

# **MT840**

## **2D Wireless Scanner**

### **User's Manual**

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# Chapter 1 Introduction

This user's manual is dedicated to MT840, a portable 2D scanner that can send data to the host up to 20 meters away. This economical, ergonomic pocket-sized wireless 2D barcode scanner is a high efficient companion for users who work with laptops, tablets, smart phones and other mobile devices with iOS®, Android® and Windows®.



## Specifications

Optic & Performance	
Light Source	White LED Visible red LED
Sensor	640 x 480
Resolution	5mil / 0.125mm (1D) 10mil / 0.25mm (2D)
Scan Angle	Horizontal 37° Vertical 27.5°
Pitch Angle	±60°
Skew Angle	±60°
Roll Angle	360°
Print Contrast Ratio	25%
Width of Field	141mm (13Mil Code39)
Memory	2MB (20,000 barcodes)
Guaranteed D.O.F	5 Mil Code 39 : 55 ~ 115mm

<b>(Environment: 800 lux)</b>	15 Mil Code 39 : 60 ~ 350mm
	13 Mil UPC/EAN : 55 ~ 285mm
	15 Mil QR Code : 40 ~ 255mm
	10 Mil Data Matrix : 40 ~ 135mm
<b>Physical Characteristics</b>	
<b>Dimension</b>	W25.6 x L65.6 x H18.2 mm
<b>Weight</b>	26.7g
<b>Color</b>	Black
<b>Material</b>	PC
<b>Cable</b>	Option 1: Mini(M) to USB A(M) Cable, 1.5M Option 2: Type-C(M) to USB A(M) Cable, 1.5M
<b>Trigger</b>	Scan Button
<b>Indicator</b>	LED, Buzzer
<b>Electrical</b>	
<b>Operation Voltage</b>	3.7 VDC $\pm$ 5%
<b>Working Current</b>	< 210mA
<b>Standby Current</b>	< 25mA
<b>Battery</b>	3.7V, 350mAh, Li-Polymer Battery
<b>Number of Scan (per full charge)</b>	> 6,000 scans (1 scan/ 5 secs, Bluetooth connected)
<b>Connectivity</b>	
<b>Radio</b>	Bluetooth 5.0 dual mode (Class 2)
<b>Range</b>	66 ft/ 20m (line of sight)
<b>Interface/ Profile</b>	BT HID BT SPP USB HID USB VCP Memory
<b>User Environment</b>	
<b>Operating Temperature</b>	-10 ~ 50°C
<b>Storage Temperature</b>	-20 ~ 60°C
<b>Humidity</b>	0% ~ 95%RH (Non-condensing)
<b>Drop Durability</b>	1.5M
<b>Ambient Light</b>	70,000 Lux (Sunlight)
<b>1D Symbolologies</b>	UPC-A/ UPC-E0/ UPC-E1, EAN-8/ EAN-13, Code128, Code39, Code93, Codabar, Interleaved 2 of 5, Industrial 2 of 5, Matrix 2 of 5, Standard 2 of 5 (IATA), China Post 25, Code11, MSI Plessey, Plessey, GS1 Databar, GS1 Databar Limited, GS1 Databar Expanded



<b>2D Symbologies</b>	QR Code, Micro QR Code, PDF417, MicroPDF417, Data Matrix, Aztec, MaxiCode, Han Xin, Code 16K
<b>Regulatory</b>	
<b>ESD</b>	Functional after 4KV contact, 8KV air discharge
<b>EMC/RF</b>	TBA
<b>Safety Approval</b>	EN/IEC62471 (Exempt Group)
<b>Environmental</b>	WEEE, RoHS 2.0

## Beeper Indication

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

## LED Indication

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

## 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**

## Abort

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



\*.P023\$\*

**Abort**

## 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**

## 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:

- Enter "A" – Press A key
- 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
- 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 16 recommended 16 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.



## Capslock 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.

## 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, with 1ms increment. 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, with 10ms increment. 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

### BCC (Binary Check Character)



\*.E029\$\*

On



\*.E030\$\*

Off\*

Note:

Once enabled, a checksum will be added to the end of each data to conduct Xor calculation. For Bluetooth SPP & USB VCP, the BCC is 1 byte. For Bluetooth HID & USB HID the BCC are 2 bytes.

