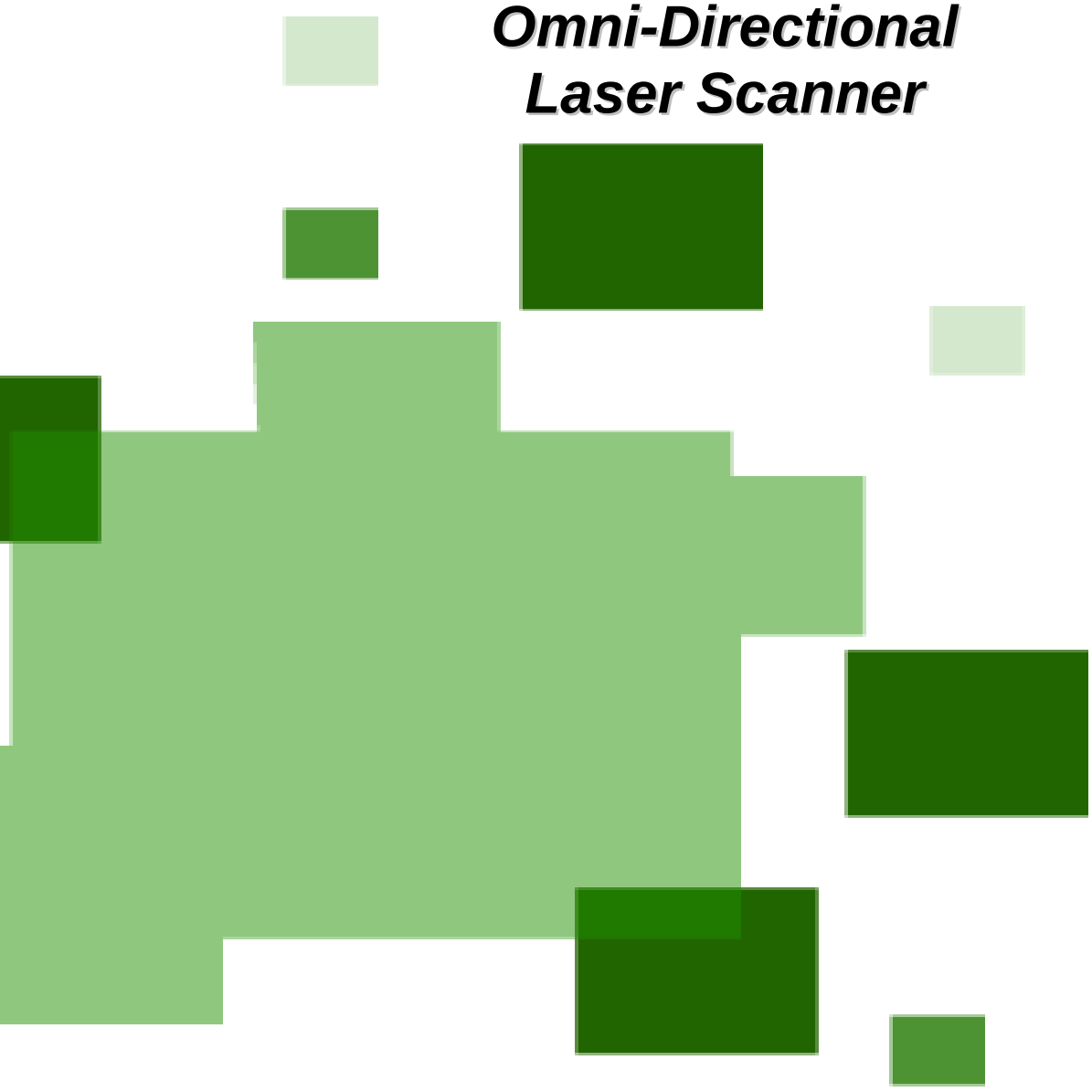
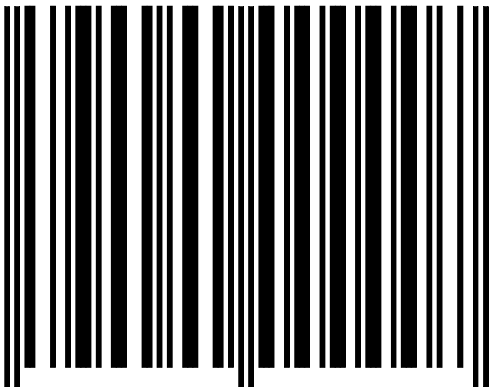
Programming Guide

Omni-Directional Laser Scanner



Enter/Exit Programming Mode



(This barcode is also found at page 8.)

IMPORTANT NOTICE

Every effort is mode to ensure the accuracy of our product information; however, we accept no responsibility for errors or omissions. Specification or version may be subject to change without notice. The actual specification and version are based on the product delivered.

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1. INTRODUCTION

The series of scanners can be configured by scanning a series of programming barcode labels. This allows decoding options and interface protocols to be tailored to a specific application. The configuration is stored in non-volatile memory and will not be lost by removing power from the scanner.

The scanner is a multi-interface communication scanner. If you had ordered only the one type of interface, default will change the initial interface configuration to the interface requested, i.e. RS-232C, keyboard wedge, or USB. But if you had ordered as multi-interface, the initial interface configuration will be set as keyboard wedge (PC/AT); if needed to change to other interface, you need to set up from a programming guide.

During the programming mode, the laser scanner will acknowledge a good and valid reading with one short beep. It will give serial beeps for either an invalid or bad reading.

2. CHANGE THE SCANNER SETTING

In order to change the scanner setting, please follow the sequence below

1. Scan Enter/Exit programming mode barcode (2 beeps Low—high)
2. Scan barcode for the desired feature (1beep)
3. Scan Enter/Exit programming mode barcode to save the configuration.(2 beeps ,long---short)

After reading a valid barcode in programming mode the scanner will gave a high beep.

3. DEFAULT PARAMETERS

This table gives the default settings of all the programmable parameters. The default settings will be restored whenever the "Reset" programming label is scanned and the laser scanner is in programming.

DEFAULT VALUES OF OPERATING PARAMETERS

Function	Default
Sleep mode	
Motor sleep mode	After 30 minutes
Laser sleep mode	After 15 minutes
Scanner timing	
Same code delay	500msec
Beeper Tone	
Frequency	medium
Duration	50msec
Code Identifiers	
Code ID	off
Code 39	M
ITF 2 of 5	I
Chinese post code	H
UPC-A	A
UPC-E	E
EAN-13	F
EAN-8	FF
Codabar	N
Code 128	K
Code 93	L
MSI/Plessy	P

DEFAULT VALUES OF KEYBOARD EMULATION PARAMETERS SETTING

Function	Default Values
Keyboard type selection	IBM PC/AT USA
Message terminator	Enter/ carriage return

DEFAULT VALUES OF RS-232C SERIAL COMMUNICATION PARAMETERS

Function	Default Values
Handshaking protocol	None
ACK/NAK response time setting	300 msec
Baud rate	9600
Data bit	8
Stop bit	1
Parity	None
Message terminator selection	CR/LF

DEFAULT VALUES OF USB EMULATION PARAMETERS

Function	Default Values
Keyboard Type	US Keyboard
Message Terminator	Enter

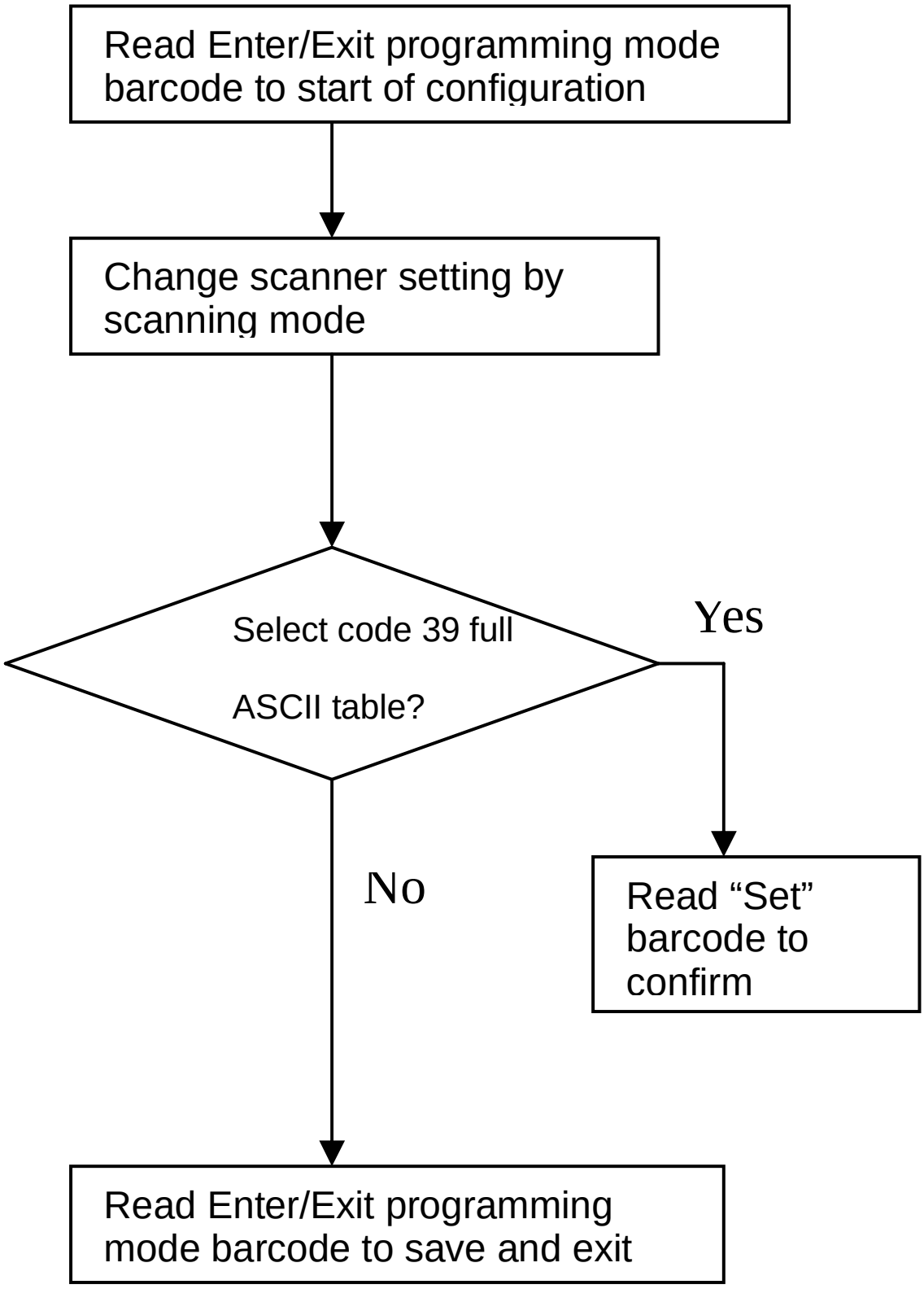
DEFAULT VALUES OF DECODING PARAMETERS

Function	Code	Default Value
Reading codes selection	Code 39	Enable
	ITF 2 of 5	Disable
	Chinese Post Code	Disable
	UPC/EAN/JAN	Enable
	Codabar	Disable
	※MSI/PLESSY	Disable
	Code 128	Disable
	Code 93	Disable
	※EAN-128	Disable
	Italian Pharmacy	Disable
	ISSN/ ISBN	Disable
Code 39	Codes	Standard
	Start/stop characters	Not transmitting
	Check digit	Disabled
	Concatenation	Off
Interleaved 2 of 5	Length	6-32
	Check digit	Disable
Chinese Post Code	Length	8~32
	Check digit	none
UPC/EAN /JAN	Format	All
	Addendum	Disable
	UPC-E=UPC-A	Disabled
	UPC-A leading digit	Transmit
	UPC-A check digit	Transmit

