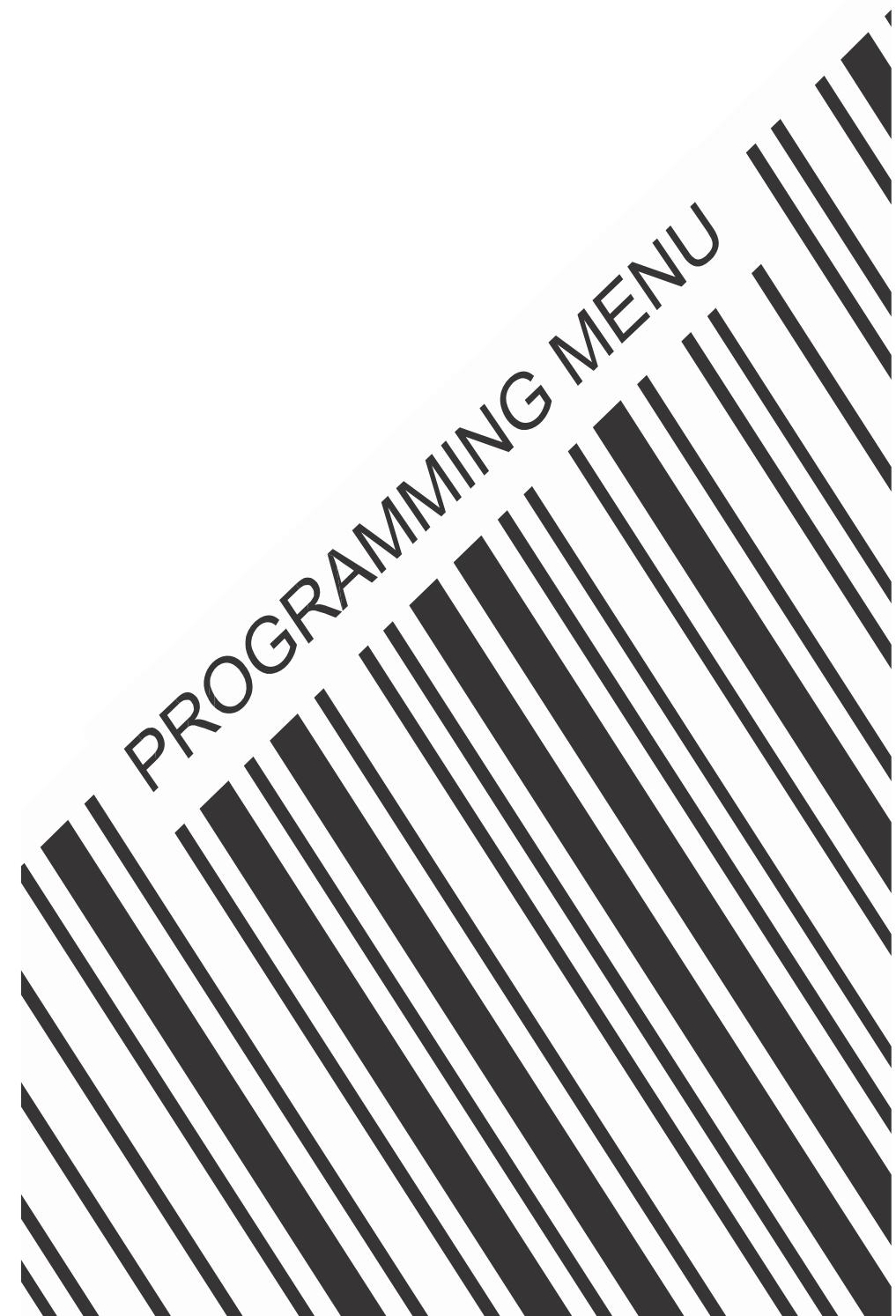


# BAR CODE





## **Programming Menu**

V3.9a

### **Notice**

The manufacturer shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages in connection with the furnishing, performance or use of the publication.

## FCC Approval



This device had been tested in accordance with the procedures and in compliance with Part 15 Subpart B of FCC Rules, and keeps all requirements according to ANSI C63.4 & FCC Part 15 B Regulation and CISPR22 Class B.

## CE Standards



The CE mark as shown here indicates this product had been tested in accordance with the procedures given in European Council Directive 2004/108/EC and confirmed to comply with the Europe Standard EN55022:2006:Class B, EN 55024:1998+A1:2001+A2:2003, IEC61000-3-2:2006, IEC61000-3-3:1995+A1:2005, IEC61000-4-2:2001, IEC61000-4-3:2006, IEC61000-4-4:2004, IEC61000-4-5:2006, IEC61000-4-6:2001, IEC61000-4-8:2001, IEC61000-4-11:2004.



## LEGISLATION AND WEEE SYMBOL



This marking shown on the product or its literature, indicates that it should not be disposed with other households wastes at the end of its working life. To prevent possible harm to the environment or human healthy from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their suppliers and check the terms and conditions of the purchase.

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# **Chapter 1 Description**

## **1.1 General**

Thank you for purchasing this linear imager barcode scanner. The user friendly functions make it easily to be operated to accommodate variety of environment. It also provides users with the most cost-effective solution in the market. The scanner is perfectly suitable and definitely the best choice for any retail and logistic environment.

## **1.2 Introduction**

The decoder is an advanced and versatile decoding facility for barcoding systems .It works with variety of barcode types, reading devices, and computer interfaces. It discriminates about twenty different symbologies automatically.

This menu provides an easy way to configure the decoding options and interface selections by scanning barcodes listed in the menu.

## **1.3 Codes Read**

The scanner supports following barcode types:  
UPC/EAN/JAN, Code 39, Code 39 Full ASCII, Code 128, Interleave 25, Industrial 25, Matrix 25, Codabar/NW7, Code 11, MSI/Plessey, Code 93, China Post, Code32/Italian Pharmacy, Code 26, LCD 25, Telepen, GS1 Databar, and others available upon request.

## **1.4 Installation**

### **Unpacking -**

Remove the scanner from its packing and check it for damage. If the scanner is defected in transit, please contact your vendor immediately. Be sure that keep the packing materials with all accessories contained in the package for returning of service.

