

2D Handheld Scanner

- MS838 -



User's Manual

Version 1.7

Change Log

Date	Change Description	Version
20210202	first published version	1.0
2021/2/25	Update factory default	1.1
2022/2/7	Add 2.15 Center Mode	1.2
2022/03/24	Add Do Not Send UPC-A Lead Digit barcode	1.3
2022/4/14	<ol style="list-style-type: none">1. Add 3.13.2 and 3.14.42. Update 1.3 IP Rating3. Add Appendix C	1.4
2022/4/26	Update 1.3 Specification	1.5
2022/5/23	Update 2.5 Scan Mode (Update Auto Sense Mode)	1.6
2022/11/16	Add Do Not Send UPC-E Lead digit Barcode	1.7

Preface

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. All product and company names are trademarks, service marks, or registered trademarks of their respective owners.

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.

Operation on the 5.15 - 5.25GHz frequency band is restricted to indoor use only. The FCC requires indoor use for the 5.15-5.25GHz band to reduce the potential for harmful interference to co-channel Mobile Satellite Systems. Therefore, it will only transmit on the 5.25-5.35 GHz, 5.47-5.725 GHz and 5.725 - 5.850 GHz band when associated with an access point (AP).

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 1.5 cm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

Canadian Compliance Statement

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte les exigences du Règlement

sur le matériel broilleur du Canada.

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 EMC 2014/30/EU directive and the Low Voltage 2014/35/EU directive.

The declaration of conformity is available for download at :

<https://portal.Unitech.eu/public/Safetyregulatorystatement>

CE RF Exposure Compliance

This device meets EU requirements (2014/53/EU) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.

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



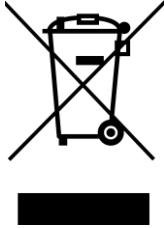
This equipment complies with the requirements of Directive 2014/53/EU of the European Parliament and Commission from 24 May, 2014 governing Radio and Telecommunications Equipment and mutual recognition of conformity.

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 EU directive 2002/96/EC and update 2003/108/EC 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

NCC 警語

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。

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；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。

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 825-1. 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, 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 your warranty.

CAUTION!

- RISK OF EXPLOSION IF BATTERY IS REPLACED INCORRECTLY. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
- 如果更換不正確之電池行事會有爆炸的風險
請依製造商說明書處理用過之電池
- 如果更換不正確之電池行事會有爆炸的風險
請依製造商說明書處理用過之電池

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 and 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.*

Hearing Damage Warning

Zx.3 Warning

The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:

- the symbol of Figure 1 with a minimum height of 5 mm; and
- the following wording, or similar :

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




Figure 1 – Warning label (IEC 60417-6044)

Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.

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 Tel: +886-2-89121122 E-mail: info@hq.ute.com Address: 5F, No. 136, Lane 235, Baoqiao Road, Xindian District, New Taipei City 231, Taiwan (R.O.C.) Website: http://www.ute.com	Europe Tel: +31-13-4609292 E-mail: info@eu.ute.com Address: Kapitein Hatterasstraat 19, 5015 BB, Tilburg, the Netherlands Website: http://eu.ute.com
China Tel: +86-59-2310-9966 E-mail: info@cn.ute.com Address: Room401C, 4F, RIHUA International Mansion, Xinfeng 3rd Road, Huoju Hi-tech District, Xiamen, Fujan , China Website: http://cn.ute.com	Japan Tel: +81-3-35232766 E-mail: info@jp.ute.com Address: Kayabacho Nagaoka Building 8F.,1-5-19 Shinkawa, Chuo-Ku, Tokyo, 104-0033, Japan Website: http://jp.ute.com
Asia & Pacific / Middle East Tel: +886-2-27911556 E-mail: info@apac.ute.com info@india.ute.com info@mideast.ute.com Address: 4F., No. 236, ShinHu 2nd Rd., NeiHu Chiu, 114, Taipei,Taiwan Website: http://apac.ute.com / http://mideast.ute.com	Latin America Tel: +52-55-5171-0528 E-mail: info@latin.ute.com Address: 17171 Park Row, Suite 210 Houston, TX 77084USA (Rep.) Website: http://latin.ute.com
North America Tel: +1-714-8926400 E-mail: info@us.ute.com / info@can.ute.com Address: 6182 Katella Ave, Cypress, CA 90630, USA Website: http://us.ute.com	Please scan QR Code to visit us : 

