

MT8225

2D Handheld Scanner

User's Manual

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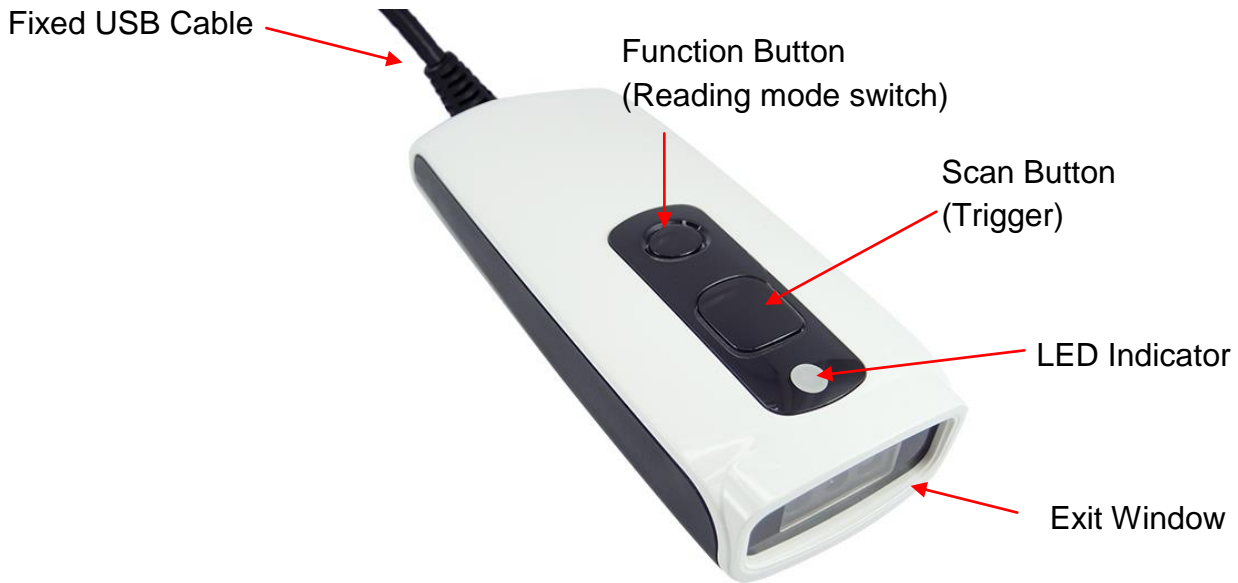
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Chapter 1 Introduction

This user's manual is dedicated to MT8225, a 2D handheld scanner that delivers snappy 1D & 2D data capture capability as well as 3mil high-density barcode reading. Water-resistant and dust-proof, this ergonomic 2D handheld barcode scanner is enclosed in an IP55 housing that can endure the harshest environment.



Specifications

Optic & Performance	
Light Source	White LED Visible red LED
Sensor	1280 x 800
Resolution	3mil / 0.075mm
Scan Angle	Horizontal 40° Vertical 30°
Pitch Angle	±60°
Skew Angle	±50°
Roll Angle	360°
Print Contrast Ratio	20%
Width of Field	141mm (13Mil Code39)
Guaranteed D.O.F (Environment: 800 lux)	3 Mil Code 39 : 70 ~ 100mm 5 Mil Code 39 : 40 ~ 160mm

	13 Mil UPC/EAN : 65 ~ 245mm
	15 Mil QR Code : 45 ~ 215mm
	6.67 Mil PDF417 : 55 ~ 115mm
	10 Mil Data Matrix : 55 ~ 105mm
Physical Characteristics	
Dimension	W42.5 x L105 x H21.5 mm
Weight	89g
Color	Black / White
Material	PC
Cable	Fixed USB A(M) Cable, 1M
Trigger	Scan Button (Trigger) Function Button (Reading mode switch)
Indicator	LED, Buzzer, Vibrator
Electrical	
Operation Voltage	3.7 VDC \pm 5%
Working Current	< 300mA
Standby Current	< 70mA
Connectivity	
Interface/ Profile	USB HID USB VCP
User Environment	
Operating Temperature	-20 ~ 50°C
Storage Temperature	-20 ~ 60°C
Humidity	0% ~ 95%RH (Non-condensing)
Drop Durability	1.5M
Sealing	IP55
Ambient Light	70,000 Lux (Sunlight)
1D Symbologies	UPC-A/ UPC-E, EAN-8/ EAN-13, Code128, GS1-128, Code 39, Code32, Code 93, Code11, Interleaved 2 of 5, Matrix 2 of 5, Industrial 2 of 5, Codabar, MSI, GS1 Databar
2D Symbologies	QR Code, Micro QR Code, Data Matrix, PDF417, MicroPDF417, Aztec
Regulatory	
ESD	Functional after 4KV contact, 8KV air discharge
EMC/RF	TBA
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	The scanner successfully reads a configuration barcode
Three short beeps	The scanner reads an unexpected barcode during multi-step configuration. (Please scan " Abort " and start over)

