MT110
Mini Wireless Scanner
User's Manual

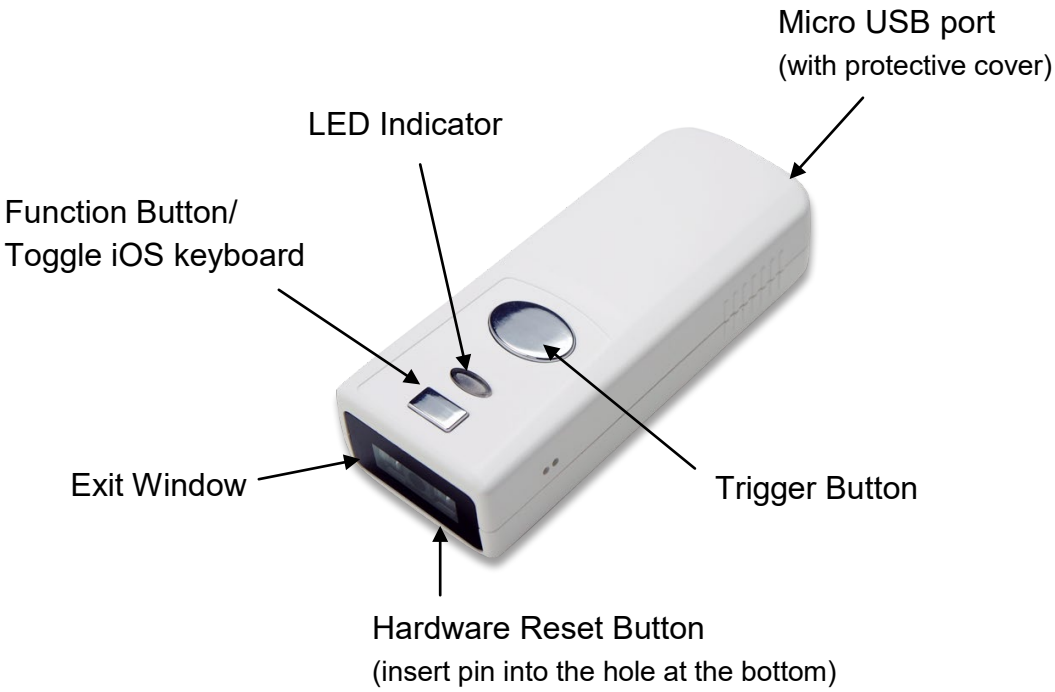
Version 1.0

DATE: 2023/07/19

Table of Content

Chapter 1 Introduction

With built-in Bluetooth® technology, MT110/M mini barcode scanner can send data to the host up to 20 meters away. This pocket-sized lightweight wireless 1D barcode scanner with patented green LED illumination is a versatile mini companion for healthcare and hygiene-sensitive applications which work on laptops, tablets, smart phones or other mobile devices with iOS®, Android® and Windows®.



Specifications

Optic & Performance	
Light Source	525nm visible green LED
Sensor	Linear Image Sensor
Scan Rate	650 Scans/Sec
Resolution	4mil/ 0.1mm
Scan Angle	41°
Pitch Angle	±30°
Skew Angle	±40°
Roll Angle	±20°
Print Contrast Ratio	30%
Width of Field	140mm (13Mil Code39)
Memory	2MB (20,000 barcodes)
Typical D.O.F	4 Mil Code 39 : 32 ~ 85mm

(Environment: 800 lux)	5 Mil Code 39 : 27 ~ 107mm
	10 Mil Code 39 : 28 ~ 207mm
	15 Mil Code 39 : 44 ~ 295mm
	13 Mil UPC/EAN : 39 ~ 248mm
Physical Characteristics	
Dimension	W27.5 x L68.4 x H16.2 mm
Weight	27g
Color	Black / White
Material	PC
Cable	Micro(M) to USB A(M) Cable, 1.5M
Trigger	Scan Button Function Button
Indicator	LED, Buzzer, Vibrator
Electrical	
Operation Voltage	3.7 VDC ± 5%
Working Current	< 170mA
Standby Current	< 60mA
Battery	3.7V, 400mAh, Li-Polymer Battery
Number of Scan (per full charge)	5400 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	-20 ~ 55˚C
Storage Temperature	-20 ~ 60˚C
Humidity	0% ~ 95%RH (Non-condensing)
Drop Durability	1.5M
Ambient Light	100,000 Lux (Sunlight)
1D Symbologies	UPC-A/UPC-E, EAN-8/EAN-13, Industrial 2 of 5, Codabar, Matrix 2 of 5, Code 11, Code 93, Code 32, Code 128, Standard Code 39, Full ASCII Code 39, Interleaved 2 of 5, China Postal Code, MSI Plessy Code, UK Plessy Code, EAN/UCC 128, Telepen Code, IATA

