

Single Line Handheld Scanner



User's Manual

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General handling precautions

- Do not dispose of 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.

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1 Introduction

With an impressive scanning speed, this scanner is a high-speed single line laser handheld scanner that brings about the most effective scanning capability any handheld scanner offers. Guaranteed to bring in efficiency for any retail, office or warehouse environment, it is also enhanced through the built-in Z-SCAN decoding technology. This one of a kind technology provides real-time scanning and hardware decoding capability that ensures an unbeatable first read success rate.

Ergonomically designed, this handheld scanner is available in two different scan engines to choose from. Compared to other similar products on the market, both versions guarantee an impressive, fast and accurate first read success rate. It automatically reads and interprets the world's most popular 1D barcodes. Either scanners pledge high-reliability and superior performance. This slender and lightweight handheld scanner is ruggedly encased. Its durable trigger switch is sturdy enough to withstand heavy usage. The LED display and beeper are programmable to cater to the users' own preference. Equipped with multi-interface communication, the scanner has an outstanding scanning performance that promises to help you achieve boundless possibilities.

2 Scanner and Accessories

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

1 ea. single line laser handheld scanner



1 ea. Communication Cable



1 ea. Power Adapter (only for specific RS-232 cables)



1 ea. User's Manual (this book)



1 ea. Optional scanner stand

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

Please leave this Users' Manual within easy access of person using the scanner.

3 Quick Start

1. Connect the 10-pin RJ45 male connector into the jack on the scanner. When the connection is made, a “click” will be heard. If the scanner is powered directly from the Host supply, skip to step 4.
2. Connect the L-shaped plug of the power supply into the power jack on the cable.
3. Connect the power supply into an AC outlet. Double check that the AC input requirement of the power supply match the AC outlet.
4. Connect the communication cable to the host (refer to your host manual to locate the correct port.)
5. Turn on the Host system.
6. Once the scanner is properly installed, the red, green, and blue LED will turn on.

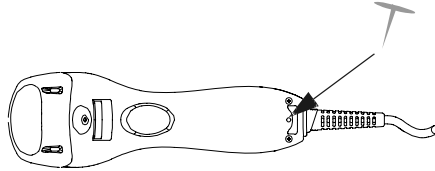
4 Connecting to a Host

1. Turn off the host system.
2. Connect the 10-pin RJ45 male connector into the jack on the scanner. When the connection is made, a “click” will be heard. If the scanner is powered directly from the host supply, skip to step 5.
3. If it is 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 requirements of the power supply match 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 once and 3 power-up beep will be heard.
8. Set the scanner to communicate with your particular POS terminal by scanning the appropriate bar codes. The programming varies on different terminals, for more information consult chapter 13.
9. Verify that the scanner is successfully reading bar codes and transmitting the correct content to the terminal.

5 Disconnecting the Cable from the Scanner

Prior to removing the cable from the scanner, it is highly advised that the power of the host system is turned off, and power supply disconnected 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.

6 How to Scan

There are two ways of scanning a bar code. One method is through “Handheld Mode” and the other is through “Stand Mode.” The following explains how these can be achieved.

6.1 Scanning in Handheld mode

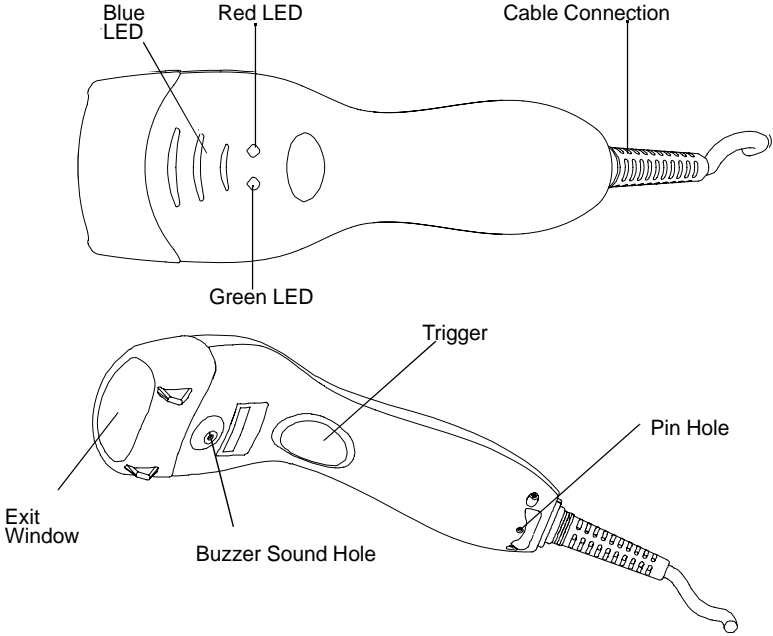
1. When the scanner is removed from the stand, the trigger scan is activated.
2. Press the trigger and aim at the bar code.
3. When decoding is successful, the scanner beeps and the LED indicate blue/green.