### Example:

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

Chapter 1 BT SPP & USB VCP:

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

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

2. BT HID & USB HID:

Data Format = <T> + <E> + <S> + <T> + <Enter> + <BCC>

BCC = 54h ^ 45h ^ 53h ^ 54h ^ E7h = F1h

However, since control character cannot be displayed in Bluetooth HID & USB HID, BCC will be converted into 2 bytes of characters.

As a result, the data will be: TEST + <Enter> + F + 1

## GS Character Replacement



\*.M005\$\*

**Enable GS Character Replacement**



\*.M006\$\*

**Disable GS Character Replacement\***



\*.M007\$\*

**Define Replacement Character**

Note:

1. When enabled, the <GS> character in all barcodes will be replaced by the one defined by the user.
2. To define replacement character, please refer to below:

**Example:** Set Replacement Character as “X”

Step1: Scan “**Define Replacement Character**”

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

Step3: Scan “**Define Replacement Character**”

## Surround GS1 Application Identifiers (AI's) with Parentheses



\*.J015\$\*

**Surround AI's with Parenthese**



\*.J016\$\*

**Not Surround AI's with Parenthese\***

Note:

When enabled, each application identifier (AI) in GS1 DataBar, Code 128, GS1 Composite, QR Code, Data Matrix or Aztec will be enclosed in parentheses in output data.

## Imaging Settings

### Inverse Barcode



\*.D021\$\*

**Disable Inverse Barcode\***



\*.D022\$\*

**Enable Inverse Barcode**

# Interface

## BT HID

### Getting Connected

1. Press the scan button to power up the scanner.
2. Scan "**Disconnect**", the scanner will emit two beeps. Alternatively you may press and hold function for 5 seconds until 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. If Bluetooth application prompts you to enter a pincode, please follow the steps in **Pincode Setup** section.
6. The scanner will emit two beeps as indication that the Bluetooth connection has established successfully.
7. 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 Scan Button twice.
  - (2) For Android device, go to "Settings" > "Language & Input", tap on "Default keyboard" and turn off "Physical keyboard" or turn on "On-screen keyboard".

## Pincode Setup

If Bluetooth application prompts you to enter a pincode, please follow the steps:

1. Scan **"Pincode Start"**



**Pincode Start**

2. Scan numeric barcodes below according to the pincode generated by the Bluetooth application.



**0**



**1**



**2**



**3**



**4**



**5**



**6**



**7**



**8**



**9**

3. Scan **"Enter"**



**Enter**



4. Scan **"Pincode Stop"**



**Pincode Stop**

## BT SPP

### Getting Connected

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



**Disconnect**

3. Scan **"BT SPP Master"**(Recommended) or **"BT SPP Slave"**, the scanner will emit two beeps. If host can't auto-reconnect, use BT SPP Master. If host can auto-reconnect, use BT SPP Slave to avoid conflict.



**BT SPP Master**  
**(Auto-reconnect)**



**BT SPP Slave**  
**(No Auto-reconnect)**

4. Select "Wireless Scanner" from discovered device list.
5. If Bluetooth application prompts you to enter a pincode, enter "1234" from the host.
6. Enter serial communication software on your host and open the port occupied by the scanner.
7. 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.



### 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**

## iOS Touch Keyboard

To toggle iOS touch keyboard, please scan below configuration barcode.



**Toggle iOS Touch Keyboard**

Alternatively, by enabling iOS Hotkey (enabled by default), you may simply double-click the scan button to toggle iOS touch keyboard.



**Enable iOS Hotkey\***



**Disable iOS Hotkey**

## 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"**

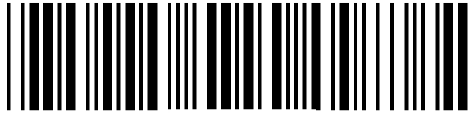
To reset Bluetooth Device ID to "Wireless Scanner", scan below barcode:



\*.B022\$\*

### **Reset Bluetooth Device ID**

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



\*.E059\$\*

### **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.



**Check Host MAC Address**

## Check Battery Life

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



**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 Master/Slave**", "**USB HID**", "**USB VCP**") other than memory mode.

## Delete Last Record

To delete last memory data, please scan below configuration barcode.



