Ez One Shot®

UNIVERSAL USER'S MANUAL

Version: 2014.2

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LED & BEEPER INDICATION

	Status	Blue/Green LED	Red LED	Beeper	Remark
Scanner	Initializing/ Power-up		Solid for 2 sec	1 long beep	
	Successful Barcode Scan	1 Flash		1 beep	
	Successful Connection	2 Flashes		2 beeps	
	Reads Configuration Barcode			2 beeps	
	Data Temporarily/ Permanently Stored	1 Flash		2 short beeps	See **Batch Mode** or **Memory Mode**
	Wireless Disconnection	Solid for 2 sec		3 beeps	
	Unexpected Barcode Scan during Configuration			3 short beeps	Scan **RESET/ ABORT** and retry
	Unsuccessful Pincode Setup	Flashing		3 short beeps	Scan **Pincode Stop** and retry
	Barcode Scann w/o Connection	Flashing		3 short beeps	
	Low Power		Flashing	5 beeps	
	Barcode Scan w/o Connection	Flashing		Several short beeps	
	Power Off or Standby				See **Power Off Timeout**
Cradle	Status	Blue LED	Red LED	Green LED	Remark
	Successful Connection	Solid			
	Charging		Solid	Flashing	Power adaptor needed
	Full Charge			Flashing	4 hours to fully charge

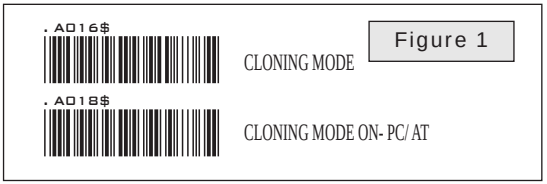
CLONING MODE

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 of the kind of device 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 command for cloning.
5. The cloning string's length can be adjusted by combining multiple strings into one, or by breaking one string into 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 row >>> ".A017$" (never edit any data of the first row)

2nd row >>> "....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 row ~ so on >>> XXXX

End row - A dot "." Is the ending of cloning.

XXXX Stands for any string

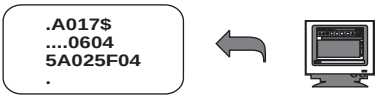
CLONING MODE

EXAMPLE :

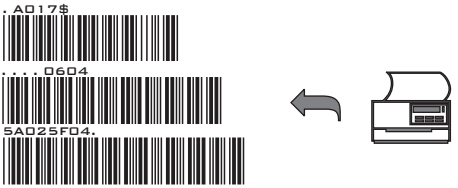
1. PROJECT ASSIGNMENTS:
1.1. Beep tone: **BEEP LOW -- HIGH.**
1.2. Capslock Mode: **CAPSLOCK ON.**
1.3. Reading Mode: **CONTINUOUS AUTO OFF.**

2. SETTING PROCEDURE:
2.1. Scan **BEEP LOW -- HIGH (GROUP 3).**
2.2. Scan **CAPSLOCK ON (GROUP 12).**
2.3. Scan **CONTINUOUS AUTO OFF (GROUP2).**

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.

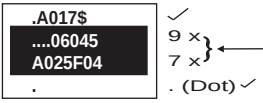
CORRECT SETTING

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

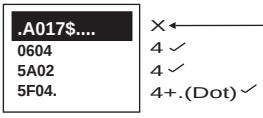
.A017$	
....06045A02	12
5F04.	4+.(Dot)

WRONG SETTING

Wrong Setting: The string "...." consists of 4 Dots, located at the beginning of second row; do not break the "...." into multiple strings.



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

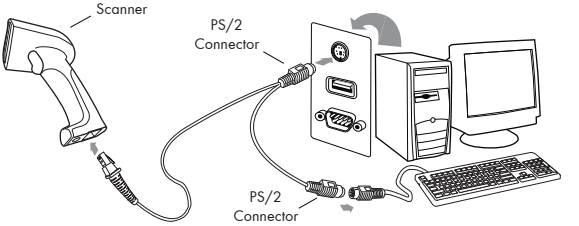


Wrong Setting because you add "...." after .A017$:
The .A017$ is a FIXED parameter to enter setup procedure. It is an unchangeable parameter. **Never add, delete or rearrange data from the FIRST row.**

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 computer.
4. Restart the computer.
5. The scanner will beep.
6. Set the scanner to KEYBOARD interface by referring to GROUP 13 (Interfaces)
7. Scanner will beep to confirm the setting.
8. Scan a bar code to confirm that data shows on the monitor.

