Handheld Laser Barcode Scanner

- MS836 -

User's Manual

Version 1.0

Change Log

Date	Change Description	Version
2022/05/25	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.

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.

European Conformity Statement

Unitech Electronics co., Ltd herewith declares that the U nitech 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

CE

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

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。

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 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 Unitech's warranty policy.

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

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 **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	**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	**Japan**
Tel: +86-59-2310-9966 **E-mail:** info@cn.ute.com **Address:** Room401C, 4F, RIHUA International Mansion, Xinfeng 3nd Road, Huoju Hi-tech District, Xiamen, Fujan , China **Website:** http://cn.ute.com	**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	**Latin America**
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	**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	**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 MS836 gift box.
If something is missing or damaged, please contact your Unitech representative.

The package contents (without cradle):

- MS836 Scanner
- Quick Start Guide

Optional Accessories

- Hands-free stand
- USB cable

1.2 Product Detail

- Scanner details

1.3 Specifications

Optical & Performance	
Sensor	Laser Engine
Aiming Element	Laser
Ambient Light	0-100,000 Lux
Scan Rate	100 times/sec
Decode Speed	3.3ms (300time/second)*
Skew Angle	±60°
Pitch Angle Sensor	±60°
Optical Resolution	4mil（code 39）
Depth of Field	10mm-265mm(13 mil, EAN13, PCS=90%)
Communication	
Host Interface supported	USB
Mechanical	
Dimension	174mm × 72mm × 96mm (L x W x H)
Weight	245g
Functionality	
Operation Mode	Trigger Mode, Presentation Mode, Auto-Sensing Mode

Symbologies	
1D	Industrial 2 of 5, Standard 2 of 5, Matrix 2 of 5, China post 25, Interleaved 2 of 5, Code 11, Codabar, MSI/plessey, UK/plessey, Code39 (Standard 39& Full ASCII Code 39) Code 32, Code 93, Code128, UPC-A, UPC-E, EAN 13, EAN 8, UPC/EAN add-on 2/5, ISBN, ISSN, GS1 Databar, Supplements +2/+5 RSS-14, LIMITED, EXPENDED, Include GS1 STACK, Code 32, ISBN, ISSN, Industrial 2 of 5
Data Formatting	Prefix, Suffix, Code ID
Electrical	
Operation Voltage	DC 5V
Current Consumption	Operation mode: ＜85 mA Standby mode: ＜36 mA
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% to 95% non-condensing
IP Rating	IP54
Regulatory Approvals	
CE, FCC DOC compliance	
Accessories	
■ Hands-free stand ■ USB cable	

1.4 Getting Started

To get started with MS836, please connect USB cable to the USB port of a host PC.

1.5 LED / Beeper Indicator

Division	Red LED Light	Green LED Light	Beep / Sound
Power On			One short low Beep
Standby Mode	Red light ON		
USB connection success			One short low Beep
Barcode Good Read		Green light ON	One short high Beep
Enter Setting Mode			Two long beeps
Exit Setting Mode			One long high beep and one long low beep
Setting Failed			Three short high beeps
Laser ON	Red light Off		
Data upload complete	Red light Off	Green light ON	High and Low Beeps
Update Mode	Red light quick flash		
Data Send Complete	Red light ON	Green light Off	
Upgrade Mode	Red light quick flash continuously		

Chapter 2 – Command Setting

2.1 Barcode Programming

Use of Programming Barcodes

Before starting scanning any setting barcode, please do follow the instruction below. Scanning the Enter Setup barcode can enable the engine to enter the setup mode. Then you can scan a number of programming barcodes to configure your engine. To exit the setup mode, scan the Exit Setup barcode.

Enter Setup

Exit Setup

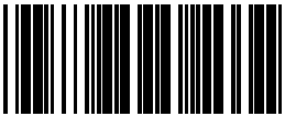
2.2 Scanner Type

Interface Mode

Auto*

USB-HID

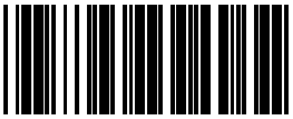
Exit Setup



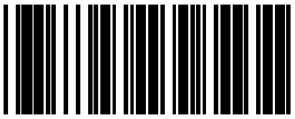
2.3 Encoding

Function keyboard On *

Function keyboard Off

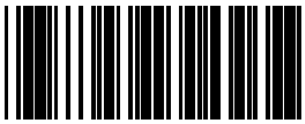


Number Lock

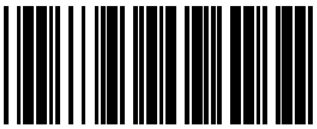


Number Lock Off *

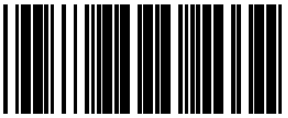
Capslock Ignore On



Capslock Ignore Off *

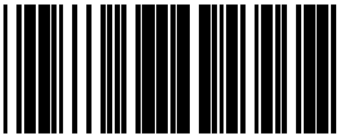


Exit Setup

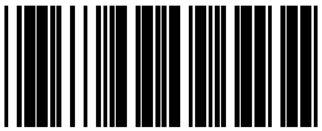


2.4 System Reset

Factory Default

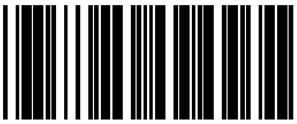


Software Decoder Version



2.5 Operation Mode

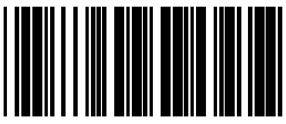
Testing Mode



Manual Mode *

Continuous Scan (LED always On)

Continuous Scan (LED Flashing)



Exit Setup

Repeat Scan Delay (10-255ms)

Example:

If scanner needs 300ms of repeat scan delay. Delay time T = N*10,

300ms = N*10, N = 30.

So scan: "Enter Setup", "Repeat scan delay", "0", "3", "0" and "Exit Setup".

2.5.1 Auto-Sensing

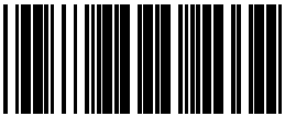
On

Off

Sensitive Setting (1-255)

Note: Long press scanner key for 10 seconds to switch auto-sensing mode.