Warranty Policy

The 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

Preface	i
About This Manual	i
Regulatory Compliance Statements	i
Laser Information	vi
LED Information	vi
Battery Notice.....	vii
Adapter Notice.....	x
Hearing Damage Warning	x
Worldwide Support	xi
Warranty Policy	xii
Chapter 1 - Overview	1
1.1 Package	1
1.2 Product Detail.....	2
1.3 Specifications	3
1.4 Getting Started	5
1.5 LED Indicator / Beeper Sequence	6
Chapter 2 – Command Settings	7
2.1 General setting	7
2.2 Data Interface Setting.....	9
2.3 USB Keyboard Layout.....	10
2.4 RS232 Interface Configuration	18
2.5 Scan Mode	22
2.6 Light Configuration	24
2.7 Buzzer Configuration	24
2.8 Prefix and Suffix Configuration	29
2.9 Custom Prefix.....	31
2.10 Custom Suffix	32
2.11 Code ID	33
2.12 AIM ID.....	34

2.13 Barcode Prefix and Suffix Order Selection	35
2.14 Inverse Color Barcode Selection	36
2.15 Center Mode.....	36
Chapter 3 – Symbology	37
3.1 Enable / Disable All barcodes.....	37
3.2 Codabar.....	38
3.3 Code 39.....	40
3.5 Industrial 2 of 5	47
3.6 Matrix 2 of 5 (4-24bit)	48
3.7 Code 93.....	49
3.8 Code 11	50
3.9 Code 128.....	52
3.10 GS1-128.....	53
3.11 UPC-A	53
3.12 UPC-E	55
3.13 EAN/JAN-8.....	57
3.14 EAN/JAN-13.....	58
3.15 GS1 DataBar (RSS14)	60
3.16 PDF417	61
3.17 Micro PDF417	61
3.18 QR Code	62
3.19 QR Code URL Link.....	62
3.20 Micro QR	63
3.21 Data Matrix.....	63
3.22 Aztec Code.....	64
Appendix A – ASCII Character Sets.....	65
A-1 Visible Character ASCII Table	65
A-2 Barcode Type ID Table.....	67
A-3 AIM ID Table	68
A-4 Control Character Set (USB keyboard mode).....	69
A-5 Control Character Set (RS232, USB, VCP)	71
Appendix B – Numeric Barcodes	72
B-1 Data and Edit barcode	72
Appendix C – The Default Value Of Each Symbology's Length Within Range.....	75

Chapter 1 - Overview

1.1 Package

Please make sure the following contents are in the MS838 gift box. If something is missing or damaged, please contact your Unitech representative.

The standard package contents:

- MS838 2D handheld Scanner
- Cable
- Quick Start Guide
- Regulatory Compliance Statements

The combo package contents:

- MS838 2D handheld Scanner
- Cable
- Hands free stand
- Quick Start Guide
- Regulatory Compliance Statements

NOTE: The barcode with an asterisk (*) which appears in the following chapters indicates that it is the default option for the corresponding setting.

