

Programming

User's Manual

Ver1.00



Chap.1 System Information

Set All default

S/W Version

Chap.2 System Installation**2.1 Interface Selection**

If you change the interface from others to USB, the program needs to restart plug the installation.



<Keyboard>



RS-232

USB

2.2.1 Keyboard Terminal Type

<PC/AT,PS/2>



IBM XT



IBM PS/2 30-80



IBM 5550



PS/2 25, 30

NEC 9801





2.2.2 Language



<U.S.A>



Italian



Spanish



French



Germany



Japan

2.2.3 Keyboard Wedge function

Function Key Emulation



<OFF>



ON

KB Emulation(For NB)



<OFF>



ON

ALT Mode



<OFF>



ON



**Caps Lock**

<OFF>



ON

Num Lock

<OFF>



ON

2.2.4 Inter-character Delay (Default: 00)

Appendix A (00H – 64H)

2.2.5 Inter-message Delay(Default: 00)

Appendix A (00H–0AH)

Delay time=set up data*100(ms)

2.2.6 Keyboard Speed(Default: 00)

Appendix A (00H–08H)

2.2.7 Message Terminator

None



<CR>



Tab



ESC



CR + LF





2.3.1 RS-232 Parameters

BAUD Rate



1200



4800



19200



2400



<9600>



38400

Data bits



7

Stop Bit



<1>



<8>



2



**Parity**

<None>



Odd



Even



Mark



Space

RS-232 Function Installation**Handshaking Protocol Delay****Inter-character Delay (Default : 00)**

Appendix A (00H-64H)

Delay time=set up data*1(ms)

Inter-message Delay (Default : 00)

Appendix A (00H-0AH)

Delay time=set up data*100(ms)

Handshaking Protocol Delay**(Default : 00)**

Appendix A (00H-0AH)

Handshaking Protocol

<None>



RTS/CTS



ACK/NAK



Xon/Xoff





2.4 Scan Mode

Time out set up

1. Scan the barcode of “Continuous/Timeout OFF”
2. Scan 2 digits of the ASCII code of the Appendix A
3. Scan the “End” of the Appendix A
4. Scan the End Configuration to end the procedure
5. The settings unit is a second. Ex:0*40 stands for 1 minute

The Timeout Default is 0*B4, about 3 minutes



Trigger On/Off



<Trigger On/Good read
off>



Continuous/Trigger Off



Testing



Continuous/LED always On



Continuous/Timeout Off



Flash On



Continuous/No Trigger





2.5 Buzzer Set-up

You can pitch the buzzer tone and adjust the buzzer time. Besides, you can set the voice of boot and decoding.

Frequency (Default: 0AH)



Appendix A(00-10H)

Adjust Buzzer Tone (Default: 05H)



Appendix A(00-10H)

Power On Tone



ON

Good read Beep



<ON>



OFF



OFF

2.6 Character Installation

The preamble and postamble character: You can put 10 ASCII at most in front of the barcode data. When the installation is "0" that means you don't need to add the first and last character. Please find the format as below:

Preamble Character	Barcode	Postamble Character
--------------------	---------	---------------------

The process for adding the first and last character to the barcode:

1. Scan the barcode of "Start Configuration" and "The Preamble Character Installation".
2. Check the ASCII table to get the ASCII code of the first and last character.
3. Scan the barcode of ASCII in the Appendix.
4. Scan the "End Configuration".

G1/G2 character Insertion: You can put 10 ASCII at most in





front of the barcode data. When the installation is “0” that means you don’t need to add the first and last character.

1. Scan the barcode of the “Start Configuration” and “G1 Insert Character”.
2. Check the ASCII table to get the ASCII code of the first and last character.
3. Scan the barcode of ASCII in the Appendix.
4. Scan the “End Configuration”.
5. Repeat the same process to the G2 insertion.
6. Scan the “End Configuration”.

The position of G1/G2 character insertion: To select a character insert to the barcode. You can’t insert any character while the installation is “0”

1. Scan the barcode of the “Start Configuration” and “G1 character insertion position”
2. Check the ASCII table to get the corresponding ASCII code of the insertion position.
3. Scan the “End Configuration”.
4. Repeat the same process to the G2 character insertion position.
5. Scan the “End Configuration”.

Code Transmission: If your application needs to transmit the code (barcode type ID), you have to set “ON” for this feature and the format is ID + Barcode data.

The Preamble Installation (Default:00)



Appendix A

The Postamble Installation (Default:00)



Appendix A

G1 Character Insertion (Default:00)



Appendix A

G2 Character Insertion (Default:00)



Appendix A





G1 Character Insertion Position (Default: 00)Appendix A

G2 Character Insertion Position (Default: 00)Appendix A

Code ID Transmission

ON

<OFF>

2.5 Other Installation

Scanning Precision: You can set to scan once or twice and then transfer the bar code data. The twice will reduce the error reading.

Bar Reverse Output Installation: This feature can read the highlight barcode.

