2D Imager Barcode Scanner

- MS282e -

User's Manual

Version 1.0

Exit Setup *

Enter Setup

Change Log

Date	Change Description	Version
2021/1/20	first published version	1.0

Exit Setup *

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Preface

About This Manual

Thank you for purchasing the unitech product.
This manual explains how to install, operate and maintain our product.

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.

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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.

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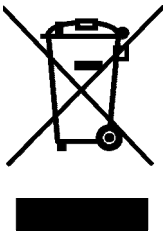
RoHS Statement

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

Exit Setup *

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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。

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.

Exit Setup *

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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.

Exit Setup *

Enter Setup

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.

Exit Setup *

Enter Setup

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.*

Exit Setup *

Enter Setup

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.

Exit Setup *

Enter Setup

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.

Exit Setup *

Enter Setup

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Exit Setup *

Enter Setup

Chapter 1 - Overview

1.1 Package

Please make sure the following contents are in the MS282e gift box.
If something is missing or damaged, please contact your unitech representative.

The standard package contents:

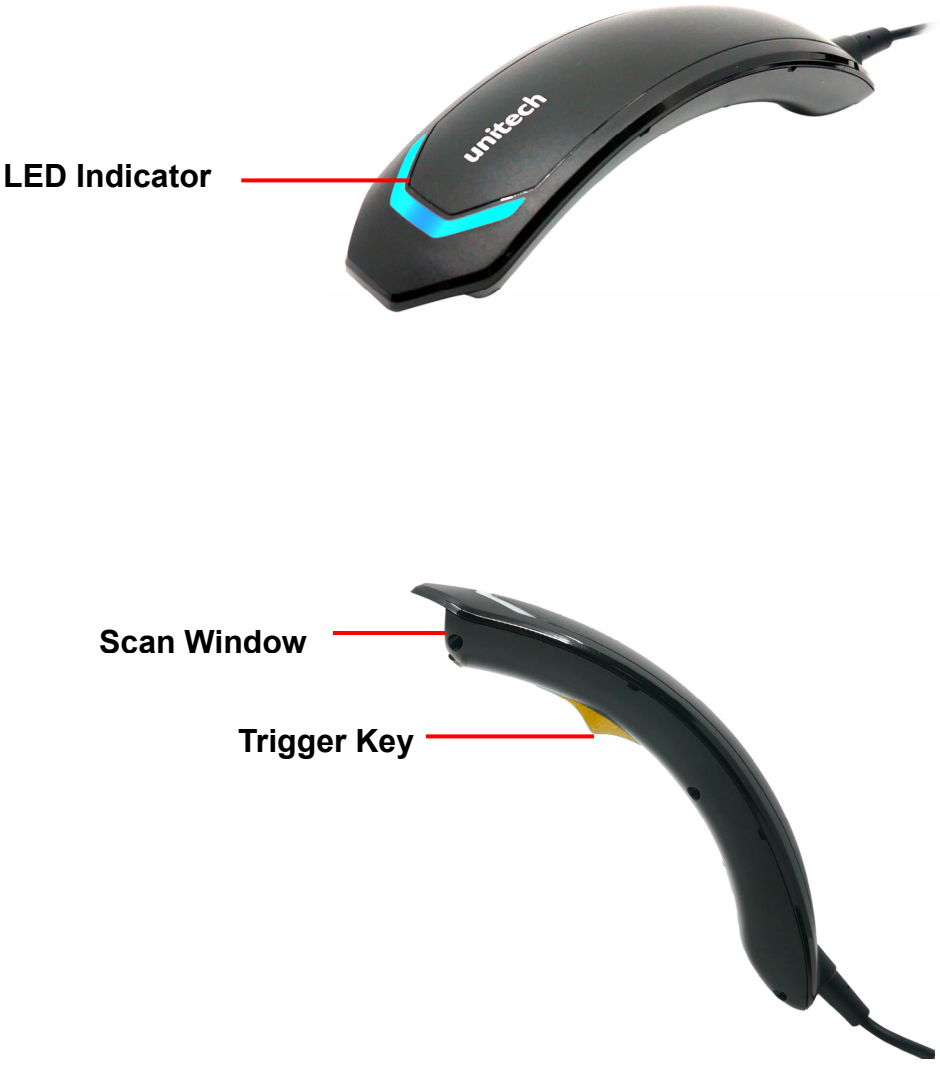
- MS282e 2D Imager Barcode Scanner
- Cable
- Quick Start Guide
- Regulatory Compliance Statements

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

Exit Setup *

Enter Setup

1.2 Product Detail



Exit Setup *

Enter Setup

1.3 Specifications

Optical & Performance	
1D or 2D	2D
Sensor	640 X 480 CMOS
Aiming Element	Red LED (625nm)
Illumination	White LED
Ambient Light	0~100,000lux (natural light)
Roll Angle	0 - 360°
Skew Angle	± 60°
Pitch Angle Sensor	± 60°
Field of View	Horizontal 42° Vertical 31.5°
Optical Resolution	≥3mil (1D)
Printing Contrast Scale	25%
Depth of Field (DOF PCS=80%)	SYMBOLOGY / X-DIM TYPICAL RANGE* Near Far EAN-13 (13mil): 60mm-350mm Code 39 (5mil): 40mm-150mm PDF417 (6.7mil): 50mm-125mm Data Matrix (10mil): 45mm-120mm QR Code (15mil): 30mm-170mm
Mechanical	
Dimension	179.7 mm x 47.5mm x 51.3mm (L x H X W)
Weight	125g
Trigger Switch Life	10 million times

Exit Setup *

Enter Setup

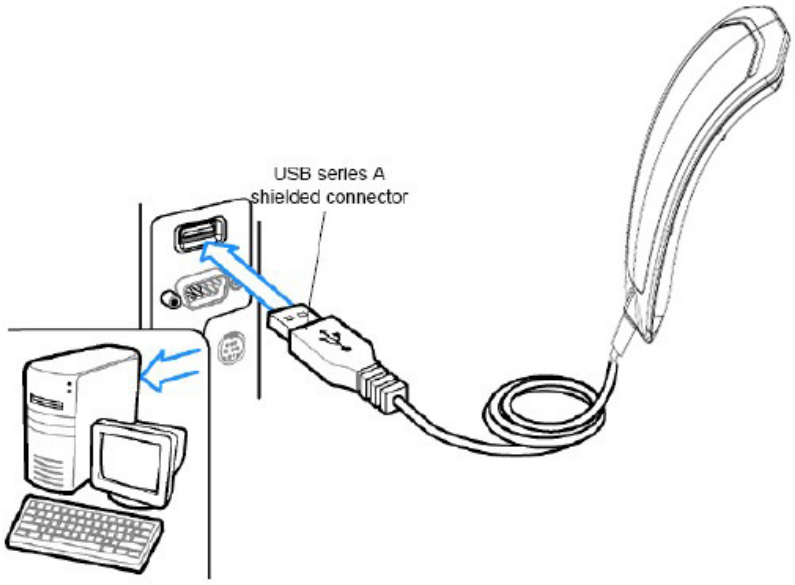
1D	
Symbologies	*1D: Code 128, EAN-13, EAN-8, Code 39, UPC-A, UPC-E, Codabar, Interleaved 2 of 5, ITF-6, ITF-14, ISBN, ISSN, Code 93, UCC/EAN-128, GS1 Databar, Matrix 2 of 5, Code 11, Industrial 2 of 5, Standard 2 of 5, AIM128, Plessey, MSI-Plessey* *2D: PDF417, QR Code, Micro QR, Data Matrix*
Electrical	
Operation Voltage	DC 5V +/- 10%
Current Consumption	Operation mode: <110mA, Standby mode: <7mA
Indicator	Buzzer, LED
Environmental	
Operating Temperature	-10°C to 50°C
Storage Temperature	-20°C to 60°C
Relative Humidity	95% non-condensing
ESD Protection	Functional after 8K Contact and 12K Air
Mechanical Shock	1.5M onto concrete (scanner only)
IP Rating	IP42
Communication	
Host Interface supported	USB
Regulatory Approvals	
CE, FCC, BSMI, VCCI	

Exit Setup *

Enter Setup

1.4 Getting Started

To get started with MS282e, please connect USB cable to the USB port of a host PC.



Exit Setup *

Enter Setup

1.5 LED Indicator / Beeper Sequence

Description	Indication	
	Beeper	LED
Trigger Pull	No Sound	No Light
No decode		
Wake up		
Decode	Middle Tone	Green Blink
Power on	Low Tone, Middle Tone, High Tone	No Light
Defaults set	High Tone, Middle Tone, Low Tone	No Light
Parameter entered		

Exit Setup *

Enter Setup

Chapter 2 - Installation

2.1 Barcode Programming

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.

Exit Setup *

Enter Setup

Exit Setup *

Enter Setup

2.2 General setting

2.2.1 Default

Scan below bar code to restore the factory setting.

Default

2.2.2 Display F/W Version

Scan below bar code to display F/W version.

Display F/W Version

2.2.3 Custom Defaults

Custom defaults make it possible to save the frequently-used settings on the engine.
Scanning the Save as Custom Defaults barcode can save the current settings as custom defaults. Once custom default settings are stored, they can be recovered at any time by scanning the Restore All Custom Defaults barcode.
Custom defaults are stored in the non-volatile memory. Restoring the engine to the factory defaults will not remove the custom defaults from the engine.

Save as Custom Defaults

Restore All Custom Defaults

Exit Setup *

Enter Setup

2.3 USB Device Type

USB HID Keyboard *

When the engine is connected to the USB port on a host device, you can enable the USB HID Keyboard feature by scanning the barcode below. Then engine's transmission will be simulated as USB keyboard input. The Host receives keystrokes on the virtual keyboard. It works on a Plug and Play basis and no driver is required.

USB CDC

If your engine is connected to the USB port on a host device, the USB CDC feature allows the host device to receive data in the way as a serial port does. A driver is needed when using this feature.

USB HID-POS

The HID-POS interface is recommended for new application programs. It can send up to 56 characters in a single USB report and appears more efficient than keyboard emulation.
Features:

- HID based, no custom driver required.
- Way more efficient in communication than keyboard emulation and traditional TTL-232 interface.

Exit Setup *

Enter Setup

2.4 USB Interface

2.4.1 USB Country Keyboard Types

Keyboard layouts vary from country to country. The default setting is U.S. keyboard.

