

# POSIX

*POINT OF SALE SIMPLIFIED*



## **ION Linear 2**

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1D Linear Imager

Configuration Guide

v1

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## Chapter 1 - System Information

### 1.1 About this manual

This User's Guide provides detailed programming instructions. Barcode scanners are factory programmed for the most common communication settings. If you need to change these settings, programming is accomplished by scanning the barcodes in this guide.

### 1.2 How to set up parameters

- (1) Scan Start Configuration
- (2) Scan all necessary barcodes
- (3) Scan End Configuration to end the programming



Start configuration



End configuration



Standard Product Defaults Setting



Check Version

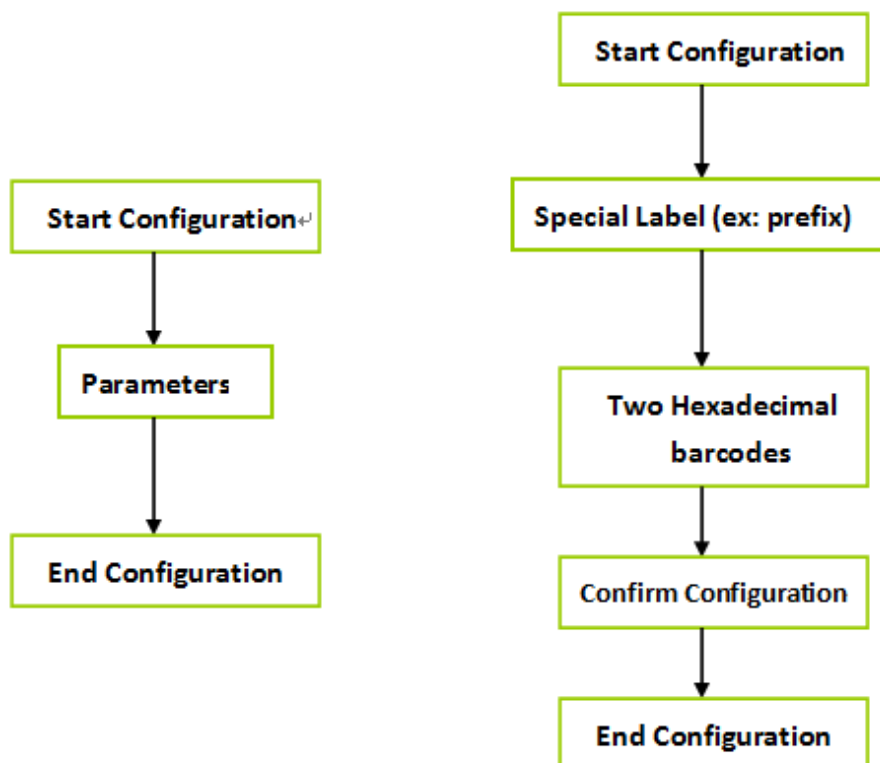
An asterisk (\*) next to an option indicates the default setting.

### 1.3 How to set up special parameters

Generally, you will only need to scan one barcode for most parameters. You will hear two beeps when you successfully set the new values. In some cases, when using special parameters you may need to read more than one barcode. For example:

- ◆ Hexadecimal barcodes, such as, prefix or suffix
- ◆ Numeric barcode, such as, inter-character delay or min/max length.

To complete the change, you will need to scan the "Confirm" barcode after you scan the parameter barcode. Below is the flow chart to explain two different configurations.





## Chapter 2 - System Setup







### 2.1 Keyboard Emulation Parameters



Start configuration



End configuration

ITEM	OPTION
Function Key	 * Disable
	 Enable
Emulate External Keyboard	 * Disable
	 Enable
ALT Mode	 * Disable
	 Enable

NOTE : Emulate External Keyboard

Scan the “Enable” barcode if you do not have an external keyboard.  
After scanning the Enable barcode, you will need to restart your computer.