\*.R005\$\*

### Delete Last Data

## 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
5	Quantity

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

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)



\*.R008\$\*

### 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)



\*.R009\$\*

### 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 2022-07-27, set time as 08:10:30 am (HH:MM:SS)

Step1: Scan **"Set Date"**

Step2: Scan **"2"** **"2"** **"0"** **"7"** **"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"**

## Quantity



\*.R017\$\*

**Enable Quantity Input**



\*.R018\$\*

**Disable Quantity Input\***

2022 When Quantity Input is enabled, the operation procedure under Memory Mode will be:

Step1: Scan **"Memory Mode"**

Step2: Include Quantity in Data Format. For example, you may set <Barcode Data>, <Quantity> as Data Format.

Step3: Scan a desired barcode; it will be stored as <Barcode Data>.

Step4: Scan **"Set Quantity"** below.



**Set Quantity**

Step5: Scan numeric barcodes (range: 1 ~ 99999) in Appendix – Numbers; it will be stored as <Quantity>

Step6: Scan **Set Quantity** again.

Step7: Scan **Save Data**.



**Save Data**

Step8: Repeat Step 3 ~ 7 until your task is completed.

Step9: Retrieve stored data (BARCODE.txt), as instructed in Memory Mode section.

**B. When Quantity Input is disabled, the operation procedure under Memory Mode will be:**

Step1: Scan **“Memory Mode”**

Step2: Set Data Format as appropriate.

Step3: Scan a desired barcode; it will be stored as <Barcode Data>.

Step4: Repeat Step3 until your task is completed.

Step9: Retrieve stored data (BARCODE.txt), as instructed in Memory Mode section.

## USB HID

To output barcode data directly to host device via USB HID keyboard interface, please scan below configuration barcode.



## USB VCP

To output barcode data directly to host device via USB virtual COM interface, please scan below configuration barcode. Normally virtual COM port can be recognized by the host. If it is not recognizable by the host, please download VCP driver from our website.



## 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\***

### Toggle Mode

In Toggle Mode the LED will stay on once trigger is pressed once, and will turn off automatically when a barcode is read or LED Auto-Off timeout expires.



**Toggle Mode**

### Continuous Mode

In Continuous Mode the LED will stay on, reading barcodes continuously, and will turn off when:  
a barcode is read (2) LED Auto-Off timeout expires (3) trigger is pressed (Trigger Control enabled)



**Continuous Mode**

## Auto-sensing Mode

In Auto-sensing Mode the LED will turn on when image change is detected within scanner's field of view, and will turn off when: (1) a barcode is read (2) LED Auto-Off timeout expires (3) trigger is pressed (Trigger Control enabled)



**Auto-sensing Mode**

## Advanced Reading Mode Settings

### LED Auto-Off Timeout

LED Auto-Off Timeout (applicable for all reading modes) is the maximum scanning duration. When LED Auto-Off Timeout expires, the scanning operation stops automatically. The configurable range is from 0.1 to 25.5 sec.



\*.F043\$\*

#### LED Auto-off Timeout

(Default = 5 sec)

**Example:** Set LED Auto-Off Timeout to 10 sec

Step1: Scan LED Auto-Off Timeout

Step2: Scan “2” “4” in Appendix – Numbers

(01 = 0.1 sec, 02 = 0.2 sec, 03 = 0.3 sec, 04 = 0.4 sec, 05 = 0.5 sec, 06 = 1.0 sec, 07 = 1.5 sec, 08 = 2.0 sec, 09 = 2.5 sec, 10 = 3.0 sec, 11 = 3.5 sec, ...55 = 25.5 sec  
 Default = 14 (5 sec))

Step3: Scan LED Auto-Off Timeout

### Scan Interval

Scan Interval (applicable for Continuous Mode) is the period of time between two consecutive scans. The configurable range is from 0.1 to 25.5 sec.



