BARCODE SCANNER USER'S MANUAL

Installation and Programming Guide

Version 1.4

www.pos-x.com

WARNING

Please power down the host computer before connecting this wand. This is critical to protecting both the wand and the host from serious damage

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

CONTENTS

GENERAL

SETTING GROUP(GROUP1~14)

SYMBOLOGY FORMATTING(GROUP15~32)

FULL ASCII(CODE39)TABLE,FUNCTION CODE TABLE(GROUP34~48)

APPENDIX

The following manual applies to all POS-X , XI3200 series and EVO series barcode scanners. For additional help, please visit www.pos-x.com or call POS-X technical support.

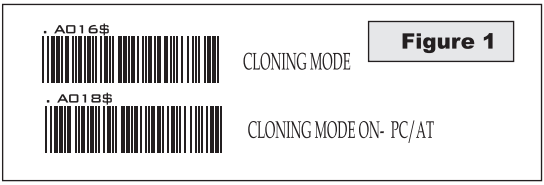
Figure 2

No	Kind of Troubles	Symptoms	Solutions
1	Computer Type (Group 1)	Scanner seems to be performing as usual, but no data is being output.	1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the scanner to the exact computer type immediately.
2	Interfaces Selections (Group 1)	The scanner does not scan when the trigger is depressed.	1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the scanner to the correct interface. The cable needs to match the interface.
3	Setting Procedure have not completed (Setting Need Triple Shot scanning) ---------- Group - 4,5,8,9, 17, 18, 19,20,22,23,25, 31	Most settings require only a single bar code , but a few need several different bar codes to be scanned in order to completely define a setting. They are: 1. Preamble, Postamble (Group 4) (page 14) 2.Accuracy Adjustment (Group 5) (page 15) 3. Customer ID Configuration (Groups 8 and 9)(page 18-19) 4. Min/Max Length (Groups 17, 18, 19, 20, 21, 22, 25) 5. ABC Codabar (Groups 22) 6. CX-Codabar (Groups 22 and 23) 7. Coupling Codabar (Groups 22 and 23) 8. EAN 128 (Group 31)	1. Follow the procedures for these settings at the appropriate pages. 2. The scanner will beep three times for an incomplete setting. 3. Scan RESET to try a setting again.
4	Limitation of length of the bar code	The scanner is reading correctly, except for certain bar codes of a certain length	Reset the Min/Max setting for the bar code symbology affected.
5	RS232 Protocol Comunication setting problem	The scanner appears to be working in the RS-232 interface, but no data is output.	Ensure the correct RS-232 communication parameters have been set: Baud Rate, Handshaking, Stop Bits, Data Bits, andParity. These settings must be the same for both the scanner and the host.

CLONING MODE

WHAT IS CLONING MODE?
CLONING duplicates a scanners settings in other scanners. It can save time when a number of scanners must be programmed to the same settings.

HOW SHOULD CLONING WORK?
1. Using this guide, make all the necessary settings for one wand.
2. Scan the CLONING MODE bar code shown below.
3. When CLONING MODE is scanned, all setup parameters will be converted to alphanumeric characters and shown on the monitor.
4. Using a bar code printer, print out all the setup parameters as Code 39 bar code labels.
5. Scan the printed labels sequentially with each wand to be programmed.



.A018$(Cloning Mode on PC/AT) - you can clone the settings to a PC/AT regardless what kind of device has been chosen on the scanner

NOTES:

1. All cloning strings are upper case.
2. All cloning strings printed on labels should be the same as those on the monitor sequentially from first to last.
3. Cloning mode works in Word Note Pad only.
4. Never edit the data on the first row (.A017$). It is an entry gate for cloning.
5. The cloning string's length can be adjusted by combining multiple strings into one, or by breaking one string to multiple strings starting from the second row after "….". Length must be in sequences of four, such as 4,8,12,16,20 (MAX).
6. Be sure to print the dots exactly where they are shown on the monitor.

FORMAT OF CLONING

* Format of Cloning :
  1st rows >>> ".A017$" (never edit any data of the first row)
  2nd rows >>> "....XXXX" you can adjust the String's Length starting from the dots"...." forward. The length of the string should be in 4, 8,12,16 or 20 (MAX)digits.
  3rd rows~ so on >>> XXXX
  End rows- A dot "." Is an ending of cloning.

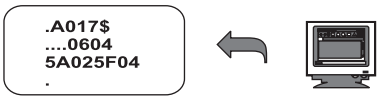
XXXX Stand for any String

EXAMPLE :

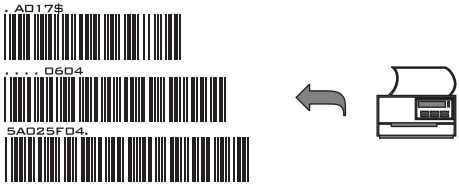
1. PROJECT ASSIGNMENTS :
1.1. Beep tone: **BEEP LOW -- HIGH .**
1.2. Capslock Mode: **CAPSLOCK ON (FIXED).**
1.3. Reading Mode: **CONTINUOUS AUTO OFF.**

2. SETTING PROCEDURE:
2.1. Scan **BEEP LOW.--HIGH (GROUP 3).(page13)**
2.2. Scan **CAPSLOCK ON (FIXED).(GROUP 3).**
2.3. Scan **CONTINUOUS AUTO OFF. (GROUP2).(page12)**

3. All parameters will be converted to alphanumeric characters and shown on the monitor.



4. Print the results shown on the monitor as bar codes with a bar code printer. The bar codes should be in the Code 39 symbology.



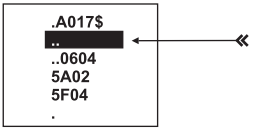
5. Scan these labels with any of the wands that must be programmed with the same settings as the first wand. Be sure to scan from the first row to the second and so on sequentially, top to bottom.

CORRECT SETTING

.A017$	
....	4
0604	4
5A02	4
5F04	4
.	. (Dot)

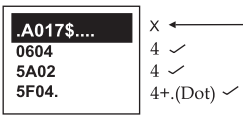
.A017$	
....06045A02	12
5F04.	4+.(Dot)

WRONG SETTING



Wrong Setting: The string"...." Consists of 4 Dots, located at the beginning of second rows, Do not break the "...." Into multiple string.

Wrong Setting: The string lengths in the second and third rows do not match the length requirements, because rows should be in lengths of four digits.

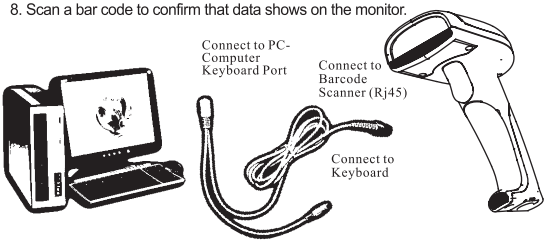


Wrong Setting Because you add " ...." After .A017$
The 0.A17$ is a FIXED parameter for setup entering. It is an unchangeable parameter. **Never adds, delete or rearrange data from the FIRST row.**

HOW TO CONNECT THE SCANNER TO THE HOST TERMINAL: Handheld Barcode Scanner

KEYBOARD WEDGE INTERFACE

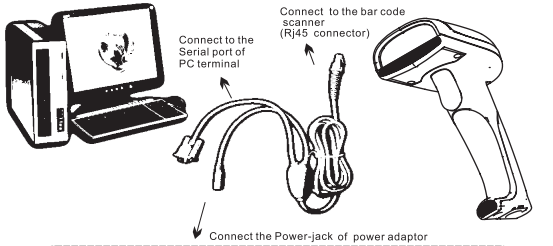
1. Power down the host computer.
2. Disconnect the keyboard cable from the computer.
3. Connect the "Y" cable between the keyboard and the scanner and the computer.
4. Restart the computer.
5. The scanner will beep.
6. Set the scanner to KEYBOARD interface by referring to GROUP 1 (page11) (Interface Selections).
7. Scanner will beep to confirm the setting.
8. Scan a bar code to confirm that data shows on the monitor.



