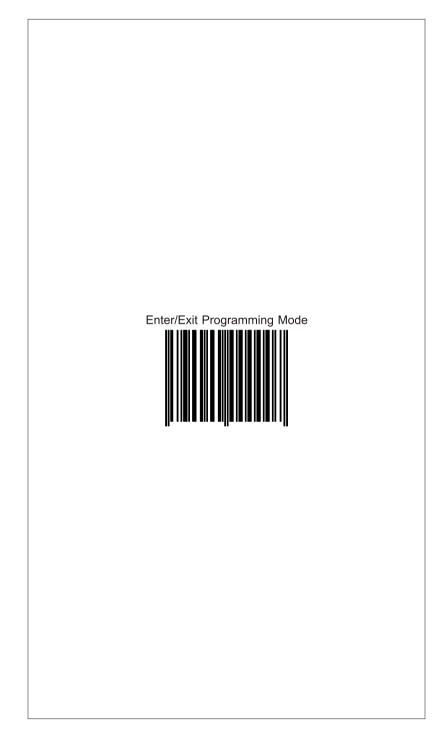
Laser Barcode Scanner User Manual







(This barcode also can be found at the back of cover page)



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Introduction

This user manual is designed especially for omnidirectional laser barcode scanner.

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Version: 2011-11

Responsibility clause
We are not responsible for errors, omissions and variation without notice.

EMC and laser safety

Omnidirectional laser barcode scanner meet IEC60825 laser product safety standard, CERH standard and Grade II laser safety. It use 650nm visible laser diode, which meets CE EMC standard as well. But shouldn't be directly irradiate to eyes for a long time.

Notice: Do not try to disassemble products by yourself. Any problem, please contact supplier immediately.

Products introduction

Omnidirectional laser barcode scanner is a new designed barcode scanner by our company, which supports both omnidirectional line scan and single line scan. It can be taken up to approach large object, and then read barcode. And also, it can stand on the desk by itself, and read barcode which comes close.

Super-sized scan window and flexible scan angle ensure the omnidirectional barcode scanner read all kinds of barcodes easily and precisely. Blue LED light can remind users of precise reading in the real time. Its shell is designed to be dustproof and withstand 1.5m drops.

Because of the auto-dormancy mode, it will enter into dormancy status if no barcode scan in the setting time, and will enter into working status automatically as the barcode pass from it. This function can lengthen the products service time.

Packing

When opening the packing, please make sure all the following part are included. If not. Please contact your supplier.

Parts name	Quantity
Scanner	1pcs
Cable	1pcs
Power adaptor	1pcs
User manual	1pcs

Scan mode introduction

Omnidirectional barcode scanner supports two scan modes:

1.omnidirectional scan mode

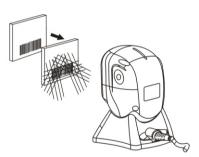
2.single line mode

omnidirectional scan mode:

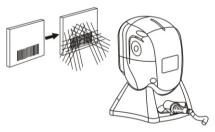
In this mode, the barcode can be read easily and automatically when the barcode come into the scan zone.

1.fixed mode

To meet different demands, this scanner can be adjusted by leaning to front and back.



Scan on skim pattern



Scan on touch pattern

Single line scan pattern

Only single line will be sent by scanner on this pattern. Press the button on the two side into single line scan pattern.

- 1. Take the scanner from the base.
- 2.Press the button 2 second the release, the scanner will into single line scan pattern automaticaly, make sure the scan line cover every barcode.





- 3.Aim at the barcode, and press the button which on the two side, the buzzer will respond succeed read tone.
- 4.Release the button, the scanner will back to omnidirectional scan pattern automatically.

Please repeat steps 3 and step 4 if need to scan more barcode.

Note: after 5 seconds or back the scanner to the basic, the scanner will back to omnidirectional scan pattern automatically.

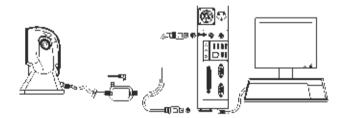
Cable connection

Keyboard Wedge Connection

PC/AT Keyboard port

The scanner will imitate the keyboard output when use the keyboard interface. If use the standard PS/2 keyboard interface, please set up connection below:

- 1)Make sure the power of the host system is off.
- 2)Insert the data cable into the "host" connector in the back of the scanner until a firm click is heard.
- 3)Connect the keyboard and data cable jack on the keyboard.
- 4)Connect the data cable and jack on the "host" keyboard.
- 5)The scanner require a minimum of 300 mA at 5V DC power, please connect the data cable with the external supplied power adapter.
- 6)Turn on your computer power supply.
- 7)Set up the scanner as KB mode.

