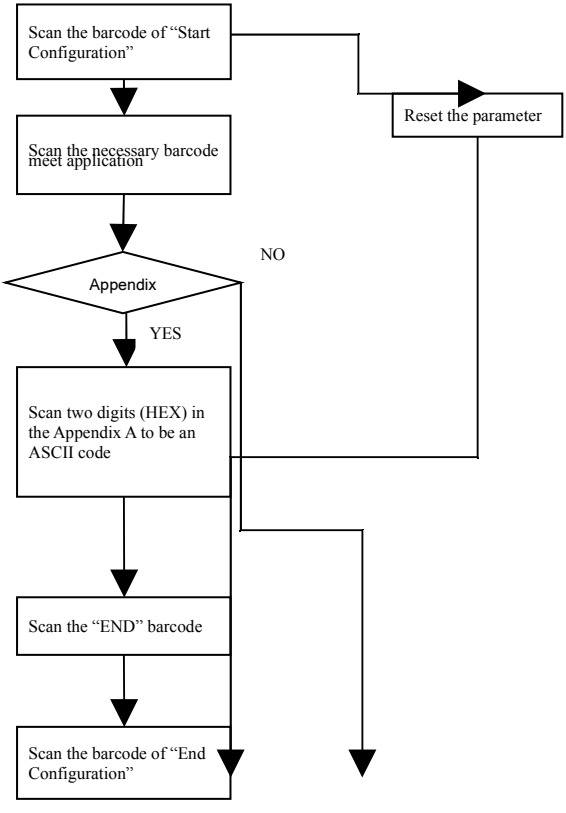
Programming
User's Manual

SC2170

Ver1.00

Contents

Barcode Scanner Install Flow Chart



Remark:

- Scan "Software Version" to get the software version number.
- Scan "Serial Number" to get the serial number.

一: Systems Information

1.1 Default
1.2 Version Information。

Start Configuration

Set All Default

Version

End Configuration

Start Configuration

二: Systems Setting

2.1 Interfaces：

Interface Selection
 **(Keyboard)**  RS-232  USB

End configuration

Start Configuration

2.1.1 Keyboard Wedge Setting

Terminals Type
(IBM AT)
IBM XT
IBM PS/2 30-80
IBM 5550
PS/2 25，30
NEC 9801

End Configuration

Start Configuration

Languages
 **(US)**
 Italian
 Spanish
 French
 Germany
 Japan

End Configuration

Start Configuration

Function Key Emulation	
(OFF)	ON
Keyboard Emulation	
(OFF)	ON
ALT mode	
(OFF)	ON

End Configuration

Start Configuration

Caps Lock
 **(OFF)**  ON
Num Lock
 **(OFF)**  ON
Inter-character delay
 **00H**（00-64H*1（ms））
Inter-Message Delay
 **00H**（00-0AH*100（ms））
Keyboard Speed
 **00H**（00-08H）

End Configuration

Start Configuration

Keyboard Terminator
 None
 **(CR)**
 Tab
 ESC

End Configuration

Start Configuration

2.1.2 RS-232 Communication Parameters

Baud Rate
 1200
 2400
 4800
 **(9600)**
 19200
 38400

End Configuration

Start Configuration

Data Bits	
	
7	**(8)**
Data Stop	
	
(1)	2
Parity	
	
(None)	Even
	
Odd	Mark
	
Space	

End Configuration

Start Configuration

Inter-Character Delay
（**00**-64H*1(ms)）
Inter-Message Delay
（**00**-0AH*100(ms)）
Handshaking Delay
（**00**-0AH*100(ms)）
Handshaking
(None) RTS/CTS
ACK/NAK Xon/Xoff

End Configuration

Start Configuration

Character Parameter

None

(CR+LF)

CR

LF

Tab

STX/ETX

EOT

End Configuration

2.2 Scan Mode

Trigger Mode

Press the trigger and start to scan. The scan will be end once you loose the trigger or decode the barcode. Repeat the action to start the next decodes.

Auto Power off Mode

Press the trigger and start to scan. The scan will be end once the time is up or decode the barcode.

Continuous/Trigger OFF Mode

Press the trigger and start the continuous scan. This mode can scan the different barcode continuously and you just scan the same barcode for one time. Remove the light; you can re-scan the same barcode. Press the trigger again; you can end the Continued Power on Mode.

Test Mode

Press the trigger and start to test. Scan the barcode continuously and press the trigger to end the test.

Continuous/LED ON Mode

Press the trigger and start the continuous scan. The light is always on and you can press the trigger to read it. This mode will be end when you choose the other scan mode.