U.S. (English)*

Belgium

Brazil

Canada (French)

Czechoslovakia

Denmark

Finland (Swedish)

Exit Setup *

Enter Setup

France

Germany/ Austria

Greece

Hungary

Israel (Hebrew)

Italy

Latin America/ South America

Netherlands (Dutch)

Exit Setup *

Enter Setup

Norway

Poland

Portugal

Romania

Russia

Slovakia

Spain

Sweden

Exit Setup *

Enter Setup

Switzerland (German)

Turkey_F

Turkey_Q

UK

Japan

2.4.2 Beep on Unknown Character

Due to the differences in keyboard layouts, some characters contained in barcode data may be unavailable on the selected keyboard. As a result, the engine fails to transmit the unknown characters.
Scan the appropriate barcode below to enable or disable the emission of beep when an unknown character is detected.

Do Not Beep on Unknown Character *

Beep on Unknown Character

Exit Setup *

Enter Setup

Note: Supposing French keyboard (Country Code: 7) is selected and barcode data ”AĐF” is being dealted with, the keyboard will fail to locate the “Đ” (0xD0) character and the engine will ignore the character and continue to process the next one.
Do Not Beep on Unknown Character: The engine does not beep and the Host receives “AF”. Beep on Unknown Character: The engine beeps and the Host still receives “AF”.

If Emulate ALT+Keypad ON is selected, Beep on Unknown Character does not function.

2.4.3 Inter-Keystroke Delay

This parameter specifies the delay between emulated keystrokes.

No Delay *

Short Delay (20ms)

Long Delay (40ms)

Exit Setup *

Enter Setup

2.4.4 Convert Case

Scan the appropriate barcode below to convert barcode data to your desired case.

No Case Conversion *

Convert All to Upper Case

Convert All to Lower Case

Example: When the Convert All to Lower Case feature is enabled, barcode data "AbC" is transmitted as "abc".

Note: If Emulate ALT+Keypad ON is selected, Convert All to Lower Case and Convert All to Upper Case do not function.

Exit Setup *

Enter Setup

2.4.5 Emulate ALT+Keypad

When Emulate ALT+Keypad is turned on, ASCII characters (0x20 - 0xFF) are sent over the numeric keypad no matter which keyboard type is selected.

1. ALT Make
2. Enter the number corresponding to a desired character on the keypad.
3. ALT Break

After **Emulate ALT+Keypad ON** is selected, you need to choose the code page with which the barcodes were created and to turn **Unicode Encoding** On or Off depending on the encoding used by the application software.

Emulate ALT+Keypad OFF *

Emulate ALT+Keypad ON

Since sending a character involves multiple keystroke emulations, this method appears less efficient.

Supposing **Emulate ALT+Keypad** is ON, Unicode Encoding is Off, Code Page 1252 (West European Latin) is selected, and **Emulate Keypad with Leading Zero** is Off, barcode data ”AĐF” (65/208/70) is sent as below:
“A” – “ALT Make” + “065” + “ALT Break”
“Đ” -- “ALT Make” + “208” + “ALT Break”
“F” -- “ALT Make” + “070” + “ALT Break”

Exit Setup *

Enter Setup

2.4.6 Function Key Mapping

When **Ctrl+ASCII Mode** is selected, function characters (0x00 - 0x1F) are sent as ASCII sequences.

Disable*

Ctrl+ASCII Mode

Alt+Keypad Mode

If Ctrl+ASCII Mode is selected and other parameters of USB HID Keyboard adopt factory defaults, barcode data "A<HT>(i.e. Horizontal Tab)F" (0x41/0x09/0x46) is sent as below:

"A" - Keystroke "A".

<HT> - "Ctrl Make" + Keystroke "I" + "Ctrl Break"

"F" - Keystroke "F"

For some text editors, "Ctrl I" means italic convert. So the output may be "AF".

If **Alt+Keypad Mode** is selected and other parameters of USB HID Keyboard adopt factory defaults, the data above is sent as below:

"A" - Keystroke "A".

<HT> - "Alt Make" + Keystrokes "009" + "Alt Break"

"F" - Keystroke "F"

Exit Setup *

Enter Setup

ASCII Function Key Mapping Table

ASCII Function	ASCII Value (HEX)	Function Key Mapping Disabled	Ctrl+ASCII
NUL	00	Null	Ctrl+@
SOH	01	Keypad Enter	Ctrl+A
STX	02	Caps Lock	Ctrl+B
ETX	03	ALT	Ctrl+C
EOT	04	Null	Ctrl+D
ENQ	05	CTRL	Ctrl+E
ACK	06	Null	Ctrl+F
BEL	07	Enter	Ctrl+G
BS	08	Left Arrow	Ctrl+H
HT	09	Horizontal Tab	Ctrl+I
LF	0A	Down Arrow	Ctrl+J
VT	0B	Vertical Tab	Ctrl+K
FF	0C	Delete	Ctrl+L
CR	0D	Enter	Ctrl+M
SO	0E	Insert	Ctrl+N
SI	0F	Esc	Ctrl+O
DLE	10	F11	Ctrl+P
DC1	11	Home	Ctrl+Q
DC2	12	PrintScreen	Ctrl+R
DC3	13	Backspace	Ctrl+S
DC4	14	tab+shift	Ctrl+T
NAK	15	F12	Ctrl+U
SYN	16	F1	Ctrl+V
ETB	17	F2	Ctrl+W
CAN	18	F3	Ctrl+X
EM	19	F4	Ctrl+Y
SUB	1A	F5	Ctrl+Z
ESC	11	F6	Ctrl+[
FS	1C	F7	Ctrl+\
GS	1D	F8	Ctrl+]
RS	1E	F9	Ctrl+6
US	1F	F10	Ctrl+-

Exit Setup *

Enter Setup

ASCII Function Key Mapping Table

The last five characters (0x1B~0x1F) in the table above apply to US keyboard layout only. The following chart provides the equivalents of these five characters for other countries.

Country	Ctrl+ASCII					
United States	Ctrl+[	Ctrl+\	Ctrl+]	Ctrl+6	Ctrl+-	
Belgium	Ctrl+[	Ctrl+<	Ctrl+]	Ctrl+6	Ctrl+-	
Scandinavia	Ctrl+8	Ctrl+<	Ctrl+9	Ctrl+6	Ctrl+-	
France	Ctrl+^	Ctrl+8	Ctrl+$	Ctrl+6	Ctrl+=	
Germany		Ctrl+Ã	Ctrl++	Ctrl+6	Ctrl+-	
Italy		Ctrl+\	Ctrl++	Ctrl+6	Ctrl+-	
Switzerland		Ctrl+<	Ctrl+..	Ctrl+6	Ctrl+-	
United Kingdom	Ctrl+[	Ctrl+ ¢	Ctrl+]	Ctrl+6	Ctrl+-	
Denmark	Ctrl+8	Ctrl+\	Ctrl+9	Ctrl+6	Ctrl+-	
Norway	Ctrl+8	Ctrl+\	Ctrl+9	Ctrl+6	Ctrl+-	
Spain	Ctrl+[	Ctrl+\	Ctrl+]	Ctrl+6	Ctrl+-	

Exit Setup *

Enter Setup

2.4.7 Emulate Numeric Keypad

Do Not Emulate Numeric Keypad 1：
Sending a number (0-9) is emulated as keystroke(s) on main keyboard.
Emulate Numeric Keypad 1：
Sending a number (0-9) is emulated as keystroke(s) on numeric keypad. The state of Num Lock on the simulated numeric keypad is determined by its equivalent on the host device. If Num Lock on the host device is turned off, the output of simulated numeric keypad is function key instead of number.
Do Not Emulate Numeric Keypad 2：
Sending "+", "-", "*" and "/" is emulated as keystroke(s) on main keyboard.
Emulate Numeric Keypad 2：
Sending "+", "-", "*" and "/" is emulated as keystroke(s) on numeric keypad.

Do Not Emulate Numeric Keypad 1 *

Emulate Numeric Keypad 1

Do Not Emulate Numeric Keypad 2 *

Emulate Numeric Keypad 2

Exit Setup *

Enter Setup

Note : Emulate ALT+Keypad ON prevails over Emulate Numeric Keypad.

Supposing the Emulate Numeric Keypad 1 feature is enabled:

if Num Lock on the host device is ON, "A4.5" is transmitted as "A4.5";

if Num Lock on the host device is OFF, "A4.5" is transmitted as ".A":

1. "A" is sent on main keyboard;
2. "4" is sent as the function key "Cursor Move to Left";
3. "." is sent on main keyboard;
4. "5" is not sent as it does not correspond to any function key.

Exit Setup *

Enter Setup

2.4.8 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the barcode being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, select the code page with which the barcodes were created by scanning the appropriate barcode below. For PDF417, QR Code, Aztec and Data Matrix, besides setting the code page, you also need to set the character encoding in the "Character Encoding" section in Chapter 6. This feature is only effective when Emulate **ALT+Keypad** is turned on.

Note: Code Page 932, Code Page 936 and Code Page 950 are selectable and respectively supported by different software versions.

Code Page 1252 (West European Latin)*

Code Page 1251 (Cyrillic)

Code Page 1250 (Central and East European Latin)

Code Page 1253 (Greek)

Code Page 1254 (Turkish)

Exit Setup *

Enter Setup

Code Page 1255 (Hebrew)

Code Page 1256 (Arabic)

Code Page 1257 (Baltic)

Code Page 1258 (Vietnamese)

Code Page 936 (Simplified Chinese, GB2312,GBK)

Code Page 950 (Traditional Chinese, Big5)

Code Page 874 (Thai)

Code Page 932 (Japanese, Shift-JIS)

Exit Setup *

Enter Setup

2.5 RS232 Interfaces

2.5.1 Parity Check

Set the parity type to match the host requirements.

Odd Parity: If the data contains an odd number of 1 bits, the parity bit value is set to 0.

Even Parity: If the data contains an even number of 1 bits, the parity bit value is set to 0.

None: Select this option when no parity bit is required.

None *

Odd Parity

Even Parity

Exit Setup *

Enter Setup

2.5.2 Data Bit

Set the number of data bits to match the host requirements.

8 Data Bits *

7 Data Bits

2.5.3 Stop Bit

The stop bit(s) at the end of each transmitted character marks the end of transmission of one character and prepares the receiving device for the next character in the serial data stream. Set the number of stop bits to match the host requirements.

1 Stop Bit *

2 Stop Bits

Exit Setup *

Enter Setup

2.6 Scan Mode

Level Mode

A trigger pull activates a decode session. The decode session continues until a barcode is decoded or you release the trigger.

Sense Mode *

The engine activates a decode session every time it detects a barcode presented to it. The decode session continues until a barcode is decoded or the decode session timeout expires. **Reread Timeout** can avoid undesired rereading of same barcode in a given period of time. **Sensitivity** can change the Sense Mode's sensibility to changes in images captured. **Image Stabilization Timeout** gives the engine time to adapt to ambient environment after it decodes a barcode and "looks" for another.

