User's manual

Revision History

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	Jun. 25, 2010	Initial release
1.1	Sep. 07, 2010	Add configuration barcode value. Add settings of Code 11, Standard 2 of 5, Industrial 2 of 5, Telepen, Matrix 2 of 5.

Important Notice

No warranty of any kind is made in regard to this material, including, but not limited to, implied warranties of merchantability or fitness for any particular purpose. We are not liable for any errors contained herein nor for incidental or consequential damages in connection with furnishing, performance or use of this material. We shall be under no liability in respect of any defect arising from fair wear and tear, willful damage, negligence, abnormal working conditions, failure to follow the instructions and warnings, or misuse or alteration or repair of the products without written approval. No part of this document may be reproduced, transmitted, stored in a retrieval system, transcribed, or translated into any human or computer or other language in any form or by any means electronic, mechanical, magnetic, optical, chemical, biological, manual or otherwise, except for brief passages which may be quoted for purposes of scholastic or literary review, without express written consent and authorization. We reserve the right to make changes in product design without reservation and without notification. The material in this guide is for information only and is subject to change without notice. All trademarks mentioned herein, registered or otherwise, are the properties of their various, ill, assorted owners.

General Handling Precautions

Do not dispose the scanner in fire.
Do not put the scanner directly in the sun or by any heat source.
Do not use or store the scanner in a very humid place.
Do not drop the scanner or allow it to collide violently with other objects.
Do not take the scanner apart without authorization

Guidance for Printing

This manual is in A5 size. Please double check your printer setting before printing it out. When the barcodes are to be printed out for programming, the use of a high-resolution laser printer is strongly suggested for the best scan result.

Laser Safety

This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions in this manual, it may cause interference to radio communications. The equipment has been tested and found to comply with the limits for a Class A computing device pursuant to EN55022 and 47 CFR, Part 2 and Part 15 of FCC Rules. These specifications are designed to provide reasonable protection against interference when operated in a commercial environment.

Radiant Energy: The laser scanner uses one low-power visible laser diodes operating at 650nm in an opto-mechanical scanner resulting in less than 3.9µW radiated power as observed through a 7mm aperture and averaged over 10 seconds.
Do not attempt to remove the protective housing of the scanner, as unscanned laser light with a peak output up to 0.8mW would be accessible inside.

Laser Light Viewing: The scan window is the only aperture through which laser light may be observed from this product. A failure of the scanner engine, while the laser diode continues to emit a laser beam, may cause emission levels to exceed those for safe operation. The scanner has safeguards to prevent this occurrence. If, however, a stationary laser beam is emitted, the failing scanner should be disconnected from its power source immediately.

Adjustments: Do not attempt any adjustments or alteration of this product. Do not remove the protective housing of the scanner. There are no user-serviceable parts inside.

Optical: The use of optical instruments with this product will increase the eye hazard. Optical instruments include binoculars, magnifying glasses, and microscopes but do not include normal eye glasses worn by the user.

CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

For CE-Countries

This scanner is in conformity with CE standards. Please note that an approved, CE-marked power supply unit should be used in order to maintain CE conformance.

Table of Contents

Introduction

This scanner is a newly released handheld single-line laser scanner with a cutting-edge scan engine. It utilizes the omnidirectional technology to transform seven laser lines into one and performs a superb scanning speed at 500 scans per second. The built-in hardware decoding technology and 32-bit MPU guarantees real-time scanning and accuracy, ensuring an unbeatable first read success rate.

The scanner comes with a stand of small footprint to save counter space. Its LED and beeper indicate scanning status and are programmable to cater to the users' own preference. Its replaceable communication cable further increases its convenience and flexibility in use.

Streamlined and light-weighed, this handy device reads most 1D barcode types, GS1 DataBar and PDF417. It is the reliable business tool to enhance work efficiency at a competitive cost, the best solution for retail, office or warehouse environments.

Key Features:

- Superb scanning ability
- Proprietary hardware decoding technology
- Able to read GS1 DataBar and PDF417
- Rugged and ergonomic form factor
- Flexible communications

Scanner and Accessories

The high-speed single line laser handheld scanner package contains:

1 ea. - Single-line laser handheld scanner

1 ea. - Optional scanner stand

(with stand)

(without stand)

1 ea. Communication cable

(Model depends on customer needs.)

1 ea. 5V Power adapter

(Only for specific RS-232 cables as optional accessory. Model depends on electrical requirements of your geographic location)

1 ea. CD-ROM or handbook

(Containing manual and programming guide)

If any contents are damaged or missing, please contact your dealer immediately.

Connecting to a Host

1. Turn off the host system.

2. Connect the 10-pin RJ45 male connector into the jack on the scanner until a "click" is heard. If the scanner is powered directly from the host supply, skip to step 5.

3. If necessary, plug the L-shaped plug of the power supply into the power jack on the cable.

4. Connect the power supply into an AC outlet. (Double check that the AC input requirement of the power supply matches the AC outlet.)

5. Connect the cable to the proper port on the host system.

6. Turn on the host system.

7. If the scanner is properly installed, the red, green, blue LED will turn on once and 3 power-up beeps will be heard.

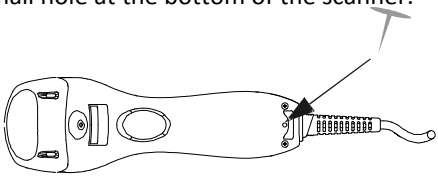
8. Set the scanner to communicate with your particular POS terminal by scanning the appropriate barcodes. The programming procedure varies on different terminals. Please refer to the Programming section for more information.

9. Verify that the scanner is successfully reading barcodes and transmitting correct information to the terminal.

Disconnecting the Cable from the Scanner

The communication cable is designed to be field-replaceable. Prior to removing the cable from the scanner, it is highly advised to turn off the power of the host system and disconnect the power supply from the cable.

1. Locate the small hole at the bottom of the scanner.



2. Use a metallic pin and insert into the hole.

3. Gently pull the strain-relief of the cable once a faint "click" is heard.

How to Scan

The scanner can be operated in two different modes: "Handheld Mode" and "Stand Mode." The following explains how these can be achieved.

Scanning in Handheld Mode

1. When the scanner is removed from the stand, the Handheld Mode is automatically activated.

2. Press the trigger and aim at the barcode.

3. When decoding is successful, the scanner beeps and the LED indicate blue/green.

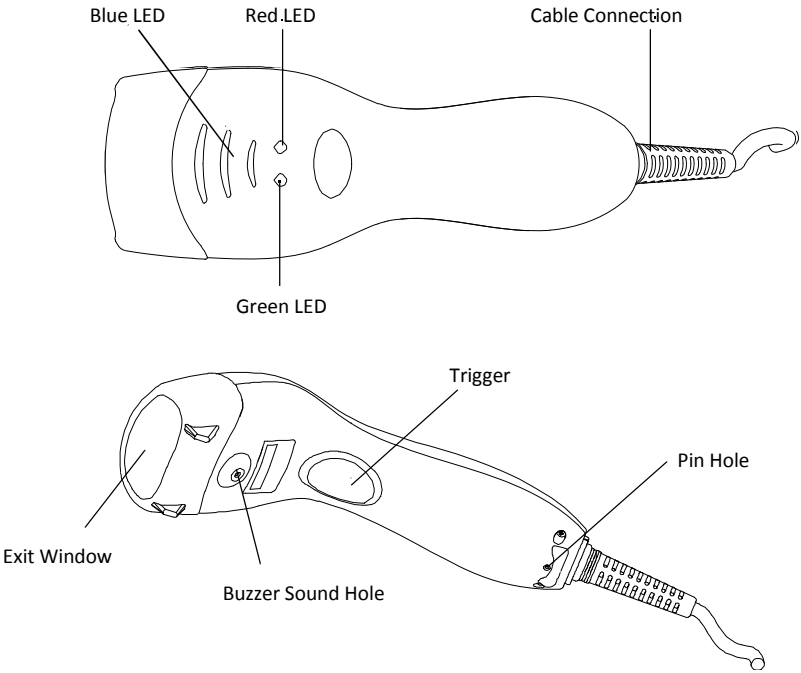
Scanning in Stand Mode

1. When the Stand Mode is activated, the blue LED would blink as the scanner is placed on the optional presentation stand.