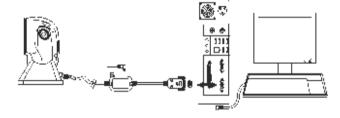


RS-232 Cable Connection

RS-232 C Serial Port

When you use the RS-232 serial cable, need to finished the below connection advance.

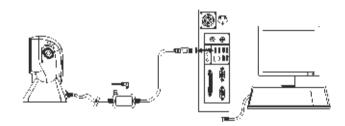
- 1)Make sure that the power of the host system is off.
- 2)Inert the data cable connector in the back of the scanner until a firm click is heard.
- 3)Connect the standard 9-pin serial port cable with the computer's serial port.
- 4)Plug the 5V DC external supplied power adapter into the jack of the data cable.
- 5)Turn on your computer power supply.
- 6)Set up the scanner as serial port mode.



USB Cable Connection

After finished below setting , the host system will auto scan the barcode when use the USB 2.0 standard interface.

- 1)Make sure that the power of the host system is off.
- 2)Insert the data cable which with KP into the "host" connector in the back of the scanner until a firm click is heard.
- 3)Cnonnect the keyboard and data cable jack on the "host" keyboard.
- 4)The scanner requires a minimum of 300mA current, please connect the data cable with the external supplied power adapter.
- 5)Turn on your compute power supply.
- 6)Set up the scanner as USB mode.



Scanner Use(introduction)

Scanner connection Interface

Scanner must be connect to POS/PC scanner series support follow interface:

Keyboard wedge RS-232 C interface USB interface

Change the scanner setting

In order to change the scanner setting, please follow steps below:

- 1.Scan the "PROGRAM" barcode, 2 beeps (low-high) indicating ready to make settings.
- 2.Scan barcode for the desired feature (1beep).
- 3. Scan the "Enter/Exit Programming Mode" barcode again to save the configuration, 2 beeps (long-short). Indicating setting successfully.

Scanner basic setting(introduction)

Reset (Return of factory default)

Reading of "Reset" barcode label turns all parameters to default values, and the scanner remains in the last interface set when it is reset.

Reset (Return to factory default)



Reading of the "Display Firmware Version" barcode label will show the current firmware version on host.

Display Firmware Version



Reading of the "Abort" barcode label discards all the parameters before scan the "Enter/Exit Programming Mode" barcode label.

Abort(Exit programming mode)



KBW Introduction

Reset to KBW default

Default Values of keyboard Emulation Parameters

Return to the KBW default



Default Values of keyboard Emulation parameters

Function	Default Values
Keyboard type selection	Enter
Keyboard Message terminator	IBM PC/AT USA

KB interface Keyboard Language settings Select the keyboard language, please choose a keyboard below the international keyboard to select the correct language.

FRANCH



ENGLAND











Capital key on and off

When barcode have letters, it can be operated as below to switch between the data in uppercase and lower case characters



CAPTIAL KEY OFF

12

Function key on and off

If you need to add function keys for the Prefix/Suffix , not only need to set the add prefix/Suffix steps, but also let function key on , otherwise, it can't work.

FUNCTION KEY ON



FUNCTION KEY OFF

FUNCTION KEY ON AND OFF

function key on , otherwise , it can't work.

If you need to add function keys for the Prefix/Suffix , not only need to set the add prefix/Suffix steps, but also let



KB interface information data processing

NONE



ENTER





RS-232 Introduction

When using RS232 Serial communication, please connected the scanner to the terminal interface of PC correctly, and following settings to make the scanner back to the RS232 interface. Pls. open the serial port support data transfer application software to ensure the normal transmission of data.

Return to RS-232 interface setting code

Return to RS-232 interface



Open RS-232 Programming

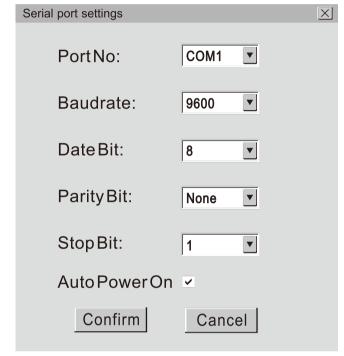
Programming Icon, show as the following graph:



Double-click the programming icon, the graph will automatically open in the taskbar to show the following graph.

