unitech
because we care

Wireless Ring Barcode Scanner

- MS650 -

User's Manual

Version 1.0

Change Log

Date	Change Description	Version
2017/7/7	first published version	1.0

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.

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 numerique de la classe B respecte les exigences du Reglement sur le material 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

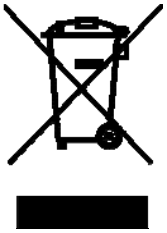
CE

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

低功率電波輻射性電機管理辦法

第十二條：經型式認證合格之低功率射頻電機，非經許可，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。

第十四條：低功率射頻電機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。
前項合法通信，指依電信法規定作業之無線電通信。
低功率射頻電機需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, 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 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
- 如果更换不正确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 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		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:**	+81-3-35232766
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:**	Kayabacho Nagaoka Building 8F.,1-5-19 Shinkawa, Chuo-Ku, Tokyo, 104-0033, 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:	+1-714-8926400		
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 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 MS650 gift box.
If something is missing or damaged, please contact your unitech representative.

The standard package contents:

- MS650 Wireless Ring Barcode Scanner
- Quick Start Guide
- Regulatory Compliance Statements
- USB Charger Cable
- Spare Velcro Strap

1.2 Product Detail

- Scanner Detail

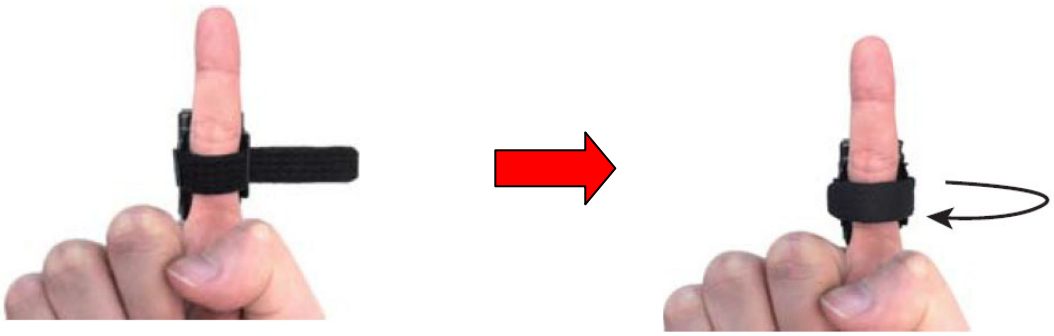
1.3 Specifications

Sensor	Linear Image Sensor	
Resolution	4mil/ 0.1mm	
Indicator	LED, Buzzer	
PCS	30%	
Housing	Plastic(PC+ABS)	
Profile	BT HID, USB HID, USB VCP, Batch Mode	
Battery Life	6000 scans (1 scan/ 5 sec)	
Scanner Dimension	W29 x L46.5 x H27 mm	
Scanner Weight	20.5g (including Velcro strap)	
Charge Time	2.5 hours (fully charged)	
Radio	Bluetooth 4.1 (Class2)	
Coverage	10M/33ft. (line of sight)	
Symbologies	All major 1D barcodes incl. GS1 Databar	
Radio	Transmitter Frequency	Maximum Output Power
Bluetooth	2402 ~ 2480 MHz	4 ± 1dBm

1.4 Getting Started

1.4.1 How to put on MS650

Step 1. Pull open the long strap and insert your index finger through the loop.
Step 2. Adjust and attach the long strap for a comfortable fit.



Step 3. Clench your fist and use your thumb to tap the touch-activated trigger button.

Step 4. Aim at the barcode you wish to scan.

1.4.2 How to set parameters

1. Use the scanner to scan at the bar code representing the function/ parameter you want to set.

2. When you hear two beeps, the new settings have been defined or updated permanently to the scanner.

Default parameters are indicated in bold type and underlined characters. The character font is ARIAL BLACK.
Most settings require only a single bar code, but a few need several different bar codes to be scanned in order to completely define a setting (i.e Multi-step Configurations). They are:

Preamble / Postamble (maximum 16 digits)
Step 1: Scan CLR PRE/POSTAMBLE.
Step 2: Scan PREAMBLE or POSTAMBLE.
Step 3: Scan 1 ~ 16 alphanumeric from Full ASCII table.
Step 4: Scan PREAMBLE or POSTAMBLE.

Min Length / Max Length
Step 1: Scan MIN LENGTH or MAX LENGTH.
Step 2: Scan two digits from Full ASCII table - Numbers.
Step 3: Scan MIN LENGTH or MAX LENGTH.

Set Code ID (Example: Code 39)
Step 1: Scan CODE 39 SET ID.
Step 2: Scan either one or two alphanumerics (maximum 2 digits) from Full ASCII table.
Step 3: Scan CODE 39 SET ID.

Set Data Format

Step 1: Scan DATA FORMAT

Step 2: Scan 1 ~ 3 digits from Full ASCII Table - Numbers

Step 3: Scan DATA FORMAT

Set Field Separator

Step 1: Scan FIELD SEPARATOR

Step 2: Scan one alphanumeric character from Full ASCII Table

Step 3: Scan FIELD SEPARATOR

Set Date/Time

Step 1: Scan SET DATE/TIME

Step 2: Scan 6 digits from Full ASCII Table - Numbers

Step 3: Scan SET DATE/TIMESet

Date/Time Format

Step 1: Scan SET DATE/TIME FORMAT

Step 2: Scan 2 digits from Full ASCII Table - Numbers

Step 3: Scan SET DATE/TIME FORMAT

Note :

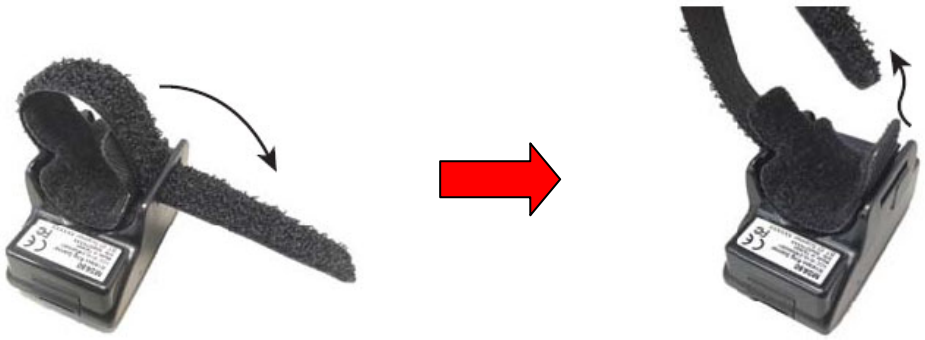
1. The scanner will beep three times as indication that a setting is not yet complete or unexpected barcode is scanned during multi-step configuration.

2. If you make a mistake, forget a step, etc., and want to abort the multi-step configuration, scan RESET/ABORT and start over again.

1.4.3 How to remove Velcro strap

Step 1. Pull open the long strap.

Step 2. Pull out the long strap through the slot.