2. Present a barcode in the scan field.

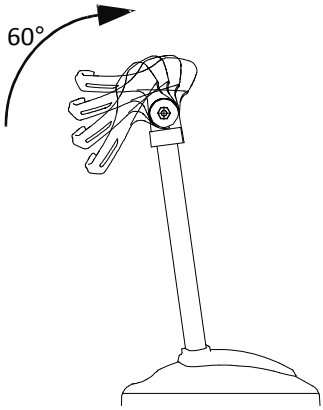
3. The barcode would be automatically decoded and transmitted.

Scanner Outline

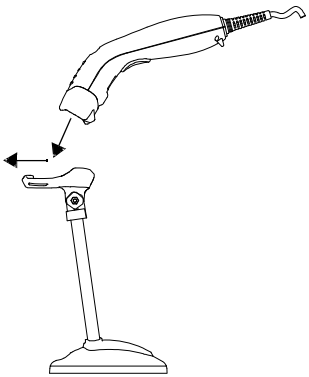


Assembling the Optional Stand

The optional self-supporting stand is to facilitate the usage of your scanner. It moves freely and can be placed anywhere on countertops. It can be tilted to a maximum of 60 degrees.



To attach the scanner to the optional stand, hook the scanner on the two holes located at the front of the stand.



Visible Indicators

There are three blue LED indicator bars and two green/red LED indicators on top of the scanner. These indicate the operational status of the scanner.

LED Status	LED Indication
Blue, red, and green LEDs are off	*The scanner is not powered. * When the scanner is in stand-by mode, the trigger button is enabled. Present a barcode to the scanner and the red LED would turn on when the laser is turned on.
Steady blue, red, and green	The scanner is in Bootload Mode (firmware upgrade status)
Steady red	When the laser is active, the red LED is on. The red LED would remain on until the laser is deactivated.
Green and blue LED flash once	A barcode has been successfully decoded.
Steady green	* A barcode has been successfully decoded, but the object is not removed from the scan window. * The scanner is in programming mode.
Steady red/green	This indicates the scanner has a motor or laser failure. A beep is heard when a motor failure occurs. Return the unit for repair.
Constant blue LED flashes	While the scanner is on the stand, the laser would turn on (along with the red LED) when a barcode is presented in the scan field. The barcode would be automatically decoded and transmitted.
Alternate red and green LED flashes	The scanner detects a power failure. Please check whether the power is properly connected.

Sound Indicators

When the scanner is in operation, it provides audible feedback. The beeps indicate the status of the scanner.

Beep	Indication
One beep	A barcode has been successfully decoded.
Three consequent beeps	*The scanner has passed the self-test and is operating properly. * The scanner is powered up.
Two consequent beep	This indicates that the scanner is in programming mode.

Continuous beep tone	This is a failure indication. Return the unit for repair.

Troubleshooting

Problem	Possible Cause	Solution
The scanner has no reaction; no LED, beeps, or laser	The power is not ON	Refer to the "Connecting to a Host" section of the manual
The scanner is functioning but is not decoding.	*The symbology of the barcode might be disabled. *The number of characters of the barcode label does not match the initial setting.	*Enable the barcode type from the programming guide. *Adjust the label length setting of the barcode type.
When using the keyboard wedge interface, the data transmission is slower than usual.	The system is not compatible with the international ALT method.	Under properties, select the language property that is suitable for your keyboard.
A barcode is read but not accepted by the host device.	Either a wrong interface is selected or the interface is incorrectly set.	Check the interface cable used and the interface settings.
Alternating red and green flashes	There is a power failure in this scanner.	Please check and see if the power is properly connected.
Steady red/green LED	There is a laser failure in the scanner.	Immediately power off the scanner and return the unit for repair.
Characters are being dropped.	The delay time in the inter-character needs to be increased.	Adjust the character delay time.

Configuration Modes

This scanner has two programming modes.

Barcodes

This scanner can be configured by scanning the barcodes located in the below "Programming Guide" section. Please refer to this guide for instructions.

Serial Programming

This mode gives end-users the ability to send a series of commands using the serial port of the host system. For more information, please contact your dealer.

Programming Guide

Scanning a series of programming barcode labels can configure the scanners. This allows decoding options and interface protocols to be tailored to a specific application. The configuration is stored in non-volatile memory and will not be lost by removing power from the scanner.

The scanner must be properly powered before programming. For RS-232C type scanners, an external power adapter must be used to supply DC power to the scanner. If a keyboard emulation type scanner is used with an IBM PC/XT/ AT, PS/2 or any fully compatible computers, power will be drawn from the keyboard port. No external power adapter is required. If keyboard emulation type scanner is used with any other non IBM PC compatible computers, an external power adapter may be needed.

During the programming mode, the laser scanner will acknowledge a good and valid reading with a short beep. It will give long beeps for either an invalid or bad reading.

Programming Options

Programmable options are divided into four groups. The first group includes the options that show the general behavior of the laser scanner. The second group governs the operation of different interfaces, RS-232 serial ports, keyboard, and USB. The third group sets the decoding parameters for each barcode symbology. The last group is about more advanced data formatting.

Default Parameters

This table gives the default settings of all the programmable parameters. The default settings will be restored whenever the laser scanner is in programming mode and the "Reset" programming label is scanned.

Factory Default Setting

Scanner Operation

Parameter	Default
Same code delay	500msec
Beeping frequency	Medium
Beeping duration	50msec
LED/Beep before data transmission	On
Trigger mode (handheld mode)	Enable
Stand mode	Enable
Header and trailer	None
Inter message delay	None
Inter character delay	None

Interface Communication

Parameter	Default
RS-232 Interface	
Baud rate	9600
Parity	none
Data Bits	8
Stop Bit	1
RTS/CTS	off
Terminator	<CR><LF>
Keyboard Wedge Interface	
Terminal Type	PC/AT
Keyboard	US keyboard
Terminator	Enter
USB Interface	
Terminator type	Enter
Code mode	Scan code
Keyboard	US keyboard
Wand Emulation	
Wand emulation speed	Normal
Data output	Black=high

Symbologies

Parameter	Default
Decoder Selection	
EAN/UPC	Enable
Code 39	Enable
Code 32	Disable
Codabar	Disable
ITF 2 of 5	Enable
MSI	Disable
Chinese Post Code	Disable
Code 93	Enable
Code 128	Enable
EAN-128	Disable
Telepen	Disable
Code 11	Disable
Standard 2 of 5	Disable
Industrial 2 of 5	Disable
Matrix 2 of 5	Disable
GS1 DataBar	Disable
PDF417	Disable
Code Identifiers	
Identifier code as factory standard	Disable
Identifier code as AIM standard	Disable
Code 39 identifier code	M
ITF 2 of 5 identifier code	I
Chinese post code identifier code	H
UPC-A identifier code	A
UPC-E identifier code	E
EAN-13 identifier code	F
EAN-8 identifier code	FF
Codabar identifier code	N
Code 128 identifier code	K
Code 93 identifier code	L
MSI identifier code	P
Code 11 identifier code	O
Standard 2 of 5 identifier code	S
Industrial 2 of 5 identifier code	D
Matrix 2 of 5 identifier code	G
GS1 DataBar identifier code	RS