Start configuration



End configuration

ITEM	OPTION
Caps Lock	
	* Disable
	Enable
Num Lock	
	* Disable
	Enable
Inter Character Delay (Default : 00)	
	Ref: Appendix (00—64H)

### Presentation Mode



Start configuration



Presentation mode








End configuration



Start configuration



End configuration

ITEM	OPTION
Terminator	 None
	 * CR
	 Tab
Block transmission delay (Default : 00)	 Ref: Appendix ( 00—0AH )
Keyboard Speed (Default 00: high clock rate)	 Ref: Appendix ( 00—08H )

## 2.2 Scanning mode selection



Start configuration



End configuration

ITEM	OPTION
Reading Mode	
	* Trigger On/Good Read Off
	Trigger On/Off
	Continuous/Trigger Off
	Continuous/Testing
Continuous/Trigger on	
Continuous /Auto power on	
Flash	
Flash / Auto Power On	







## 2.3 Beeper tone selection



Start configuration



End configuration

ITEM	OPTION
<p>Beep Tone (Default : 09H)</p>	 Ref: Appendix (00-10H)
<p>Beep Sound Duration (Default : 05H)</p>	 Ref: Appendix (00-10H)
<p>Power On Beeper</p>	 * Enable <hr/>  Disable
<p>Beeper</p>	 * ON <hr/>  OFF

## 2.4 String Options (Prefix & Suffix)

This section describes the alterations which can be made to the format of the transmitted data string. A prefix and suffix, 10 characters maximum, may be included in front of or at the end of a scanned barcode.

### **Format**

{Prefix} {Code ID} {Bar Code} {Suffix}

### **How to set up a prefix?**

To configure “##” as prefix

- (1) Scan Start Configuration barcode
- (2) Scan Preamble barcode
- (3) Scan “#” twice from FULL ASCII table
- (4) Scan Confirm configuration barcode
- (5) Scan End Configuration barcode.

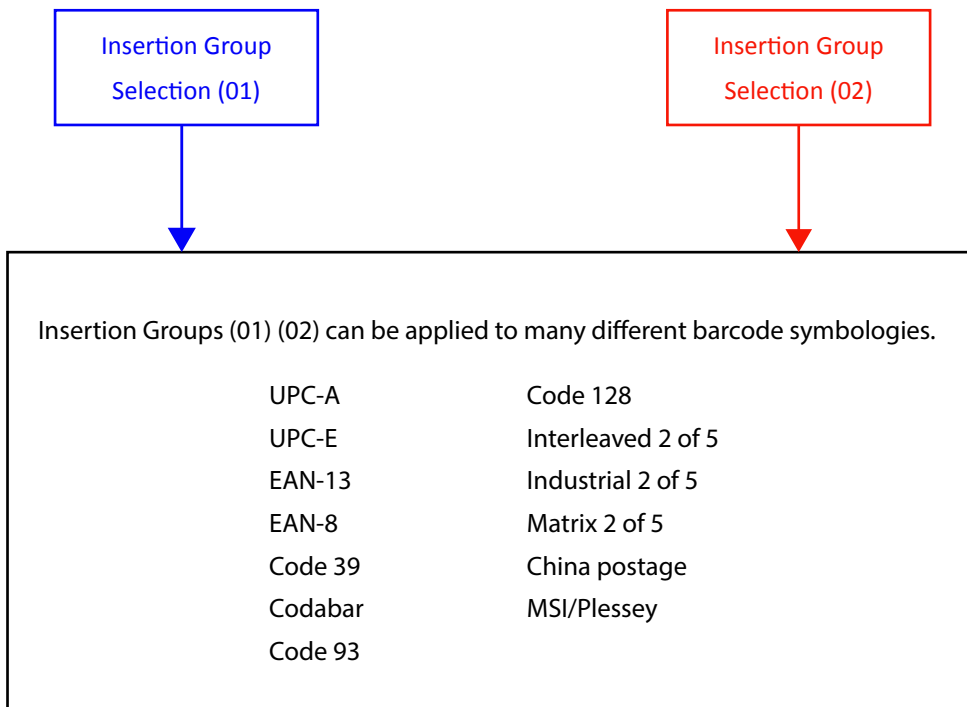
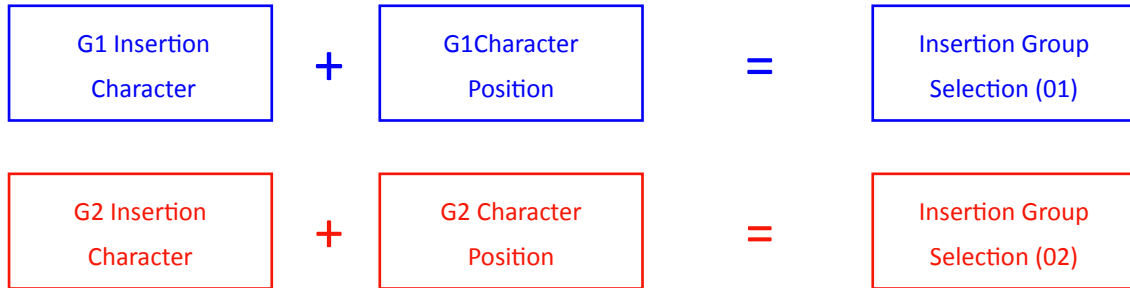
### **How to set up a suffix?**

