unitech

Wireless Pocket 2D Scanner

- MS912+ -

User's Manual

Version 1.0

Revision History

Date	Change Description	Version
20221122	First Published Version	V1.0

About This Manual

Thank you for purchasing the Unitech product.

This manual explains how to install, operate and maintain our product.

No part of this publication may be reproduced or used in any form, or by any electrical or mechanical means, such as photocopying, recording, or information storage and retrieval systems, without permission in writing from the manufacturer. The material in this manual is subject to change without notice.

Regulatory Compliance Statements

FCC Warning Statement

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

–Reorient or relocate the receiving antenna.

–Increase the separation between the equipment and receiver.

–Connect the equipment into an outlet on a circuit different from that to

which the receiver is connected.

–Consult the dealer or an experienced radio/TV technician for help.

1. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure requirements, avoid direct contact to the transmitting antenna during transmitting.
3. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

FCC Label Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

RF Radiation Exposure Statement

For body contact during operation, this device has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum of 1.0 cm from the body.
Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

European Conformity Statement

Unitech Electronics co., Ltd herewith declares that the Unitech product is in compliance with the essential requirements and all other provisions of the RED 2014/53/EU directive.
The declaration of conformity is available for download at :
https://portal.Unitech.eu/public/Safetyregulatorystatement

CE RF Exposure Compliance

For body-worn operation, this device has been tested and meets the ICNIRP guidelines and the European Standard EN 62209-2, for use with dedicated accessories, SAR is measured with this device at a separation of 0.5 cm to the body, while transmitting at the highest certified output power level in all frequency bands of this device. Use of other accessories which contain metals may not ensure compliance with ICNIRP exposure guidelines.

CE Mark Warning

RoHS Statement

This device conforms to RoHS (Restriction Of Hazardous Substances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

Waste electrical and electronic equipment (WEEE)

Unitech has set up a policy and process to meet the 2012/19/EU concerning electronic waste disposal.

For more detailed information of the electronic waste disposal of the products you have purchased from Unitech directly or via Unitech's resellers, you shall either contact your local supplier or visit us at :
https://portal.Unitech.eu/public/WEEE

Taiwan NCC Warning Statement

低功率電波輻射性電機管理辦法

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。應避免影響附近雷達系統之操作。高增益指向性天線只得應用於固定式點對點系統。

SAR標準值2.0W/KG，送測產品實測值為：0.395（W/KG）

注意事項：

1. 使用過度恐傷害視力。
2. 使用30分鐘請休息10分鐘；未滿2歲以下幼兒不看螢幕，2歲以上每天看螢幕不要超過1小時。
3. 減少電磁波影響，請妥適使用。

Note:

Within the 5.25-5.35 GHz band, U-NII devices will be restricted to indoor operations to reduce any potential for harmful interference to co-channel MSS operations.

Laser Information

The Unitech product is certified in the U.S. to conform to the requirements of DHHS/CDRH 21CFR Subchapter J and to the requirements of IEC 60825-1. Class II and Class 2 products are not considered to be hazardous. The Unitech product contains internally a Visible Laser Diode (VLD) whose emissions do not exceed the maximum limits as set forth in the above regulations. The scanner is designed so that there is no human access to harmful laser light during normal operation, user maintenance or prescribed service operations.

The laser safety warning label required by the DHHS/IEC for the Unitech product's optional laser scanner module is located on the memory compartment cover, on the back of the unit.

* Laser information only applies to the products with laser components.

CAUTION! Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light. Use of optical instruments with the scanner, including binoculars, microscopes, and magnifying glasses, with will increase eye damage. This does not include eyeglasses worn by the user.

LED Information

The Unitech product contains LED indicator(s) or LED ring whose luminance is not harmful to human eyes during normal operation, user maintenance or prescribed service operations.

*LED information only applies to the products with LED components.

Battery Notice

1. To guarantee optimal performance, it is recommended that rechargeable batteries be replaced every year, or after 500 charging cycles are completed. It is normal for the battery to balloon or expand after one year or 500 cycles. Although it does not cause damage, it cannot be used again and must be disposed of according to the location's safe battery disposal procedures.

2. If a battery performance decreases more than 20%, the battery is at the end of its life cycle. Stop use and ensure the battery is disposed of properly.

3. The length of time that a battery lasts depends on the battery type and how the device is used. Conserve the battery life by doing the following:
    - Avoid fully uncharging the battery because this places additional strain on it. Several partial uncharges with frequent charges are better than a fully uncharged battery. Charging a partially charged battery does not cause harm to the unit.
    - Keep the battery cool. Avoid hot vehicles. For prolonged storage, keep the battery at a 40% charge level.
    - Do not leave the battery uncharged and unused for an extended period of time, the battery will wear out and the longevity of the battery will be at least half of one with frequent charges.