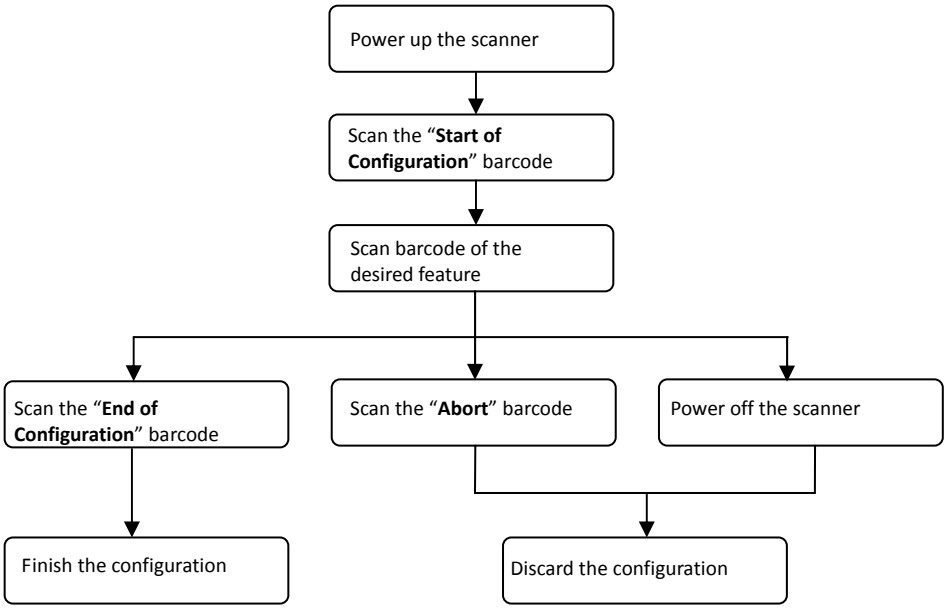
GS1 DataBar Limited identifier code		RL
GS1 DataBar Expanded identifier code		RX
PDF417 identifier code		X
Barcode Length		
Codabar Code 11 Standard 2 of 5 Industrial 2 of 5 Matrix 2 of 5	maximum	32
	minimum	6
Code 39 Code 93 Code 128	maximum	62
	minimum	3
Chinese Post Code	maximum	16
	minimum	10
MSI ITF 2 of 5	maximum	32
	minimum	4
GS1 DataBar GS1 DataBar Limited	maximum	14
	minimum	14
GS1 DataBar Expanded	maximum	48
	minimum	6

Data Formating

Code	Message Format
EAN-13	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13
EAN-8	D1 D2 D3 D4 D5 D6 D7 D8
UPC-A	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12
UPC-E	D1 D2 D3 D4 D5 D6 D7 D8
Code 128	D1-Dx (default 3~62)
EAN-128	C1 D1-Dx (default 3~62)
Code 39	D1-Dx (default 3~62)
Codabar	D1-Dx (default 6~32)
ITF 2 of 5	D1-Dx (default 6~32)
Chinese Post Code	D1-Dx (default 8~32)
Code 93	D1-Dx (default 3~32)
MSI	D1-Dx (default 6~32)

Program Procedure Using Barcode Manual

1. Power up the scanner.
2. Scan the Start of Configuration barcode.
3. Scan the barcode for the desired feature. Multiple features can be enabled/disabled before scanning the End of Configuration barcode.
4. Scan the End of Configuration barcode and save the new configuration.
5. To give up a configuration change, power off the scanner before scanning the End of Configuration barcode or scan the Abort barcode.
6. For some parameter setting, such as barcode length and identifier code, it is required to scan the Set barcode to save the configuration.



Parameter setting

Start Of Configuration

Scanner Operation

1. System Function Setting

Barcode Value	Barcode Label	Description
--		Reset (return to factory default)
%/		Display firmware version
++		Abort :exit programming mode with no update
KE94		Return to customer default
KE95		Save as customer default

End Of Configuration

Start Of Configuration

2. Interface Setting

Barcode Value	Barcode Label	Description
KE97		Return to USB default
KE99		Return to RS-232 default
KE87		Enable USB virtual COM **(Virtual COM driver required. For installation steps refer to Appendix 1.)**
KE01		Enable IBM PC/AT/PS/2 Keyboard emulation
KE05		Enable stand-alone keyboard **(Required no keyboard or key simulator. Only available for special firmware version.)**
KE98		Enable wand emulation **(Only available for special firmware version.)**
KE77		Enable OPOS/JPOS **(Available for USB interface only and requires driver. For RS-232 interface, the scanner needs reset and identifier code has to be enabled.)**

End Of Configuration

Start Of Configuration

3. General Scan Mode Setting

Handheld Operation

Barcode Value	Barcode Label	Description
SM01		Trigger Mode • The scanner becomes inactive as soon as the data is transmitted. It must be triggered to become active again.
SM02		Auto Scan Mode • The scanner is still active after the data is transmitted but the successive transmission of the same barcode is not allowed when the trigger switch is pressed again.
SM04		Pulse Mode • The scanner will light up and blink when press the scanner trigger switch once and the scanner will turn off after next pressing. The laser remains on for approximately 3 to 10 seconds after the pulse light is on.
SM07		Auto Trigger Mode • The scanner will automatically detect object and activate laser lighting. Barcode data is transmitted when the trigger is pressed.
SM08		Aim Mode • When the trigger is pressed once, the scanner will light up, blink and decode automatically. But the data is transmitted only when the trigger is released. The scanner will turn off when the trigger is pressed again.
SM09		Momentary mode • The scanner will light up only when the trigger switch is pressed the scanner will turn off when the trigger switch is release.

End Of Configuration

Start Of Configuration

Stand Operation

Barcode Value	Barcode Label	Description
SM20		IR On (Auto scan on stand) • The scanner automatically activates laser, scans and transmits data when detecting object.
SM21		IR Off (Scan by manual trigger)

End Of Configuration

Start Of Configuration

4. Operation Function Setting

Good Read Beeper Tone Selection

Barcode Value	Barcode Label	Description
GR02		Low beeper tone
GR01		Medium beeper tone
GR03		High beeper tone
GR05		Speaker disable

Beeper Sound Selection

Barcode Value	Barcode Label	Description
GR13		Very short (5 msec)
GR12		Short (20 msec)
GR11		Medium (50 msec)
GR10		Long (100 msec)
GR14		Very Long (200 msec)
GR15		Ultra long (500 msec)

End Of Configuration

Start Of Configuration

Beeper Volume Selection

Barcode Value	Barcode Label	Description
GR20		Loud
GR21		Medium
GR22		Slight

Beeper Timing Selection

Barcode Value	Barcode Label	Description
LB00		LED/Beep after transmission • Use this barcode to indicate a "good read" after a barcode has been successfully decoded.
LB01		LED/Beep before transmission • Use this barcode to indicate a "good read" before successfully transmitting the barcode data to the host.
LB03		Power-on tone enable
LB04		Power-on tone disable

End Of Configuration

Start Of Configuration

Inter Message Delay

Barcode Value	Barcode Label	Description
IM01		0 ms
IM02		100 ms
IM03		500 ms
IM04		1000 ms

Inter Character Delay

Barcode Value	Barcode Label	Description
IC01		0ms
IC00		5ms
IC02		10ms
IC03		20ms
IC04		50ms
IC05		2ms

End Of Configuration

Start Of Configuration

Same Code Delay

Barcode Value	Barcode Label	Description
SD01		Same code delay time 50msec
SD02		Same code delay time 100msec
SD03		Same code delay time 200msec
SD04		Same code delay time 300msec
SD05		Same code delay time 400msec
SD06		Same code delay time 500msec
SD07		Same code delay time 600msec
SD08		Same code delay time 700msec
SD09		Same code delay time 800msec
SD10		Same code delay time 900msec
SD11		Same code delay time 1000msec
SD12		Same code delay time Infinite

End Of Configuration

Start Of Configuration

Connection to an Omnidirectional Scanner

Instead of connecting to a host, sometimes the handheld scanner is to be connected to the AUX port of an omnidirectional scanner and transmit data to the host system via this omnidirectional scanner. Such application is not uncommon in places like hypermarkets and home improvement shops where there are products too heavy or bulky to be put on the counter and need a handheld scanner to read their barcodes.