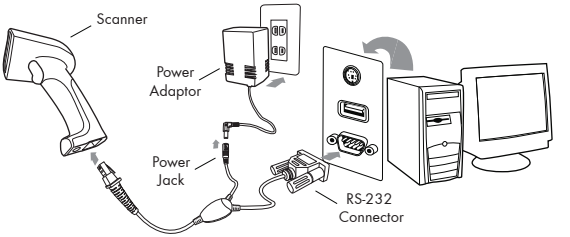


RS-232 INTERFACE

1. Power down the host computer.
2. Disconnect the cable between the scanner and 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 13 (Interfaces).
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.



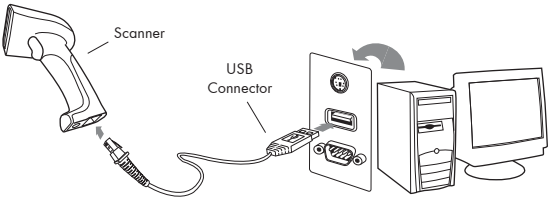
Check the power adaptor to ensure:

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

USB INTERFACE

The USB Interface supported is compatible with Apple MAC series, , Windows 98, 2000, XP, Vista, 7, 8 and so on.

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-13 (Interfaces)
5. Scanner will beep to confirm the setting.
6. Scan a bar code to confirm that data shows on the monitor.

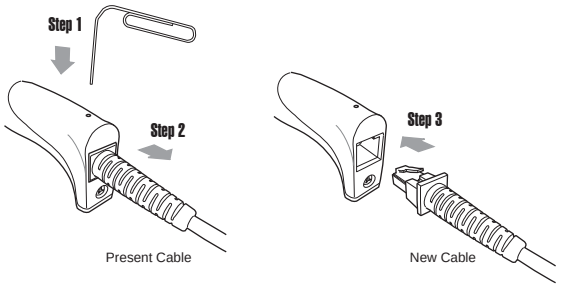


HOW TO CHANGE A CABLE

The scanners are designed to switch easily between interface options. To switch from one interface to another, the appropriate cable must be installed. To change a cabl, 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 reset the interface setting as appropriate (including parameter settings for the RS-232 interface).



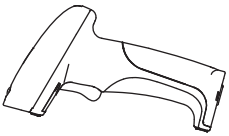
HOW TO SET PARAMETERS

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 settings 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 Group 52-63
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 60 or Full ASCII numeric table in Appendix
Step 3: Scan MIN LENGTH or MAX LENGTH.

Accuracy Adjustment
Step 1: Scan ACCURACY ADJUSTMENT.
Step 2: Scan one digit from GROUP 5
Step 3: Scan ACCURACY ADJUSTMENT.

Set Code ID (Example: Code 39)
Step 1: Scan CODE 39 SET ID from Group 8
Step 2: Scan either one or two alphanumerics (maximum 2 digits) from Full ASCII table in Group 54-60
Step 3: Scan CODE 39 SET ID from Group 8

Set A Data - (CX-Codabar, ABC Codabar, Codabar Coupling).
Step 1: Scan SET INSERT DATA.
Step 2: Scan one alphanumeric character from Full ASCII Table in Group 54-60
Step 3: Scan SET INSERT 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 RESET to start again.

RESET

GROUP-1

GENERAL SETTINGS

DEFAULT

.A001$

*Reset to factory default

CHECK VERSION

.A007$

*Check firmware version

RESET/ ABORT

.P023$

*Abort multi-step configuration

SETUP CODE READ

.B015$

SETUP CODE ON

.B016$

SETUP CODE OFF

*Caution: Scanning SETUP CODE OFF will turn the scanner into unprogrammable state and the scanner will not react to any configuration barcode!

GROUP-2

GENERAL SETTINGS - READING MODE

CONTINUOUS MODE

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

FLASH MODE

* The LED is on steady if a bar code is close to the scanner, but starts flashing if no bar code is 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

* The LED is always on when the trigger is pressed.
* The LED will go off if one bar code is read.

*AUTO SENSING MODE (CCD)

* If Auto-Sensing Mode(CCD) is on, the LED will go off if no bar code is detected after Deactivation Time elapses. (The default is 3 sec.)
* The LED lights automatically when a BAR CODE is detected.