4. Protect battery life by not over or under charging the battery.

5. Please do not leave battery unused for long time without charging it. Despite Unitech's safety precautions, the battery pack may begin to change shape. If so, stop using it immediately. Please check to see if you are using a proper power adapter to charge the battery or contact your service provider for service.

6. If you cannot charge the battery after it has been idle for an extended period of time and it begins to heat up, please do not try to charge it. It may not be functional anymore.

7. Please only use the original battery from Unitech. Using a third party battery can damage our products. Please note that when such damage occurs, it is not covered by Unitech's warranty policy.

CAUTION!
- RISK OF EXPLOSION IF BATTERY IS REPLACED INCORRECTLY.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
- 電池若未正確更換，可能會爆炸。請用原廠建議之同款或同等級的電池來更換。請依原廠指示處理廢電池。
請依製造商説明書處理用過之電池
- 如果更換不正確之电池行事会有爆炸的风险
请依制造商说明书处理用过之电池

Battery charge notice

It is important to consider temperature when the battery pack is charging. Charging is most efficient at normal room temperature or in a slightly cooler environment. It is essential that batteries are charged within the stated range of 0°C to 40°C. Charging batteries outside of the specified range could damage the batteries and shorten their life cycle.

CAUTION! Do not charge batteries at a temperature lower than 0°C. This will make the batteries unstable and dangerous. Please use a battery temperature detecting device for a charger to ensure a safe charging temperature range.

CAUTION! To ensure the unit working properly, please keep all connectors away from the contaminants staying inside of them such as dust, grease, mud, and water. The negligence may cause the unit with no communication, short circuited, overheated and so on.

CAUTION! If the connector is damaged, please ensure the connector is being fully repaired before use the unit to avoid causing short circuited.

Storage and safety notice

Although charged batteries may be left unused for several months, their capacity may be depleted due to build up of internal resistance. If this happens, they will require recharging prior to use. Batteries may be stored at temperatures between -20°C to 60°C, however they may deplete more rapidly at higher temperatures. It is recommended to store batteries at room temperature.

The message above only applies to the usage of the removable batteries.
For the products with non-removable batteries / without batteries, please refer to the specification of each product.

Product Operation and Storage Notice

The Unitech product has applicable operation and storage temperature conditions. Please follow the limitation of suggested temperature conditions to avoid failure, damage or malfunction.

For applicable temperature conditions, please refer to the specification of each product.

Adapter Notice

1. Please do not leave the power adapter in the socket when it is not connected to your Unitech product for charging.
2. Please remove the power adapter when the battery is fully recharged.
3. The bundled power adapter that comes with your Unitech product is not meant to be used outdoors. An adapter exposed to water or rain, or a very humid environment can cause damage to both the adapter and the product.
4. Please only use the bundled power adapter or same specification of adapter to charge your Unitech product. Using the wrong power adapter can damage your Unitech product.

The message above only applies to the product connected to the adapter.
For the products without using the adapters, please refer to the specification of each product.

x

Hearing Damage Warning

To prevent possible hearing damage, do not listen at high volume levels for long periods.

Figure 1 – Warning label (IEC 60417-6044)

Worldwide Support

Unitech's professional support team is available to quickly answer questions or assist with technical-related issues. Should an equipment problem occur, please contact the nearest Unitech regional service representative. For complete contact information please visit the Web sites listed below:

Taipei, Taiwan – Headquarters	**Europe**
Tel: +886-2-89121122	**Tel:** +31-13-4609292
E-mail: info@hq.ute.com	**E-mail:** info@eu.ute.com
Address: 5F, No. 136, Lane 235, Baoqiao Road, Xindian District, New Taipei City 231, Taiwan (R.O.C.)	**Address:** Kapitein Hatterasstraat 19, 5015 BB, Tilburg, the Netherlands
Website: http://www.ute.com	**Website:** http://eu.ute.com
China	**Japan**
Tel: +86-59-2310-9966	**Tel:** +81-3-62310896
E-mail: info@cn.ute.com	**E-mail:** info@jp.ute.com
Address: Room401C, 4F, RIHUA International Mansion, Xinfeng 3nd Road, Huoju Hi-tech District, Xiamen, Fujan , China	**Address:** Tosei Building 3F.,18-10 Nihonbashi-Hakozakicho, Cyuouku, Tokyo, 103-0015, Japan
Website: http://cn.ute.com	**Website:** http://jp.ute.com
Asia & Pacific / Middle East	**Latin America**
Tel: +886-2-27911556	**Tel:** +52-55-5171-0528
E-mail: info@apac.ute.com info@india.ute.com info@mideast.ute.com	**E-mail:** info@latin.ute.com
Address: 4F., No. 236, ShinHu 2nd Rd., NeiHu Chiu, 114, Taipei,Taiwan	**Address:** 17171 Park Row, Suite 210 Houston, TX 77084USA (Rep.)
Website: http://apac.ute.com / http://mideast.ute.com	**Website:** http://latin.ute.com
North America	**Please scan QR Code to visit us :**
Tel: +1-714-8916400	
E-mail: info@us.ute.com / info@can.ute.com	
Address: 6182 Katella Ave, Cypress, CA 90630, USA	
Website: http://us.ute.com	

Warranty Policy

The following items covered under the Unitech Limited Warranty are free from defects during normal use:

The warranty period is varied from each country. Please consult with your supplier or Unitech local office for actual length of warranty period to your purchased product.