In most cases, the auxiliary input port's data transmission format would follow the main output format of the omnidirectional scanner, including barcode symbologies and related parameters. For example, if the handheld scanner can read Codabar while the omnidirectional scanner can not, the handheld scanner would decode a Codabar barcode without transmitting the data. To complete the data transmission process, you have to re-program the omnidirectional scanner and enable Codabar decoding capability.

The following barcode allows you to enable and disable the AUX port. For more application and connection instructions, refer to the manual of the omnidirectional scanner.

Barcode Value	Barcode Label	Description
AUXS		Enable AUX function

Not all firmware versions support the AUX function. Please contact your distributor if you have any questions.

End Of Configuration

Start Of Configuration

Pulse Light Flash On/Off Timeout Duration

Barcode Value	Barcode Label	Description
FT01		Fast
FT00		Medium
FT02		Slow

Blue LED

Barcode Value	Barcode Label	Description
LE00		When scanner on stand, blue LED remains off when decoding
LE01		When scanner on stand, blue LED lights on when decoding
LE04		When handheld, blue LED remains off when decoding
LE05		When handheld, blue LED lights on when decoding

End Of Configuration

Start Of Configuration

Interface Configuration

1. RS-232C Interface Setting

Same Code Delay

Barcode Value	Barcode Label	Description
BR09		115200
BR08		57600
BR00		38400
BR01		19200
BR02		9600
BR03		4800
BR04		2400
BR05		1200

End Of Configuration

Start Of Configuration

Parity Bit

Barcode Value	Barcode Label	Description
PB01		Even parity
PB02		Odd parity
PB03		Mark parity
PB04		Space parity
PB05		None parity

Stop Bit

Barcode Value	Barcode Label	Description
SB01		1 stop bit
SB02		2 stop bit

Data Bit

Barcode Value	Barcode Label	Description
DB07		7 data bit
DB08		8 data bit

End Of Configuration

Start Of Configuration

Handshaking Protocol

Barcode Value	Barcode Label	Description
HP01		None handshaking
HP02		ACK/NAK
HP03		Xon/Xoff
HP04		RTS/CTS
LB07		Enable BEEPER ON<BEL> CHARACTER
LB08		Ignore BEEP ON <BEL> CHARACTER
LB09		Disable ACK/NAK timeout beeper
LB10		Enable ACK/NAK timeout beeper (three beeps) **(Only available for Handheld High-Speed Laser Scanner)**
RT01		ACK/NAK response time 300ms
RT03		ACK/NAK response time 500ms
RT05		ACK/NAK response time 1 sec
RT02		ACK/NAK response time 2 sec
RT04		ACK/NAK response time 3 sec
RT06		ACK/NAK response time 5 sec
RT07		ACK/NAK response time infinity

End Of Configuration

Start Of Configuration

Message Terminator

Barcode Value	Barcode Label	Description
DT11		RS-232 message terminator—none
DT12		RS-232 message terminator—CR/LF
DT13		RS-232 message terminator—CR
DT14		RS-232 message terminator—LF
DT15		RS-232 message terminator—H-tab
DT16		RS-232 message terminator—STX/ETX
DT17		RS-232 message terminator—EOT

End Of Configuration

Start Of Configuration

2. Keyboard Wedge and USB Interface Setting

Language Support

Barcode Value	Barcode Label	Description
KL00		International Keyboard mode (ALT mode)
KL01		Keyboard language support—USA
KL02		Keyboard language support—UK
KL03		Keyboard language support—Germany
KL04		Keyboard language support—French
KL05		Keyboard language support—Spanish
KL06		Keyboard language support—Italian
KL07		Keyboard language support—Switzerland
KL08		Keyboard language support—Sweden
KL09		Keyboard language support—Belgium
KL10		Keyboard language support—Portugal
KL11		Keyboard language support—Turkish
KL15		Keyboard language support—Japanese

End Of Configuration

Start Of Configuration

Keyboard Setting

Barcode Value	Barcode Label	Description
CP00		Capital lock on
CP01		Capital lock off
CP05		Function key emulation enable
CP06		Function key emulation disable
CP18		Send number as normal data
CP19		Send number as keypad data
CP20		Alphabet follow as keyboard
CP21		Alphabet always upper case
CP22		Alphabet always Lower case

Message Terminator

Barcode Value	Barcode Label	Description
DT01		Keyboard terminator---none
DT02		Keyboard terminator---Enter
DT03		Keyboard terminator---H-TAB

End Of Configuration

Start Of Configuration

3. Want Emulation Setting

Wand emulation is a standard interface but requires special firmware. If needed, please contact your distributor.

Barcode Value	Barcode Label	Description
WD01		All barcode will be decoded and transmitted in that symbology
WD02		Enable Wand output data format as Code 39
WO01		Wand emulation data output black = high • Scan this barcode to set quiet zones and spaces low and bars =high.
WO02		Wand emulation data output black=low • Scan this barcode to set quiet zones and spaces high and bars=low
WO03		Idle = high • Idle state refers to the TTL logic level of the Wand Emulation signal when not in use
WO04		Idle = low • Idle state refers to the TTL logic level of the Wand Emulation signal when not in use
WS01		Wand emulation speed---Low • This option allows the transmission of wand emulation at 1ms narrow element width
WS02		Wand emulation speed---medium • This option allows the transmission of wand emulation at 600us narrow element width

End Of Configuration

Start Of Configuration

Wand Emulation Speed

Barcode Value	Barcode Label	Description
WS03		Wand emulation speed---normal
WS04		Wand emulation speed---high • This option allows the transmission of wand emulation at 300us narrow element width
WS05		Wand emulation speed---higher • This option allows the transmission of wand emulation at 100 us narrow element width
WS00		Wand emulation narrow/wide ratio 1:2
WS08		Wand emulation narrow/wide ratio 1:3

End Of Configuration

Start Of Configuration

The Symbologies

1. **Codabar Parameter Setting**

Barcode Value	Barcode Label	Description
RC02		Codabar enable (
RD02		Codabar disable
CB05		Codabar start/stop character transmission—none
CB06		Codabar start/stop character transmission—A,B,C,D
CB07		Codabar start/stop character transmission—DC1~DC4
CB08		Codabar start/stop character transmission—a/t,b/n,c/*,d/e
CB09		Codabar maximum length setting
CB10		Codabar minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
CB11		Codabar concatenation disable
CB12		Codabar concatenation enable

End Of Configuration

Start Of Configuration

Barcode Value	Barcode Label	Description
CB13		No check character
CB14		Validate modulo 16,but don't transmit
CB15		Validate modulo 16 and transmit
DC50		Codabar data redundant check=off
DC51		Codabar data redundant check=1
DC52		Codabar data redundant check=2
DC53		Codabar data redundant check=3

End Of Configuration

Start Of Configuration

2. **Code 39 Parameter Setting**

Barcode Value	Barcode Label	Description
RC01		Code 39 enable
RD01		Code 39 disable
RC13		Code 32 enable
RD13		Code 32 disable
DC00		Code 39 data redundant check=off
DC01		Code 39 data redundant check=1
DC02		Code 39 data redundant check=2
DC03		Code 39 data redundant check=3
3901		Standard code 39
3902		Full ASCII code 39
3903		Code 39 start/stop character transmission
3904		Code 39 start/stop character without transmission

