01)



Set Max Length
(Default = 99)

Example: Set Min Length as 8, Max Length as 12 for MSI Plessey

- Step1: Scan "Set Min Length"
- Step2: Scan "0" "8" in Appendix – Numbers
- Step3: Scan "Set Min Length"
- Step4: Scan "Set Max Length"
- Step5: Scan "1" "2" in Appendix – Numbers
- Step6: Scan "Set Max Length"

Note: Configurable range for Min/Max Length is 01 ~ 99.

UK Plessey

Enable/Disable UK Plessey



Enable UK Plessey



Disable UK Plessey*

GS1 DataBar (RSS-14)

Enable/Disable GS1 DataBar



.N032\$

Enable GS1 DataBar*



.N033\$

Disable GS1 DataBar

Prefix AI



.N036\$

Send Prefix AI*



.N037\$

Not Send Prefix AI

Enable/Disable GS1 DataBar Stacked / Omnidirectional



.N038\$

Enable GS1 DataBar Stacked



.N039\$

Disable GS1 DataBar Stacked*

GS1 DataBar Limited (RSS-Limited)

Enable/Disable GS1 DataBar Limited



.N010\$

Enable GS1 DataBar Limited*



.N011\$

Disable GS1 DataBar Limited

Prefix AI



.N024\$

Send Prefix AI*



.N025\$

Not Send Prefix AI

GS1 DataBar Expanded (RSS-Expanded)

Enable/Disable GS1 DataBar Expanded



.N026\$

Enable GS1 DataBar Expanded*



.N027\$

Disable GS1 DataBar Expanded

Enable/Disable GS1 DataBar Expanded Stacked



.N028\$

Enable GS1 DataBar Expanded Stacked



.N029\$

Disable GS1 DataBar Expanded Stacked*

GS1 Composite CC-A

Enable/Disable GS1 Composite CC-A



.K049\$

Enable GS1 GS1 Composite CC-A



.K048\$

Disable GS1 Composite CC-A*

GS1 Composite CC-B

Enable/Disable GS1 Composite CC-B



.K047\$

Enable GS1 GS1 Composite CC-B



.K046\$

Disable GS1 Composite CC-B*

GS1 Composite CC-C

Enable/Disable GS1 Composite CC-C



.K045\$

Enable GS1 GS1 Composite CC-C



.K044\$

Disable GS1 Composite CC-C*

QR Code

Enable/Disable QR Code



.G025\$

Enable QR Code*



.G026\$

Disable QR Code

Micro QR Code

Enable/Disable Micro QR Code



.G027\$

Enable Micro QR Code*



.G028\$

Disable Micro QR Code

Data Matrix

Enable/Disable Data Matrix



.G031\$

Enable Data Matrix*



.G032\$

Disable Data Matrix

PDF417

Enable/Disable PDF417



.G021\$

Enable PDF417*



.G022\$

Disable PDF417

MicroPDF417

Enable/Disable MicroPDF417



.G039\$

Enable MicroPDF417*



.G040\$

Disable MicroPDF417

Aztec

Enable/Disable Aztec



.G055\$

Enable Aztec



.G056\$

Disable Aztec*

MaxiCode

Enable/Disable MaxiCode



Enable MaxiCode



Disable MaxiCode*

DotCode

Enable/Disable DotCode



Enable DotCode



Disable DotCode*

Chapter 7 Appendix

Appendix – Numbers



0



1



2



3



4



5



6



7



8



9

Appendix – Upper Case Alphabets



A



B



C



D



E



F



G



H



I



J



K



L



M



N



O



P



Q



R



S



T



U



V



W



X



Y



Z

Appendix – Lower Case Alphabets



a



b



c



d



e



f



g



h



i



j



k



l



m



n



o



p



Appendix – Control Codes



NUL



SOH



STX



ETX



EOT



ENQ



ACK



BEL



BS



HT



LF



VT



FF



CR



SO



SI



DLE



DC1



DC2



DC3



DC4



NAK



SYN



ETB



CAN



EM



SUB



ESC



FS



GS



RS



US

Appendix – Symbols



+



-



.



\$



%



/



\



!



@



#



^



~



&



*



—



=



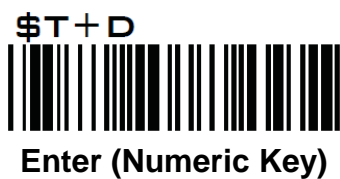


SP



DEL

Appendix – Function Keys



Appendix – Navigation Keys



Cursor Left



Cursor Right



Cursor Up



Cursor Down



Page Up



Page Down



Tab



Back Tab



Esc



Enter



BS



Ins



Del

Appendix – Modifier Keys

\$T%L



Alt (Left) make *1

\$T%M



Alt (Left) break

\$T+E



Alt (Right) make

\$T+F



Alt (Right) break

\$T%N



Shift (Left) make *2

\$T%□



Shift (Left) break

\$T+I



Shift (Right) make

\$T+J



Shift (Right) break

\$T+K



Win (Left) make

\$T+L



Win (Left) break

\$T+M



Win (Right) make

\$T+N



Win (Right) break



Ctrl (Left) make *3



Ctrl (Left) break



Ctrl (Right) make



Ctrl (Right) break

Note:

*1: When "Alt (Left) make" is programmed, please scan "Alt (Left) break" to resume barcode setting.