Warranty becomes void if equipment is modified, improperly installed or used, damaged by accident or neglect, or if any parts are improperly installed or replaced by the user.

Table of Contents

Chapter 1 - Overview

1.1 Package

Please make sure the following contents are in the MS912+ 2D gift box.
If something is missing or damaged, please contact your Unitech representative.

The Package Contents

- MS912+ 2D Scanner
- USB Type-C Cable
- Wrist Lanyard
- Quick Start Guide
- Quick Connection Card

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1.2 Product Detail

MS912+ 2D Product View

Trigger

LED Indicator

USB Type-C Port

Exit Window

Hard Reset Button
(insert pin into the hole)
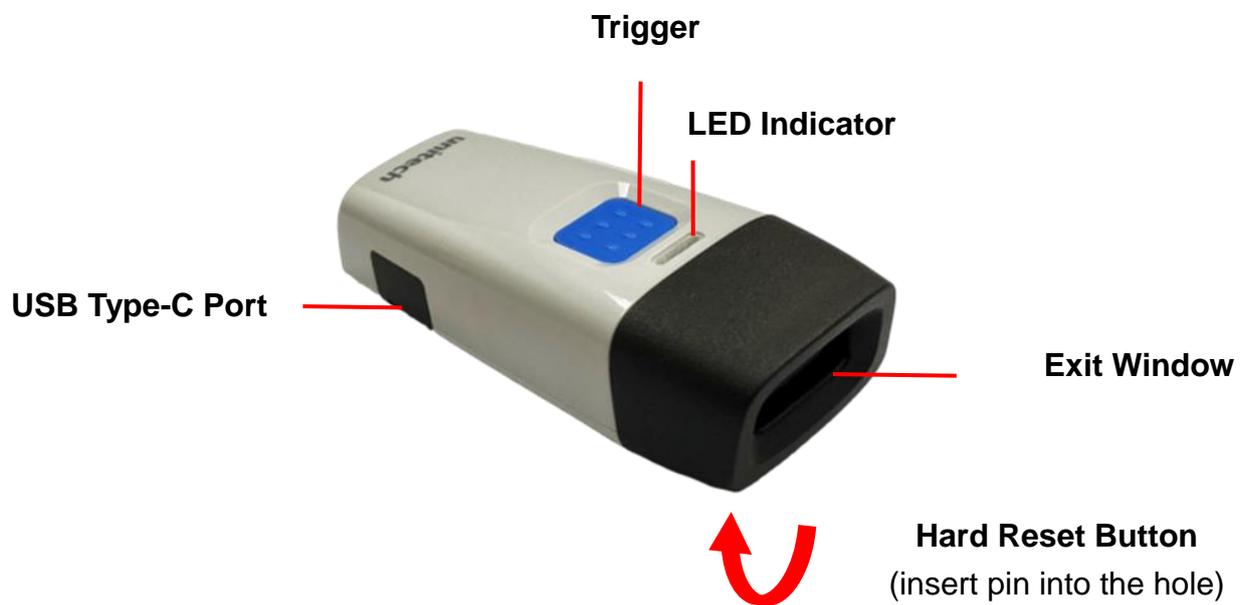
1.3 Specifications

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 (Environment: 800 lux)	5 Mil Code 39 : 55 ~ 100mm
	13 Mil UPC/EAN : 55 ~ 270mm
	15 Mil QR Code : 40 ~ 190mm
	6.7 Mil PDF417: 45 ~ 120mm
	10 Mil Data Matrix : 40 ~ 90mm
Physical Characteristics	
Dimension	W30 x L72 x H20 mm
Weight	30.7g
Color	Gray
Material	PC
Cable	Type-C(M) to USB A(M) Cable, 1.5M
Trigger	Scan Button
Indicator	LED, Buzzer

Electrical	
Operation Voltage	3.7 VDC ± 5%
Working Current	< 230mA
Standby Current	< 25mA
Battery	3.7V, 350mAh, Li-Polymer Battery
Number of Scan (per full charge)	> 5,000 scans (1 scan/ 5 secs, Bluetooth connected)
Connectivity	
Radio	Bluetooth 5.0 dual mode (Class 2)
Range	66 ft/ 20m (line of sight)
Interface/ Profile	BT HID BT SPP USB HID USB VCP Memory
User Environment	
Operating Temperature	-10 ~ 50˚C
Storage Temperature	-20 ~ 60˚C
Humidity	0% ~ 95%RH (Non-condensing)
Drop Durability	1.5M
Ambient Light	70,000 Lux (Sunlight)
1D Symbologies	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
2D Symbologies	QR Code, Micro QR Code, PDF417, MicroPDF417, Data Matrix, Aztec, MaxiCode, Han Xin, Code 16K