End Of Configuration

Start Of Configuration

Barcode Value	Barcode Label	Description
3905		Code 39 check digit calculate and transmit
3906		Code 39 check digit calculate but without transmit
3907		No check character
3908		Code 39 maximum length setting
3909		Code 39 minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
3910		Code 39 concatenation enable
3911		Code 39 concatenation disable
3912		Code 32 (Italian pharmacy) transmit "A" character
3913		Code 32 (Italian pharmacy) without transmit "A" character

End Of Configuration

Start Of Configuration

3. **Code 93 Parameter Setting**

Barcode Value	Barcode Label	Description
RC08		Code 93 enable
RD08		Code 93 disable
DC30		Code 93 data redundant check=off
DC31		Code 93 data redundant check=1
DC32		Code 93 data redundant check=2
DC33		Code 93 data redundant check=3
9301		Code 93 maximum length setting
9302		Code 93 minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
9303		Code 93 check digit calculate but without transmit
9304		Code 93 check digit not calculate and without transmit
9305		Code 93 check digit calculate and transmit

End Of Configuration

Start Of Configuration

4. Code 128 Parameter Setting

Barcode Value	Barcode Label	Description
RC06		Code 128 enable
RD06		Code 128 disable
RC10		EAN-128 enable
RD10		EAN-128 disable
DC40		Code 128 data redundant check=off
DC41		Code 128 data redundant check=1
DC42		Code 128 data redundant check=2
DC43		Code 128 data redundant check=3
1801		Code128 FNC2 concatenation enable
1802		Code128 FNC2 concatenation disable
1803		No check character
1804		Calculate but not transmitted
1805		Calculate and transmit
1806		Code 128 maximum length setting
1807		Code 128 minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)

End Of Configuration

Start Of Configuration

5. Chinese Post Code Parameter Setting

Barcode Value	Barcode Label	Description
RC05		Chinese post code enable
RD05		Chinese post code disable
DC60		Chinese post code data redundant check=off
DC61		Chinese post code data redundant check=1
DC62		Chinese post code data redundant check=2
DC63		Chinese post code data redundant check=3
SZ01		Chinese post code maximum length setting
SZ02		Chinese post code minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)

End Of Configuration

Start Of Configuration

6. MSI/Plessy Parameter Setting

Barcode Value	Barcode Label	Description
RC14		MSI enable
RD14		MSI disable
DC70		MSI data redundant check= off
DC71		MSI data redundant check=1
DC72		MSI data redundant check=2
DC73		MSI data redundant check=3
MS01		MSI/Plessy maximum length setting
MS02		MSI/Plessy minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
MS03		MSI/Plessy double check digit calculate but not transmit
MS04		MSI/Plessy double check digit without calculate and transmit
MS05		MSI/Plessy double check digit calculate but only first digit transmit
MS06		MSI/Plessy double check digit calculate and both transmit
MS07		MSI/Plessy single check digit calculate but without transmit
MS08		MSI/Plessy single check digit calculate and transmit

End Of Configuration

Start Of Configuration

7. Code 11 Interface Setting

Barcode Value	Barcode Label	Description
RC07		Code 11 enable
RD07		Code 11 disable
1101		Code 11 maximum length setting
1102		Code 11 minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
1103		Code 11 one check digit verification
1104		Code 11 two check digit verification
1105		Two Check for Code 11 check digit if code length is longer than 10 characters
1106		Disable verification
1107		Code 11 check digit transmitted
1108		Code 11 check digit not transmitted

End Of Configuration

Start Of Configuration

8. **ITF 2 of 5 Parameter Setting**

Barcode Value	Barcode Label	Description
RC04		ITF 2 of 5 enable
RD04		ITF 2 of 5 disable
RC09		IATA code enable
RD09		IATA disable
DC80		ITF 25 data redundant check=off
DC81		ITF25 data redundant check=1
DC82		ITF25 data redundant check=2
DC83		ITF25 data redundant check=3
IT03		ITF 2 of 5 no check character
IT04		ITF 2 of 5 check digit calculate and transmit
IT05		ITF 2 of 5 check digit calculate but without transmit

End Of Configuration

Start Of Configuration

Barcode Value	Barcode Label	Description
IT01		ITF 2 of 5 code maximum length setting
IT02		ITF 2 of 5 code minimum length setting
IT06		ITF 2 of 5 one fixed length setting
IT07		ITF 2 of 5 two fixed length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
IT08		ITF 2 of 5 length variable

End Of Configuration

Start Of Configuration

9. Standard 2 of 5 Parameter Setting

Barcode Value	Barcode Label	Description
RC22		Standard 2 of 5 code enable
RD22		Standard 2 of 5 code disable
D051		Standard 2 of 5 code maximum length setting
D052		Standard 2 of 5 code minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
D053		Standard 2 of 5 code no check character
D054		Standard 2 of 5 code check digit calculate and transmit
D055		Standard 2 of 5 code check digit calculate but without transmit

End Of Configuration

Start Of Configuration

10. Industrial 2 of 5 Parameter Setting

Barcode Value	Barcode Label	Description
RC21		Industrial 2 of 5 code enable
RD21		Industrial 2 of 5 code disable
D251		Industrial 2 of 5 code maximum length setting
D252		Industrial 2 of 5 code minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
D253		Industrial 2 of 5 code no check character
D254		Industrial 2 of 5 code check digit calculate and transmit
D255		Industrial 2 of 5 code check digit calculate but without transmission

End Of Configuration

Start Of Configuration

11. **UPC/EAN/JAN Parameter Setting**

Barcode Value	Barcode Label	Description
RC11		EAN convert to ISSN/ISBN enable
RD11		EAN convert to ISSN/ISBN disable
RC03		UPC/EAN/JAN enable
RD03		UPC/EAN/JAN disable
UE01		UPC/EAN/JAN all enable
UE02		EAN-8 or EAN-13 enable
UE03		UPC-A and EAN-13 enable
UE04		UPC-A and UPC-E enable
UE05		UPC-A enable
UE06		UPC-E enable
UE07		EAN-13 enable
UE08		EAN-8 enable
UE09		UPC/EAN Addendum disable

End Of Configuration

Start Of Configuration

Barcode Value	Barcode Label	Description
UE10		Add on 5 only
UE11		Add on 2 only
UE12		Add on 2 or 5
UE13		Force UPC-E to UPC-A format enable
UE14		Force UPC-E to UPC-A format disable
UE15		Force UPC-A to EAN-13 format enable
UE16		Force UPC-A to EAN-13 format disable
UE44		Force EAN-8 to EAN-13 format enable
UE45		Force EAN-8 to EAN-13 format disable
UE17		Transmit UPC-A check digit enable
UE18		Transmit UPC-A check digit disable
UE19		Transmit UPC-E leading character enable
UE20		Transmit UPC-E leading character disable
UE21		Transmit UPC-E check digit enable
UE22		Transmit UPC-E check digit disable

End Of Configuration

Start Of Configuration

Barcode Value	Barcode Label	Description
UE23		Transmit EAN-8 check digit enable
UE24		Transmit EAN-8 check digit disable
UE25		Transmit EAN-13 check digit enable
UE26		Transmit EAN-13 check digit disable
UE27		Transmit UPC-A leading character enable
UE28		Transmit UPC-A leading character disable
UE30		Add-on format with separator
UE31		Add-on format without separator
UE60		EAN-13 country code first "0" can transmitted
UE61		EAN-13 country code first:"0" can't transmitted
UE66		EAN-13 with first 0 ID code same as "UPC-A"
UE67		EAN-13 with first 0 ID code same as "EAN-13"
DC10		UPC-A data redundant check=off
DC11		UPC-A data redundant check=1