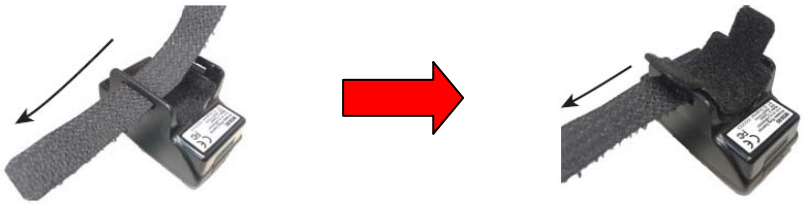
Step 3. Pull open the short strap on the other side.

Step 4. Keep pulling the short strap until the whole velcro strap is removed from the scanner.

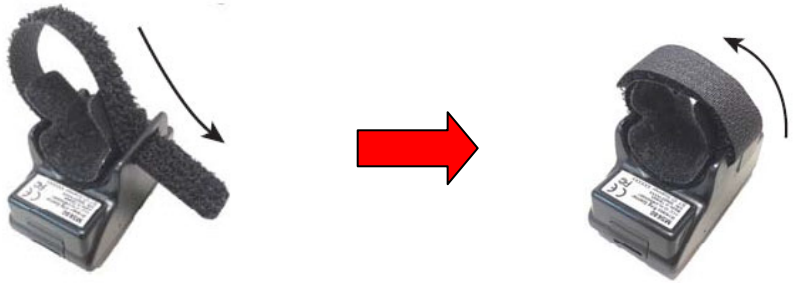
1.4.4 How to install Velcro strap

▪ For right handed user :

Step 1. Insert the long strap through the left slot, with velcro side facing downwards.
Step 2. Pull the long strap to the end.

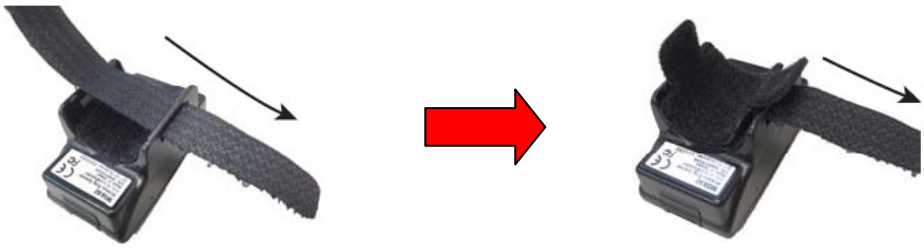


Step 3. Insert the long strap through the other slot, with velcro side facing downwards.
Step 4. Attach the long strap to itself to close.

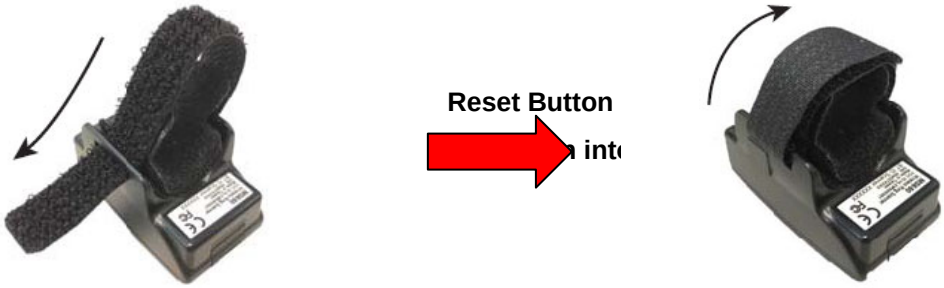


▪ For left handed user :

Step 1. Insert the long strap through the right slot, with velcro side facing downwards.
Step 2. Pull the long strap to the end.

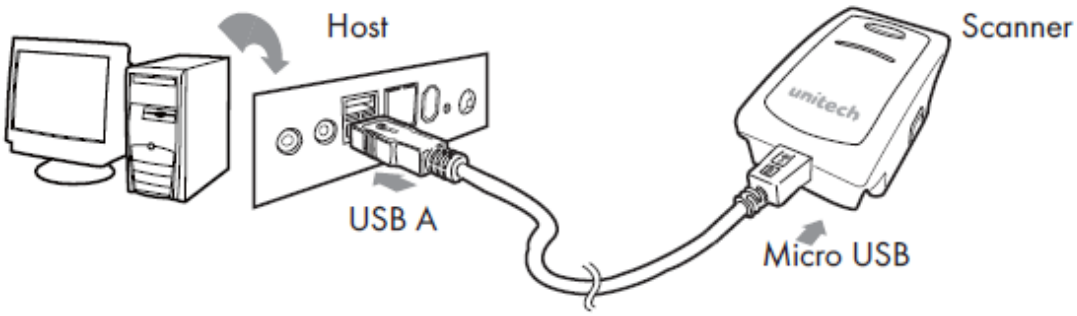


Step 3. Insert the long strap through the other slot, with velcro side facing downwards.
Step 4. Attach the long strap to itself to close.



1.5 Battery Charging

1. Flip open the micro USB port on the scanner.
2. Insert the micro USB connector into the port on the scanner and USB A connector into a USB port on the host PC.
3. Keep charging until the red LED indicator turns off.



1.6 LED Indicator / Beeper Sequence

Status	Green LED	Blue LED	Red LED	Beeper
Successful Barcode Scan	1 Flash			1 Beep
Successful Connection	2 Flashes			2 Beeps
Reads Configuration Barcode	1 Flash			2 Beeps
Barcode Scan in Batch Mode	1 Flash			1 Beep
Wireless Disconnection	3 Flashes			3 beeps
Unexpected Barcode Scan during Configuration	1 Flash			3 Short Beeps
Memory Full	1 Flash			3 Short Beeps
Barcode Scan while Disconnected	1 Flash			3 Short Beeps
Poor Connection (Out of Range)	1 Flash			4 Beeps (Hi-Lo-Hi-Lo)
Low Power			Flashing	5 Beeps
Bluetooth Discoverable		Flashing		
Power Off or Standby				

Chapter 2 - Installation

2.1 Interface

2.1.1 BT HID

Emulates a **Bluetooth HID keyboard** that transmits each barcode data to the host after decode. Please scan the barcode below.

BT HID

2.1.2 Batch Mode

Emulates a **USB mass storage device** that saves each barcode data during off-line data collection. Please scan the barcode below.

Batch Mode

2.1.3 USB HID

Emulates a **USB keyboard** that transmits each barcode data to the host after decode. Barcode data is sent via USB cable directly.
Please scan the barcode below.

USB HID

2.1.4 USB VCP

Emulates a **USB virtual com device** that transmit each barcode data to the host after decode. Barcode data is sent via USB cable directly.
Please scan the barcode below.

USB VCP

2.2 BT – HID

2.2.1 BT-HID Getting Connected

Step 1. Scan **[Disconnect]** to delete previous pairing record. Alternatively, you may long-press the function button for 5 seconds until the scanner emit two beeps.

Disconnect

Step 2. Scan **[BT - HID]**; the scanner will emit two beeps.