RS-232 INTERFACE

1.Power down the host computer.
2.Connect the RS-232 cable between the scanner and the computer.
3 Connect the power adaptor to the cable.
4 Restart the computer, .
5.Plug the power adaptor into a power outlet.
6.The scanner will beep.
7.Set the scanner to RS-232 interface by referring to GROUP 1 (page 11) (Interface Selection).
8.Set RS-232 protocol: Baud Rate, Stop Bits, Handshaking, Data Bits, and Parity.
9.Scan a bar code to confirm that data shows on the monitor.

NOTES:
1.Before plugging the power adaptor into the scanner, be sure the voltage, power consumption, and inner and outer DC characteristics are correct to avoid serious damage to the scanner and/or the computer.
2.Make sure the protocol communication settings of the scanner (such as baud rate, data bits, etc.) match those of the host computer. Otherwise, no data will be transmitted..

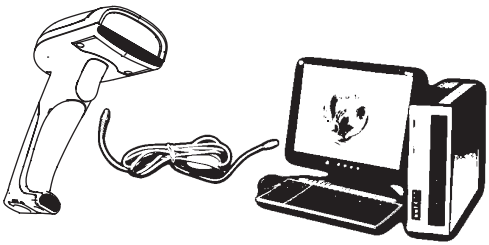


Check the power adaptor to ensure:
1. Input of AC current 110V/ 220V matches the power supply standard of the country in which the scanner is being used.
2.Adapter output is +5V DC
3.The jack input is +5V DC

USB INTERFACES

The USB Interface supported is compatible with the Apple MAC series, later PCs and Windows 98, 2000, Me and XP, Vista .

1. Connect the USB cable between the scanner and the computer.
2. The scanner will beep.
3. The Scanner will detect the USB driver automatically. (The first time the scanner is connected via the USB port, follow the appropriate instructions for the host computer.)
4. Set the scanner to KEYBOARD/USB interface by referring to GROUP-1 (Interface Selections).
5. Scanner will beep to confirm the setting.
6. Scan a bar code to confirm that data shows on the monitor.

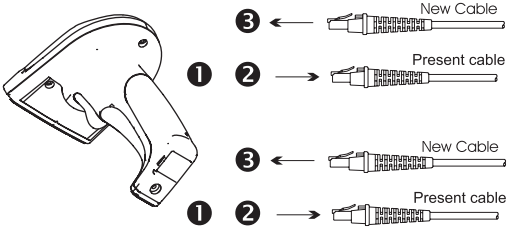


HOW TO CHANGE A CABLE

The CCD scanner are designed to switch easily between interface options. To switch from one interface to another, the appropriate cable must be installed. To change a cable, simply follow these steps:

1.To release the cable, insert a pin or straightened paper clip into the hole at the base of the scanner where the cable is connected.
2. Remove the cable from the scanner.
3. Plug in the new cable.

After changing to a new cable, be sure to resetthe interface setting as appropriate (including parameter settings for the RS-232 interface).



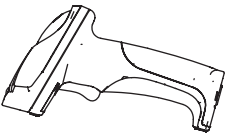
HOW TO SET PARAMETERS

How do you program a scanner with this user's guide?

1. Use the scanner to scan at the bar code representing the function/ parameter you want to set.
2. When you hear two beeps, the new setting will have been defined or updated into the memory processor.

   Default parameters are indicated in bold type and underlined characters. The character font is ARIAL BLACK. CD = Check Digit. CDV = Check Digit Verification.

   Most settings require only a single bar code, but a few need several different bar codes to be scanned in order to completely define a setting. They are:



SETTING BAR CODE

Preamble / Postamble (maximum 16 digits)
Step 1: Scan CLR PRE/POSTAMBLE.
Step 2: Scan PREAMBLE or POSTAMBLE..
Step 3: Scan any alphanumeric from Full ASCII Table in Groups 34 - 45. (page52-63)
Step 4: Scan PREAMBLE or POSTAMBLE.

Min Length / Max Length
Step 1: Scan MIN LENGTH or MAX LENGTH.
Step 2: Scan two digits from Group 42 (page60)
Step 3: Scan MIN LENGTH or MAX LENGTH.

Accuracy Adjustment
Step1: Scan ACCURACY ADJUSTMENT.
Step 2:Scan one digit from Group 42 (page60)
Step 3:Scan ACCURACY ADJUSTMENT.

Customer Configuration ID (Example: Code 39)
Step 1: Scan CODE 39 SET ID from Group 8. (page18)
Step 2: Scan either one digits or two digits alphanumeric (maximum 2 digits) from Full ASCII table In Groups 34 - 45. (page52-63)
Step 3: Scan CODE 39 SET ID from Group 8.(page18)

Set A Data - (CX-Codabar, ABC Codabar, Codabar Coupling).
Step1: Scan SET A DATA.
Step 2:Scan one digits any alphanumeric character from Full ASCII Table in Groups 34 - 45. (page52-63)
Step 3: Scan SET A DATA.

NOTES:
1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan CLEAR to start again.

RESET

GROUP-1

INTERFACES SELECTION, COMPUTER TYPE, DEFAULT, SCAN SPEED.

DEFAULT

. A001$

COMPUTER TYPE

. C004$

PC-AT

. C007$

NOTEBOOK*

SYMPTOMS	SOLUTION
Scanner seems to be performing as usual, but no data is being output.	1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the scanner to the exact computer type immediately.

Caution:Please ensure the correct computer type is set when the scanner is attached to a new host computer. If set to Notebook, the scanner will operate with no external keyboard.

INTERFACES SELECTION

. C001$

KEYBOARD

. C002$

RS232

. C003$

WAND

. C005$

USB

SYMPTOM	SOLUTION
The wand does not scan/ The scanner does not scan when the trigger is depressed.	1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the wand to the correct interface. The cable needs to match the interface.

Caution: This scanner is designed to switch easily between interface options. To switch from one interface to another, the appropriate cable must be installed. After changing to a new cable, be sure to reset the interface setting as appropriate.

GROUP-2

READING MODE SETTING

CONTINUOUS MODE

* LED is always on. ,
* The trigger does not function in Continuous Mode.

FLASH MODE

*The LED is on steadily if a bar code is close to the scanner, but starts to flash if no bar code has been detected after 60 seconds.
*The trigger does not function in Flash Mode.

TRIGGER MODE

* The LED will light when the trigger is pressed.
* The LED will go off when the trigger is released.

CONTINUOUS AUTO OFF

* The LED is always on when the trigger is pressed .
* The LED will go off if no bar code has been detected after 60 seconds.

TOGGLE MODE

* This function works like Trigger Mode, but the scanner beeps to indicate a good read.

*AUTO SENSING MODE

* If Auto-Sensing (Triggerless) Mode is on, the LED will go off if the scanner does notdetect a bar code.
* The LED lights automatically when a bar code is detected.

*ULTRAVIOLET MODE

* If Ultraviolet Mode is on, the ultraviolet light source will light and stay on continuously.
* The ultraviolet light will go off when the trigger is pressed, and back on when the trigger is released.

TEST MODE

* Factory Test Scanning

NOTES:

1. To extend the scanner's life, keep the scanner set to Trigger Mode or Continuous Auto Off Mode.
2. Only certain models support Auto Sensing or Ultraviolet Modes.
3. For convenience, print the bar code for Ultraviolet Mode and keep it near the work station for easy scanning when needed.
4. In Ultraviolet Mode, press the trigger button and the reading mode will swift from Ultraviolet Mode to the reading mode the scanner was last in.
5. The LED will glow RED for STANDBY and GREEN for GOOD READ.
6. The Trigger Mode is available for most handheld bar code scanner, but The trigger is only available to wands with a switch capability.

APPENDIX

Autosensing Mode : I

Autosensing Mode:ON

.F007$

Autosensing Mode ：When Autosensing Mode is on, both Blue LED and Magnetic switches will be on automatically (Blue LED ON + Magnetic switches ON).

Magnetic ON/OFF

.F034$

Magnetic Switch ON

.F035$

Magnetic Switch OFF

Remark:

(1). Be informed that Magnetic Switch functionality is offered for certain high grade model only, please consult your vendor for the detail,

(2). It should be paired to work with Magnetic Stand.

(3). If Magnetic Switch is on, the scanner will be switched to Autosensing mode while you put it on the Autostand. the scanner will be switched to Trigger mode while move away from autostand.