	Code, GS1 Databar
Regulatory	
ESD	Functional after 4KV contact, 8KV air discharge
EMC/RF	FCC Part 15B Class B, Part 15C, CE EN55022/24/32, EN301489-1-17, EN300328 V1.9.1, TELEC
Safety Approval	EN/IEC62471 (Exempt Group), EN/IEC60950-1
Environmental	WEEE, RoHS 2.0, PAHs
Medical Compliance (MT110M only)	ISO 22196 (JIS Z 2801), ISO 11737-1/2

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 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

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

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.

Numeric Key

.D017$

Numeric Key

.D018$

Alphanumeric Key*

Note:

1. By default, the alphanumeric key is used for trasmitting 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$

.C026$

Swiss French

.C022$

Czech (QWERTZ)

.C029$

Norwegian

.C031$

Portuguese

.C033$

Brazilian (QWERTY)

.C009$

Japanese

Swedish

.C017$

Czech (QWERTY)

.C030$

Belgian

.C032$

Slovak

.C034$

Canadian (Traditional)

.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 = 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

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>
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, BCC will be converted into 2 bytes of characters.
As a result, the data will be: TEST + <Enter> + F + 1

Imaging Settings

Inverse Barcode

.D021$

Disable Inverse Barcode*

.D022$

Enable Inverse Barcode

Chapter 3 Interface

BT HID

Getting Connected

1. Press the function button on the top to power up the scanner.
2. Scan "**Disconnect**", the scanner will emit two beeps. Alternatively, press and hold the function button for 5 seconds until the scanner emits 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 function button on the top 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".

Pincode Setup

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

1. Scan "**Pincode Start**"

.E032$

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**"

$TX

Enter

4. Scan "**Pincode Stop**"

.E033$

Pincode Stop

BT SPP

Getting Connected

1. Press the function button on the top to power up the scanner.
2. Scan "**Disconnect**", the scanner will emit two beeps. Alternatively, press and hold the function button for 5 seconds until the scanner emits two beeps

.E031$

Disconnect

3. Scan "**BT SPP Master**"(recommeded) 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.

.E042$

BT SPP Master
(Auto-reconnect)

.E052$

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.

.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 minnutes 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, pelase scan below configuration barcode.

.E255$

Shut Down

iOS Touch Keyboard

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

.E044$

Toggle iOS Touch Keyboard

Alternatively, you may simply press the function button.

Secure Simple Pairing (SSP)

Secure Simple Pairing (SSP), enabled by default, allows the scanner to establish connection with host device without entering pincode. When SSP is disabled, a pincode will be requested by the host device, which by default is "1234" for BT SPP profile and a random number generated by the host device for BT HID profile.

.E049$

Enable SSP*

.E050$

Disable SSP

Batch Mode

In Batch Mode, data will be temporarily stored in memory buffer (2KB RAM) when the scanner is out of range or in poor connection quality. Once the scanner gets back in range, the stored data will be sent back to the host immediately, which will also be erased from memory buffer at the same time. Please note that Batch Mode only works with BT HID / BT SPP.

.E054$

Enable Batch Mode

.E053$

Disable Batch Mode*

Set Bluetooth Device ID

Bluetooth device name is configurable up to 16 alphanumeric characters:

.B023$

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.

.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.

For BT SPP profile, please encode:
SPP<MAC Address> in Code39 without checksum.

Example: Target Slave Device MAC Address = 00:15:83:52:2C:3B, Profile = BT HID
Encode **HID001583522C3B** in Code39 without checksum.

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 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>**.

.R011$

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.

.R010$

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 2022-09-27, set time as 08:10:30 am (HH:MM:SS)

Step1: Scan "**Set Date**"

Step2: Scan "**2**" "**2**" "**0**" "**9**" "**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

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 download VCP driver from our website.