6.2 Scanning in Stand mode

1. The blue LED will blink when the scanner is placed on the optional presentation stand. This indicates that the Stand mode scanning is activated.
2. Present the bar code in the scan field.
3. The bar code will automatically be decoded and transmitted.

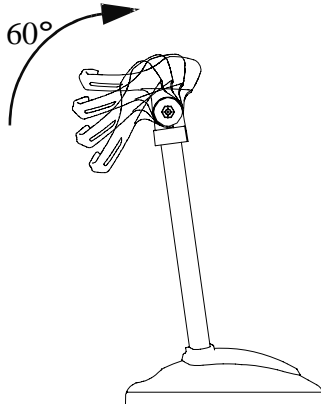
7

Scanner Outline

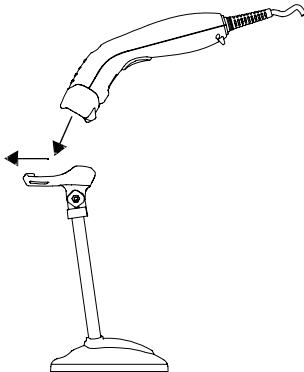


8 Assembling the Optional Stand

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.



9 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	These LED will not be on if the scanner has no power from the host or transformer. When the scanner is in stand-by mode, the trigger button is enabled. Present a barcode to the scanner and the red LED will 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 will remain on until the laser is deactivated.
Single Green and Blue Flash	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 Flashes	While the scanner is on the stand, the laser will turn on (along with the red LED) when a barcode is presented in the scan field. The barcode will be automatically decoded and transmitted.
Alternate Red and Green Flashes	The scanner detects a power failure. Please check whether the power is properly connected.

10 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	This indicates that the scanner has passed the self-test and is operating properly. When 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.

11 Troubleshooting

Problem	Possible Cause	Solution
The scanner has no reaction; no LED, beeps, or laser	The power is not ON	Refer to the "Quick Start" section of the manual
The scanner is functioning but it is not decoding.	The label 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 KBW 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 its 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.

12 Configuration Modes

This scanner has three programming modes.

12.1 Barcodes

This scanner can be configured by scanning the bar codes located under the "Programming Guide" section. Please refer to this guide for instructions.

12.2 ZSet

ZSet is a Windows-based utility program providing a quick and user-friendly configuration via RS-232C.

12.3 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.

13 Programming Guide

Scanning a series of programming bar code labels can configure the series 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.

13.1 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 RS-232C type serial ports. The third group selects the keyboard type that the keyboard emulation type will be emulated. The last group sets the decoding parameters for each barcode symbology.