### **Connecting the scanner -**

Keyboard wedge/RS-232C/USB:  
Connect the 10-pins RS-45 male connector to the bottom of scanner and you will hear a “click” when the connection is made.

### **Power supply for RS-232C scanner -**

There are 3 ways to supply the power: external +5V power supply adaptor, optional power cable (KBDC) which taking the power from KB wedge or +5V power supplied from the pin 9 of host.

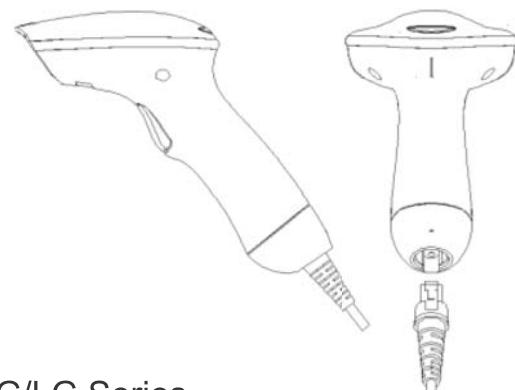
### **Installing the scanner to the Host System -**

1. Turn off the host system.
2. Connect the power if needed.
3. Connect to the proper port on the host system.
4. Turn on the host system.

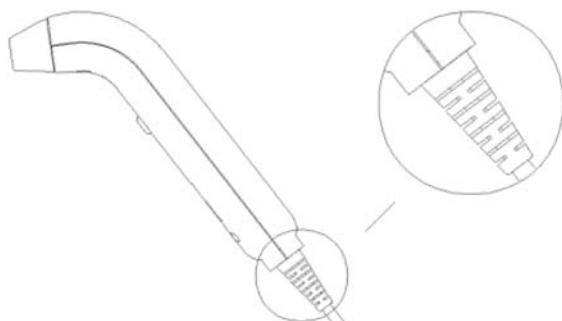
### **Switching cable -**

Before removing the cable from the scanner, it is recommended to turn off power on the host system and disconnect the power supply from unit.

1. Find the small "Pin-hole" on the bottom of the unit.
2. Use a bended regular paperclip and insert the tip into the hole.
3. When hear a "click", gently move out the strain-relief of the cable and it will slide out of the scanner.



SG/LG Series



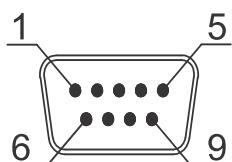
SD Series

## 1.5 Pin Assignment

### A> Input Port for Mini Decoder

**DB 9 Male**

Pin No.	Wand / Slot Reader	CCD / Laser Scanner
1	N.C.	S.O.S.
2	DATA	DATA
3	N.C.	N.C.
4	N.C.	N.C.
5	N.C.	TRIGGER
6	N.C.	P.E.
7	GND	GND
8	SHIELD	SHIELD
9	+5V	+5V



### B> Output Port

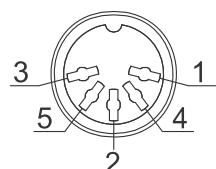
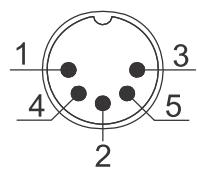
#### 1. PC Keyboard Output

**DIN 5 MALE**

Pin No.	Function
1	HOST CLK
2	HOST DATA
4	GND
5	Vcc (+5V)

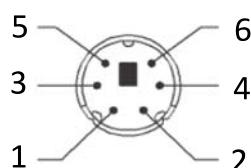
**DIN 5 FEMALE**

Pin No.	Function
1	KB CLK
2	KB DATA
4	GND
5	Vcc (+5V)



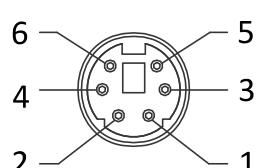
**MiniDIN 6 MALE**

Pin No.	Function
1	HOST DATA
3	GND
4	Vcc
5	HOST CLK



**MiniDIN 6 FEMALE**

Pin No.	Function
1	KB DATA
3	GND
4	Vcc
5	KB CLK



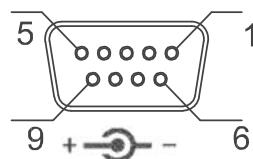
## 2. RS-232 Output

### DB 9 Female

Pin No. Function

2	TXD
3	RXD
5	GND
7	CTS
8	RTS

Power Lead Vcc (+5V)

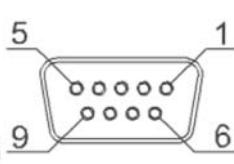


## 3. WAND Emulation Output

### DB 9 Female

Pin No. Function

2	DATA
7	GND
9	Vcc (+5V)



## 4. ADB Interface

### MiniDIN 4 MALE

Pin No. Function

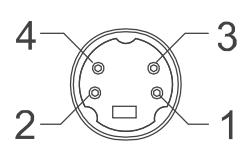
1	ADB
3	Vcc
4	GND



### MiniDIN 4 FEMALE

Pin No. Function

1	ADB
3	Vcc
4	GND

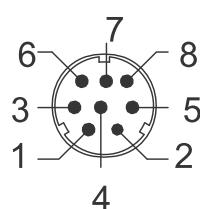


## 5. NEC 9801 Interface

### MiniDIN 8 MALE

Pin No. Function

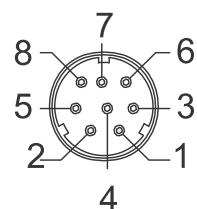
1	RST
2	GND
3	HOST RDY
4	HOST DATA
5	RTY
8	+5V