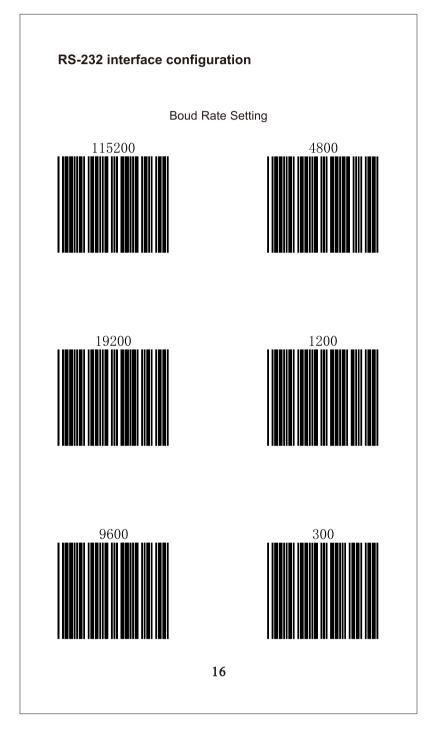


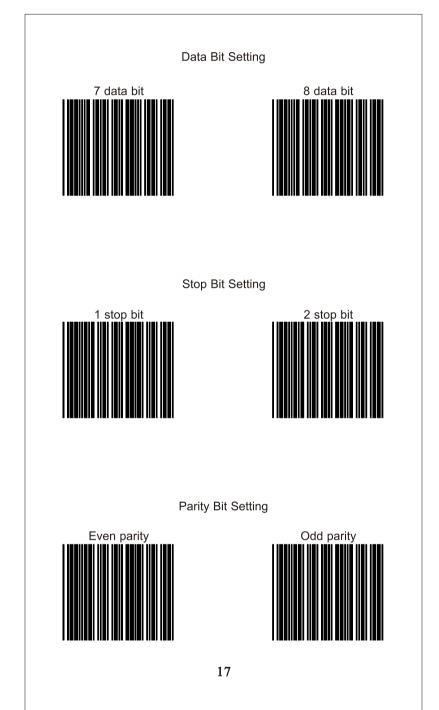
You can right-click the taskbar to set the application procedures:

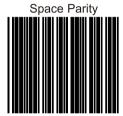


RS-232 default:

Function	Default Values
Handshakig protocol	None
Ack/NAK response time setting	300ms
Baud rate	9600
Data Bit	8
Stop Bit	1
Parity	None
Message terminator selection	CR/LF













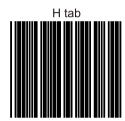


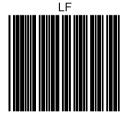


Message terminator for RS-232

When the scanner send the data by RS232, it can be programmed to append a terminator message as your needs, eg: add Enter after data or TAB key, ect . please see the following setting:













USB Interface Introduction

USB mode simulate keyboard to work with the host computer.

USB SettingWhen the scanner connect to the USB cable, following below settings to ensure that data can be successfully transferred to the PC.

Return to USB default



USB default

Function	Omitted and added
Keyboard Mode	US Keyboard
Messega Terminator	Enter

USB and Keyboard type

Keyboard type-USA (Scan method)



Keyboard type (ALT code method)



Message Terminator for USB

None



Enter





How to cleaning and extend the service life

Cleaning:

Only an occasional cleaning of the scanner window is necessary in order to remove dirty and fingerprints. The cleaning of the scanner window can be done during operation with a soft cotton cloth and the non-abrasive cleaner to avoid scratching.

Two points for extend the service life

1.Sleep function:

Our products with automatic sleep function. Not only save power, but also reduce the laser loss and extend the service life

2.Gently use (To protect motor)

The user should carefully use this device, to avoid motor loose or even fall off, this will affect the performance of this device

Laser and motor sleep

If omnidirectional scanner does not work in a certain period of time, laser or motor will automatically shut down and enter "sleep mode", and the blue light flashing. When there are objects close to the scanner window, or press the button, the scanner will be automatically wake up. By default, the omnidirectional scanner enter into sleep mode following two steps:

First, the laser sleep after 10 minutes. Second, the motor sleep after 30 minutes. Sleep time can be setting based on actual demand by scan the setting barcode of the manual.

Note: In the front of the omnidirectional scanner window, there is a sensor to detect moving objects. in the case of the general ambient light to detect the distance of 50mm from the scan window range.







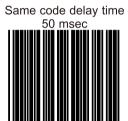


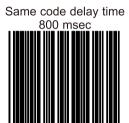




Same Code Delay Time

This parameter sets the minimum time allowd between decodes of the same label.





Same code delay time 200 msec



Same code delay time 1000 msec



Same code delay time 500 msec



Same code delay time infinite



Beeper Sound Selection

This section includes all setting labels for beeper sound, setting tone frequency, volume, duration time, power on beep enable/disable and enable/disable sound, when enter sleep mode.