Continuous Mode

The engine automatically starts one decode session after another. To suspend/resume barcode reading, simply press the trigger. Reread Timeout can avoid undesired rereading of same barcode in a given period of time. Note that when switching to this mode by scanning the Continuous Mode barcode, the engine will stop barcode reading for 3 seconds before starting scanning continuously.

Pulse

When the trigger is pulled and released, scanning is activated until a barcode is decoded or the decode session timeout expires (The decode session timeout begins when the trigger is released).

Batch Mode

A trigger pull activates a round of multiple decode sessions. This round of multiple scans continues until you release the trigger. Rereading the same barcode is not allowed in the same round.

Exit Setup *

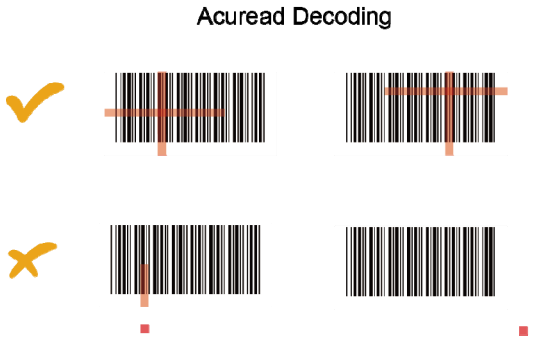
Enter Setup

2.7 Decode Area

Whole Area Decoding: The engine attempts to decode barcode(s) within its field of view, from the center to the periphery, and transmits the barcode that has been first decoded.

Specific Area Decoding: The engine attempts to read barcode(s) within a specified decoding area and transmits the barcode that has been first decoded. This option allows the engine to narrow its field of view to make sure it reads only those barcodes intended by the user. For instance, if multiple barcodes are placed closely together, specific area decoding in conjunction with appropriate pre-defined decoding area will insure that only the desired barcode is read.

Acuread Decoding: The engine only decodes the barcode aimed squarely by the aiming pattern. For those using a crosshair aiming pattern, only the barcode aimed by the center of crosshair will be decoded.



Exit Setup *

Enter Setup

Whole Area Decoding*

Specific Area Decoding

Acuread Decoding

If **Specific Area Decoding** is enabled, the engine only reads barcodes that intersect the predefined decoding area.
The default decoding area is an area of 40% top, 60% bottom, 40% left and 60% right of the engine's field of view
You can define the decoding area using the Top of Decoding Area, Bottom of Decoding Area, Left of Decoding Area and **Right of Decoding Area** barcodes as well as numeric barcode(s) that represent(s) a desired percentage (0-100). The value of Bottom must be greater than that of Top; the value of Right must be greater than that of Left.

Top of Decoding Area

Bottom of Decoding Area

Left of Decoding Area

Right of Decoding Area

Exit Setup *

Enter Setup

2.8 Internal Illumination

2.8.1 Illumination

A couple of illumination options are provided to improve the lighting conditions during every image capture:

Normal: Illumination LEDs are turned on during image capture.

Always ON: Illumination LEDs keep ON after the engine is powered on.

OFF: Illumination LEDs are OFF all the time.

Normal *

Always ON

OFF

Exit Setup *

Enter Setup

2.8.2 External Illumination

Normal

Always ON

OFF *

2.8.3 Aiming

When scanning/capturing image, the engine projects an aiming pattern which allows positioning the target barcode within its field of view and thus makes decoding easier.

Normal: The engine projects an aiming pattern only during barcode scanning/capture.
Always ON: Aiming pattern is constantly ON after the engine is powered on.
OFF: Aiming pattern is OFF all the time.

Normal *

Always ON

OFF

Exit Setup *

Enter Setup

2.9 Beep & LED Notifications

2.9.1 Good Read LED

The LED can be programmed to be On or Off to indicate good read.

On *

Off

2.9.2 Good Read LED Duration

This parameter sets the amount of time that the Good Read LED to remain on following a good read. It is programmable in 1ms increments from 1ms to 2,500ms.

Short (20ms) *

Long (220ms)

Medium (120ms)

Prolonged (320ms)

Custom
(1 - 10000ms）

Exit Setup *

Enter Setup

Note:

Set the Good Read LED duration to 800ms:

1. Scan the Enter Setup barcode.
2. Scan the Custom barcode.
3. Scan the numeric barcodes "8", "0" and "0" from the "Digit Barcodes" section in Appendix.
4. Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the Exit Setup barcode.

Exit Setup *

Enter Setup

2.9.3 Power On Beep

The engine can be programmed to beep when it is powered on. Scan the Off barcode if you do not want a power on beep.

On*

Off

2.9.4 Good Read Beep

Scanning the **Off** barcode can turn off the beep that indicates successful decode; scanning the **On** barcode can turn it back on.

On*

Off

Exit Setup *

Enter Setup

2.9.5 Good Read Beep Duration

This parameter sets the length of the beep the engine emits on a good read. It is programmable in 1ms increments from 20ms to 300ms.

Short (40ms)

Medium (80ms) *

Long (120ms)

Custom (20 – 300ms)

Note:

Set the Good Read Beep duration to 200ms:

1. Scan the Enter Setup barcode.
2. Scan the Custom barcode.
3. Scan the numeric barcodes "2", "0" and "0" from the "Digit Barcodes" section in Appendix.
4. Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the Exit Setup barcode.

Exit Setup *

Enter Setup

2.9.6 Good Read Beep Frequency

This parameter is programmable in 1Hz increments from 20Hz to 20,000Hz.

Extra Low (800Hz)

Low (1600Hz)

Medium (2730Hz) *

High (4200Hz)

Custom (20 - 20,000Hz)

Note:

Set the Good Read Beep frequency to 2,000Hz:

1. Scan the Enter Setup barcode.
2. Scan the Custom barcode.
3. Scan the numeric barcodes "2", "0", "0" and "0" from the "Digit Barcodes" section in Appendix.
4. Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the Exit Setup barcode.

Exit Setup *

Enter Setup

2.9.7 Good Read Beep Volume

There are 20 volume levels to choose from.

Loud *

Medium

Low

Custom Volume (Level 1-20)

Note :

Set the Good Read Beep volume to Level 8:

1. Scan the Enter Setup barcode.
2. Scan the Custom Volume barcode.
3. Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.
4. Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the Exit Setup barcode.

Exit Setup *

Enter Setup

2.10 Prefix & Suffix

A 1D barcode could contain digits, letters, symbols, etc. A 2D barcode could contain more data, such as Chinese characters and other multi-byte characters. However, in real applications, they do not and should not have all information we need, such as barcode type, data acquisition time and delimiter, in order to keep the barcodes short and flexible.
Preffix and suffix are how to fulfill the needs mentioned above. They can be added, removed and modified while the original barcode data remains intact.

Barcode processing procedure:

1. Edit data with Data Formatter
2. Append prefix/suffix
3. Pack data
4. Append terminating character

Exit Setup *

Enter Setup

2.10.1 Global Settings

Enable/Disable All Prefixes/Suffixes

Disable All Prefixes/Suffixes: Transmit barcode data with no prefix/suffix.
Enable All Prefixes/Suffixes:
Allow user to append Code ID prefix, AIM ID prefix, custom prefix/suffix and terminating character to the barcode data before the transmission.

Enable All Prefixes/Suffixes

Disable All Prefixes/Suffixes

Prefix Sequences

Code ID+ Custom +AIM ID *

Custom + Code ID + AIM ID

Exit Setup *

Enter Setup

2.10.2 Custom Prefix

Enable/Disable Custom Prefix

If custom prefix is enabled, you are allowed to append to the data a user-defined prefix that cannot exceed 10 characters. For example, if the custom prefix is "AB" and the barcode data is "123", the Host will receive "AB123".

Enable Custom Prefix

Disable Custom Prefix*

Set Custom Prefix

To set a custom prefix, scan the Set Custom Prefix barcode then the numeric barcodes corresponding to the hexadecimal value of a desired prefix then the Save barcode.

Note: A custom prefix cannot exceed 10 characters.

Set Custom Prefix

Set the custom prefix to "CODE" (HEX: 0x43/0x4F/0x44/0x45):

1. Scan the Enter Setup barcode.
2. Scan the Set Custom Prefix barcode.
3. Scan the numeric barcodes "4", "3", "4", "F", "4", "4", "4" and "5" from the "Digit Barcodes" section in Appendix.
4. Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the Enable Custom Prefix barcode.
6. Scan the Exit Setup barcode.

Exit Setup *

Enter Setup

2.10.3 AIM ID Prefix

AIM (Automatic Identification Manufacturers) ID defines symbology identifier (For the details, see the "AIM ID Table" section in Appendix). If AIM ID prefix is enabled, the engine will add the symbology identifier before the scanned data after decoding.

Note: AIM ID is not user programmable.

Enable AIM ID Prefix

Disable AIM ID Prefix *

2.10.4 Code ID Prefix

Code ID can also be used to identify barcode type. Unlike AIM ID, Code ID is user programmable. Code ID can only consist of one or two English letters.

Enable Code ID Prefix

Disable Code ID Prefix *

2.10.5 Restore All Default Code IDs

For the information of default Code IDs, see the "Code ID Table" section in Appendix.

Restore All Default Code IDs

Exit Setup *

Enter Setup

2.10.6 Modify Code ID

See the examples below to learn how to modify a Code ID and restore the default Code IDs of all symbologies.

Modify PDF417 Code ID to be "p" (HEX: 0x70):

1. Scan the Enter Setup barcode.
2. Scan the Modify PDF417 Code ID barcode.
3. Scan the numeric barcodes "7" and "0" from the "Digit Barcodes" section in Appendix.
4. Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the Exit Setup barcode.

Restore the default Code IDs of all symbologies:

1. Scan the Enter Setup barcode.
2. Scan the Restore All Default Code IDs barcode.
3. Scan the Exit Setup barcode.

Modify Code 128 Code ID

Modify GS1-128 Code ID

Modify AIM-128 Code ID

Modify EAN-8 Code ID

Exit Setup *

Enter Setup

Modify EAN-13 Code ID

Modify UPC-E Code ID

Modify UPC-A Code ID

Modify ISBN Code ID

Modify ISSN Code ID

Modify Code 39 Code ID

Modify Code 93 Code ID

Modify Interleaved 2 of 5 Code ID

Modify ITF-14 Code ID

Modify ITF-6 Code ID

Modify Codabar Code ID

Modify Industrial 25 Code ID

Modify Standard 25 Code ID

Modify Matrix 2 of 5 Code ID

Exit Setup *

Enter Setup

Modify Code 11 Code ID

Modify Plessey Code ID

Modify MSI/Plessey Code ID

Modify GS1 Databar Code ID

Modify PDF417 Code ID

Modify QR Code ID

Modify Data Matrix Code ID

Modify Micro QR Code ID

2.10.7 Custom Suffix

Enable/Disable Custom Suffix

If custom suffix is enabled, you are allowed to append to the data a user-defined suffix that cannot exceed 10 characters. For example, if the custom suffix is "AB" and the barcode data is "123", the Host will receive "123AB".