### MiniDIN 8 FEMALE

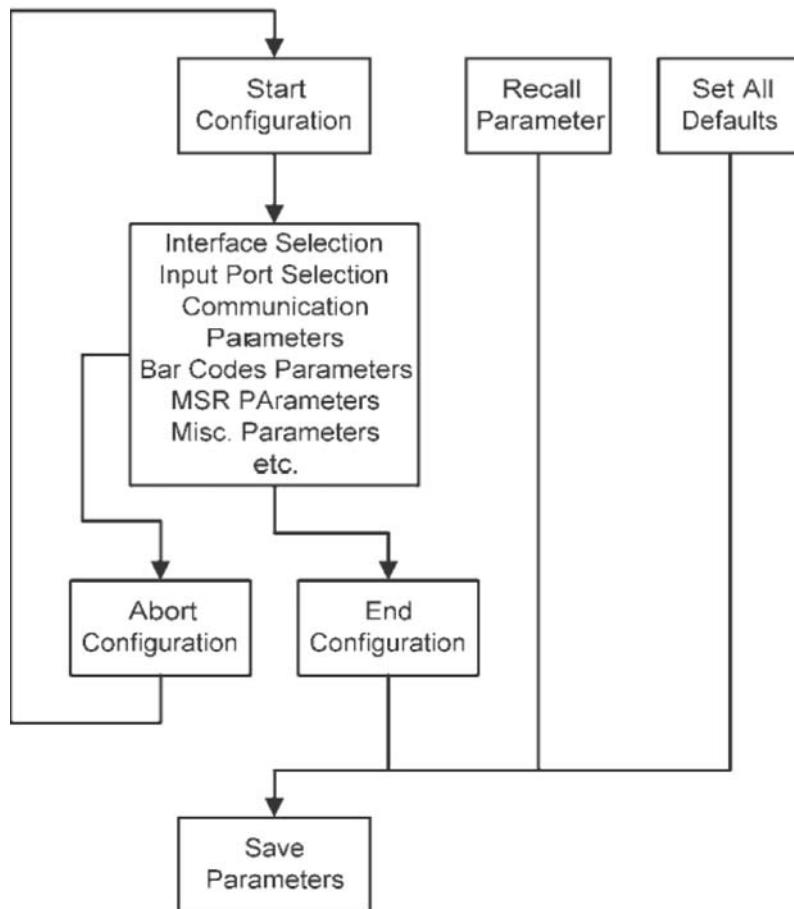
Pin No. Function

1	RST
2	GND
3	KB RDY
4	KB DATA
5	RTY
8	+5V



# Chapter 2 Configuration

## 2.1 Flow Chart



## **2.2 Loop of Programming**

The procedure of programming parameters is shown on the flow chart. Basically it is implemented by:

1. Scan “Start Configuration”.
2. Scan all necessary barcodes for parameters that meet applications.
3. Scan “End Configuration” to end the programming.
4. To permanently save the parameters, scan “Save Parameters”.
5. To go back to the default settings, scan “Set All Defaults”.

## **2.3 Factory Default Settings**

The factory default settings are shown with <> and bold in the following sections. Make your own settings by following the procedures in this manual. To save the settings permanently, scan the barcode of “Save Parameters” on “Main Page of Configuration”. Otherwise the settings will be lost after the decoder power is off, and all settings will go back to previous saved settings.

By scanning “Set All Default” barcodes, the settings will go back to the factory default settings.

## 2.4 Main Page of Configuration

**Save Parameters**



%\$+/0

**Recall Stored  
Parameters**



%\$+/1

**Set All Defaults**



%\$+/2

**Start Configuration**



%\$+/3

**End Configuration**



%\$+/4

**Abort Configuration**



%\$+/6

**Version Information**



%\$+/5

**Save Parameters -**

The parameters will be saved permanently.

**Recall Stored Parameters -**

Replace the current parameters by the parameters saved last time.

**Set All Defaults -**

Set all the parameters to the factory default settings.

**Abort Configuration -**

Terminate the current programming procedure.

**Version Information -**

Display the decoder version and date code.

# **Chapter 3 Interface and Reading Mode Selection**

## **3.1 Interface Selection**

Keyboard Mode



%00U0

RS232 Mode



%00 U8

WAND Emulation



%00M2

**<USB Mode>**



%0X08

Virtual COM



%0088

## 3.2 Reading Mode Selection

<Good Read OFF>



%0271

Trigger ON/OFF



%0270

Continuous/Trigger OFF



%0272

Testing



%0275

Continuous/Auto Power On



%0273

Flash



%0274

Flash/Auto Power On



%0276

Reserved1



%0277

Auto Sense(Option)



%09F8

Reserved3



%09F9

Reserved4



%09FA

Reserved5



%09FB

# Ch.4 Communication Parameters

## 4.1 RS232 Communication Parameters

### A> Setup Baud Rate

2400



%0Y72

1200



%0Y71

4800



%0Y73

<9600>



%0Y77

38400



%0Y75

19200



%0Y74

### B> Setup Data Bits

7 Data Bits



%0Y80

<8 Data Bits>



%0Y88

### C> Setup Stop Bits

<1 Bit>



%0Y08

2 Bits



%0Y00

## D> Setup Parity Check

<None>



%0YN7

Even



Odd

%0YN2



%0YN3

Mark



Space

%0YN1



%0YN0

## E> Setup Handshaking

RTS/CTS Enable



%0188

<RTS/CTS Disable>



%0180

ACK/NAK Enable



%0144

<ACK/NAK Disable>



%0140

XON/XOFF Enable



%03K4

<XON/XOFF Disable>



%03K0

## 4.2 Keyboard Wedge Mode Parameters

### A> Terminal Type

<IBM PC/AT, PS/2>



%0ZF0

IBM PS/2 25, 30



%0ZF1

IBM PC/XT



%0ZF2

NEC 9800



%0ZF3

Apple Desktop Bus(ADB)



%0ZF4

IBM 5550



%0ZF5

IBM 122 Key (1)



%0ZF6

IBM 102 Key



%0ZF7

IBM 122 Key (2)



%0ZF8

Reserved 1



%0ZF9

Reserved 2



%0ZFA

Reserved 3



%0ZFB

Reserved 4



%0ZFC

Reserved 5



%0ZFD

## B> Upper/Lower Case

<No Change>



%0330

Upper Case



%0331

Lower Case



%0332

## C> Caps Lock Detection

Enable



%0X88

<Disable>



%0X80

## D> Send Character by ALT Method

Enable



%0308

<Disable>



%0300

## E> Select Numerical Pad

ON



%01K4

<OFF>



%01K0

## 4.3 Output Character Parameters

### A> Select Terminator

<CR+LF>



%7S2+

CR



%7S0+

Space



%7S4+

STX-ETX



%7S5+

None



%7S7+

LF



%7S1+

HT (TAB)