1.2 Product Detail



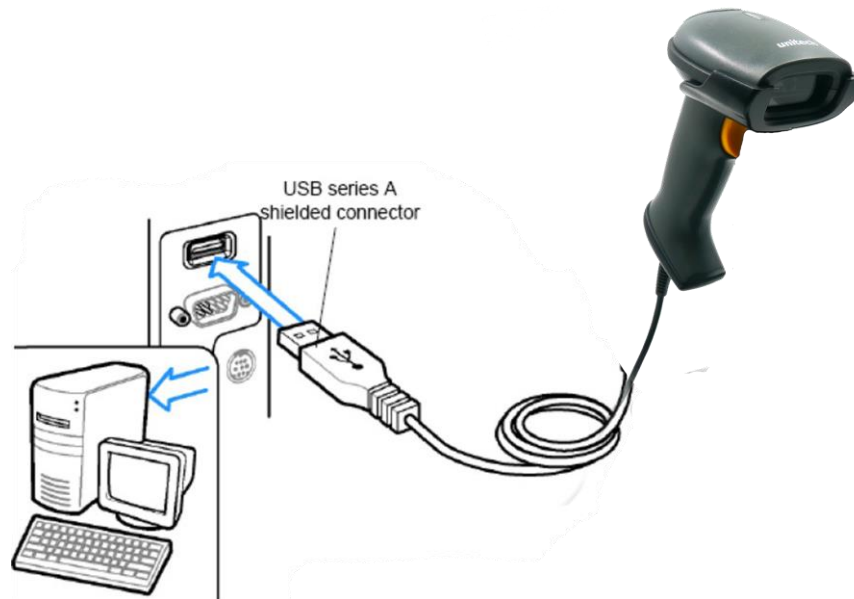
1.3 Specifications

Optical & Performance	
1D or 2D	2D
Sensor	CMOS sensor with 640 x 480 pixel
Aiming Element	Red LED
Illumination	White LED
Ambient Light	0~100,000lux (natural light)
Skew Angle	± 65°
Pitch Angle Sensor	± 60°
Roll Angle	0 - 360°
Optical Resolution	≥3mil (code 39)
Depth of Field (DOF PCS=80%)	60-310mm (13 mil, EAN13, PCS=90%)
Communication	
Host Interface supported	USB / RS232
Mechanical	
Dimension	174mm x 72mm x 96mm (L x W x H)
Weight	245g
Trigger Switch Life	1 million time

Functionality	
Symbologies	<p>1D: Code 128, EAN-13, EAN-8, Code 39, Code 32, UPC-A, UPC-E, Codabar, Interleaved 2 of 5, Code 93, GS1-128, GS1 Databar, GS1 Databar Limited, GS1 Databar Expanded, Matrix 2 of 5, Code 11, Industrial 2 of 5, Matrix 2 of 5</p> <p>2D: PDF417, Micro PDF417, QR Code, Micro QR, Data Matrix, Aztec Code</p>
Operation Mode	Trigger mode, Presentation mode,
Data Formatting	Prefix, Suffix, Code ID, Reformatting Date
Electrical	
Operation Voltage	DC 5V
Current Consumption	Operation mode: <142mA, Standby mode: <42mA
Indicator	Buzzer, LED
Environmental	
Mechanical Shock	1.5M onto concrete
Operating Temperature	-10°C to 50°C
Storage Temperature	-20°C to 60°C
Relative Humidity	5%-95% non-condensing
IP Rating	IP54
Regulatory Approvals	
CE, FCC, BSMI, VCCI	

1.4 Getting Started

To get started with MS838, please connect USB cable to the USB port of a host PC.



1.5 LED Indicator / Beeper Sequence

Description	Indication	
	Beeper	LED
Trigger pull	No Sound	No Light
No decode		
Wake up		
Decode	High Tone	Blue Blink
Power on	Low Tone, Middle Tone, High Tone	Blue Blink
Transmission error	Four Low Tones	No Light

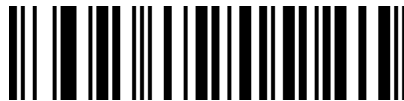
Chapter 2 – Command Settings

2.1 General setting

2.1.1 Enable/Disable Configuration barcode

Scanner can set up when enabled barcode function. In contrast, the scanner can't set up if disabled. Need to switch on and set up again.

Enable Configuration Function*



Disable Configuration Function



2.1.2 Display Version

Scan below bar code to display version.

Display Version



2.1.3 Factory Default

Scanning the below barcode can restore the scanner the factory default.

Restore Factory Default Configuration



2.1.4 Product User Configuration

Scanning the below barcode can save current parameters as user's configuration.

Save



Scanning the below barcode can restore for saved user's configuration.