BT-HID

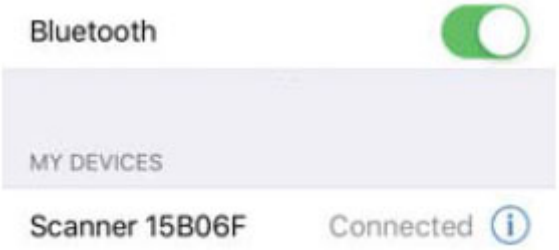
Step 3. Scan either one of below barcodes according to your host system.

iOS/MAC/WINDOWS

ANDROID

Step 4. Select "Scanner XXXXXX" on the discovered device list of your Bluetooth. ("XXXXXX" are the last 6 digits of MAC address which can also be found on the product label)

Step 5. The scanner will emit two beeps to verify the connection.



BT-HID-Smart phone/Tablet touch Keyboard

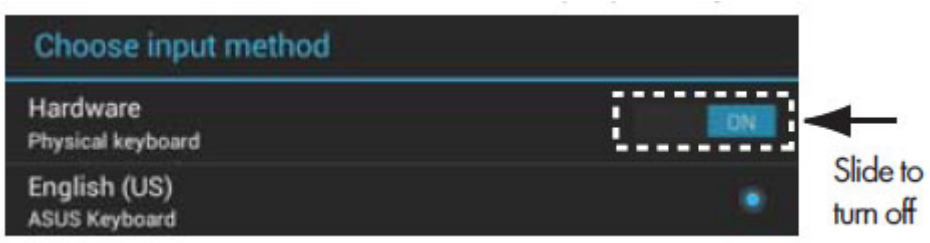
■ iOS

While connected with the scanner, the Touch Keyboard on theiOS device might disappear. To resolve this issue, please simplypress the function button to toggle iOS Touch Keyboard.

■ Android

While connected with the scanner, the Touch Keyboard on theAndroid smartphone or tablet might disappear. To resolve thisissue, please change settings on Android device with below steps:

1. Enter "Settings"
2. Enter "Language & input"
3. Tap on "Default keyboard"
4. Turn off "Physical keyboard", or Turn on "On-screen keyboard" and the Touch Keyboard will function properly again.



2.3 Power Off Timeout

2.3.1 Variable Timeout

The timeout is 30 seconds by default, and is programmable to the second and minute, ranging from 10 seconds (00:10) to 60minutes and 60 seconds (60:60)

For example, to set the timeout as 5 minutes 30 seconds:

1. Scan [Set Minute]
2. Scan [0] & [5] on below numeric barcode table.
3. Scan [Set Minute]
4. Scan [Set Second]
5. Scan [3] & [0] on below numeric barcode table.
6. Scan [Set Second]

Set Minute
(Range: 00~ 60)

Set Second
(Range: 00~ 60)

Disable Time out
(Scanner always On)

Note: *This will cause the battery to drain quickly.*

2.3.2 Numeric Barcodes

1 2 3 4 5

6 7 8 9 0

2.4 Batch Mode

2.4.1 Batch Mode, Delete Record

After scanning the above barcode, the scanner will be able to collect barcodedata 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 cable, access removable storage device "**MiniScan**" from which you may open or copy the file "**BARCODE.txt**" to your computer.

To exit Batch Mode, simply scan any other **interface barcode** in **INTERFACE** section.

Batch Mode

2.4.2 Delete Last Record

Delete Last Record

To delete ONE stored data, please scan below barcode or press function button.

Clear All Record –
To delete ALL stored data, simply delete the file "**BARCODE.txt**" in there movable storage device "**MiniScan**" until you hear two beeps.

2.4.3 Data Format, Date & Time Setup

The default Data Format for Batch Mode is <Date>, <Time>, <Barcode Data>below are items and their setup codes:

Code	Item	Code	Item
2	Date	4	Barcode Data
3	Time		

Data Format

Example:

To change Data Format to **<Barcode Data>, <Date>, <Time>**

1. Scan [Data Format]
2. Scan [4], [2], [3] on Appendix A.
3. Scan [Data Format]

Field Separator

Default is comma (,) . You may replace it with any alphanumeric characters from the full ASCII table.

Example:
To change Field Separator to Semicolon (;)
1. Scan [Field Separator]
2. Scan [;] from the full ASCII table on Appendix A.
3. Scan [Field Separator]

Set Date

Example:
To set Date to 2018-08-01 (Year-Month-Day):
1. Scan [Set Date]
2. Scan [1], [8], [0], [8], [0], [1] on Appendix A.
3. Scan [Set Date]

Set Time

Example:
To set Time to 08:10:30 am (Hr:Min:Sec)
1. Scan [Set Time]
2. Scan [0], [8], [1], [0], [3], [0] on Appendix A.
3. Scan [Set Time]

Note: *Full drain of battery may cause the Time and Date to stop.*

To avoid this, please fully charge the scanner for at least 1 hour before use.

2.4.4 Date Format

The default Date Format for Batch Mode is DD/MM/YYYY (Code = 09), below is full list of available formats and their setup codes:

Code	Format	Code	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

Date Format

Example:

To set Date Format to MM/DD/YY (Code =12)

1. Scan [Date Format]
2. Scan [1], [2] on Appendix A.
3. Scan [Date Format]

2.4.5 Time Format

The default Time Format for Batch Mode is HH:MM:SS (Code = 01),below are available formats and their setup codes:

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

Time Format

Example:

To set Time Format to HH:MM (Code = 02)

1. Scan [Time Format]
2. Scan [0], [2] on Appendix A.
3. Scan [TimeFormat]

Chapter 3 – Symbology

3.1 Enable / Disable Symbologies

Enable	Disable
ENABLE ALL CODE	DISABLE ALL CODE
CODE 32	CODE 32
CHINA POSTAL CODE	CHINA POSTAL CODE
UK PLESSEY CODE	UK PLESSEY CODE
INDUSTRIAL 2 OF 5	INDUSTRIAL 2 OF 5
MATRIX 2 OF 5	MATRIX 2 OF 5
INTERLEAVED 2 OF 5	INTERLEAVED 2 OF 5
CODE 128	CODE 128
CODABAR	CODABAR
TELEPEN	TELEPEN

Enable	Disable
UPC-A	UPC-A
UPC-E	UPC-E
EAN-8	EAN-8
EAN-13	EAN-13
MSI	MSI
CODE 39	CODE 39
CODE 11	CODE 11
CODE 93	CODE 93
EAN-128	EAN-128
IATA	IATA

3.2 China Postal Code

For MIN/MAX Length setting procedure, please refer to Appendix A.

Enable	Disable
 **GS1 Databar ENABLE**	 **GS1 Databar DISABLE**
 **GS1 Databar STACKED ENABLE**	 **GS1 Databar STACKED DISABLE**
 **GS1 Databar LIMITED ENABLE**	 **GS1 Databar LIMITED DISABLE**
 **GS1 Databar EXPANDED ENABLE**	 **GS1 Databar EXPANDED DISABLE**
 **GS1 Databar EXPANDED STACKED ENABLE**	 **GS1 Databar EXPANDED STACKED DISABLE**

China Postal Code (TOSHIBA Code)

 **ENABLE**

 **DISABLE**

 **DISABLE CDV**

 **CDV & SEND CD**

 **CDV & NOT SEND CD**

 **MIN LENGTH (11)**

 **MAX LENGTH (48)**

3.3 MSI Code, UK Plessey Code

For MIN/MAX Length setting procedure, please refer to Appendix A.