.C006$

USB VCP

Chapter 4 Reading Mode

Trigger Mode

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

.F002$

Trigger Mode*

Toggle Mode

In Toggle Mode the LED will stay on when the trigger is pressed once, and will not turn off until a barcode is read or LED Auto-Off timeout expires if LED Auto-Off Control is enabled.

.F003$

Toggle Mode

Flash Mode

In Flash Mode the LED will stay on after a barcode is detected, and will start flashing if no barcode is detected after LED Auto-Off timeout expires. The trigger is unfunctional unless Trigger Control is enabled.

.F001$

Flash Mode

Continuous Mode

In Continuous Mode the LED is always on, with barcodes being read continuously. The trigger is unfunctional unless Trigger Control is enabled.

.F005$

Continuous Mode

Continuous Auto Off Mode

In Continuous Auto Off Mode the LED will stay on when the trigger is pressed once, and will automatically turn off if no barcode is detected after LED Auto-Off timeout expires.

.F006$

Continuous Auto Off Mode

Flash / Continuous Mode – Trigger Control

When enabled, the LED can be turned on/off by pressing trigger.

.F037$

Trigger Control On

.F036$

Trigger Control Off*

Trigger / Toggle Mode – LED Auto-Off Control

When enabled, the LED will automatically turn off after LED Auto-Off Timeout expires.

.F039$

LED Auto-Off Control On

.F038$

LED Auto-Off Control Off*

Trigger / Toggle / Flash / Continuous Auto Off Mode – LED Auto-Off Timeout

LED Auto-Off Timeout is the maximum scanning duration. When LED Auto-Off Timeout expires, the scanning operation stops automatically.
The configurable range is 0.1 ~ 125 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, 009 = 2.5 sec, 010 = 3 sec, ... 254 = 125 sec, 255 = unlimited)

.F043$

LED Auto-Off Timoeut
(Default = 60 sec)

Example: Set LED Auto-Off Timeout as 5 sec
Step1: Scan "**LED Auto-Off Timeout**"
Step2: Scan "**0**" "**1**" "**4**" in Appendix - Numbers
Step3: Scan "**LED Auto-Off Timeout**"

Flash / Continuous / Continuous Auto Off 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 ~ 125 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, 009 = 2.5 sec, 010 = 3 sec, ... 254 = 125 sec, 255 = unlimited)

.F040$

Identical Read Interval
(Default = 1 sec)

Example: Set Identical Read Interval as 5 sec
Step1: Scan "**Identical Read Interval**"
Step2: Scan "**0**" "**1**" "**4**" 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 0 ~ 9. 1 digit must be programmed during the multi-step configuration.

.A010$

Accuracy Adjustment
(Default = 0)

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

When Factory ID or AIM ID is enabled, a Factory ID or AIM ID (see Appendix – Factory ID and AIM ID Table) will be added to the beginning of each barcode data. When Set ID is enabled, a user-defined ID (see Set ID) will be added to the beginning of each barcode data.

.A009$

Disable Code ID*

.A008$

Enable Factory ID

.A014$

Enable AIM ID

.A015$

Enable Set ID

Set ID

Set ID can be 0 ~ 2 alphanumerics 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-E

.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

.P019$

Set ID – GS1 Databar Limited

.P020$

Set ID – GS1 Databar Expanded

.P012$

Set ID – China Postal Code

.P015$

Set ID – UK Plessey

.P022$

Set ID – Telepen

.P016$

Set ID – GS1-128

.P011$

Set ID – Code32

.P021$

Set ID – IATA

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

.A011$

Clear Preamble/Postamble

Terminator

.D010$

None

.D011$

<LF>

.D012$

<CR>*

.D013$

<CR><LF>

.D014$

<TAB>

.D015$

<Space>

.D016$

<ESC>

Note:

1. Default Terminator for BT HID or USB HID interface = <CR> (or Enter)
2. Default Terminator for BT SPP or USB VCP interface = <CR><LF>
3. <CR><LF> or <LF> is treated as Enter for BT HID or USB HID interface.