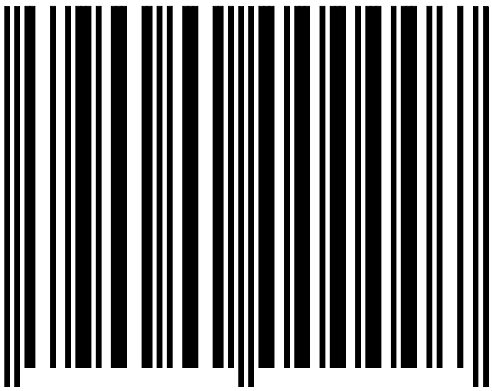
	UPC-E leading digit	Transmit
	UPC-E check digit	Transmit
Codabar	Type	Standard
	Start/stop characters	A,B,C,D
	Length	6~32 digits
Code 128	FNC 2 append	Disable
	Check digit	Disable
Code 93	Length	3~32
	Check digit	Not transmit
MSI	Length	6~32
	Check digit	Transmit
Italian Pharmacy	Transmit "A" Character	Not transmitting

Note: The configuration of the items with asterisk (※) is effective when being appointed in advance

PROGRAM PROCEDURE USING BARCODE MENUS



Enter/Exit Programming Mode

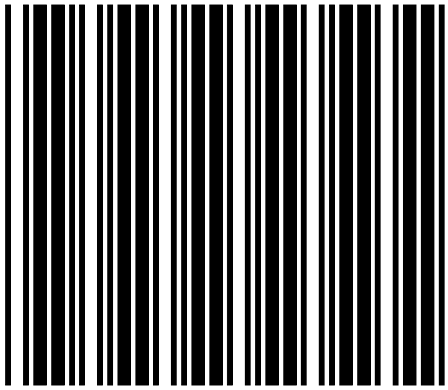


All framed barcode names represent

as default settings.

SYSTEM SETTING

RESET

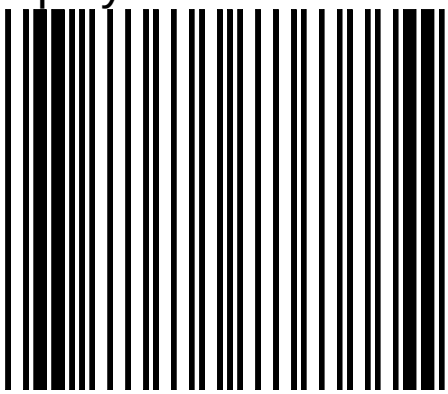


※ The reading of the “RESET” label turns all the parameters back to default values.

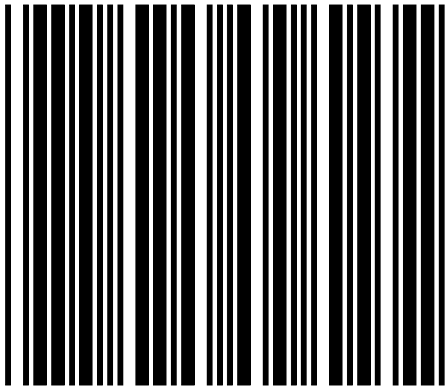
※ **The scanner remains in the last interface mode when the scanner is reset. The label below should be scanned if the scanner is configured for the first time.**

The reading of the “Show Version” label will show firmware version.

Display firmware version



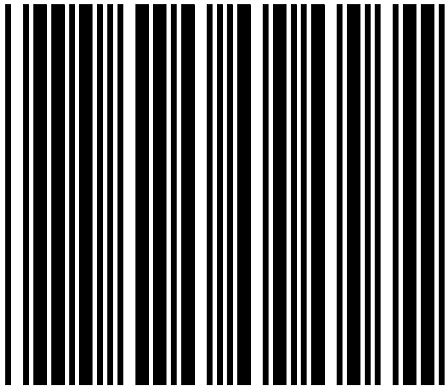
Save as Customer default



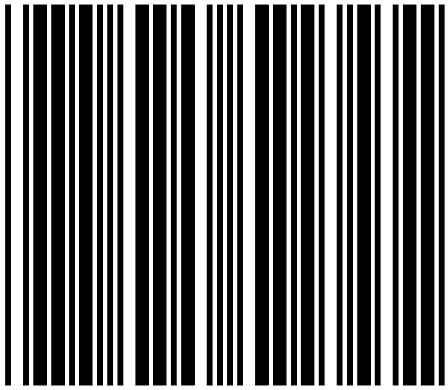
The setting allows the multi-desired setting barcode to be saved as a customer default.

The RS-232C interface scanner is used when connecting to the serial port of a PC or terminal

Return to RS-232C default

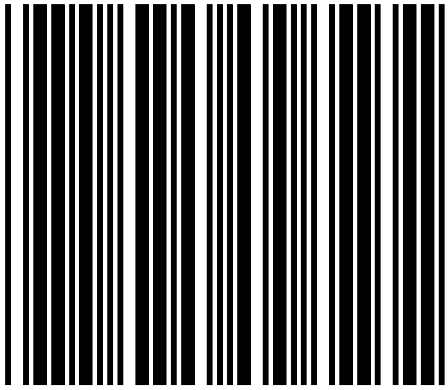


Return to PC/AT default

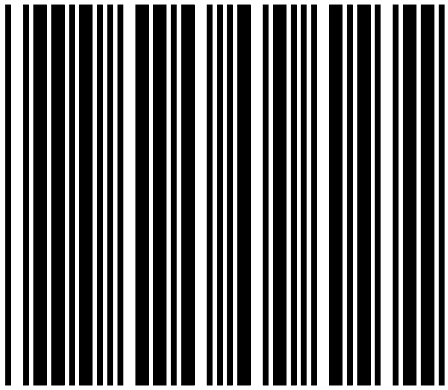


Keyboard wedge interface for IBM PC AT and compatibles

Return to USB default

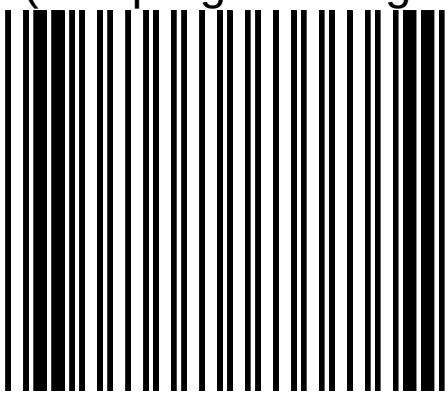


Return to customer default



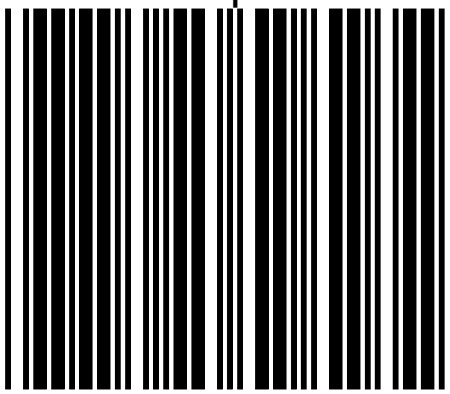
The reading of the “ABORT” label discards all the parameters reading prior to the “Enter/Exit of Programming”

Abort (Exit programming mode)