Enhanced CCD autosensing (Blue LED) : ON/OFF

.F032$

BLUE LED ON

.F033$

Blue LED OFF

Blue LEDs are enhanced the sensitivity of Autosensing mode. If Blue LEDs are on, the Sensitivity of autosensing will be become more sensitive.

APPENDIX

Autosensing Mode : II

No decode timeout (3sec)

.F030$

No decode timeout (3sec)
No decode timeout ： The purpose is
to control the illumination red LED, if no any signal detect within setting time, the Illumination Red LED turn will turned off. The greater the number, the longer time.

Setting procedures:
Step 1 ： scan No decode timeout
Step 2 ： scan two digits from numeric table
Step 3 ： scan No decode timeout.


0


1


2


3


4


5


6


7


8


9

GROUP-3

CHECK VERSION, BEEP TONE , TERMINATOR SEND DATA LENGTH

BEEP TONE MODE

2.7KHz

.F019$

BEEP HIGH

.F021$

BEEP HIGH--LOW

.F018$

BEEP MEDIUM

.F020$

BEEP LOW--HIGH

.F022$

BEEP LOW

2.1KHz

. F012$

BEEP OFF

. F014$

BEEP HIGH

. F016$

BEEP HIGH--LOW

. F013$

BEEP MEDIUM

. F015$

BEEP LOW--HIGH

. F017$

BEEP LOW

CHECK VERSION

. A007$

CHECK VERSION

TERMINATOR

. D010$

NONE

. D011$

LF

. D012$

CR

. D013$

CR+LF

. D014$

TAB

. D015$

SPACE

. D016$

ESC

NOTES:

1. For the Keyboard Wedge interface the default terminator is CR.
2. For the USB interfaces the default terminator is CR,
3. For the RS232 interfaces the default terminator is CR+LF

SEND DATA LENGTH

.D019$

SEND DATA LENGTH ON

.D020$

SEND DATA LENGTH OFF

GROUP-4

SETUP CODE READ, PREAMBLE & POSTAMBLE.

SETUP CODE READ

.B015$

SETUP CODE ON

.B016$

SETUP CODE OFF * 1

NOTE :

* 1 This setting is disable to all User's Manual Code setting. To use bar code setting, Scan Setup Code On enable bar code setting.

PREAMBLE & POSTAMBLE (PREFIX AND SUFFIX)

. A011$

CLEAR PRE/ POSTAMBLE

. A012$

PREAMBLE (16)

. A013$

POSTAMBLE (16)

EXAMPLE:

Set PREAMBLE String as " ## "
POSTAMBLE String as " $$ "

SETTING PROCEDURE:

STEP 1 : Scan : CLEAR PRE/ POSTAMBLE.
STEP 2 : Scan : PREAMBLE.
STEP 3 : Scan : " # " twice from FULL ASCII Table.
STEP 4 : Scan : PREAMBLE.
STEP 5 : Scan : POSTAMBLE.
STEP 6 : Scan : " $ " twice From FULL ASCII Table.
STEP 7 : Scan : POSTAMBLE.

FORMAT:

{ Preamble}{CodeID}{Bar Code}{Postamble}

NOTES:

1. A PREAMBLE is a string of up to 16 characters added to the beginning of a scanned barcode.
2. A POSTAMBLE is a string of up to16 characters added to the end of a scanned bar code.
3. Default value for either: None.

GROUP-5

ACCURACY ADJUSTMENT

0

1

2

3

4

5

6

7

8

9

ACCURACY ADJUSTMENT

.A010$

Accuracy Adjustment assures a more reliable decoded output. Enabling the feature and setting a number from 1 to 9 subjects the decoded output a higher standard of accuracy. The higher the number, the greater the accuracy.

SETTING PROCEDURE:

1. Scan ACCURACY ADJUSTMENT.
2. Scan one digit (1~9) from barcode menu above.
3. Scan ACCURACY ADJUSTMENT.

RESET

.P023$

NOTES:

1. The scanner will beep three times as reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

GROUP-6

LABEL TYPE POSITIVE / NEGATIVE,ENABLE AND DISABLE CODE ID

LABEL TYPE POSITIVE / NEGATIVE

.D021$

DISABLE NEGATIVE LABEL
(POSITIVE LABEL ENABLE)

.D022$

ENABLE NEGATIVE LABEL
(POSITIVE & NEGATIVE ENABLE)

ENABLE CODE ID

. A008$

FACTORY ID ON

. A014$

AIM ID ON

. A015$

SET ID -ON

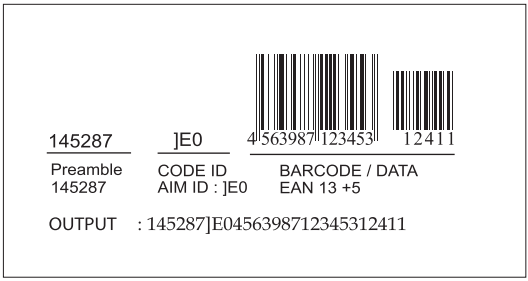
DISABLE CODE ID

. A009$

NOTES:

1. Only ONE code ID will be sent.
2. The code ID is located at the position before the bar code data and after the preamble.

EXAMPLE :
1.Preamble 145287,
2.Code ID: enable AIM ID,
3.Bar code symbologies : EAN 13+5



GROUP-7

SYMBOLOGIES CODE ID IDENTIFIER, SET ID

SYMBOLOGIES CODE ID IDENTIFIER					
Symbologies	Factory ID	AIM ID (new)	Symbologies	Factory ID	AIM ID (new)
EAN 128	T	]C1	MSI	O	]M0
Code 128	K	]C0	MSI(MOD 10 / CDV & not send CD)		]M1
EAN8(+2/+5 OFF)	S	]E4	Code 32	B	]X0
EAN8(+2 ON)		]E4	Codabar	N	]F0
EAN8(+5 ON)		]E4	Codabar(ABC Codabar)		]F1
UPC-E(+2/+5 OFF)	E	]E0	Codabar(CDV & Send CD)		]F2
UPC-E(+2 ON)		]E3	Codabar(CDV & not send CD)		]F4
UPC-E(+5 ON)		]E3	UK Plessey	P	]P0
UPC-A(+2/+5 OFF)	A	]E0	Matrix 2 of 5	Y	]X0
UPC-A(+2 ON)		]E3	Full ASCII Code 39(disable CDV)	D	]A4
UPC-A(+5 ON)		]E3	Full ASCII Code 39(CDV & send CD)		]A5
EAN-13(+2/+5 OFF)	F	]E0	Full ASCII Code 39(CDV & not send CD)		]A7
EAN-13(+2 ON)		]E3	Standard Code 39(disable CDV)	M	]A0
EAN-13(+5 ON)		]E3	Standard Code 39(CDV & send CD)		]A1
Code 93	L	]G0	Standard Code 39(CDV & not send CD)		]A3
Code 11(disable CDV)	J	]H0	IATA 2 of 5	R	]R0
Code 11(send one CD)		]H0	Industrial 2 of 5	V	]S0
Code 11(send two CD)		]H1	China Post Code	H	]X0
Code 11(not send CD)		]H3	Interleaved 2 of 5(CDV & send CD)	I	]I1
Telepen(ASCII)	U	]B0	Interleaved 2 of 5(CDV & not send CD)		]I3
Telepen(Numeric)		]B1	Interleaved 2 of 5(disable CDV)		]I0

SET ID - SETTING PROCEDURES

Settting steps:

1. Scan the SET ID bar code for a particular symbology.
2. Scan one or two alphanumeric characters from the Full ASCII Table.
3. Scan the SET ID bar code again.

Example :Define the MSI Code ID = A, Code 93 = G9
MSI :
Step1: Scan MSI Set ID (Group 9).
Step2: "A" from (Group 37).
Step3: Scan MSI Set ID (Group 9).

Code 93:
Step1: Scan Code 93 Set ID (Group 8).
Step2: "G" from (Group 38), Scan "9" from(Group 42).
Step3: Scan Code 93 Set ID (Group 8).