%7S3+

## B> Time-out Between Characters

<0 ms>



%0070

5 ms



%0071

10 ms



%0072

25 ms



%0073

50 ms



%0074

100 ms



%0075

200 ms



%0076

300 ms



%0077

## 4.4 Wand Emulation Mode Parameters

### A> TTL Level Representation

<Bar Equals High>



%02K4

Bar Equals Low



%02K0

### B> Scan Speed Selection

<Fast>



%0288

Slow



%0280

### C> Output Format Selection

<Output as Code 39>



%0208

Output as Code 39

Full ASCII



%0200

Output as Original  
Code Format



%0XK4

# Ch.5 Barcodes & Others

## 5.1 Symbology Selection

UPC-A <ON>



%0 A44

OFF



%0 A40

UPC-E <ON>



%0 BO8

OFF



%0 BO0

EAN-13/JAN-13/ISBN-13  
<ON>



%0 A22

OFF



%0 A20

EAN-8/JAN-8 <ON>



%0 A11

OFF



%0 A10

CODE 39 <ON>



%0 EO8

OFF



%0 EO0

CODE 128 <ON>



%0 FO8

OFF



%0 FO0

Codabar/NW7 <ON>



%0 JO8

OFF



%0 JO0

Interleaved 25 <ON>



%0GO8

OFF



%0GO0

Industrial 25 ON



%0HO8

<OFF>



%0HO0

Matrix 25 ON



%0I O8

<OFF>



%0I O0

CODE 93 ON



%0KO8

<OFF>



%0KO0

CODE 11 ON



%0LO8

<OFF>



%0LO0

China Post ON



%CMO8

<OFF>



%0MO0

MSI/Plessey ON



%CNO8

<OFF>



%0NO0

Code 2 of 6 ON



%0PO8

<OFF>



%0POC

LCD 25 ON



%0QO8

<OFF>



%0QO0

Telepen ON



%0TO8

<OFF>



%0TO0

Reserved5 ON



%0RO8

<OFF>



%0RO0

Reserved6 ON



%0SO8

<OFF>



%0SO0

GS1 Databar-Omnidirectional ON



%0U08

<OFF>



%0U00

GS1 Databar-Limited ON



%0V08

<OFF>



%0V00

GS1 Databar-Expanded ON



%0W08

<OFF>



%0W00

Select All Barcodes



%1A/+

## 5.2 UPC/EAN/JAN Parameters

### A Reading Type

UPCA=EAN13 ON



%0AK4

ISBN-10 Enable



%0B88

ISSN Enable



%0B44

Decode with Supplement



%0100

Expand UPC-E  
Enable



%0BH1

EAN8=EAN13  
Enable



%0AO8

GTIN Format  
Enable



%0X44

UPCA=EAN13<OFF>



%0AK0

ISBN-13 <Enable>



%0B80

ISSN <Disable>



%0B40

<Auto discriminate  
Supplement>



%0108

Expand UPC-E  
<Disable>



%0BH0

EAN8=EAN13  
<Disable>



%0AO0

GTIN Format  
<Disable>



%0X40

## B> Supplement Setup

### <Not Transmit>



%0B33

### Transmit 5 Digits



%0B32

Transmit 2 Digits



%0B31

Transmit 2&5 Digits



%0B30

## C> Check Digit Transmission

### UPC-A Check Digit Transmission <ON>



%0AI2

OFF



%0AI0

### UPC-E Check Digit Transmission <ON>



%0BI2

OFF



%0BI0

### EAN-8 Check Digit Transmission <ON>



%0A88

OFF



%0A80

### EAN-13 Check Digit Transmission <ON>



%0AH1

OFF



%0AH0

### ISSN Check Digit Transmission <ON>



%0BK4

OFF



%0BK0

## 5.3 Code 39 Parameters

### A> Type of Code

<Standard>



%0EH1

Full ASCII



%0EH0

Italian Pharmacy/Code 32

<OFF>



%0E80

Italian Pharmacy/  
Code 32 ON



%0E88

### B> Check Digit Transmission

<Do Not Calculate  
Check Digit>



%0EM2

Calculate Check Digit  
& Transmit



%0EM6

Calculate Check Digit  
& Not Transmit



%0EM4

### C> Output Start/Stop Character

Enable



%0E44

<Disable>



%0E40

## D> Decode Asterisk

Enable



%0E22

< Disable>



%0E20

## E> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length  
to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

<Variable>



%4E1+

Fix Length (2 Sets Available)

1. 1st Set Begin



%4E00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4E01

1. 2nd Set Begin



%4E00

2. Decimal Value  
(Appendix A)

3. 2nd Set Complete



%4E02

Minimum Length

1. Begin



%2+-/

2. Decimal Value  
(Appendix A)

3. Complete



%2C0+

## 5.4 Code 128 Parameters

### A> Reading Type

UCC/EAN-128

Enable



%0F44

<UCC/EAN-128

Disable>



%0F40

<Enable 'J1' Code Format>



%0F22

Disable 'J1' Code Format



%0F20

<Enable Code128 Group Separators(GS)>



%0F11

Disable Code128 Group Separators(GS)



%0F10

### B> Check Digit Transmission

Do Not Calculate

Check Digit



%0FN1

Calculate Check Digit & Transmit



%0FN7

<Calculate Check Digit & Not Transmit>



%0FN5

### C> Append FNC2

ON



%0F88

<OFF>



%0F80

## D> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length  
to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