Restore User Configuration



2.2 Data Interface Setting

2.2.1 USB Device Type

USB Keyboard*



RS232



USB Virtual Com (driver is needed)



2.3 USB Keyboard Layout

2.3.1 Control Character Escaping

Disable *



Enable



2.3.2 Control Character Output

Disable



Enable



2.3.3 CR/LF Character Processing (USB Keyboard)

Only 0D (CR) line feed *



Only 0A(LF) line feed



All Covert to 0A (LF)/0D(CR)



2.3.4 USB Keyboard Transfer Speed

Used for set up scanning speed under USB keyboard mode. If PC in a lower function, please choose low scanning speed to make sure its accuracy.

Low *



Middle



High



Custom Sending Speed (2ms ~ 50ms)



2.3.5 Covert Case

Scan below bar code to send / don't send non printable characters to the host.

Original data*



Convert All to Upper Case



Convert All to Lower Case



Case Inversion



2.3.6 Keyboard Layouts

Scan the bar code corresponding to the keyboard type.

English (US)*



German



French



Russian (MS)



Russian (typewriter)



Arabic (101)



Spanish



Spanish (Latin America)



Finnish



Japanese



Italian 142



Italian



Irish



English (UK)



Polish (Programmers)



Dutch (Netherlands)



Czech (QWERTZ)



Portuguese



Portuguese (Brazil)



Swedish



Turkish Q



Turkish F



Greek (MS)



French (Belgium)



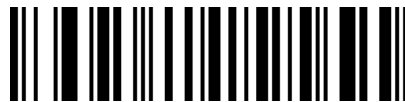
2.3.7 Barcode Encoding Configuration

In a normal situation , the barcode encoding was identified accurately. Please use manual to set up if encountered peculiar characters, then make sure output barcode content correctly.

Auto*



KOI8-R Code



2.3.8 Output Encoding Format

To output correctly in the specified encoding format.

For example: It's GBK code when output in the Notepad /Excel; It's UNICODE when output in the Word.

When output is English/Latin-1 encode format, the output mode will be affected by the function switch of virtual keyboard. When output is GBK/UNICODE, the output mode will be compelled to virtual keyboard.

English / Latin-1 *



GBK (Notepad /excel)



UNICODE (Word)



2.4 RS232 Interface Configuration

2.4.1 Baud Rate



2.4.2 Data bit, Stop bit, Parity bit

7 Bit,1 Stop Bit, No Parity



7 Bit,1 Stop Bit, Even Parity



7 Bit,1 Stop Bit, Odd Parity



7 Bit,2 Stop Bit, No Parity



7 Bit,2 Stop it, Even Parity B



7 Bit,2 Stop Bit, Odd Parity



8 Bit,1 Stop Bit, No Parity *



8 Bit,1 Stop Bit, Even Parity



8 Bit,1 Stop Bit, Odd Parity



8 Bit,2 stop Bit, No Parity



8 Bit,2 Stop Bit, Even Parity



8 Bit,2 Stop Bit, Odd Parity



2.4.3 GS Control Character Replacement

When output character is “Ç”, please first to scan” Virtual keyboard (Mode one or Mode two or Mode three)”.

Do not Replace *



Replace Ç



Replace



Replace ^]



R

Replace]



Replace <GS>



2.5 Scan Mode

2.5.1 Auto Sense Mode off

Decoding by pulling the trigger of the scanner when auto sense mode is off. It's default mode

Off *



2.5.2 Auto Sense Mode on

The scanner can sense barcode for decoding automatically.

On



2.5.3 Repeat Barcode Detection

Use for decode same barcode of interval time, it will decode only one time if not exceeded set time.

750ms*



500ms



1s



2s



2.6 Light Configuration

2.6.1 LED Indicator Light

On *



Off



2.7 Buzzer Configuration

2.7.1 Volume Setting

High *



Low



2.7.2 Prompt Tone Setting

On *



Off



2.7.3 Successful Decode Prompt Tone Setting

On *



Off



2.7.4 Successful Decode Prompt Audio Frequency Setting (Tone)

1 *



2



3



Custom



2.7.5 Successful Decode Prompt Duration

Setting

Long *



Short



2.7.6 Error Warning Prompt Frequency Setting (Tone)

There will be four consecutive error warning tones if data transmission fails, and a single error warning tone when the unrecognized configuration code is scanned.

