



BARCODE SCANNER

Configuration Guide

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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 setting. If you need to change these settings, programming is accomplished by scanning the bar codes in this guide.

1.2 How to set up the parameter -I

- (1) Scan Start Configuration
- (2) Scan all necessary labels for parameters that meet your applications.
- (3) Scan End Configuration to end the programming.



Start configuration



End configuration



Standard Product Defaults Setting



Check Version

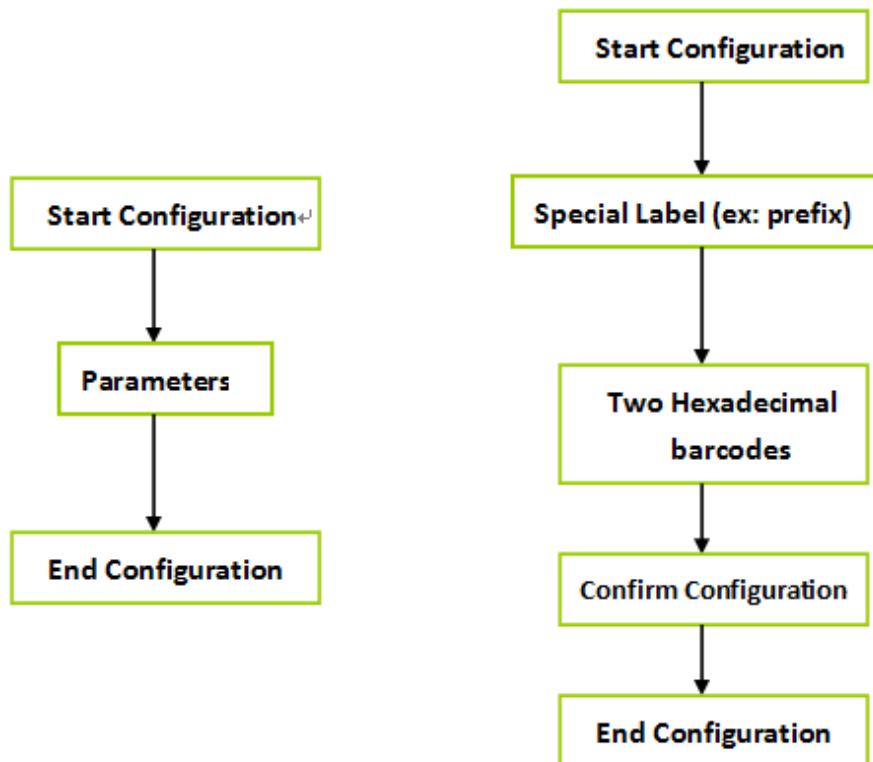
An asterisk (*) next to an option indicate the default setting.

1.3 How to set up the parameter - II

Most of time the scanner only requests one read of parameters when changing to new values. You will hear two beeps when you successfully set to the new values. But for some special parameters, multiple reads are needed to complete the configuration. When use these special parameters. In some cases, you might need to read one or more barcodes, such as:

- ◆ Hexadecimal barcodes. For example: prefix, suffix, etc.
- ◆ Numeric barcodes. For example: inter-character delay, max/min length

To complete the change of setting you will need to read the “Confirm” barcode after you read the parameter. Below is the flow chart to explain two different configurations.



Chapter 2 - System setup

2.1 Interface selection

The scanner is designed to switch easily from interfaces.

Remember to reset the interface before changing to PS/2 or RS232 cable.

No presetting is requested for USB interface. Scanning USB bar code after the cable is changed and activating the scanner by plugging the USB cable again. USB interface complies with HID keyboard which means the setting of USB scanner is exactly the same like the default setting from keyboard.



Start configuration



End configuration

ITEM	OPTION
Interface Selection	 KEYBOARD
	 RS-232
	 * USB
	 USB Virtual COM

2.1.1 Keyboard emulation parameters setting



Start configuration



End configuration

ITEM	OPTION
Device Selection for keyboard	IBM 5550
Interface	



Start configuration



End configuration

ITEM	OPTION
Language for Keyboard Interface	



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 barcode below if you do not have an external keyboard.