To configure “\$\$” as suffix

- (1) Start configuration barcode
- (2) Scan Postamble barcode
- (3) Scan “\$” twice from FULL ASCII table
- (4) Scan Confirm configuration barcode
- (5) Scan End configuration barcode.

## 2.5 Setup Insertion

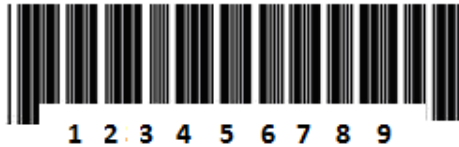
This section describes how to setup the insertion of output.



### NOTE :

- Max. 10 characters can be inserted each time
- Max. Insertion group is two
- Insertion Group (01) or (02) can be used on different barcode symbologies at the same time

**Example:**



To insert character “A” before the third digit(3)

Final Output will be: 12A3456789

**How to set up a character you want to insert**

- (1) Scan Start Configuration barcode
- (2) Scan “G1 Insertion character”
- (3) Scan “4” and “1” from FULL ASCII Table
- (4) Scan Confirm configuration barcode
- (5) Scan End configuration barcode

**How to set up position you wish to place the character**

- (6) Scan Start Configuration barcode
- (7) Scan “G1 Character Position”
- (8) Scan “0” and “3” from FULL ASCII Table (which represents the position)
- (9) Scan Confirm configuration barcode
- (10) Scan End configuration barcode

**How to set up insertion for code 39**

Go to chapter 3.5 (code 39)

- (11) Scan Start Configuration barcode
- (12) Scan “Insert group selection” barcode
- (13) scan “0” and “1” from FULL ASCII Table  
(which presents the group- 01 you just set up previously)
- (14) Scan Confirm configuration barcode
- (15) Scan End configuration barcode











Start configuration



End configuration



Confirm configuration

ITEM	OPTION
Preamble (Default : 00)	 Ref: Appendix
Postamble (Default : 00)	 Ref: Appendix
G1 Insertion character (Default : 00)	 Ref: Appendix
G2 Insertion character (Default : 00)	 Ref: Appendix
G1 Character Position to be inserted (Default : 00)	 Ref: Appendix
G2 Character Position to be inserted (Default : 00)	 Ref: Appendix



Start configuration



End configuration

ITEM	OPTION
Bar Code ID	 *Disable
	 Enable
Accuracy	 * Read 1 Time
	 Read 2 Times
Reading	 Bar equals high
	 Bar equals low

Code Type	ID	Code Type	ID
UPC-A	F	Interleaved 25	N
UPC-E	G	Industrial 25	O
EAN-13	H	Matrix 25	P
EAN-8	I	China Postal Code	Q
Code 39	J	MSI/Plessey	R
Codabar	K	Code 32	S
Code 93	L	Code 11	T
Code 128	M	Telepen	V

## Chapter 3 - Barcode parameters setting

### How to set up a Code ID?

- (1) Scan Start configuration barcode
- (2) Go to the ASCII Table and scan the barcodes that represent the characters you want inserted.
- (3) Scan Confirm configuration barcode
- (4) Scan End configuration barcode



Start configuration






End configuration



Confirm configuration

### 3.1 UPC-A

ITEM	OPTION
Read	 Disable
	 * Enable
Code ID Setting (Default : F )	 Ref: Appendix (20-7EH)



Start configuration



End configuration






ITEM	OPTION
UPC-A Expand to EAN-13	* Disable
	Enable
Check Digit Send	Disable
	* Enable
Truncate Leading Zero	* Disable
	Enable
Truncate Leading (Default:00)	Ref: Appendix (00-0DH)
Truncate Ending (Default:00)	Ref: Appendix (00-0DH)
Insert group selection	Ref: Appendix (00—02H)