Regulatory	
ESD	Functional after 4KV contact, 8KV air discharge
EMC/RF	CE, FCC, BSMI, NCC, VCCI, TELEC, DOE, CEC
Safety Approval	EN/IEC62471 (Exempt Group)
Environmental	WEEE, RoHS 2.0

Note:

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK
	IS	LI	NO	CH	TR		

1.4 Getting Started

1.4.1 Charging the Battery

1. Flip open the Type-C USB port on the scanner.
2. Insert the Type-C USB connector into the port on the scanner and USB A connector into a USB port on the host PC or a smartphone charger.
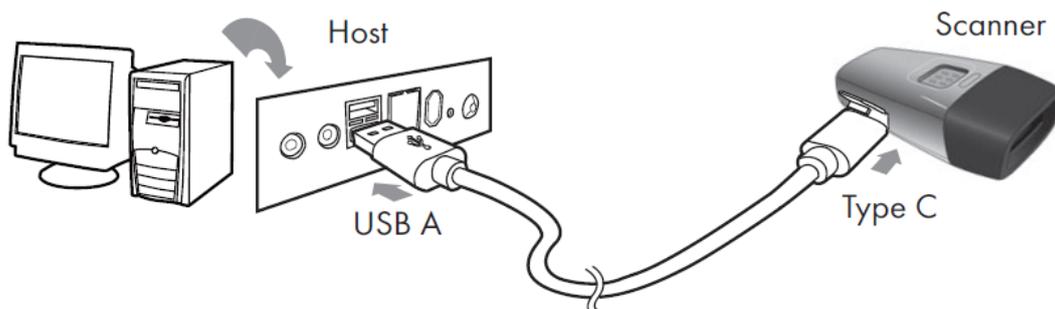
1.4.2 Checking the LED status

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

1.5 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

Chapter 2 – General Settings

2.1 Barcode Configurability

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

Enable Barcode Configurability *

Disable Barcode Configurability

2.2 Factory Default

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

Factory Default

2.3 Check Version

To check firmware version, please scan below configuration barcode.

Check Version

2.4 Abort

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

Abort

2.5 Good Read Indicator

2.5.1 Beep Tone

Off

Beep Low (2.0KHz)

Beep Medium (2.7KHz)

Beep High (4.0KHz)

2.5.2 Beep Mode

Normal *

Warning Beep Only

Mute

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2.6 Data Format

2.6.1 UTF-8 to Unicode Conversion

Off *

On

Note:

To output double-byte character (i.g., Chinese) using UTF-8 to Unicode Conversion, please make sure that the application accepting barcode data supports Unicode display (i.g., Word, TeraTerm).

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

Off *

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.

2.6.3 Function Code Conversion

Off

On *

Note:

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

2.6.4 Control Code Output Method

Ctrl Mode *

Alt Mode

Disable Output

Note:

Control code (0x01 ~ 0x1A) can be sent by two methods:

(1) Ctrl Mode:

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

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

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

(2) Alt Mode:

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

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

Control Code Table

ASCII	Hex	Dec	Ctrl Mode	Alt Mode
NUL	00	0	Alt+0+0	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	Alt+0+0+2+7	Alt+0+0+2+7
FS	1C	28	Alt+0+0+2+8	Alt+0+0+2+8
GS	1D	29	Alt+0+0+2+9	Alt+0+0+2+9
RS	1E	30	Alt+0+0+3+0	Alt+0+0+3+0
US	1F	31	Alt+0+0+3+1	Alt+0+0+3+1

2.6.5 Numeric Key

Numeric Key

Alphanumeric Key *

Note:

1. By default, the alphanumeric key is used for 14ecommended14 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.

2.6.6 Capslock Mode

Capslock Off *

Capslock On

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.

2.6.7 Keyboard Layout

English (US)*

English (UK)

Danish

Spanish

Hungarian (QWERTZ)

Hungarian (QWERTY)

Canadian French

Dutch

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Italian

French

German

Swiss German

Swiss French

Swedish

Czech (QWERTZ)

Czech (QWERTY)

Norwegian

Belgian

Portuguese

Slovak

Brazilian (QWERTY)

Canadian (Traditional)

Japanese

Alt Code

2.6.8 Intercharacter Delay

The configurable range is from 0 to 255ms, with 1ms increment. The larger the number, the longer the delay.