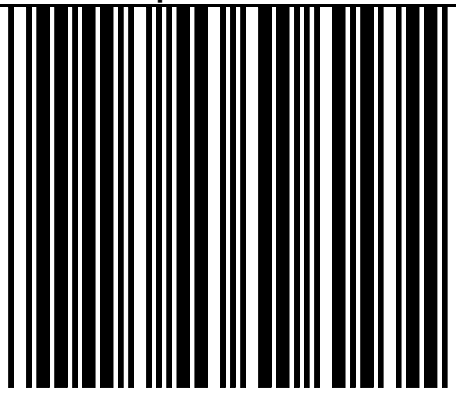


SLEEP MODE

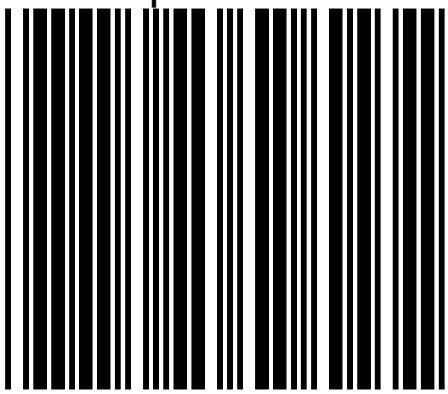
Motor Sleep mode off



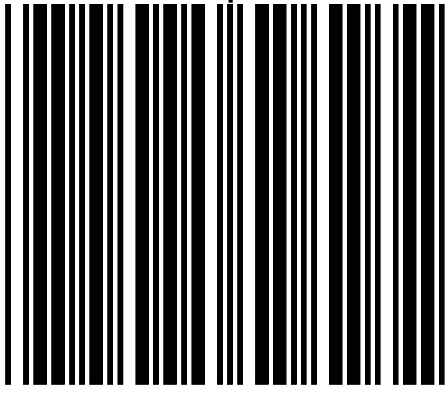
Motor Sleep after 30 minutes



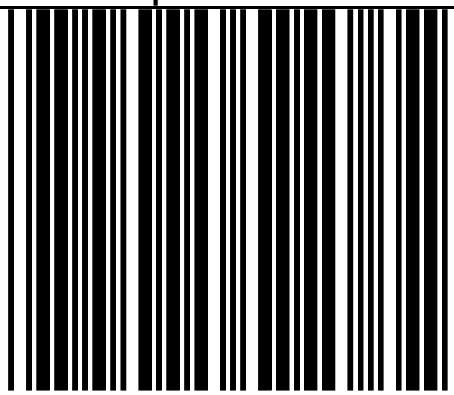
Motor sleep after 60 minutes



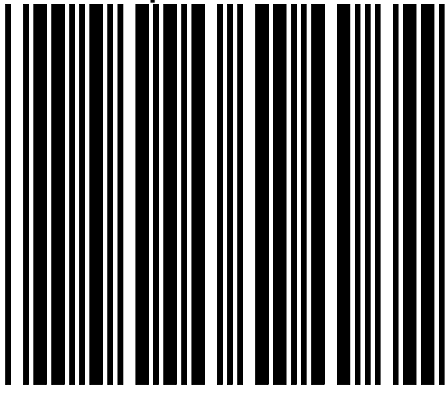
Laser sleep mode off



Laser sleep after 15 minutes

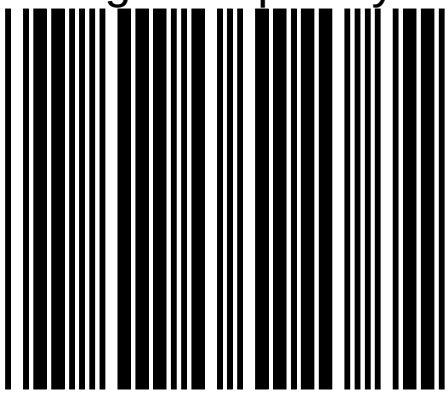


Laser sleep after 30 minutes

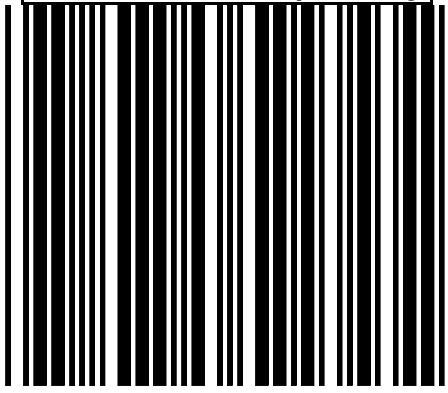


BEEPER TONE

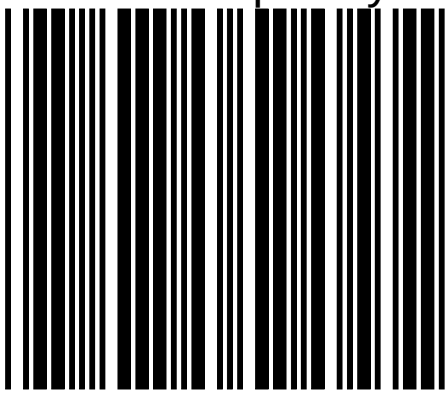
High Frequency



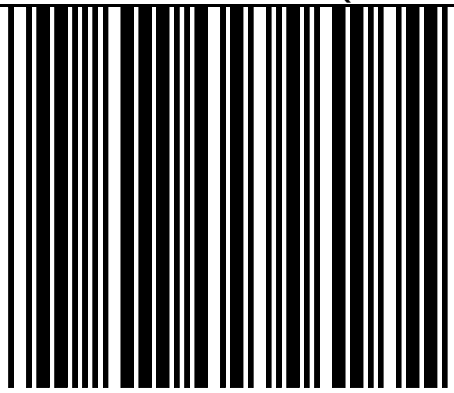
Medium Frequency



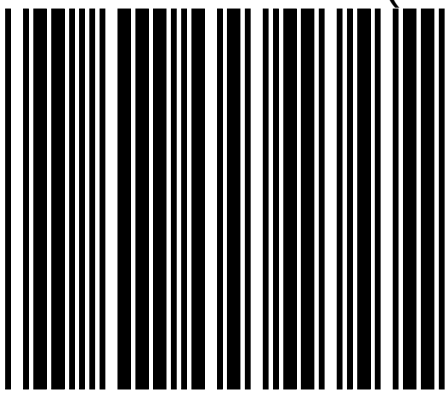
Low Frequency



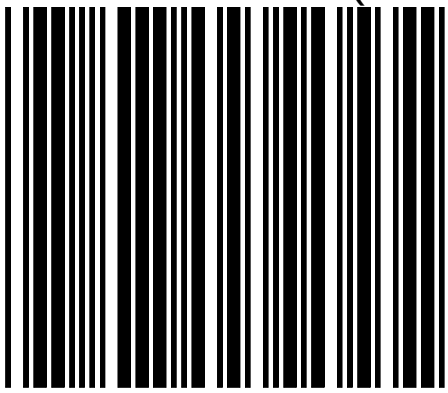
Long sound duration (100msec.)



Medium sound duration (50msec)

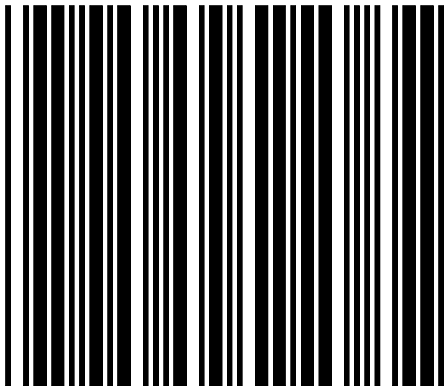


Short sound duration (20msec.)

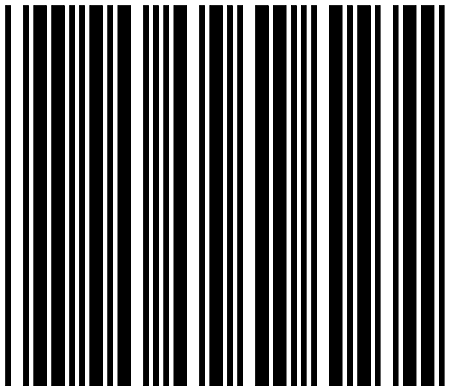


SCANNER TIMING

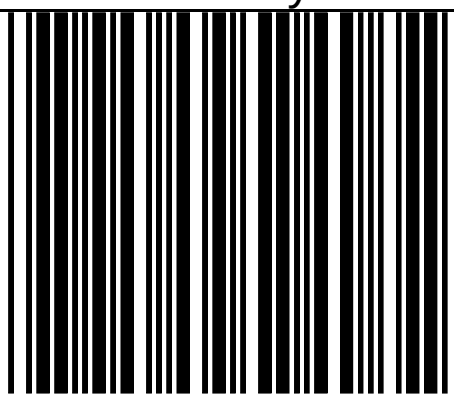
Same code delay time 200 msec.



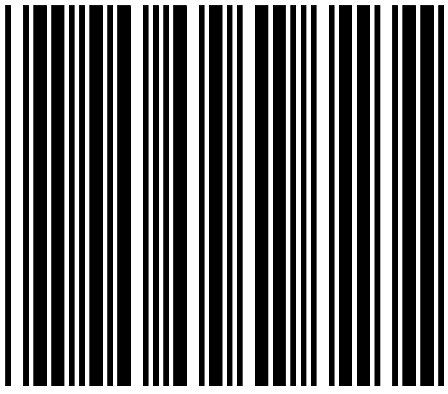
Same Code delay 300msec



Same code delay 500msec



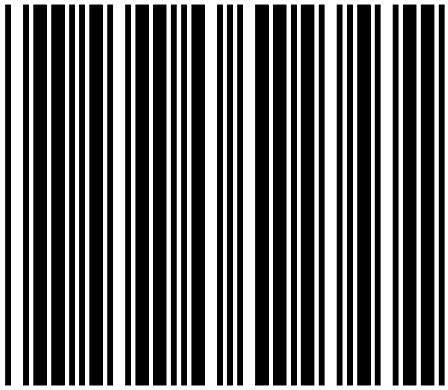
Same code delay time 600 msec.