NOTES:

1. The length of a Code ID is either one or two characters. If one character is set, the Code ID output will be one character. If two charact

GROUP-8

CODE ID CONFIGURATION: SET ID

EAN 13 Set ID

EAN 8- Set ID

UPC E Set ID

UPC A Set ID

CODE 39 Set ID

Code 93 Set ID

Codabar Set ID

IATA Set ID

Code 128 Set ID

EAN128 Set ID

Telepen Set ID

Code 11 Set ID

Code 32 Set ID

GROUP-9

CODE ID CONFIGURATION: SET ID

China Post Code
[TOSHIBA Code] Set ID

MSI Code Set ID

UK Plessy Set ID

Matrix 2 of 5 Set ID

Interleaved 2 of 5
Set ID

Industrial 2 of 5 Set ID

Full ASCII Code39
Set ID

RSS 14/LIMITED

RSS-Expand Set ID

RSS-14 Set ID

LABEL Code Set ID
(Reserved)

RESET

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

GROUP-10

DELAY BETWEEN BLOCKS AND CHARACTERS

INTERBLOCK DELAY

. B001$ **0mS**

. B002$ 10mS

. B003$ 50mS

. B004$ 100mS

. B005$ 200mS

. B006$ 500mS

INTERCHARACTER DELAY

. B010$ **140uS**

. B011$ 500uS

. B012$ 1mS

. B013$ 4mS

. B014$ 16mS

GROUP-11

KEYBOARD LAYOUT / CAPLOCK MODE / NUMERIC KEY

KEYBOARD LAYOUT

. C010$

ENGLISH (USA)

. C018$

ENGLISH (UK))

. C011$

GERMAN

. C012$

FRENCH

. C009$

JAPAN (106 key only)

. C013$

SPANISH

. C014$

ITALIAN

. C015$

UNIVERSAL CODE

. C016$

SWISS

. C017$

CZECH (QWERTY)

CAPITAL LOCK MODE

. A004$

CAPLOCK ON

. A005$

CAPLOCK OFF

. A006$

CAPLOCK FREE

NOTE:

①When Barcode scanner set to Caplock Free mode.No matter of keyboard CapsLock LED indicator is ON or OFF , output will be always the same as the Original barcode. In other words , what you see is what output is.(CODABAR is the exception.) ② If ABCD/ABCD, abcd/abcd, ABCD/T*E, abcd/tn*e are on, they work independently according to their rules.

NUMERIC KEY

. D017$

NUMERIC KEY

. D018$

ALPHANUMERIC KEY

GROUP-12

Rs232: BAUD RATE,DATA BITS & PARITY

BAUD RATE

. E001$

300

. E002$

600

. E003$

1200

. E004$

2400

. E005$

4800

. E006$

9600

. E007$

19200

. E022$

38400

DATA BITS & PARITY

. E008$

8 Bits None

. E009$

8 Bits EVEN

. E010$

8 Bits ODD

. E011$

8 bits MARK

. E012$

8 Bits SPACE

. E013$

7 Bits EVEN

. E014$

7 Bits ODD

. E015$

7 Bits MARK

. E021$

7 Bits SPACE

GROUP-13

Rs232 : STOP BIT, HANDSHAKING, ACK/NAK, FLOW CONTROL ,BCC

STOP BITS

. E016$

1 STOP BITS

. E017$

2 STOP BITS

HANSHAKING

. E018$

NONE

. E019$

RTS enable at Power on

. E020$

RTS enable with Communication

ACK / NAK

. E023$

ON

. E024$

OFF

FLOW CONTROL: TIME OUT

. E025$

1 Sec

. E026$

3 Sec

. E027$

10 Sec

. E028$

Unlimited

BCC

. E029$

RS232 BCC Char On

. E030$

RS232 BCC Char Off

GROUP-14

WAND EMULATION PARAMETER SETTING

. D001$

200us

LEVEL DURATION OF MINI WIDTH

. D002$

600uS

. D003$

LOW

POLARITY OF IDLE CONDITION

. D004$

HIGH

. D005$

Bar High / Space Low

OUTPUT OF WAND EMULATION

. D006$

Bar Low / Space High

. D007$

PEN TYPE

WAVE FORM

. D008$

FULL ASCII CODE 39

GROUP 15~ 33 SYMBOLOGIES FORMATTING

GROUP-15

ENABLE SYMBOLOGIES

. A002$

ENABLE ALL CODE

. K010$

CODE 32

. K001$

CHINA POSTAL CODE

. L010$

UK PLESSY CODE

. N001$

INDUSTRIAL 2 OF 5

. M010$

MATRIX 2 OF 5

. J001$

INTERLEAVED 2 OF 5

. J010$

CODE 128

. I001$

CODABAR

. L014$

TELEPEN

. H001$

UPC-A

. H007$

UPC-E

. H019$

EAN -8

. H013$

EAN -13

. L001$

MSI

. G008$

CODE 39

. I010$

CODE 11

. G010$

CODE 93

. M001$

EAN-128

. N017$

IATA

GROUP-16

DISABLE SYMBOLOGIES

. A003$

DISABLE ALL CODE

. K011$

CODE 32

. K002$

CHINA POSTALCODE

. L011$

UK PLESSY CODE

. N002$

INDUSTRIAL 2 OF 5

. M011$

MATRIX 2 OF 5

. J002$

INTERLEAVED 2 OF 5

. J011$

CODE 128

. I002$

CODABAR

. L015$

TELEPEN

. H002$

UPC-A

. H008$

UPC-E

. H020$

EAN-8

. H014$

EAN-13

. L002$

MSI

. G009$

CODE 39

. I011$

CODE 11

. G011$

CODE 93

. M002$

EAN -128

. N018$

IATA

GROUP-17

SYMBOLOGIES : CHINA POST CODE (TOSHIBA CODE)

CHINA POSTAL CODE [TOSHIBA CODE]

. K001$

ENABLE

. K002$

DISABLE

. K003$

DISABLE CDV

. K004$

CDV & SEND CD

. K005$

CDV & NOT SEND CD

. K006$

MIN LENGTH (11)

. K007

MAX LENGTH (48)

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

SETTING PROCEDURE

MIN / MAX LENGTH
STEP 1 - Scan: MIN LENGTH/ MAX LENGTH
STEP 2 - Scan : Two digits from Appendix .
STEP 3 - Scan: MIN LENGTH / MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:
1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

RESET

GROUP-18

SYMBOLOGIES : MSI CODE , UK PLESSY CODE

. L001$

ENABLE

. L002$

DISABLE

. L004$

CDV & SEND CD

. L003$

CDV & NOT SEND CD

. L007$

CHECK DIGIT DOUBLE MOD 10

MSI

. L008$

CHECK DIGIT DOUBLE 11 PLUS MOD 10

. L009$

CHECK DIGIT SINGLE MOD 10

. L005$

MIN LENGTH (6)

. L006$

MAX LENGTH (48)

. L010$

ENABLE

. L011$

DISABLE

UK PLESSY CODE

. L012$

CDV & SEND CD

. L013$

CDV & NOT SEND CD

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

SETTING PROCEDURE

MIN / MAX LENGTH
STEP 1 - Scan: MIN LENGTH/ MAX LENGTH
STEP 2 - Scan : Two digits from Appendix .
STEP 3 - Scan: MIN LENGTH / MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:
1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

RESET

GROUP-19

SYMBOLOGIES: CODE 93, TELEPEN, IATA

CODE 93

. G010$

ENABLE

. G011$

DISABLE

. G012$

MIN LENGTH (6)

. G013$

MAX LENGTH (48)

TELEPEN

. L014$

ENABLE TELEPEN

. L015$

DISABLE TELEPEN

. L020$

TELEPEN ASCII

. L021$

TELEPEN NUMBER

IATA

. N017$

ENABLE

. N018$

DISABLE

. N019$

DISABLE CDV

. N020$

CDV & SEND CD

. N021$

CDV & NOT SEND CDV

. N022$

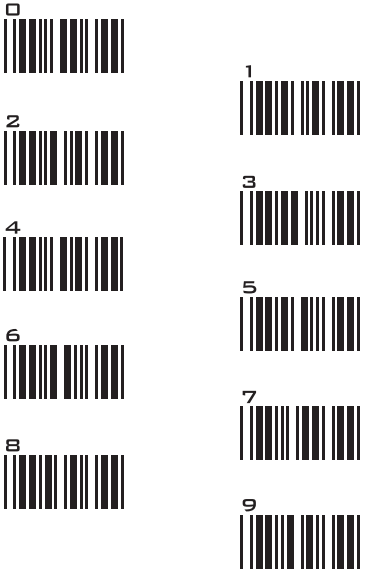
MIN LENGTH (6)

. N023$

MAX LENGTH (48)

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE



SETTING PROCEDURE

MIN / MAX LENGTH
STEP 1 - Scan: MIN LENGTH/ MAX LENGTH
STEP 2 - Scan : Two digits from Appendix .
STEP 3 - Scan: MIN LENGTH / MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:
1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

RESET

GROUP-20

SYMBOLOGIES : INTERLEAVED 2 OF 5 , CODE 11.