Set Intercharacter Delay

Example: Set Intercharacter Delay to 8ms

Step1: Scan Set Intercharacter Delay

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

Step3: Scan Set Intercharacter Delay

2.6.9 Interblock Delay

The configurable range is from 0 to 2550ms, with 10ms increment. The larger the number, the longer the delay.

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

2.6.10 BCC (Binary Check Character)

On

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

2.6.11 GS Character Replacement

Enable GS Character Replacement

Disable GS Character Replacement *

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**"

2.7 Imaging Settings

2.7.1 Inverse Barcode

Disable Inverse Barcode *

Enable Inverse Barcode

2.8 Interface

2.8.1 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.

Disconnect

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

BT HID

4. Select "Wireless Scanner" from discovered device list.
5. The scanner will emit two beeps as indication that the Bluetooth connection has established successfully.
6. While conneted with the scanner as physical keyboard, the touch keyboard on iOS/Android device might disappear. To resolve this issue please do the following:

   (1) For iOS device, simply press the 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".

2.8.2 BT SPP

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

Disconnect

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

BT SPP

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**"

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2.9 General Bluetooth Settings

2.9.1 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)

Set Minute
(Default = 03)

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:

Disable Timeout

2.9.2 Shut Down

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

Shut Down

2.9.3 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

2.9.4 Set Bluetooth Device ID

Bluetooth device name is configurable up to 16 alphanumeric characters:

Set Bluetooth Device ID

Example: Set XYZ123 as Bluetooth Device ID

Step 1: Scan "**Set Bluetooth Device ID**"

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

Step 3: Scan "**Set Bluetooth Device ID**"

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

Reset Bluetooth Device ID

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

Add MAC Address to Bluetooth Device ID

2.9.5 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.

Check Bluetooth Firmware Version

2.9.6 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.

Check Device MAC Address

2.9.7 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

2.9.8 Check Battery Life

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

Check Battery Life

2.9.9 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.

2.10 Memory Mode

Memory Mode

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

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

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

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

2.10.1 Delete Last Record

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

Delete Last Data

2.10.2 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.

2.10.3 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**"

2.10.4 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**"

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2.10.5 Date Format

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

Date Format

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**"

2.10.6 Time Format

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

Time Format

Below are available Time Format and their setup codes:

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

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

Step1: Scan "**Time Format**"

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

Step3: Scan "**Time Format**"

2.10.7 Date & Time Setup

Set Date

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**"

2.10.8 Quantity

Enable Quantity Input

Disable Quantity Input *

A. 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.

2.11 USB HID

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

USB HID

2.12 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.

USB VCP

2.13 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*

2.14 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

2.15 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

2.16 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

2.17 Advanced Reading Mode Settings

2.17.1 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.

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

2.17.2 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.

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**

2.17.3 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.

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

2.17.4 Trigger Control

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

Enable Trigger Control*

Disable Trigger Control

2.18 Code ID

Note:
By default data format is as follows:
<Preamble> <Code ID> <Barcode Length> <Barcode Data> <Postamble> <Terminator>

Disable Code ID *

Enable Factory ID

Enable Set ID

2.19 Set ID

Set ID can be up to 2 alphanumerics for each symbology.

Set ID – Code39
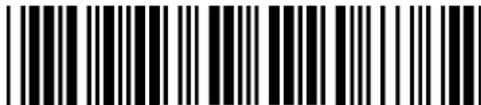
Set ID – Full ASCII Code39

Set ID – Code32

Set ID – Codabar

Set ID – Interleaved 2 of 5

Set ID – Standard 2 of 5

Set ID – Matrix 2 of 5

Set ID – Industrial 2 of 5

Set ID – Code11

Set ID – China Postal Code

Set ID – MSI Plessey

Set ID – UK Plessey

Set ID – EAN-13

Set ID – UPC-A

Set ID – EAN-8

Set ID – UPC-E

Set ID – Code93

Set ID – Code128 / GS1-128

Set ID – GS1 DataBar (Limited / Expanded)

Set ID – QR Code

Set ID – Micro QR Code

Set ID – PDF417

Set ID – MicroPDF417

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Set ID – Data Matrix

Set ID – Aztec

Set ID – MaxiCode

Set ID – Hanxin

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**"

2.20 Data Length

Send Data Length Off *

Send Data Length On

2.20 Preamble

Preamble can be up to 16 bytes of data.

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**"

2.21 Postamble

Postamble can be up to 16 bytes of data.

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**"

2.21.1 Clear Preamble/Postamble

Clear Preamble/Postamble

2.22 Terminator

None

<LF>

<CR> *

<CR><LF> *

<TAB>

<Space>

<ESC>

Note:

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

Chapter 3 - Introduction to Applications

3.1 General Settings

Enable All Symbologies

Disable All Symbologies

Enable All 1D Symbologies

Disable All 1D Symbologies

Enable All 2D Symbologies

Disable All 2D Symbologies

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

3.2 UPC-A

Enable/Disable UPC-A

Enable UPC-A*

Disable UPC-A

3.2.1 Check Digit

Send Check Digit *

Not Send Check Digit

3.2.2 UPC-A Expand to EAN-13

Enable UPC-A Expand to EAN-13

Disable UPC-A Expand to EAN-13 *

3.2.3 Add On Supplement

Enable 5-digit Supplement

Disable 5-digit Supplement *

Enable 2-digit Supplement

Disable 2-digit Supplement *

Enable Addenda Required

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 even if 2-digit or 5-digit Supplement is disabled.