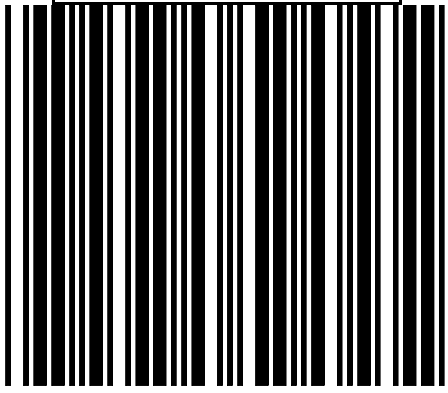
RS-232

COMMUNICATION

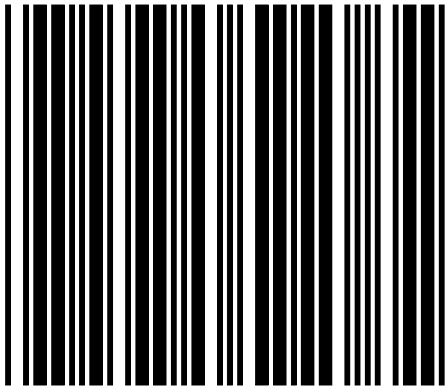
Baud Rate 19200



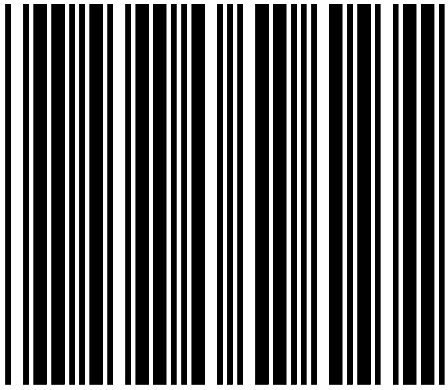
Baud Rate 9600



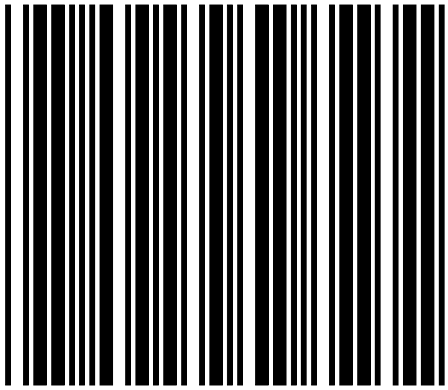
Baud Rate 4800



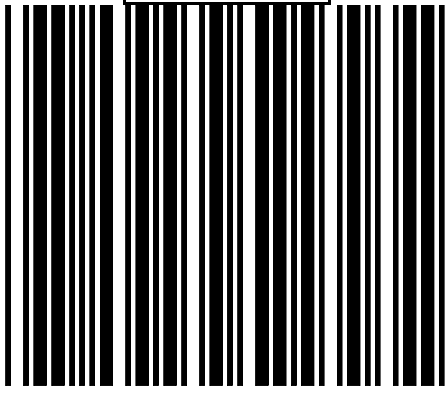
Baud Rate 2400



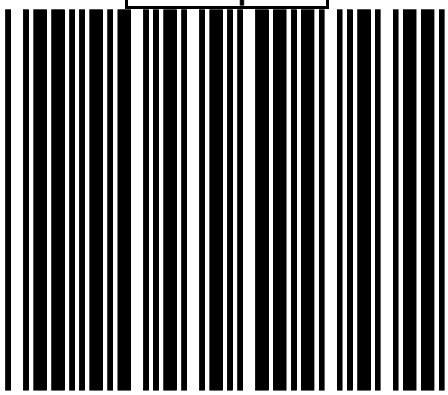
7 Data bit



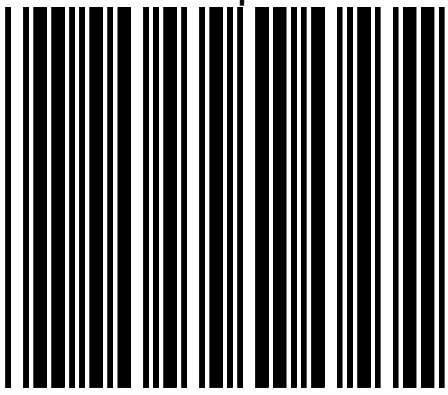
8 Data bit



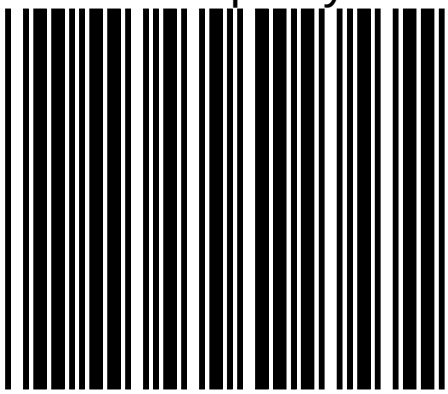
1 Stop bit



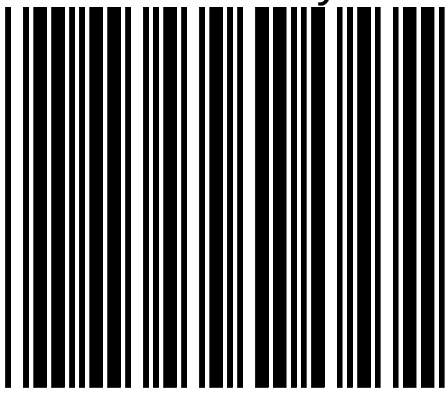
2 Stop bit



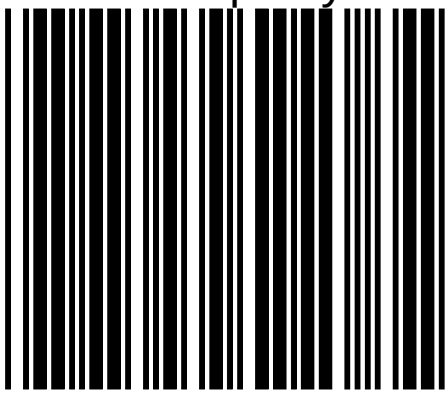
Even parity



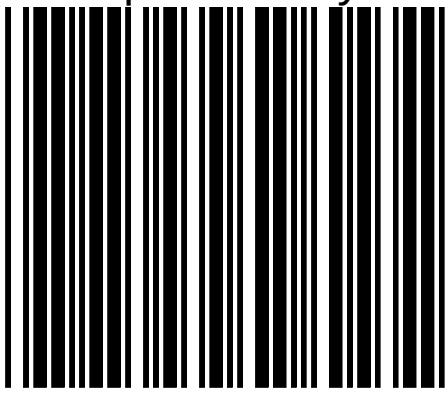
Odd Parity



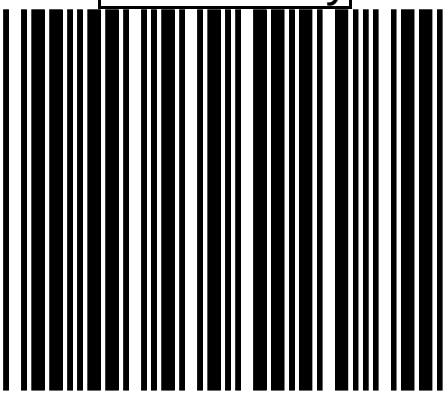
Mark parity



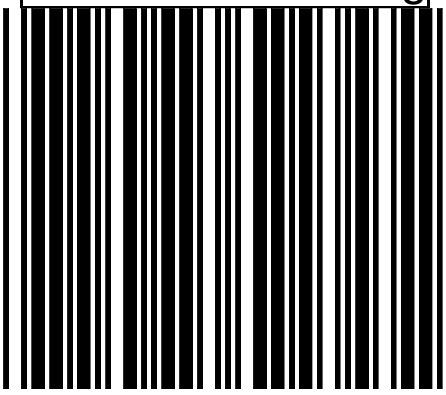
Space Parity



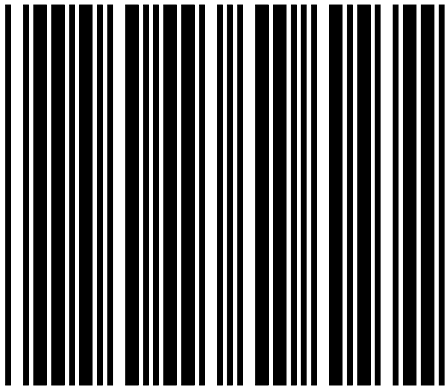
None Parity



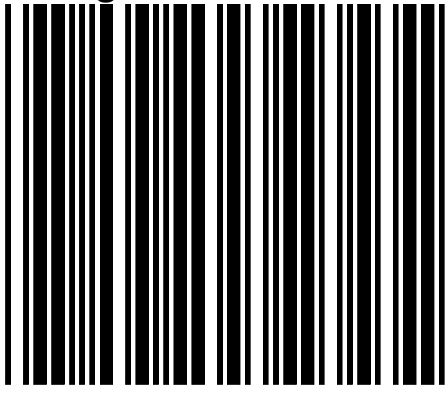
None Handshaking



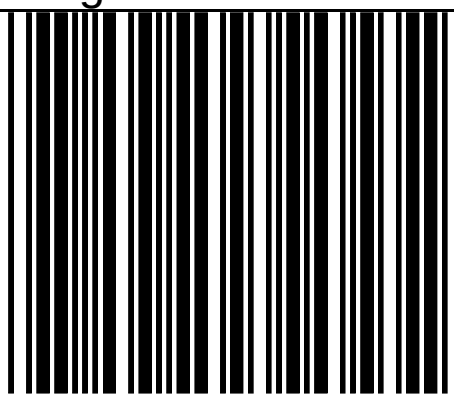
RTS/CTS on



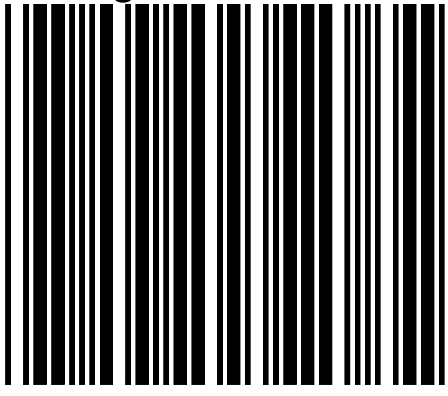
Message terminator-None



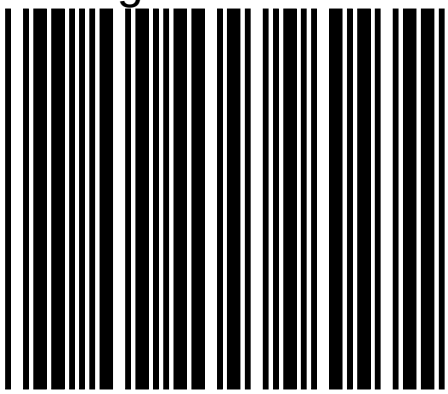
Message Terminator-CR/LF



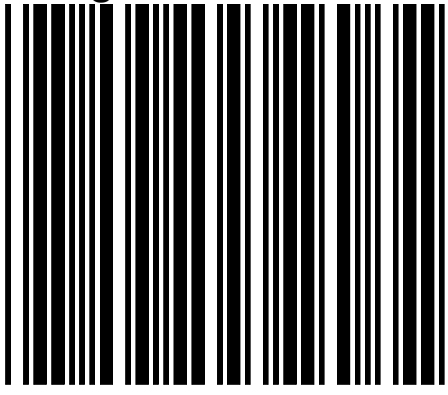
Message Terminator-CR



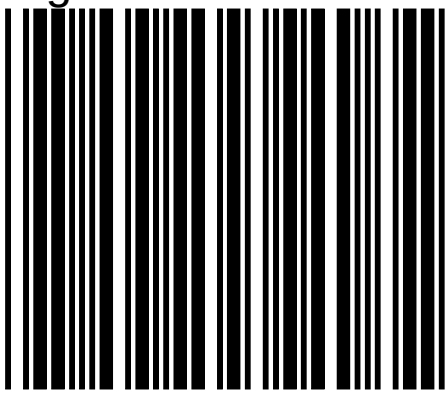
Message Terminator-LF



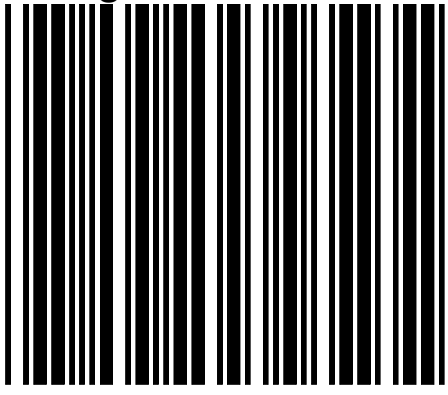
Message Terminator-H.tab



Message Terminator-STX/ETX

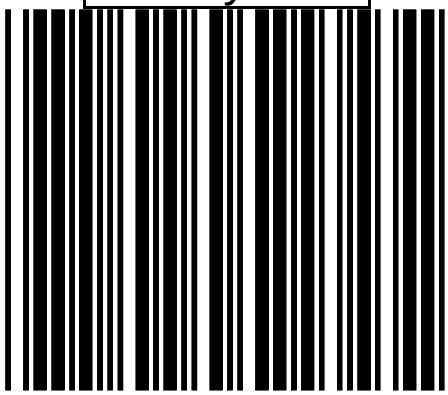


Message Terminator-EOT

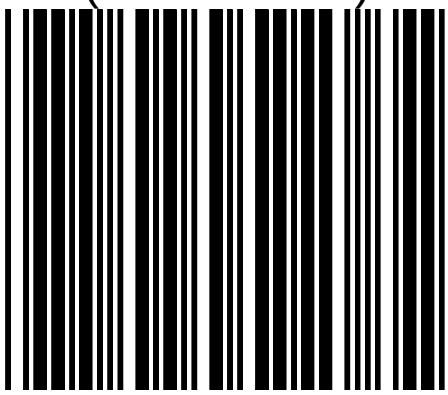


KEYBOARD WEDGE

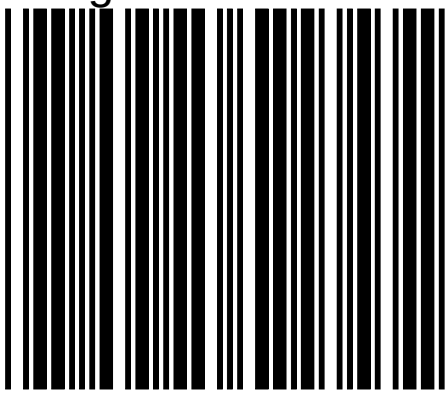
US Keyboard



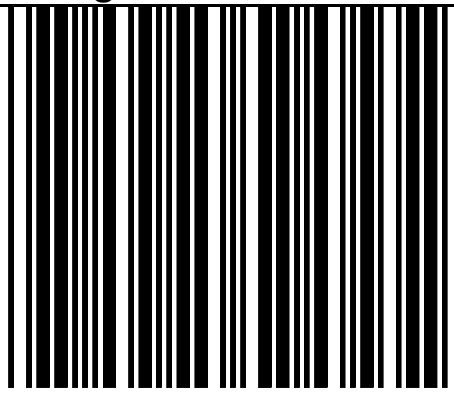
International Keyboard
(ALT method)