### <Variable>



%4F1+

#### Fix Length (2 Sets Available)

1. 1st Set Begin



%4F00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4F01

1. 2nd Set Begin



%4F00

2. Decimal Value  
(Appendix A)

3. 2nd Set Complete



%4F02

#### Minimum Length

1. Begin



%2+- /

2. Decimal Value  
(Appendix A)

3. Complete



%2C1+

## 5.5 Interleaved 25 Parameters

### A> Check Digit Transmission

<Do Not Calculate  
Check Digit>



%0GN3

Calculate Check Digit  
& Transmit



%0GN7

Calculate Check Digit  
& Not Transmit



%0GN5

### B> Setup Number of Character

<Even>



%0G88

Odd



%0G80

### C> Brazilian Bank Code

<Disable>



%0G40

Enable



%0G44

## D> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length  
to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4G1+

**Fix Length (2 Sets Available)**

1. 1st Set Begin



%4G00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4G01

1. 2nd Set Begin



%4G00

2. Decimal Value  
(Appendix A)

3. 2nd Set Complete



%4G02

**Minimum Length**

1. Begin



%2+- /

2. Decimal Value  
(Appendix A)

3. Complete



%2C2+

## 5.6 Industrial 25 Parameters

### A> Reading Type

IATA25 Enable



%0H44

IATA25 <Disable>



%0 H40

### B> Check Digit Transmission

<Do Not Calculate  
Check Digit>



%0HN3

Calculate Check Digit  
& Transmit



%0HN7

Calculate Check Digit  
& Not Transmit



%0HN5

### C> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4 H1+

Fix Length (2 Sets Available)

1. 1st Set Begin



%4 H00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4 H01

1. 2nd Set Begin



%4 H00

2. Decimal Value  
(Appendix A)

3. 2nd Set Complete



%4 H02

Minimum Length

1. Begin



%2 +- /

2. Decimal Value  
(Appendix A)

3. Complete



%2 C3 +

## 5.7 Matrix 25 Parameters

### A> Check Digit Transmission

<Do Not Calculate  
Check Digit>



%0|N3

Calculate Check Digit  
& Transmit



%0|N7

Calculate Check Digit  
& Not Transmit



%0|N5

### B> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4|1+

Fix Length (2 Sets Available)

1. 1st Set Begin



%4|00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4|01

1. 2nd Set Begin



%4|00

2. Decimal Value  
(Appendix A)

3. 2nd Set Complete



%4|02

Minimum Length

1. Begin



%2+-/

2. Decimal Value  
(Appendix A)

3. Complete



%2C4+

## 5.8 Codabar/NW7 Parameters

### A> Setup Start/Stop Characters Upon Transmission

ON



%CJH1

<OFF>



%DJH0

### B> Transmission Type of Start/Stop

<A/B/C/D> <Start>



%04VF

<A/B/C/D> <Stop>



%04FF

A Start



%04V1

A Stop



%04F1

B Start



%04V2

B Stop



%04F2

C Start



%04V4

C Stop



%04F4

D Start



%04V8

D Stop



%04F8

## C> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length  
to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

### <Variable>



%4J1+

#### Fix Length (2 Sets Available)

1. 1st Set Begin



%4J00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4J01

1. 2nd Set Begin



%4J00

2. Decimal Value  
(Appendix A)



%4J02

3. 2nd Set Complete

#### Minimum Length

1. Begin



%2+-/

2. Decimal Value  
(Appendix A)

3. Complete



%2C5+

## 5.9 Code 93 Parameters

### A> Check Digit Transmission

<Calculate 2 Check Digits  
& Not Transmit>



%0KN4

Do Not Calculate  
Check Digits



%0KN3

### B> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4K1+

Fix Length (2 Sets Available)

1. 1st Set Begin



%4K00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4K01

1. 2nd Set Begin



%4K00

2. Decimal Value  
(Appendix A)

3. 2nd Set Complete



%4K02

Minimum Length

1. Begin



%2+- /

2. Decimal Value  
(Appendix A)

3. Complete



%2C6+

## 5.10 Code 11 Parameters

### A> Check Digit Transmission

<Do Not Calculate  
Check Digit>



%0LN3

Calculate 1 Check  
Digit & Transmit



%0LN7

Calculate 1 Check Digit  
& Not Transmit



%0LN5

Calculate 2 Check  
Digits & Transmit



%0LN6

Calculate 2 Check Digits  
& Not Transmit



%0LN4

### B> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4L1+

Fix Length (2 Sets Available)

1. 1st Set Begin



%4L00

2. Decimal Value

(Appendix A)

3. 1st Set Complete



%4L01

1. 2nd Set Begin



%4L00

2. Decimal Value

(Appendix A)

3. 2nd Set Complete



%4L02

Minimum Length

1. Begin



%2+-/

2. Decimal Value

(Appendix A)

3. Complete



%2C7+

## 5.11 MSI/Plessey Parameters

### A> Check Digit Transmission

Do Not Calculate  
Check Digit



%0NN3

Calculate Check Digit  
& Transmit



%0NN7

**<Calculate Check Digit  
& Not Transmit>**



%0NN5

### B> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length to  
be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4N1+

Fix Length (2 Sets Available)

1. 1st Set Begin



%4N00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4N01

1. 2nd Set Begin



%4N00

2. Decimal Value  
(Appendix A)

3. 2nd Set Complete



%4N02

Minimum Length

1. Begin



%2+- /

2. Decimal Value  
(Appendix A)

3. Complete



%2C9+

## 5.12 Code 2 of 6 Parameters

### A> Check Digit Transmission

<Do Not Calculate  
Check Digit>



%0 PN3

Calculate Check  
Digit & Transmit



%0PN7

Calculate Check Digit  
& Not Transmit



%0PN5

### B> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4 P1+

Fix Length (2 Sets Available)