After scanning the Emulate External Keyboard bar code, you must power cycle 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)



Start configuration



End configuration

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

2.1.2 RS-232 communication setting



Start configuration



End configuration

ITEM	OPTION
	1200bps
	2400bps
Baud Rate	
	4800bps
	* 9600bps
	19200bps
	38400bps
Data Bits	
	7 Bits
	* 8 Bits



Start configuration



End configuration

ITEM	OPTION
Stop Bits	* 1 Stop Bits
	2 Stop Bits
	* NONE
Parity	ODD
	EVEN
	Mark
	Space



Start configuration



End configuration

ITEM	OPTION
Inter-character delay (Default : 00)	 Ref: Appendix (00—64H)
Block transmission delay (Default : 00)	 Ref: Appendix (00-0AH)
Response delay (Default : 00)	 Ref: Appendix (00-0AH)
HANSHAKING	



Start configuration



End configuration

ITEM	OPTION
	None
	* CR+LF
CR	
Terminator	
For RS-232	RS-232
	LF
Tab	
	STX/ETX
	EOT



Start configuration



End configuration

ITEM	OPTION
Handshaking	

2.2 Scanning mode selection



Start configuration



End configuration

ITEM	OPTION
	* Trigger On/Good Read Off
	Trigger On/Off
Reading Mode	Continuous/Trigger Off
	Presentation Mode (only linear imager supported)
	Continuous/Trigger on
	Continuous /Auto power on
	Flash
	Flash / Auto Power On

2.3 Beeper tone selection



Start configuration



End configuration

ITEM	OPTION
Beep Tone (Default : 09H)	 Ref: Appendix (00-10H)
Beep Sound Duration (Default : 05H)	 Ref: Appendix (00-10H)
Power On Beeper	 * Enable
	 Disable
Beeper	 * ON
	 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 of maximum 10 direct input may be included in front and at the end of 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 bar code
- (3) Scan ‘#’ twice from FULL ASCII table
- (4) Scan Confirm configuration barcode
- (5) Scan End Configuration barcode.

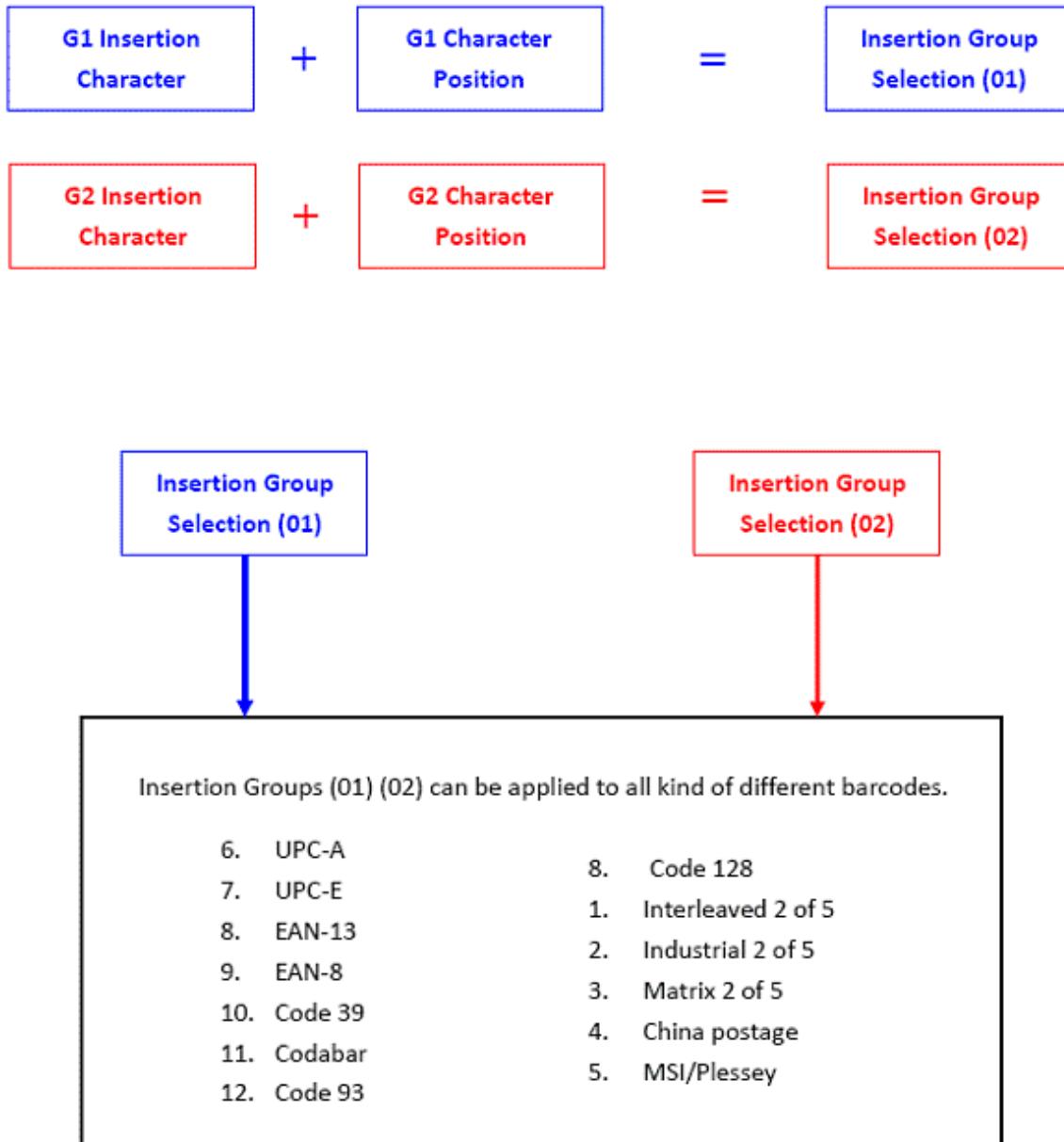
How to set up a suffix?