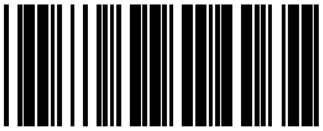
Exit Setup



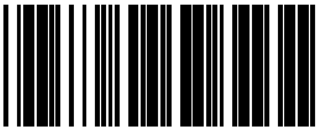
2.6 Redundancy Scan Set-Up

None *

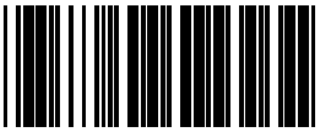
2 times



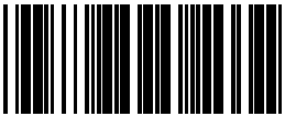
3 times



4 times



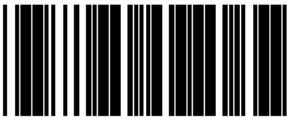
Exit Setup



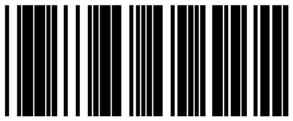
2.7 Data Terminator

CR *

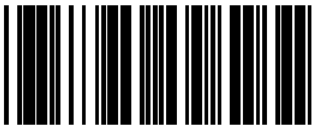
Space



LF



None



TAB

Exit Setup

2.8 Barcode Data Inversion

On

Off*

2.9 HID Keyboard Case

Normal Letter Case *

All Upper Case

All Lower Case

Case Inversion

Exit Setup

2.10 HID Keyboard Language

USA *

UK

German

France

Italy

Spain

Universal

Exit Setup

Turkey-Q

Denmark

Japan

2.11 Data Interception

Not intercept *

Intercept from left to right

Intercept from right to left

Data interception starting digit

Exit Setup

Data interception ending digit

Example:

Example: barcode "0123456", if you need to intercept "234", scan the "Enter Setup" "Data interception starting digit", "0" "0" "3", "data intercept ending digit", "0" "0" "5", "Intercept from left to right" and "Exit Setup".

2.12 Reading Length Setting for all Codes

Minimum Length for All Codes

Minimum Length for All Codes

Note: Reading length setting for all codes is used to limit the barcode length that can be read (is subjected to the data length).

Example:

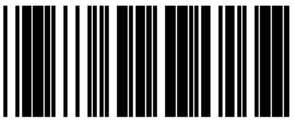
Set the reading length as 5-10 digit.

Scan "Enter" "Minimum length for all Codes" "0" "0" "5" "Maximum length for all Codes" "0" "1" "0" "Exit". After that, any barcodes shorter than 5 digits or longer than "10" digits cannot be read successfully.

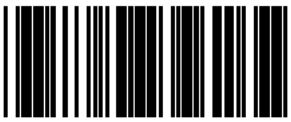
Exit Setup

2.13 Beep Tones

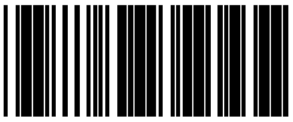
None



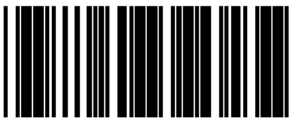
Beep Duration Short



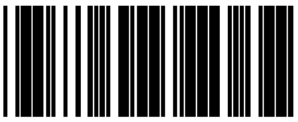
Beep Duration Medium *



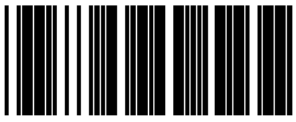
Beep Duration Long



Set as Customized Duration



Customized Duration (0.01-2.55s)



Example:

If scanner needs 200ms of customized duration, duration time T = N*10,
200 ms = N*10, N = 20.
So scan: "Enter Setup", "Customize duration", "0", "2", "0", "Set as customized duration", "Exit".

Exit Setup

Low

Medium *

High

Set as Customized Tone

Customized Tone (0.01-2.55Khz)

Example:

If scanner needs 200Hz of customized tone, customized tone = N*10,

200Hz = N*10, N = 20.

So scan: "Enter" "Customize tone" "0" "2" "0" "Set as customized tone" "Exit".

Starting Sound On *

Starting Sound Off

Exit Setup

2.14 Data Delay

Delay between Characters (T=N)

(1-255ms)

Barcode Delay (T=10*N) (10-2550ms)

Exit Setup

Chapter 3 – Symbology

3.1 Common Settings for all Symbology

3.1.1 Set the Barcode Length as Prefix (2 digits)

On

Off*

3.1.2 Prefix and Suffix for All Codes

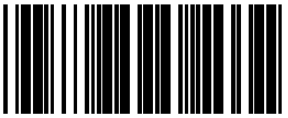
Prefix for all Codes

Suffix for all Codes

Example: add "SN" prefix to all codes by scanning "Enter Setup", "Prefix for all Codes", "S", "N", "Prefix for all Codes" and "Exit Setup".

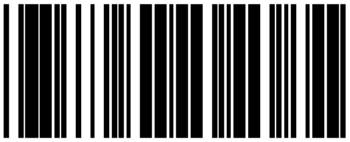
Note: In the following chapters, please refer to A.1-ASCII Code Table when Setting Length Range and Setting Prefix/Suffix for Symbologies.