Start configuration



End configuration

ITEM	OPTION
	 * NONE
	 2 digits
Supplement digits	 5 digits
	 2 or 5 digits
	 Auto-discriminate Supplement



### 3.2 UPC-E



Start configuration



End configuration

ITEM	OPTION
Read	
	Disable
Code ID setting (Default : G)	
	* Enable Ref: Appendix (20-7EH)



Start configuration



End configuration








ITEM	OPTION
UPC-E Expand to UPC-A	* Disable
	Enable
Check Digit Send	Disable
	* Enable
Truncate Leading (Default:00)	Ref: Appendix (00-08H)
Truncate Ending (Default:00)	Ref: Appendix (00-08H)
Insert group selection (Default:00)	Ref: Appendix (00-02H)



Start configuration



End configuration

ITEM	OPTION
Truncate Leading Zero	
	* Disable
	
	Enable
Supplement digits	
	* None
	
	2 digits
	
5 digits	
	
	2 or 5 digits
	
Auto-discriminate Supplement	










### 3.3 EAN-13



Start configuration



End configuration









ITEM	OPTION
Read	 Disable
	 * Enable
Code ID setting (Default : H)	 Ref: Appendix (20-7EH)
Check Digit Send	 Disable
	 * Enable
Truncate Leading (Default : 00 )	 Ref: Appendix (00-0DH)
Truncate Ending (Default : 00 )	 Ref: Appendix (00-0DH)



Start configuration



End configuration

ITEM	OPTION
	 * None
	 2 digits
Supplement digits	 5 digits
	 2 or 5 digits
	 Auto-discriminate Supplement
ISBN/ISSN Conversion	 * Disable
	 Enable
Insert group selection (Default : 00 )	 Ref: Appendix (00-02H)







### 3.4 EAN-8



Start configuration



End configuration








ITEM	OPTION
Read	 Disable
	 * Enable
Code ID setting (Default : I)	 Ref: Appendix (20-7EH)
Check Digit Send	 Disable
	 * Enable
Truncate Leading (Default : 00)	 Ref: Appendix (00-08H)



Start configuration



End configuration

ITEM	OPTION
Truncate Ending (Default : 00)	 Ref: Appendix (00-08H)
Supplement digits	 * None
	 2 digits
	 5 digits
	 2 or 5 digits
	 Auto-discriminate Supplement
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)








### 3.5 Code39



Start configuration



End configuration







ITEM	OPTION
Read	 Disable
	 * Enable
Code ID setting (Default : J)	 Ref: Appendix (20-7EH)
	 * Disable
Check-sum verification	 Enable
	 Disable
Check-sum transmission	 * Enable



Start configuration



End configuration

ITEM	OPTION
Append	 * Disable
	 Enable
Min. code length (Default: 00)	 Ref: Appendix (00-32H)
Max. code length (Default: 32H)	 Ref: Appendix (00-32H)
Format	 * Standard Code39
	 Code 39 Full ASCII



Start configuration



End configuration

ITEM	OPTION
Transmit Start/End Character	
	* Disable
	Enable
Truncate Leading (Default: 00)	
	Ref: Appendix (00-32H)
Truncate Ending (Default: 00)	
	Ref: Appendix (00-32H)
Insert group selection (Default: 00)	
	Ref: Appendix (00-02H)

### 3.6 Codabar






Start configuration



End configuration

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ITEM	OPTION
Read	
	Disable
	
	* Enable
Code ID setting (Default : K)	
	Ref: Appendix (20-7EH)

---












Start configuration



End configuration






ITEM	OPTION
Check-sum verification	 Disable
	 * Enable
Check-sum transmission	 * Disable
	 Enable
Append	 * Disable
	 Enable
Truncate Leading (Default:00)	 Ref: Appendix (00-7EH)



Start configuration



End configuration



ITEM	OPTION
Truncate Ending (Default:00)	 Ref: Appendix (00-7EH)
Start/End type	 * ABCD/ABCD
	 abcd/abcd
	 abcd/tn*e
Start/End transmission	 * Disable
	 Enable
Min. code length (Default: 05)	 Ref: Appendix (00-3CH)