Enable Custom Suffix

Disable Custom Suffix *

Exit Setup *

Enter Setup

Set Custom Suffix

To set a custom suffix, scan the Set Custom Suffix barcode then the numeric barcodes corresponding to the hexadecimal value of a desired suffix then the Save barcode.

Note: A custom suffix cannot exceed 10 characters.

Set Custom Suffix

Set the custom suffix to "CODE" (HEX: 0x43/0x4F/0x44/0x45):

1. Scan the Enter Setup barcode.
2. Scan the Set Custom Suffix barcode.
3. Scan the numeric barcodes "4", "3", "4", "F", "4", "4", "4" and "5" from the "Digit Barcodes" section in Appendix.
4. Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the Enable Custom Suffix barcode.
6. Scan the Exit Setup barcode.

Exit Setup *

Enter Setup

2.10.8 Terminating Character Suffix

Enable/Disable Terminating Character Suffix

A terminating character such as carriage return (CR) or carriage return/line feed pair (CRLF) can only be used to mark the end of data, which means nothing can be added after it.

Disable Terminating Character Suffix

Enable Terminating Character Suffix *

Set Terminating Character Suffix

To set a terminating character suffix, scan the Set Terminating Character Suffix barcode then the numeric barcodes corresponding to the hexadecimal value of a desired terminating character then the Save barcode.

Note: A terminating character suffix cannot exceed 2 characters.

Set Terminating Character Suffix

Set Terminating Character to CR (0x0D) *

Set Terminating Character to CRLF (0x0D,0x0A)

Set the terminating character suffix to 0x0A:

1. Scan the Enter Setup barcode.
2. Scan the Set Terminating Character Suffix barcode.
3. Scan the numeric barcodes "0" and "A" from the "Digit Barcodes" section in Appendix.
4. Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the Enable Terminating Character Suffix barcode.
6. Scan the Exit Setup barcode.

Exit Setup *

Enter Setup

2.10.9 Data Packing

Data packing is designed for a specific group of users who want to have the data packed before transmission. Data packing influences data format, so it is advised to disable this feature when it is not required.

Data Packing Options

Disable Data Packing: Transmit decoded data in raw format (unpacketed).

Packet format 1: [STX + ATTR + LEN] + [AL_TYPE + DATA] + [LRC]
STX: 0x02
ATTR: 0x00
LEN: Barcode data length is expressed in 2 bytes ranging from 0x0000 (0) to 0xFFFF (65535).
AL_TYPE: 0x36
DATA: Raw barcode data.
LRC: Check digit.
LRC calculation algorithm: computation sequence: 0xFF+LEN+AL_TYPE+DATA; computation method is XOR, byte by byte.

Exit Setup *

Enter Setup

Enable Data Packing, Format 2: Transmit decoded data with the packet format 2 defined below.
Packet format 2: [STX + ATTR + LEN] + [AL_TYPE] + [Symbology_ID + DATA] + [LRC]
STX: 0x02
ATTR: 0x00
LEN: Barcode data length is expressed in 2 bytes ranging from 0x0000 (0) to 0xFFFF (65535).
AL_TYPE: 0x3B
Symbology_ID: The ID number of symbology, 1 byte.
DATA: Raw barcode data.
LRC: Check digit.
LRC calculation algorithm: computation sequence: 0xFF+LEN+AL_TYPE+Symbology_ID+DATA; computation method is XOR, byte by byte.

Disable Data Packing *

Enable Data Packing, Format 1

Enable Data Packing, Format 2

Exit Setup *

Enter Setup

2.11 Save /Cancel Barcodes

After reading numeric barcode(s), you need to scan the Save barcode to save the data. If you scan the wrong digit(s), you can either scan the Cancel barcode and then start the configuration all over again, or scan the Delete the Last Digit barcode and then the correct digit, or scan the Delete All Digits barcode and then the digits you want.
For instance, after reading the Maximum Length barcode and numeric barcodes "1", "2" and "3", you scan:

Delete the Last Digit: The last digit "3" will be removed.
Delete All Digits: All digits "123" will be removed.
Cancel: The maximum length configuration will be cancelled. And the engine is still in the setup mode.

Save

Delete the Last Digit

Delete All Digits

Cancel

Exit Setup *

Enter Setup

Chapter 3 – Symbology

3.1 All symbologies

If the Disable All Symbologies feature is enabled, the engine will not be able to read any non-programming barcodes except the programming barcodes.

All Symbologies On

All Symbologies Off

3.2 Enable/Disable 1D / 2D Symbologies

3.2.1 Enable/Disable 1D Symbologies

If the Disable 1D Symbologies feature is enabled, the engine will not be able to read any 1D barcodes.

Enable 1D Symbologies

Disable 1D Symbologies

3.2.2 Enable/Disable 2D Symbologies

If the Disable 2D Symbologies feature is enabled, the engine will not be able to read any 2D barcodes.

Enable 2D Symbologies

Disable 2D Symbologies

Exit Setup *

Enter Setup

3.3 1D

Before starting any symbology setting, please scan "**Enter Setup**"

Enter Setup

When finished setting, please scan "**Exit Setup**"

Exit Setup

Exit Setup *

Enter Setup

3.3.1 Code 128

Restore the Factory Defaults of Code 128

Enable Code 128*

Disable Code 128

If the engine fails to identify Code 128 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Code 128 barcode.

3.3.1.1 Set Length Range for Code 128

The engine can be configured to only decode Code 128 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 1)**

Set the Maximum Length **(Default: 48)**

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes Code 128 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 128 barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode Code 128 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

Exit Setup *

Enter Setup

3.3.2 GS1-128 (UCC/EAN-128)

Restore the Factory Defaults of GS1-128

Enable GS1- 128*

Disable GS1-128

Note: If the engine fails to identify GS1-128 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable GS1-128 barcode.

3.3.2.1 Set Length Range for GS1-128

The engine can be configured to only decode GS1-128 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 1)**

Set the Maximum Length **(Default: 48)**

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes GS1-128 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only GS1-128 barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode GS1- 128 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

Exit Setup *

Enter Setup

3.3.3 AIM-128

Restore the Factory Defaults of AIM-128

Enable AIM-128

Disable AIM-128*

Note: If the engine fails to identify AIM 128 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable AIM 128 barcode

3.3.3.1 Set Length Range for AIM 128

The engine can be configured to only decode AIM 128 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 1)**

Set the Maximum Length **(Default: 48)**

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes AIM-128 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only AIM-128 barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode AIM- 128 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.4 EAN-8

Restore the Factory Defaults of EAN-8

Enable EAN-8*

Disable EAN-8

Note: If the engine fails to identify EAN-8 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable EAN-8** barcode.

3.3.4.1 Transmit Check Digit

EAN-8 is 8 digits in length with the last one as its check digit used to verify the integrity of the data.

Transmit EAN-8 Check Digit *

Do Not Transmit EAN-8 Check Digit

Exit Setup *

Enter Setup

3.3.4.2 Add-On Code

An EAN-8 barcode can be augmented with a two-digit or five-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is an EAN-8 barcode while the part circled by red dotted line is add-on code.

Enable 2-Digit Add-On Code

Disable 2-Digit Add-On Code *

Enable 5-Digit Add-On Code

Disable 5-Digit Add-On Code*

Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code:
The engine decodes a mix of EAN-8 barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-Digit Add-On Code/ Disable 5-Digit Add-On Code:
The engine decodes EAN-8 and ignores the add-on code when presented with an EAN-8 plus 2-digit/5-digit add-on barcode. It can also decode EAN-8 barcodes without 2-digit/5-digit add-on codes.

Exit Setup *

Enter Setup

3.3.4.3 Add-On Code Required

When EAN-8 Add-On Code Required is selected, the engine will only read EAN-8 barcodes that contain add-on codes.

EAN-8 Add-On Code Required

EAN-8 Add-On Code Not Required *

3.3.4.4 Convert EAN-8 to EAN-13

Do Not Convert EAN-8 to EAN-13: EAN-8 decoded data is transmitted as EAN-8 data, without conversion.

Do Not Convert EAN-8 to EAN-13

3.3.5 EAN-13

Restore the Factory Defaults of EAN-13

Enable EAN-13*

Disable EAN-13

Note: If the engine fails to identify EAN-13 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable EAN-13 barcode.

Exit Setup *

Enter Setup

3.3.5.1 Transmit Check Digit

Transmit EAN-13 Check Digit *

Do Not Transmit EAN-13 Check Digit

3.3.5.2 Add-On Code

An EAN-13 barcode can be augmented with a two-digit or five-digit add-on code to form a new one.

Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code:
The engine decodes a mix of EAN-13 barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-Digit Add-On Code/ Disable 5-Digit Add-On Code:
The engine decodes EAN-13 and ignores the add-on code when presented with an EAN-13 plus add-on barcode. It can also decode EAN-13 barcodes without add-on codes.

Enable 2-Digit Add-On Code

Disable 2-Digit Add-On Code *

Enable 5-Digit Add-On Code

Disable 5-Digit Add-On Code *

Exit Setup *

Enter Setup

3.3.5.3 Add-On Code Required

When EAN-13 Add-On Code Required is selected, the engine will only read EAN-13 barcodes that contain add-on codes.

EAN-13 Add-On Code Required

EAN-13 Add-On Code Not Required *

3.3.5.4 EAN-13 Beginning with 290 Add-On Code Required

This setting programs the engine to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with "290". The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with "290" must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected Require Add-On Code, and you want to disable this feature, scan Do Not Require Add-On Code. EAN-13 barcodes are handled, depending on your selection for the "Add-On Code Required" feature.

Do Not Require Add-On Code *

Require Add-On Code

Exit Setup *

Enter Setup

3.3.5.5 EAN-13 Beginning with 378/379 Add-On Code

Required

This setting programs the engine to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with a "378" or "379". The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with a "378" or "379" must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected Require Add-On Code, and you want to disable this feature, scan Do Not Require Add-On Code. EAN-13 barcodes are handled, depending on your selection for the "Add-On Code Required" feature.