Exit Setup

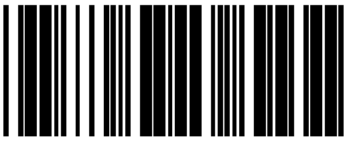


3.2 Codabar

Enable *

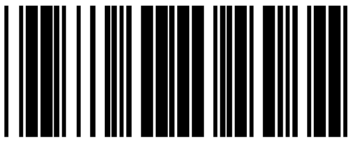


Disable

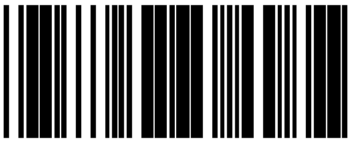


3.2.1 Check Digit Verification

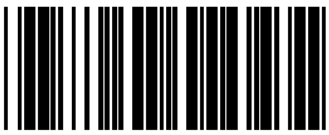
Enable



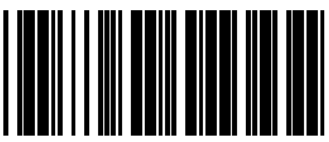
Disable *



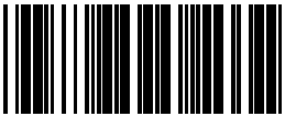
Transmit Check Digit After Verification



Do Not Transmit Check Digit After Verification *

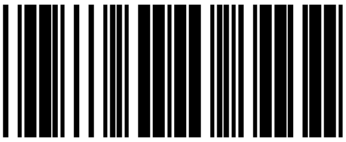


Exit Setup

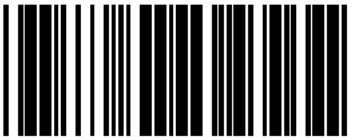


3.2.2 Transmit Start/Stop Character

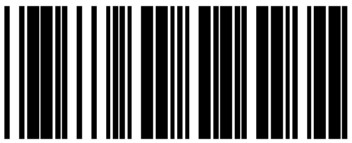
Transmit Start/Stop Character



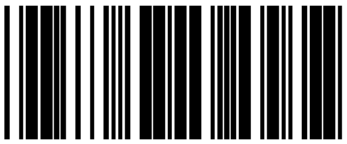
Do Not Transmit Start/Stop Character *



Transmit Start/Stop ABCD/ABCD



Transmit Start/Stop ABCD/TN*E



Exit Setup

3.2.3 Set Length Range for Codabar

Minimum Length

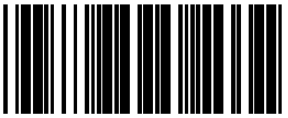
Maximum Length

3.2.4 Prefix/Suffix for Codabar

Codabar Prefix

Codabar Suffix

Exit Setup



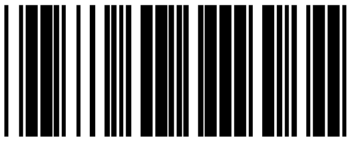
3.3 Code 39

Enable *

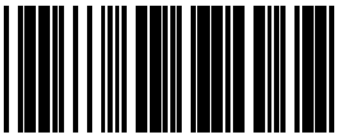
Disable

3.3.1 Code 39 Check Digit Verification

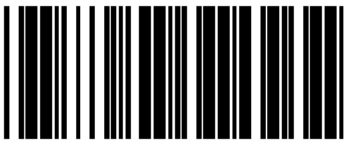
Enable



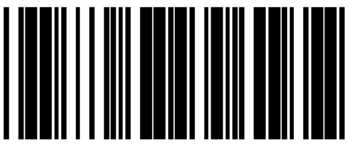
Disable *



Do Not Transmit Check Digit After Verification *



Transmit Check Digit After Verification



Exit Setup

3.3.2 Transmit Start/Stop Character

Transmit Start/Stop Character

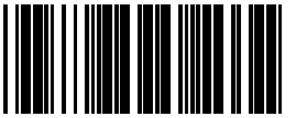
Do Not Transmit Start/Stop Character *

3.3.3 Code 39 Full ASCII

Full ASCII 39 *

3.3.4 Standard 39

Exit Setup



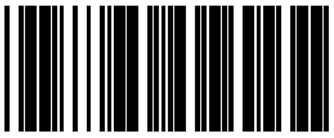
3.3.5 Set Length Range for Code 39

Minimum Length

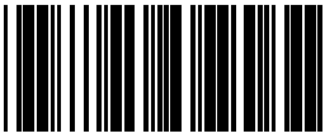
Maximum Length

3.3.6 Prefix/Suffix for Code 39

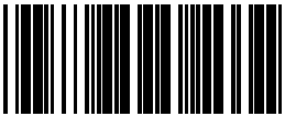
Code 39 Prefix



Code 39 Suffix



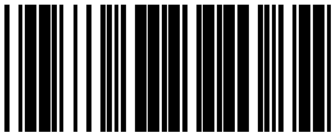
Exit Setup



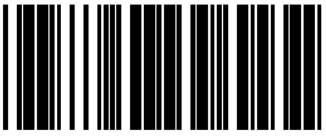
3.4 Code 32

3.4.1 Code 32

Enable

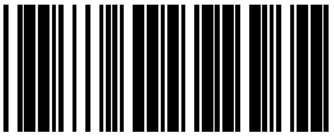


Disable *

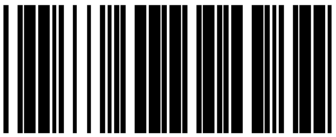


3.4.2 Transmit Code 32 Prefix A

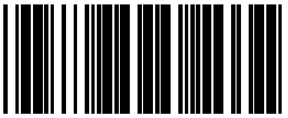
Transmit Code 32 Prefix A



Do Not Transmit Code 32 Prefix A *

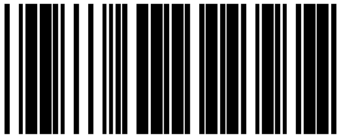


Exit Setup

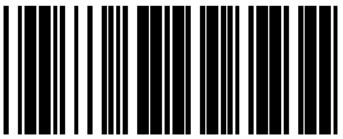


3.4.3 Transmit Code 32 Check Digit