Start configuration



End configuration

ITEM	OPTION
Max. code length (Default: 3CH)	 Ref: Appendix (00-3CH)
Insert group selection (Default: 00)	 Ref: Appendix (00-02H)





### 3.7 Code93



Start configuration



End configuration








ITEM	OPTION
Read	 Disable
	 * Enable
Code ID setting (Default : L)	 Ref: Appendix (20-7EH)
Check-sum verification	 Disable
	 * Enable



Start configuration



End configuration

ITEM	OPTION
Check-sum transmission	 * Disable
	 Enable
Min. code length (Default: 00)	 Ref: Appendix (0-50H)
Max. code length (Default: 50H)	 Ref: Appendix (0-50H)
Truncate Leading (Default: 00)	 Ref: Appendix (00-7EH)
Truncate Ending (Default: 00)	 Ref: Appendix (00-7EH)
Insert group selection	 Ref: Appendix (00-02H)






### 3.8 Code 128



Start configuration



End configuration

ITEM	OPTION
Read	 Disable
	 * Enable
Code ID setting (Default : M)	 Ref: Appendix (20-7EH)
Check-sum verification	 Disable
	 * Enable



Start configuration



End configuration






ITEM	OPTION
Check-sum transmission	* Disable
	Enable
FNC2 Append	* Disable
	Enable
UCC/EAN128	* Disable
	Enable
FNC1 transmission	* Disable
	Enable



Start configuration



End configuration

ITEM	OPTION
Truncate Leading (Default: 00)	 Ref: Appendix (00-7FH)
Truncate Ending (Default: 00)	 Ref: Appendix (00-7FH)
Min. code length (Default: 00)	 Ref: Appendix (00-7FH)
Max. code length (Default: 7FH)	 Ref: Appendix (00-7FH)
Insert group selection (Default: 00)	 Ref: Appendix (00-02H)










### 3.9 Interleaved 2 of 5



Start configuration



End configuration






ITEM	OPTION
Read	
	* Disable
	
	Enable
Code ID setting (Default : N)	
	Ref: Appendix (20-7EH)
Check-sum verification	
	Disable
	
	* Enable
Check-sum transmission	
	Disable
	
	* Enable



Start configuration



End configuration

ITEM	OPTION
Truncate Leading (Default : 00)	 Ref: Appendix (00-7EH)
Truncate Ending (Default : 00)	 Ref: Appendix (00-7EH)
Min. code length (Default : 00)	 Ref: Appendix (00-7FH)
Max. code length (Default : 7FH)	 Ref: Appendix (00-7FH)
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)






### 3.10 Industrial 2 of 5



Start configuration



End configuration








ITEM	OPTICON
<p>Read</p>	 <p>* Disable</p> <hr/>  <p>Enable</p>
<p>Code ID setting (Default : 0)</p>	 <p>Ref: Appendix (20-7EH)</p>
<p>Min. code length (Default : 00)</p>	 <p>Ref: Appendix (00-32H)</p>
<p>Max. code length (Default : 32H)</p>	 <p>Ref: Appendix (00-32H)</p>



Start configuration



End configuration

ITEM	OPTION
Truncate Leading (Default : 00)	 Ref: Appendix (00-32H)
Truncate Ending (Default : 00)	 Ref: Appendix (00-32H)
Check-sum verification	 * Disable <hr/>  Enable
Check-sum transmission	 Disable <hr/>  * Enable
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)


### 3.11 Matrix 2 of 5



Start configuration



End configuration








ITEM	OPTION
Read	
	<p data-bbox="986 622 1110 656">* Disable</p> <hr/>  <p data-bbox="1002 806 1094 840">Enable</p>
Code ID setting (Default : P)	 <p data-bbox="890 1019 1206 1052">Ref: Appendix (20-7EH)</p>
Check-sum verification	
	<p data-bbox="986 1238 1110 1272">* Disable</p> <hr/>  <p data-bbox="1002 1422 1094 1456">Enable</p>



Start configuration



End configuration

ITEM	OPTION
Check-sum transmission	 Disable
	 * Enable
Truncate Leading (Default : 00)	 Ref: Appendix (00-50H)
Truncate Ending (Default : 00)	 Ref: Appendix (00-50H)
Min. code length (Default : 0B)	 Ref: Appendix (00-50H)
Max. code length (Default : 50H)	 Ref: Appendix (00-50H)
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)