Chapter 6 Symbologies

General Settings

.A002$

Enable All Symbologies

.A003$

Disable All 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*

.H045$

Enable Add A Space

.H046$

Disable Add A Space*

.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

UPC-E System Number

.H063$

UPC-E0 Off & UPC-E1 Off

.H064$

UPC-E0 On Only*

.H065$

UPC-E1 On Only

.H066$

UPC-E0 On & UPC-E1 On

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*

.H047$

Enable Add A Space

.H048$

Disable Add A Space*

.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

Lead Digit

.H022$

Not Send Lead Digit

.H021$

Send Lead Digit*

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*

.H043$

Enable Add A Space

.H044$

Disable Add A Space*

.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

Lead Digit

.H016$

Not Send Lead Digit

.H015$

Send Lead Digit*

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*

.H041$

Enable Add A Space

.H042$

Disable Add A Space*

.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

.H049$

On

.H050$

Off*

.H074$

Enable ISBN-10 Expand to ISBN-13

.H073$

Disable ISBN-10 Expand to ISBN-13*

ISSN

.H051$

On

.H052$

Off*

ISMN

.H069$

On

.H070$

Off*

Note:

ISBN / ISSN / ISMN will be considered as an extension of EAN-13. If ISBN / ISSN / ISMN needs to be read, EAN-13 must be enabled. If ISBN / ISSN / ISMN need to be read with addenda, EAN-13 must be enabled with Addenda Required and 2-digit or 5-digit supplement enabled as well.

Code 128

Enable/Disable Code 128

.J010$

Enable Code 128*

.J011$

Disable Code 128

Code 128 Min/Max Length

.J012$

Set Min Length
(Default = 05)

.J013$

Set Max Length
(Default = 48)

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.

GS1-128(UCC/EAN 128)

Enable/Disable GS1-128

.M001$

Enable GS1-128*

.M002$

Disable GS1-128

GS1-128 AIM ID

.M003$

Enable AIM ID

.M004$

Disable AIM ID*

FUNC 1 Character

.M005$

Send FUNC1 Character

.M006$

Not Send FUNC1 Character *

.M007$

Define FUNC1 Character

Note:

1. The first FUNC1 Character is transformed into]c1, and the next FUNC1 Character(s) is transformed into <GS> by default, which can be user-defiend.
2. Data format is as follows: **<]c1 > <Barcode Data> <GS> <Barcode Data>**

3. To define the second FUNC1 Character, please refer below:

Example: Set FUNC1 Character as "X"
Step1: Scan "**Define FUNC1 Character**"
Step2: Scan "**X**" in Appendix - Upper Case Alphabets
Step3: Scan "**Define FUNC1 Character**"

GS1-128 Min/Max Length

.M019$

Set Min Length
(Default = 05)

.M020$

Set Max Length
(Default = 48)

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

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 = 48)

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*

Code 93

Enable/Disable Code 93

.G010$

Enable Code 93

.G011$

Disable Code 93*

Code 93 Min/Max Length

.G012$

Set Min Length
(Default = 06)

.G013$

Set Max Length
(Default = 48)

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*

.I013$

CDV & Send CD

.I014$

CDV & Not Send CD

Check Digit

.I042$

1 Digit*

.I043$

2 Digits

Code 11 Min/Max Length

.I015$

Set Min Length
(Default = 06)

.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.

Codabar (NW-7)

Enable/Disable Codabar

.I001$

Enable Codabar*

.I002$

Disable Codabar

Start/Stop

.I003$

Send Start/Stop

.I004$

Not Send Start/Stop*

.I029$

ST/SP: ABCD/ABCD*

.I030$

ST/SP: abcd/abcd

.I031$

ST/SP: ABCD/TN*E

.I032$

ST/SP: abcd/tn*e

Example of ST(Start) / SP(Stop):

123456	Not Send Start/Stop
A123456B	ST/SP: ABCD/ABCD
a123456b	ST/SP: abcd/acbd
A123456N	ST/SP: ABCD/TN*E
a123456n	ST/SP: abcd/tn*e

Verification

.I005$

Disable CDV*

.I006$

CDV & Send CD

.I007$

CDV & Not Send CD

Codabar Min/Max Length

.I008$

Set Min Length
(Default = 06)

.I009$

Set Max Length
(Default = 48)

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.

CLSI Format

.I027$

CLSI Format On

.I028$

CLSI Format Off*

Note:
CLSI – Enable library space insertion. If you enable CLSI format, this option inserts spaces in position 2, 7, 13 of the data string for use in library systems.