1. 1st Set Begin



%4 P00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4 P01

1. 2nd Set Begin



%4 P00

2. Decimal Value  
(Appendix A)



%4 P02

Minimum Length

1. Begin



%2 +- /

2. Decimal Value  
(Appendix A)

3. Complete



%2 CB+

## 5.13 LCD 25 Parameters

### A> Check Digit Transmission

<Do Not Calculate  
Check Digit>



%0QN3

Calculate Check Digit  
& Transmit



%0QN7

Calculate Check  
Digit & Not Transmit



%0QN5

### B> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4Q1+

**Fix Length (2 Sets Available)**

1. 1st Set Begin



%4Q00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4Q01

1. 2nd Set Begin



%4Q00

2. Decimal Value  
(Appendix A)

2. 2nd Set Complete



%4Q02

**Minimum Length**

1. Begin



%2+-/

2. Decimal Value  
(Appendix A)

3. Complete



%2CC+

## 5.14 Telepen Parameters

### A> Type of Code

#### <Full ASCII Mode>



%0T80

Compressed Numeric  
Mode



%0T88

### B> Check Digit Transmission

Do Not Calculate  
Check Digit



%0TN3

Calculate Check  
Digit & Transmit



%0TN7

<Calculate Check Digit  
& Not Transmit>



%0TN5

### C> Setup Code Length

To set the fixed length:

1. Scan “Begin” for the desired set.
2. Go to the Decimal Value Table in Appendix A.  
Scan barcode(s) that represents the length to be read.
3. Scan “Complete” for the desired set.

Repeat the steps 1 - 3 to set additional lengths.

**<Variable>**



%4T1+

Fix Length (2 Sets Available)

1. 1st Set Begin



%4T00

2. Decimal Value  
(Appendix A)

3. 1st Set Complete



%4T01

1. 2nd Set Begin



%4T00

2. Decimal Value  
(Appendix A)

3. 2nd Set Complete



%4T02

Minimum Length

1. Begin



%2+-/

2. Decimal Value  
(Appendix A)

3. Complete



%2CF+

## 5.15 GS1 Databar Parameters

### A> GS1 Databar-Omnidirectional

<Transmit Check Digit>



%0UN7

Don't Transmit  
Check Digit



%0UN5

<Transmit  
Application ID>



%0U88

Don't Transmit  
Application ID



%0U80

Transmit Symbology ID



%0U44

<Don't Transmit  
Symbology ID>



%0U40

### B> GS1 Databar-Limited

<Transmit Check Digit>



%0VN7

Don't Transmit  
Check Digit



%0VN5

**<Transmit Application ID>**



%0V88

Don't Transmit  
Application ID



%0V80

Transmit Symbology ID



%0V44

**<Don't Transmit  
Symbology ID>**



%0V40

**C> GS1 Databar-Expanded**

Transmit Symbology ID



%0W44

**<Don't Transmit  
Symbology ID>**



%0W40

## Ch.6 Miscellaneous Parameters

### 6.1 Language Selection

<US English>



%0ZV0

UK English



%0ZV1

Italian



%0ZV2

Spanish



%0ZV3

French



%0ZV4

German



%0ZV5

Swedish



%0ZV6

Swiss



%0ZV7

Hungarian



%0ZV8

Japanese



%0ZV9

Belgium



%0ZVA

Portuguese



%0ZVB

Danish



%0ZVC

Dutch



%0ZVD

Turkish



%0ZVE

Reserved2



%0ZVF

## 6.2 Barcode ID

ON



<OFF>



Default



With this function ON, a leading character, barcode ID, will be added to the output string while scanning barcodes.

Refer to the following table to check what type of barcode is scanned.

Code Type	ID	Code Type	ID
UPC-A	A	UPC-E	B
EAN-8	C	EAN-13	D
CODE 39	E	CODE 128	F
Interleaved 25	G	Industrial 25	H
Matrix 25	I	Codabar/NW7	J
CODE 93	K	CODE 11	L
China Post	M	MSI/Plessey	N
Code 2 of 6	P	LCD 25	Q
Telepen	T	GS1 Databar-	U
GS1 Databar- Limited	V	Omnidirectional GS1 Databar-	W
		Expanded	

### User Define Code ID

To set desired code ID:

1. Scan the symbology barcode.
2. Go to the ASCII Tables in Appendix B, scan label that represents the desired code ID.

Note:

User define code ID will override default value.  
Program will not check the conflict. It is possible to have more than two symbologies with the same code ID.

UPC-A



%9 1 A+

UPC-E



%9 1 B+

EAN-13/JAN-13



%9 1 Y+

EAN-8/JAN-8



%9 1 Z+

CODE 39



%9 1 E+

CODE 128



%9 1 F+

Codabar/NW7



%9 1 J +

Interleaved 25



%9 1 G+

Industrial 25



%9 1 H+

Matrix 25



%9 1 I +

CODE 93



%9 1 K+

CODE 11



%9 1 L +

China Post



%9 1 M+

MSI/Plessey



%9 1 N+

Code 2 of 6



%91P+

Telepen



%91T+

LCD25



%91Q+

GS1 Databar-  
Omnidirectional



%91U+

GS1 Databar-  
Limited



%91V+

GS1 Databar-  
Expanded



%91W+

Reserved5



%91R+

Reserved6



%91S+

## 6.3 Reading Level

Bar Equals High



%0312

<Bar Equals Low>



%0310

## 6.4 Accuracy

<1 Time>



%0130

2 Times (V-1040/LG700)



%0131

3 Times



%0132

4 Times



%0133

## 6.5 Buzzer Tone

<High>



%01J3

Medium



%01J2

Low



%01J1

OFF



%01J0

## 6.6 Sensitivity of Continuous Reading Mode

### A> Quick Setting:

<Fast>



%0388

Slow



%0380

### B> Same Code Delay Reading Interval

This is to configure the length of delay time prior to an identical barcode can be rescanned. The value is defined from 1-50 that represents 100ms - 5 seconds in 100ms interval. The default value is 3 (0.3 seconds).

This setting is only applicable to continuous and flash reading modes.

#### To setup same code delay reading interval:

1. Scan "Begin".
2. Go the Decimal Value Tables in Appendix A. Scan barcode(s) that represents the delay reading interval. The range is from 1 to 50. An interval represents 0.1 second. Therefore, the available range is from 0.1 to 5 seconds.
3. Scan "Complete".