3.3 UPC-E

Enable/Disable UPC-E

Enable UPC-E *

Disable UPC-E

3.3.1 Check Digit

Send Check Digit *

Not Send Check Digit

3.3.3 Add On Supplement

Enable 5-digit Supplement

Disable 5-digit Supplement *

Enable 2-digit Supplement

Disable 2-digit Supplement *

Enable Addenda Required

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 even if 2-digit or 5-digit Supplement is disabled.

3.4 EAN-8

Enable/Disable EAN-8

Enable EAN-8 *

Disable EAN-8

3.4.1 Check Digit

Not Send Check Digit

Send Check Digit *

3.4.2 Add On Supplement

Enable 5-digit Supplement

Disable 5-digit Supplement *

Enable 2-digit Supplement

Disable 2-digit Supplement *

Enable Addenda Required

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 even if 2-digit or 5-digit Supplement is disabled.

3.5 EAN-13

Enable/Disable EAN-13

Enable EAN-13 *

Disable EAN-13

3.5.1. Check Digit

Not Send Check Digit

Send Check Digit *

3.5.2. Add On Supplement

Enable 5-digit Supplement

Disable 5-digit Supplement *

Enable 2-digit Supplement

Disable 2-digit Supplement *

Enable Addenda Required

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 even if 2-digit or 5-digit Supplement is disabled.

3.6 Code 39

Enable/Disable Code 39

Enable Code 39 *

Disable Code 39

3.6.1 Verification

Disable CDV *

CDV & Send CD

CDV & Not Send CD

3.6.2 Start/Stop

Not Send Start/Stop *

Send Start/Stop

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3.6.3 Full ASCII Code39

Enable Full ASCII Code 39 *

Disable Full ASCII Code39

3.6.4 Code39 Min/Max Length

Set Min Length

(Default = 01)

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.

3.7 Code 32

Enable/Disable Code 32

Enable Code 32

Disable Code 32 *

3.7.1 Leading/Tailing

Not Send Leading & Tailing

Send Leading Only

Send Tailing Only

Send Leading & Tailing *

3.8 Codabar

Enable/Disable Codabar

Enable Codabar *

Disable Codabar

3.8.1 Verification

Disable CDV *

CDV & Send CD

CDV & Not Send CD

3.8.2 Start/Stop

Not Send Start/Stop *

Send Start/Stop

3.8.3 Codabar Min/Max Length

Set Min Length

(Default = 01)

Set Max Length

(Default = 99)

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

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

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

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

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

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

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

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

3.9 Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5

Enable Interleaved 2 of 5

Disable Interleaved 2 of 5 *

3.9.1 Verification

Disable CDV *

CDV & Send CD

CDV & Not Send CD

3.9.2 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.

3.10 Standard 2 of 5

Enable/Disable Standard 2 of 5

Enable Standard 2 of 5

Disable Standard 2 of 5 *

3.10.1 Verification

Disable CDV *

CDV & Send CD

CDV & Not Send CD

3.10.2 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.

3.11 Matrix 2 of 5

Enable/Disable Matrix 2 of 5

Enable Matrix 2 of 5

Disable Matrix 2 of 5 *

3.11.1 Verification

Disable CDV *

CDV & Send CD

CDV & Not Send CD

3.11.2 Matrix 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 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.

3.12 Industrial 2 of 5

Enable/Disable Industrial 2 of 5

Enable Industrial 2 of 5

Disable Industrial 2 of 5 *

3.12.1 Verification

Disable CDV *

CDV & Send CD

CDV & Not Send CD

3.12.2 Industrial 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 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.

3.13 Code 11

Enable/Disable Code 11

Enable Code 11

Disable Code 11 *

3.13.1 Verification

Single Digit *

Double Digits

3.13.2 Check Digit

Send Check Digit

Not Send Check Digit *

3.13.3 Code 11 Min/Max Length

Set Min Length

(Default = 04)

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.

3.14 China Postal Code

Enable/Disable China Postal Code

Enable China Postal Code

Disable China Postal Code*

3.14.1 Verification

Disable CDV *

CDV & Send CD

CDV & Not Send CD

3.14.2 China Postal Code Min/Max Length

Set Min Length

(Default = 04)

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.