LED Indication

LED	Status
Solid red	Power on
Off	Power off

Chapter 2 General Settings

Barcode Configurability

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)*

Vibrator



.D035\$

Off*



.D034\$

On

Good Read Indicator LED



.F054\$

Off



.F055\$

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)**



.C057\$

**Traditional Chinese, Big5
(Notepad / Excel)**



.C056\$

**Traditional Chinese, Big5
(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.

OPOS



.A031\$

Off*



.A030\$

On

Note:

To function properly with OPOS, the host PC must be installed with OPOS driver or demo program, which is available from our website.

Capital Lock Mode



.A005\$

Capslock Off*



.A004\$

Capslock On



.A006\$

Capslock Free

Note:

When in Capslock On, the scanner inverses case or cancels out the Capslock state of keyboard. When 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

Inverse Barcode



.D021\$

Disable Inverse Barcode*



.D022\$

Enable Inverse Barcode

Chapter 3 Interface

USB HID



.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\$

Swiss French



.C026\$

Swedish



.C022\$

Czech (QWERTZ)



.C017\$

Czech (QWERTY)



.C029\$

Norwegian



.C030\$

Belgian



.C031\$

Portuguese



.C032\$

Slovak



.C033\$

Brazilian (QWERTY)



.C034\$

Canadian (Traditional)



.C009\$

Japanese



.C015\$

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 = 0ms)

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



.C006\$

USB VCP

RS232



.C002\$

RS232

Baud Rate



.E003\$

1200



.E004\$

2400



.E005\$

4800



.E006\$

9600*



.E007\$

19200



.E022\$

38400



.E061\$

57600



.E063\$

115200

Data Bits & Parity



.E009\$

8 Bits Even



.E010\$

8 Bits Odd



.E012\$

8 Bits Space



.E011\$

8 Bits Mark



.E008\$

8 Bits None*



.E013\$

7 Bits Even



.E014\$

7 Bits Odd



.E021\$

7 Bits Space



.E015\$

7 Bits Mark

Stop Bits



.E016\$

1 Stop Bit*



.E017\$

2 Stop Bits

Handshaking



.E018\$

None*



.E019\$

RTS enable at Power On



.E020\$

RTS enable with Communication

ACK/NAK



.E023\$

On



.E024\$

Off*

BCC (Binary Check Character)



.E029\$

On



.E030\$

Off*

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 LED Auto-Off timeout expires.



Trigger 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*

Chapter 5 Data Format

By default data format is as follows:

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

Code ID



.A009\$

Disable Code ID*



.A008\$

Enable Factory ID



.A015\$

Enable Set ID

Set ID

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



.P005\$

Set ID – Code39



.P007\$

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-E0



.P006\$

Set ID – Interleaved 2 of 5



.P017\$

Set ID – Matrix 2 of 5



.P018\$

Set ID – Industrial 2 of 5



.P013\$

Set ID – Code93



.P009\$

Set ID – Code11



.P014\$

Set ID – MSI Plessey



.P024\$

Set ID – GS1 Databar



.P025\$

Set ID – PDF417



.P029\$

Set ID – MicroPDF417



.P026\$

Set ID – QR Code



.P027\$

Set ID – Data Matrix



.P033\$

Set ID – Aztec

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.