13.2 Default Parameters

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

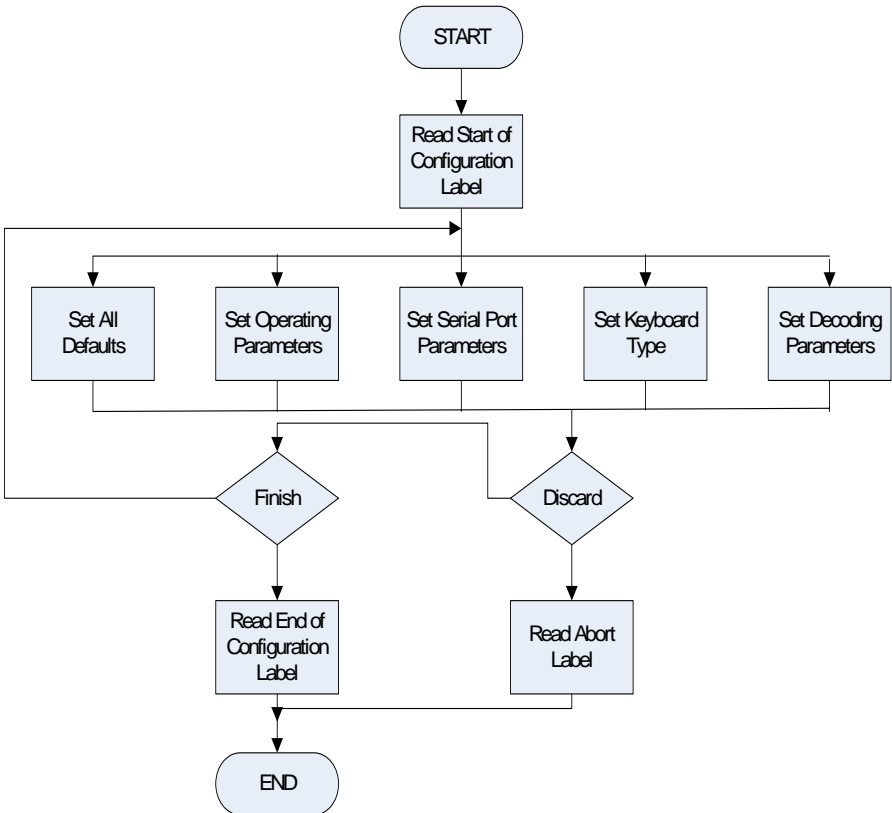
13.3 Factory Default Setting

Scanner Timing	Default
Same code delay	500msec
RS-232 communication	Default
Baud rate	9600
Parity	none
Data Bits	8
Stop Bit	1
RTS/CTS	off
Terminator	<CR><LF>
Keyboard Wedge Communication	Default
Terminal Type	PC/AT
Keyboard	US keyboard
Terminator	Enter(Alpha numeric)
USB Communication	Default
Terminator type	Enter
Code mode	Scan code
Keyboard	US keyboard
Wand Emulation	Default
Wand emulation speed	Normal
Data output	Black=high
Decoder Selection	Default
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
Beeper sound	Default
Frequency	Medium
Duration	100msec
Led/Beep Before transmission	On
Operating parameter	Default
Trigger mode(handheld mode)	Enable
Stand mode	Enable
Header and Trailer	None
Inter-Message delay	None
Inter character delay	None
Code Identifiers	Default
Identifier code as ZEBEX 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

13.4 Default data transmit format

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
UPCA	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12
UPCE	D1 D2 D3 D4 D5 D6 D7 D8
CODE128	D1-Dx (default 3~62)
EAN128	C1 D1-Dx (default 3~62)
CODE39	D1-Dx (default 3~62)
CODABAR	D1-Dx (default 6~32)
INTERLEAVED 2/5	D1-Dx (default 6~32)
CHINESE POST CODE	D1-Dx (default 8~32)
CODE93	D1-Dx (default 3~32)
MSI	D1-Dx (default 6~32)

13.5 Program Procedure Using Barcode Manual



13.6 Parameter setting

Note: Default values are highlighted in grey background.



Start Of Configuration

System Function Setting

Barcode Value	Description
	Reset (return to factory default)
	Display firmware version
	Return as customer default
	Save as customer default
	Return to USB default
	Return to wand emulation default
	Return to RS232 default
	IBM PC/AT/PS/2 Keyboard emulation
	Abort (exit programming mode(no update))



End Of Configuration



Scan Function Setting

Handheld Operation



Trigger mode

- The scanner becomes inactive as soon as the data is transmitted. It must be triggered to become active again.



Pulse mode

- This scanner will light up and blink when press the scanner trigger switch once. And, the scanner will turn off for next pressing. The laser remains on for approximately 3 to 10 second after enter Pulse light



Auto trigger mode.

- The mode is auto object detect to active laser. Bar code data is transmitted when the trigger button is pressed.

Note: Not all models support this function setting.



Aim mode.

- Normal is pulse mode but Bar code data is transmitted when the trigger button is pressed



Momentary mode.

- The scanner will light up only when the trigger switch is pressed. The scanner will turn off when the trigger switch is released.

