# User's manual

# Revision History

Changes to the original manual are listed below:

| Version | Date | Description of Version |
|---------|------|------------------------|
| 1.0 | June. 25, 2010 | Initial release |

# Important Notice

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## 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

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 Plus 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 slender and lightweight handheld scanner is ruggedly encased; it comes with a standard stand with small footprint to save counter space. It is available in two different scan engines to choose from; either scanners pledge high-reliability and superior performance. It automatically reads and interprets the world's most popular 1D barcodes. 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.

# Scanner and Accessories

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

-Single line laser handheld scanner (1 ea.)
- Optional scanner stand (1 ea.)

(with stand)          (without stand)

-Communication cable (1 ea.)

-5V Power adapter (1 ea.)

(only for specific RS-232 cables as optional accessory)

-CD-ROM (1 ea.)

(Containing manual and programming guide)

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

# Quick Start

1. Connect the 10-pin RJ45 male connector into the jack on the scanner. When the connection is made, a "click" would 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 matches 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 would turn on.

# 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" would be 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 chapter 13 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

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.
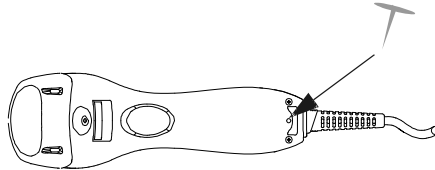


2. Use a metallic pin and insert into the hole.
3. Gently pull the strain-relief of the cable once a faint "click" is heard.

# 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.

6.1     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.

6.2     Scanning in Stand Mode

1. The blue LED would blink when the scanner is placed on the optional presentation stand. This indicates that the Stand Mode is activated.
2. Present a barcode in the scan field.
3. The barcode would be automatically decoded and transmitted.

# Scanner Outline

Blue LED

Red LED

Cable Connection

Green LED

Trigger

Pin Hole

Exit Window

Buzzer Sound Hole
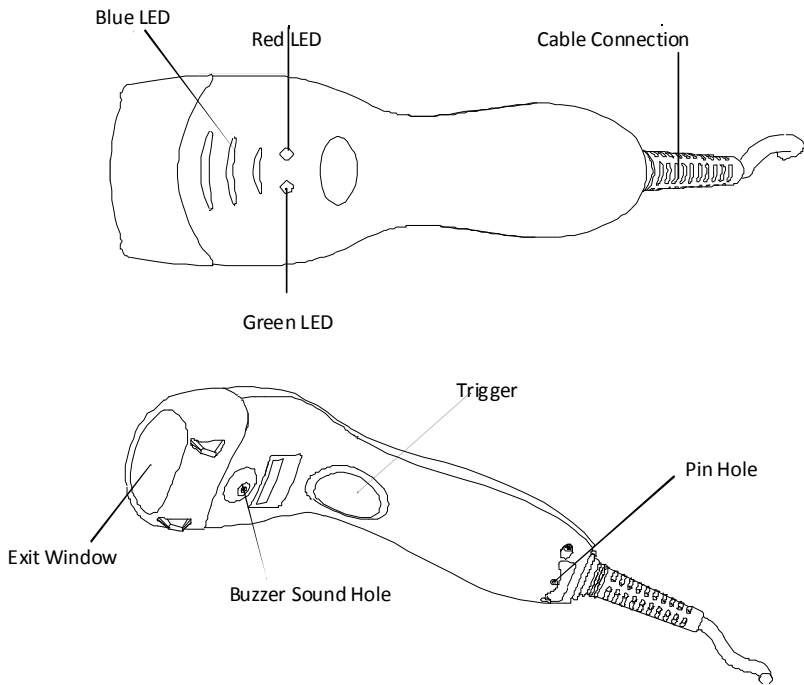
# Assembling the Optional Stand

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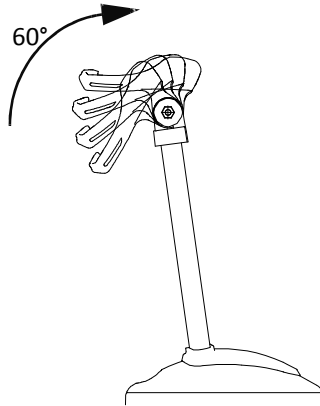
To attach the scanner to the optional stand, hook the scanner on the two holes located at the front of the stand.
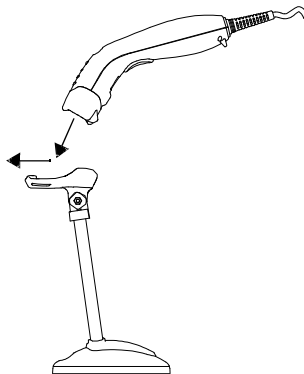
# Visible Indicators

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.<br><br>* When the scanner is in stand-by mode, the trigger button is enabled. Present a barcode to the scanner and the red LED wiould 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 wiould 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.<br><br>* 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. |

# 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.<br><br>* 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 "Quick Start" section of the manual |
| The scanner is functioning but is not decoding. | *The symbology of the barcode might be disabled.<br><br>*The number of characters of the barcode label does not match the initial setting. | *Enable the barcode type from the programming guide.<br><br>*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. |

# 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 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 key- board 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 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.