ABC-Codabar

.I017$

On

.I018$

Off*

.I039$

Insert Data - On

.I036$

Insert Data - Off*

.I035$

Set Insert Data

Note:
1. ABC-Codabar (American Blood Commission). The ABC Code is an acronym for American Blood Commission. This barcode is a variant of Codabar developed for the use in the blood bank. This barcode consists of two barcodes which are decoded in one read cycle. This barcode is concatenated when the stop character of the first barcode and the start character of the secnd barcode are both "D". Those two D's are not transmitted.
2. Insert Data can be 1 alphanumeric.

Example: Set Insert Data as "X"
Step1: Scan "**Set Insert Data**"
Step2: Scan "**X**" in Appendix - Upper Case Alphabets
Step3: Scan "**Set Insert Data**"

CX-Codabar

.I022$

On

.I023$

Off*

.I040$

Insert Data - On

.I038$

Insert Data - Off*

.I037$

Set Insert Data

Note:

1. CX-Codabar consists of two barcodes which are decoded in one read cycle. The barcode is concatenated when the stop character of the first barcode is a C and the start character of the second barcode is a B. These two characters are not transmitted.
2. Please make sure Codabar Coupling is disabled before enabling CX-Codabar.

Example: Set Insert Data as "X"
Step1: Scan "**Set Insert Data**"
Step2: Scan "**X**" in Appendix - Upper Case Alphabets
Step3: Scan "**Set Insert Data**"

Codabar Coupling

.I019$

On

.I020$

Off*

.I041$

Insert Data - On

.I026$

Insert Data - Off*

.I021$

Set Insert Data

Note:
ABC-Codabar and CX-Codabar have certain rules regarding the Stop Character of first barcode and the Start Character of second barcode while in conjunction, with Codabar Coupling enabled, the data from any two Codabar barcodes can be coupled into one set of data without any limitations between the Stop Character of the first barcode and the Start Character of second barcode. The Start and Stop characters associated with each barcode will be sent.

Example: Set Insert Data as "X"
Step1: Scan "**Set Insert Data**"
Step2: Scan "**X**" in Appendix - Upper Case Alphabets
Step3: Scan "**Set Insert Data**"

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

First / Last Digit Suppressed

.J014$

No Suppressed*

.J008$

First Digit Suppressed

.J009$

Last Digit Suppressed

Interleaved 2 of 5 Min/Max Length

.J006$

Set Min Length
(Default = 06)

.J007$

Set Max Length
(Default = 48)

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*

Verification

.N019$

Disable CDV*

.N020$

CDV & Send CD

.N021$

CDV & Not Send CD

IATA Min/Max Length

.N022$

Set Min Length
(Default = 06)

.N023$

Set Max Length
(Default = 48)

Example: Set Min Length as 8, Max Length as 12 for IATA
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 = 06)

.M016$

Set Max Length
(Default = 48)

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 = 06)

.N007$

Set Max Length
(Default = 48)

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.

China Postal Code (Toshiba 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 = 11)

.K007$

Set Max Length
(Default = 48)

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$

CDV & Send CD*

.L003$

CDV & Not Send CD

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 = 06)

.L006$

Set Max Length
(Default = 48)

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*

Verification

.L012$

CDV & Send CD

.L013$

CDV & Not Send CD*

Telepen

Enable/Disable Telepen

.L014$

Enable Telepen

.L015$

Disable Telepen*

Output Format

.L020$

ASCII*

.L021$

Number

GS1 DataBar (RSS-14)

Enable/Disable GS1 DataBar

.N032$

Enable GS1 DataBar

.N033$

Disable GS1 DataBar*

Enable/Disable GS1 DataBar Stacked / Omnidirectional

.N038$

Enable GS1 DataBar Stacked*

.N039$

Disable GS1 DataBar Stacked

Prefix AI

.N036$

Send Prefix AI

.N037$

Not Send Prefix AI*

Check Digit

.N034$

Send CD

.N035$

Not Send CD*

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*

Check Digit

.N012$

Send CD

.N013$

Not Send CD*

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 DataBar Expanded Min/Max Length

.N030$

Set Min Length
(Default = 01)

.N031$

Set Max Length
(Default = 74)

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.