Transmit Code 32 Check Digit

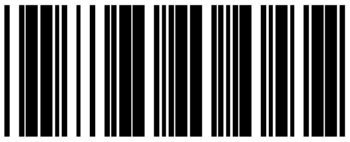


Do Not Transmit Code 32 Check Digit *

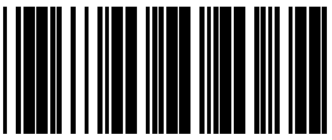


3.4.4 Prefix/Suffix for Code 32

Code 32 Prefix



Code 32 Suffix



Exit Setup

3.5 Interleaved 2 of 5

Enable *

Disable

3.5.1 Interleaved 2 of 5 Check Digit Verification

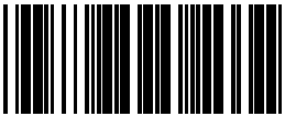
Enable

Disable *

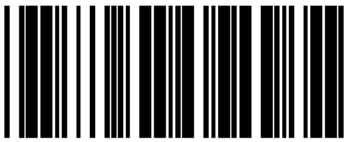
Transmit Check Digit

Do Not Transmit Check Digit *

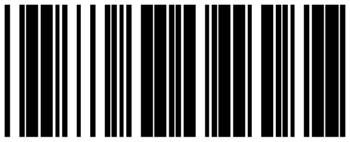
Exit Setup



Transmit the first 0 *

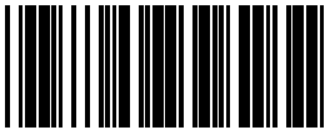


Do Not Transmit the first 0

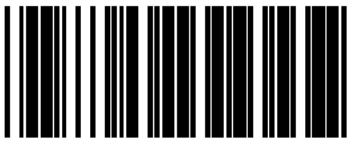


3.5.2 Set Length Range for Interleaved 2 of 5

Minimum Length

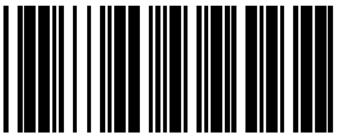


Maximum Length

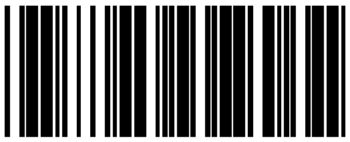


3.5.3 Prefix/Suffix for Interleaved 2 of 5

Interleaved 2 of 5 Prefix



Interleaved 2 of 5 Suffix



Exit Setup

3.6 Industrial 2 of 5

Enable

Disable*

3.6.1 Check Digit Verification

Enable

Disable *

Transmit Check Digit After Verification

Do Not Transmit Check Digit After Verification *

Exit Setup

3.6.2 Set Length Range for Industrial 2 of 5

Minimum Length

Maximum Length

3.6.3 Prefix/Suffix for Industrial 2 of 5

Industrial 2 of 5 Prefix

Industrial 2 of 5 Suffix

Exit Setup

3.7 Matrix 2 of 5

Enable

Disable *

3.7.1 Check Digit Verification

Enable

Disable *

Transmit Check Digit After Verification

Do Not Transmit Check Digit After Verification *

Exit Setup

3.7.2 Set Length Range for Matrix 2 of 5

Minimum Length

Maximum Length

3.7.3 Prefix/Suffix for Matrix 2 of 5

Matrix 2 of 5 Prefix

Matrix 2 of 5 Suffix

Exit Setup

3.8 Chinese Postal 2 of 5

Enable

Disable *

3.8.1 Check Digit Verification

Enable

Disable *

Transmit Check Digit After Verification

Do Not Transmit Check Digit After Verification *

Exit Setup

3.8.2 Set Length Range for Chinese Postal

2 of 5

Minimum Length

Maximum Length

3.8.3 Prefix/Suffix For Chinese Postal 2 of 5

Chinese Postal 2 of 5 Prefix

Chinese Postal 2 of 5 Suffix

Exit Setup

3.9 Standard 2 of 5

Enable

Disable *

3.9.1 Check Digit Verification

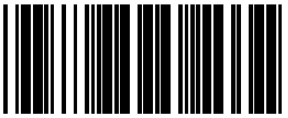
Enable

Disable *

Transmit Check Digit After Verification

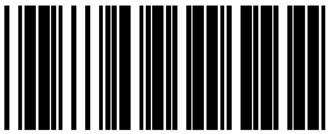
Do Not Transmit Check Digit After Verification *