Power-up tone disable



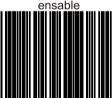
Led/Beep before transmission



Sleep sound



Power-up tone ensable



Sleep silent















Beeper sound duration (20msec)





Beeper sound duration (5msec)



Mudium beeper volume



Beeper sound duration (5msec)



Low beeper volume



Barcode Identifier Code Setting

The scanner can transmit maximum 2 digits barcode identifier code for different type of barcodes, Using enable or disable identifier setting barcode to choose transmit or do not transmit barcode identifier code.

The procedures are as follows:

- Scan Enter programming mode label;
 Scan Barcode Identifier Setting Code label;
 Scan the new code mark from ASCII label (maximum 2) digits);for example: If AB is the code mark then scan A and B.
- Scan Save Setting to Confirm label;
- 5) Scan Exit Programming Mode Label.



Enable identifier code



Scan "Enable identifier code" label to transmit the label ID as shown in the table below.

Code 39	М
ITF 2 of 5	1
Chinese post code	Н
UPC-A	Α
UPC-E	Е
EAN-13	F
EAN-8	FF
Codabar	N
Code 128	K
Code 93	L
MSI/Plessy	Р

Set message format Code Identifier(alpha-30 format)



Code	Code identifier
UPC-A	A
UPC-E	E
EAN-8	FF
EAN-13	F
Code 39	*
Codabar	%
ITF 2 of 5	i
Code 93	&
Code 128	#
MSI/Plessy	@
EAN-128	P

Enable Identifier Code Table as AIM Standard

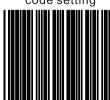


Custom barcode identifier setting

Code 39 identifier code setting



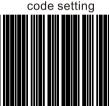
UPC-E identifier code setting



ITF 2 of 5 identifier code setting



UPC-A identifier code setting



EAN-13 identifier code setting



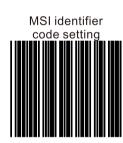
EAN-8 identifier code setting



Codabar identifier code setting

Code 93 identifier code setting

Code 128 identifier code setting





Message Delay

In this section contains

The scanner allow to add time delay in two consecutive barcode data transferring to the PC .This delay will be add before each transmission of barcode data.

Inter message



Inter message delay 500 ms



Data Edit

Truncate Preamble/Postamble character

Truncate Preamble/Postamble for barcode. the specific character selected is deleted from the barcode.

- 1)Scan the "Enter/Exit programming mode"lable.
- 2)Slecte the "Truncate header" or "Truncate trailer" label.
- 3)Scan the barcode value from the full of ASCII code table(0-9). For exmple, if 2 number of header that you want to do clear, then scan "0" and "2".
- 4)Scan "save setting to confirm" label.
- 5)Scan "Enter/Exit programming mode" label to end of configuration.

Truncate header



Truncate traller

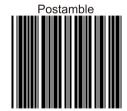


Add Code Length

This option allows you to add reading barcode characters as Preamble or Postamble. But do not exceed 10 characters total.

- 1)Scan corresponding barcode, select "Preamble" or "Postamble".
- 2)Please release 39 code from FULL ASCII before scanning, and selected header and trailer characters on enclose ASCII.
- 3)Scan "setting" barcode to store sets.







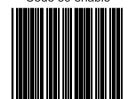
Barcode open/close

The scanner can all the normal ID barcode, if you have special need,please scan follow barcode to setting:

1)Scan "Enter/Exit programming mode".
2)Scan the "Open/Close barcode" you need.

3)Scan "Enter/Exit programming mode".

Code 39 enable





Codabar enable



Codacar disable

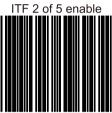


UPC/EAN/JAN enable



UPC/EAN/JAN disable





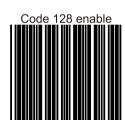






Code 93 enable











EAN-128 disable



Code 32 enable



Code 32 disable



EAN convert to ISSN/ISBN



EAN convert to ISSN/ISBN disable



MSI enable



MSI disable



UPC/EAN parameters setting

In this section, device can be programmed to recognize some or all derivatives of UPC/EAN.

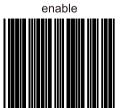
The programming menu for UPC/EAN/JAN also provides several options to govern the transmission scanned data.