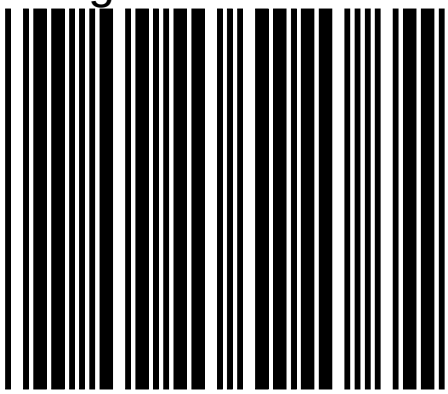
Message Terminator-None



Message Terminator-Enter



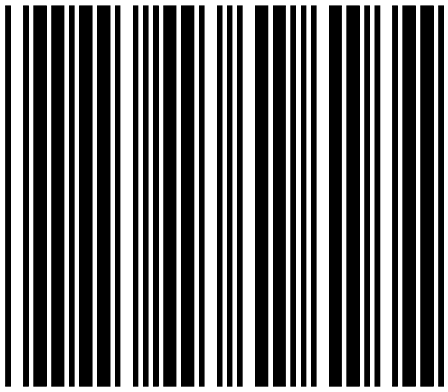
Message Terminator-H.tab



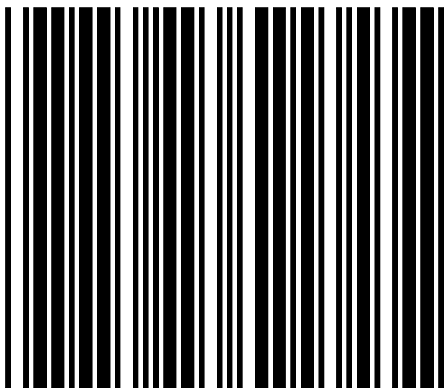
CAPITAL LOCK

Select the suitable code to match your keyboard caps lock status

Capital lock on



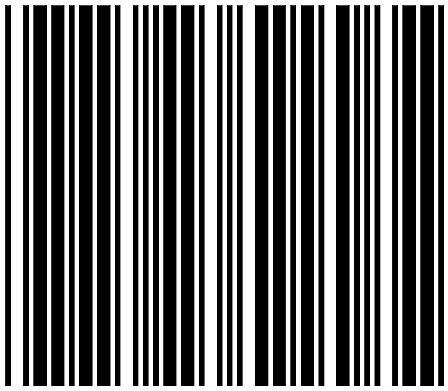
Capital lock off



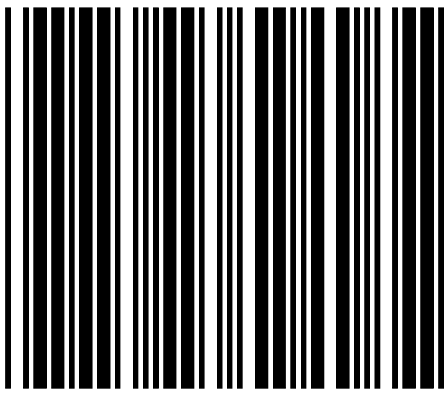
FUNCTION KEY EMULATION

The series allow you to emulate Function keys, Arrow keys, and many other “extended” keys. An IBM compatible keyboard does not translate to ASCII characters. It can be concatenated with input data as header and/or trailer. (see Appendix B)

Function key emulation enable

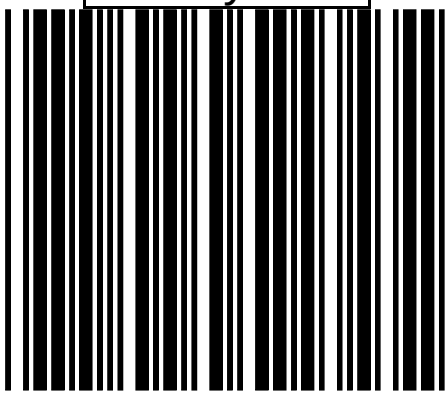


Function key emulation disable

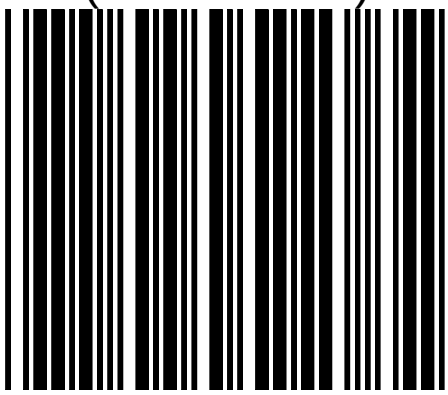


USB INTERFACE

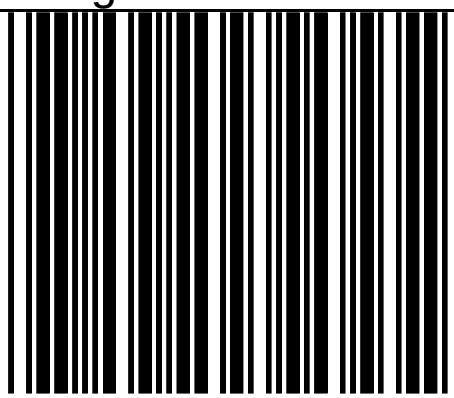
US Keyboard



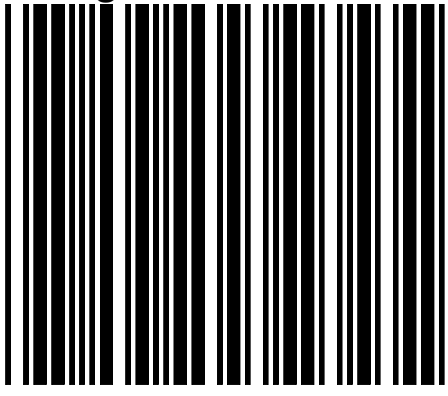
International Keyboard
(ALT method)