Flash on/off timeout duration



Medium



Fast



Slow





Scan Function Setting (continued)

Stand Operation



Auto scan in stand mode.

- Auto object detect to active laser and bar code is automatically decoded and transmitted. (Specific models only)
- Always active pulse laser when order without object sensor version



Stand by manual trigger

Scan Angle Change (for specific models only)



Wide scan angle mode



Reduced scan angle mode

Same Code Delay



50msec



100msec



200msec



300msec



400msec



500msec



600msec



700msec



800msec



1000msec



Infinite





Start Of Configuration

Operation Function Setting

Good Read Beeper Tone Selection



Medium beeper tone



Low beeper tone



High beeper tone



Speaker disable

Beeper Sound Selection



Long



Medium



Short



Ultra Short



Ultra Long



Loud Volume



Medium Volume



Slight volume



Power-on tone enable



Power-on tone disable



LED/Beep after transmission.

- Use this bar code to indicate a "good read" after a bar code has been successfully decoded.



LED/Beep before transmission

- Use this bar code to indicate a "good read" after successfully transmitting the bar code data to the host.

Inter Character Delay



0ms



2ms



5ms



10ms



20ms



50ms



End Of Configuration



Start Of Configuration

Inter Message Delay



0 ms



100 ms



500 ms



1000 ms

Interface Settings

1. RS-232C Interface Setting

Baud Rate



115200



19200



9600



4800



2400



1200

Parity Bit



Even parity



Odd parity



Mark parity



Space parity



None parity

Stop Bit



1 stop bit



2 stop bit

Data Bit



7 data bit



8 data bit



End Of Configuration



Handshaking Protocol



None handshaking



ACK/NAK



Xon/Xoff



RTS/CTS



Enable BEEPER ON<BEL> CHARACTER



Ignore BEEP ON <BEL> CHARACTER



Disable ACK/NAK timeout beeper



Enable ACK/NAK timeout beeper(three sound beeper sound)



ACK/NAK response time 300ms



ACK/NAK response time 2s



ACK/NAK response time 500ms



ACK/NAK response time 3s



ACK/NAK response time 1s



ACK/NAK response time 5s



ACK/NAK response time infinity





Start Of Configuration

Message Terminator



RS-232 message terminator—none



RS-232 message terminator—CR/LF



RS-232 message terminator—C



RS-232 message terminator—LF



RS-232 message terminator—H tab



RS-232 message terminator—STX/ETX



RS-232 message terminator—EOT

2. Keyboard Wedge Setting

Keyboard Wedge Setting



IBM PC/AT/PS/2 Keyboard emulation



International Keyboard mode.(ALT method).



Keyboard language support---USA



Keyboard language support---UK send scan code



Keyboard language support---GERMANY



Keyboard language support---FRENCH send scan code



End Of Configuration



Keyboard Wedge Setting (continued)



Keyboard language support---SPANISH send scan code



Keyboard language support---ITALIAN send scan code



Keyboard language support---Switzerland send scan code



Keyboard language support---Belgium send scan code



Keyboard language support---Japanese



Capital lock on



Capital lock off



Function key emulation enable



Function key emulation disable



Send number as normal data



Send number as keypad data

Message Terminator



Keyboard terminator---none



Keyboard terminator---Enter



Keyboard terminator---H-TAB





3. USB Interface Setting

USB interface



International Keyboard mode.(ALT method).



Keyboard language support---USA



Keyboard language support---GERMANY



Keyboard language support---FRENCH send scan code



Keyboard language support---SPANISH send scan code



Keyboard language support---Japanese

Message Terminator



Keyboard terminator---none



Keyboard terminator---Enter



Keyboard terminator---H-TAB





4. Wand Emulation Setting

Wand emulation is not supported as standard, if needed, please contact your distributor.

Wand Emulation



All barcode will be decoded and transmitted in that symbology



Enable Wand output data format as CODE39



Wand emulation data output black=high

- Scan this bar code to set quiet zones and spaces low and bars =high.