End Of Configuration

Start Of Configuration

Barcode Value	Barcode Label	Description
DC12		UPC-A data redundant check=2
DC13		UPC-A data redundant check=3
DC14		UPC-E data redundant check=off
DC15		UPC-E data redundant check=1
DC16		UPC-E data redundant check=2
DC17		UPC-E data redundant check=3
DC20		EAN-13 data redundant check=off
DC21		EAN-13 data redundant check=1
DC22		EAN-13 data redundant check=2
DC23		EAN-13 data redundant check=3
DC24		EAN-8 data redundant check=off
DC25		EAN-8 data redundant check=1
DC26		EAN-8 data redundant check=2
DC27		EAN-8 data redundant check=3
UE32		EAN/UPC +add-on (none mandatory)
UE33		EAN/UPC +add-on (mandatory)

End Of Configuration

Start Of Configuration

UE35 EAN/UPC +add-on mandatory for 978/977 bookland
(Supplement requirement, not sent for other)

UE38 EAN/UPC +addon mandatory for 978/977 bookland
(Supplement requirement, optionally for other)

UE42 EAN/UPC +addon mandatory for 491 Japanese bookland **(Supplement requirement, not sent for other)**

UE43 EAN/UPC +addon mandatory 491 Japanese bookland
(Supplement requirement, optionally for other)

UE34 EAN/UPC +addon mandatory for 378/379 French
(Supplement requirement, not sent for other)

UE37 EAN/UPC +addon mandatory for 378/379 French
(Supplement requirement, optionally for other)

UE36 EAN/UPC +addon mandatory for 434/439 German
(Supplement requirement, not sent for other)

UE39 EAN/UPC +addon mandatory for 434/439 German
(Supplement requirement, optionally for other)

UE40 EAN/UPC +addon mandatory for 419/414 Euro amounts **(Supplement requirement, not sent for other)**

UE41 EAN/UPC +addon mandatory for 414/419 Euro
(Supplement requirement, optionally for other)

UE46 EAN/UPC +addon mandatory for 414/419/378/379/978/977/434/439/529/ Euro
(Supplement requirement, optionally for other)

UE47 EAN/UPC +addon mandatory for 414/419/378/379/978/977/434/439/529/ Euro
(Supplement requirement, not sent for other)

End Of Configuration

Start Of Configuration

12. **Telepen Parameter Setting**

Barcode Value	Barcode Label	Description
RC25		Telepen enable
RD25		Telepen disable
TE03		Telepen numeric mode enable
TE04		AIM Telepen enable

End Of Configuration

Start Of Configuration

13. **Matrix 2 of 5 Parameter Setting**

Barcode Value	Barcode Label	Description
RC12		Matrix 2 of 5 enable
RD12		Matrix 2 of 5 disable
D151		Matrix 2 of 5 maximum length setting
D152		Matrix 2 of 5 minimum length setting
SET		Confirm to save this setting (required for reading full ASCII table and length setting)
D153		Matrix 2 of 5 no check character
D154		Matrix 2 of 5 check digit calculate and transmit
D155		Matrix 2 of 5 check digit calculate but without transmission

End Of Configuration

Start Of Configuration

14. **GS1 DataBar Parameter Setting**

There are 7 kinds of barcodes in the GS1 DataBar family and they are categorized into three groups. Barcode types in the same group use the same barcodes for setting.

Group	Representative	Contents
Group 1	GS1 DataBar Omnidirectional **(Formally RSS-14)**	GS1 DataBar Omnidirectional GS1 DataBar Truncated GS1 DataBar Stacked GS1 DataBar Stacked Omnidirectional
Group 2	GS1 DataBar Limited **(Formally RSS Limited)**	GS1 DataBar Limited
Group 3	GS1 DataBar Expanded **(Formally RSS Expanded)**	GS1 DataBar Expanded GS1 DataBar Expanded Stacked

GS1 DataBar Omnidirectional (Formally RSS-14)

Barcode Value	Barcode Label	Description
RC15		GS1 DataBar Omnidirectional enable
RD15		GS1 DataBar Omnidirectional disable
SS00		Transmit GS1 DataBar Omnidirectional check digit
SS01		Do not transmit GS1 DataBar Omnidirectional check digit
SS02		Transmit GS1 DataBar Omnidirectional application ID (01)
SS03		Do not transmit GS1 DataBar Omnidirectional application ID (01)
SS05		GS1 DataBar Omnidirectional /EAN-128 emulation enable
SS04		GS1 DataBar Omnidirectional /EAN-128 emulation disable

End Of Configuration

Start Of Configuration

GS1 DataBar Limited (Formally RSS Limited)

Barcode Value	Barcode Label	Description
RC16		GS1 DataBar Limited enable
RD16		GS1 DataBar Limited disable
SS10		Transmit GS1 DataBar Limited check digit
SS11		Don't transmit GS1 DataBar Limited check digit
SS12		Transmit GS1 DataBar limited application ID (01)
SS13		Do not transmit GS1 DataBar limited application ID

End Of Configuration

Start Of Configuration

GS1 DataBar Expanded (Formally RSS Expanded)

Barcode Value	Barcode Label	Description
RC17		GS1 DataBar Expanded enable
RD17		GS1 DataBar Expanded disable
SS07		GS1 DataBar Expanded/EAN-128 emulation enable
SS06		GS1 DataBar Expanded/EAN-128 emulation disable
SS08		GS1 DataBar Expanded check digital enable
SS09		GS1 DataBar Expanded check digital disable
SS16		Transmit GS1 DataBar Expanded application ID (01)
SS17		Do not transmit GS1 DataBar Expanded application ID

End Of Configuration

Start Of Configuration

15. **PDF417 Parameter Setting**

Barcode Value	Barcode Label	Description
RC31		PDF 417 enable
RD31		PDF 417 disable

End Of Configuration

Start Of Configuration

Data Editing

1. **Identifier Code**

Barcode Value	Barcode Label	Description
IS00		Disable identifier code
IS01		Enable identifier code table as factory standard
IS03		Enable identifier code table as AIM standard.
CI01		Code 39 identifier code setting
CI02		ITF 2 of 5 identifier code setting
CI03		Chinese Post Code identifier code setting
CI04		UPC-E identifier code setting
CI05		UPC-A identifier code setting
CI06		EAN-13 identifier code setting
CI07		EAN-8 identifier code setting

SET		Confirm to save this setting (required for reading full ASCII table and length setting)

End Of Configuration

Start Of Configuration

Barcode Value	Barcode Label	Description
CI08		Codabar identifier code setting
CI09		Code 128 identifier code setting
CI10		Code 93 identifier code setting
CI11		MSI identifier code setting
CI12		GS1 DataBar Omnidirectional identifier code setting
CI13		GS1 DataBar Limited identifier code setting
CI14		GS1 DataBar expanded identifier code setting
CI15		Industrial 2 of 5 identifier code setting
CI16		Code 11 Identifier code setting
CI17		Standard 2 of 5 identifier code setting
CI18		Matrix 2 of 5 identifier code setting

SET		Confirm to save this setting (required for reading full ASCII table and length setting)

End Of Configuration

Start Of Configuration

2. **Header and Trailer**

Barcode Value	Barcode Label	Description
CP11		Add code length as header enable (2 digits)
CP12		Add code length as header disable (2 digits)
HT01		Header (Preamble)
HT02		Trailer (Postamble)
HT03		Truncate header character
HT04		Truncate trailer character

SET		Confirm to save this setting (required for reading full ASCII table and length setting)

End Of Configuration

Start Of Configuration

3. **Multi-Barcode Editing**

Refer to Appendix 3 for detail setup steps.