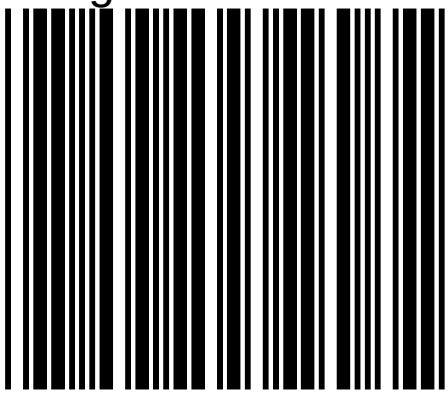
Message Terminator-Enter



Message terminator-None

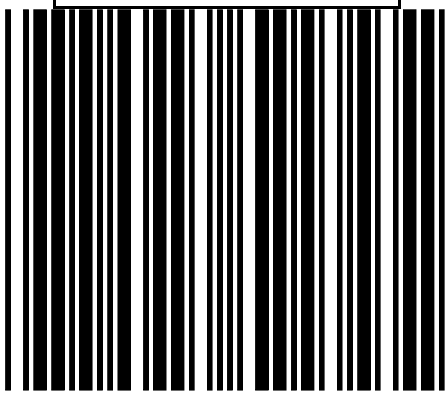


Message Terminator-H.tab

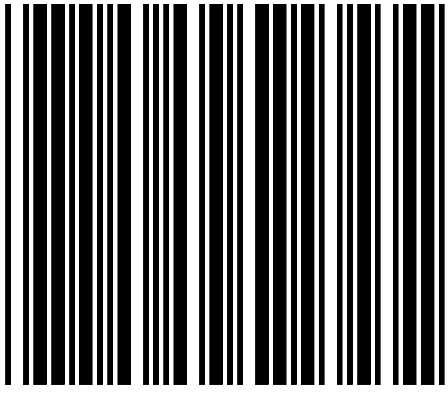


CODE SELECTION

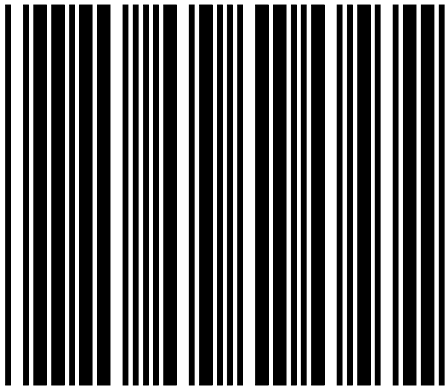
Code 39 Enable



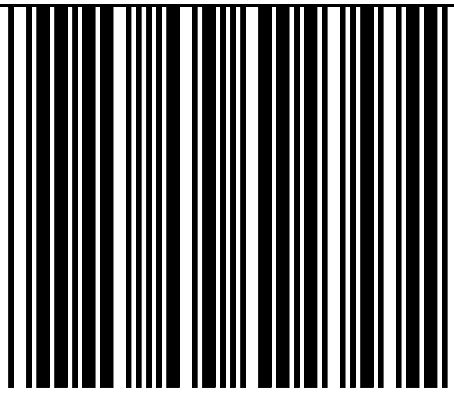
Code 39 Disable



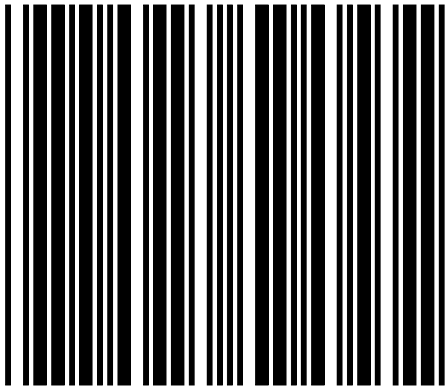
FULL ASCII CODE39 Enable



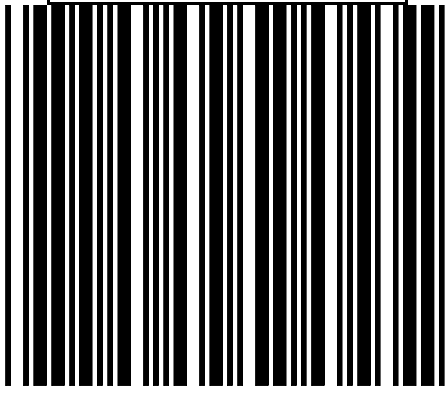
FULL ASCII CODE 39 Disable



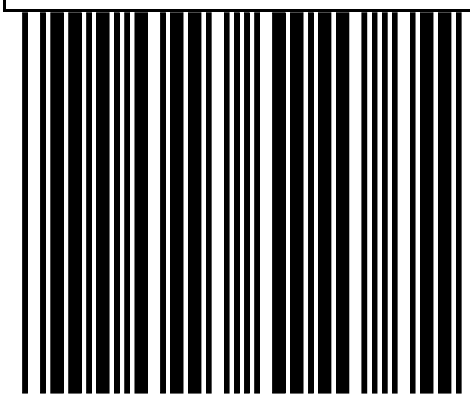
Codabar Enable



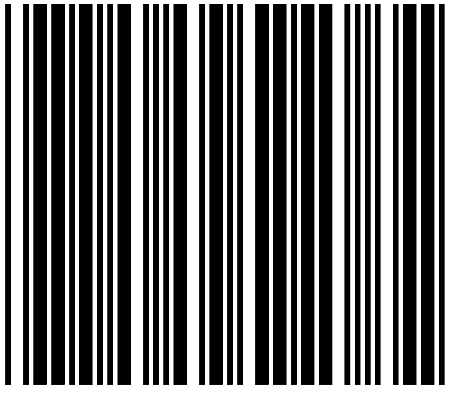
Codabar Disable



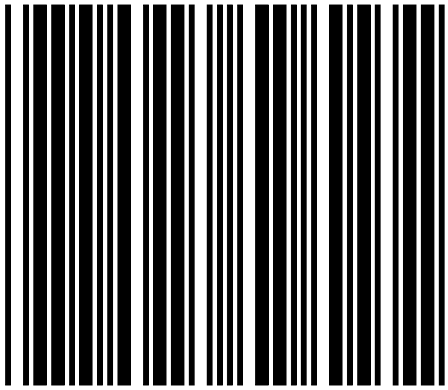
UPC/EAN/JAN Enable



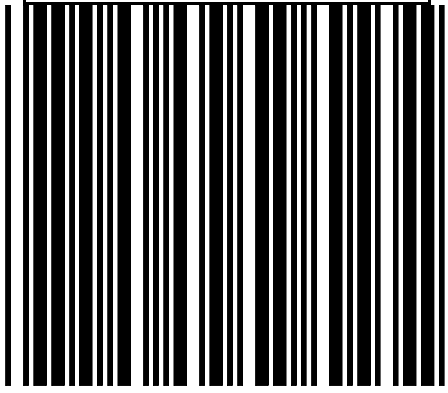
UPC/EAN/JAN Disable



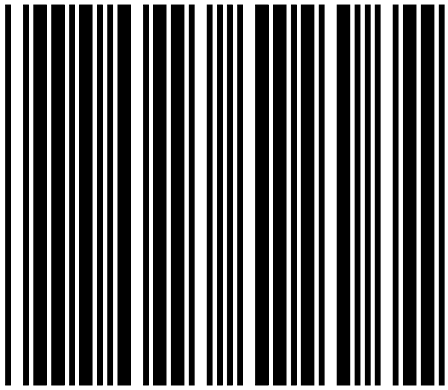
ITF 2 of 5 Enable



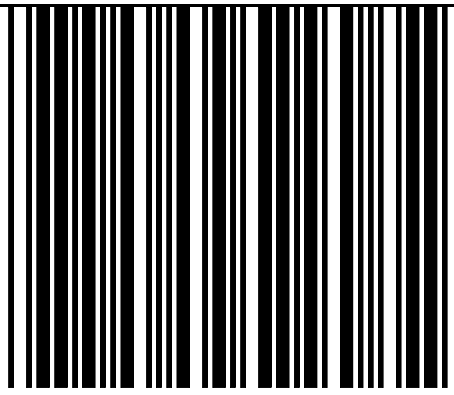
ITF 2 OF 5 Disable



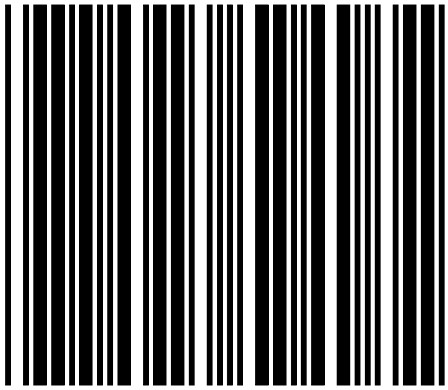
Chinese Post Code Enable



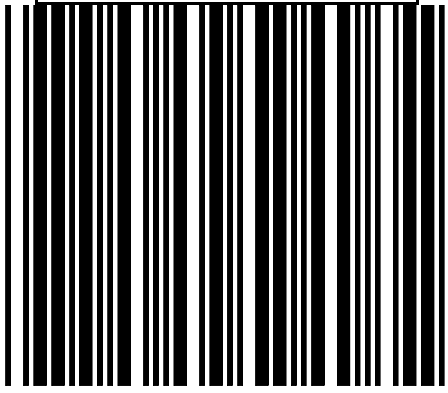
Chinese Post Code Disable



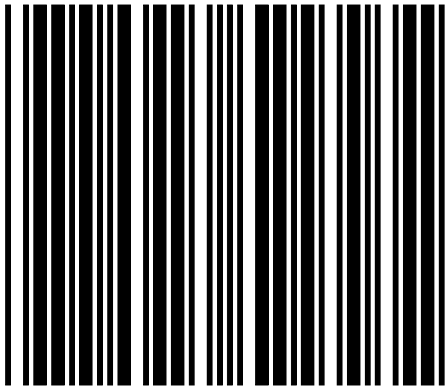
Code 128 Enable



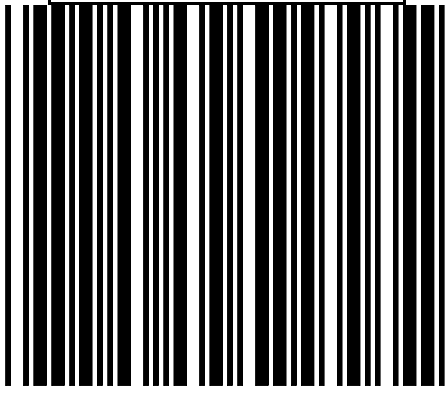
Code 128 Disable



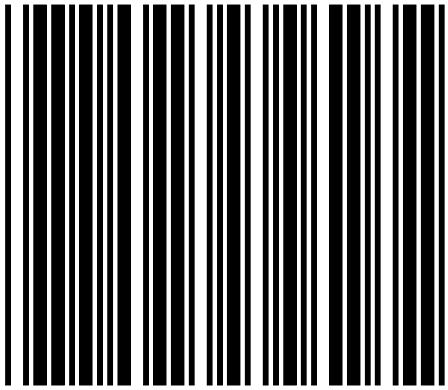
Code 93 Enable



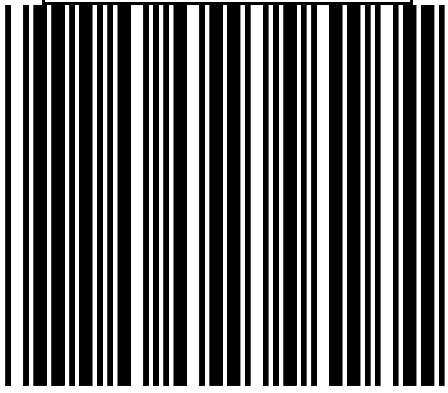
Code 93 Disable



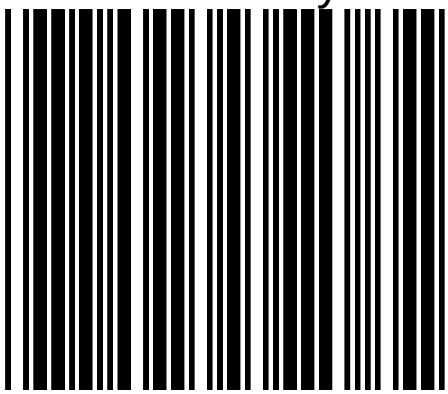
EAN-128 Enable



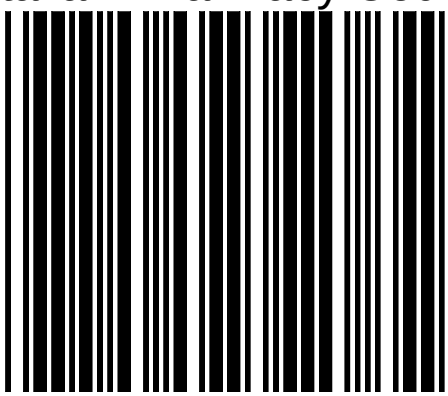
EAN-128 Disable



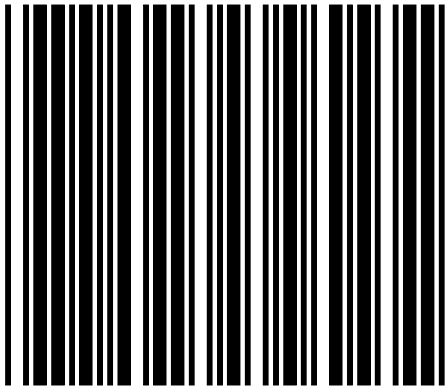
Code 32 Enable
(Italian Pharmacy Code)



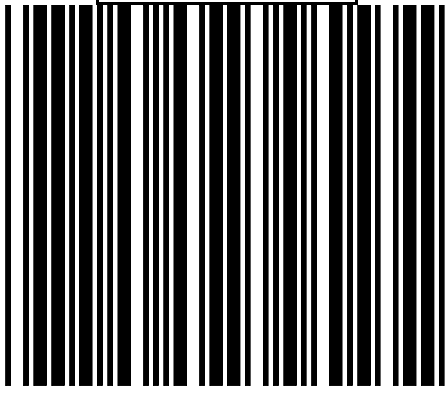
Code 32 Disable
(Italian Pharmacy Code)



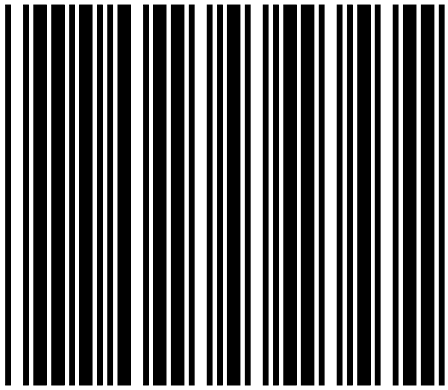
MSI enable



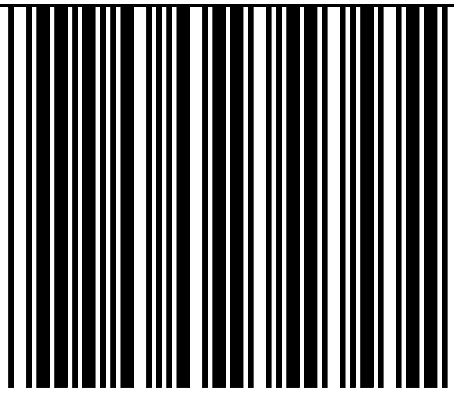
MSI Disable



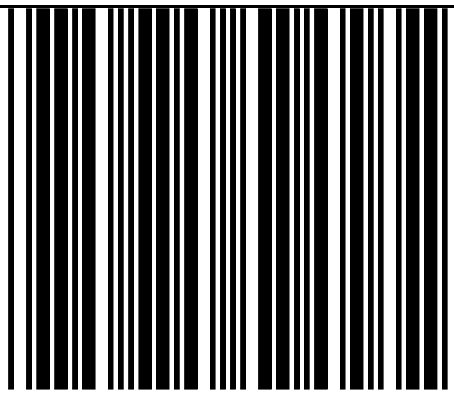
EAN-13 Convert to ISBN/ISSN Enable



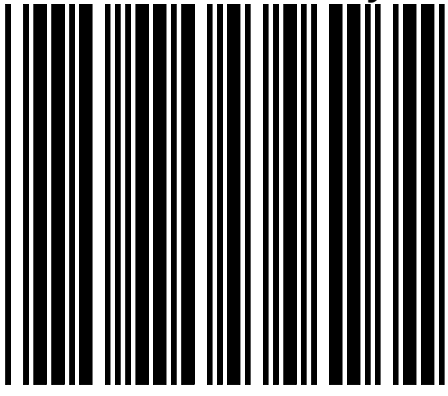
EAN-13 Convert to ISBN/ISSN Disable



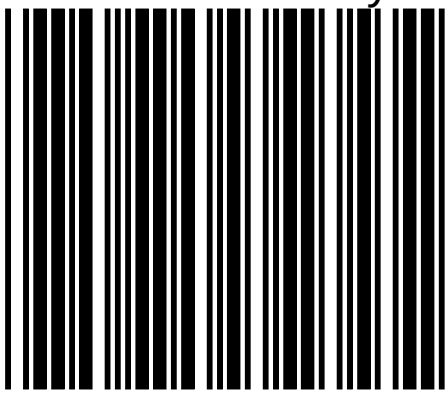
UPC/EAN ADD ON OFF



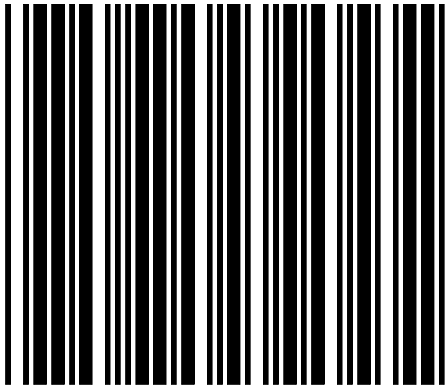
ADD ON 5 only



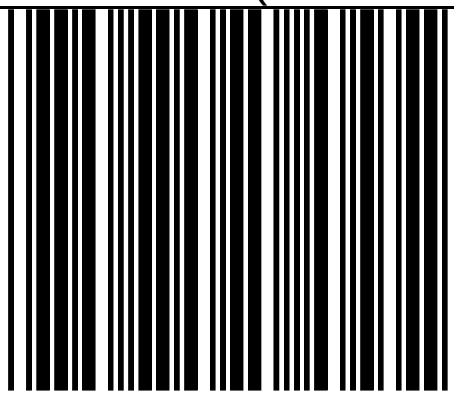
ADD ON 2 only



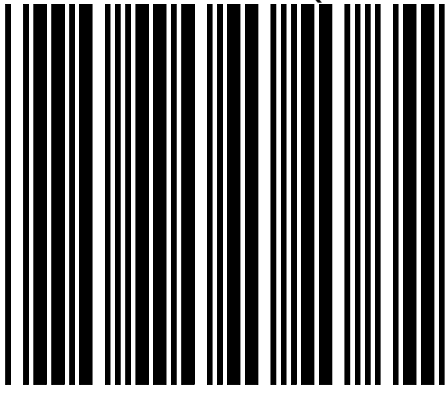
ADD ON 2 or 5



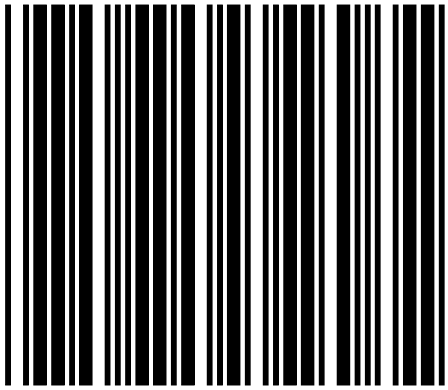
EAN/UPC +Add on (none mandatory)