*AUTO SENSING MODE (Laser)

* If Auto-Sensing Mode(Laser) is on, the LED will go off if no barcode is detected after Deactivation Time elapses. (The default is 3 sec.)
* The laser emits automatically when an OBJECT is detected.

NOTES:

1. To extend the scanner's life, keep the scanner set to Trigger Mode or Continuous Auto Off Mode.
2. The LED indicator will glow for GOOD READ.
3. For advanced settings of Auto-Sensing Mode(such as Deactivation Time, Magnetic Switch and Blue LED) please refer to the next pages.

GROUP-3

GENERAL SETTINGS

BEEP TONE

2.7KHz Buzzer
(Wireless Scanner)

.F019$

BEEP HIGH

.F021$

BEEP HIGH--LOW

.F018$

BEEP MEDIUM

.F020$

BEEP LOW--HIGH

.F022$

BEEP LOW

2.1KHz Buzzer
(Tethered Scanner)

. F012$

BEEP OFF

. F014$

BEEP HIGH

. F016$

BEEP HIGH--LOW

. F013$

BEEP MEDIUM

. F015$

BEEP LOW--HIGH

. F017$

BEEP LOW

TERMINATOR

. D010$

NONE

. D011$

LF

. D012$

CR

. D013$

CR+LF

. D014$

TAB

. D015$

SPACE

. D016$

ESC

NOTES:

Below is the position of Terminator among output data string:

[Preamble] [Symbology ID] [Barcode Length] [Barcode Data] [Postamble] **[Terminator]**

By default, with Preamble, Postamble, Barcode Length and Symbology ID disabled, the scanner data output will be:

[Barcode Data] **[Terminator]**

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

GROUP-4

SEND DATA LENGTH, PREAMBLE & POSTAMBLE.

SEND DATA LENGTH

.D019$

SEND DATA LENGTH ON

.D020$

SEND DATA LENGTH OFF

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.

DATA FORMAT:

[Preamble] [Symbology ID] [Barcode Length] [Barcode Data] **[Postamble]** [Terminator]

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 to 16 characters added to the end of a scanned barcode.
3. Default value for both: None.

GROUP-5

GENERAL SETTINGS - ACCURACY ADJUSTMENT

0

1

2

3

4

5

6

7

8

9

ACCURACY ADJUSTMENT

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

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

ENABLE INVERSE BARCODE

.D021$

DISABLE INVERSE BARCODE
(READS POSITIVE BARCODE ONLY)

.D022$

ENABLE INVERSE BARCODE
(READS POSITIVE & NEGATIVE BARCODES)

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

Preamble	CODE ID	BARCODE / DATA
145287	AIM ID :]E0	EAN 13 +5

OUTPUT : 145287]E0456398712345312411

GROUP-7

GENERAL SETTINGS

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	Interleaved 2 of 5(CDV & send CD)	I	]I1
Code 11(send one CD)		]H0	Interleaved 2 of 5(CDV & not send CD)		]I3
Code 11(send two CD)		]H1	Interleaved 2 of 5(disable CDV)		]I0
Code 11(not send CD)		]H3	Databar	G	]e0
Telepen(ASCII)	U	]B0	Databar Stacked		
Telepen(Numeric)		]B1	Databar Stacked Omnidirectional		
IATA 2 of 5	R	]R0	Databar Truncated		
Industrial 2 of 5	V	]S0	Databar Limited	C	
China Post Code	H	]X0	Databar Expanded	Q	
PDF417	Z	]E0	Databar Expanded Stacked		

SET ID - SETTING PROCEDURES

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 56.
Step3: Scan MSI Set ID (Group 9).

Code 93:
Step1: Scan Code 93 Set ID (Group8).
Step2: "G" from Group 56, Scan "9" from Group 60.
Step3: Scan Code 93 Set ID (Group8).

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 characters are set, the Code ID output will be two characters.
2. Only one type of Code ID will be sent.