\*.F041\$\*

#### Scan Interval

(Default = 1 sec)

**Example:** Set Scan Interval to 10 sec

Step1: Scan Scan Interval

Step2: Scan “2” “4” in Appendix – Numbers

(01 = 0.1 sec, 02 = 0.2 sec, 03 = 0.3 sec, 04 = 0.4 sec, 05 = 0.5 sec, 06 = 1.0 sec,  
 07 = 1.5 sec, 08 = 2.0 sec, 09 = 2.5 sec, 10 = 3.0 sec, 11 = 3.5 sec, ...55 = 25.5 sec  
 Default = 06 (1 sec))

Step3: Scan Scan Interval

## Identical Read Interval

Identical Read Interval (applicable for Continuous Mode, Auto-sensing Mode) defines the period of time between two consecutive scans on a barcode or two identical ones. This prevents repetitive input of an identical data. The configurable range is from 0.1 to 25.5 sec.



\*.F031\$\*

**Identical Read Interval**

(Default = 1 sec)

**Example:** Set Identical Read Interval to 10 sec

Step1: Scan Identical Read Interval

Step2: Scan “2” “4” in Appendix – Numbers

(01 = 0.1 sec, 02 = 0.2 sec, 03 = 0.3 sec, 04 = 0.4 sec, 05 = 0.5 sec, 06 = 1.0 sec,  
 07 = 1.5 sec, 08 = 2.0 sec, 09 = 2.5 sec, 10 = 3.0 sec, 11 = 3.5 sec, ...55 = 25.5 sec  
 Default = 06 (1 sec))

Step3: Scan Identical Read Interval

## Trigger Control

Trigger Control (applicable for Continuous Mode, Auto-sensing Mode) allows LED to be turned on/off by pressing trigger.



\*.F037\$\*

**Enable Trigger Control\***



\*.F036\$\*

**Disable Trigger Control**



## 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 up to 2 alphanumerics for each symbology.



**Set ID – Code39**



**Set ID – Full ASCII Code39**



**Set ID – Code32**



**Set ID – Codabar**



\*.P006\$\*

Set ID – Interleaved 2 of 5



\*.P021\$\*

Set ID – Standard 2 of 5



\*.P017\$\*

Set ID – Matrix 2 of 5



\*.P018\$\*

Set ID – Industrial 2 of 5



\*.P009\$\*

Set ID – Code11



\*.P012\$\*

Set ID – China Postal Code



\*.P014\$\*

Set ID – MSI Plessey



\*.P015\$\*

Set ID – UK Plessey



\*.P001\$\*

Set ID – EAN-13



\*.P004\$\*

Set ID – UPC-A



\*.P002\$\*

Set ID – EAN-8



\*.P003\$\*

Set ID – UPC-E



\*.P013\$\*

Set ID – Code93



\*.P010\$\*

Set ID – Code128 / GS1-128



\*.P024\$\*

**Set ID – GS1 DataBar (Limited / Expanded)**



\*.P026\$\*

**Set ID – QR Code**



\*.P050\$\*

**Set ID – Micro QR Code**



\*.P025\$\*

**Set ID – PDF417**



\*.P029\$\*

**Set ID – MicroPDF417**



\*.P027\$\*

**Set ID – Data Matrix**



\*.P033\$\*

**Set ID – Aztec**



\*.P030\$\*

**Set ID – MaxiCode**



\*.P034\$\*

**Set ID – Han Xin**



\*.P067\$\*

**Set ID – Code 16K**

**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 Preamble as XYZ123**

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 Postamble as XYZ123**

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



\*.D010\$\*

None



\*.D011\$\*

<LF>



\*.D012\$\*

<CR>\*



\*.D013\$\*

<CR><LF>\*



\*.D014\$\*

<TAB>



\*.D015\$\*

<Space>



\*.D016\$\*

<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 Symbolologies

### 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 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**

### Check Digit



\*.H011\$\*

**Send Check Digit\***



\*.H012\$\*

**Not Send Check Digit**

### 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\***

### **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.

## 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\***

### Leading/Tailing



\*.K012\$\*

**Not Send Leading & Tailing**



\*.K013\$\*

**Send Leading Only**



\*.K014\$\*

**Send Tailing Only**



\*.K015\$\*

**Send Leading & Tailing\***

## Codabar (NW-7)

### Enable/Disable Codabar



\*.1001\$\*

Enable Codabar\*



\*.1002\$\*

Disable Codabar

### Verification



\*.1005\$\*

Disable CDV\*



\*.1006\$\*

CDV & Send CD



\*.1007\$\*

CDV & Not Send CD

### Start/Stop



\*.1003\$\*

Send Start/Stop



\*.1004\$\*

Not Send Start/Stop\*

## Codabar Min/Max Length



\*.1008\$\*

**Set Min Length**

(Default = 01)