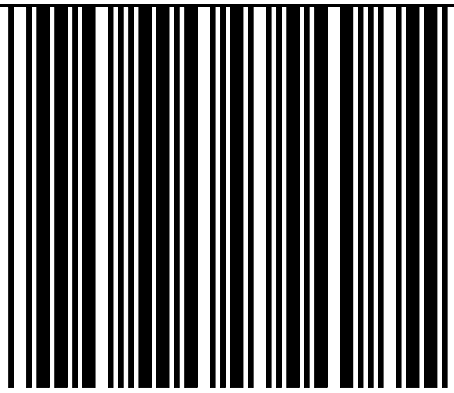
EAN/UPC + Add on (mandatory)



Force UPC-A to EAN-13 format enable



Force UPC-A to EAN-13 format disable



BARCODE IDENTIFIER CODE SETTING

The series scanner can transmit max.2 digit barcode identifier code for different type of barcode, Use enable or disable identifier setting barcode to choose transmit or not transmit barcode identifier code.

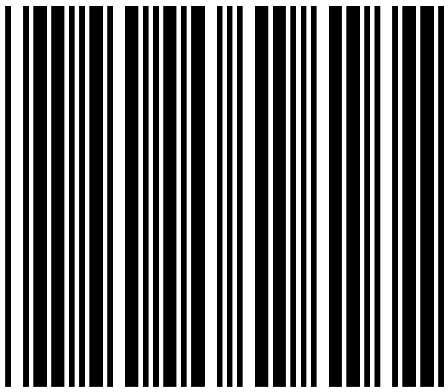
Each of the series type scanners also can set max.2digits as barcode identifier code according to different barcode. The procedure is as follows:

1.) Scan “Enter/Exit programming mode” label
2.) Scan “Barcode identifier setting code” label
3.) Scan the new code mark from ASCII table (max. two digits). For example, if one “AB” want for code mark then scan “A” and “B”
4.) Scan “save setting to confirm” label
5.) Scan “ Enter/Exit programming mode” label

.

BARCODE IDENTIFIER CODE SELECTION

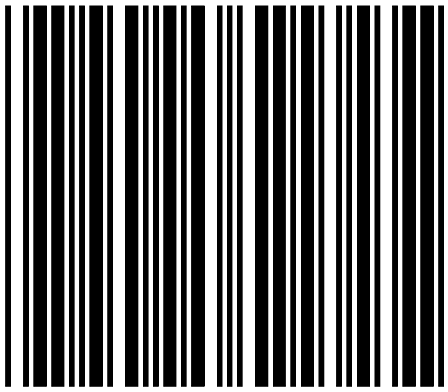
Disable identifier code



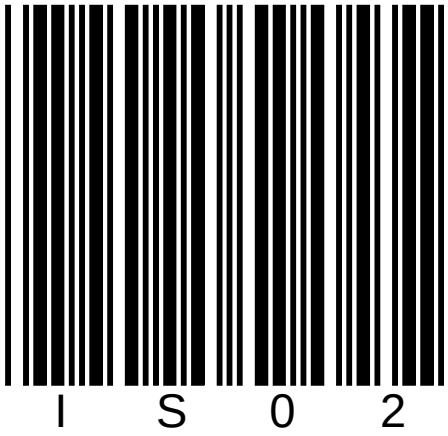
scan “enable identifier code” label to transmit the label ID as following table

Code 39	M
ITF 2 of 5	I
Chinese post code	H
UPC-A	A
UPC-E	E
EAN-13	F
EAN-8	FF
Codabar	N
Code 128	K
Code 93	L
MSI/Plessy	P

Enable identifier code



SET MESSAGE FORMAT WITH CODE IDENTIFIER AS ALPHA-30 FORMAT



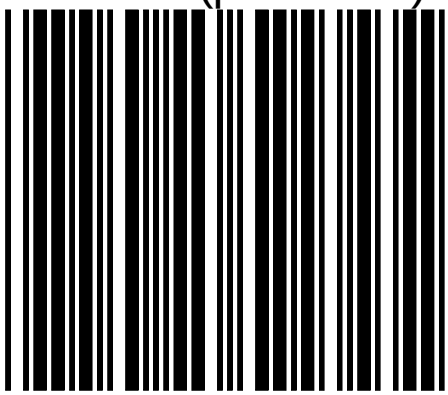
Code	Code identifier
UPC-A	A
UPC-E	E
EAN-8	FF
EAN-13	F
CODE 39	*
CODBAR	%
ITF 2 OF 5	i
CODE 93	&
CODE 128	#
MSI/PLESSY	@
EAN-128	P

DATA EDITING

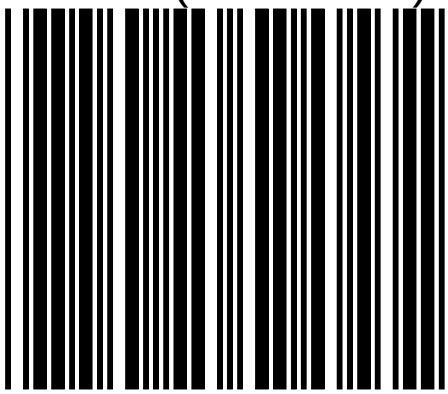
The **Header and Trailer** allows you to append a header and/or a trailer to every message transmitted via the serial ports or the keyboard port. There is no restriction in selecting header or trailer characters as far as the sum of the lengths of header and trailer is not greater than 10 digits.

1. Select either header or trailer you are going to program by scanning the corresponding label
2. Scan the character(s) you want from the enclosed ASCII table to set as header or trailer (be sure to enable full ASCII code 39 option before you start).
3. Read the “Set” label to confirm your choice into memory.

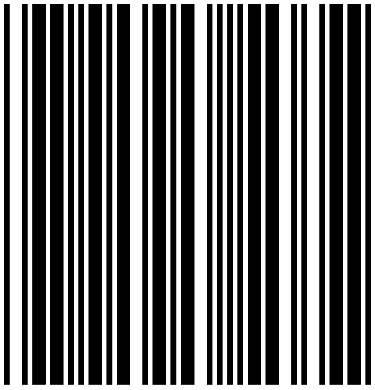
Header (preamble)



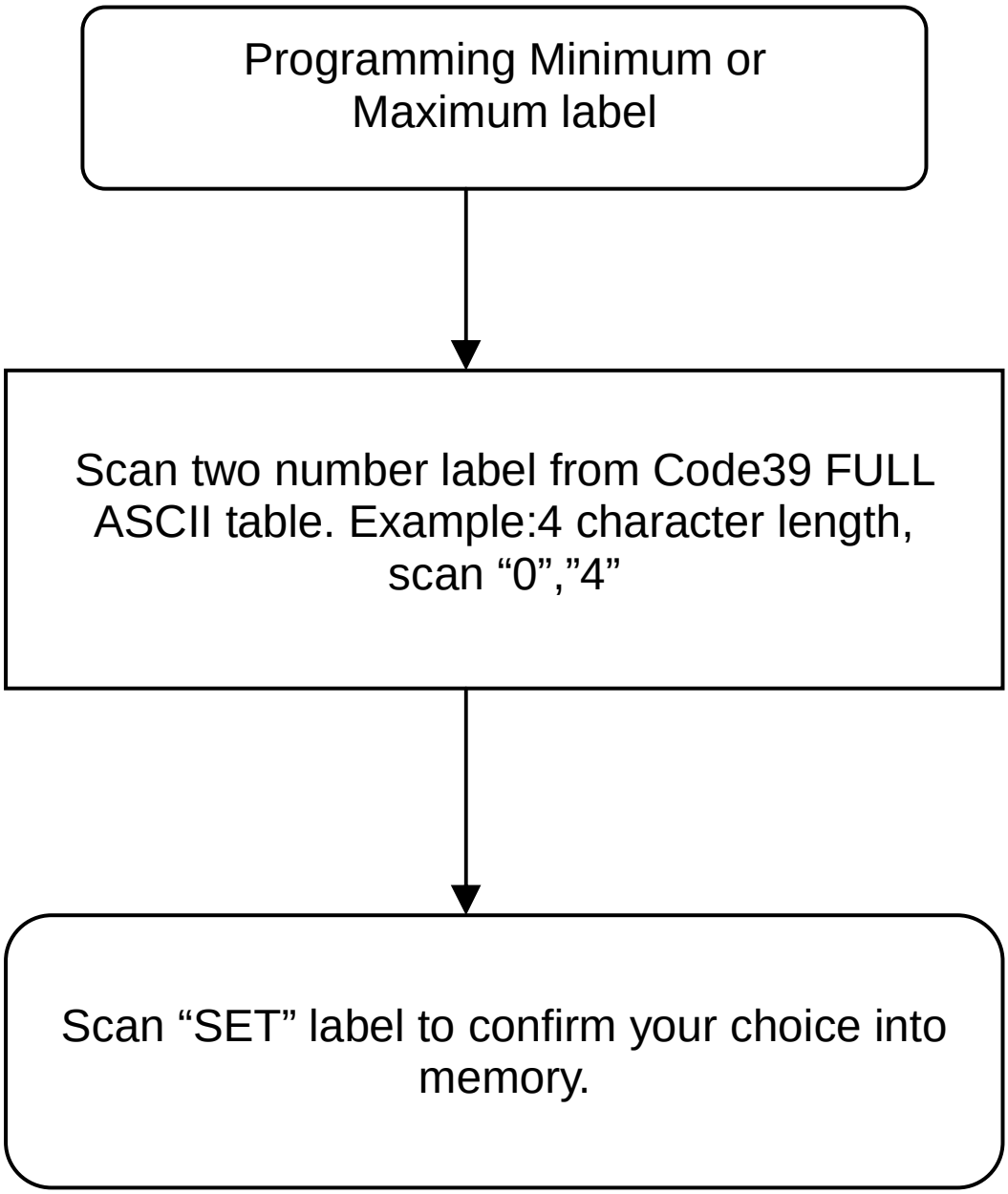
Trailer (Postamble)