1. Begin



%3000

2. Decimal Value  
(1-50) (Appendix A)

3. Complete



%3001

## 6.7 Reverse Output Characters

<Disable>



%03H0

Enable



%03H1

## 6.8 Setup Deletion

Setup the deletion of output characters:

1. Scan the desired set number
2. Scan the desired symbology
3. Go to the Decimal Value Table in Appendix A, scan barcode(s) that represents the desired position to be deleted.
4. Scan “Complete” of “Character Position to be Deleted”.
5. Go to the Decimal Value Table in Appendix A, scan barcodes(s) that represents the number of characters to be deleted.
6. Scan “Complete” of “Number of Characters to be Deleted”.

Repeat steps 1 - 6 to configure additional deletion set.

### A> Select Deletion Set Number

1. 1st Set



%800+

2. 2nd Set



%801+

3. 3rd Set



%802+

4. 4th Set



%803+

5. 5th Set



%804+

6. 6th Set



%805+

## B> Symbology Selection

UPC-A



%8 1 A+

UPC-E



%8 1 B+

EAN-13/JAN-13/ISBN-13



%8 1 Y+

EAN-8/JAN-8



%8 1 Z+

CODE 39



%8 1 E+

CODE 128



%8 1 F+

Codabar/NW7



%8 1 J+

Interleaved 25



%8 1 G+

Industrial 25



%8 1 H+

Matrix 25



%8 1 I +

CODE 93



%8 1 K+

CODE 11



%8 1 L +

China Post



%8 1 M+

MSI/Plessey



%8 1 N+

Code 2 of 6



% 81P+

Telepen



%81T+

LCD 25



%81Q+

GS1 DataBar-  
Omnidirectional



%81U+

GS1 DataBar-  
Limited



%81V+

GS1 DataBar-  
Expanded



% 81W+

All Barcodes



%81S+

None



% 814+

## C> Character Position to be Deleted

1. Decimal Value  
(Appendix A)

2. Complete



%8 20+

## D> Number of Characters to be Deleted

1. Decimal Value  
(Appendix A)

2. Complete



%8 30+

## 6.9 Setup Insertion

Setup the insertion of output characters:

1. Scan the desired set number.
2. Scan the desired symbology.
3. Go to the Decimal Value Table in Appendix A,  
scan barcode(s) that represents the desired position  
to be inserted.
4. Scan “Complete” of “Character Position to be  
Inserted”.
5. Go to the ASCII Table in Appendix B or Function Key  
Table in Appendix C, scan barcode(s) that  
represents the desired characters to be inserted.
6. Scan “Complete” of “Characters to be Inserted”.

Repeat steps 1 - 6 to configure additional insertion set.

### A> Select Insertion Set Number

#### 1. 1st Set



%500+

#### 2. 2nd Set



%501+

#### 3. 3rd Set



%502+

#### 4. 4th Set



%503+

#### 5. 5th Set



%504+

#### 6. 6th Set



%505+

## B> Symbology Selection

UPC-A



%51A+

EAN-13/JAN-13/ISBN-13



%51Y+

CODE 39



%51E+

Codabar/NW7



%51J+

Industrial 25



%51H+

CODE 93



%51K+

China Post



%51M+

UPC-E



%51B+

EAN-8/JAN-8



%51Z+

CODE 128



%51F+

Interleaved 25



%51G+

Matrix 25



%51I+

CODE 11



%51L+

MSI/Plessey



%51N+

Code 2 of 6



%51P+

Telepen



%51T+

GS1 Databar-  
Omnidirectional



%51U+

GS1 Databar-  
Expanded



%51W+

None



%514+

LCD 25



%51Q+

GS1 Databar-  
Limited



%51V+

All Barcodes



%51S+

## C> Character Position to be Inserted

1. Decimal Value  
(Appendix A)

2. Complete



%520+

## D> Characters to be Inserted

1. ASCII Table  
(Appendix B)

2. Complete



%530+

## 6.10 Multi-Parallel Lines Mode

<Double Click to Interchange  
Multi Parallel/Single Line>



Multiple Parallel Lines Only



Single Line Only



# Ch7. Bluetooth Configuration

Set BT Parameter Default



## 7.1 Scanner Mode

A>Setup SPP Master Mode

<SPP Master Mode>



Follow the steps below to setup the connection between the scanner and cradle.

- 1) Scan “SPP Master Mode” to set the scanner in SPP master mode.
- 2) Scan the Bluetooth MAC address barcode located on the bottom of the cradle.
- 3) When the Bluetooth MAC address barcode is successfully scanned, the scanner sounds 3 short beeps with green LED flash once.
- 4) Wait approximately five seconds for BT pairing process.
- 5) If the connection is successful, the scanner sounds an ascending tone and the blue LED flashes slowly, and the cradle blue LED is continuous on.

B>Setup SPP Slave Mode

SPP Slave Mode



Follow the steps below to setup the connection between the scanner and Bluetooth device.

- 1) Scan “SPP Slave Mode” to set the scanner in SPP slave mode.
- 2) Search the scanner by Bluetooth device. Enter the pin code (default 00:00:00) to setup the connection when prompt.
- 3) When scanner is successful connected, the scanner sounds an ascending tone and the blue LED flashes slowly.

## C>Setup HID Slave Mode



HID Slave Mode

Follow the steps below to setup the connection between the scanner and Bluetooth device in HID mode.

- 1) Scan “HID Slave Mode” to set the scanner in HID slave mode.
- 2) Search the scanner by Bluetooth device. Enter the pin code to setup pairing. Go to Numeric Keypad Table in Appendix D to scan the number 0-9 for pin code when prompt.
- 3) When scanner is successful connected, the scanner sounds an ascending tone and the blue LED flashes slowly.

## 7.2 Out of Range

When “Out of Range” function is enabled, the scanner is still working at the distance that is out of BT transmission range. The scanned data will be stored in out-of-range memory. All the stored data will be transmitted to host device once the link is reconnected, and the all data stored in out-of-range memory will be cleared.

### <Out of Range Enable>



Out of Range Disable



### **7.3 Sleep Mode**

The scanner is equipped with sleep mode function to save battery energy when the scanner is not used for 1 minute or 10 minutes. During sleep mode, all the functions and connection will be halted until pressing the trigger button. The communication with cradle or Bluetooth device will be reconnected.