Do Not Require Add-On Code *

Require Add-On Code

Exit Setup *

Enter Setup

3.3.5.6 EAN-13 Beginning with 414/419 Add-On Code

Required

This setting programs the engine to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with a "414" or "419".
The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with a "414" or "419" must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected Require Add-On Code, and you want to disable this feature, scan Do Not Require Add-On Code.
EAN-13 barcodes are handled, depending on your selection for the "Add-On Code Required" feature.

Do Not Require Add-On Code *

Require Add-On Code

Exit Setup *

Enter Setup

3.3.5.7 EAN-13 Beginning with 434/439 Add-On Code

Required

This setting programs the engine to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with a "434" or "439". The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with a "434" or "439" must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected Require Add-On Code, and you want to disable this feature, scan Do Not Require Add-On Code. EAN-13 barcodes are handled, depending on your selection for the "Add-On Code Required" feature.

Do Not Require Add-On Code *

Require Add-On Code

Exit Setup *

Enter Setup

3.3.5.8 EAN-13 Beginning with 977 Add-On Code

Required

This setting programs the engine to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with "977". The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with "977" must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected Require Add-On Code, and you want to disable this feature, scan Do Not Require Add-On Code. EAN-13 barcodes are handled, depending on your selection for the "Add-On Code Required" feature.

Do Not Require Add-On Code *

Require Add-On Code

Exit Setup *

Enter Setup

3.3.5.9 EAN-13 Beginning with 978 Add-On Code

Required

This setting programs the engine to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with "978". The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with "978" must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected Require Add-On Code, and you want to disable this feature, scan Do Not Require Add-On Code. EAN-13 barcodes are handled, depending on your selection for the "Add-On Code Required" feature.

Do Not Require Add-On Code *

Require Add-On Code

Exit Setup *

Enter Setup

3.3.5.10 EAN-13 Beginning with 979 Add-On Code

Required

This setting programs the engine to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with "979". The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with "979" must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected Require Add-On Code, and you want to disable this feature, scan Do Not Require Add-On Code. EAN-13 barcodes are handled, depending on your selection for the "Add-On Code Required" feature.

Do Not Require Add-On Code *

Require Add-On Code

3.3.6 ISSN

Restore the Factory Defaults of ISSN

Enable ISSN

Disable ISSN*

Note: IF the engine fails to identify ISSN barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable ISSN barcode.

Exit Setup *

Enter Setup

3.3.7 ISBN

Restore the Factory Defaults of ISBN

Enable ISBN

Disable ISBN*

Note: If the engine fails to identify ISBN barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable ISBN barcode.

3.3.7.1 Set ISBN Format

ISBN-13

ISBN-10*

Exit Setup *

Enter Setup

3.3.8 UPC-E

Restore the Factory Defaults of UPC-E

Enable UPC-E *

Disable UPC-E

Note: If the scanner fails to identify UPC-E barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable UPC-E barcode.

3.3.8.1 Transmit Check Character

UPC-E is 8 digits in length with the last one as its check character used to verify the integrity of the data.

Transmit UPC-E Check Character *

Do Not Transmit UPC-E Check Character

Exit Setup *

Enter Setup

3.3.8.2 Add-On Code

A UPC-E barcode can be augmented with a two-digit or five-digit add-on code to form a new one.

Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code:
The engine decodes a mix of UPC-E barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-Digit Add-On Code/ Disable 5-Digit Add-On Code:
The engine decodes UPC-E and ignores the add-on code when presented with an UPC-E plus add-on barcode. It can also decode UPC-E barcodes without add-on codes.

Enable 2-Digit Add-On Code

Disable 2-Digit Add-On Code *

Enable 5-Digit Add-On Code

Disable 5-Digit Add-On Code *

3.3.8.3 Add-On Code Required

When UPC-E Add-On Code Required is selected, the engine will only read ISBN barcodes that contain add-on codes.

UPC-E Add-On Code Required

UPC-E Add-On Code Not Required *

Exit Setup *

Enter Setup

3.3.8.4 Transmit Preamble Character

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-E barcode. Select one of the following options for transmitting UPC-E preamble to the host device: transmit system character only, transmit system character and country code ("0" for USA), or transmit no preamble.

System Character *

No Preamble

System Character & Country Code

3.3.8.5 Convert UPC-E to UPC-A

Do Not Convert UPC-E to UPC-A: UPC-E decoded data is transmitted as UPC-E data, without conversion.

Do Not Convert UPC-E to UPC-A

Exit Setup *

Enter Setup

3.3.9 UPC-A

Restore the Factory Defaults of UPC-A

Enable UPC-A *

Disable UPC-A

Note: If the engine fails to identify UPC-A barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable UPC-A barcode.

3.3.9.1 Transmit Check Character

UPC-A is 13 digits in length with the last one as its check character used to verify the integrity of the data.

Transmit UPC-A Check Character *

Do Not Transmit UPC-A Check Character

Exit Setup *

Enter Setup

3.3.9.2 Add-On Code

A UPC-A barcode can be augmented with a two-digit or five-digit add-on code to form a new one.

Enable 2-Digit Add-On Code/ Enable 5-Digit Add-On Code:
The engine decodes a mix of UPC-A barcodes with and without 2-digit/5-digit add-on codes.

Disable 2-Digit Add-On Code/ Disable 5-Digit Add-On Code:
The engine decodes UPC-A and ignores the add-on code when presented with an UPC-A plus add-on barcode. It can also decode UPC-A barcodes without add-on codes.

Enable 2-Digit Add-On Code

Disable 2-Digit Add-On Code *

Enable 5-Digit Add-On Code

Disable 5-Digit Add-On Code *

3.3.9.3 Add-On Code Required

When UPC-A Add-On Code Required is selected, the engine will only read UPC-A barcodes that contain add-on codes.

UPC-A Add-On Code Required

UPC-A Add-On Code Not Required *

Exit Setup *

Enter Setup

3.3.9.4 Transmit Preamble Character

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-A barcode. Select one of the following options for transmitting UPC-A preamble to the host device: transmit system character only, or transmit system character and country code ("0" for USA), or transmit no preamble.

System Character & Country Code

System Character

No Preamble*

Exit Setup *

Enter Setup

3.3.10 Interleaved 2 of 5

Restore the Factory Defaults of Interleaved 2 of 5

Enable Interleaved 2 of 5 *

Disable Interleaved 2 of 5

Note: If the engine fails to identify Interleaved 2 of 5 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Interleaved 2 of 5 barcode.

3.3.10.1 Set Length Range for Interleaved 2 of 5

The engine can be configured to only decode Interleaved 2 of 5 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length (Default: 6)

Set the Maximum Length (Default: 80)

Note: If minimum length is set to be greater than maximum length, the engine only decodes Interleaved 2 of 5 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Interleaved 2 of 5 barcodes with that length are to be decoded.

Exit Setup *

Enter Setup

Example :

Set the engine to decode Interleaved 2 of 5 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.10.2 Check Character Verification

A check character is optional for Interleaved 2 of 5 and can be added as the last character. It is a calculated value used to verify the integrity of the data.
Disable: The engine transmits Interleaved 2 of 5 barcodes as is.
Do Not Transmit Check Character After Verification: The engine checks the integrity of all Interleaved 2 of 5 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.
Transmit Check Character After Verification: The engine checks the integrity of all Interleaved 2 of 5 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

Since Interleaved 2 of 5 must always have an even number of digits, a zero may need to be added as the first digit when the check character is added. The check character is automatically generated when making Interleaved 2 of 5 barcodes.

Disable *

Do Not Transmit Check Character After Verification

Transmit Check Character After Verification

Exit Setup *

Enter Setup

Note: If the Do Not Transmit Check Character After Verification option is enabled, Interleaved 2 of 5 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the Do Not Transmit Check Character After Verificationoption is enabled and the minimum length is set to 4, Interleaved 2 of 5 barcodes with a total length of 4 characters including the check character cannot be read.)

3.3.11 ITF-14

ITF-14 is a special kind of Interleaved 2 of 5 with a length of 14 characters and the last character as the check character.
ITF-14 priority principle: For the Interleaved 2 of 5 barcodes with a length of 14 characters and the last character as the check character, the ITF-14 configurations shall take precedence over the Interleaved 2 of 5 settings.

Restore the Factory Defaults of ITF-14

Disable ITF-14

Enable ITF-14 and Transmit Check Character

Enable ITF-14 But Do Not Transmit Check Character

Exit Setup *

Enter Setup

Note: An example of the ITF-14 priority principle: when ITF-14 is enabled and Interleaved 2 of 5 is disabled, the engine only decodes Interleaved 2 of 5 barcodes with a length of 14 characters and the last character as the check character.

3.3.12 ITF-6

ITF-6 is a special kind of Interleaved 2 of 5 with a length of 6 characters and the last character as the check character.
ITF-6 priority principle: For the Interleaved 2 of 5 barcodes with a length of 6 characters and the last character as the check character, the ITF-6 configurations shall take precedence over the Interleaved 2 of 5 settings.

Restore the Factory Defaults of ITF-6

Disable ITF-6 *

Enable ITF-6 and Transmit Check Digit

Enable ITF-6 But Do Not Transmit Check Digit

Note: An example of the ITF-6 priority principle: when ITF-6 is enabled and Interleaved 2 of 5 is disabled, the engine only decodes Interleaved 2 of 5 barcodes with a length of 6 characters and the last character as the check character..

Exit Setup *

Enter Setup

3.3.13 Matrix 2 of 5

Restore the Factory Defaults of Matrix 2 of 5

Enable Matrix 2 of 5*

Disable Matrix 2 of 5

3.3.13.1 Set Length Range for Matrix 2 of 5

The engine can be configured to only decode Matrix 2 of 5 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length
(Default: 4)

Set the Maximum Length
(Default: 80)

Note: If the engine fails to identify Matrix 2 of 5 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Matrix 2 of 5 barcode.

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes Matrix 2 of 5 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Matrix 2 of 5 barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode Matrix 2 of 5 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.13.1 Check Character Verification

A check character is optional for Matrix 2 of 5 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The engine transmitsMatrix 2 of 5 barcodes as is.
Do Not Transmit Check Character After Verification: The engine checks the integrity of all Matrix 2 of 5 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.
Transmit Check Character After Verification: The engine checks the integrity of all Matrix 2 of 5 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

Since Matrix 2 of 5 must always have an even number of digits, a zero may need to be added as the first digit when the check character is added. The check character is automatically generated when making Matrix 2 of 5 barcodes.