### 3.12 CHINA POSTAL CODE



Start configuration



End configuration






ITEM	OPTION
Read	
	<p data-bbox="986 622 1110 654">* Disable</p> <hr/>  <p data-bbox="1002 806 1094 837">Enable</p>
Code ID setting (Default : Q)	 <p data-bbox="890 1019 1203 1050">Ref: Appendix (20-7EH)</p>
Check-sum verification	
	<p data-bbox="986 1238 1110 1270">* Disable</p> <hr/>  <p data-bbox="1002 1422 1094 1453">Enable</p>
Check-sum transmission	
	<p data-bbox="1002 1608 1094 1639">Disable</p> <hr/>  <p data-bbox="976 1792 1094 1823">* Enable</p>



Start configuration



End configuration

ITEM	OPTION
Truncate Leading (Default : 00)	 Ref: Appendix (00-50H)
Truncate Ending (Default : 00)	 Ref: Appendix (00-50H)
Min.code length (Default : 00)	 Ref: Appendix (00-50H)
Max.code length (Default : 50H)	 Ref: Appendix (00-50H)
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)










### 3.13 MSI/Plessey



Start configuration



End configuration








ITEM	OPTION
Read	
	* Disable
	
	Enable
Code ID setting (Default : R)	
	Ref: Appendix (20-7EH)
Check-sum verification	
	* Disable
	
MOD 10	
	
MOD 10/10	
	
MOD 11/10	



Start configuration



End configuration

ITEM	OPTION
Check-sum transmission	 Disable
	 * Enable
Truncate Leading (Default : 00)	 Ref: Appendix (00-3CH)
Truncate Ending (Default : 00)	 Ref: Appendix (00-3CH)
Min. code length (Default : 00)	 Ref: Appendix (00-3CH)
Max. code length (Default : 3CH)	 Ref: Appendix (00-3CH)
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)

### 3.14 CODE 32 (Italian Pharma-Code)



Start configuration



End configuration




ITEM	OPTION
Read	* Disable
	Enable
Code ID Setting (Default:S)	Ref: Appendix (20-7EH)
Check-sum verification	Disable
	* Enable
Check-sum transmission	Disable
	* Enable



Start configuration



End configuration

ITEM	OPTION
Truncate Leading (Default : 00)	
	Ref: Appendix (00-0AH)
Truncate Ending (Default : 00)	
	Ref: Appendix (00-0AH)
Insert group selection (Default : 00)	
	Ref: Appendix (00-02H)

### 3.15 CODE 11



Start configuration



End configuration








ITEM	OPTION
Read	
	* Disable
	
	Enable
Code ID setting (Default:T)	
	Ref: Appendix (20-7EH)
Check-sum verification	
	Disable
	
	* Enable



Start configuration



End configuration

ITEM	OPTION
Check-sum transmission	 * Disable
	 Enable
Truncate Leading (Default : 00)	 Ref: Appendix (00-50H)
Truncate Ending (Default : 00)	 Ref: Appendix (00-50H)
Min. code length (Default : 00)	 Ref: Appendix (00-50H)
Max. code length (Default : 50H)	 Ref: Appendix (00-50H)
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)

### 3.16 Telepen



Start configuration



End configuration








ITEM	OPTION
Read	* Disable
	Enable
Code ID setting (Default:V)	Ref: Appendix (20-7EH)
	Disable
Check-sum verification	* Enable
	Only Numnic
Data Format	*Full ASCII



Start configuration



End configuration

ITEM	OPTION
Check-sum transmission	 * Disable
	 Enable
Truncate Leading (Default : 00)	 Ref: Appendix (00-40H)
Truncate Ending (Default : 00)	 Ref: Appendix (00-40H)
Min. code length (Default : 00)	 Ref: Appendix (00-40H)
Max. code length (Default : 40H)	 Ref: Appendix (00-40H)
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)



### 3.17 GS1 Data Bar (RSS)

	
Start configuration	End configuration
ITEM	OPTION
RSS-14	
	Enable
RSS-14	
	*Disable
RSS-14 LIMITED	
	Enable
RSS-14 LIMITED	
	*Disable
RSS-14 EXPANDED	
	Enable
RSS-14 EXPANDED	
	*Disable
RSS TO UPC/EAN	
	Enable
RSS TO UPC/EAN	
	*Disable




### 3.18 Function Key Emulation



Start configuration





























End configuration

ITEM	OPTION
Function Key	 * Disable
	 Enable
Code 39 format	 Full ASCII Code 39

To scan a function key barcode label, Full ASCII Code 39 must be enabling. Please refer to Full ASCII Code 39 Table to produce the function key barcode label.