Sleep Mode 1 min. ON



Sleep Mode10 min. ON



<Sleep Mode OFF>



### **7.4 Batch Mode**

“\*\*\*” indicates “Quick Setting Barcode”. The function can be executed directly by scanning barcode instead of doing the general programming process.

Batch Mode ON



< Batch Mode OFF>



\*\*\* Delete Last Data



\*\*\* Batch Data Read



\*\*\* Batch Data Clear



## 7.5 Firmware Version

Display the firmware version of the scanner, scan the below barcodes.

Scanner Firmware Version



Cradle Firmware Version



Scanner MAC Address



Cradle MAC Address



## Appendix A Decimal Value Table

0



1



2



3



4



5



6



7



8



9



## Appendix B ASCII Table

NULL



ETX



ACK



HT



FF



SI



DC2



NAK



CAN



ESC



RS



STX



ENQ



BS



VT



SO



DC1



DC4



ETB



SUB



GS



SOH



EOT



BEL



LF



CR



DLE



DC3



SYN



EM



FS



US



**SPACE**



20

#



23

&



26

)



29

,



2C

/



2F

2



32

5



35

8



38

;



3B

>



3E

"



22

%



25

(



28

+



2B

.



2E

1



31

4



34

7



37

:



3A

=



3D

!



21

\$



24

'



27

\*



2A

-



2D

0



30

3



33

6



36

9



39

<



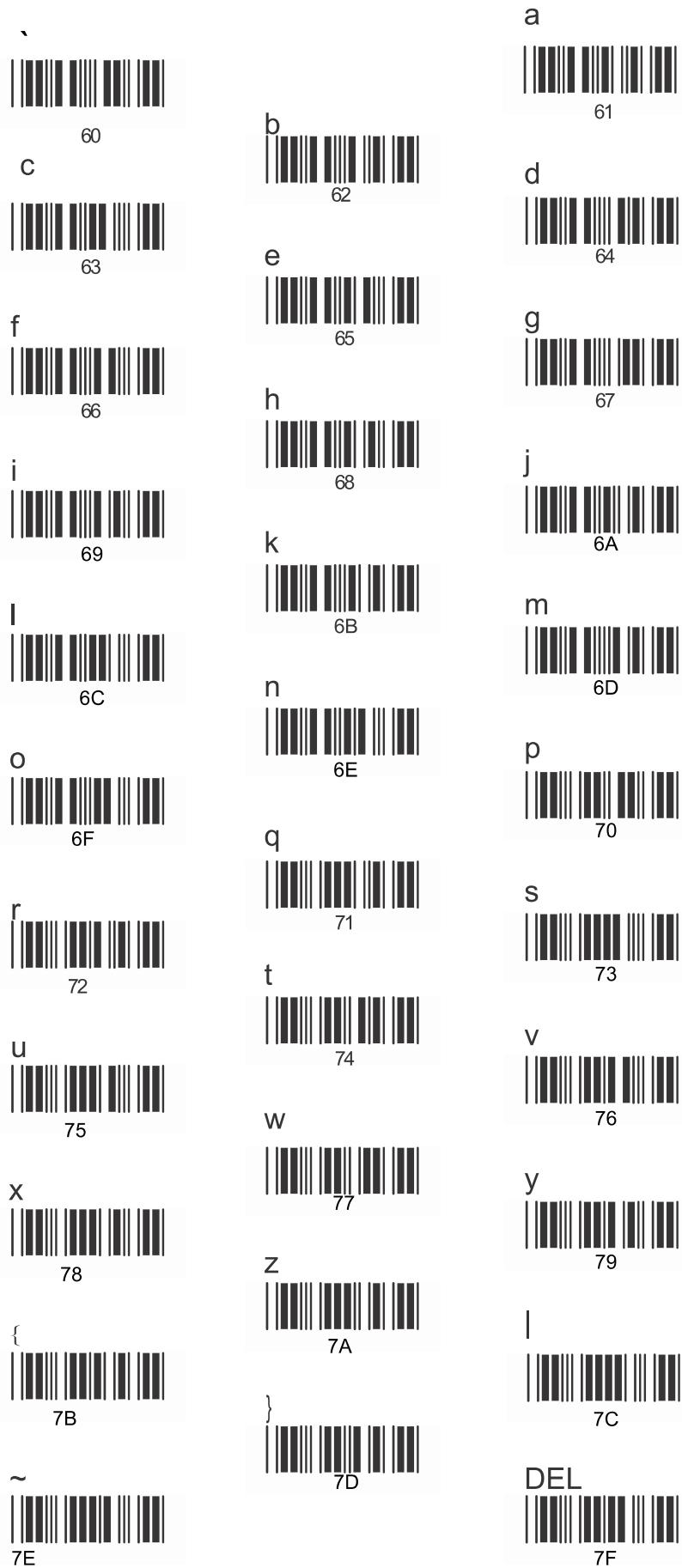
3C

?



3F

@		40
C		43
F		46
I		49
L		4C
O		4F
R		52
U		55
X		58
[		5B
^		5E
B		42
E		45
H		48
K		4B
N		4E
Q		51
T		54
W		57
Z		5A
]		5D
A		41
D		44
G		47
J		4A
M		4D
P		50
S		53
V		56
Y		59
\		5C
—		5F



## Appendix C Function Key Table

F1



C0

F2



C1

F3



C2

F4



C3

F5



C4

F6



C5

F7



C6

F8



C7

F10



C9

F11



CA

F12



CB

Insert



CC

Delete



CD

Home



CE

Page Up



CF

Page Down



D0

End



D1

Left



D2

Right



D3

Up



D4

Down



D5

## Appendix D Numeric Keypad Table

0		1	
2		3	
4		5	
6		7	
8		9	
Enter			

All the above programming materials are subject to change without notice.

Save Parameters



%\$+/0

Recall Stored  
Parameters



%\$+/1

Set All Defaults



%\$+/2

Start Configuration



%\$+/3

End Configuration



%\$+/4

Abort Configuration



%\$+/6

Version Information



%\$+/5

Ver 3.9a  
0145-85E00S1