. J001$

ENABLE

. J002$

DISABLE

. J003$

DISABLE CDV

. J004$

CDV & SEND CD

. J005$

CDV & NOT SEND CDV

INTERLEAVE 2 OF 5

. J008$

First digit suppressed

. J009$

Last digit suppressed

. J014$

NO suppressed

. J006$

MIN LENGTH (6)

. J007$

MAX LENGTH (48)

. I010$

ENABLE

. I011$

DISABLE

. I012$

DISABLE CDV

. I013$

CDV & SEND CD

. I042$

CDV & SEND CD
(1 DIGIT)

CODE 11

. I043$

CDV & SEND CD
(2 DIGITS)

. I014$

CDV & NOT SEND CD

. I015$

MIN LENGTH (6)

. I016$

MAX LENGTH (32)

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

SETTING PROCEDURE

MIN / MAX LENGTH
STEP 1 - Scan: MIN LENGTH/ MAX LENGTH
STEP 2 - Scan : Two digits from Appendix .
STEP 3 - Scan: MIN LENGTH / MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:
1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

RESET

GROUP-21

SYMBOLOGIES : INDUSTRIAL 2 OF 5, MATRIX 2 OF 5

. N001$

ENABLE

. N002$

DISABLE

. N003$

DISABLE CDV

. N004$

CDV & SEND CD

INDUSTRIAL 2 OF 5

. N005$

CDV & NOT SEND CD

. N006$

MIN LENGTH (6)

. N007$

MAX LENGTH (48)

. M010$

ENABLE

. M011$

DISABLE

. M012$

DISABLE CDV

. M013$

CDV & SEND CD

MATRIX 2 OF 5

. M014$

CDV & NOT SEND CD

. M015$

MIN LENGTH (6)

. M016$

MAX LENGTH (48)

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

SETTING PROCEDURE

MIN / MAX LENGTH
STEP 1 - Scan: MIN LENGTH/ MAX LENGTH
STEP 2 - Scan : Two digits from Appendix .
STEP 3 - Scan: MIN LENGTH / MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:
1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

RESET

GROUP-22

SYMBOLOGIES: CODABAR

ENABLE

DISABLE

DISABLE CDV

CDV & SEND CD

CODABAR

CDV & NOT SEND CD

MIN LENGTH (6)

MAX LENGTH (48)

ST/SP: abcd/abcd

ST/SP: ABCD/ABCD

ST/SP: ABCD/TN*E

ST/SP:abc/tn*e

START / STOP

SEND START /STOP

Not Sent START / STOP

Example of ST (Start) / SP (Stop)

123456	Not Transmit ST/SP
A123456B	ST/SP: ABCD/ABCD
a123456b	ST/SP: abcd/abcd
A123456N	ST/SP: ABCD/TN*E
a123456n	ST/SP: abcd/tn*e

CLSI FORMAT ON

CLSI FORMAT OFF

CLSI FORMAT

CLSI- Enable library space insertion. If you enable the CLSI format, this option inserts spaces in position 2,7,13of the datastring for use in library systems

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

SETTING PROCEDURE

MIN / MAX LENGTH
STEP 1 - Scan: MIN LENGTH/ MAX LENGTH
STEP 2 - Scan : Two digits from Appendix .
STEP 3 - Scan: MIN LENGTH / MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:
1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

RESET

GROUP-23

SYMBOLOGIES: ABC-CODABAR, CX- CODABAR

ON

OFF

SET INSERT DATA*

ABC- CODABAR

INSERT DATA -ON

INSERT DATA- OFF

* *The data can any alphanumerics of FULL ASCII Table (GROUP 34-42)(page 52-60)*

REMARK:
ABC-CODABAR (American Blood Commission.).The ABC Code is an acronym for American Blood Commission. This bar code is a variant of the CODABAR Code developed for he use in the blood bank. This Code consists of two bar codes which are decoded in one read cycle. The code is concatenated when the stop character of the first bar code and the start character of the second bar code is a "D ", these two"D "are not transmitted.

ON

OFF

SET INSERT DATA*

CX CODE- CODABAR

INSERT DATA -ON

INSERT DATA- OFF

* *The data can any alphanumerics of FULL ASCII Table (GROUP 34-42)(page 52-60)*

REMARK:
The CX-Code consists of two bar Codes which are decoded in one read cycle, the code is concatenated when the stop character of the first bar code is a C, and the start character of the second bar code is a B. The B and C characters are not transmitted.

GROUP-24

SYMBOLOGIES : CODABAR COUPLING, ADJACENT REQUIRED.

.I019$

ON

.I020$

OFF

.I021$

SET INSERT DATA*

CODABAR COUPLING

.I041$

INSERT DATA -ON

.I026$

INSERT DATA- OFF

ABC-Codabarand CX-Codabar have certain rules regarding the Stop Character of first bar code and the stop character of Second bar code while in conjunction, while Codabar-Coupling is enabled, the data from any two Codabar bar codes can be coupled into one set of data without any limitations between the Stop character of first bar code and the Start character of second bar code. The Start and Stop characters associated with each bar code each bar code will be sent.

**The data can any alphanumerics of FULL ASCII Table (GROUP 34-42)(page 52-60)*

ADJACENT REQUIRED

If CODABAR ADJACENT is enabled, the scanner will only read two adjacent Codabar bar codes, A single bar code will not be read.

.I033$

ON

.I034$

OFF

NOTES:

1. Both ABC-Codabar and CX-Codabar can be enabled together, except when Codabar-Coupling is also enabled.
2. If ABC-Codabar, CX-Codabar, and Codabar-Coupling are all enabled at same time, the scanner will read only Codabar-Coupling, that is, ABC-Codabar, CX-Codabar wil be considered coupling formats.

SETTING PROCEDURE - SET INSERT DATA

Step 1- Scan SET INSERT DATA.
Step 2- Scan any combination of alphanumeric characters from FULL ASCII TABLE.
Step 3- Scan SET INSERT DATA.

RESET

NOTES:

1. The scanner will beep three times as reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

GROUP- 25

SYMBOLOGIES: STANDARD & FULL ASCII CODE 39 ,CODE 32

STANDARD CODE 39 & FULL ASCII 39

. G008$

ENABLE

. G009$

DISABLE

. G001$

FULL ASCII CODE 39 ENABLE

. G002$

FULL ASCII CODE 39 DISABLE

. G014$

START / STOP - SEND

. G003$

DISABLE CDV

. G004$

CDV & SEND CD

. G005$

CDV & NOT SEND CD

. G006$

MIN LENGTH (1)

. G007$

MAX LENGTH (48)

. G015$

START / STOP Not SEND

NOTE:
The default for Code 39 is Standard Code 39. If Full ASCII Code 39 is enabled, Standard Code 39 will be automatically disabled.

CODE 32

. K010$

ENABLE

. K011$

DISABLE

. K012$

LEADING SEND

. K013$

LEADING NOT SEND

. K014$

TAILING SEND

. K015$

TAILING NOT SEND

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

SETTING PROCEDURE

MIN / MAX LENGTH
STEP 1 - Scan: MIN LENGTH/ MAX LENGTH
STEP 2 - Scan : Two digits from Appendix .
STEP 3 - Scan: MIN LENGTH / MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

NOTES:
1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

RESET

GROUP-26

SYMBOLOGIES FORMATTING: UPC-E

. H007$

ENABLE

. H008$

DISABLE

. H009$

LEAD DIGIT SEND

UPC-E

. H010$

LEAD DIGIT NO SEND

. H011$

CHECK DIGIT SEND

. H012$

CHECK DIGIT NO SEND

. H037$

+5 ON

. H038$

+ 5 OFF

. H039$

+2 ON

. H040$

+ 2 OFF

ADD ON SUPPLEMENT

. H047$

ADD A SPACE ON

. H048$

ADD A SPACE OFF

. H055$

ADDENDA REQUIRED OFF

. H056$

ADDENDA REQUIRED ON

NOTE:
If **ADDENDA REQUIRED** is set to ON, The scanner will only read an UPC-E bar code that has an addenda.