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>*



.D014\$

<TAB>



.D015\$

<Space>



.D016\$

<ESC>

Note:

1. For USB HID interface the default terminator is CR.
2. For USB VCP/RS232 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

Check Digit



.H005\$

Send Check Digit*



.H006\$

Not Send Check Digit

UPC-A to EAN-13



.H068\$

Enable UPC-A to EAN-13



.H067\$

Disable UPC-A to EAN-13*

UPC-E0

Enable/Disable UPC-E0



.H007\$

Enable UPC-E0*



.H008\$

Disable UPC-E0

Check Digit



.H011\$

Send Check Digit*



.H012\$

Not Send Check Digit

UPC-E0 to UPC-A



.H053\$

Enable UPC-E0 to UPC-A



.H054\$

Disable UPC-E0 to UPC-A*

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-13

Enable/Disable EAN-13



.H013\$

Enable EAN-13*



.H014\$

Disable EAN-13

Check Digit



.H018\$

Not Send Check Digit



.H017\$

Send Check Digit*

ISBN



.H049\$

On



.H050\$

Off*

ISSN



.H051\$

On



.H052\$

Off*

UPC/EAN Supplement



.H091\$

Enable 2/5-digit Supplement



.H090\$

Disable 2/5-digit Supplement*



.H092\$

Auto 2/5-digit Supplement

Code 128

Enable/Disable Code 128



.J010\$

Enable Code 128*



.J011\$

Disable Code 128

GS1-128(UCC/EAN 128)

Enable/Disable GS1-128



.M001\$

Enable GS1-128*



.M002\$

Disable GS1-128

Code128/GS1-128 Min/Max Length



.J012\$

Set Min Length

(Default = 04)



.J013\$

Set Max Length

(Default = 50)

Example: Set Min Length as 8, Max Length as 12 for Code128/GS1-128

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 ~ 50.

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 = 50)

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 ~ 50.

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 = 04)



.G013\$

Set Max Length

(Default = 50)

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 ~ 50.

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 = 04)



.I016\$

Set Max Length

(Default = 50)

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 ~ 50.

Codabar (NW-7)

Enable/Disable Codabar



.1001\$

Enable Codabar*



.1002\$

Disable Codabar

Start/Stop



.1003\$

Send Start/Stop



.1004\$

Not Send Start/Stop*

Codabar Min/Max Length



.1008\$

Set Min Length

(Default = 04)



.1009\$

Set Max Length

(Default = 50)

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 ~ 50.

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



.J006\$

Set Min Length

(Default = 05)



.J007\$

Set Max Length

(Default = 50)

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 ~ 50.

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 = 04)



.M016\$

Set Max Length
(Default = 24)

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 ~ 50.

Industrial 2 of 5

Enable/Disable Industrial 2 of 5



.N001\$

Enable Industrial 2 of 5*



.N002\$

Disable Industrial 2 of 5

Industrial 2 of 5 Min/Max Length



.N006\$

Set Min Length
(Default = 04)



.N007\$

Set Max Length
(Default = 24)

Example: Set Min Length as 8, Max Length as 12 for Industrial 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 ~ 50.

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



.L008\$

Double Check Digits MOD10/MOD11

MSI Plessey Min/Max Length



.L005\$

Set Min Length

(Default = 04)



.L006\$

Set Max Length

(Default = 50)

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 ~ 50.

GS1 DataBar (RSS-14)

Enable/Disable GS1 DataBar



.N032\$

Enable GS1 DataBar*



.N033\$

Disable GS1 DataBar

GS1 DataBar Limited (RSS-Limited)

Enable/Disable GS1 DataBar Limited



.N010\$

Enable GS1 DataBar Limited*



.N011\$

Disable GS1 DataBar Limited

GS1 DataBar Expanded (RSS-Expanded)

Enable/Disable GS1 DataBar Expanded



.N026\$

Enable GS1 DataBar Expanded*



.N027\$

Disable GS1 DataBar Expanded

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*

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



Appendix - Lower Case Alphabets



a



b



c



d



e



f



g



h



i



j



k



l



m



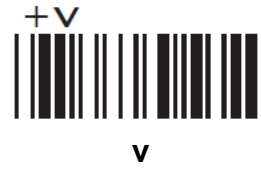
n



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



F1



F2



F3



F4



F5



F6



F7



F8



F9



F10



F11



F12



Home



End



Enter (Numeric Key)