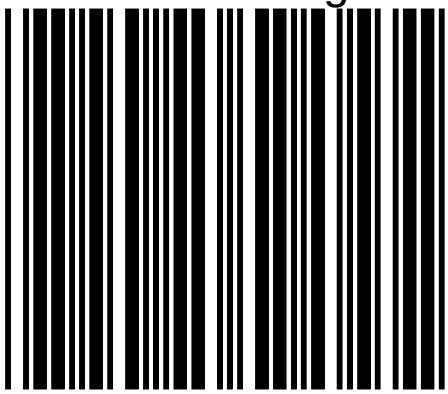
Set



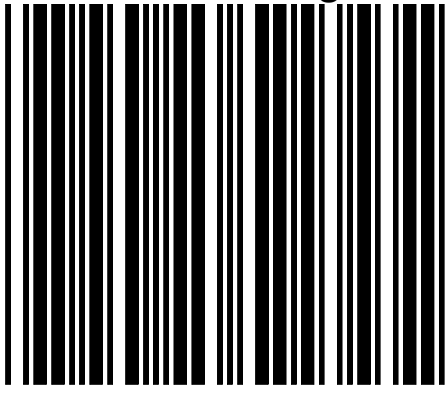
CODE LENGTH SETTING FLOW



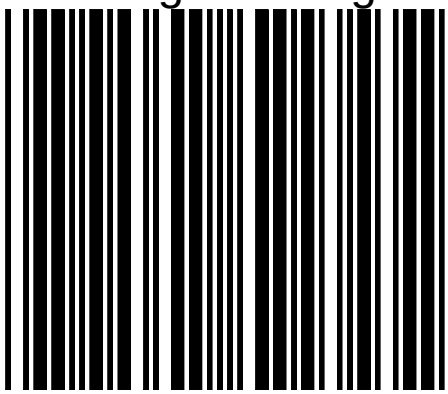
ITF 2 OF 5 Min. length setting



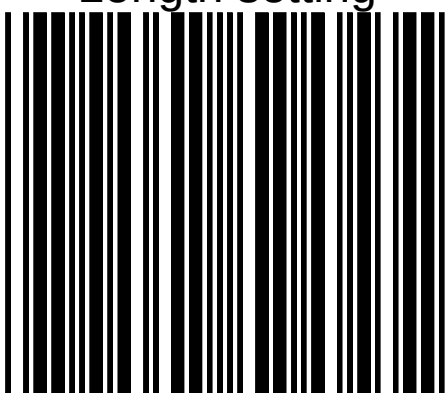
ITF 2 of 5 Max. length setting



Chinese post code maximum
Length setting

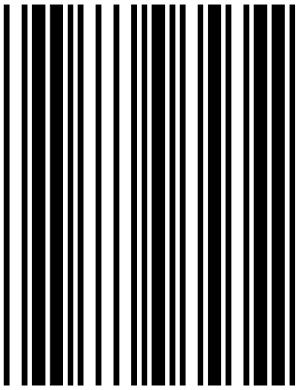


Chinese post code minimum
Length setting

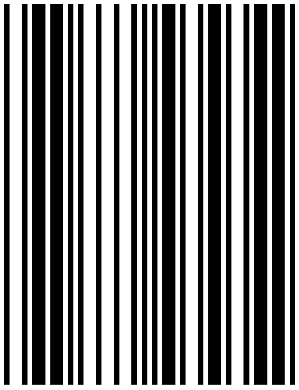


ASCII CHARACTER

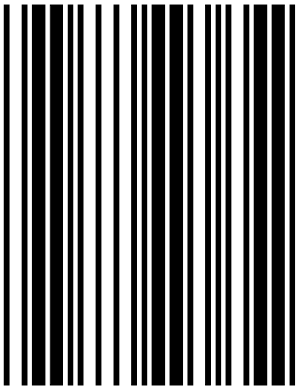
SOH



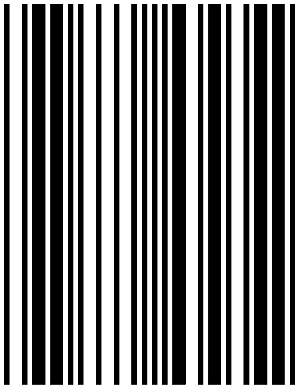
STX



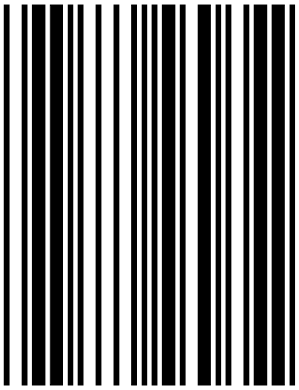
ETX



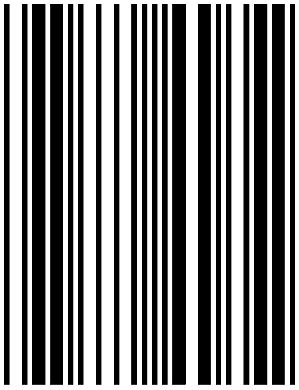
EOT



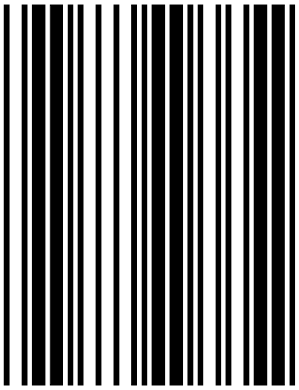
HT



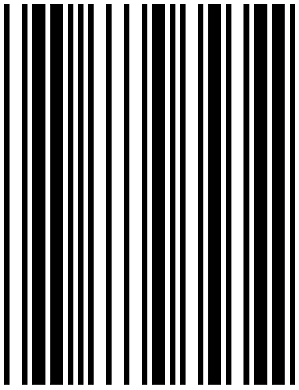
LF



CR



ESC



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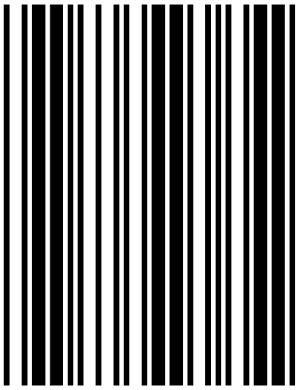

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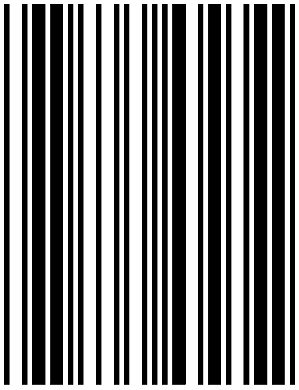

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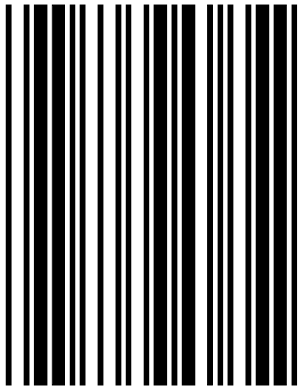

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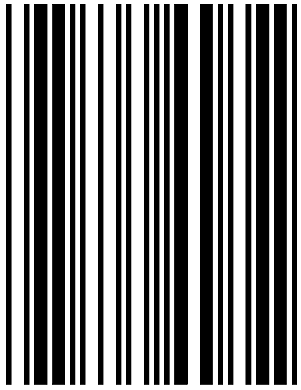

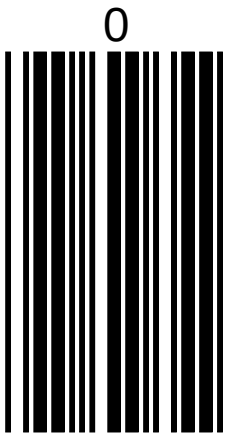

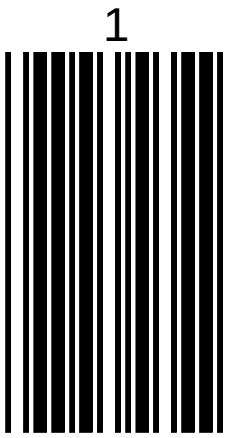

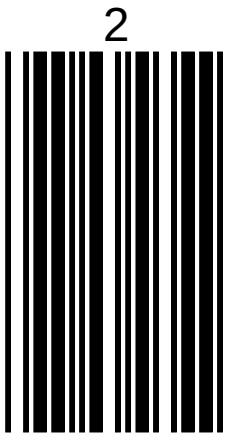
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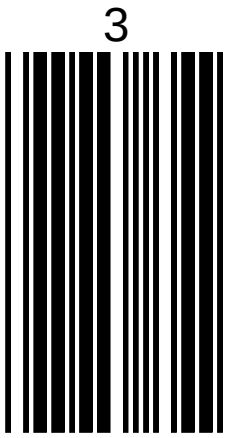
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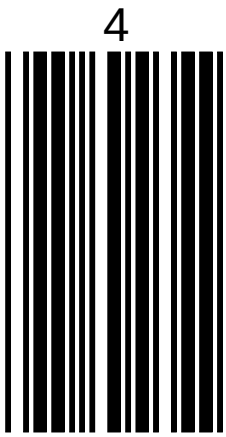
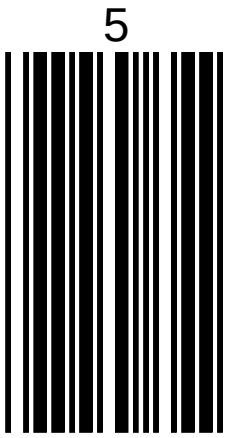
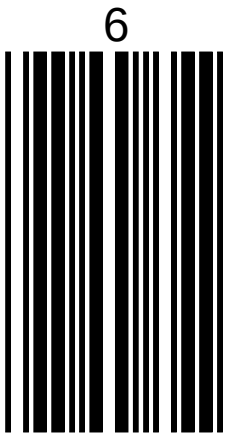
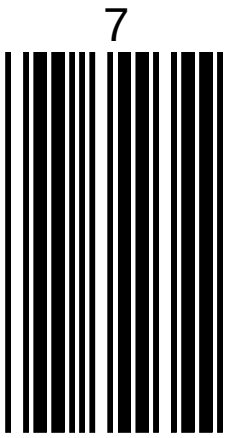
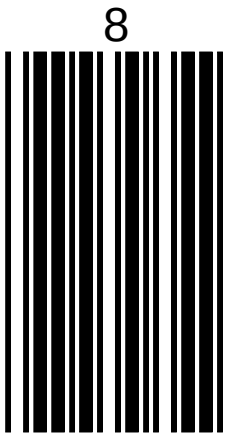
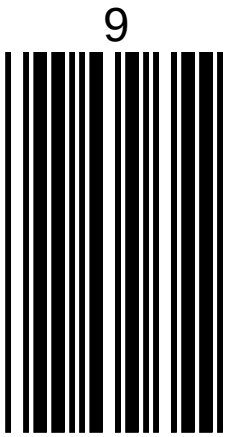

4


5

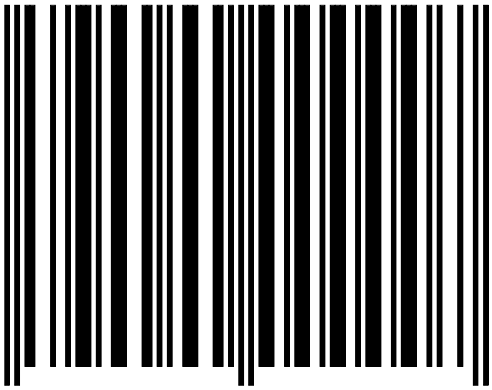

6


7


8


9

Enter/Exit Programming Mode



Part No.: MUL-53243-03