Low *



Middle



High



2.8 Prefix and Suffix Configuration

2.8.1 Start Character

None*



STX



2.8.2 Terminal Character

CR / LF*



TAB



ETX



Enter



LF



None



2.9 Custom Prefix

2.9.1 Output Options

Off *



On



2.9.2 Edit

Clear All Custom Prefix



Set Custom Prefix



(Please set up ID Table ,Data, and edit barcode refer to the appendix after scanning.)

2.10 Custom Suffix

2.10.1 Output Options

Off *



On



2.10.2 Edit

Clear All Custom Suffix



Set Custom Suffix



(Please set up ID Table ,Data, and edit barcode refer to the appendix after scanning.)

2.11 Code ID

2.11.1 Output Options

Off *



Before Switch on



After Switch on



2.11.2 Edit

Clear All Custom Prefix



Set Custom Prefix



(Please set up ID Table ,Data, and edit barcode refer to the appendix after scanning.)

2.12 AIM ID

2.12.1 Output Options

Off *



Before Switch on



After Switch on



2.13 Barcode Prefix and Suffix Order Selection

2.13.1 Prefix

Start Character+CODE ID+AIM ID+Custom Prefix *



Start Character+ Custom Prefix + CODE ID+AIM ID



2.13.2 Suffix

Custom Suffix+CODE ID+AIM ID+Terminal Character *



CODE ID+AIM ID+Custom Suffix+Terminal Character



2.14 Inverse Color Barcode Selection

(Only 1D/ DataMatrix / Aztec)

Normal Color



Inverse Color



Both (Normal / Inverse)



2.15 Center Mode

On



Off *



Chapter 3 – Symbology

3.1 Enable / Disable All barcodes

Enable all barcodes will low down decoding speed. So, we suggest you switch on scanner when needed. (Default is switch on state)

Enable All



Disable All



3.1.1 Enable / Disable All 1D barcodes

Enable All



Disable All



3.1.2 Enable / Disable All 2D barcodes

Enable All



Disable All



Note: For the default values of each symbology's length within range, please refer to [Appendix C](#).

3.2 Codabar

Enable



Disable



3.2.1 Codabar Start / Terminal Character

Not Send Codabar Start/Terminal Character *



Send Codabar Start/Terminal Character



3.2.2 Set Length Range For Codabar

Minimum Length (0~50bit)



Maximum Length (0~50bit)



3.3 Code 39

Enable



Disable



3.3.1 Code 39 Parity Check

Disable *



Enable But Not Transfer



Enable & Transfer



3.3.2 Code 39 Full ASCII

Enable



Disable *

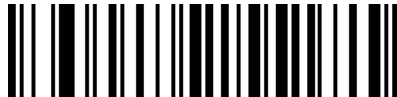


3.3.3 Set Length Range For Code 39

Minimum Length (0~50bit)



Maximum Length (0~50bit)



3.3.4 Code 32 (Enable code39 first)

Enable



Disable



3.3.5 Code 32 Prefix

Enable



Disable



3.4 Interleaved 2 of 5 (ITF25)

Enable



Disable



3.4.1 Interleaved 2 of 5 (ITF25) Check Bit

Disable Check Bit *



Enable Check and Not Send Check Bit



Enable Check & Send Check Bit



3.4.2 Interleaved 2 of 5 (ITF25) Length Selection

Random Length (6-50bit) *



6 Bit



8 Bit



10 Bit



12 Bit



14 Bit



16 Bit



18 Bit



20 Bit



22 Bit



24 Bit



3.4.3 Set Length Range For Interleaved 2 of 5

Minimum Length (0~50bit)



Maximum Length (0~50bit)