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 charters can be inserted each time
- ◆ Max. Insertion group is only two.
- ◆ Insertion group (01) or (02) can be used in different kinds of barcodes at the same time

Example:



:

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

Make the decoded data: 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 presents 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” bar code
- (13) scan “0” and “1” from FULL ASCII Table
(which presents the group- 01 you just set up previously)
- (14) Scan Confirm configuration bar code
- (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 Time
	Read 3 Time
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 bar code
- (2) Go to the ASCII Table and scan label that represent the desired characters to be inserted.
- (3) Scan Confirm configuration bar code
- (4) Scan End configuration bar code.



Start configuration



End configuration



Confirm configuration

3.1 UPC-A

ITEM	OPTION
Read	A standard 1D barcode representing the 'Disable' configuration option.
	A standard 1D barcode representing the 'Enable' configuration option.
Code ID Setting (Default : F)	A standard 1D barcode representing the 'Code ID Setting' configuration option. 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 5digits
	Auto-discriminate Supplement

3.2 UPC-E



Start configuration



End configuration

ITEM	OPTION
Read	
	
Code ID setting (Default : G)	 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
Insert group selection (Default : 00)	
	Ref: Appendix (00-02H)

3.4 EAN-8



Start configuration



End configuration

ITEM	OPTION
Read	 * Enable
Code ID setting (Default : I)	 Ref: Appendix (20-7EH)
Check Digit Send	 * Enable
Truncate Leading (Default : 00)	 Ref: Appendix (00-08H)
EAN-8 to EAN-13 format	
Add Leading 5 Zero	



Start configuration



End configuration

ITEM	OPTION
Truncate Ending (Default : 00)	 Ref: Appendix (00-08H)
Supplement digits	
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)
Check-sum verification	 * Disable
	 Enable
Check-sum transmission	 Disable
	 * 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

ITEM	OPTION
Read	
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	
Code ID setting (Default : M)	
Check-sum verification	



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
FIELD SEPARATED DEFIN (GS CHARACTER)	 Enable Field Separator Ref: Appendix
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
Read	
Code ID setting (Default : 0)	 Ref: Appendix (20-7EH)
Min. code length (Default : 00)	 Ref: Appendix (00-32H)
Max. code length (Default : 32H)	 Ref: Appendix (00-32H)



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
	 Enable
Check-sum transmission	 Disable
	 * Enable
Insert group selection (Default : 00)	 Ref: Appendix (00-02H)

3.11 Matrix 2 of 5



Start configuration



End configuration

ITEM	OPTION
Read	
Code ID setting (Default : P)	
Check-sum verification	



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	* Disable
	Enable
Code ID setting (Default : Q)	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 (00-50H)
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	
Code ID setting (Default : R)	 Ref: Appendix (20-7EH)
Check-sum verification	 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)
Check-sum verification	Disable
	* Enable
Data Format	Only Numnic
	* 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



Enable

RSS-14



*Disable



Enable

RSS-14 LIMITED



*Disable



Enable

RSS-14 EXPANDED



*Disable



Enable

RSS TO UPC/EAN



*Disable



Start configuration



End configuration

ITEM

OPTION

APPLICATION ID TRANSMISSION

*Enable



Disable

CHECKSUM TRANSMISSION

* Enable



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

	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)

3.19 Same Barcode dealy time



Start configuration



End configuration



100m sec



200m sec



300m sec



400m sec



500m sec



20,000m sec



600m sec



700m sec



800m sec



900m sec



1000m sec



30,000m sec

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



A



2



B



3



C



4



D



5



E



6



F



7



8



Confirm configuration



9



End Configuration



0

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	

NUMA



DEFAULT



CHECK VERSION