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

a

+B

b

+C

c

+D

d

+E

e

+F

f

+G

g

+H

h

+I

i

+J

j

+K

k

+L

l

+M

m

+N

n

+O

o

+P

p

+Q

q

+R

r

+S

s

+T

t

+U

u

+V

v

+W

w

+X

x

+Y

y

+Z

z

Appendix – Control Codes

%U

NUL

$A

SOH

$B

STX

$C

ETX

$D

EOT

$E

ENQ

$F

ACK

$G

BEL

$H

BS

$I

HT

$J

LF

$K

VT

$L

FF

$M

CR

$N

SO

$O

SI

$P

DLE

$Q

DC1

$R

DC2

$S

DC3

$T

DC4

$U

NAK

$V

SYN

$W

ETB

$X

CAN

$Y

EM

$Z

SUB

%A

ESC

%B

FS

%C

GS

%D

RS

%E

US

Appendix – Symbols

+

-

.

$

%

/

\

!

@

#

^

~

&

*

_

=

%Q

|

%P

{

%R

}

%K

[

%M

]

/ H

(

/ I

)

%G

<

%I

>

%W

`

/ B

“

/ G

‘

/ L

,

%F

;

/ Z

:

%J

?

SP

%T

DEL

Appendix – Function Keys

$TA

F1

$TB

F2

$TC

F3

$TD

F4

$TE

F5

$TF

F6

$TG

F7

$TH

F8

$TI

F9

$TJ

F10

$TK

F11

$TL

F12

$TM

Home

$TN

End

$T+D

Enter (Numeric Key)

$T+O

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%O

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)	
Beep Mode	Normal	
Vibrator	OFF	
Data Format		
HT/CR/ESC Converts to TAB/ENTER/ESCAPE	OFF	
Function Code Conversion	ON	
Numeric Key	OFF	
Capslock Mode	OFF	
Keyboard Layout	English (US)	
Intercharacter Delay	4ms	
Interblock Delay	0ms	
BCC (Binary Check Character)	OFF	
Image Settings		
Inverse Barcode	OFF	
Interface		
Set SPP Pincode	1234	
General Bluetooth Settings		
Power Off Timeout	03:00	
Secure Simple Pairing (SSP)	ON	
Batch Mode	OFF	
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	
Reading Mode		
Trigger Mode	Trigger Mode	
Toggle Mode	N/A	
Flash Mode	N/A	
Continuous Mode	N/A	
Continuous Auto Off Mode	N/A	

Flash / Continuous Mode – Trigger Control	OFF
Trigger / Toggle Mode – LED Auto-Off Control	OFF
Trigger / Toggle / Flash / Continuous Auto Off Mode – LED Auto-Off Timeout	60 sec
Flash / Continuous / Continuous Auto Off Mode – Identical Read Interval	1 sec
Accuracy Adjustment	0
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-A Expand to EAN-13	OFF
5-digit Supplement	OFF
2-digit Supplement	OFF
Add A Space	OFF
Addenda Required	ON
UPC-E	
Enable/Disable	ON
System Number	UPC-E0 Only
Lead Digit	Send
Check Digit	Send
UPC-E Expand to UPC-A	OFF
5-digit Supplement	OFF
2-digit Supplement	OFF
Add A Space	OFF
Addenda Required	ON
EAN-8	

Enable/Disable	ON
Lead Digit	Send
Check Digit	Send
EAN-8 Expand to EAN-13 (Zero Extension)	OFF
5-digit Supplement	OFF
2-digit Supplement	OFF
Add A Space	OFF
Addenda Required	ON
EAN-13	
Enable/Disable	ON
Lead Digit	Send
Check Digit	Send
5-digit Supplement	OFF
2-digit Supplement	OFF
Add A Space	OFF
Addenda Required	ON
ISBN	OFF
ISBN-10 Expand to ISBN-13	OFF
ISSN	OFF
ISMN	OFF
Code 128	
Enable/Disable	ON
Min Length	05
Max Length	48
GS1-128	
Enable/Disable	ON
AIM ID	OFF
FUNC1 Character	Not Send
Define FUNC1	<GS>
Min Length	05
Max Length	48
Code 39	
Enable/Disable	ON
Verification	Disable CDV
Start/Stop	Not Send
Full ASCII Code39	ON
Min Length	01
Max Length	48
Code 32	