3.5 Industrial 2 of 5

Enable



Disable



3.5.1 Set Length Range For Industrial 2 of 5

Minimum Length (0~50bit)



Maximum Length (0~50bit)

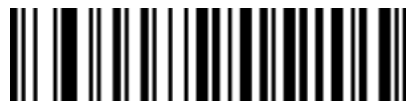


3.6 Matrix 2 of 5 (4-24bit)

Enable



Disable



3.6.1 Set Length Range For Matrix 2 of 5

Minimum Length (0~50bit)



Maximum Length (0~50bit)



3.7 Code 93

Enable



Disable



3.7.1 Set Length Range For Code 93

Minimum Length (0~50bit)



Maximum Length (0~50bit)



3.8 Code 11

Enable



Disable



3.8.1 Code 11 Parity Check Output

Enable



Disable *



3.8.2 Code 11 Parity Selection

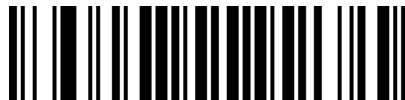
Disable *



1 Bit



2 Bit



3.8.3 Set Length Range For Code 11

Minimum Length (0~50bit)



Maximum Length (0~50bit)



3.9 Code 128

Enable



Disable



3.9.1 Set Length Range For Code 128

Minimum Length (0~50bit)



Maximum Length (0~50bit)



3.10 GS1-128

Enable



Disable



3.11 UPC-A

Enable



Disable



3.11.1 UPC-A Check Bit

Send UPC-A Check Bit *



Not send UPC-A Check Bit



3.11.2 UPC-A Convert to EAN-13

Disable UPC-A convert to EAN-13 *



Enable UPC-A convert to EAN-13



3.11.3 Do Not Send UPC-A Lead-digit



Do Not Send UPC-A Lead-digit

3.12 UPC-E

Enable



Disable



3.12.1 UPC-E Check Bit

Send UPC-E Check Bit *



Not send UPC-E Check Bit



3.12.2 UPC-E Expand to UPC-A

Enable



Disable *



3.12.3 Do Not Send UPC-E Lead Digit

Do Not Send UPC-E Lead Digit



3.13 EAN/JAN-8

Enable



Disable



3.13.1 EAN-8 Convert to EAN-13

Disable EAN-8 convert to EAN-13



Enable EAN-8 convert to EAN-13



3.13.2 EAN-8 Check Digit

Send EAN-8 Check Digit *



Do Not Send EAN-8 Check Digit



3.14 EAN/JAN-13

Enable



Disable



3.14.1 UPC/EAN/JAN Add on code

Ignore UPC/EAN/JAN *



Decode UPC/EAN/JAN



Custom UPC/EAN/JANA add on code



3.14.2 EAN13 Convert to ISBN

Enable



Disable *



3.14.3 EAN13 Convert to ISSN

Enable



Disable *



3.14.4 EAN13 Check Digit

Send EAN-13 Check Digit *



Do Not Send EAN-13 Check Digit



3.15 GS1 DataBar (RSS14)

Enable



Disable



3.15.1 GS1 DataBar Limited

Enable



Disable



3.15.2 GS1 DataBar Expanded

Enable



Disable



3.16 PDF417

Enable



Disable



3.17 Micro PDF417

Enable



Disable



3.18 QR Code

Enable



Disable



3.19 QR Code URL Link

Enable



Disable



3.20 Micro QR

Enable



Disable



3.21 Data Matrix

Enable



Disable



3.22 Aztec Code

Enable



Disable



Appendix A – ASCII Character Sets

A-1 Visible Character ASCII Table

Decimal	Hexadectimal	Character	Decimal	Hexadectimal	Character	Decimal	Hexadectimal	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	“	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c
36	24	\$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	66	f
39	27	'	71	47	G	103	67	g
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q

Decimal	Hexadectimal	Character	Decimal	Hexadectimal	Character	Decimal	Hexadectimal	Character
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	s
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w
56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C	|
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_			