GROUP-27

SYMBOLOGIES: UPC-E SYSTEM NUMBER

UPC E0

E (0) OFF

E (0) ON

UPC E1

E (1) ON

E (1) OFF

NOTE:
Most UPC Bar codes lead with 0 number systems, For these bar codes use UPC E(0) Selection, For the bar codes that lead with the 1 number, use UPC(E1) select

UPC-E EXPAND TO UPC-A

ENABLE

DISABLE

NOTE:
1. If UPC E EXPAND TO UPC A FORMAT set enabled, The output of UPC-A will be 12 digits.
2. The default output of UPC-A is 12 digits, if UPC-A EXPAND TO EAN13 is enabled, a zero will be added to in front of the bar code.

GROUP-28

SYMBOLOGIES FORMATTING: UPC -A

. H001$

ENABLE

. H002$

DISABLE

. H003$

LEAD DIGIT SEND

UPC- A

. H004$

LEAD DIGIT NO SEND

. H005$

CHECK DIGIT SEND

. H006$

CHECK DIGIT NO SEND

UPC-A EXPAND TO E EAN -13

. H068$

ENABLE

. H067$

DISABLE

. H033$

+5 ON

. H034$

+ 5 OFF

. H035$

+2 ON

. H036$

+ 2 OFF

ADD ON SUPPLEMENT

. H045$

ADD A SPACE ON

. H046$

ADD A SPACE OFF

. H059$

ADDENDA REQUIRED OFF

. H060$

ADDENDA REQUIRED ON

NOTE:
If **ADDENDA REQUIRED** is set to ON, The scanner will only read an UPC-A bar code that has an addenda.

GROUP-29

SYMBOLOGIES FORMATTING: EAN 8

EAN-8

. H019$

ENABLE

. H020$

DISABLE

. H021$

LEAD DIGIT SEND

. H022$

LEAD DIGIT NO SEND

. H023$

CHECK DIGIT SEND

. H024$

CHECK DIGIT NO SEND

ADD ON SUPPLEMENT

. H029$

+ 5 ON

. H030$

+ 5 OFF

. H031$

+ 2 ON

. H032$

+ 2 OFF

. H043$

ADD A SPACE ON

. H044$

ADD A SPACE OFF

. H061$

ADDENDA REQUIRED OFF

. H062$

ADDENDA REQUIRED ON

NOTE:
If **ADDENDA REQUIRED** is set to ON, The scanner willonly read an **EAN-8** bar code that has an addenda.

GROUP-30

SYMBOLOGIES FORMATTING: EAN13 ,ISBN,ISSN,ISMN

EAN-13

. H013$

ENABLE

. H014$

DISABLE

. H015$

LEAD DIGIT SEND

. H016$

LEAD DIGIT NO SEND

. H017$

CHECK DIGIT SEND

. H018$

CHECK DIGIT NO SEND

ADD ON SUPPLEMENT

. H025$

+ 5 ON

. H026$

+ 5 OFF

. H027$

+ 2 ON

. H028$

+ 2 OFF

. H041$

ADD A SPACE ON

. H042$

ADD A SPACE OFF

. H057$

ADDENDA REQUIRED OFF

. H058$

ADDENDA REQUIRED ON

ISBN

. H050$

ISBN OFF

. H049$

ISBN ON

NOTES:

1. If ADDENDA REQUIRED is set to ON, the scanner will only read an EAN-13 bar code that has an addenda.
2. Either ISBN or ISBN will be considered as an extension of EAN-13, If ISSN or ISBN need to be read , EAN13 must be enabled. If ISSN and ISBN need to be read with addenda, EAN13 must be enabled with ADDENDA REQUIRED set to ON.

ISSN

. H052$

ISSN OFF

. H051$

ISSN ON

NOTE :

Both ISSN and ISBN are the extension codes of EAN-13, If scanner is required to read either ISSN or ISBN, Enable EAN-13 must be enabled. Otherwise the scanner will not able to read the ISSN or ISBN.

ISMN

. H070$

ISMN OFF

. H069$

ISMN ON

GROUP-31

SYMBOLOGIES: EAN/UCC-128, CODE 128

. M001$

ENABLE

. M002$

DISABLE

. M003$

CODE ID ENABLE

. M004$

CODE ID DISABLE

EAN/ UCC- 128

. M005$

FUNC 1CHEAR SEND

. M006$

FUNC 1 CHEAR NOT SEND

. M007$

DEFINE EAN 128

NOTES :DEFINE EAN 128

The first FNC1 character is translated to]c1, and the second FNC1 character is translated to an ASCII <GS> character (scan from Group 43-45). (page61-63)

String format :

]C1	DATA CHARACTERS	<GS>	DATA CHARACTERS

Setting Procedure:

1:Scan DEFINE EAN128.
2: Scan ASCII Code (page60)
3: Scan DEFINE EAN128.

CODE 128

. J010$

ENABLE

. J011$

DISABLE

. J012$

MIN LENGTH (5)

. J013$

MAX LENGTH (48)

GROUP-32

DataBar (RSS) , LIMITED, EXPANDED

DataBar (RSS)

. N032$

DataBar-14 ENABLE

. N033$

DataBar-14 DISABLE

. N034$

DataBar-14 CHECK DIGIT SEND

. N035$

DataBar-14 CHECK DIGIT NOT SEND

. N036$

DataBar-14 PREFIX SEND

. N037$

DataBar-14 PREFIX NOT SEND

. N038$

DataBar-14 STACKED ENABLE

. N039$

DataBar-14 STACKED DISABLE

. P024$

DataBar-14 SET ID

DataBar (RSS)

. N010$

DataBar-LIMITED ENABLE

. N011$

DataBar-LIMITED DISABLE

. N012$

DataBar-LIMITED CHECK DIGIT SEND

. N013$

DataBar-LIMITED CHECK DIGIT NOT SEND

. N024$

DataBar-LIMITED PREFIX SEND

. N025$

DataBar-LIMITED PREFIX NOT SEND

. P019$

DataBar-LIMITED SET ID

DataBar (RSS)

. N026$

DataBar-EXPANDED ENABLE

. N027$

DataBar-EXPANDED DISABLE

. N028$

DataBar-EXPANDED STACKED ENABLE

. N029$

DataBar-EXPANDED STACKED DISABLE

. N030$

DataBar-EXPANDED MIN LENGTH

. N031$

DataBar-EXPANDED MAX LENGTH

. P020$

DataBar-EXPANDED SET ID

GROUP-33

SYMBOLOGIES: PDF417

<Set PDF 417 Code Enable/Disable>

.G021$

PDF417 Enable

.G022$

PDF417 Disable

<Set Scanner 'Idel enter Idel Mode >

Step1: Scan 'Idel On Mode' barcode below.

.B026$

Idel Mode On

.B027$

Idel Mode Off

Step2: Scan 'Idel Entry Time Mode' Barcode.

.B028$

Idel Entry Mode Time
(1~9Min.)

Idel Mode Off

Step4: Scan 'Idel End Time Mode' barcode.

.B028$

Idel End Mode Time

Step3: Scan one digit Idel time barcode as below.

0

1

2

3

4

5

6

7

8

9

GROUP-34

FULL ASCII TABLE (CODE 39)

%U

NUL

$A

SOH

$B

STX

$C

ETX

$D

EOT

$E

ENQ

$F

ACK

$G

BEL

$H

BS

$I

HT

$J

LF

$K

VT

$L

FF

$M

CR

$N

SO

$O

SI

GROUP-35

FULL ASCII TABLE (CODE 39)

$P

DLE

$Q

DC1

$R

DC2

$S

DC3

$T

DC4

$U

NAK

$V

SYN

$W

ETB

$X

CAN

$Y

EM

$Z

SUB

%A

ESC

%B

FS

%C

GS

%D

RS

GROUP-36

FULL ASCII TABLE (CODE 39)

%E
US

/ A
!