Exit Setup

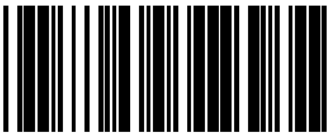


3.9.2 Set Length Range for Standard 2 of 5

Minimum Length

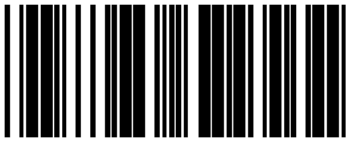


Maximum Length

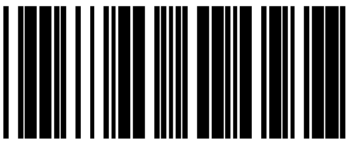


3.9.3 Prefix/Suffix for Standard 2 of 5

Standard 2 of 5 Prefix



Standard 2 of 5 Suffix



Exit Setup

3.10 MSI

Enable

Disable *

3.10.1 Check Digit Verification

Enable

Disable *

Transmit Check Digit After Verification

Exit Setup

Do Not Transmit Check Digit After Verification *

Verify Second Check Digit *

Do Not Verify Second Check Digit Verification *

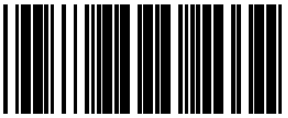
Verify First Check Digit, MOD11

Verify First Check Digit, MOD10 *

Verify Second Check Digit, MOD11

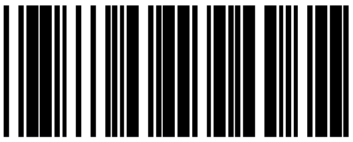
Verify Second Check Digit, MOD10 *

Exit Setup



3.10.2 Set Length Range for MSI

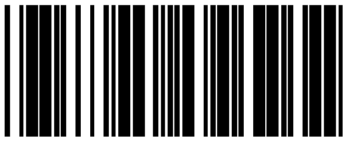
Minimum Length



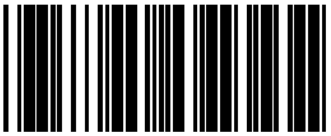
Maximum Length

3.10.3 Prefix/Suffix for MSI

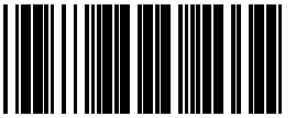
MSI Prefix



MSI Suffix

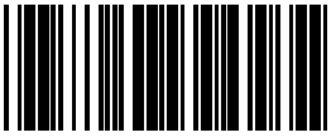


Exit Setup

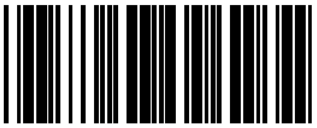


3.11 Code 93

Enable *

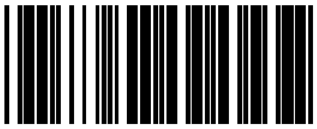


Disable

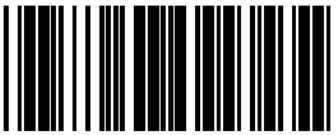


3.11.1 Check Digit Verification

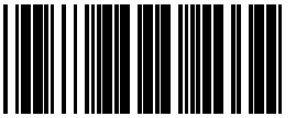
Enable



Disable*



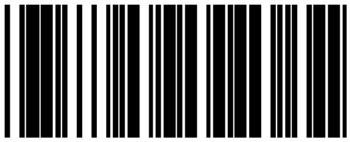
Exit Setup



3.11.2 Set Length Range for Code 93

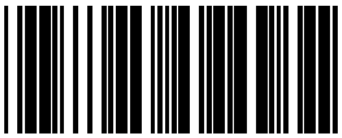
Minimum Length

Maximum Length

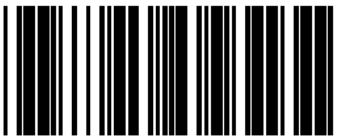


3.11.3 Prefix/Suffix for Code 93

Code 93 Prefix



Code 93 Suffix



Exit Setup

3.12 Code 11

Enable

Disable *

3.12.1 Check Digit Verification

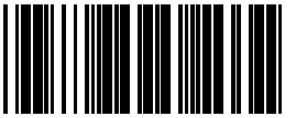
Verify First Check Digit

Do Not Verify First Check Digit*

Transmit Check Digit After Verification

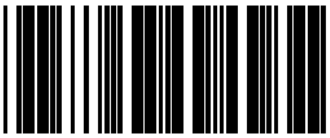
Do Not Transmit Check Digit After Verification *

Exit Setup

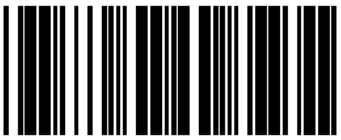


Verify Second Check Digit *

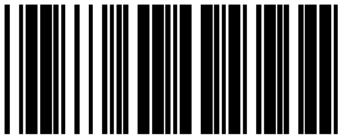
Do Not Verify Second Check Digit



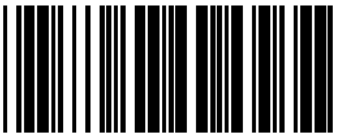
Verify First Check Digit, MOD09



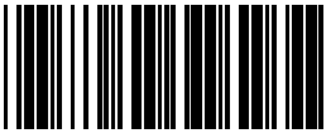
Verify First Check Digit, MOD10 *



Verify Second Check Digit, MOD09



Verify Second Check Digit, MOD10 *



Exit Setup

3.12.2 Set Length Range for Code 11

Minimum Length

Maximum Length

3.12.3 Prefix/Suffix for Code 11

Code 11 Prefix

Code 11 Suffix

Exit Setup

3.13 Code 128

Enable *

Disable

3.13.1 UCC 128

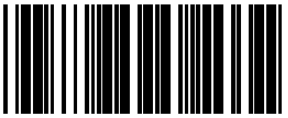
Enable

Disable *

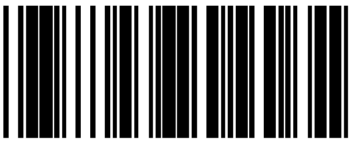
3.13.2 Transmit Check Digit

Transmit Check Digit

Exit Setup



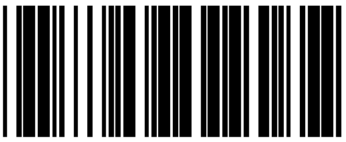
Do Not Transmit Check Digit *



3.13.3 Set Length Range for Code 128

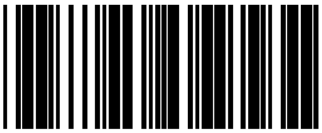
Minimum Length

Maximum Length

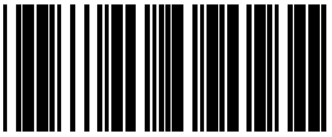


3.13.4 Prefix/Suffix for Code 128

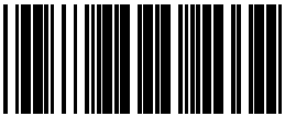
Code 128 Prefix



Code 128 Suffix

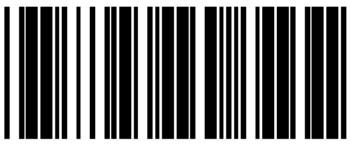


Exit Setup

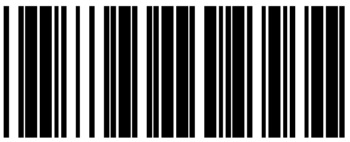


3.14 GS1 Databar

GS1 Databar Enable All *



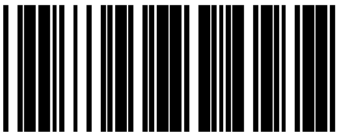
GS1 Databar Disable All



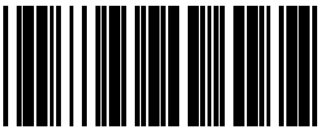
Note: If you scan the GS1 Databar disable all, you have to scan the GS1 Databar Enable all before scanning the following barcodes.