Wand emulation data output black=low

- Scan this bar code to set quiet zones and spaces high and bars=low



Idle = high

- Idle state refers to the TTL logic level of the Wand Emulation signal when not in use



Idle = low

- Idle state refers to the TTL logic level of the Wand Emulation signal when not in use



Wand emulation speed----Low

- This option allows the transmission of wand emulation at 1ms narrow element width



Wand emulation speed----medium

- This option allows the transmission of wand emulation at 600us narrow element width



Wand emulation speed----normal



Wand emulation speed----high

- This option allows the transmission of wand emulation at 300us narrow element width



Wand emulation speed----higher

- This option allows the transmission of wand emulation at 100 us narrow element width



Wand emulation narrow/wide ratio 1:2



Wand emulation narrow/wide ratio 1:3





The Symbolologies



CODABAR Parameter Setting

Codabar enable



CODABAR disable



Codabar start/stop character transmission-----none



Codabar start/stop character transmission-----A,B,C,D



Codabar start/stop character transmission-----
DC1~DC4



Codabar start/stop character transmission-----
a/t,b/n,c/*,d/e



Codabar maximum length setting



Codabar minimum length setting



Save setting to confirm (for length setting)



Codabar concatenation disable



Codabar concatenation enable



No check character



Validate modulo 16, but don't transmit





Start Of Configuration

CODABAR Parameter Setting (continued)



Validate modulo 16 and transmit



Codabar data redundant check=off



Codabar data redundant check=1



Codabar data redundant check=2

Code 39 Parameter Setting



Code 39 enable



Code 39 disable



Code 32 enable



Code 32 disable



Code 39 data redundant check=off



Code 39 data redundant check=1



Code 39 data redundant check=2



Standard code 39



FULL ASCII code 39



Code 39 start/stop character transmission



End Of Configuration



Start Of Configuration

Code 39 Parameter Setting (continued)



Code 39 start/stop character without transmission



Code 39 check digit calculate and transmit



Code 39 check digit calculate but without transmit



No check character



Code 39 maximum length setting



Code 39 minimum length setting



Save setting to confirm (for length setting)



Code 39 concatenation enable



Code 39 concatenation disable



Code 32 (Italian pharmacy) transmit "A" character



Code 32 (Italian pharmacy) without transmit "A" character



End Of Configuration



Start Of Configuration

Code 93 Parameter Setting (continued)



Code 93 enable



Code 93 disable



Code 93 data redundant check=off



Code 93 data redundant check=1



Code 93 data redundant check=2



Code 93 maximum length setting



Code 93 minimum length setting



Save setting to confirm (for length setting)



Code 93 check digit calculate but without transmit



Code 93 check digit not calculate and without transmit



Code 93 check digit calculate and transmit



End Of Configuration



Start Of Configuration

Code 128



Code 128 enable



Code 128 disable



EAN 128 enable



EAN 128 disable



Code 128 data redundant check=off



Code 128 data redundant check=1



Code 128 data redundant check=2



Code128 FNC2 concatenation enable



Code128 FNC2 concatenation disable



No check character



Calculate but not transmitted



Save setting to confirm (for length setting)



Code 128 maximum length setting



Code 128 minimum length setting



End Of Configuration



Start Of Configuration

Chinese Post Code



Chinese post code enable



Chinese post code disable



Chinese post codedata redundant check=off



Chinese post code data redundant check=1



Chinese post codedata redundant check=2



Chinese post code maximum length setting



Chines post code code minimum length setting



Save setting to confirm (for length setting)

MSI/PLESSY



MSI enable



MSI disable



MSI data redundant check= off



MSI data redundant check=1



MSI data redundant check=2



MSI/PLESSY maximum length setting



MSI/PLESSY minimum length setting



Save setting to confirm (for length setting)



End Of Configuration



MSI/PLESSY (continued)



MSI/Plessy double check digit calculate but not transmit



MSI/Plessy double check digit without calculate and transmit



MSI/Plessy double check digit calculate but only first digit transmit



MSI/Plessy double check digit calculate and both transmit



MSI/Plessy single check digit calculate but without transmit



MSI/Plessy single check digit calculate and transmit

ITF 2 of 5



ITF 2 of 5 enable



ITF 2 of 5 disable



IATA code enable



IATA disable



ITF 25 data redundant check=off



ITF25 data redundant check=1



ITF25 data redundant check=2



ITF 2 of 5 code maximum length setting





Start Of Configuration

ITF 2 of 5 (continued)