Scanning Verify

<Single>

Double

Bar / Space Setting

<Bar = High>

Bar = Low

Laser Data Speed Up

<ON>

OFF





Chap.3 BAR-CODE INSTALLATION**3.1 UPC-A****Reading**

OFF

**Code ID (Default:F)**

<20H-7EH>

<ON>

UPC-A convert to EAN-13

<OFF>

Transmit Check Character

OFF



ON

Truncate Leading Zero

<OFF>



<ON>



ON

Truncate Leading Digit(Default:00)

<00H-0DH>

Truncate Last Digit(Default:00)

<00H-0DH>

Select Insertion(Default:00)

<00H-02H>





3.1 UPC-A

Add-On 2/5



<None>



2 digit



5 digit



2 or 5 digit





3.2 UPC-E

Reading



OFF



<ON>

Code ID (Default: G)



<20H-7EH>

UPC-E Convert to UPC-A



<OFF>



ON

Transmit Check Character



OFF



<ON>

Truncate Leading Zero



OFF



<ON>

Truncate Leading Digit(Default:00)



<00H-08H>

Truncate Last Digit(Default:00)



<00H-08H>

Select Insertion(Default:00)



<00H-02H>



Start Configuration



3.2 UPC-E

Add-On 2/5



<None>



2digit



5digit



2 or 5 digit

End Configuration



**3.3 EAN-13****Reading**

OFF



<ON>

Code ID (Default::H)

<20H-7EH>

Transmit Check Character

OFF



<ON>

Truncate Leading Digit(Default:00)

<00H-0DH>

Truncate Last Digit(Default:00)

<00H-0DH>

Select Insertion Default:oo

<00H-02H>

Add-On 2/5

<None>



2 Digit



5 Digit



2or 5 Digit



Start Configuration



ISBN/ISSN Convert



<OFF>



ON

End Configuration



**3.4 EAN-8****Reading**

OFF



<ON>

Code ID (Default::I)

<20H-7EH>

Transmit Check Character

OFF



<ON>

Truncate Leading Digit(Default:00)

<00H-08H>

Truncate Last Digit(Default:00)

<00H-08H>

Select Insertion(Default:00)

<00H-02H>

Add-On 2/5

<None>



2 digit



5 digit



2 or 5 digit



**3.5 Code 39****Reading**

OFF

**Code ID (Default::J)**

(20H-7EH)

<ON>

Verification

<OFF>



ON

Transmit Check Character

OFF



<ON>

Checksum

<OFF>



ON

Min. Length (Default:00)

<00H-32H>

Max. Length

(Default:32H)



<00H-32H>



Start Configuration



3.5 Code 39

Format



<Standard Code39>



Full-featured Code39

Transfer Start / End Character



<OFF>



ON

Truncate Leading Digit(Default:00)



<00H-32H>

Truncate Last Digit(Default:00)



<00H-32H>

Select Insertion(Default:00)



<00H-02H>

End Configuration





3.6 Codabar

Reading



OFF



Code ID (Default::K)



<20H-7EH>

<ON>

Verification



OFF



<ON>

Transmit Check Character



<OFF>



ON

Checksum



<OFF>



ON

Truncate Leading Digit(Default:00)



<00H-7EH>

Truncate Last Digit(Default:00)



<00H-7EH>

Select Insertion (Default:00)



<00H-02H>





3.6 Codabar

Start / End Character Type



<ABCD/ABCD>



abcd/abcd



abcd/tn*e

Transmit Start / End Character



<OFF>



ON

Min. Length (Default:00)



<00H-3CH>

Max. Length



<00H-3CH>





3.7 Code93

Reading



OFF



<ON>

Code ID Default:(L)



<20H-7EH>

Verification



OFF



<ON>

Transmit Check Character



<OFF>



ON

Select Insertion (Default:00)



<00H-02H>

Truncate Leading Digit (Default:00)



<00H-7EH>

Truncate Last Digit (Default:00)



<00H-7EH>

Min. Length(Default:00)



<00H-50H>

Max. Length(Default:00)



<00H-50H>



**3.8 Code 128****Reading**

OFF

**Code ID (Default::M)**

<20H-7EH>

<ON>

Verification

OFF

**Transmit Check Character**

<OFF>

<ON>



ON

Truncate Leading Digit(Default:00)

<00H-7FH>

Truncate Last Digit(Default:00)

<00H-7FH>

Select Insertion Defaule:00

<00H-02H>

Min. Length(Default:00)

<00H-7FH>

Max. Length(Default:7FH)

<00H-7FH>



Start Configuration



UCC/EAN128



<OFF>

FNC1 Transmit



<OFF>

FNC2 Checksum



<OFF>



ON



ON



ON

End Configuration





3.9 Interleaved 2 of 5**Reading**

OFF

**Code ID (Default: N)**

<20H-7EH>

<ON>

Verification

<OFF>

**Transmit Check Character**

OFF

ON



<ON>

Truncate Leading Digit(Default:00)