Enable/Disable	OFF
Leading/Tailing	Send Leading & Tailing
Code 93	
Enable/Disable	OFF
Min Length	06
Max Length	48
Code 11	
Enable/Disable	OFF
Verification	Disable CDV
Check Digit	1 Digit
Min Length	06
Max Length	32
Codabar	
Enable/Disable	ON
Start/Stop	Not Send
ST/SP	ABCD/ABCD
Verification	Disable CDV
Min Length	06
Max Length	48
CLSI Format	OFF
ABC-Codabar	OFF
Insert Data On/Off	OFF
Insert Data	N/A
CX-Codabar	OFF
Insert Data On/Off	OFF
Insert Data	N/A
Codabar Coupling	OFF
Insert Data On/Off	OFF
Insert Data	N/A
Interleaved 2 of 5	
Enable/Disable	ON
Verification	Disable CDV
First/Last Digit Suppressed	No Suppressed
Min Length	06
Max Length	48
IATA (Standard 2 of 5)	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	06
Max Length	48

Matrix 2 of 5	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	06
Max Length	48
Industrial 2 of 5	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	06
Max Length	48
China Postal Code (Toshiba Code)	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	11
Max Length	48
MSI Plessey	
Enable/Disable	OFF
Verification	CDV & Send CD
Check Digit	Single Check Digit MOD10
Min Length	06
Max Length	48
UK Plessey	
Enable/Disable	OFF
Verification	CDV & Not Send CD
Telepen	
Enable/Disable	OFF
Output Format	ASCII
GS1 DataBar (RSS-14)	
Enable/Disable GS1 DataBar	OFF
Enable/Disable GS1 DataBar Stacked / Omnidirectional	ON
Prefix AI	Not Send
Check Digit	Not Send CD
GS1 DataBar Limited (RSS-Limited)	
Enable/Disable	OFF
Prefix AI	Not Send
Check Digit	Not Send CD
GS1 DataBar Expanded (RSS-Expanded)	
Enable/Disable GS1 DataBar	OFF

Expanded	
Enable/Disable GS1 DataBar Expanded Stacked	ON
Min Length	01
Max Length	74

Appendix - Factory ID and AIM ID Table

Symbology	Factory ID	AIM ID
MSI Plessey	O	]M0
MSI Plessey (MOD10 / Not Send CD)		]M1
EAN-8 (2-digit/5-digit Supplement Off) **EAN-8 (2-digit Supplement On)** **EAN-8 (5-digit Supplement On)**	S	]E4
UPC-E (2-digit/5-digit Supplement Off)	E	]E0
UPC-E (2-digit Supplement On) **UPC-E (5-digit Supplement On)**		]E3
UPC-A (2-digit/5-digit Supplement Off)	A	]E0
UPC-A (2-digit Supplement On) **UPC-A (5-digit Supplement On)**		]E3
EAN-13 (2-digit/5-digit Supplement Off)	F	]E0
EAN-13 (2-digit Supplement On) **EAN-13 (5-digit Supplement On)**		]E3
Code 93	L	]G0
Code 11 (Disable CDV)	J	]H0
Code 11 (Send 1-Digit CD)		
Code 11 (Send 2-Digit CD)		]H1
Code 11 (Not Send CD)		]H3
Telepen (ASCII)	U	]B0
Telepen (Number)		]B1
GS1-128 (UCC/EAN 128)	T	]C1

Code 128	K	]C0
Code 32	B	]X0
Codabar	N	]F0
Codabar (ABC Codabar)		]F1
Codabar (CDV & Send CD)		]F2
Codabar (CDV & Not Send CD)		]F4
UK Plessey	P	]P0
Matrix 2 of 5	Y	]X0
Full ASCII Code 39 (Disable CDV)	D	]A4
Full ASCII Code 39 (CDV & Send CD)		]A5
Full ASCII Code 39 (CDV & Not Send CD)		]A7
Code 39 (Disable CDV)	M	]A0
Code 39 (CDV & Send CD)		]A1
Code 39 (CDV & Not Send CD)		]A3
IATA (Standard 2 of 5)	R	]R0
Industrial 2 of 5	V	]S0
China Postal Code (Toshiba Code)	H	]X0
Interleaved 2 of 5 (Disable CDV)	I	]I0
Interleaved 2 of 5 (CDV & Send CD)		]I1
Interleaved 2 of 5 (CDV & Not Send CD)		]I3
GS1 DataBar	G	]E0

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	2023.07.19	Initial Release	Shaw