3.14.1 GS1 DataBar-14

Enable *



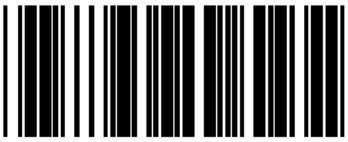
Disable



Exit Setup

3.14.2 Transmit GS1 DataBar-14 Check Digit

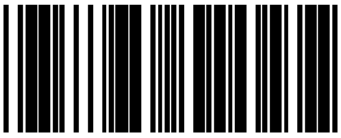
Transmit GS1 Databar Check Digit *



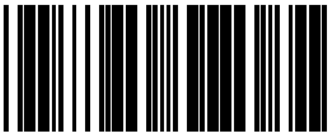
Do Not Transmit GS1 DataBar Check Digit

3.14.3 Prefix/Suffix for GS1 Databar-14

GS1 Databar-14 Prefix



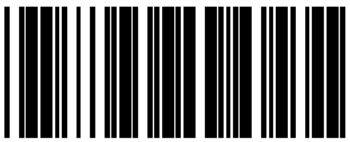
GS1 Databar-14 Suffix



3.14.4 AI_GS1 Databar-14

Enable *

Disable



Exit Setup

3.14.5 GS1 DataBar Limited

Enable *

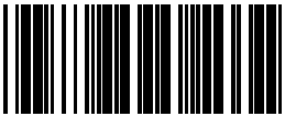
Disable

3.14.6 Transmit GS1 DataBar Limited Check Digit

Transmit GS1 DataBar Limited Check Digit *

Do Not Transmit GS1 DataBar Limited Check Digit

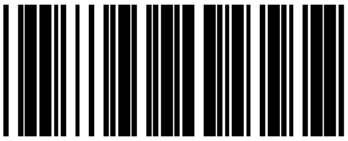
Exit Setup



3.14.7 AI Limited

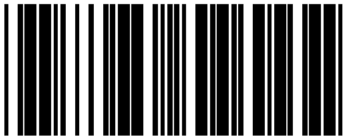
Enable *

Disable

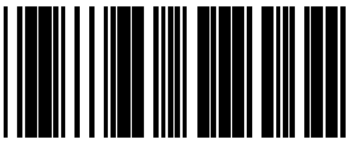


3.14.8 Prefix/Suffix for GS1 Databar Limited

GS1 Databar Limited Prefix

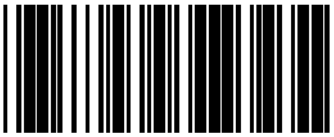


GS1 Databar Limited Suffix

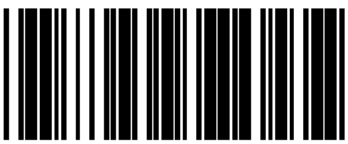


3.14.9 GS1 DataBar Expanded

Enable *



Disable



Exit Setup

3.14.10 Set Length Range for GS1 DataBar Expanded

Expanded Minimum Length

Expanded Maximum Length

3.14.11 Prefix/Suffix for GS1 Databar Exapanded

GS1 Databar Exapanded Prefix

GS1 Databar Exapanded Suffix

Exit Setup

3.14.12 GS1-128 AI Check Digit

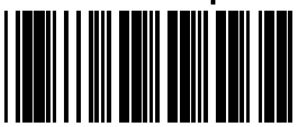
Do Not Transmit GS1-128 AI Check Digit

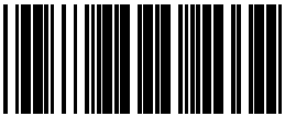
Add Brackets to GS1-128 AI Check Digit

Add Brackets and CR to GS1-128 AI Check Digit

Note: Enable UCC 128 first to enable the Add Brackets and CR to GS1-128 AI check digit above.

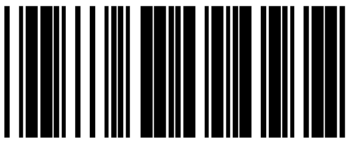
Exit Setup



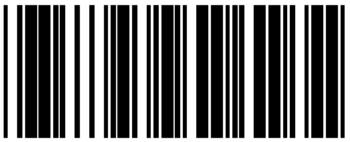


3.15 UPC-A

Enable *

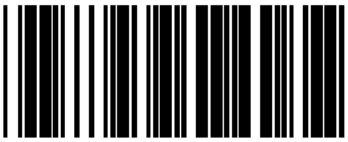


Disable

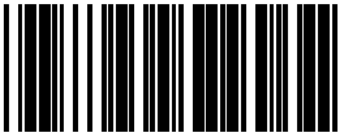


3.15.1 Transmit UPC-A Check Digit

Transmit UPC-A Check Digit *

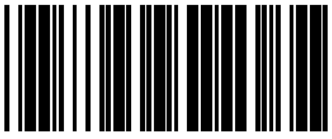


Do Not Transmit UPC-A Check Digit

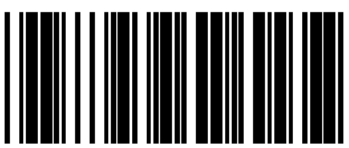


3.15.2 UPC-A Convert to EAN-13

Enable



Disable *



Exit Setup

3.15.3 Transmit UPC-A Leading Digit

Transmit UPC-A Leading Digit *

Do Not Transmit UPC-A Leading Digit

3.15.4 Prefix/Suffix for UPC-A

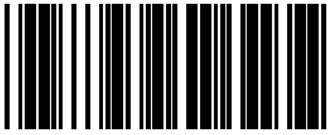
UPC-A Prefix

UPC-A Suffix

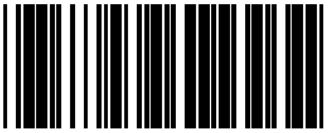
Exit Setup

3.16 UPC-E

Enable *

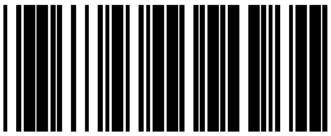


Disable

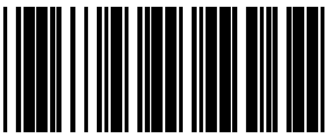


3.16.1 Transmit UPC-E Check Digit

Transmit UPC-E Check Digit *

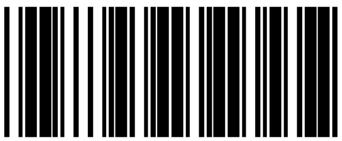


Do Not Transmit UPC-E Check Digit

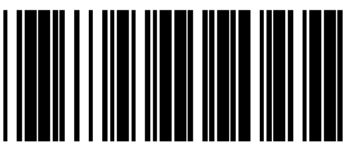


3.16.2 Convert UPC-E to UPC-A

Enable



Disable *



Exit Setup

3.16.3 Convert UPC-E to EAN-13

Enable

Disable *

Note: If "Covert to UPC-A" and "Convert to EAN-13" are enabled both, it will convert to EAN-13.