<00H-7EH>

Truncate Last Digit(Default:00)

<00H-7EH>

Select Insertion(Default:00H)

<00H-02H>

Min. Length(Default:00)

<00H-7FH>

Max. Length(Default:7FH)

<00H-7FH>





3.10 Industrial 2 of 5**Reading**

<OFF>



ON

Code ID (Default:: 0)

<00H-7EH>

Verification

<OFF>



ON

Transmit Check Character

<OFF>



ON

Truncate Leading Digit(Default:00)

<00H-32H>

Truncate Last Digit(Default:00)

<00H-32H>

Select Insertion (Default:00)

<00H-02H>

Min. Length Defaule:0

<00H-32H>

Max. Length Defaule:32H

<00H-32H>





3.11 Matrix 2 of 5**Reading**

<OFF>

**Code ID (Default: P)**

<20H-7EH>

ON

Verification

<OFF>

**Transmit Check Character**

OFF

ON



<ON>

Truncate Leading Digit(Default:00)

<00H-50H>

Truncate Last Digit(Default:00)

<00H-50H>

Select Insertion

<00H-02H>

Min. Length(Default:00)

<00H-50H>

Max. Length(Default:50H)

<00H-50H>





3.12 China Post Code

Reading



<OFF>



Code ID (Default: Q)



<20H-7EH>

ON

Verification



<OFF>



Transmit Check Character



<OFF>

ON



ON

Truncate Leading Digit(Default:00)



<00H-50H>

Truncate Last Digit(Default:00)



<00H-50H>

Select Insertion Defaule:00



<<00H-02H>

Min. Length(Default:00)



<00H-50H>

Max. Length(Default:50H)



<00H-50H>





3.13 MSI / Plessey**Reading**

<OFF>



ON

Code ID (Default: R)

<20H-7EH>

Verification

<OFF>



MOD 11/10



MOD 10



MOD 10/10

Transmit Check Character

OFF



<ON>

Truncate Leading Digit (Default:00)

<00H-3CH>

Truncate Last Digit (Default:00)

<00H-3CH>

Select Insertion (Default:00)

<00H-02H>



Start Configuration



3.13 MSI / Plessey

Min. Length (Default:00)



<00H-3CH>

Max. Length (Default:3CH)



<00H-3CH>

End Configuration





3.14 CODE32

Reading



<OFF>



ON

Code ID (Default: S)



<20H-7FH>

Verification



<OFF>



ON

Transmit Check Character



<OFF>



ON

Truncate Leading Digit(Default:00)



<00H-0AH>

Truncate Last Digit(Default:00)



<00H-0AH>

Select Insertion (Defaule:00)



<00-02H>





3.15 Code 11**Reading**

<OFF>

**Code ID (Default: T)**

<20H-7EH>

ON

Verification

<OFF>

**Transmit Check Character**

<OFF>

ON



ON

Truncate Leading Digit (Default:00)

<00H-50H>

Truncate Last Digit (Default:00)

<00H-50H>

Select Insertion

<00H-02H>

Min. Length (Default:00)

<00H-50H>

Max. Length (Default:50H)

<00H-50H>





APPENDIX A -- ASCII

CODE



0



A



1



B



2



C



3



D



4



E



5



F



6



Y



7



N



8

**Confirm**

9





ASCII Table

	0	1	2	3	4	5	6	7
0	NUL	DLE	SP	0	@	P	`	p
1	SOH	DC1	!	1	A	Q	a	q
2	STX	DC2	“	2	B	R	b	r
3	ETX	DC3	#	3	C	S	c	s
4	EOT	DC4	\$	4	D	T	d	t
5	ENQ	NAK	%	5	E	U	e	u
6	ACK	SYN	&	6	F	V	f	v
7	BEL	ETB	‘	7	G	W	G	w
8	BS	CAN	(	8	H	X	h	x
9	HT	EM	)	9	I	Y	i	y
A	LF	SUM	*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{
C	FF	FS	,	<	L	¥	l	|
D	CR	GS	-	=	M	}	m	}
E	SO	RS	.	>	N	^	n	~
F	SI	US	/	?	O	_	o	DEL





APPENDIX B — 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	





Function Key Code

Before scanning, please turn on the CODE 39.



UP(\$A)



F5(\$U)



F10(\$Z)

DE-
LETE(\$O)

F1(\$Q)



HOME(\$K)



DOWN(\$B)

PAGE
DOWN(\$F)

ESC(%A)

EN-
TER(\$M)

F2(\$R)



F6(\$V)



END(\$L)



LEFT(\$C)



F7(\$W)



F11(%B)



F3(\$S)



BS(\$H)



F12(%C)



RIGHT(\$D)



F8(\$X)



F13(%D)



F4(\$T)



TAB(\$I)



INSERT(\$N)

PAGE
UP(\$E)

F9(\$Y)



F14(%E)



Start Configuration



End Configuration