MSI

ENABLE

DISABLE

CDV & SEND CD

CDV & NOT SEND CD

CHECK DIGIT DOUBLE MOD 10

CHECK DIGIT DOUBLE 11 PLUS MOD 10

CHECK DIGIT SINGLE MOD 10

MAX LENGTH (48)

MIN LENGTH (6)

UK PLESSEY CODE

ENABLE

DISABLE

CDV & SEND CD

CDV & NOT SEND CD

3.4 Code 93, Telepen , IATA

For MIN/MAX Length setting procedure, please refer to Appendix A.

Code 93

ENABLE

DISABLE

MIN Length (6)

MAX Length (48)

TELEPEN

ENABLE TELEPEN

DISABLE TELEPEN

TELEPEN ASCII

TELEPEN NUMBER

IATA

ENABLE

DISABLE

DISABLE CDV

CDV & SEND CD

CDV & NOT SEND CDV

MIN LENGTH (6)

MAX LENGTH (48)

3.5 Interleaved 2 of 5, Code 11

For MIN/MAX Length setting procedure, please refer to Appendix A.

Interleaved 2 of 5

ENABLE

DISABLE

DISABLE CDV

CDV & SEND CD

CDV & NOT SEND CD

First digit suppressed

Last digit suppressed

No suppressed

MIN LENGTH (6)

MAX LENGTH (48)

Code 11

ENABLE

DISABLE

DISABLE CDV

CDV & SEND CD

CDV & SEND CD (1 digit)

CDV & SEND CD (2 digits)

CDV & NOT SEND CD

MIN LENGTH (6)

MAX LENGTH (32)

3.6 Industrial 2 of 5, Matrix 2 of 5

For MIN/MAX Length setting procedure, please refer to Appendix A.

Industrial 2 of 5

ENABLE

DISABLE

DISABLE CDV

CDV & SEND CD

CDV & NOT SEND CD

MIN LENGTH (6)

MAX LENGTH (48)

Matrix 2 of 5

ENABLE

DISABLE

DISABLE CDV

CDV & SEND CD

CDV & NOT SEND CD

MIN LENGTH (6)

MAX LENGTH (48)

3.7 Codabar

For MIN/MAX Length setting procedure, please refer to Appendix A.

Codabar	Start / Stop	CLSI format
ENABLE	ST/SP: abcd/ abcd	CLSI FORMATION ON
DISABLE	ST/SP: ABCD/ABCD	CLSI FORMATION OFF
DISABLE CDV	ST/SP: ABCD / TN*E	
CDV & SEND CD	ST/SP: abcd/tn*e	
CDV & NOT SEND CD	SEND START / STOP	
MIN Length (6)	Not send START / STOP	
MAX Length (48)		

CLSI FORMAT

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

Example of ST (Start) / SP (Stop)

123456	Not Transmit ST/SP
A123456B	ST/SP: ABCD/ABCD
a123456b	ST/SP: abcd/abcd
A123456N	ST/SP: ABCD/TN*E
a123456n	ST/SP: abcd/tn*e

3.8 ABC-Codabar CX-Codabar

ABC-Codabar

 **On**

 **Off**

 **Set insert Data ***

** The data can be any alphanumerics of FULL ASCII Table*

 **Insert Data On**

 **Insert Data Off**

Remark :

ABC-CODABAR (American Blood Commission). The ABC Code is an acronym for American Blood Commission. This bar code is a variant of the CODABAR Code developed for the use in the blood bank. This Code consists of two bar codes which are decoded in one read cycle. The code is concatenated when the stop character of the first bar code and the start character of the second bar code is a " D ", these two " D " are not transmitted.

CX Code-Codabar

 **On**

 **Off**

 **Set insert Data ***

** The data can be any alphanumerics of FULL ASCII Table*

 **Insert Data On**

 **Insert Data Off**

Remark :

The CX-Code consists of two bar codes which are decoded in one read cycle, the code is concatenated when the stop character of the first bar code is a C, and the start character of the second bar code is a B. The B and C characters are not transmitted**.**

3.9 Codabar coupling, Adjacent Required

Codabar Coupling

 **On**

 **Off**

 **Set insert Data ***

** The data can be any alphanumerics of FULL ASCII Table*

 **Insert Data On**

 **Insert Data Off**

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

Adjacent Required

 **On**

 **Off**

If CODABAR ADJACENT is enabled, the scanner will only read two adjacent Codabar bar codes; a single bar code will not be read.

Notes:

1. Both ABC-Codabar and CX-Codabar can be enabled together, except when Codabar-Coupling is also enabled.
2. If ABC-Codabar, CX-Codabar, and Codabar-Coupling are all enabled at the same time, the scanner will read only Codabar- Coupling, that is, ABC-Codabar, CX-Codabar will be considered coupling formats.

Setting Procedure – Set Insert Data

Step 1- Scan SET INSERT DATA.

Step 2- Scan any combination of alphanumeric characters from FULL ASCII Table.

Step 3- Scan SET INSERT DATA.

 **Reset**

Notes :

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

3.10 Standard & Full ASCII 39, Code 32

For MIN/MAX Length setting procedure, please refer to Appendix A.

Standard Code 39 & Full ASCII 39


ENABLE


DISABLE


DISABLE CDV


CDV & SEND CD

CDV & NOT SEND CD

Full ASCII Code 39 Enable

Full ASCII Code 39 Disable


MIN LENGTH (1)


MAX LENGTH (48)


Start / Stop –Send


Start / Stop –Not Send

Note:

The default for Code 39 is Standard Code 39. If Full ASCII Code 39 is enabled, Standard Code 39 will be automatically disabled.

Code 32


ENABLE


DISABLE


Leading Send


Leading Not Send


Tailing Send


Tailing Not Send

3.11 UPC-E

UPC-E

ENABLE

DISABLE

Lead Digit Send

Lead Digit No Send

Check Digit Send

Check Digit No Send

Add on Supplement

+5 On

+5 Off

+2 On

+2 Off

Add a Space On

Add a Space Off

Addenda Required On

Addenda Required Off

Note:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-E bar code that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

3.12 UPC-E System Number

UPC-E0

E (0) OFF

E (0) ON

UPC-E1

E (1) ON

E (1) OFF

Note:

Most UPC bar codes lead with 0 number systems, for these barcodes use UPC E(0) selection. For the bar codes that lead with the 1 number, use UPC E(1) selection.

UPC-E EXPAND

Enable

Disable

Notes:

1. If UPC-E EXPAND TO UPC A FORMAT is enabled, the output of UPC-A will be 12 digits.
2. The default output of UPC-A is 12 digits, if UPC-A EXPAND TO EAN13 is enabled, a zero will be added to in front of the bar code.