3.16.4 Transmit Lead Zero on UPC-E

Transmit Lead Zero on UPC-E *

Do Not Transmit Lead Zero on UPC-E

3.16.5 Prefix/Suffix for UPC-E

UPC-E Prefix

UPC-E Suffix

Exit Setup

3.17 EAN/JAN-8

Enable *

Disable

3.17.1 Transmit EAN-8 Check Digit

Transmit EAN-8 Check Digit *

Do Not Transmit EAN-8 Check Digit

3.17.2 Convert EAN-8 to UPC-A

Enable

Disable *

Exit Setup

3.17.3 Convert EAN-8 to EAN-13

Enable

Disable *

3.17.4 Transmit Lead Zero on EAN-8

Transmit Lead Zero on EAN-8

Do Not Transmit Lead Zero on EAN-8 *

***Note*:** If Convert to "UPC-A" and "Convert to EAN-13" are enabled both, it actually converts to EAN-13.

3.17.5 Prefix/Suffix for EAN-8

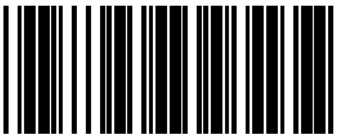
EAN-8 Prefix

EAN-8 Suffix

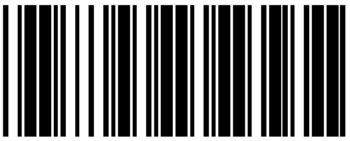
Exit Setup

3.18 EAN/JAN-13

Enable *

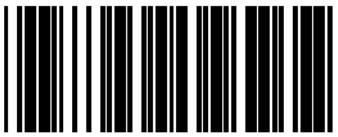


Disable

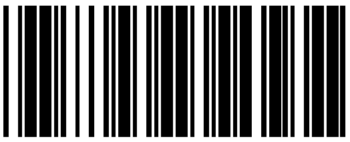


3.18.1 Transmit EAN-13 Leading Digit

Transmit EAN-13 Leading Digit *

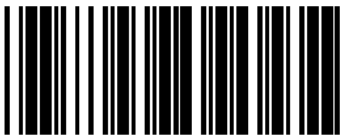


Do Not Transmit EAN-13 Leading Digit



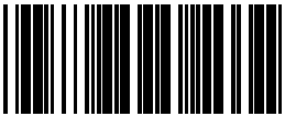
3.18.2 Transmit EAN-13 Second Digit

Transmit EAN-13 Second Digit *



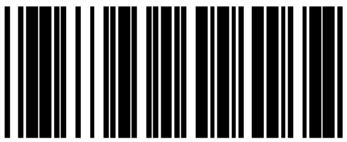
Do Not Transmit EAN-13 Second Digit

Exit Setup

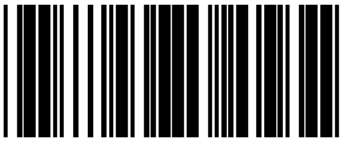


3.18.3 Transmit EAN-13 Check Digit

Transmit EAN-13 Check Digit *

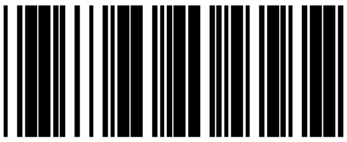


Do Not Transmit EAN-13 Check Digit

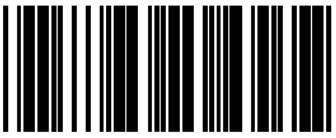


3.18.4 Prefix/Suffix of EAN-13

EAN-13 Prefix

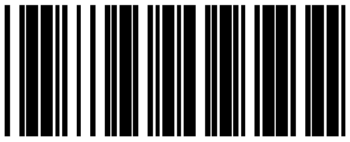


EAN-13 Suffix



3.18.5 378/379 Supplemental Mode

Enable



Exit Setup

Disable *

3.18.6 978/977 Supplemental Mode

Enable

Disable *

Note: Enable _addenda 2 digit or _addenda 5 digit before enable " Supplemental Mode".

3.18.7 434/439 Supplemental Mode

Enable

Disable *

Exit Setup

3.18.8 419/414 Supplemental Mode

Enable

Disable *

3.18.9 491 Supplemental Mode

Enable

Disable *

3.18.10 978/192 Supplemental Mode

Enable

Disable *

Exit Setup

3.19 ISBN

Enable

Disable *

3.20 ISSN

Enable

Disable *

Exit Setup

3.21 Supplements +2/+5

3.21.1 Addenda 2 Digit

Enable

Disable*

3.21.2 Addenda 5 Digit

Enable

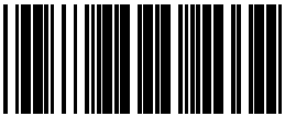
Disable*

3.21.3 Space Separator

Enable

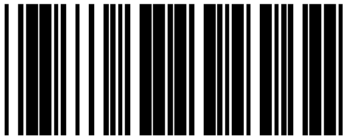
Disable *

Exit Setup

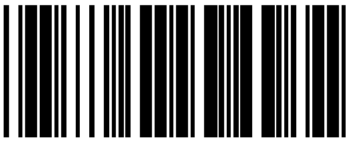


3.22 UK/Plessey

Code UK Enable *

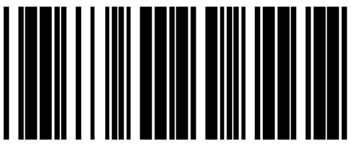


Code UK Disable

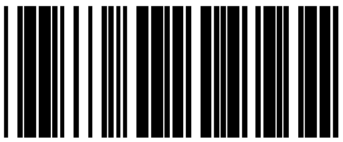


3.22.1 Check Digit Verification

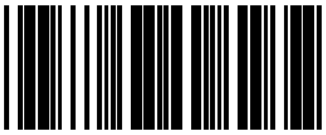
Enable *



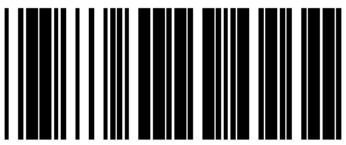
Disable



Transmit Check Digit After Verification



Do Not Transmit Check Digit After Verification *



Exit Setup

3.22.2 Set Length Range for Code UK

Minimum Length

Maximum Length

3.22.3 Prefix/Suffix for Code UK

Code UK Prefix

Code UK Suffix

3.23 Code ID

On

Off *

Exit Setup

3.24 Febraban Transfer Function

On

Off *

3.25 Black and White Inverse Code

On

Note: When the black and white inverse code is on, row types code cannot be read.

Off *

Exit Setup

Appendix A – Digit Barcodes

A.1 ASCII Code Table

SOH (start of headline)

STX (start of text)

ETX

EOT

ENQ

ACK

BEL

BS

HT

LF

VT

FF

CR

SO

SI

DLE

DC1

DC2

Exit Setup

DC3

DC4

NAK

SYN

ETB

CAN

EM

SUB

ESC

FS

GS

RS

US

SP

!

“

#

$

%

&

,

Exit Setup

(

)

*

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-

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/

0

1

2

3

4

5

6

7

8

9

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>

?