Continuous/Timeout OFF Mode

The scanning method is the same as the Continuous/Trigger OFF mode but you have to scan it within the compulsory time, otherwise the mode will be end. You can press the trigger to start the next scan

. Timeout Set-Up

1. Scan the barcode of “Continuous/Timeout OFF Mode”
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

Start Configuration

Scan Mode

Trigger On/Off

(Trigger On/Good read off)

Continuous/Trigger Off

Testing

Continuous/LED always On

Continuous/Timeout Off

Flash On

Continuous/No Trigger

End Configuration

Start Configuration

2.3 Beep Setting

Buzzer Frequency

(00-**0A**-10H)

Buzzer Beep Tone

(00-**05**-10H)

Power Up Tone

(OFF) ON

Good read Beep

(OFF) ON

End Configuration

2.4 字符串设置

The first and last 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:

The First Character	Barcode	The Last Character

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

1. Scan the barcode of “Start Configuration” and “The First 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.

Start Configuration

Preamble Setting	
(00)	
Postamble Setting	
(00)	
Character Insertion	
G1(**00**)	G2(**00**)
Character Insertion Position	
G1(**00**)	G2(**00**)
Code ID Transmission	
ON	**(OFF)**

End Configuration

Start Configuration

2.5 Others Setting

Verify Scanning	
(Single)	Double
Bar Space Setting	
(Bar High)	Bar Low
Laser Data Scan Speed Up	
ON	OFF

End Configuration

Start Configuration

3.1 UPC-A

Reading	
 OFF	 **(ON)**
Code ID	
 **46H** (20-7EH)	
UPC-A Convertor to EAN-13	
 **(OFF)**	 ON
Transmit Check Char.	
 OFF	 **(ON)**

End Configuration

Start Configuration

UPC-A

Truncate Leading Zero

(OFF)

ON

Truncate Leading Digit

00H (00-0DH)

Truncate Last Digit

00H (00-0DH)

Select Insertion Code

00H (00-02H）

Add-on 2/5

(None)

2

5

2/5

End Configuration

Start Configuration

3.2 UPC-E

Reading	
OFF	**(ON)**
Code ID	
47H (20-7EH)	
UPC-E Convertor to UPC-A	
(OFF)	ON
Transmit Check Char.	
OFF	**(ON)**
Truncate Leading Zero	
(OFF)	ON

End Configuration

Start Configuration

UPC-E

Truncate Leading Digit

00H (00-08H)
Truncate Last Digit

00H (00-08H)
Select Insertion Code

00H (00-02H)
Add-on 2/5
 **(None)**  2  5  2/5

End Configuration

Start Configuration

3.3 EAN-13

Reading
 OFF  **(ON)**
Code ID
 **48H** (20-7EH)
Transmit Check Char.
 OFF  **(ON)**
Truncate Leading Digit
 **00H** (00-0DH)
Truncate Last Digit
 **00H** (00-0DH)

End Configuration

Start Configuration

EAN-13

Add-on 2/5	
 **(None)**	 2
 5	 2/5
ISBN/ISSN Convert	
 **(OFF)**	 ON
Select Insertion Code	
 **00H** (00-02H)	

End Configuration

Start Configuration

3.4 EAN-8

Reading
 OFF  **(ON)**
Code ID
 **49H** (20-7EH)
Transmit Check Char.
 OFF  **(ON)**
Truncate Leading Digit
 **00H** (00-08H)

End Configuration

Start Configuration

EAN-8

Truncate Last Digit

00H (00-08H)

Add-on 2/5

(None)

2

5

2/5

Select Insertion Code

00H (00-02H)

End Configuration

Start Configuration

3.5 Code 39

Reading	
OFF	**(ON)**
Code ID	
4AH (20-7EH)	
Verify Checksum	
(OFF)	ON
Transmit Check Char.	
OFF	**(ON)**

End Configuration

Start Configuration

Code 39

数据串联	
(OFF)	ON
Min. Length	
00H (00-32H)	
Max. Length	
32H (00-32H)	
Format	
(Standard)	Full ASCII

End Configuration

Start Configuration

Code 39

Transmit Start/End Char.
(OFF) ON
Truncate Leading Digit
00H (00-32H)
Truncate Last Digit
00H (00-32H)
Select Insertion Code
00H (00-02H)

End Configuration

Start Configuration

3.6 Codabar

Reading	
 OFF	 **(ON)**
Code ID	
 **4BH** (20-7EH)	
Verify Checksum	
 OFF	 **(ON)**
Transmit Check Character	
 **(OFF)**	 ON
数据串联	
 **(OFF)**	 ON

End Configuration

Start Configuration

Codabar

Truncate Leading Digit
00H (00-7EH)
Truncate Last Digit
00H (00-7EH)
Transmit Start/End Character
(ABCD/ABCD) abcd/abcd abcd/tn*e
Transmit Start/End Character
(OFF) ON
Min. Length
00H (00-3CH)
Max. Length
3CH (00-3CH)
Select Insertion Code
00H (00-02H)

End Configuration

Start Configuration

3.7 Code 93

Reading	
 OFF	 **(ON)**
Code ID	
 **4CH** (20-7EH)	
Verify Checksum	
 OFF	 **(ON)**

End Configuration

Start Configuration

Code 93

Transmit Check Character
 **(OFF)**  ON
Min. Length
 **00H** (00-50H)
Max. Length
 **50H** (00-50H)
Truncate Leading Digit
 **00H** (00-50H)
Truncate Last Digit
 **50H** (00-50H)
Select Insertion Code
 **00H** (00-02H)