\*.1009\$\*

**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 = 04)



**Set Max Length**  
(Default = 32)

**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.

## Standard 2 of 5 (IATA)

### Enable/Disable Standard 2 of 5



\*.N017\$\*

**Enable Standard 2 of 5**



\*.N018\$\*

**Disable Standard 2 of 5\***

### Verification



\*.N019\$\*

**Disable CDV\***



\*.N020\$\*

**CDV & Send CD**



\*.N021\$\*

**CDV & Not Send CD**

## Standard 2 of 5 Min/Max Length



**Set Min Length**  
(Default = 04)



**Set Max Length**  
(Default = 32)

**Example: Set Min Length as 8, Max Length as 12 for Standard 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.

## Matrix 2 of 5

### Enable/Disable Matrix 2 of 5



\*.M010\$\*

Enable Matrix 2 of 5



\*.M011\$\*

Disable Matrix 2 of 5\*

### Verification



\*.M012\$\*

Disable CDV\*



\*.M013\$\*

CDV & Send CD



\*.M014\$\*

CDV & Not Send CD

## Matrix 2 of 5 Min/Max Length



\*.M015\$\*

**Set Min Length**

(Default = 04)



\*.M016\$\*

**Set Max Length**

(Default = 32)

**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\***

### Verification



\*.N003\$\*

**Disable CDV\***



\*.N004\$\*

**CDV & Send CD**



\*.N005\$\*

**CDV & Not Send CD**

## Industrial 2 of 5 Min/Max Length



\*.N006\$\*

**Set Min Length**

(Default = 04)



\*.N007\$\*

**Set Max Length**

(Default = 32)

**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 ~ 99.

## Code 11

### Enable/Disable Code 11



\*.I010\$\*

**Enable Code 11**



\*.I011\$\*

**Disable Code 11\***



## Verification



\*.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 = 32)

### 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.

## China Postal Code

### Enable/Disable China Postal Code



\*.K001\$\*

**Enable China Postal Code**



\*.K002\$\*

**Disable China Postal Code\***

### Verification



\*.K003\$\*

**Disable CDV\***



\*.K004\$\*

**CDV & Send CD**



\*.K005\$\*

**CDV & Not Send CD**

## China Postal Code Min/Max Length



\*.K006\$\*

**Set Min Length**

(Default = 04)



\*.K007\$\*

**Set Max Length**

(Default = 32)

**Example: Set Min Length as 8, Max Length as 12 for China Postal Code**

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.

## 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

## MSI Plessey Min/Max Length



\*.L005\$\*

**Set Min Length**

(Default = 04)



\*.L006\$\*

**Set Max Length**

(Default = 32)

**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



\*.L010\$\*

**Enable UK Plessey**



\*.L011\$\*

**Disable UK Plessey\***

### Check Digit



\*.L012\$\*

**Send Check Digit**



\*.L013\$\*

**Not Send Check Digit\***

## 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 128/GS1-128

### Enable/Disable Code 128/GS1-128



\*.J010\$\*

**Enable Code 128/GS1-128\***



\*.J011\$\*

**Disable Code 128/GS1-128**

### Code 128/GS1-128 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/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 ~ 99.



## 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\*

## GS1 DataBar Expanded Min/Max Length



\*.N030\$\*

**Set Min Length**

(Default = 04)



\*.N031\$\*

**Set Max Length**

(Default = 32)

**Example: Set Min Length as 8, Max Length as 12 for GS1 DataBar Expanded**

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.