Exit Setup *

Enter Setup

Do Not Transmit Check Character After Verification

Transmit Check Character After Verification

Disable*

Note: If the Do Not Transmit Check Character After Verification option is enabled, Matrix 2 of 5 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the Do Not Transmit Check Character After Verification option is enabled and the minimum length is set to 4, Matrix 2 of 5 barcodes with a total length of 4 characters including the check character cannot be read.)

Exit Setup *

Enter Setup

3.3.14 Industrial 25

Restore the Factory Defaults of Industrial 25

Enable Industrial 25

Disable Industrial 25*

*Note: If the engine fails to identify Industrial 25 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Industrial 25** barcode.*

3.3.14.1 Set Length Range for Matrix 2 of 5

The engine can be configured to only decode Industrial 25 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length
(Default: 6)

Set the Maximum Length
(Default: 48)

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes Industrial 25 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Industrial 25 barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode Industrial 25 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.14.2 Check Character Verification

A check character is optional for Industrial 25 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The engine transmits Industrial 25 barcodes as is.
Do Not Transmit Check Character After Verification: The engine checks the integrity of all Industrial 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.
Transmit Check Character After Verification: The engine checks the integrity of all Industrial 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

Do Not Transmit Check Character After Verification

Transmit Check Character After Verification

Disable *

Exit Setup *

Enter Setup

Note: If the Do Not Transmit Check Character After Verification option is enabled, Industrial 25 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the Do Not Transmit Check Character After Verification option is enabled and the minimum length is set to 4, Industrial 25 barcodes with a total length of 4 characters including the check character cannot be read.)

3.3.15 Standard 25

Restore the Factory Defaults of Standard 25

Enable Standard 25

Disable Standard 25*

Note: If the engine fails to identify Standard 25 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Standard 25 barcode.

Note: If minimum length is set to be greater than maximum length, the engine only decodes Standard 25 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Standard 25 barcodes with that length are to be decoded.

Exit Setup *

Enter Setup

Example :

Set the engine to decode Standard 25 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.15.1 Set Length Range for Standard 25

The engine can be configured to only decode Standard 25 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length
(Default: 6)

Set the Maximum Length
(Default: 48)

Exit Setup *

Enter Setup

3.3.15.2 Check Character Verification

A check character is optional for Standard 25 and can be added as the last character. It is a calculated value used to verify the integrity of the data.
Disable: The engine transmits Standard 25 barcodes as is.
Do Not Transmit Check Character After Verification: The engine checks the integrity of all Standard 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.
Transmit Check Character After Verification: The engine checks the integrity of all Standard 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

Do Not Transmit Check Character After Verification

Transmit Check Character After Verification

Disable *

Note: If the Do Not Transmit Check Character After Verification option is enabled, Standard 25 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the Do Not Transmit Check Character After Verification option is enabled and the minimum length is set to 4, Standard 25 barcodes with a total length of 4 characters including the check character cannot be read.)

Exit Setup *

Enter Setup

3.3.16 Code 39

Restore the Factory Defaults of Code 39

Enable Code 39 *

Disable Code 39

Note : I f the engine fails to identify Code 39 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Code 39 barcode.

3.3.16.1 Set Length Range for Code 39

The engine can be configured to only decode Code 39 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length
(Default: 1)

Set the Maximum Length
(Default: 48)

Note: If minimum length is set to be greater than maximum length, the engine only decodes Code 39 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 39 barcodes with that length are to be decoded.

Exit Setup *

Enter Setup

Example :

Set the engine to decode Code 39 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.16.2 Check Character Verification

A check character is optional for Code 39 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The engine transmits Code 39 barcodes as is.
Do Not Transmit Check Character After Verification: The engine checks the integrity of all Code 39 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.
Transmit Check Character After Verification: The engine checks the integrity of all Code 39 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

Do Not Transmit Check Character After Verification

Transmit Check Character After Verification

Disable *

Exit Setup *

Enter Setup

Note: If the Do Not Transmit Check Character After Verification option is enabled, Code 39 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the Do Not Transmit Check Character After Verification option is enabled and the minimum length is set to 4, Code 39 barcodes with a total length of 4 characters including the check character cannot be read.)

3.3.16.3 Transmit Start/ Stop Character

Code 39 uses an asterisk (*) for both the start and the stop characters. You can choose whether or not to transmit the start/stop characters by scanning the appropriate barcode below.

Do Not Transmit Start/Stop Character *

Transmit Start/Stop Character

3.3.16.4 Enable/Disable Code 39 Full ASCII

The engine can be configured to identify all ASCII characters by scanning the appropriate barcode below.

Enable Code 39 Full ASCII

Disable Code 39 Full ASCII*

Exit Setup *

Enter Setup

3.3.16.5 Enable/Disable Code 32 (Italian Pharma Code)

Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry. Scan the appropriate bar code below to enable or disable Code 32. Code 39 must be enabled and Code 39 check character verification must be disabled for this parameter to function.

Enable Code 32

Disable Code 32 *

3.3.16.6 Code 32 Prefix

Scan the appropriate barcode below to enable or disable adding the prefix character "A" to all Code 32 barcodes. Code 32 must be enabled for this parameter to function.

Enable Code 32 Prefix

Disable Code 32 Prefix*

3.3.16.7 Transmit Code 32 Start/Stop Character

Code 32 must be enabled for this parameter to function.

Transmit Code 32 Start/Stop Character

Do Not Transmit Code 32 Start/Stop Character *

Exit Setup *

Enter Setup

3.3.16.8 Transmit Code 32 Check Character

Code 32 must be enabled for this parameter to function.

Transmit Code 32 Check Character

Do Not Transmit Code 32 Check Character *

3.3.17 Codabar

Restore the Factory Defaults of Codabar

Enable Codabar *

Disable Codabar

Note: If the engine fails to identify Codabar barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Codabar barcode

3.3.17.1 Set Length Range for Codabar

The engine can be configured to only decode Codabar barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 2)**

Set the Maximum Length **(Default: 60)**

Exit Setup *

Enter Setup

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes Codabar barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Codabar barcodes with that length are to be decoded.*

Example :

Set the engine to decode Codabar barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

Exit Setup *

Enter Setup

3.3.17.2 Check Character Verification

A check character is optional for Codabar and can be added as the last character. It is a calculated value used to verify the integrity of the data.
Disable: The engine transmits Codabar barcodes as is.
Do Not Transmit Check Character After Verification: The engine checks the integrity of all Codabar barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.
Transmit Check Character After Verification: The engine checks the integrity of all Codabar barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

Do Not Transmit Check Character After Verification

Transmit Check Character After Verification

Disable *

Note: If the Do Not Transmit Check Character After Verification option is enabled, Codabar barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the Do Not Transmit Check Character After Verification option is enabled and the minimum length is set to 4, Codabar barcodes with a total length of 4 characters including the check character cannot be read.)

Exit Setup *

Enter Setup

3.3.17.3 Start / Stop Character

You can set the start/stop characters and choose whether or not to transmit the start/stop characters by scanning the appropriate barcode below.

Do Not Transmit Start/Stop Character *

Transmit Start/Stop Character

ABCD/ABCD as the Start/Stop Character *

ABCD/TN*E as the Start/Stop Character

abcd/abcd as the Start/Stop Character

abcd/tn*e as the Start/Stop Character

Exit Setup *

Enter Setup

3.3.18 Code 93

Restore the Factory Defaults of Code 93

Enable Code 93

Disable Code 93 *

Note: If the engine fails to identify Code 93 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Code 93 barcode.

3.3.18.1 Set Length Range for Code 93

The engine can be configured to only decode Code 93 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 1)**

Set the Maximum Length **(Default: 48)**

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes Code 93 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 93 barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode Code93 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.18.2 Check Digit Verification

Check characters are optional for Code 93 and can be added as the last two characters, which are calculated values used to verify the integrity of the data.
Disable: The engine transmits Code 93 barcodes as is.
Do Not Transmit Check Character After Verification: The engine checks the integrity of all Code 93 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the checks will be transmitted except the last two digits, whereas those failing them will not be transmitted.
Transmit Check Character After Verification: The engine checks the integrity of all Code 93 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the checks will be transmitted, whereas those failing them will not be transmitted.

Disable

Transmit Check Digit After Verification

Do Not Transmit Check Digit After Verification *

Exit Setup *

Enter Setup

Note: If the Do Not Transmit Check Character After Verification option is enabled, Code 93 barcodes with a length that is less than the configured minimum length after having the two check characters excluded will not be decoded. (For example, when the Do Not Transmit Check Character After Verification option is enabled and the minimum length is set to 4, Code 93 barcodes with a total length of 4 characters including the two check characters cannot be read.)

3.3.18 GS1-Databar (RSS)

Restore the Factory Defaults of GS1-Databar

Enable GS1-Databar *

Disable GS1-Databar

Note: If the engine fails to identify GS1 Databar barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable GS1 Databar barcode.

3.3.18.1 Transmit Application Identifier "01"

Transmit Application Identifier "01" *

Do Not Transmit Application Identifier "01"

Exit Setup *

Enter Setup

3.3.19 Code 11

Restore the Factory Defaults of Code 11

Enable Code 11

Disable Code 11*

Note: If the engine fails to identify Code 11 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Code 11 barcode.

3.3.19.1 Set Length Range for Code 11

The engine can be configured to only decode Code 11 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 4)**

Set the Maximum Length **(Default: 48)**

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes Code 11 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 11 barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode Code11 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.19.2 Transmit Check Character

Do Not Transmit Code 11 Check Character

Transmit Code 11 Check Character *

Note: If you select a check character algorithm and the Do Not Transmit Check Character option, Code 11 barcodes with a length that is less than the configured minimum length after having the check character(s) excluded will not be decoded. (For example, when the One Check Character, MOD11 and Do Not Transmit Check Character options are enabled and the minimum length is set to 4, Code 11 barcodes with a total length of 4 characters including the check character cannot be read.)

Exit Setup *

Enter Setup

3.3.19.3 Check Character Verification

Check characters are optional for Code 11 and can be added as the last one or two characters, which are calculated values used to verify the integrity of the data. If the Disable option is enabled, the engine transmits Code 11 barcodes as is.