3.13 UPC-A

UPC-A	UPC-A Expand to EAN-13	Add on Supplement
		
ENABLE	**ENABLE**	**+5 On**
		
DISABLE	**DISABLE**	**+5 Off**
		
Lead Digit Send		**+2 On**
		
Lead Digit No Send		**+2 Off**
		
Check Digit Send		**Add a Space On**
		
Check Digit No Send		**Add a Space Off**
		
		Addenda Required On
		
		Addenda Required Off

Note:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-E bar code that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

3.14 EAN-8

EAN-8

ENABLE

DISABLE

Lead Digit Send

Lead Digit No Send

Check Digit Send

Check Digit No Send

Add on Supplement

+5 On

+5 Off

+2 On

+2 Off

Add a Space On

Add a Space Off

Addenda Required On

Addenda Required Off

Note:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-E bar code that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

3.15 EAN-13, ISBN, ISSN, ISMN

EAN-13

ENABLE

DISABLE

Lead Digit Send

Lead Digit No Send

Check Digit Send

Check Digit No Send

Add on Supplement

+5 On

+5 Off

+2 On

+2 Off

Add a Space On

Add a Space Off

Addenda Required On

Addenda Required Off

ISBN

ISBN OFF

ISBN ON

Notes:

1. If ADDENDA REQUIRED is set to ON, the scanner will only read an EAN-13 bar code that has an addenda.
2. Either ISSN or ISBN will be considered as an extension of EAN-13. If ISSN or ISBN needs to be read, EAN-13 must be enabled. If ISSN and ISBN need to be read with addenda, EAN-13 must be enabled with ADDENDA REQUIRED set to ON, and +2 ON or +5 ON must be enabled as well.

ISSN

ISSN OFF

ISSN ON

Note:

Both ISSN and ISBN are the extension codes of EAN-13.If scanner is required to read either ISSN or ISBN, EAN-13 must be enabled. Otherwise the scanner will not be able t read ISSN or ISBN.

ISMN

ISMN OFF

ISMN ON

3.16 EAN/UCC-128, Code 128

EAN / UCC-128

ENABLE

DISABLE

Code ID Enable

Code ID Disable

FUNC 1 Char Send

FUNC 1 Char Not Send

Define EAN 128

Notes: DEFINE EAN 128

The first FNC1 character is translated to]c1, and the secondFNC1 character is translated to an ASCII <GS> character.

String format :

]C1	DATA CHARACTERS	<GS>	DATA CHARACTERS

Setting Procedure:

1: Scan DEFINE EAN128.

2: Scan ASCII Code

3: Scan DEFINE EAN128.

Code 128

Enable

Disable

Min Length (5)

Max Length (48)

3.17 GS1 DataBar, Limited, Expanded

GS1 DataBar (RSS) - OMNI & STACKED

 GS1 DataBar ENABLE

 GS1 DataBar CHECK DIGIT SEND

 GS1 DataBar PREFIX SEND

 GS1 DataBar STACKED ENABLE

 GS1 DataBar SET ID

 GS1 DataBar DISABLE

 GS1 DataBar CHECK DIGIT NOT SEND

 GS1 DataBar PREFIX NOT SEND

 GS1 DataBar STACKED DISABLE

GS1 DataBar (RSS) - Limited

GS1 DataBar LIMITED ENABLE

GS1 DataBar LIMITED CHECK DIGIT SEND

GS1 DataBar LIMITED PREFIX SEND

GS1 DataBar LIMITED SET ID

GS1 DataBar LIMITED DISABLE

GS1 DataBar LIMITED CHECK DIGIT NOT SEND

GS1 DataBar LIMITED PREFIX NOT SEND

GS1 DataBar (RSS) - Expanded

GS1 DataBar EXPANDED ENABLE

GS1 DataBar EXPANDED STACKED ENABLE

GS1 DataBar EXPANDED MIN LENGTH

GS1 DataBar EXPANDED SET ID

GS1 DataBar EXPANDED DISABLE

GS1 DataBar EXPANDED STACKED DISABLE

GS1 DataBar EXPANDED MAX LENGTH

Chapter 4 – Command Settings

4.1 General setting

4.1.1 Default

Scan below bar code to restore the factory setting.

4.1.2 Check Version

Scan below bar code to check firmware version.

4.1.3 Reset / Abort

Scan below bar code to abort multi-step configuration.

4.1.3 Setup Code Read

Scan below bar code to set up code read.

Setup Code On

Setup Code Off

Caution:

Scanning SETUP CODE OFF will turn the scanner into unprogrammable state and the scanner will not react to any configuration barcode!

4.1.4 Function Code Conversion

Scan below bar code to set up function code conversion.

Enable

Disable

Caution:

Once disabled, the scanner will output the original encoded data of the barcodes in Full ASCII Table - Function/Navigation/Modifier Keys.

4.1.5 Reading Mode

Scan below bar code to set up reading mode.

Continuous Mode

- LED is always on.
- The trigger does not function in Continuous Mode.

Trigger Mode

- The LED will turn on when the trigger is pressed.
- The LED will go off when the trigger is released.

4.1.6 Button Preference

Scan below bar code to determine which touch-sensing button to enable according to your habit:

Right Button Only

- Recommended for left-handed user.

Left Button Only

- Recommended for right-handed user.

Both Buttons

4.1.7 Illumination Preference

Scan below bar code to determine which illumination button to enable according to your habit:

Laser always on
LED on after 1 sec

Laser always on
LED Auto-adaptive

Laser always on
LED always on

Laser off
LED always on

4.2 Beep Tone, Terminator

4.2.1 Beep Tone

Scan below bar code to set up beep tone.

Beep High

Beep Low

Beep Medium

Beep off

4.2.2 Terminator

Scan below bar code to set up terminator.

None

LF

CR

CR + LF

TAB

SPACE

ESC

Notes:

1. For the BT HID/ USB HID interface the default terminator is CR.
2. For the USB VCP interface the default terminator is CR+LF.
3. Below is the position of Terminator among output data string:[Preamble] [Symbology ID] [Barcode Length] [Barcode Data] [Postamble] [Terminator]
4. By default, with Preamble, Postamble, Barcode Length and Symbology IDdisabled, the scanner data output will be: [Barcode Data] [Terminator]

4.3 Send Data Length, Preamble & Postambnle

4.3.1 Send Data Length

Scan below bar code to send data length.

Send Data Length On

Send Data Length Off

4.3.2 Preamble & Postamble (Prefix and Suffix)

Scan below bar code to set up preamble & postamble.

Clear Pre / Postamble

Preamble

Postamble

Example :

Set PREAMBLE String as " ## "

POSTAMBLE String as " $$ "

Setting Procedure:

Step 1 : Scan : CLEAR PRE/ POSTAMBLE.

Step 2 : Scan : PREAMBLE.

Step 3 : Scan : " # " twice from Full ASCII Table.

Step 4 : Scan : PREAMBLE.

Step 5 : Scan : POSTAMBLE.

Step 6 : Scan : " $ " twice from Full ASCII Table.

Step 7 : Scan : POSTAMBLE.

Data Format :

[Preamble] [Symbology ID] [Barcode Length] [Barcode Data] [Postamble] [Terminator]

Notes:

1. A PREAMBLE is a string of up to 16 characters added to the beginning of a scanned barcode.
2. A POSTAMBLE is a string of up to 16 characters added to the end of a scanned barcode.
3. Default value for both: None.