## GS1 Composite

### Enable/Disable GS1 Composite



\*.K051\$\*

**Enable GS1 Composite**



\*.K050\$\*

**Disable GS1 Composite\***

## QR Code

### Enable/Disable QR Code



**Enable QR Code\***



**Disable QR Code**

## Micro QR Code

### Enable/Disable Micro QR Code



**Enable Micro QR Code\***



**Disable Micro QR Code**

## Data Matrix

### Enable/Disable Data Matrix



**Enable Data Matrix\***



**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



\*.G043\$\*

Enable MaxiCode



\*.G044\$\*

Disable MaxiCode\*

## Han Xin

### Enable/Disable Han Xin



\*.G059\$\*

Enable Han Xin



\*.G060\$\*

Disable Han Xin\*

## Code 16K

### Enable/Disable Code 16K



\*.N051\$\*

Enable Code 16K



\*.N050\$\*

Disable Code 16K\*

## Chapter 6 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



q



r



s



t



u



v



w



x



y



z

## Appendix – Control Codes



NUL



SOH



STX



ETX



EOT



ENQ



ACK



BEL



BS



HT



LF



VT



FF



CR



SO



SI



## 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

\$TP



Cursor Left

\$TO



Cursor Right

\$TQ



Cursor Up

\$TR



Cursor Down

\$TS



Page Up

\$TT



Page Down

\$TU



Tab

\$TV



Back Tab

\$TW



Esc

\$TX



Enter

\$TY



BS

\$TZ



Ins

\$T%K



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
<b>General Settings</b>		
Barcode Configurability	ON	
Beep Tone	High (4.0KHz)	
Beep Mode	Normal	
<b>Data Format</b>		
UTF-8/Shift-JIS to Unicode Conversion	OFF	
HT/CR/ESC Converts to TAB/ENTER/ESCAPE	OFF	
Function Code Conversion	ON	
Control Code Output Method	Ctrl Mode	
Numeric Key	Alphanumeric Key	
Capslock Mode	OFF	
Keyboard Layout	English (US)	
Intercharacter Delay	4ms	
Interblock Delay	0ms	
BCC (Binary Check Character)	OFF	
GS Character Replacement	OFF	
Define Replacement Character	N/A	
Surround AI's with Parentheses	OFF	
<b>Imaging Settings</b>		
Inverse Barcode	OFF	
<b>Interface</b>		
<b>BT HID</b>		
Getting Connected	N/A	
<b>BT SPP</b>		
Getting Connected	N/A	
Set SPP Pincode	1234	
<b>General Bluetooth Settings</b>		
Power Off Timeout	03:00	
iOS Hotkey	ON	
Set Bluetooth Device ID	Wireless Scanner	
<b>Memory Mode</b>		
Data Format	<Date>,<Time>,<Barcode Data>	
Field Separator	,	
Date Format	DD/MM/YYYY	

Time Format	HH:MM:SS
Date & Time Setup	N/A
Quantity	Disable
<b>USB HID</b>	N/A
<b>USB VCP</b>	N/A
<b>Reading Mode</b>	
Trigger Mode	Trigger Mode
Toggle Mode	N/A
Continuous Mode	N/A
Auto-sensing Mode	N/A
LED Auto-Off Timeout	5 sec
Scan Interval	1 sec
Identical Read Interval	1 sec
Trigger Control	ON
<b>Data Format</b>	
Code ID	Disable Code ID
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)
<b>Symbologies</b>	
General Settings	N/A
<b>UPC-A</b>	
Enable/Disable	ON
Check Digit	Send
UPC-A Expand to EAN-13	OFF
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
<b>UPC-E</b>	
Enable/Disable	ON
Check Digit	Send
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
<b>EAN-8</b>	
Enable/Disable	ON
Check Digit	Send

5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
<b>EAN-13</b>	
Enable/Disable	ON
Check Digit	Send
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
<b>Code 39</b>	
Enable/Disable	ON
Verification	Disable CDV
Start/Stop	Not Send
Full ASCII Code39	ON
Min Length	01
Max Length	99
<b>Code 32</b>	
Enable/Disable	OFF
Leading/Tailing	Send Leading & Tailing
<b>Codabar</b>	
Enable/Disable	ON
Verification	Disable CDV
Start/Stop	Not Send
Min Length	01
Max Length	99
<b>Interleaved 2 of 5</b>	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32
<b>Standard 2 of 5 (IATA)</b>	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32
<b>Matrix 2 of 5</b>	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32