3.15 MSI Plessey

Enable/Disable MSI Plessey

Enable MSI Plessey

Disable MSI Plessey *

3.15.1 Verification

Send Check Digit *

Not Send Check Digit

Single Check Digit MOD10 *

Double Check Digits MOD10

3.15.2 MSI Plessey Min/Max Length

Set Min Length

(Default = 04)

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.

3.16 UK Plessey

Enable/Disable UK Plessey

Enable UK Plessey

Disable UK Plessey *

3.16.1 Check Digit

Send Check Digit

Not Send Check Digit *

3.17 Code 93

Enable/Disable Code 93

Enable Code 93 *

Disable Code 93

3.17.1 Code 93 Min/Max Length

Set Min Length

(Default = 01)

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.

3.18 Code 128

Enable/Disable Code 128/GS1-128

Enable Code 128/GS1-128 *

Disable Code 128/GS1-128

3.18.1 Code 128 Min/Max Length

Set Min Length

(Default = 01)

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.

3.19 GS1 DataBar

Enable/Disable GS1 DataBar

Enable GS1 DataBar

Disable GS1 DataBar *

3.20 GS1 DataBar Limited

Enable/Disable GS1 DataBar Limited

Enable GS1 DataBar Limited

Disable GS1 DataBar Limited *

3.21 GS1 DataBar Expanded

Enable/Disable GS1 DataBar Expanded

Enable GS1 DataBar Expanded

Disable GS1 DataBar Expanded *

3.21.1 GS1 DataBar Expanded Min/Max Length

Set Min Length

(Default = 04)

Set Max Length

(Default = 32)

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

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.

3.21.2 Surround GS1 Application Identifiers (AI's)

with Parentheses

Surround AI's with Parenthese

Not Surround AI's with Parenthese *

Note:

When enabled, each application identifier (AI) in GS1 DataBar will be enclosed in parentheses in output data.

3.22 QR Code

Enable/Disable QR Code

Enable QR Code*

Disable QR Code

3.23 Micro QR Code

Enable/Disable Micro QR Code

Enable Micro QR Code *

Disable Micro QR Code

3.24 Data Matrix

Enable/Disable Data Matrix

Enable Data Matrix *

Disable Data Matrix

3.25 PDF417

Enable PDF417 *

Disable PDF417

3.26 MicroPDF417

Enable MicroPDF417 *

Disable MicroPDF417

3.27 Aztec

Enable/Disable Aztec

Enable Aztec

Disable Aztec *

3.28 MaxiCode

Enable/Disable MaxiCode

Enable MaxiCode

Disable MaxiCode *

3.29 Hanxin

Enable/Disable Hanxin

Enable Hanxin

Disable Hanxin *

3.30 Code 16K

Enable Code 16K

Disable Code 16K *

Appendix A – Numbers

0

1

2

3

4

5

6

7

8

9

Appendix B – 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

Y

Z

Z

Appendix C – 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

92

q

+Q

r

+R

s

+S

t

+T

u

+U

v

+V

w	
+W	
	x
	+X

y

+Y

z

+Z

Appendix D – Control Codes

NUL

%U

SOH

$A

STX

$B

ETX

$C

EOT

$D

ENQ

$E

ACK

$F

BEL

$G

BS

HT

LF

VT

FF

CR

SO

SI

DLE

$P

DC1

$Q

DC2

$R

DC3

$S

DC4

$T

NAK

$U

SYN

$V

ETB

$W

97

CAN

$X

EM

$Y

SUB

$Z

ESC

%A

FS

%B

GS

%C

RS

%D

US

%E

Appendix E – Symbols

+

+ |||||||||||||||

-

- |||||||||||||||

.

. |||||||||||||||

$

$ |||||||||||||||

%

% |||||||||||||||

/

/ |||||||||||||||

\

%L |||||||||||||||

!

/A |||||||||||||||

@

%V |||||||||||||||

99

#

/ C

^

%N

~

%S

&

/ F

*

/ J

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%O

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%H

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%Q

{

%P

}

%R

[

%K

]

%M

(

/ H

)

/ I

<

%G

>

%I

`

%W

"

/ B

'

/ G

,

/ L

;

%F

:

/ Z

?

%J

SP

DEL

%T

Appendix F – Function Keys

F1

$TA

F2

$TB

F3

$TC

F4

$TD

F5

$TE

F6

$TF

F7

$TG

F8

$TH

F9

$TI

F10

$TJ

F11

$TK

F12

$TL

Home

$TM

End

$TN

Enter (Numeric Key)

$T＋D

App

$T＋O

104

Appendix G – Navigation Keys

Cursor Left

$TP

Cursor Right

$TO

Cursor Up

$TQ

Cursor Down

$TR

Page Up

$TS

Page Down

$TT

Tab

$TU

Back Tab

$TV

Esc

$TW

Enter

$TX

BS

$TY

Ins

$TZ

Del

$T%K

Appendix H – Modifier Keys

Alt (Left) make *1

$T%L

Alt (Left) break

$T%M

Alt (Right) make

$T+E

Alt (Right) break

$T+F

Shift (Left) make *2

$T%N

Shift (Left) break

$T%O

Shift (Right) make

$T+I

Shift (Right) break

$T+J

Win (Left) make

$T+K

Win (Left) break

$T+L

Win (Right) make

$T+M

Win (Right) break

$T+N

Ctrl (Left) make *3

$T%W

Ctrl (Left) break

$T+A

Ctrl (Right) make

$T+G

Ctrl (Right) break

$T+H

Please view the next page for additional note.