4.4 Accuracy Adjustment

0

1

2

3

4

5

6`

7

8

9

Accuracy Adjustment

Accuracy Adjustment assures a more reliable decoded output.

Enabling the feature and setting a number from 1 to 9 subjects the decoded output a higher standard of accuracy. The higher the number, the greater the accuracy.

Setting Procedure:

1. Scan Accuracy Adjustment.
2. Scan one digit (1~9) from barcode menu above.
3. Scan Accuracy Adjustment.

Reset / Abort

1. The scanner will beep three times as indication that a setting is not yet complete or unexpected barcode is scanned during multi-step configuration
2. If you make a mistake, forget a step, etc., and want to abort the multi- step configuration, scan RESET/ABORT and start over again.

4.5 Code ID, Inverse Barcode

4.5.1 Enable Inverse Barcode

Disable Inverse Barcode

[Reads Positive Barcode Only]

Enable Inverse Barcode

[Reads Positive & Negative Barcodes]

4.5.2 Code ID / Symbology ID

Factory ID On

Aim ID On

Set ID On

Disable Code ID

1. Only ONE code ID will be sent.
2. The code ID is located at the position before the barcode data and after the preamble.

Data Format :

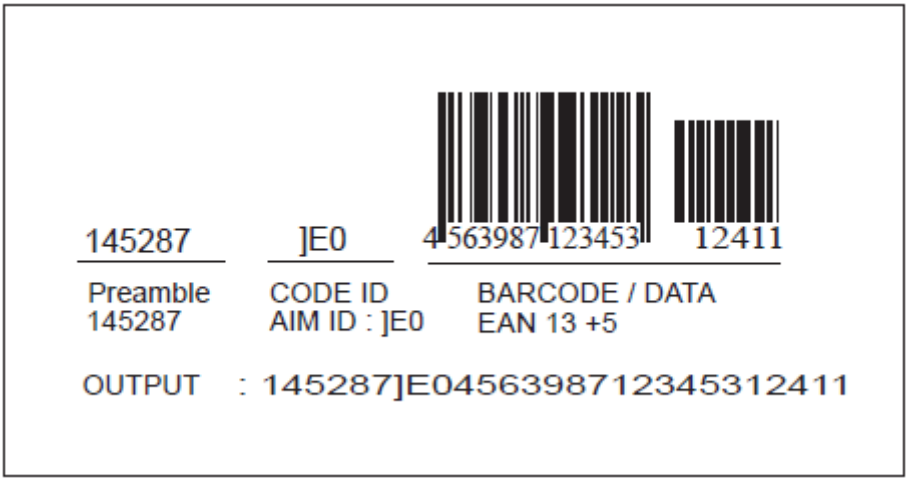
[Preamble] [Symbology ID] [Barcode Length] [Barcode Data] [Postamble] [Terminator]

EXAMPLE :

1.Preamble 145287,

2.Code ID: enable AIM ID,

3.Bar code symbologies : EAN 13+5



4.6 Symbologies Code Identifier

SYMBOLOGIES CODE ID IDENTIFIER					
Symbologies	Factory ID	AIM ID (new)	Symbologies	Factory ID	AIM ID (new)
EAN 128	T	]C1	MSI	O	]M0
Code 128	K	]C0	MSI(MOD 10 / CDV & not send CD)		]M1
EAN8(+2/+5 OFF)	S	]E4	Code 32	B	]X0
EAN8(+2 ON)		]E4	Codabar	N	]F0
EAN8(+5 ON)		]E4	Codabar(ABC Codabar)		]F1
UPC-E(+2/+5 OFF)	E	]E0	Codabar(CDV & Send CD)		]F2
UPC-E(+2 ON)		]E3	Codabar(CDV & not send CD)		]F4
UPC-E(+5 ON)		]E3	UK Plessey	P	]P0
UPC-A(+2/+5 OFF)	A	]E0	Matrix 2 of 5	Y	]X0
UPC-A(+2 ON)		]E3	Full ASCII Code 39(disable CDV)	D	]A4
UPC-A(+5 ON)		]E3	Full ASCII Code 39(CDV & send CD)		]A5
EAN-13(+2/+5 OFF)	F	]E0	Full ASCII Code 39(CDV & not send CD)		]A7
EAN-13(+2 ON)		]E3	Standard Code 39(disable CDV)	M	]A0
EAN-13(+5 ON)		]E3	Standard Code 39(CDV & send CD)		]A1
Code 93	L	]G0	Standard Code 39(CDV & not send CD)		]A3
Code 11(disable CDV)	J	]H0	Interleaved 2 of 5(CDV & send CD)	I	]I1
Code 11(send one CD)		]H0	Interleaved 2 of 5(CDV & not send CD)		]I3
Code 11(send two CD)		]H1	Interleaved 2 of 5(disable CDV)		]I0
Code 11(not send CD)		]H3	Databar	G	]e0
Telepen(ASCII)	U	]B0	Databar Stacked		
Telepen(Numeric)		]B1	Databar Stacked Omnidirectional		
IATA 2 of 5	R	]R0	Databar Truncated		
Industrial 2 of 5	V	]S0	Databar Limited	C	
China Post Code	H	]X0	Databar Expanded	Q	
PDF417	Z	]E0	Databar Expanded Stacked		

4.6.1 Set ID – Setting Procedures

Steps:

1. Scan the SET ID bar code for a particular symbology.
2. Scan one or two alphanumeric characters from the Full ASCII Table.
3. Scan the SET ID bar code again.

Example: Define the MSI Code ID = A, Code 93 = G9

MSI :

Step1: Scan MSI Set ID (Group 9).

Step2: "A" from Group 42.

Step3: Scan MSI Set ID (Group 9).

Code 93:

Step1: Scan Code 93 Set ID.

Step2: "G" from Group 56, Scan "9" from Group 46.

Step3: Scan Code 93 Set ID.

Notes:

1. The length of a Code ID is either one or two characters. If one character is set, the Code ID output will be one character. If two characters are set, the Code ID output will be two characters.
2. Only one type of Code ID will be sent.

4.7 Set Code ID

EAN 13 Set ID

EAN 8 Set ID

UPC E Set ID

UPC A Set ID

Code 39 Set ID

Code 93 Set ID

Codabar Set ID

IATA Set ID

Code 128 Set ID

EAN 128 Set ID

Telepen Set ID

Code 11 Set ID

Code 32 Set ID

[TOSHIBA Code]
Set ID China Post Code

MSI Code Set ID

UK Plessey Set ID

Matrix 2 of 5 Set ID

Interleaved 2 of 5 Set ID

Industrial 2 of 5 Set ID

Full ASCII Code39 Set ID

GS1 Databar (RSS) Limited Set ID

GS1 Databar (RSS) Expanded Set ID

GS1 Databar (RSS) Set ID

LABEL Code Set ID
[Reserved]

Steps:

1. Scan the SET ID bar code for a particular symbology.
2. Scan one or two alphanumeric characters from the Full ASCII Table.
3. Scan the SET ID bar code again.
4. If you make a mistake, forget a step, etc., and want to abort the multi- step configuration, scan RESET/ABORT and start over from step 1 to step 3 again.