<b>Industrial 2 of 5</b>	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32
<b>Code 11</b>	
Enable/Disable	OFF
Verification	Single Digit
Check Digit	Not Send
Min Length	04
Max Length	32
<b>China Postal Code</b>	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32
<b>MSI Plessey</b>	
Enable/Disable	OFF
Verification	Send Check Digit Single Check Digit MOD10
Min Length	04
Max Length	32
<b>UK Plessey</b>	
Enable/Disable	OFF
Check Digit	Not Send
<b>Code 93</b>	
Enable/Disable	ON
Min Length	01
Max Length	99
<b>Code 128/GS1-128</b>	
Enable/Disable	ON
Min Length	01
Max Length	99
<b>GS1 Composite</b>	
Enable/Disable	OFF
<b>GS1 DataBar (RSS-14)</b>	
Enable/Disable	OFF
<b>GS1 DataBar Limited (RSS-Limited)</b>	
Enable/Disable	OFF
<b>GS1 DataBar Expanded</b>	

<b>(RSS-Expanded)</b>	
Enable/Disable	OFF
Min Length	04
Max Length	32
<b>GS1 Composite</b>	
Enable/Disable	OFF
<b>QR Code</b>	
Enable/Disable	ON
<b>Micro QR Code</b>	
Enable/Disable	ON
<b>Data Matrix</b>	
Enable/Disable	ON
<b>PDF 417</b>	
Enable/Disable	ON
<b>Micro PDF 417</b>	
Enable/Disable	ON
<b>Aztec</b>	
Enable/Disable	OFF
<b>MaxiCode</b>	
Enable/Disable	OFF
<b>Han Xin</b>	
Enable/Disable	OFF
<b>Code 16K</b>	
Enable/Disable	OFF



## Appendix – Factory ID and AIM ID Table

#	Symbology	Factory ID	AIM ID	AIM ID Modifier (m)
0	UPC-A	A	JEm	0,3
1	UPC-E	E	JEm	0,3
2	EAN-8	S	JEm	3,4
3	EAN-13	F	JEm	0,3
4	Code 128/GS1-128	K	JCm	0,1
5	Code 39	M	JAm	0,1,3,4,5,7
6	Full ASCII Code39	D	JAm	0,1,3,4,5,7
7	Code32	B	JX0	
8	Code 93	L	JG0	
9	Code 11	J	JHm	0,1,3
10	Codabar	N	JFm	0,2,4
11	Interleaved 2 of 5	I	JIm	0,1,3
12	Matrix 2 of 5	Y	JX0	
13	Industrial 2 of 5	V	JS0	
14	Standard 2 of 5 (IATA)	R	JR0	
15	China Postal Code	H	JX0	
16	MSI Plessey	O	JMm	0,1
17	UK Plessey	P	JP0	
18	GS1 DataBar	G	Je0	
19	PDF417	Z	JL0	
20	MicroPDF417	Z	JL0	
21	Data Matrix	X	Jdm	0,1,2,3,4,5
22	QR Code	W	JQm	0,1,2,3

<b>23</b>	Micro QR Code	w	]Q1	
<b>24</b>	Aztec	z	]zm	0,1
<b>25</b>	MaxiCode	Z	]Um	0,1
<b>26</b>	Han Xin	X	]X0	
<b>27</b>	Code 16K	16	]K0	

## 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	2022.06.09	Initial Release	Shaw
1.1	2022.07.14	Added Control Code Output Method, GS Character Replacement, Surround GS1 AI's with Parentheses, Code 16K	Shaw
1.2	2022.09.07	Updated Product Picture	Shaw
1.3	2022.09.08	Removed SSP, Scan Rate, Sealing Added Quantity	Shaw
1.4	2022.09.23	Updated Control Code Output Method Updated Micro QR Code Set ID Removed GS1 DataBar Limited Set ID, GS1 DataBar Expanded Set ID	Shaw
1.5	2023.06.19	FW: HM3-t-1.01.BTA Added Shift-JIS to Unicode Conversion	Shaw
1.6	2023.11.17	FW: HM3-t-1.02.BTA / HM3-t-1.01.BTB Renamed "UTF-8/Shift-JIS to Unicode Conversion" to "Country Code Page" Added West European Latin Added AIM ID and AIM ID Table Added GS1 Composite Added GS1 AI Parentheses on GS1 Composite, Code 128, QR Code, Data Matrix and Aztec	Shaw
1.7	2023.11.24	Updated Control Code Table	Shaw