End Configuration

Start Configuration

3.8 Code 128

Reading	
 OFF	 **(ON)**
Code ID	
 **4DH** (20-7EH)	
Verify Checksum	
 OFF	 **(ON)**
Transmit Check Character	
 **(OFF)**	 ON
Select Insertion Code	
 **00H** (00-02H)	

End Configuration

Start Configuration

Code 128

FNC2
(OFF) ON
UCC/EAN128
(OFF) ON
FNC1
(OFF) ON
Truncate Leading Digit
00H (00-7FH)
Truncate Last Digit
00H (00-7FH)
Min. Length
00H (00-7FH)
Max. Length
7FH (00-7FH)

End Configuration

Start Configuration

3.9 Interleaved 2 of 5

Reading	
 OFF	 **(ON)**
Code ID	
 **4EH** (20-7EH)	
Verify Checksum	
 **(OFF)**	 ON
Transmit Check Character	
 OFF	 **(ON)**

End Configuration

Start Configuration

Interleaved 2/5

Truncate Leading Digit
00H (00-7EH)
Truncate Last Digit
00H (00-7EH)
Min. Length
00H (00-50H)
Max. Length
50H (00-50H)
Select Insertion Code
00H (00-02H)

End Configuration

Start Configuration

3.10 Industrial 2 of 5

Reading
 **(OFF)**  ON
Code ID
 **4FH** (20-7EH)
Min. Length
 **00H** (00-32H)
Max. Length
 **32H** (00-32H)

End Configuration

Start Configuration

Industrial 2 of 5

Truncate Leading Digit
00H (00-32H)
Truncate Last Digit
00H (00-32H)
Verify Checksum
(OFF) ON
Transmit Check Character
(OFF) ON
Select Insertion Code
00H (00-02H)

End Configuration

Start Configuration

3.11 Matrix 2 of 5

Reading
(OFF) ON
Code ID
50H (20-7EH)
Verify Checksum
(OFF) ON

End Configuration

Start Configuration

Matrix 2of 5

Transmit Check Character
 OFF **(ON)**
Truncate Leading Digit
 **00H** (00-50H)
Truncate Last Digit
 **00H** (00-50H)
Min. Length
 **00H** (00-50H)
Max. Length
 **50H** (00-50H)
Select Insertion Code
 **00H** (00-02H)

End Configuration

Start Configuration

3.12 China Post Code

Reading	
 (OFF)	 ON
Code ID	
 **00H** 51(20-7EH)	
Verify Checksum	
 **(OFF)**	 ON
Transmit Check Character	
 **(OFF)**	 ON

End Configuration

Start Configuration

China Post Code

Truncate Leading Digit
00H (00-50H)
Truncate Last Digit
00H (00-50H)
Min. Length
00H (00-50H)
Max. Length
50H (00-50H)
Select Insertion Code
00H (00-02H)

End Configuration

Start Configuration

3.13 MSI/Plessey

Reading	
 **(OFF)**	 ON
Code ID	
 **52H** (20-7EH)	
Verify Checksum	
 **(OFF)**	 MOD 10
 MOD 10/10	 MOD 11/10

End Configuration

Start Configuration

MSI/Plessey

Transmit Check Character
 OFF **(ON)**
Truncate Leading Digit
 **00H** (00-3CH)
Truncate Last Digit
 **00H** (00-3CH)
Min. length
 **00H** (00-3CH)
Max. Length
 **3CH** (00-3CH)
Select Insertion Code
 **00H** (00-02H

End Configuration

Start Configuration

3.14 Code 32

Reading	
(OFF)	ON
Code ID	
53H (20-7EH)	
Verify Checksum	
OFF	**(ON)**
Transmit Check Character	
OFF	**(ON)**

End Configuration

Start Configuration

Code 32

Truncate Leading Digit
00H (00-0AH)
Truncate Last Digit
00H (00-0AH)
Select Insertion Code
00H (00-02H)

End Configuration

Start Configuration

3.15 Code 11

Reading	
 **(OFF)**	 ON
Code ID	
 **54H** (20-7EH)	
Verify Checksum	
 OFF	 **(ON)**

End Configuration

Start Configuration

Code 11

Transmit Check Character
 **(OFF)**  ON
Truncate Leading Digit
 **00H** (00-50H)
Truncate Last Digit
 **00H** (00-50H)
Min length
 **00H** (00-50H)
Max. length
 **50H** (00-50H)
Select Insertion Code
 **00H** (00-02H)

End Configuration

Appendix A ASCII code


0


1


2


3


4


5


6


7


8


9


A


B


C


D


E


F


Y


N


Confirm


End Configuration

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 Code 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 barcode, please turn on Full ASCII CODE 39

 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)
	 F7($W)
 BS($H)	 F8($X)
 TAB($I)	 F9($Y)
	 F10($Z)
 HOME($K)	 ESC(%A)

 END($L)	 F11(%B)
 ENTER($M)	 F12(%C)
 INSERT($N)	 F13(%D)
 DELETE($O)	 F14(%E)