- *UPC/EAN expansion
- *Check digit transmission
- *Date redundant check
- *Addendum seek timeout
- *Addendum left/right margin adjust

UPC-A and UPC-E enable



EAN-8 or EAN-13



UPC-A and EAN-13 enable



UPC/EAN/JAN all



UPC-A enable



UPC-E enable





EAN-8 enable

Force UPC-E to UPC-A format

Force UPC-E to UPC-A format enable

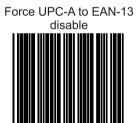




Force UPC-A to EAN-13 format

Force UPC-A to EAN-13 enable

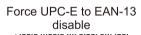




Force UPC-E to EAN-13 format

Force UPC-E to EAN-13 enable







Force EAN-8 to EAN-13 format

EAN-13 first "0" transmitted



EAN-13 first "0" can't transmitted



Transmit UPC-A check digit

Transmit UPC-A check digit enable





Transmit UPC-E leading character

Transmit UPC-E leading character enable



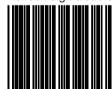
Transmit UPC-E leading character disable



Transmit UPC-E check digit enable



Transmit UPC-E check digit
JPC-E Transmit UPC-E
enable check digit disable





Transmit EAN-8 check digit enable



Transmit EAN-8 check digit disable



Transmit EAN-13 check digit

Transmit EAN-13 check digit enable

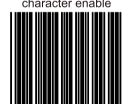


Transmit EAN-13 check digit disable



Transmit UPC-A leading character

Transmit UPC-A leading character enable



Transmit UPC-A leading character disable



Addendum



Add on 5 only



Addendum

Add on 2 only



Add on 2 or 5



Add for format

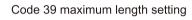
Add for format with separater

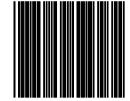


Add for format without separater



Code 39 reading length setting The default code 39 length is 3-32 characters. It can be set at minimum 1 digit and maximum 62 digits. CODE LENGTH SETTING FLOW Scan starting setting Scan minimum/maximumlength setting Scan the barcode from the Code 39 FULL ASCII table(that is double digit combination), such as: set the digit length, scan 0, 4. Scan save setting Scan end setting

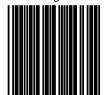




Code 39 minimum length setting



Save setting to confirm



44

FULL ASCII CODE TABLE

Full ASCII---SOH (Function Key---Ins)



Full ASCII---STX (Function Key---Del)



Full ASCII---EXT (Function Key---Home)



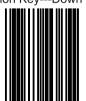
Full ASCII---EOT (Function Key---End)



Full ASCII---ENQ (Function Key---Up arrow)



Full ASCII---ACK (Function Key---Down arrow)

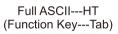


Full ASCII---BEL (Function Key---Left arrow)



Full ASCII---BS (Function Key----Backspace)







Full ASCII---LF (Function Key---Enter(num))





Full ASCII---VT (Function Key---Right arrow)



Full ASCII---FF (Function Key---PgUp)



Full ASCII---CR (Function Key---Enter(alphabet))



Full ASCII---SO (Function Key---PgDn)



Full ASCII---SI (Function Key---Shift)



Full ASCII---DEL (Function---5(num))







Full ASCII---DC2 (Function Key---F2)



Full ASCII---DC3 (Function Key---F3)



Full ASCII---DC4 (Function Key---F4)