/ C
#

%
%

%G
<

/ Z
:

%I

%V

SP

/ B
"

$
$

/ F
&

%F
;

%H
=

%J
?

GROUP-37

FULL ASCII TABLE (CODE 39)

(

'

)

*

,

.

+

-

/

A

B

C

D

E

F

GROUP-38

FULL ASCII TABLE (CODE 39)

GROUP-39

FULL ASCII TABLE (CODE 39)

V

X

Z

\

^

`

b

d

W

Y

[

]

-

a

c

GROUP-40

FULL ASCII TABLE (CODE 39)

e

g

i

k

m

o

q

s

f

h

j

l

n

p

r

GROUP-41

FULL ASCII TABLE (CODE 39)

t

u

v

w

x

y

z

|

}

{

DEL

~

GROUP-42

FULL ASCII NUMERIC TABLE (CODE 39)


0


1


2


3


4


5


6


7


8


9

GROUP-43

FUNCTION CODE TABLE (CODE 39)

F1

F2

F3

F4

F5

F6

F7

F8

F9

F10

F11

F12

Home

End

GROUP-44

FUNCTION CODE TABLE (CODE 39)

$TO

Cursor Right

$TP

Cursor Left

$TQ

Cursor Up

$TR

Cursor Down

$TS

Page Up

$TT

Page Down

$TU

Tab

$TV

Back Tab

$TW

Esc

$TX

Enter

$TY

BS

$TZ

Ins

$T%K

Del

GROUP-45

FUNCTION CODE TABLE (CODE 39)

$T%L

Alt（Left） make*1

$T%M

Alt（Left）break

$T+E

Alt (Right) make

$T+F

Alt (Right) break

$T%N

Shift（Left） make *2

$T%O

Shift（Left） break

$T+I

Shift (Right) make

$T+J

Shift (Right) break

$T+K

Win (Left) make

$T+L

Win (Left) break

$T+M

Win (Right) make

$T+N

Win (Right) break

$T%W

Ctrl（Left） makek *3

$T+A

Ctrl（Left） braek

$T+G

Ctrl (Right) make

$T+H

Ctrl (Right) break

$T+D

Enter（Numeric Key）

$T+O

App

For UK Keyboard Special Character

$T+B

¬

$T+C

£

Note:

*1. “Alt(left)Make” is programmed, please scan “Alt(left)Break” to resume barcode setting.
*2. “Shift(left)Make” is programmed, please scan “Shift(left)Break” to resume barcode setting.
*3. ”Ctrl(left)Make” is programmed, please scan “Ctrl(left)Break” to resume barcode setting.

GROUP-46

TROUBLE SHOOTING

All POS-X Barcode Scanners are simple to install and use.
Most operational issues can be attributed to:

INCORRECT INTERFACE CONNECTION
INCORRECT CONFIGURATION SETUP
POOR BAR CODE QUALITY

GENERAL PROCEDURES

1. First, make sure the scanner is firmly connected to the host computer, when attached correctly, the scanner will emit one long beep. When the trigger is pressed, LED will flash.

2. Once the power is on, try scanning some sample bar codes from this user's guide. The scanner should beep and the LED should flash to indicate a good read in the default configuration . If reading the bar code does not result in a good read, there may have been a problem with the scanning technique or the interface configuration setting. Reset the scanner to default.

3. If the scanner indicates a good read,but no output of data to the monitor, please check the cabling connect

KEYBOARD INTERFACES PROBLEMS.

In general, the Keyboard Wedge interface is trouble free, but there still are some things to check in the event of a problem.

Do you have the correct cable?
Most computers use an XT/AT-compatible keyboard. Be sure you have the proper cable for your computer.

Does the keyboard work?
Since the keyed-in data from keyboard must pass through the decoder, the cabling connections are correct if the keyboard is functioning.

Can your computer accept the data fast enough?
Your computer's BIOS has a feature related to keyboard typing speed. Try to set the Intercharacter Delay feature to stimulate the keystroke entry speed.

Does keyboard port supply enough power ?
Most notebook computers do not supply enough power to the scanner. The symptom of insufficient power is a lower "good read" rate (since there is not enough power to properly support the scanning operation).

RS232 INTERFACE PROBLEMS

Once you read bar code, there is no output on the monitor: the symptoms may be caused by:

1. If the handshaking Have you set the protocol of RS232 like Baud rate, data bits, parity and handshaking etc. of a scanner to match to the PC terminal setting? Solution: reset the above mentioned RS232 protocol of scanner to match to PC protocol.
2. Pls check if the cable pinout assignment of bar code match to the pinout assignment of PC terminal?

No power supply to scanner;

1. Do you connect the right power adaptor to the scanner?
2. Does scanner connect the cable with right pinout which match to PC-terminal?

INTERFACE PROBLEMS

Are you using the Wand Emulation mode with Code 39 output? If so, is your decoder set to accept Code 39 data?
Check the scanner's configuration setting to make sure it can accept the bar code symbology you are trying to read.

Although the cable seems to connect properly, does the scanner not send data to the host computer?
There are no industrial standards for scanner interface cables, so even if they look alike and have similar connector, they might not be alike. For example, cables for Keyboard Wedge and Wand Emulation are similar, but they are not interchangeable due to different pin assignments. Be sure the cable you are using attaches correctly to the matching connector.

CONFIGURATION SETUP

Are you setup for the right Interface?
Are you set up for the right interface? Did you select the Keyboard Wedge cable but set the scanner for RS-232 or Wand Emulation? Or did you change the Keyboard cable to RS-232 but forget to set the scanner interface to RS-232 as well? Set the scanner to its default settings, then selectthe correct interface based upon the cable and input you are using.

Sympton ----The LED lighting is stuck, and no function at all, even triggered the scanner.

Solution ---- Set the Scanner to Default condition, and choose the right interfaces

Is the proper symbology enabled?
Each bar code symbology can be individually enabled or disabled.It is suggested that you enable only those that you will be scanning,thereby eliminating the possibility of mis reads from the scanningof other symbologies.

Does the selected the bar code symbology configuration match the bar code(s) being read?
Scanned data from each bar code symbology can be restrictedto eliminate the scanning of unused symbologies. The restrictionsare individually set for eachsymbology.

POOR BAR CODE QUALITY

The third problem area has nothing to do with the scanner, but rather the printed quality of the bar code and/or the scanning technique employed.

TOLERANCE OF BAR CODE

A bar code may have a tolerance. Normally, the tolerances are caused by bar code font software or a printer. Software with a proven reputation should be chosen to generate bar codes. If the printed bar codes are distorted, the scanner might not recognize them.

It is very difficult to get a good read from a poor quality bar code unless it is scanned many times. As the quality of the symbology drops, the chances for undetected error increase. A bar code Check Digit Verification (CDV) should be used to check the quality of the suspect bar codes.

LABELS (PAPER & COLOR & PRINTER)

The light source of a bar code scanner is generally red, so there are some restrictions for the printing of labels. Care should be taken whenchoosing materials, especially color inks and papers. Sometimes the combination of the label color and the color of the ink can , in effect, blind the scanner. Media with a shiny surface will also cause reading difficulties for scanners.

Moreover, poor printing quality can also result in reading difficulties for the scanner. Bad printing may be caused by the type of printer used; dot matrix and inkjet printers will not produce high quality bar codes. Also check to make sure the ink, ribbon, or toner in good supply.