Function Setting

Barcode Value	Barcode Label	Description
MC00		Start to edit multi-barcode
MC01		Multi-barcode enable
MC02		Multi-barcode disable
MC03		Apply output sequence • In this mode, the scanner would retain the barcode data until it reads all the conditioned barcodes and transmit the data all together. It the scanner reads a barcode not compliant with programmed format, it would consider it a normal barcode and transmit this data.
MC04		Enforce output sequence • In this mode, every barcode must follow the programmed format; otherwise no data would be transmitted.
MC05		Enable terminator
MC06		Disable terminator

SET		Confirm to save this setting (required for reading full ASCII table and length setting)

End Of Configuration

Start Of Configuration

Barcode Type Setting

Barcode Value	Barcode Label	Description
$Q		Code39
$A		Codabar
$B		ITF2 of 5
$C		Code128
$F		Code 93
$G		MSI
$E		Chinese Post Code
4		EAN-8
D		EAN-13
/D		UPC-A
$T		UPC-E
$U		GS1 DataBar Standard
$V		GS1 DataBar Expanded
$W		GS1 DataBar Limited

End Of Configuration

Appendix 1: USB Virtual COM Driver Installation

Contact your distributor to get the driver and follow the steps below to enable USB virtual COM port.

1. Connect the handheld scanner and the host (e.g. a PC) with a USB interface cable.

2. Enable USB virtual COM port with programming barcodes on page 13.

3. After the programming, the host would request driver installation. Browse your files to locate the driver and start installation.

4. The USB virtual COM port is ready for use after driver installation.

Appendix 2: Barcode Length Setting

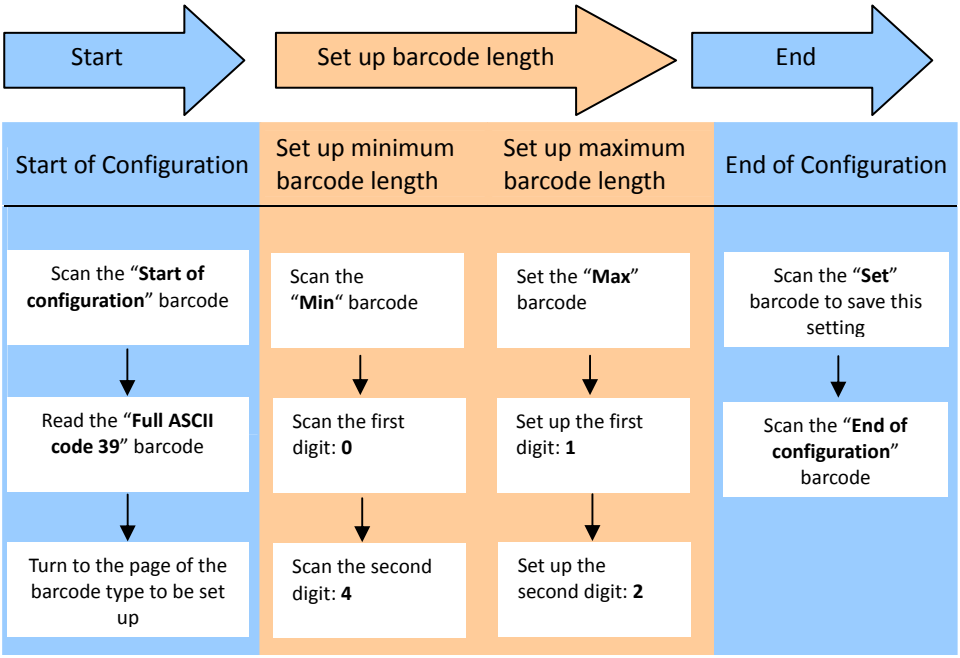
Introduction

The length of a barcode is the number of characters it contains, including check digits. As listed in the Default Parameters section, each barcode type has different default length. You may change the setting by the following procedure.

To set up barcode length, the paramours to be determined are barcode type and the desired barcode length. Barcode length is consisted of 2 digits. For numbers smaller than 10, you need to add a "0" in the front.

Example

If the barcode length is 4 to 12 digits, the steps would be as below:



Use the ASCII table (Appendix 4) to set up barcode length. Be sure to enable the full ASCII code 39 option before you start and read the "Set" label to set your choice into memory.

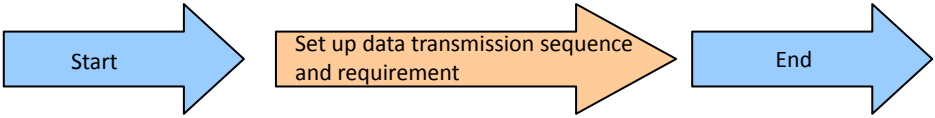
Appendix 3: Multi-Barcode Editor

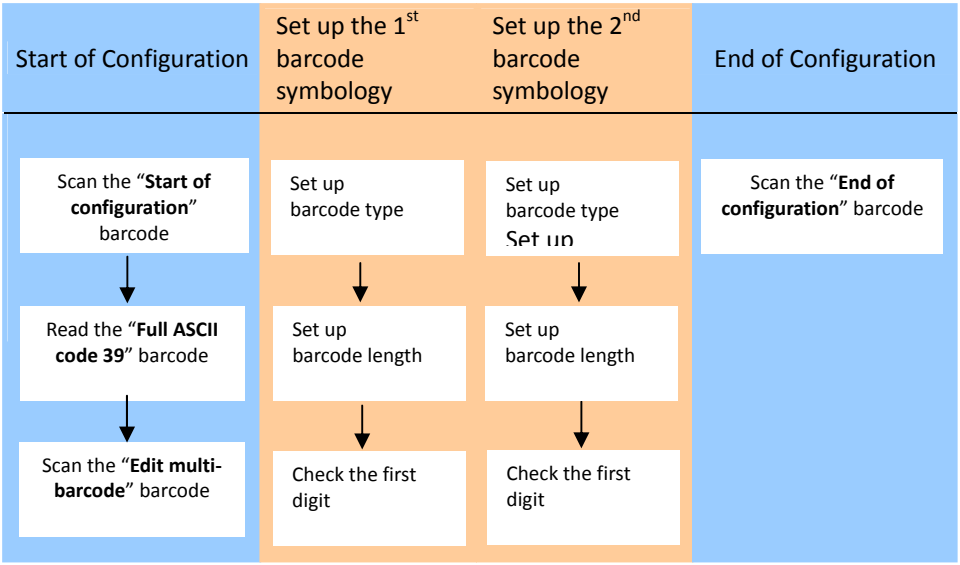
Introduction

The multi-barcode editor function allows users to set up the sequence of barcode data transmission. After the configuration, the scanner would transmit data in the pre-programmed sequence even if the user doesn't scan barcodes in the correct order. Users can set up the sequence of up to 5 pieces of barcode data.

The three parameters to be programmed are: barcode type, barcode length and check digit.

Set up as "0" if the barcode length is not required; set up as "NUL" is there is no need to check the first digit of the barcode value.