A-2 Barcode Type ID Table

Code type	HEX	CODE ID(Default)
All codes	99	
Codabar	61	a
Code128	6A	j
Code32	3C	<
Code93	69	i
Code39	62	b
Code11	48	H
EAN-13	64	d
EAN-8	64	d
GS1 DataBar	52	R
GS1-128 (EAN-128)	6A	j
2 of 5		
Interleaved 2 of 5	65	e
Matrix 2 of 5	76	v
Industry 2 of 5/IATA	44	D
UPC-A	63	c
UPC-E	63	c
ISBN	42	B
ISSN	6E	n
MSI	6D	m
Aztec Code	7A	z
DataMatrix	75	u
PDF417	72	r
Micro PDF417	53	S
QR Code	51	Q
Micro QR Code	51	Q

A-3 AIM ID Table

Code type	AIM ID	Description
Codabar	]Fm	m: 0~1
Code128	]C0	m: 0, 1, 2, 4
Code32	]A0	
Code93	]G0	
Code39	]Am	m: 0, 1, 3, 4, 5, 7
Code11	]Hm	m: 0, 1, 3, 8, 9
EAN-13 / EAN-8	]Em	m: 0, 1, 3, 4
GS1 DataBar	]e0	
GS1-128 (EAN-128)	]C1	
Interleaved 2 of 5	]Im	m: 0, 1, 3
Matrix 2 of 5	]X0	
Industry 2 of 5	]S0	
UPC-A/ UPC-E	]Em	m: 0, 3
ISBN	]X0	
ISSN	]X0	
Aztec Code	]z0	
DataMatrix	]dm	m: 0~6
PDF417 / Micro PDF417	]Lm	m: 0~5
QR Code / Micro QR Code	]Qm	m: 0~6

A-4 Control Character Set (USB keyboard mode)

Decimal	Hexadecimal	Corresponding key value (disable CODE ID)	Corresponding key value (enable CODE ID)
0	00	reserve	Ctrl+@
1	01	Insert	Ctrl+A
2	02	Home	Ctrl+B
3	03	End	Ctrl+C
4	04	Delete	Ctrl+D
5	05	PageUp	Ctrl+E
6	06	PageDown	Ctrl+F
7	07	ESC	Ctrl+G
8	08	Backspace	Ctrl+H
9	09	Tab	Ctrl+I
10	0A	Enter (The configuration of CRLF processing decide how it express)	Ctrl+J
11	0B	Caps Lock	Ctrl+K
12	0C	Print Screen	Ctrl+L
13	0D	Enter (The configuration of CRLF processing decide how it express)	Ctrl+M
14	0E	Scroll Lock	Ctrl+N
15	0F	Pause/Break	Ctrl+O
16	10	F11	Ctrl+P
17	11	Direction key ↑	Ctrl+Q
18	12	Direction key ↓	Ctrl+R
19	13	Direction key ←	Ctrl+S
20	14	Direction key →	Ctrl+T
21	15	F12	Ctrl+U
22	16	F1	Ctrl+V
23	17	F2	Ctrl+W
24	18	F3	Ctrl+X
25	19	F4	Ctrl+Y
26	1A	F5	Ctrl+Z