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 I – Abort

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

Abort

Appendix J – Default Table

Function	Default	Remark
General Settings		
Barcode Configurability	ON	
Beep Tone	High (4.0KHz)	
Beep Mode	Normal	
Data Format		
UTF-8 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	
Imaging Settings		
Inverse Barcode	OFF	
Interface		
BT HID		
Getting Connected	N/A	
BT SPP		
Getting Connected	N/A	
Set SPP Pincode	1234	
General Bluetooth Settings		
Power Off Timeout	03:00	
iOS Hotkey	ON	

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
Quantity	Disable
USB HID	N/A
USB VCP	N/A
Reading Mode	
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
Data Format	
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)
Symbologies	
General Settings	N/A
UPC-A	
Enable/Disable	ON
Check Digit	Send
UPC-A Expand to EAN-13	OFF

5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
UPC-E	
Enable/Disable	ON
Check Digit	Send
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
EAN-8	
Enable/Disable	ON
Check Digit	Send
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
EAN-13	
Enable/Disable	ON
Check Digit	Send
5-digit Supplement	OFF
2-digit Supplement	OFF
Addenda Required	OFF
Code 39	
Enable/Disable	ON
Verification	Disable CDV
Start/Stop	Not Send
Full ASCII Code39	ON
Min Length	01
Max Length	99
Code 32	
Enable/Disable	OFF
Leading/Tailing	Send Leading & Tailing
Codabar	
Enable/Disable	ON

Verification	Disable CDV
Start/Stop	Not Send
Min Length	01
Max Length	99
Interleaved 2 of 5	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32
Standard 2 of 5 (IATA)	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32
Matrix 2 of 5	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32
Industrial 2 of 5	
Enable/Disable	OFF
Verification	Disable CDV
Min Length	04
Max Length	32
Code 11	
Enable/Disable	OFF
Verification	Single Digit
Check Digit	Not Send
Min Length	04
Max Length	32
China Postal Code	
Enable/Disable	OFF
Verification	Disable CDV

Min Length	04
Max Length	32
MSI Plessey	
Enable/Disable	OFF
Verification	Send Check Digit Single Check Digit MOD10
Min Length	04
Max Length	32
UK Plessey	
Enable/Disable	OFF
Check Digit	Not Send
Code 93	
Enable/Disable	ON
Min Length	01
Max Length	99
Code 128/GS1-128	
Enable/Disable	ON
Min Length	01
Max Length	99
GS1 DataBar (RSS-14)	
Enable/Disable	OFF
GS1 DataBar Limited (RSS-Limited)	
Enable/Disable	OFF
GS1 DataBar Expanded (RSS-Expanded)	
Enable/Disable	OFF
Min Length	04
Max Length	32
Surround AI's with Parentheses	OFF
QR Code	
Enable/Disable	ON
Micro QR Code	

Enable/Disable	ON
Data Matrix	
Enable/Disable	ON
PDF 417	
Enable/Disable	ON
Micro PDF 417	
Enable/Disable	ON
Aztec	
Enable/Disable	OFF
MaxiCode	
Enable/Disable	OFF
Hanxin	
Enable/Disable	OFF
Code 16K	
Enable/Disable	OFF

Appendix K – Factory ID

#	Symbology	Code ID	HEX
0	UPC-A	A	41
1	UPC-E	E	45
2	EAN-8	S	53
3	EAN-13	F	46
4	Code 39	M	4D
5	Full ASCII Code39	D	44
6	Code32	B	42
7	Codabar	N	4E
8	Interleaved 2 of 5	I	49
9	Standard 2 of 5 (IATA)	R	52
10	Matrix 2 of 5	Y	59
11	Industrial 2 of 5	V	56
12	Code 11	J	4A
13	China Postal Code (Toshiba Code)	H	48
14	MSI Plessey	O	4F
15	UK Plessey	P	50
16	Code 93	L	4C
17	Code 128/GS1-128	K	4B
18	GS1 DataBar	G	47
19	QR Code	W	57
20	Micro QR Code	w	77

21	Data Matrix	X	58
22	PDF417	Z	5A
23	MicroPDF417	Z	5A
24	Aztec	z	7A
25	MaxiCode	Z	5A
26	Hanxin	X	58
27	Code 16K	16	31 36

Appendix L – 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)