*2: When "Shift (Left) make" is programmed, please scan "Shift (Left) break" to resume barcode setting.

*3: When "Ctrl (Left) make" is programmed, please scan "Ctrl (Left) break" to resume barcode setting.

Appendix – Abort

If there is an error reading data barcode during multi-step configuration, you may cancel configuration by scanning below configuration barcode.



.P023\$

Abort

Appendix – Default Table

Function	Default	Remark
General Settings		
Barcode Configurability (Setup Code)	ON	
Beep Tone	High (4.0KHz)	
Beep Mode	Normal	
Vibrator	OFF	
Data Format		
UTF-8 to Unicode Conversion	OFF	
Country Code Page	West European Latin	
HT/CR/ESC Converts to TAB/ENTER/ESCAPE	OFF	
Function Code Conversion	ON	
Control Code Output Method	Ctrl Mode	
Numeric Key	OFF	
Capital Lock Mode	OFF	
Image Settings		
Centering	OFF	
Interface		
Set SPP Pincode	1234	
General Bluetooth Settings		
Power Off Timeout	03:00	
Set Bluetooth Device ID	Wireless Scanner	
Memory Mode		
Data Format	<Date>,<Time>,<Barcode Data>	
Field Separator	,	
Date Format	DD/MM/YYYY	
Time Format	HH:MM:SS	
Date & Time Setup	N/A	
Keyboard Layout	English (US)	
Intercharacter Delay	4ms	
Interblock Delay	0ms	
BCC	OFF	
Reading Mode		
Trigger Mode	Trigger Mode	
Continuous Mode	N/A	
Auto-sensing Mode	N/A	
Continuous / Auto-sensing Mode –	0.4 sec	

Identical Read Interval	
Accuracy Adjustment	1
Data Format	
Code ID	Disable
Set ID	N/A
Data Length	OFF
Preamble	N/A
Postamble	N/A
Terminator	CR (BT HID / USB HID) CR+LF (BT SPP / USB VCP)
Symbologies	
General Settings	N/A
UPC-A	
Enable/Disable	ON
Lead Digit	Send
Check Digit	Send
UPC-E Expand to UPC-A	OFF
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
UPC-E	
Enable/Disable	ON
Lead Digit	Send
Check Digit	Send
UPC-E Expand to UPC-A	OFF
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
EAN-8	
Enable/Disable	ON
Check Digit	Send
EAN-8 Expand to EAN-13 (Zero Extension)	OFF
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
EAN-13	
Enable/Disable	ON
Check Digit	Send
5-digit Supplement	OFF

2-digit Supplement	OFF
Addenda Required	OFF
ISBN	OFF
ISSN	OFF
Code 128	
Enable/Disable	ON
Min Length	01
Max Length	99
Code 39	
Enable/Disable	ON
Verification	Disable CDV
Start/Stop	Not Send
Full ASCII Code39	ON
Min Length	01
Max Length	99
Code 32	
Enable/Disable	OFF
Leading/Tailing	Send Leading & Tailing
Code 93	
Enable/Disable	ON
Min Length	01
Max Length	99
Code 11	
Enable/Disable	OFF
Verification	Disable CDV
Check Digit	Not Send
Min Length	01
Max Length	99
Codabar	
Enable/Disable	ON
Start/Stop	Not Send
Verification	Disable CDV
Min Length	01
Max Length	99
Interleaved 2 of 5	
Enable/Disable	ON
Verification	Disable CDV
Min Length	01
Max Length	99
IATA (Standard 2 of 5)	

Enable/Disable	OFF
Matrix 2 of 5	
Enable/Disable	OFF
Min Length	01
Max Length	99
Industrial 2 of 5	
Enable/Disable	OFF
MSI Plessey	
Enable/Disable	ON
Verification	Send Check Digit, Single Check Digit MOD10
Min Length	01
Max Length	99
UK Plessey	
Enable/Disable	OFF
GS1 DataBar (RSS-14)	
Enable/Disable	ON
Prefix AI	Send
Enable/Disable GS1 DataBar Stacked / Omnidirectional	OFF
GS1 DataBar Limited (RSS-Limited)	
Enable/Disable	ON
Prefix AI	Send
GS1 DataBar Expanded (RSS-Expanded)	
Enable/Disable GS1 DataBar Expanded	ON
Enable/Disable GS1 DataBar Expanded Stacked	OFF
GS1 Composite CC-A	
Enable/Disable	OFF
GS1 Composite CC-B	
Enable/Disable	OFF
GS1 Composite CC-C	
Enable/Disable	OFF
QR Code	
Enable/Disable	ON
Micro QR Code	
Enable/Disable	ON
Data Matrix	