ITF 2 of 5 code minimum length setting



ITF 2 of 5 no check character



ITF 2 of 5 check digit calculate and transmit



ITF 2 of 5 check digit calculate but without transmit



ITF 2 of 5 one Fixed length setting



ITF 2 of 5 two Fixed length setting



ITF 2 of 5 length variable



Save setting to confirm (for length setting)

UPC/EAN/JAN



EAN convert to ISSN/ISBN enable



EAN convert to ISSN.ISBN disable



UPC/EAN/JAN enable



UPC/EAN/JAN disable



UPC/EAN/JAN ALL ENABLE



EAN-8 OR EAN-13 ENABLE



UPC-A AND EAN-13 ENABLE



End Of Configuration



Start Of Configuration

UPC/EAN/JAN (continued)



UPC-A AND UPC-E ENABLE



UPC-A ENABEL



UPC-E ENABLE



EAN-13 ENABLE



EAN-8 ENABEL



UPC/EAN Addendum Disable



Add on 5 only



Add on 2 only



Add on 2 or 5



Force UPC-E to UPC-A format enable



Force UPC-E to UPC-A format disable



Force UPC-A to EAN-13 format enable



Force UPC-A to EAN-13 format disable



Transmit UPC-A check digit enable



Transmit UPC-A check digit disable



Transmit UPC-E leading character enable



End Of Configuration



UPC/EAN/JAN (continued)



Transmit UPC-E leading character disable



Transmit UPC-E check digit enable



Transmit UPC-E check digit disable



Transmit EAN-8 check digit enable



Transmit EAN-8 check digit disable



Transmit EAN-13 check digit enable



Transmit EAN-13 check digit disable



Transmit UPC-A leading character enable



Transmit UPC-A leading character disable



Add-on format with separator



Add-on format without separator



EAN/UPC +add-on (none mandatory)



EAN/UPC +add-on (mandatory)



EAN/UPC +add-on mandatory for 378/379 French Supplement requirement, not sent for other



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





Start Of Configuration

UPC/EAN/JAN (continued)



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



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



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



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



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



Disable all EAN/UPC + Add-on mandatory for specific country code



force EAN-8 to EAN-13 format enable



force EAN-8 to EAN-13 format disable



EAN/UPC +add-on mandatory for 414/419/378/379/978/977/434/439/529/ Euro Supplement requirement, optionally for other



EAN/UPC +add-on mandatory for 414/419/378/379/978/977/434/439/529/ Euro Supplement requirement, not sent for other



EAN-13 country code first "0" can transmitted



EAN-13 country code first:"0" can't transmitted



End Of Configuration



Addendum Seek Timeout

Note: A higher timeout value setting offer more assurance that an addendum has been read correctly while a lower setting allows faster scanning performance.



Addendum seek timeout value=1



Addendum seek timeout value=2



Addendum seek timeout value=3



Addendum seek timeout value=4



Addendum seek timeout value=5



Addendum seek timeout value=6



Addendum seek timeout value=7



Addendum seek timeout value=8



Addendum seek timeout value=9



Addendum seek timeout value=10



2 digit addendum data redundant check=off



2 digit addendum data redundant check=1



2 digit addendum data redundant check=2



2 digit addendum data redundant check=3



5 digit addendum data redundant check=off





Addendum Seek Timeout (continued)



5 digit addendum data redundant check=1



5 digit addendum data redundant check=2



5 digit addendum data redundant check=3

Data Editing

Identifier Code



Disable identifier code



Enable identifier code table as ZEBEX standard



Enable identifier code table as AIM standard.



CODE 39 identifier code setting



ITF 2 of 5 identifier code setting



CHINESE POST CODE identifier code setting



UPC-E identifier code setting



UPC-A identifier code setting



EAN-13 identifier code setting



EAN-8 identifier code setting





Start Of Configuration

Identifier Code (continued)



CODABAR identifier code setting



CODE 128 identifier code setting



CODE 93 identifier code setting



MSI identifier code setting



Save setting to confirm (for length setting)



Add code length as header enable (2 Bytes)



Add code length as header disable (2 Bytes)

Header And Trailer



Header (Preamble)



Trailer (Postamble)



Truncate header character



Truncate trailer character



End Of Configuration



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





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





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





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





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



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