Disable

One Check Character, MOD11*

Two Check Characters, MOD11/MOD11

Two Check Characters, MOD11/MOD9

One Check Digit, MOD11 (Len<=10)
Two Check Characters, MOD11/MOD11 (Len>10)

One Check Digit, MOD11 (Len<=10)
Two Check Characters, MOD11/MOD9 (Len>10)

Exit Setup *

Enter Setup

3.3.20 Plessey

Restore the Factory Defaults of Plessey

Enable Plessey

Disable Plessey *

*Note: If the engine fails to identify Plessey barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Plessey** barcode.*

3.3.20.1 Set Length Range for Plessey

The engine can be configured to only decode Plessey barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 4)**

Set the Maximum Length **(Default: 48)**

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes Plessey barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Plessey barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode Code11 barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

Exit Setup *

Enter Setup

3.3.20.2 Check Character Verification

Check characters are optional for Plessey and can be added as the last two characters, which are calculated values used to verify the integrity of the data.
Disable: The engine transmits Plessey barcodes as is.
Do Not Transmit Check Character After Verification: The engine checks the integrity of all Plessey barcodes to verify that the data complies with the check character algorithm. Barcodes passing the checks will be transmitted except the last two digits, whereas those failing them will not be transmitted.
Transmit Check Character After Verification: The engine checks the integrity of all Plessey barcodes to verify that the data complies with the check character algorithm. Barcodes passing the checks will be transmitted, whereas those failing them will not be transmitted.

Disable*

Transmit Check Character After Verification

Do Not Transmit Check Character After Verification

Note: If the Do Not Transmit Check Character After Verification option is enabled, Plessey barcodes with a length that is less than the configured minimum length after having the check characters excluded will not be decoded. (For example, when the Do Not Transmit Check Character After Verification option is enabled and the minimum length is set to 4, Plessey barcodes with a total length of 4 characters including the check characters cannot be read.)

Exit Setup *

Enter Setup

3.3.21 MSI-Plessey

Restore the Factory Defaults of MSI-Plessey

Enable MSI-Plessey

Disable MSI-Plessey*

Note: If the engine fails to identify MSI-Plessey barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable MSI-Plessey barcode.

3.3.21.1 Set Length Range for MSI-Plessey

The engine can be configured to only decode MSI-Plessey barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 4)**

Set the Maximum Length **(Default: 48)**

***Note**: If minimum length is set to be greater than maximum length, the engine only decodes MSI-Plessey barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only MSI-Plessey barcodes with that length are to be decoded.*

Exit Setup *

Enter Setup

Example :

Set the engine to decode MSI-Plessey barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.3.21.2 Transmit Check Character

Transmit Check Character

Do Not Transmit Check Character *

Note: If you select a check character algorithm and the Do Not Transmit Check Character option, MSI-Plessey barcodes with a length that is less than the configured minimum length after having the check character(s) excluded will not be decoded. (For example, when the One Check Character, MOD10 and Do Not Transmit Check Character options are enabled and the minimum length is set to 4, MSI-Plessey barcodes with a total length of 4 characters including the check character cannot be read.)

Exit Setup *

Enter Setup

3.3.21.3 Check Character Verification

Check characters are optional for MSI-Plessey and can be added as the last one or two characters, which are calculated values used to verify the integrity of the data. If the Disable option is enabled, the engine transmits MSI-Plessey barcodes as is.

One Check Character, MOD10 *

Disable

Two Check Characters, MOD10/MOD10

Two Check Characters, MOD10/MOD11

Exit Setup *

Enter Setup

3.4 2D

3.4.1 PDF 417

Restore the Factory Defaults of PDF 417

Enable PDF 417 *

Disable PDF 417

Note: If the engine fails to identify PDF417 barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable PDF417 barcode.

3.4.1.1 Set Length Range for PDF417

The engine can be configured to only decode PDF417 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 1)**

Set the Maximum Length **(Default: 2710)**

Note: Minimum length is not allowed to be greater than maximum length. If you only want to read PDF417 barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Exit Setup *

Enter Setup

Example :

Set the engine to decode PDF417 barcodes containing between 8 and 12 characters:

9. *Scan the **Enter Setup** barcode.*
1. *Scan the Set the Minimum Length barcode.*
2. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
3. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
4. *Scan the Set the Maximum Length barcode.*
5. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
6. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
7. *Scan the **Exit Setup** barcode.*

3.4.1.2 PDF 417 Twin Code

PDF417 twin code is 2 PDF417 barcodes paralleled vertically or horizontally. They must both be either regular or inverse barcodes. They must have similar specifications and be placed closely together.

There are 3 options for reading PDF417 twin codes:

Single PDF417 Only: Read either PDF417 code.

Twin PDF417 Only: Read both PDF417 codes.

Both Single & Twin: Read both PDF417 codes. If successful, transmit as twin PDF417 only. Otherwise, try single PDF417 only.

Single PDF417 Only *

Twin PDF417 Only

Both Single & Twin

Exit Setup *

Enter Setup

3.4.1.3 Character Encoding

Default Character Encoding *

UTF-8

3.4.1.4 Enable/Disable PDF417 ECI Output

Disable PDF417 ECI Output

Enable PDF417 ECI Output *

Exit Setup *

Enter Setup

3.4.2 QR Code

Restore the Factory Defaults of QR Code

Enable QR Code *

Disable QR Code

Note: If the engine fails to identify QR Code barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable QR Code barcode.

3.4.2.1 Set Length Range for QR CODE

The engine can be configured to only decode QR Code barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 1)**

Set the Maximum Length **(Default: 7089)**

Note: Minimum length is not allowed to be greater than maximum length. If you only want to read QR Code barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Exit Setup *

Enter Setup

Example :

Set the engine to decode QR Code barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode.*

3.4.2.3 QR Twin Code

QR twin code is 2 QR barcodes paralleled vertically or horizontally. They must both be either regular or inverse barcodes. They must have similar specifications and be placed closely together.

There are 3 options for reading QR twin codes:

Single QR Only: Read either QR code.

Twin QR Only: Read both QR codes.

Both Single & Twin: Read both QR codes. If successful, transmit as twin QR only. Otherwise, try single QR only.

Single QR Only *

Twin QR Only

Both Single & Twin

Exit Setup *

Enter Setup

3.4.2.4 Character Encoding

Default Character Encoding *

UTF-8

3.4.2.5 QR ECI Output

Enable QR ECI Output *

Disable QR ECI Output

3.4.3 Data Matrix

Restore the Factory Defaults of Data Matrix

Enable Data Matrix *

Disable Data Matrix

Note: If the engine fails to identify Data Matrix barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Data Matrix barcode.

Exit Setup *

Enter Setup

3.4.3.1 Set Length Range for Data Matrix

The engine can be configured to only decode Data Matrix barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 1)**

Set the Maximum Length **(Default: 3116)**

Note: Minimum length is not allowed to be greater than maximum length. If you only want to read Data Matrix barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Example :

Set the engine to decode Data Matrix barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode*

Exit Setup *

Enter Setup

3.4.3.2 Data Matrix Twin Code

Data Matrix twin code is 2 Data Matrix barcodes paralleled vertically or horizontally. They must both be either regular or inverse barcodes. They must have similar specifications and be placed closely together.

There are 3 options for reading Data Matrix twin codes:
Single Data Matrix Only: Read either Data Matrix code.
Twin Data Matrix Only: Read both Data Matrix codes.
Transmission sequence: left (upper) Data Matrix code followed by right (lower) Data Matrix code.
Both Single & Twin: Read both Data Matrix codes. If successful, transmit as twin Data Matrix only. Otherwise, try single Data Matrix only.

Single Data Matrix Only *

Twin Data Matrix Only

Both Single & Twin

Exit Setup *

Enter Setup

3.4.3.3 Rectangular Barcode

Data Matrix has two formats:
Square barcodes having the same amount of modules in length and width: 10*10, 12*12.... 144*144.
Rectangular barcodes having different amounts of models in length and width: 6*16, 6*14...14*22.

Enable Rectangular Barcode *

Disable Rectangular Barcode

3.4.3.4 Character Encoding

Default Character Encoding *

UTF-8

3.4.3.5 Data Matrix ECI Output

Disable Data Matrix ECI Output

Enable Data Matrix ECI Output*

Exit Setup *

Enter Setup

3.4.4 Micro QR Code

Restore the Factory Defaults of Micro QR Code

Disable Micro QR

Enable Micro QR*

Note: If the engine fails to identify Micro QR barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable Micro QR barcode.

3.4.4.1 Set Length Range for Micro QR

The engine can be configured to only decode Micro QR barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.

Set the Minimum Length **(Default: 1)**

Set the Maximum Length **(Default: 35)**

Note: Minimum length is not allowed to be greater than maximum length. If you only want to read Micro QR barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Exit Setup *

Enter Setup

Example :

Set the engine to decode Micro QR barcodes containing between 8 and 12 characters:

1. *Scan the **Enter Setup** barcode.*
2. *Scan the Set the Minimum Length barcode.*
3. *Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.*
4. *Scan the Save barcode from the "Save/Cancel Barcodes" section in Appendix.*
5. *Scan the Set the Maximum Length barcode.*
6. *Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.*
7. *Scan the Save barcode from the "**Save/Cancel Barcodes**" section in Appendix.*
8. *Scan the **Exit Setup** barcode*

Exit Setup *

Enter Setup

Appendix A – Digit Barcodes

A.1 Numbers

0

1

2

3

4

5

6

7

8

9

A.2 Alphabets

A

B

C

D

E

F

Exit Setup *

Enter Setup

A.3 Save/Cancel Barcodes

After reading numeric barcode(s), you need to scan the Save barcode to save the data. If you scan the wrong digit(s), you can either scan the Cancel barcode and then start the configuration all over again, or scan the Delete the Last Digit barcode and then the correct digit, or scan the Delete All Digits barcode and then the digits you want.
For instance, after reading the Maximum Length barcode and numeric barcodes "1", "2" and "3", you scan:

Delete the Last Digit: The last digit "3" will be removed.
Delete All Digits: All digits "123" will be removed.
Cancel: The maximum length configuration will be cancelled. And the engine is still in the setup mode.