App

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

\$T%W



Ctrl (Left) make *3

\$T+A



Ctrl (Left) break

\$T+G



Ctrl (Right) make

\$T+H



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	ON	
Beep Tone	High (4.0KHz)	
Vibrator	OFF	
Indicator LED	ON	
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	
Numeric Key	OFF	
Control Code Output Method	Ctrl Mode	
OPOS	OFF	
Capital Lock Mode	OFF	
Image Settings		
Inverse Barcode	OFF	
Interface		
USB HID	N/A	
Keyboard Layout	English (US)	
Intercharacter Delay	0ms	
Interblock Delay	0ms	
USB VCP	N/A	
RS232	N/A	
Baud Rate	9600	
Data Bits & Parity	8 Bits None	
Stop Bits	1 Stop Bit	
Handshaking	None	
ACK/NAK	OFF	
BCC	OFF	
Reading Mode		
Trigger Mode	N/A	
Auto-sensing Mode	Auto-sensing Mode	
Data Format		
Code ID	Disable	
Set ID	N/A	

Data Length	OFF
Preamble	N/A
Postamble	N/A
Terminator	CR (USB HID) CR+LF (USB VCP/RS232)
Symbologies	
General Settings	N/A
UPC-A	
Enable/Disable	ON
Check Digit	Send
UPC-A to EAN-13	OFF
UPC-E0	
Enable/Disable	ON
Check Digit	Send
UPC-E0 to UPC-A	OFF
EAN-8	
Enable/Disable	ON
Check Digit	Send
EAN-13	
Enable/Disable	ON
Check Digit	Send
ISBN	OFF
ISSN	OFF
UPC/EAN Supplement	OFF
Code 128	
Enable/Disable	ON
GS1-128	
Enable/Disable	ON
Min Length	04
Max Length	50
Code 39	
Enable/Disable	ON
Verification	Disable CDV
Start/Stop	Not Send
Full ASCII Code39	ON
Min Length	01
Max Length	50
Code 32	
Enable/Disable	OFF
Leading/Tailing	Send Leading & Tailing

Code 93	
Enable/Disable	ON
Min Length	04
Max Length	50
Code 11	
Enable/Disable	OFF
Verification	Disable CDV
Check Digit	Not Send
Min Length	04
Max Length	50
Codabar	
Enable/Disable	ON
Start/Stop	Not Send
Min Length	04
Max Length	50
Interleaved 2 of 5	
Enable/Disable	ON
Verification	Disable CDV
Min Length	05
Max Length	50
Matrix 2 of 5	
Enable/Disable	ON
Min Length	04
Max Length	24
Industrial 2 of 5	
Enable/Disable	ON
Min Length	04
Max Length	24
MSI Plessey	
Enable/Disable	OFF
Verification	Send Check Digit, Single Check Digit MOD10
Min Length	04
Max Length	50
GS1 DataBar (RSS-14)	
Enable/Disable	ON
GS1 DataBar Limited (RSS-Limited)	
Enable/Disable	ON
GS1 DataBar Expanded (RSS-Expanded)	

Enable/Disable	ON
QR Code	
Enable/Disable	ON
Micro QR Code	
Enable/Disable	ON
Data Matrix	
Enable/Disable	ON
PDF 417	
Enable/Disable	ON
Micro PDF 417	
Enable/Disable	ON
Aztec	
Enable/Disable	ON
MaxiCode	
Enable/Disable	OFF

Appendix - Factory ID

#	Symbology	Code ID	HEX
0	UPC-E0	E	45
1	UPC-A	A	41
2	EAN-8	S	53
3	EAN-13	F	46
4	Code 128/GS1-128/ISBT 128	K	4B
5	Code 39/Code32	M	4D
6	Code 93	L	4C
7	Code 11	J	4A
8	Codabar	N	4E
9	Interleaved 2 of 5	I	49
10	Matrix 2 of 5	Y	59
11	Industrial 2 of 5	V	56
12	GS1 DataBar	G	47
13	MSI Plessey	O	4F
14	PDF 417	Z	5A
15	Micro PDF 417	r	72
16	Data Matrix	X	58
17	QR Code/Micro QR Code	W	57
18	Aztec	z	7A

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	2021.10.28	Initial Release	Shaw
1.1	2022.10.04	Updated Product Picture, Removed Scan Rate, Updated Terminator	Shaw
1.2	2022.12.27	FW: HM3-r-1.01.T1 Added Shift-JIS to Unicode Conversion Added Control Code Output Method Added MaxiCode	Shaw
1.3	2023.11.24	Updated Control Code Table	Shaw
1.4	2023.12.27	FW: HM3-r-1.02.T1 Renamed "UTF-8/Shift-JIS to Unicode Conversion" to "UTF-8 to Unicode Conversion" Added Country Code Page Updated Safety Approval	Shaw