Exit Setup

@

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

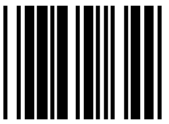
V

W

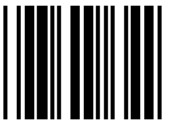
Exit Setup

X

Y



Z



[

\

]

^

-

`

a

b

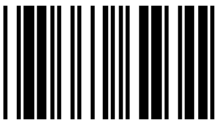
c

d

e

f

g



h

i

j

k

l

Exit Setup

m

n

o

p

q

r

s

t

u

v

w

x

y

z

{

|

}

~

Insert

Del

Function Key F1

Function Key F2

Function Key F3

Function Key F4

Exit Setup

Function Key F5

Function Key F6

Function Key F7

Function Key F8

Function Key F9

Function Key F10

Function Key F11

Function Key F12

TAB

Back TAB

ESC

Enter

Home

PageUp

Return

PageDown

End

RightArrow

LeftArrow

DownArrow

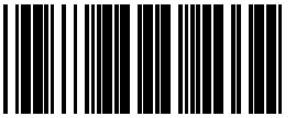
UpArrow

Ctrl On

Ctrl Off

Alt On

Exit Setup

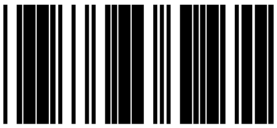


Alt Off

Shift On

Shift Off

Win



Exit Setup

Dec	Hex	Char
0	00	NUL (Null char.)
1	01	SOH (Start of Header)
2	02	STX (Start of Text)
3	03	ETX (End of Text)
4	04	EOT (End of Transmission)
5	05	ENQ (Enquiry)
6	06	ACK (Acknowledgment)
7	07	BEL (Bell)
8	08	BS (Backspace)
9	09	HT (Horizontal Tab)
10	0A	LF (Line Feed)
11	0B	VT (Vertical Tab)
12	0C	FF (Form Feed)
13	0D	CR (Carriage Return)
14	0E	SO (Shift Out)
15	0F	SI (Shift In)
16	10	DLE (Data Link Escape)
17	11	DC1 (XON) (Device Control 1)
18	12	DC2 (Device Control 2)
19	13	DC3 (XOFF) (Device Control 3)
20	14	DC4 (Device Control 4)
21	15	NAK (Negative Acknowledgment)
22	16	SYN (Synchronous Idle)
23	17	ETB (End of Trans. Block)
24	18	CAN (Cancel)
25	19	EM (End of Medium)
26	1A	SUB (Substitute)
27	1B	ESC (Escape)
28	1C	FS (File Separator)
29	1D	GS (Group Separator)
30	1E	RS (Request to Send)
31	1F	US (Unit Separator)

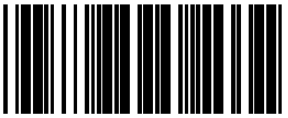
Exit Setup

Dec	Hex	Char
32	20	<SPACE>
33	21	!
34	22	“
35	23	#
36	24	$
37	25	%
38	26	&
39	27	‘
40	28	(
41	29	)
42	2A	*
43	2B	+
44	2C	,
45	2D	-
46	2E	.
47	2F	/
48	30	0
49	31	1
50	32	2
51	33	3
52	34	4
53	35	5
54	36	6
55	37	7
56	38	8
57	39	9
58	3A	:
59	3B	;
60	3C	<
61	3D	=
62	3E	>
63	3F	?

Exit Setup

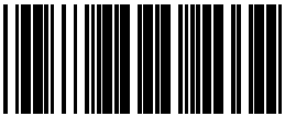
Dec	Hex	Char
64	40	@
65	41	A
66	42	B
67	43	C
68	44	D
69	45	E
70	46	F
71	47	G
72	48	H
73	49	I
74	4A	J
75	4B	K
76	4C	L
77	4D	M
78	4E	N
79	4F	O
80	50	P
81	51	Q
82	52	R
83	53	S
84	54	T
85	55	U
86	56	V
87	57	W
88	58	X
89	59	Y
90	5A	Z
91	5B	[
92	5C	\
93	5D	]
94	5E	^

Exit Setup



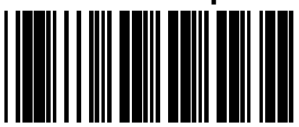
Dec	Hex	Char
95	5F	_
96	60	`
97	61	a
98	62	b
99	63	c
100	64	d
101	65	e
102	66	f
103	67	g
104	68	h
105	69	i
106	6A	j
107	6B	k
108	6C	l
109	6D	m
110	6E	n
111	6F	o
112	70	p
113	71	q
114	72	r
115	73	s
116	74	s
117	75	u
118	76	v
119	77	w
120	78	x
121	79	y
122	7A	z
123	7B	{
124	7C	|
125	7D	}

Exit Setup



Dec	Hex	Char
126	7E	~
127	7F	DEL

Exit Setup



A.2 Default Barcode Parameter Setting Table

Types	Read	Verify Check	Transmit checking digit	Minimum length	Maxnimum length	ID
Industrial 2 of 5	N	N	N	4	64	A
Standard 2 of 5	N	N	N	4	64	B
MatriX 2 of 5	N	N	N	6	64	C
Chinese Postal 2 of 5	N	N	N	6	64	D
Interleave 2 of 5	YES	N	N	6	64	E
Code 11	N	YES	N	4	64	F
Codabar	YES	N	N	4	64	G
Code MSI	N	YES	N	4	64	H
Code UK	YES	YES	N	1	64	I
Code39	YES	N	N	1	64	J
Code32	N	N	N	8	8	K
Code93	YES	YES	N	1	64	L
EAN-13	YES	YES	N	13	13	O
UPC-A	YES	YES	YES	12	12	P
EAN-8	YES	YES	YES	8	8	Q
UPC-E	YES	YES	YES	7	7	R
Code128	YES	YES	N	1	100	L
GS1 Databar Truncated	YES	N	N	14	14	S
GS1 Databar Limited	YES	N	N	14	14	T
GS1 Databar Expanded	YES	N	N	1	74	M

Exit Setup

A.3 Default Setting Table

List	Project Name	Description	Default
1	Scan mode		Manual scan
2	Interface setting		*Automatic
3	KB/USB	Keyboard language	US
4		Function keyboard	ON
5		Enable digital keypad	Disable
6		Caplock Ignore	Not ignore
8	Data editing	Terminator	Enter(0x0d)
9		Caps lock	Origianl data
10		Data inversion	Disable
11		CODE ID	OFF
12		Overall Prefix and Suffix	None
13		Overall decoding length limitation	None
14		Character delay	None
15		String delay	None
16	Beeper settings	Successful decoding sound tips	Middle tone, Long duration
17		Starting sound tips	ON
18	Other functions	Repeated	None
19		Inverse barcode decoding	OFF
20		Automatic sensing	ON

Exit Setup