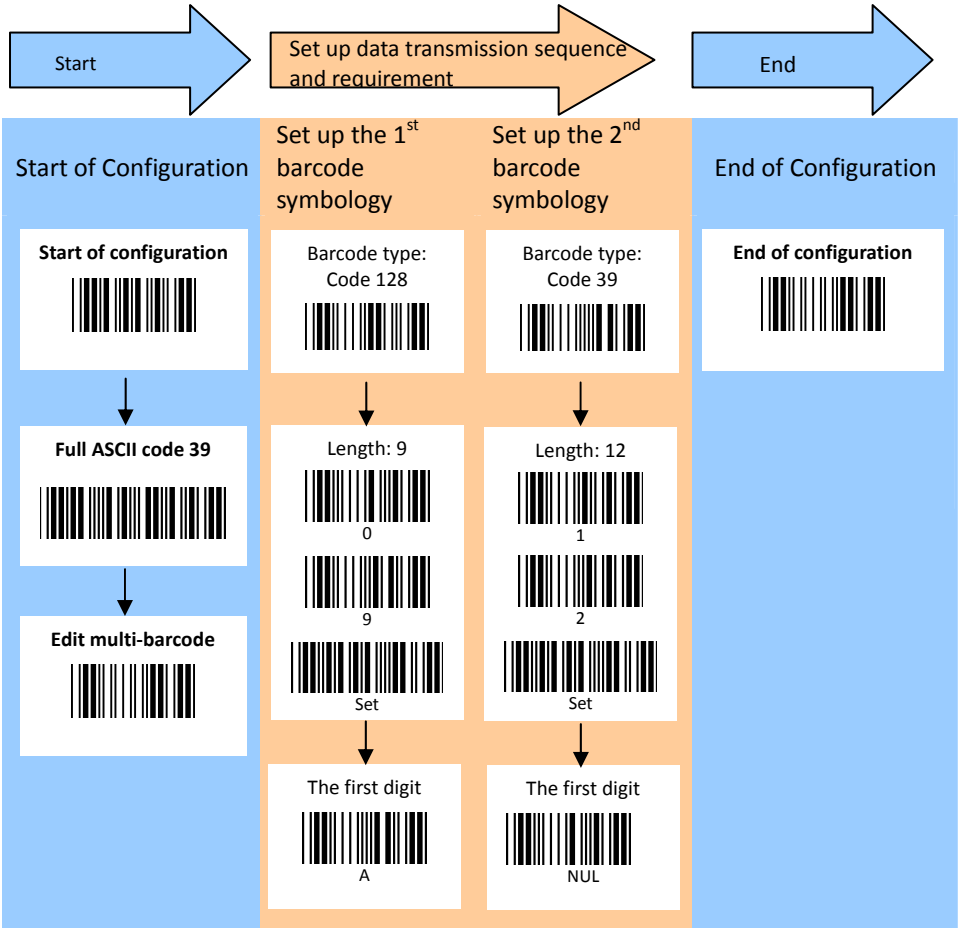


Use the ASCII table (Appendix 4) to set up barcode length and first digit checkup. Be sure to enable the full ASCII code 39 option before you start and read the "Set" label to set your choice into memory.

Example

If the barcode data transmission sequence and requirements are as below:

The 1st barcode symbology		The 2nd barcode symbology	
Barcode type	Code 128	Barcode type	Code 39
Barcode length	9	Barcode length	12
First digit	A	First digit	No check on the first digit is required



Start Of Configuration

Appendix 4: Full ASCII Code 39 Table

Code 39	ASCII	Hexa-code	Code 39	ASCII	Hexa-code
	Full ASCII ---NUL	00		Full ASCII ---SI Function key-----"Shift"	0F
	Full ASCII ---SOH Function key-----"Ins"	01		Full ASCII ---DLE Function key-----"5(num)"	10
	Full ASCII ---STX Function key-----"Del"	02		Full ASCII ---DC1 Function key-----"F1"	11
	Full ASCII ---ETX Function key-----"Home"	03		Full ASCII ---DC2 Function key-----"F2"	12
	Full ASCII ---EOT Function key-----"End"	04		Full ASCII ---DC3 Function key-----"F3"	13
	Full ASCII ---ENQ Function key-----"Up arrow"	05		Full ASCII ---DC4 Function key-----"F4"	14
	Full ASCII ---ACK Function key-----"Down arrow"	06		Full ASCII ---NAK Function key-----"F5"	15
	Full ASCII ---BEL Function key-----"Left arrow"	07		Full ASCII ---SYN Function key-----"F6"	16
	Full ASCII ---BS Function key-----"Backspace"	08		Full ASCII ---ETB Function key-----"F7"	17
	Full ASCII ---HT Function key-----"TAB"	09		Full ASCII ---CAN Function key-----"F8"	18
	Full ASCII ---LF Function key-----"Enter (alpha numeric"	0A		Full ASCII ---EN Function key-----"F9"	19
	Full ASCII ---VT Function key-----"right arrow"	0B		Full ASCII ---SUB Function key-----"F10"	1A
	Full ASCII ---FF Function key-----"PgUp"	0C		Full ASCII ---ESC Function key-----"F11"	1B
	Full ASCII ---CR Function key----- "Enetr(num.)"	0D		Full ASCII ---FS Function key-----"F12"	1C
	Full ASCII ---SO Function key-----"PgDn"	0E		Full ASCII ---GS Function key-----"ESC"	1D

End Of Configuration

Start Of Configuration

Full ASCII Code 39 Table

Code 39	ASCII	Hexa-code	Code 39	ASCII	Hexa-code
	Full ASCII ---RS Function key-----"CTL(L)"	1E		Full ASCII ----	2D
	Full ASCII ---US Function key-----"ALT(L)"	1F		Full ASCII ---.	2E
	Full ASCII ---SP	20		Full ASCII ---/	2F
	Full ASCII ---!	21		Full ASCII ---0	30
	Full ASCII ---"	22		Full ASCII ---1	31
	Full ASCII ---#	23		Full ASCII ---2	32
	Full ASCII ---$	24		Full ASCII ---3	33
	Full ASCII ---%	25		Full ASCII ---4	34
	Full ASCII ---&	26		Full ASCII ---5	35
	Full ASCII ---'	27		Full ASCII ---6	36
	Full ASCII --- (	28		Full ASCII ---7	37
	Full ASCII ---)	29		Full ASCII ---8	38
	Full ASCII ---*	2A		Full ASCII ---9	39
	Full ASCII ---+	2B		Full ASCII ---:	3A
	Full ASCII ---,	2C		Full ASCII ---;	3B

End Of Configuration

Start Of Configuration

Full ASCII Code 39 Table

Code 39	ASCII	Hexa-code	Code 39	ASCII	Hexa-code
	Full ASCII ---<	3C		Full ASCII ---K	4B
	Full ASCII ---=	3D		Full ASCII ---L	4C
	Full ASCII --->	3E		Full ASCII ---M	4D
	Full ASCII ---?	3F		Full ASCII ---N	4E
	Full ASCII ---@	40		Full ASCII ---O	4F
	Full ASCII ---A	41		Full ASCII ---P	50
	Full ASCII ---B	42		Full ASCII ---Q	51
	Full ASCII ---C	43		Full ASCII ---R	52
	Full ASCII ---D	44		Full ASCII ---S	53
	Full ASCII ---E	45		Full ASCII ---T	54
	Full ASCII ---F	46		Full ASCII ---U	55
	Full ASCII ---G	47		Full ASCII ---V	56
	Full ASCII ---H	48		Full ASCII ---W	57
	Full ASCII ---I	49		Full ASCII ---X	58
	Full ASCII ---J	4A		Full ASCII ---Y	59

End Of Configuration

Start Of Configuration

Full ASCII Code 39 Table

Code 39	ASCII	Hexa-code	Code 39	ASCII	Hexa-code
	Full ASCII ---Z	5A		Full ASCII ---i	69
	Full ASCII ---[	5B		Full ASCII ---j	6A
	Full ASCII ---\	5C		Full ASCII ---k	6B
	Full ASCII ---]	5D		Full ASCII ---l	6C
	Full ASCII ---^	5E		Full ASCII ---m	6D
	Full ASCII ---_	5F		Full ASCII ---n	6E
	Full ASCII ---`	60		Full ASCII ---o	6F
	Full ASCII ---a	61		Full ASCII ---p	70
	Full ASCII ---b	62		Full ASCII ---q	71
	Full ASCII ---c	63		Full ASCII ---r	72
	Full ASCII ---d	64		Full ASCII ---s	73
	Full ASCII ---e	65		Full ASCII ---t	74
	Full ASCII ---f	66		Full ASCII ---u	75
	Full ASCII ---g	67		Full ASCII ---v	76
	Full ASCII ---h	68		Full ASCII ---w	77

End Of Configuration

Start Of Configuration

Full ASCII Code 39 Table

Code 39	ASCII	Hexa-code
	Full ASCII ---x	78
	Full ASCII ---y	79
	Full ASCII ---z	7A
	Full ASCII ---{	7B
	Full ASCII ---|	7C
	Full ASCII ---}	7D
	Full ASCII ---~	7E
	Full ASCII ---DEL	7F

End Of Configuration