APPENDIX 1

DEFAULT TABLE 1

CROUP		PARAMETER	DEFAULT
1		Computer Type	PC-AT
		Interfaces	*
2		Reading Mode	Trigger
3		Beep Tone Mode 2.1k	Beep Medium
		Beep Tone Mode 2.7k	Beep Medium
		Capital lock Mode	Caplock Off
4		Preamble & Postamble Setop Barcode	On/off
5		Accuracy Adjustment	2
6~9		Enable & Disable Code ID	Off
10		Interblock Delay	Oms
		Inter-character Delay	140us
11		Keyboard Layout	English(USA)
		Coplock	off
12		Baud Rate	9600
		Data Bits & Parity	8 Bit None
13		Stop Bits	1 stop bit
		Handshaking	None
		ACK/NAK	Off
		Flow Control TimeOut	1 Sec
14		Level dutation of Mini Width	200us
		Polarity Of Idle Condition	High
		Output of Wand Emulation	Bar High/Space Low
		Wave Form	Full ASCII 39
15~16		Enable and Disable Symbologies	
		Code 32	Disable
		China Postal Code	Enable
		UK Plessy Code	Disable
		Industrial 2 of 5	Disable
		Matrix 2 of 5	Disable
		Interleaved 2 of 5	Enable
		Code 128	Enable
		Cadabar	Enable
		Telepen	Disable
		UPC-A	Enable
		UPC-E	Enable
		EAN-8	Enable
		EAN-13	Enable
		MSI	Disable
		Code 39	Enable
		Code 11	Enable
		Code 93	Disable
		EAN-128	Enable
		IATA	Disable
17	1	China Post Code	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	11 digits
		Max Length	48 digits
	2	Code 32	
		Enable/Disable	Disable
		Leading send/not send	send
18	1	MSI	
		Enable/Disable	Disable
		Check Digits	CDV & send CD
		Check Digits Mode	Single MOD 10

* The interface setting of scanner does not have certain default value, the default of interface of scanner will be set according to customer order.

APPENDIX 1

DEFAULT TABLE 2

CROUP		PARAMETER	DEFAULT
18	2	**UK Plesssy**	
		Enable/Disable	Disable
		Check Digits	CDV & not send CD
19	1	**IATA**	
		Enable/ Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
	2	**Code 93**	
		Enable/Disable	Disable
		Min Length	6 digits
		Max Length	48 digits
	3	**Telepen**	
		Enable/Disable	Disable
		Telepen ASCII /Number	Number
20	1	**Interlenved 2 of 5**	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		First/ last digit suppressed	No suppressed
		Min Length	6 digits
		Max Length	48 digits
	2	**Code II**	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
21	1	**Industrial 2 of 5**	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
	2	**Matrix 2 of 5**	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
22		**Codabar**	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
		ST/SP;Abcd/abcd,abcd/tn*c, ABCD/ABCD,ABCD/TN*C	ABCD/ABCD
		Start(ST)/Stop(SP)send	Send
		CLSI Format	ON
23	1	**ABC-Codabar**	
		ON/OFF	Off
		Insert Data	Off
	2	**CX-Codabar**	
		Insert Data	Off
		ON/OFF	Off
24		**Codabar-Coupling**	
		ON/OFF	Off
		Insert Data	Off
		Adjacent Required	Off
25		**Code 39**	
		Full ASCII 39 Enable/Disable	Enable
		Check Digits	Disable CDV
		Start/Stop	Not Send
		Min Length	1 digits
		Max Length	48 digits

APPENDIX 1

DEFAULT TABLE 3

CROUP		PARAMETER	DEFAULT
26		**UPC-E**	
		Enable/Disable	Enable
		Check Digits	Send
		Lead Digits	Send
		Add a space	Off
		Addenda required	Off
		+5 On/Off	Off
		+2 On/Off	Off
27		**UPC-A&E, EANS Expand, UPCE systems number**	
		UPC E(0) On/Off	On
		UPC E(1) On/Off	Off
		UPC-E expand to UPGA	Disable
		UPC-A expand to EAN13	Disable
28		**UPC-A**	
		Enable/Disable	Enable
		Check Digits	Send
		Lead Digits	Send
		Add a space	Off
		Addenda required	Off
		+5 On/Off	Off
		+2 On/Off	Off
29		**EAN-8**	
		Enable/Disable	Enable
		Check Digits	Send
		Lead Digits	Send
		Add a space	Off
		Addenda required	Off
		+5 On/Off	Off
		+2 On/Off	Off
30		**EAN-13**	
		Enable/Disable	Enable
		Check Digits	Send
		Lead Digits	Send
		Add a space	Off
		Addenda required	Off
		+5 On/Off	Off
		+2 On/Off	Off
		ISSN On/Off	Off
		ISBN	Off
31	1	**EAN/UCC128**	
		Enable/Disable	Enable
		Code ID	Disable
		Func I Chear send	Not Send
	2	**Code 128**	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	5 digits
		Max Length	48 digits
32		Rss-14	Disable
		Rss-14 Check digit	Not Send
		Rss-14 Prefix	Not Send
		Rss-14 Stacked	Enable
		Rss-Limited	Disable
		Rss-Limited Check Digit	Not Send
		Rss-Limited Prefix	Not Send
		Rss-Expanded	Disable

Appendix 2

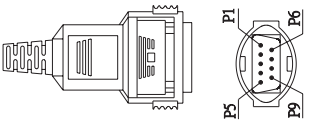
Cable Pin Assignment

INTERFACES:

1. TTL , Wand Emulation

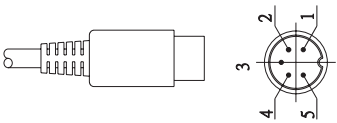
1.1) AMP (D-Sub 9Pin):

Pin	Signal
2	Data
7	GND
9	+5VCC



1.2) Din 5 male (240 degree):

Pin	Signal
1	+ 5Vcc
2	Data
3	GND
4	N/A
5	N/A



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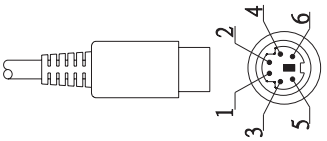
2. Keyboard Interface:

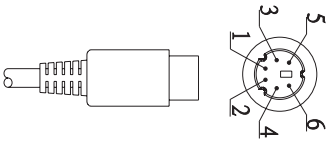
Type of connector:
2.1) PS/2 Mini Din6 Female:

Pin	Signal
1	PC Data
2	NC
3	GND
4	+5Vcc
5	PC-Clk
6	NC



2.2) PS/2 Mini Din6 Male:

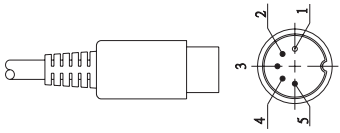
Pin	Signal
1	KB- Data
2	NC
3	GND
4	+5Vcc
5	KB-CLK
6	NC



Type of connector:

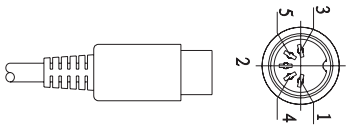
2.3) PC-AT : Din 5 Male :

Pin	Signal
1	KB-Clk
2	KB-Data
3	NC
4	GND
5	+5VCC



2.4) PC-AT : Din 5 Female

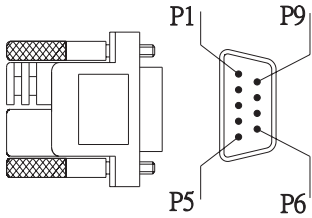
Pin	Signal
1	PC-Clk
2	PC-Data
3	NC
4	GND
5	+5VCC



3.RS232 Interfaces:

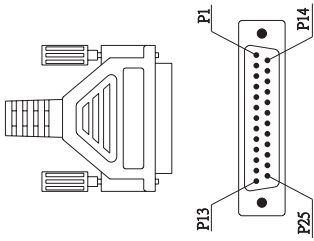
3.1) DB9F

Pin	Signal
2	TXD(Out)
3	RXD(In)
5	GND
7	CTS(In)
8	RTS(Out)
9	+5Vcc



3.2) DB25F

Pin	Signal
2	RXD(In)
3	TXD (out)
4	CTS (In)
5	RTS (Out)
7	GND
16	+5VCC
25	+5VCC



Appendix 3

BAR CODE TEST CHART

DENSITY	NARROW mm(mil)	WIDE mm(mil)	CHAR.GAP mm(mil)	N/W RATIO
MEDIUM DENSITY	0.25(10)	0.625(25)	0.25(10)	1/2.5

MEDIUM DENSITY

NW-7 (CODABAR)

CODE-39

Interleaved 2of5

UPC

EAN

Appendix 3

BAR CODE TEST CHART

DENSITY	NARROW mm(mil)	WIDE mm(mil)	CHAR.GAP mm(mil)	N/W RATIO
MEDIUM DENSITY	0.25(10)	0.625(25)	0.25(10)	1/2.5

LOW DENSITY

C9876543210D

CODE-39 TEST

0012345690