27	1B	F6	Ctrl+[
28	1C	F7	Ctrl+\
29	1D	F8	Ctrl+]
30	1E	F9	Ctrl+^
31	1F	F10	Ctrl+_

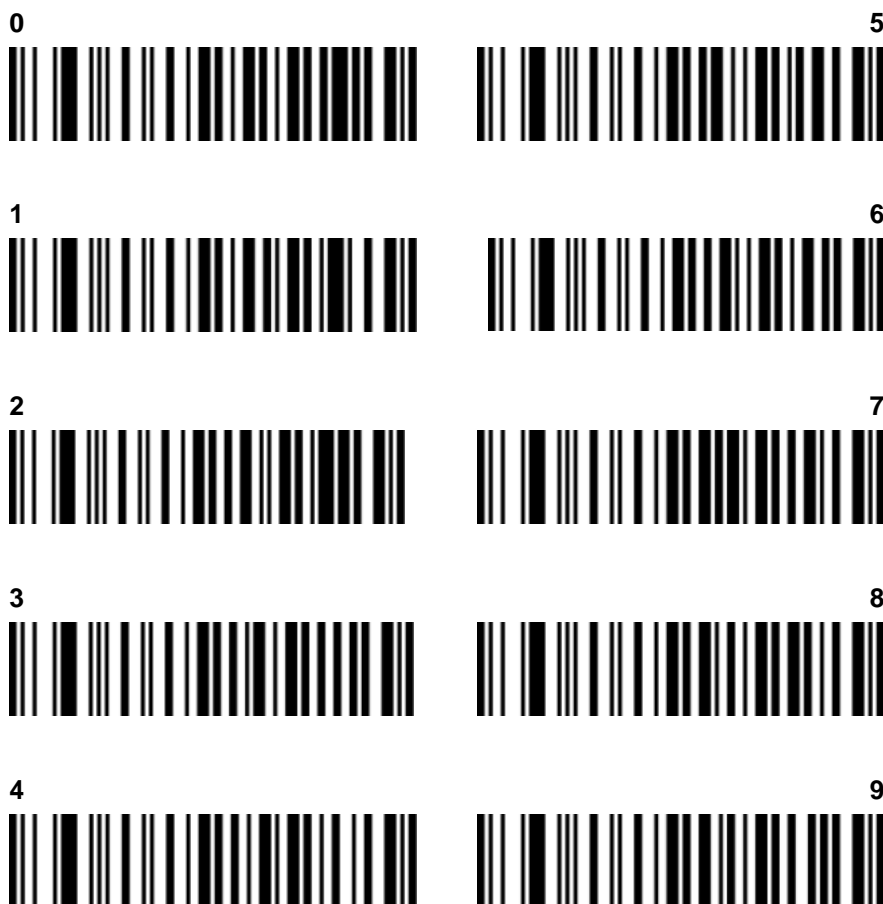
A-5 Control Character Set (RS232, USB, VCP)

Decimal	Hexadecimal	Character
0	00	NUL
1	01	SOH
2	02	STX
3	03	ETX
4	04	EOT
5	05	ENQ
6	06	ACK
7	07	BEL
8	08	BS
9	09	HT
10	0A	LF
11	0B	VT
12	0C	FF
13	0D	CR
14	0E	SO
15	0F	SI

Decimal	Hexadecimal	Character
16	10	DLE
17	11	DC1
18	12	DC2
19	13	DC3
20	14	DC4
21	15	NAK
22	16	SYN
23	17	ETB
24	18	CAN
25	19	EM
26	1A	SUB
27	1B	ESC
27	1B	ESC
28	1C	FS
29	1D	GS
30	1E	RS
31	1F	US

Appendix B – Numeric Barcodes

B-1 Data and Edit barcode



A



B



C



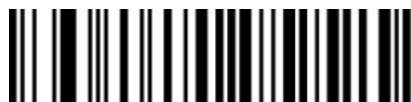
D



E



F



Cancel current setting



Cancel a string of data from previous read



Cancel the data from previous read



Save



Appendix C – The Default Value Of Each Symbology's Length Within Range

Symbology	Default Minimum Length	Default Maximum Length
Codabar	4	50
Code 93	4	50
Code 39	4	50
Code 32	4	50
Interleaved 2 of 5	6	50
Code 11	4	50
Industrial 2 of 5	4	50
Matrix 2 of 5	4	50
GS1 DataBar Omnidirectional	4	50
PDF 417	ANY LENGTH	ANY LENGTH
Micro PDF417	ANY LENGTH	ANY LENGTH
UPC-A	4	50
UPC-E	4	50
EAN-8	4	50
EAN-13	4	50
Code 128	4	50
GS1 128	4	50
ISBT 128	4	50
Data Matrix	ANY LENGTH	ANY LENGTH
QR Code	ANY LENGTH	ANY LENGTH
QR Code URL Link	ANY LENGTH	ANY LENGTH
Micro QR Code	ANY LENGTH	ANY LENGTH
Aztec	ANY LENGTH	ANY LENGTH