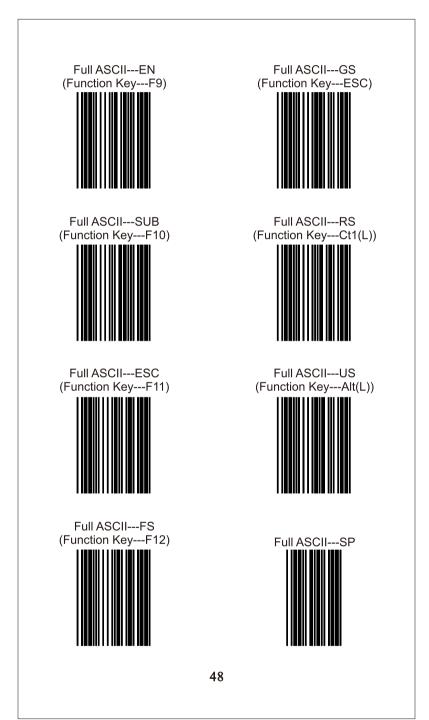


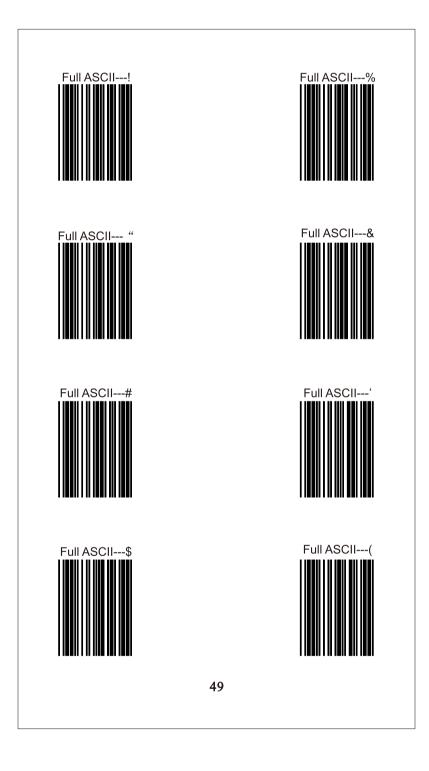


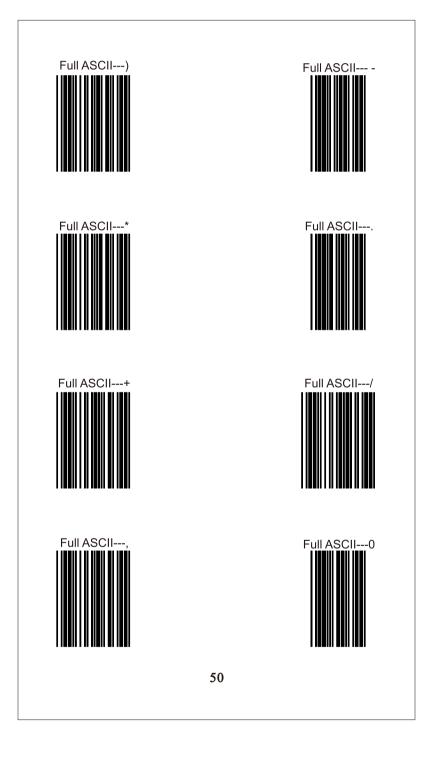


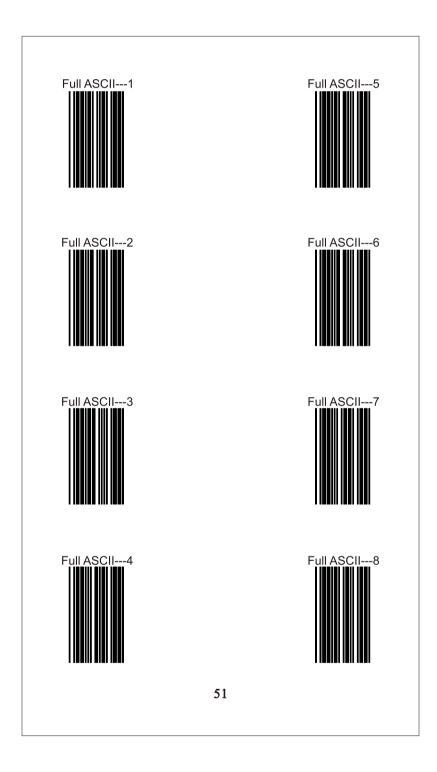
Full ASCII---CAN (Function Key---F8)