### Function Code

 UP(\$A)	 F1(\$Q)
 DOWN(\$B)	 F2(\$R)
 LEFT(\$C)	 F3(\$S)
 RIGHT(\$D)	 F4(\$T)

 PAGE UP(\$E)	 F5(\$U)
 PAGE DOWN(\$F)	 F6(\$V)
 BS(\$H)	 F7(\$W)
 TAB(\$I)	 F8(\$X)
 HOME(\$K)	 F9(\$Y)
 END(\$L)	 F10(\$Z)
 ENTER(\$M)	 ESC(%A)
 INSERT(\$N)	 F11(%B)
 DELETE(\$O)	 F12(%C)

## **Appendix A –**

Dec	Hex	Char.	Dec	Hex	Char.
0	00	NUL	32	20	SP
1	01	SOH	33	21	!
2	02	STX	34	22	"
3	03	ETX	35	23	#
4	04	EOT	36	24	\$
5	05	ENQ	37	25	%
6	06	ACK	38	26	&
7	07	BEL	39	27	'
8	08	BS	40	28	(
9	09	HT	41	29	)
10	0A	LF	42	2A	*
11	0B	VT	43	2B	+
12	0C	FF	44	2C	,
13	0D	CR	45	2D	-
14	0E	SO	46	2E	.
15	0F	SI	47	2F	/
16	10	DLE	48	30	0
17	11	DC1	49	31	1
18	12	DC2	50	32	2
19	13	DC3	51	33	3
20	14	DC4	52	34	4
21	15	NAK	53	35	5
22	16	SYN	54	36	6
23	17	ETB	55	37	7
24	18	CAN	56	38	8
25	19	EM	57	39	9
26	1A	SUB	58	3A	:
27	1B	ESC	59	3B	;
28	1C	FS	60	3C	<
29	1D	GS	61	3D	=
30	1E	RS	62	3E	>
31	1F	US	63	3F	?

Dec	Hex	Char.	Dec	Hex	Char.
64	40	@	96	60	'
65	41	A	97	61	a
66	42	B	98	62	b
67	43	C	99	63	c
68	44	D	100	64	d
69	45	E	101	65	e
70	46	F	102	66	f
71	47	G	103	67	G
72	48	H	104	68	h
73	49	I	105	69	i
74	4A	J	106	6A	j
75	4B	K	107	6B	k
76	4C	L	108	6C	l
77	4D	M	109	6D	m
78	4E	N	110	6E	n
79	4F	O	111	6F	o
80	50	P	112	70	P
81	51	Q	113	71	q
82	52	R	114	72	r
83	53	S	115	73	s
84	54	T	116	74	t
85	55	U	117	75	u
86	56	V	118	76	v
87	57	W	119	77	w
88	58	X	120	78	x
89	59	Y	121	79	y
90	5A	Z	122	7A	z
91	5B	[	123	7B	{
92	5C	\	124	7C	
93	5D	}	125	7D	}
94	5E	^	126	7E	~
95	5F	_	127	7F	DEL

# Table-Hex HEXADCIMAL



1



2



3



4



5



6



7



8



9



0



A



B



C



D



E



F



Confirm configuration



End Configuration

## Function Key Table

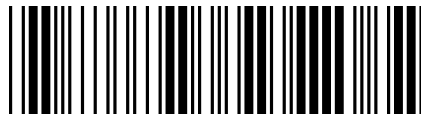
	0	1
0	NULL	
1	UP	F1
2	DOWN	F2
3	LEFT	F3
4	RIGHT	F4
5	PAGE UP	F5
6	PAGE DOWN	F6
7		F7
8	BS	F8
9	TAB	F9
A		F10
B	HOME	ESC
C	END	F11
D	ENTER	F12
E	INSERT	
F	DELETE	



# POSX



**DEFAULT**



**CHECK VERSION**

Version: 1