Reset / Abort

4.8 Inter-block and Inter-character Delay

Interblock Key


0mS


10mS


50mS


100mS


200mS


500mS

Intercharacter Delay


140uS


500uS


1mS


4mS


16mS

4.9 Keyboard Layout


ENGLISH (USA)


ENGLISH (UK)


FRENCH


GERMAN


ITALIAN


SPANISH


CZECH (QWERTY)


CZECH (QWERTZ)


HUNGARIAN (QWERTZ)


HUNGARIAN (101 KEY)


SWISS (GERMAN)


SWISS (FRENCH)


JAPAN (106 key)


CANADIAN (FRENCH)


CANADIAN (TRADITIONAL)


NORWEGIAN


SWEDISH


PORTUGUESE


BELGIAN (AZERTY)


DUTCH


DANISH


SLOVAK


BRAZILIAN (PORTUGUESE)


ALT CODE

4.10 Caplock Mode,Numeric Key, HT/CR/ESC Conversion

4.10.1 Capital Lock Mode

 Caplock Off

 Caplock On

 Caplock Free

Notes:

1. When barcode scanner is set to Caplock 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.(CODABAR is the exception)
2. If ABCD/ ABCD, abcd/ abcd, ABCD/T*E, abcd/tn*e are on, they work independently according to their rules.

4.10.2 Numbeic Key

 Numeric Key

 Alphanumeric Key

Notes:

1. By default, the alphanumeric key is used for transmitting digits. Scan NUMERIC KEY if you want to use the keys on the numeric keypad.
2. If you select NUMERIC KEY, the Num Lock status of the physical keyboard should be ON.

4.10.3 HT/CR/ESC converts to TAB/ENTER/ESCAPE

HT/CR/ESC converts to TAB/ENTER/ESCAPE enable

HT/CR/ESC converts to TAB/ENTER/ESCAPE Disable

Notes:

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.

Appendix A – Full ASCII table & Function Key table

A-1 MIN/ MAX Length setting Procedure

MIN / MAX LENGTH
STEP 1 - Scan: MIN LENGTH/ MAX LENGTH
STEP 2 - Scan: Two digits above
STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

Reset / Abort

1. The scanner will beep three times as indication that a setting is not yet complete or unexpected barcode is scanned during multi-step configuration.
2. If you make a mistake, forget a step, etc., and want to abort the multi-step configuration, scan RESET/ABORT and start over again.

FULL ASCII (Code 39) Numeric Table

A-2 FULL ASCII Table (CODE 39)

- FULL ASCII Table (CODE 39) Control Codes


DLE


DC1


DC2


DC3


DC4


NAK


SYN


ETB


CAN


EM


SUB


ESC


FS


GS


RS


US


SP

- FULL ASCII Table (CODE 39) Symbols


{


}


[


]


(


)


<


>


`


"


'


,

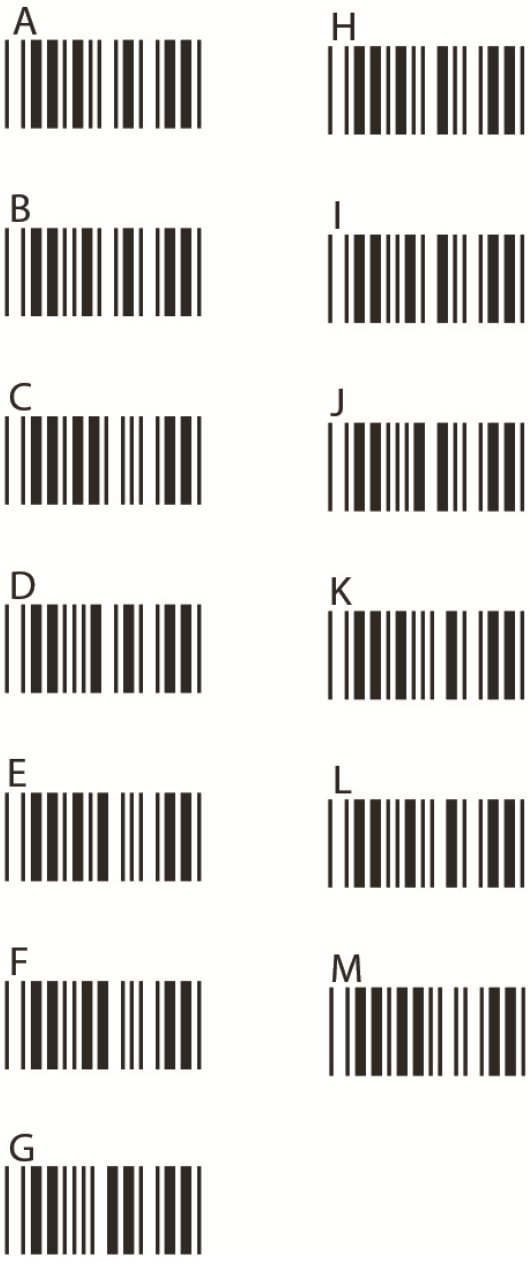

;


:


?


DEL

- FULL ASCII Table (CODE 39) Upper Case Alphabets



N

U

O

V

P

W

Q

X

R

Y

S

Z

T

- FULL ASCII Table (CODE 39) Lower Case Alphabets


n


o


p


q


r


s


t


u


v

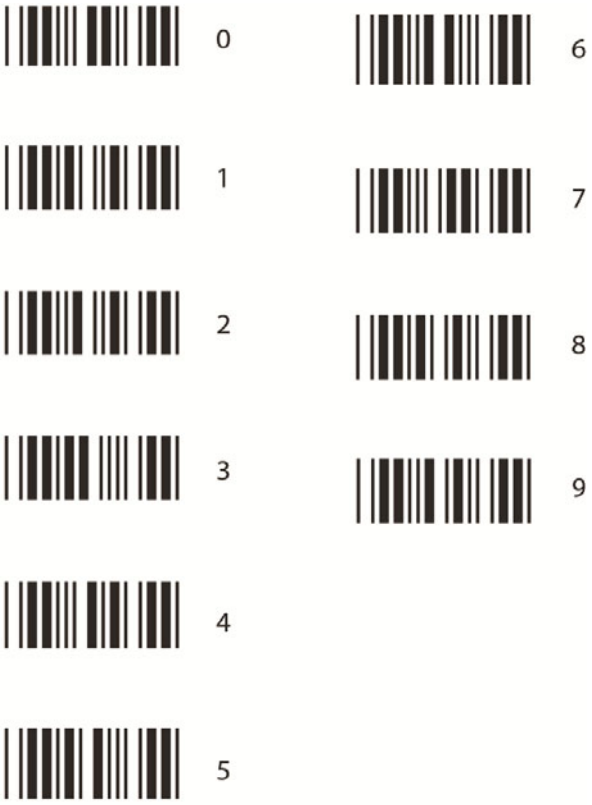

w


x


y


z

- FULL ASCII Table (CODE 39) Numbers



A-3 Function Key Table (Code39)


F1


F2


F3


F4


F5


F6


F7


F8


F9


F10


F11


F12


Home


End


Enter (Numeric Key)