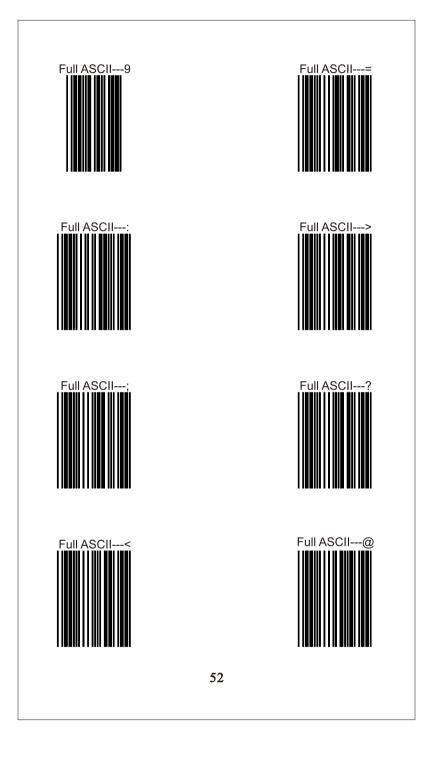


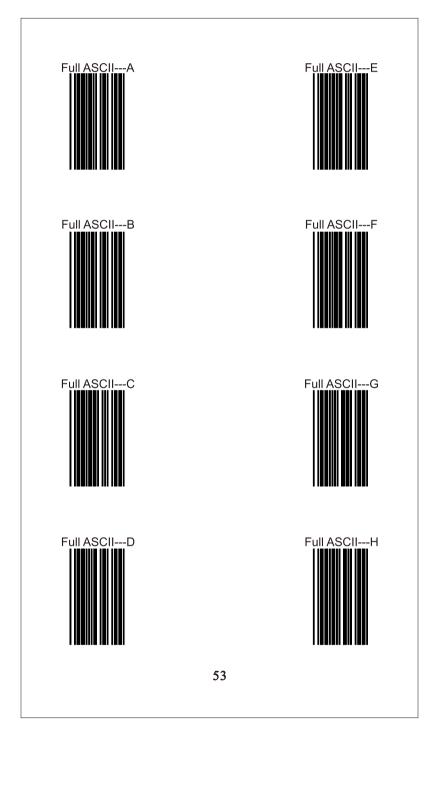


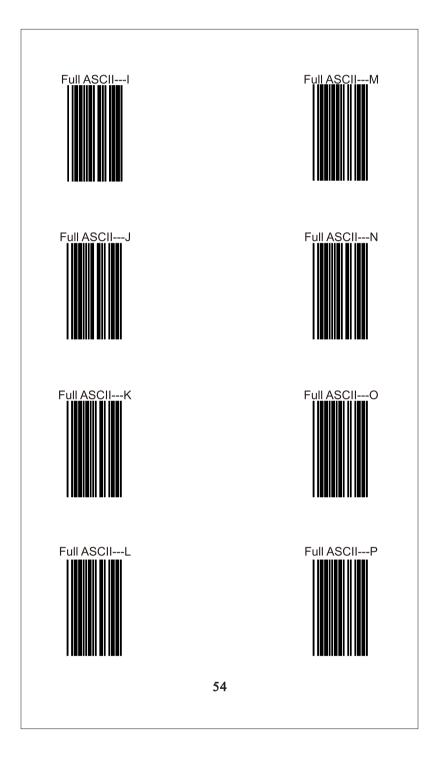


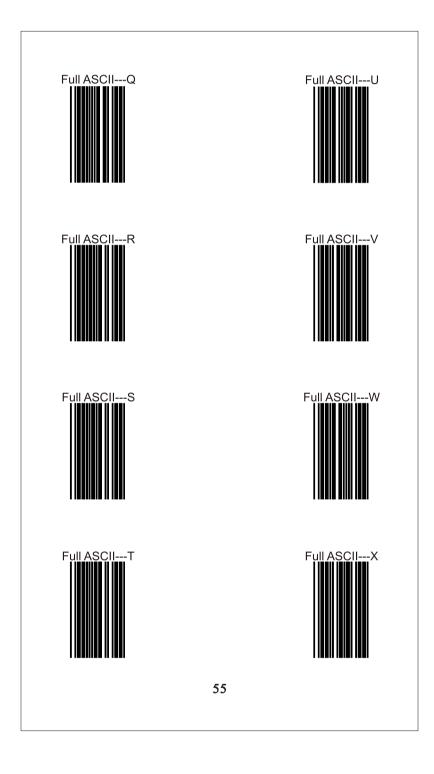


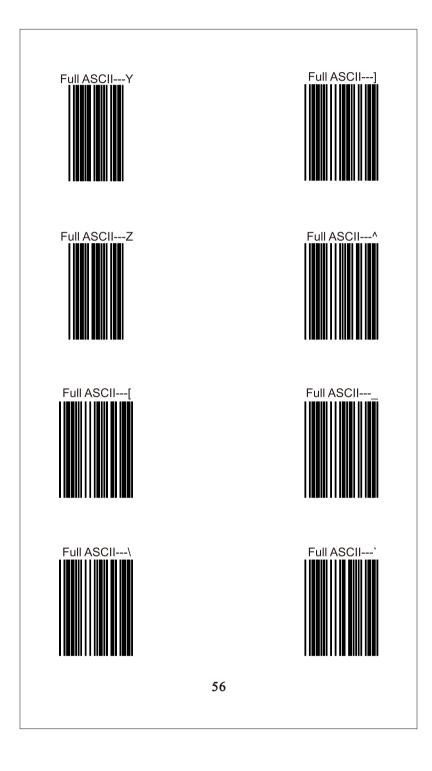


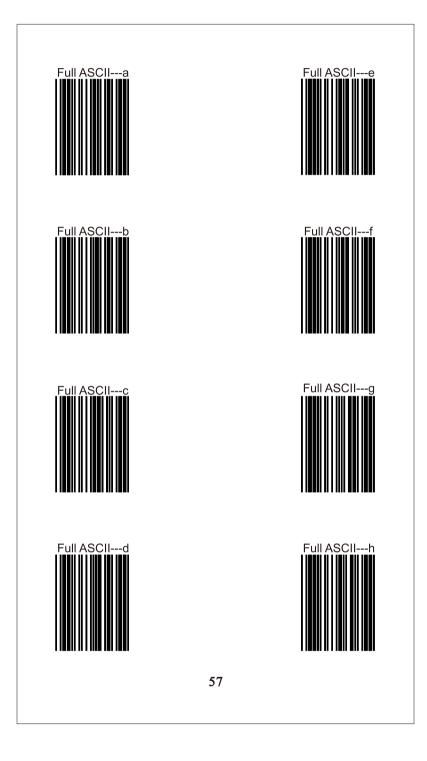


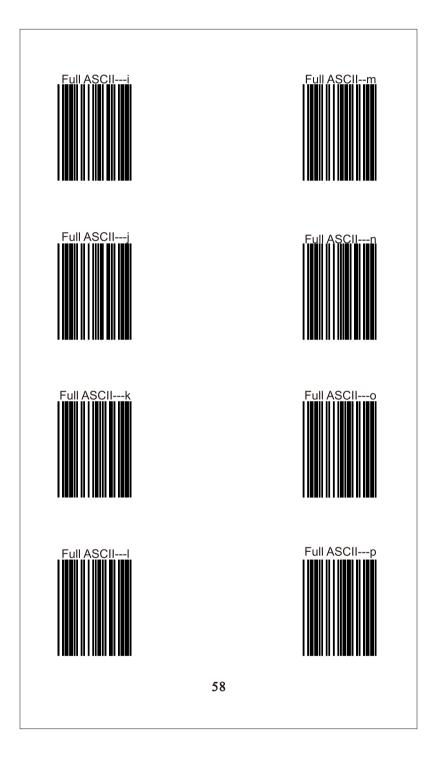


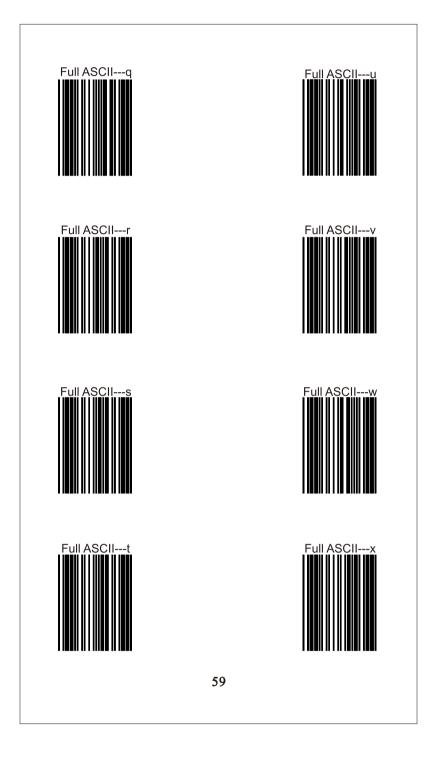


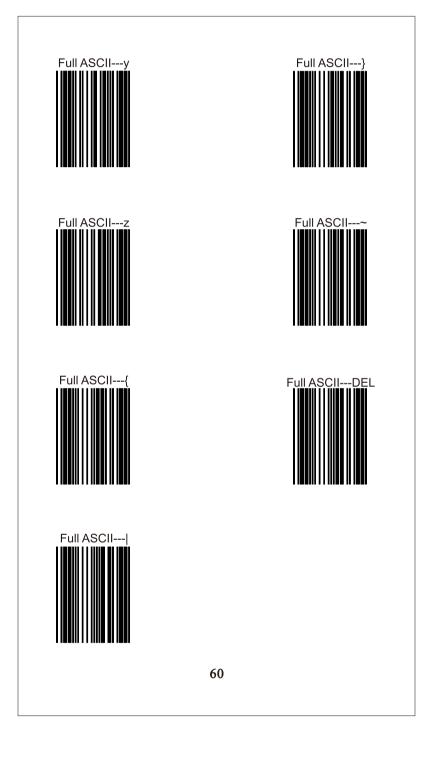












TROUBLE-SHOOTING

This section contians information about how to solve problems that you may encounter when use the scanner. If the trouble occur, please refer to the following diagnostic tips as a mean to solve the trouble, However before to referring to the tips. Make sure the scanner is installed correctly and cables are properly connected.

If the problem remains, contact your dealer.

Trouble-shooting Guide

PROBLEM	DIAGNOSTIC
The scanner is on, but cannot reads barcode, the LED is red.	 The scanner window is dirty, clean the scanner window as described in the maintenance section. The presented barcode type is not enable. Return to the factory for repair.
The scanner is on, but the motor is not rotating, a barcode cannot be read, the LED is intermittently flashing red.	•The scanner has entered into the sleep mode. Press the switch on the side or in front of the scanner to wake up the scanner.
The LED is remain Red and Green.	 Possible failure of the scanning safe guard circuit. Disconnect the scanner from its power source immediately and contactyour dealer.
The scanner can't decode more than two barcode labels.	 The scanner reading a barcode labels out of the scan volume of the scanner. Try again. The scanner cannot send the data to the POS system. There is no proper handshaking between the scanner and the host. Make sure that all cables are connected and POS system is ready to receive data.