Save

Cancel

Delete the Last Digit

Delete All Digits

Exit Setup *

Enter Setup

Appendix B – Factory Defaults Table

Parameter	Factory Default	Remark
System Settings		
Barcode Programming	Disabled (Exit Setup)	
Programming Barcode Data	Do not transmit	
Internal Illumination	Normal	
External Illumination	Off	
Aiming	Normal	
Good Read LED	On	
Good Read LED Duration	Short (20ms)	
Power On Beep	On	
Good Read Beep	On	
Good Read Beep Duration	Medium (80ms)	
Good Read Beep Frequency	Medium (2730Hz)	
Good Read Beep Volume	Loud	
Scan Mode	Sense Mode	
Decode Session Timeout	3,000ms.	1-3,600,000ms; 0: Infinite
Image Stabilization Timeout (Sense Mode)	500ms	0-3,000ms
Reread Timeout	Disabled	
	1500ms	0-3,600ms
Reread Timeout Reset	Off	
Image Decoding Timeout	500ms	1-3000ms
Good Read Delay	Disabled, 500ms	1-3,600,000ms
Sensitivity	Sensitivity 5	
Trigger Commands	Disabled	
Start Scanning Command	<SOH> T <EOT>	
Stop Scanning Command	<SOH> P <EOT>	
Scanning Preference	Normal Mode	
Read Barcode	On	
Decode Area	Whole Area Decoding	
Specify Decoding Area	40% top, 60% bottom, 40% left, 60%	

Exit Setup *

Enter Setup

	right	
Image Flipping	Do Not Flip	
Bad Read Message	Off	
	NG	1-7 characters
Auto Sleep	Disabled	
Time Period from Idle to Sleep	15s	
Default Interface	USB HID Keyboard	
TTL-232 Interface		
Baud Rate	9600	
Parity Check	None	
Data Bits	8	
Stop Bits	1	
USB Interface		
USB Country Keyboard	US keyboard	USB HID Keyboard
Beep on Unknown Character	Off	USB HID Keyboard
Emulate ALT+Keypad	Off	USB HID Keyboard
Code Page	Code Page 1252 (West European Latin)	USB HID Keyboard
Unicode Encoding	Off	USB HID Keyboard
Emulate Keypad with Leading Zero	On	USB HID Keyboard
Function Key Mapping	Disable	USB HID Keyboard
Inter-Keystroke Delay	No Delay	USB HID Keyboard
Caps Lock	Caps Lock OFF, non-Japanese Keyboard	USB HID Keyboard
Convert Case	No Case Conversion	USB HID Keyboard
Emulate Numeric Keypad 1	Off	USB HID Keyboard
Emulate Numeric Keypad 2	Off	USB HID Keyboard
Fast Mode	Off	USB HID Keyboard
Polling Rate	4ms	USB HID Keyboard
Adaptive Wired Communication	On	
Symbologies		
Global Settings		
Surround GS1 AI's with Parentheses	Do Not Surround GS1 AI's with Parentheses	
Code 128		
Code 128	Enabled	

Exit Setup *

Enter Setup

Maximum Length	48	
Minimum Length	1	
EAN-8		
EAN-8	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not Required	
Convert EAN-8 to EAN-13	Disabled	
EAN-13		
EAN-13	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not Required	
EAN-13 Beginning with 290 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 378/379 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 414/419 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 434/439 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 977 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 978 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 979 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 290 Add-On Code Required	Do Not Require Add-On Code	
UPC-E		
UPC-E	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not Required	

Exit Setup *

Enter Setup

Transmit Preamble Character	System Character	
Convert UPC-E to UPC-A	Disabled	
UPC-A		
UPC-A	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not Required	
Transmit Preamble Character	No Preamble	
Interleaved 2 of 5		
Interleaved 2 of 5	Enabled	
Maximum Length	80	
Minimum Length	6	
Check Character Verification	Disabled	
Febraban		
Febraban	Disabled	
Transmit Delay per Character	Disabled	
	70ms	
Transmit Delay per 12 Characters	Disabled	
	500ms	
ITF-14		
ITF-14	Disabled	
ITF-6		
ITF-6	Disabled	
Matrix 2 of 5		
Matrix 2 of 5	Enabled	
Maximum Length	80	
Minimum Length	4	No less than 4
Check Character Verification	Disabled	
Code 39		
Code 39	Enabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Disabled	
Start/Stop Character	Do not transmit	
Code 39 Full ASCII	Disabled	
Code 32 Pharmaceutical	Disabled	

Exit Setup *

Enter Setup

(PARAF)		
Code 32 Prefix	Disabled	
Code 32 Start/Stop Character	Do not transmit	
Code 32 Check Character	Do not transmit	
Codabar		
Codabar	Enabled	
Maximum Length	60	
Minimum Length	2	
Check Character Verification	Disabled	
Start/Stop Character	Do not transmit	
	ABCD/ABCD	
Code 93		
Code 93	Disabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Do Not Transmit Check Character After Verification	
GS1-128 (UCC/EAN-128)		
GS1-128	Enabled	
Maximum Length	48	
Minimum Length	1	
GS1 Databar		
GS1 Databar	Enabled	
Application Identifier "01"	Transmit	
Code 11		
Code 11	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	One Check Character, MOD11	
Check Character	Transmit	
ISBN		
ISBN	Disabled	
Set ISBN Format	ISBN-10	
ISSN		
ISSN	Disabled	
Industrial 25		
Industrial 25	Disabled	

Exit Setup *

Enter Setup

Maximum Length	48	
Minimum Length	6	No less than 4
Check Character Verification	Disabled	
Standard 25		
Standard 25	Disabled	
Maximum Length	48	
Minimum Length	6	No less than 4
Check Character Verification	Disabled	
Plessey		
Plessey	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	Disabled	
MSI-Plessey		
MSI-Plessey	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	One Check Character, MOD10	
Check Character	Do Not Transmit	
AIM 128		
AIM 128	Disabled	
Maximum Length	48	
Minimum Length	1	
PDF417		
PDF417	Enabled	
Maximum Length	2710	
Minimum Length	1	
PDF417 Twin Code	Single PDF417 Only	
Character Encoding	Default Character Encoding	
PDF417 ECI Output	Enabled	
QR Code		
QR Code	Enabled	
Maximum Length	7089	
Minimum Length	1	
QR Twin Code	Single QR Only	
QR Inverse	Decode Regular QR Barcodes Only	
Character Encoding	Default Character Encoding	

Exit Setup *

Enter Setup

QR ECI Output	Enabled	
Micro QR Code		
Micro QR	Enabled	
Maximum Length	35	
Minimum Length	1	
Data Matrix		
Data Matrix	Enabled	
Maximum Length	3116	
Minimum Length	1	
Data Matrix Twin Code	Single Data Matrix Only	
Rectangular Barcode	Enabled	
Character Encoding	Default Character Encoding	
Data Matrix ECI Output	Enabled	
Data Formatter		
Data Formatter	Disabled	
Non-Match Error Beep	on	
Data Format Selection	Format_0	
Prefix & Suffix		
All Prefixes/Suffixes	Disabled	
Prefix Sequence	Code ID+ Custom +AIM ID	
Custom Prefix	Disabled	
AIM ID Prefix	Disabled	
Code ID Prefix	Disabled	
Custom Suffix	Disabled	
Data Packing	Disable Data Packing	
Terminating Character Suffix	Enabled 0x0D (Carriage Return)	

Exit Setup *

Enter Setup

Appendix C – AIM ID Table

Symbology	AIM ID	Possible AIM ID Modifiers (m)
Code128	]C0	
GS1-128 (UCC/EAN-128)	]C1	
EAN-8	]E4	
EAN-8 with Addon	]E3	
EAN-13	]E0	
EAN-13 with Addon	]E3	
UPC-E	]E0	
UPC-E with Addon	]E3	
UPC-A	]E0	
UPC-A with Addon	]E3	
Interleaved 2 of 5,	]Im	0, 1, 3
ITF-14	]Im	1, 3
ITF-6	]Im	1, 3
Matrix 2 of 5	]X0	
Code 39, Code 32	]Am	0, 1, 3, 4, 5, 7
Codabar	]Fm	0, 2, 4
Code 93	]G0	
AIM 128	]C2	
ISSN	]X0	
ISBN	]X0	
Industrial 25	]S0	
Standard 25	]R0	
Plessey	]P0	
Code 11	]Hm	0, 1, 3
MSI Plessey	]Mm	0, 1
GS1 Databar (RSS)	]e0	
PDF417	]Lm	0-2
QR Code	]Qm	0-6
Data Matrix	]dm	0-6
Micro QR	]Q1	

Note: Note: "m" represents the AIM modifier character. Refer to ISO/IEC 15424:2008 Information technology – Automatic identification and data capture techniques – Data Carrier Identifiers (including Symbology Identifiers) for AIM modifier character details.

Exit Setup *

Enter Setup

Appendix D – Code ID Table

Symbology	Code ID
Code128	j
GS1-128 (UCC/EAN-128)	j
EAN-8	d
EAN-13	d
UPC-E	c
UPC-A	c
Interleaved 2 of 5,	e
ITF-14	e
ITF-6	e
Matrix 2 of 5	v
Code 39, Code 32	b
Codabar	a
Code 93	i
AIM 128	X
ISSN	g
ISBN	B
Industrial 25	I
Standard 25	f
Plessey	n
Code 11	H
MSI Plessey	m
GS1 Databar (RSS)	R
PDF417	r
QR Code	s
Data Matrix	u
Micro QR	X

Exit Setup *

Enter Setup

Appendix E – Symbology ID Number

Symbology	ID Number
Code 128	002
GS1-128 (UCC/EAN-128)	003
EAN-8	004
EAN-13	005
UPC-E	006
UPC-A	007
Interleaved 2 of 5,	008
ITF-14	009
ITF-6	010
Matrix 2 of 5	011
Code 39, Code 32	013
Codabar	015
Code 93	017
AIM 128	020
ISSN	023
ISBN	024
Industrial 25	025
Standard 25	026
Plessey	027
Code11	028
MSI-Plessey	029
GS1 Databar (RSS)	031
PDF417	032
QR Code	033
Data Matrix	035
Micro QR	043

Exit Setup *

Enter Setup

Appendix F – ASCII Table

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

Exit Setup *

Enter Setup

Hex	Dec	Char
1e	30	RS (Request to Send)
1f	31	US (Unit Separator)
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)
23	35	# (Number Sign)
24	36	$ (Dollar Sign)
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Left/ Opening Parenthesis)
29	41	) (Right/ Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus/ Dash)
2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3a	58	: (Colon)
3b	59	; (Semi-colon)
3c	60	< (Less Than)
3d	61	= (Equal Sign)

Exit Setup *

Enter Setup

Hex	Dec	Char
3e	62	> (Greater Than)
3f	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	J
4b	75	K
4c	76	L
4d	77	M
4e	78	N
4f	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5a	90	Z
5b	91	[(Left/ Opening Bracket)
5c	92	\ (Back Slash)
5d	93	] (Right/ Closing Bracket)

Exit Setup *

Enter Setup

Hex	Dec	Char
5e	94	^ (Caret/ Circumflex)
5f	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f
67	103	g
68	104	h
69	105	i
6a	106	j
6b	107	k
6c	108	l
6d	109	m
6e	110	n
6f	111	o
70	112	p
71	113	q
72	114	r
73	115	s
74	116	t
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7a	122	z
7b	123	{ (Left/ Opening Brace)
7c	124	| (Vertical Bar)
7d	125	} (Right/ Closing Brace)
7e	126	~ (Tilde)
7f	127	DEL (Delete)

Exit Setup *

Enter Setup