Enable/Disable	ON
PDF417	
Enable/Disable	ON
MicroPDF417	
Enable/Disable	ON
Aztec	
Enable/Disable	OFF
MaxiCode	
Enable/Disable	OFF
DotCode	
Enable/Disable	OFF

Appendix - Factory ID and AIM ID Table

#	Symbology	Factory ID	AIM ID	AIM ID Modifier (m)
0	UPC-E	E	JEm	0,3
1	UPC-A	A	JEm	0,3
2	EAN-8	S	JEm	3,4
3	EAN-13	F	JEm	0,3
4	Code 128	K	JC0	
5	Code 39	M	JAm	0,1,3,4,5,7
6	Code 32	B	JX0	
7	Code 93	L	JG0	
8	Code 11	J	JHm	0,1,3
9	Codabar	N	JFm	0,2,4
10	Interleaved 2 of 5	I	JIm	0,1,3
11	Matrix 2 of 5	Y	JXm	0,2,3
12	Industrial 2 of 5	V	JS0	
13	Standard 2 of 5 (IATA)	R	JS0	
14	MSI Plessey	O	JMm	0,1
15	UK Plessey	P	JP0	
16	GS1 DataBar	G	Je0	
17	GS1 Composite		Je0	
18	PDF417	Z	JL0	
19	MicroPDF417	r	JL0	
20	Data Matrix	X	Jdm	0-6
21	QR Code	W	JQm	0-6

22	Micro QR Code	w	]Qm	0-6
23	Aztec	z	]zm	0,3
24	MaxiCode	u	]Um	0,2
25	DotCode	.	]J0	

Appendix – ASCII Table

Note: ASCII 0~31 are non-printable characters, ASCII 32~127 are printable characters.

Hex	Dec	ASCII
00	00	NUL (Null char.)
01	01	SOH (Start of Header)
02	02	STX (Start of Text)
03	03	ETX (End of Text)
04	04	EOT (End of Transmission)
05	05	ENQ (Enquiry)
06	06	ACK (Acknowledgment)
07	07	BEL (Bell)
08	08	BS (Backspace)
09	09	HT (Horizontal Tab)
0A	10	LF (Line Feed)
0B	11	VT (Vertical Tab)
0C	12	FF (Form Feed)
0D	13	CR (Carriage Return)
0E	14	SO (Shift Out)
0F	15	SI (Shift In)
10	16	DLE (Data Link Escape)
11	17	DC1 (XON) (Device Control 1)
12	18	DC2 (Device Control 2)
13	19	DC3 (XOFF) (Device Control 3)
14	20	DC4 (Device Control 4)
15	21	NAK (Negative Acknowledgment)
16	22	SYN (Synchronous Idle)
17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1A	26	SUB (Substitute)
1B	27	ESC (Escape)
1C	28	FS (File Separator)
1D	29	GS (Group Separator)
1E	30	RS (Request to Send)
1F	31	US (Unit Separator)
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)

23	35	# (Number Sign)
24	36	\$ (Dollar Sign)
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Right / Closing Parenthesis)
29	41	) (Right / Closing Parenthesis)
2A	42	* (Asterisk)
2B	43	+ (Plus)
2C	44	, (Comma)
2D	45	- (Minus / Dash)
2E	46	. (Dot)
2F	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3A	58	: (Colon)
3B	59	; (Semi-colon)
3C	60	< (Less Than)
3D	61	= (Equal Sign)
3E	62	> (Greater Than)
3F	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4A	74	J

4B	75	K
4C	76	L
4D	77	M
4E	78	N
4F	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5A	90	Z
5B	91	[(Left / Opening Bracket)
5C	92	\ (Back Slash)
5D	93	] (Right / Closing Bracket)
5E	94	^ (Caret / Circumflex)
5F	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f
67	103	g
68	104	h
69	105	i
6A	106	j
6B	107	k
6C	108	l
6D	109	m
6E	110	n
6F	111	o
70	112	p
71	113	q
72	114	r



73	115	s
74	116	t
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7A	122	z
7B	123	{ (Left/ Opening Brace)
7C	124	| (Vertical Bar)
7D	125	} (Right/Closing Brace)
7E	126	~ (Tilde)
7F	127	DEL (Delete)

Version History

Rev	Date	Description	Issued
1.0	2024.01.01	FW: HM3-v-1.00.BTB.T1 Initial Release	Shaw