## 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 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 |

Factory Default Setting (Continued)

| Code Identifiers | Default |
|---|---|
| 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 |

# 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 |
| Code 128 | D1-Dx        (default 3~62) |
| EAN128 | C1 D1-Dx (default 3~62) |
| Code 39 | D1-Dx        (default 3~62) |
| Codebar | D1-Dx        (default 6~32) |
| Interleaved 2/5 | 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
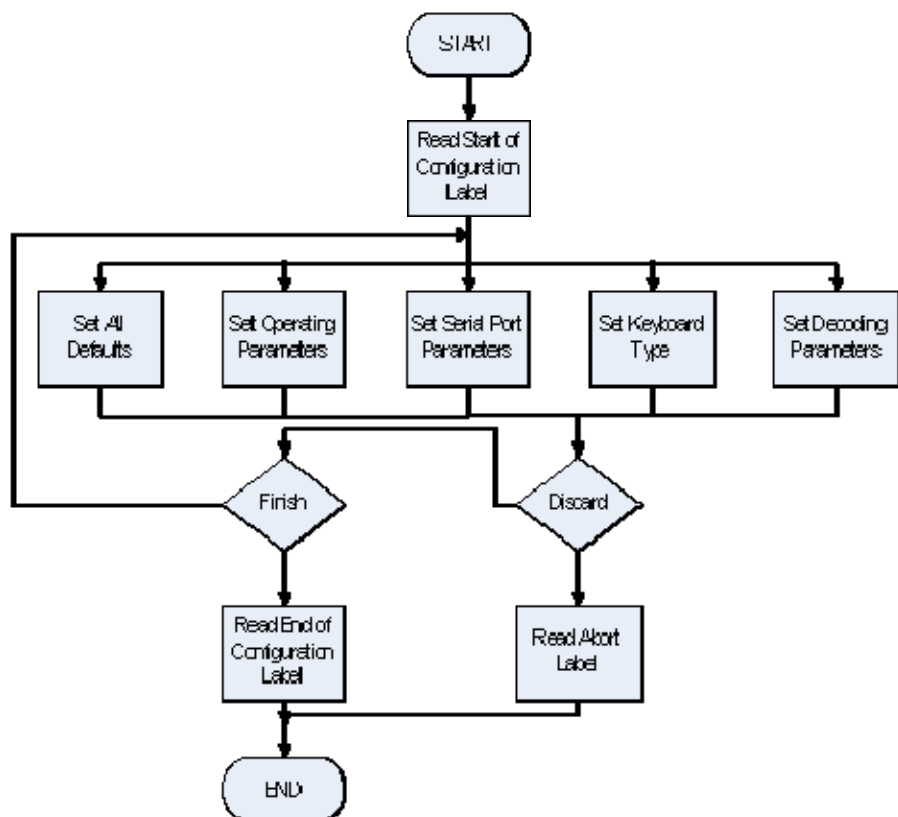
Parameter setting

>  Default values are highlighted in gray background.

|||||||||||||||||||||    Start Of Configuration

**System Function Setting**

**Barcode Value**                                          **Description**

|||||||||||||||||||||    Reset (return to factory default)

|||||||||||||||||||||    Display firmware version

|||||||||||||||||||||    Return to 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

||||||||||||||||    Start 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
- The 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. Barcode data is transmitted when the trigger button is pressed.

📝 **Not all models support this function setting.**

||||||||||||||||||    Aim mode.
- Normal is pulse mode but Barcode 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

---

||||||||||||    End Of Configuration

|||||||||||||||||||||  Start Of Configuration

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**Scan Function Setting (Continued)**

**Stand Operation**

|||||||||||||||||||||||  Auto scan in stand mode.
- Auto object detect to active laser and barcode 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

---

||||||||||||||  End Of Configuration

|||||||||||||||    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 barcode to indicate a "good read" after a barcode has been successfully decoded.

||||||||||||||||    LED/Beep before transmission
*   Use this barcode to indicate a good read" after successfully transmitting the barcode 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

|||||||||||||||    Start 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

|||||||||||||||    End Of Configuration

||||||||||||||||| 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

|||||||||||||||||  Start 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

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||||||||||||||  End Of Configuration

|||||||||||||||||| Start Of Configuration

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**3.    USB Interface Setting**

**USB interface**

|||||||||||||||||| International Keyboard mode. (ALT method).

|||||||||||||||||| Keyboard language support---USA

|||||||||||||||||| Keyboard language support---Germany

|||||||||||||||||| Keyboard language support---French

|||||||||||||||||| Keyboard language support---Spanish

|||||||||||||||||| Keyboard language support---Japanese

**Message Terminator**

|||||||||||||||||| Keyboard terminator---none

|||||||||||||||||| Keyboard terminator---Enter

|||||||||||||||||| Keyboard terminator---H-TAB

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|||||||||||||||||| End Of Configuration

||||||||||||||||  Start Of Configuration

## 4. Wand Emulation Setting

Wand emulation is a standard interface. 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 barcode to set quiet zones and spaces low and bars =high.

Wand emulation data output black=low
- Scan this barcode 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

||||||||||||||||  End Of Configuration

|||||||||||||||| Start Of Configuration

**The Symbologies**

**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

|||||||||||||||| End Of Configuration

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 code data redundant check=off

||||||||||||||||||||| Chinese post code data redundant check=1

||||||||||||||||||||| Chinese post code data redundant check=2

||||||||||||||||||||| Chinese post code maximum length setting

||||||||||||||||||||| Chinese post 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

|||||| ||| |||| ||| End Of Configuration

Handheld High-Speed Laser Scanner

Start 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

End Of Configuration

|||||| |||| ||||    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

Start 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

End Of Configuration

|||||||||||||||||  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/OPC + 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

||||| |||||||| Start Of Configuration

## Addendum Seek Timeout

✎ 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

|||||||||||| End Of Configuration

‖‖‖‖‖‖‖‖‖‖‖ Start Of Configuration

**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 factory 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

‖‖‖‖‖‖‖‖‖ End Of Configuration

|||||| ||| |||||| 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

|||||||||||| Start 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 |

|||||||||||| 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