App

- FULL ASCII Table (CODE 39) Navigation Keys


Cursor Right


Cursor Left


Back Tab


Cursor Up


Esc


Cursor Down


Enter


Page Up


BS


Page Down


Ins


Tab


Del

- FULL ASCII Table (CODE 39) Modifier Keys


Alt (Left) make*1


Alt (Right) make


Shift (Left) make *2


Shift (Right) make


Win (Left) make


Win (Right) make


Ctrl (Left) make *3


Ctrl (Right) make


Alt (Left) break


Alt (Right) break


Shift (Left) break


Shift (Right) break


Win (Left) break


Win (Right) break


Ctrl (Left) break


Ctrl (Right) break

- For UK Keyboard Special Character

£

¬

Notes:

*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 B – Default Table

B-1 Default Table 1

GROUP	PARAMETER	DEFAULT
1	Setup Code	ON
	Function Code Conversion	ON
2	Reading Mode	Trigger Mode
	Button Preference	Both Buttons
	Illumination Preference	Laser always ON, LED ON after 1 sec
3	Beep Tone	Medium
	Terminator	CR (BT HID, USB HID)
		CR+LF (USB VCP)
4	Send Data Length	OFF
	Preamble	None
	Postamble	None
5	Inverse Barcode	Disable
	Code ID (Symbology ID)	Disable Code ID
7~9	Set ID	None
10	Interblock Delay	0mS
	Intercharacter Delay	140uS
11	Keyboard Layout	English (USA)
12	Capital Lock Mode	Caplock OFF
	Numeric Key	Alphanumeric Key
	HT/CR/ESC Conversion	Disable
13	Interface	N/A
14	iOS/MAC/Windows or Android	iOS/MAC/Windows
16	Power Off Timeout	30 seconds
18	Data Format	<Date><Time><Barcode Data>
	Field Separator	,
	Set Date	N/A
	Set Time	N/A
20	Date Format	DD/MM/YYYY
	Time Format	HH:MM:SS
20~22	**Enable/Disable Symbologies**	
	Code 32	Disable
	China Postal Code	Disable
	UK Plessey Code	Disable
	Industrial 2 of 5	Disable
	Matrix 2 of 5	Disable
	Interleaved 2 of 5	Enable
	Code 128	Enable
	Codabar	Enable
	Telepen	Disable
	UPC-A	Enable
	UPC-E	Enable
	EAN-8	Enable
	EAN-13	Enable
	MSI	Disable
	Code 39	Enable
	Code 11	Disable
	Code 93	Disable
	EAN-128	Enable
	IATA	Disable
	GS1 Databar	Disable
	GS1 Databar Stacked	Enable
	GS1 Databar Limited	Disable
	GS1 Databar Expanded	Disable
	GS1 Databar Stacked	Enable
22	**China Postal Code (Toshiba Code)**	
	Enable/Disable	Enable
	Min Length	11
	Max Length	48
	Check Digit Verification	Disable CDV
23	**MSI**	
	Enable/Disable	Disable
	Check Digit Verification	CDV & Send CD
	Check Digit Mod	Check Digit Single Mod 1
	Min Length	6
	Max Length	48
	UK Plessey Code	
	Enable/Disable	Disable
	Check Digit Verification	CDV & Not Send CD

B-2 Default Table 2

GROUP	PARAMETER	DEFAULT
24	**Code 93**	
	Enable/Disable	Disable
	Min Length	6
	Max Length	48
	Telepen	
	Enable/Disable	Disable
	Number/ASCII	ASCII
	IATA	
	Enable/Disable	Disable
	Check Digit Verification	Disable CDV
	Min Length	6
	Max Length	48
25	**Interleaved 2 of 5**	
	Enable/Disable	Enable
	Check Digit Verification	Disable CDV
	Suppressed	No Suppressed
	Min Length	6
	Max Length	48
	Code 11	
	Enable/Disable	Disable
	Check Digit Verification	Disable CDV
	Min Length	6
	Max Length	32
26	**Industrial 2 of 5**	
	Enable/Disable	Disable
	Check Digit Verification	Disable CDV
	Min Length	6
	Max Length	48
	Matrix 2 of 5	
	Enable/Disable	Disable
	Check Digit Verification	Disable CDV
	Min Length	6
	Max Length	48
27	**Codabar**	
	Enable/Disable	Enable
	Check Digit Verification	Disable CDV
	Min Length	6
	Max Length	48
	Start/Stop	Send
	Start/Stop Type	ST/SP: ABCD/ABCD
	CLSI Format	CLSI Format OFF
28	**ABC-Codabar**	
	ON/OFF	OFF
	Insert Data	Insert Data OFF
	CX-Codabar	
	ON/OFF	OFF
	Insert Data	Insert Data OFF
29	**Codabar Coupling**	
	ON/OFF	OFF
	Insert Data	Insert Data OFF
	Adjacent Required	OFF
30	**Code 39**	
	Enable/Disable	Enable
	Check Digit Verification	Disable CDV
	Min Length	1
	Max Length	48
	Full ASCII Code 39	Enable
	Start/Stop	Not Send
	Code 32	
	Enable/Disable	Disable
	Leading	Send
	Tailing	Send
31	**UPC-E**	
	Enable/Disable	Enable
	Check Digit Verification	Send CD
	Lead Digit	Send
	+ 5	OFF
	+ 2	OFF
	Add a Space	OFF
	Addenda Required	OFF

B-3 Default Table 3

GROUP	PARAMETER	DEFAULT
32	UPC-E0	ON
	UPC-E1	OFF
	UPC-E Expand to UPC-A	Disable
33	**UPC-A**	
	Enable/Disable	Enable
	Check Digit Verification	Send CD
	Lead Digit	Send
	UPC-A Expand to EAN-13	Disable
	+ 5	OFF
	+ 2	OFF
	Add a Space	OFF
	Addenda Required	OFF
34	**EAN-8**	
	Enable/Disable	Enable
	Check Digit Verification	Send CD
	Lead Digit	Send
	+ 5	OFF
	+ 2	OFF
	Add a Space	OFF
	Addenda Required	OFF
35	**EAN-13**	
	Enable/Disable	Enable
	Check Digit Verification	Send CD
	Lead Digit	Send
	+ 5	OFF
	+ 2	OFF
	Add a Space	OFF
	Addenda Required	OFF
	ISBN	OFF
	ISSN	OFF
	ISMN	OFF
36	**EAN/UCC-128**	
	Enable/Disable	Enable
	Func 1 Char	Not Send
	Code 128	
	Enable/Disable	Enable
	Min Length	5
	Max Length	48
37	**GS1 Databar**	
	Enable/Disable	Disable
	Check Digit Verification	Not Send CD
	Prefix	Not Send
	GS1 Databar Stacked/Omnidirectional	
	Enable/Disable	Enable
	GS1 Databar Limited	
	Enable/Disable	Disable
	Check Digit Verification	Not Send CD
	Prefix	Not Send
	GS1 Databar Expanded	
	Enable/Disable	Disable
	GS1 Databar Expanded Stacked	
	Enable/Disable	Enable
	Min Length	1
	Max Length	74