GROUP-8

GENERAL SETTINGS - SET CODE 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

EAN 128 Set ID

Telepen Set ID

Code 11 Set ID

Code 32 Set ID

China Post Code
(TOSHIBA Code) Set ID

GROUP-9

GENERAL SETTINGS - SET CODE ID

MSI Code Set ID

UK Plessey 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

GS1 Databar (RSS)
Limited Set ID

GS1 Databar (RSS)
Expanded Set ID

GS1 Databar (RSS)
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

GENERAL SETTINGS

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

GENERAL SETTINGS

KEYBOARD LAYOUT

. C010$

ENGLISH (USA)

. C018$

ENGLISH (UK)

. C012$

FRENCH

. C011$

GERMAN

. C014$

ITALIAN

. C013$

SPANISH

. C017$

CZECH (QWERTY)

. C022$

CZECH (QWERTZ)

. C021$

HUNGARIAN (QWERTZ)

. C024$

HUNGARIAN (101 KEY)

. C016$

SWISS (GERMAN)

. C023$

SWISS (FRENCH)

. C009$

JAPAN (106 key)

. C025$

CANADIAN (FRENCH)

. C034$

CANADIAN (TRADITIONAL)

. C029$

NORWEGIAN

. C026$

SWEDISH

. C031$

PORTUGUESE

. C030$

BELGIAN (AZERTY)

. C028$

DUTCH

. C027$

DANISH

. C032$

SLOVAK

. C033$

BRAZILIAN (PORTUGUESE)

. C015$

ALT CODE

GROUP-12

GENERAL SETTINGS

CAPITAL LOCK MODE

. A004$

CAPLOCK ON

. A005$

CAPLOCK OFF

. A006$

CAPLOCK FREE

NOTE:

1. When barcode scanner is set to Caplock Free mode, no matter 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-13

TETHERED SCANNER SETTINGS

COMPUTER TYPE

. C004$

PC-AT

. C007$

NOTEBOOK*

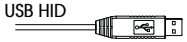
SYMPTOMS	SOLUTION
Scanner seems to be performing as usual, but no data is being output.	1. Unplug the cable from the host computer. 2. Plug the cable back into the host computer. 3. Set the scanner to the exact computer type immediately.

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

. C005$

USB HID



. C008$

USB HID

. C006$

USB VCP

. C001$

PS2 KB

. C002$

RS232

SYMPTOMS	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:

1. **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.**
2. **Before switching to USB VCP, please make sure you have installed proper driver on PC. The driver is available either on enclosed CD or from your local distributor.**

GROUP-14

TETHERED SCANNER SETTINGS

(The following are only supported by Bi-Color models)

BI-COLOR: CYCLE MODE

. D027$

GREEN > RED

. D028$

RED > GREEN

. D029$

GREEN > BI-COLOR

. D030$

RED > BI-COLOR

NOTES:

1. Illumination color will switch back and forth from one to another when good read does not occur.
2. Illumination color will remain as the one used at the last good read.

BI-COLOR: SINGLE MODE

. D031$

BI-COLOR

. D032$

GREEN

. D033$

RED

NOTES:

1. Illumination color will remain single.

GROUP-15

ADVANCED AUTO-SENSING SETTINGS

(The following is only supported by autosensing models)

MAGNETIC SWITCH (CCD & LASER SCANNERS)

. F034$

MAGNETIC SWITCH ON

. F035$

MAGNETIC SWITCH OFF

NOTES:

1. The Magnetic Switch is automatically activated when Auto-Sensing Mode is on.
2. To enable Magnetic Switch, the scanner should be paired with an Autosense Stand to perform Auto-Sensing function.
3. When Magnetic Switch is disabled, the scanner will perform Auto-Sensing function without Autosense Stand.

GREEN LED/ SUPPLEMENT LIGHT (CCD SCANNER ONLY)

. F032$

GREEN LED ON

. F033$

GREEN LED OFF

NOTES:

1. The green LED is automatically activated when Auto-Sensing Mode is on.
2. Green LED serves as Supplement Light for a CCD scanner in order to enhance the sensitivity of scanner in Auto-Sensing Mode.

GROUP-16

ADVANCED AUTO-SENSING SETTINGS

(The following is only supported by autosensing models)

DEACTIVATION TIME (CCD & LASER SCANNERS)

NOTES:

1. The default of Deactivation Time is 3 Sec.
2. Deactivation Time is the time interval between the last scan and the automatic deactivation of LED or Laser light in Auto-Sensing Mode.
3. You can set the Deactivation Time value by the following three steps:

Step 1: scan Deactivation Time
Step 2: scan two digits(Limit Range: 01 ~ 30sec.) from the Full ASCII numeric table.
Step 3: scan Deactivation Time

SAME CODE INTERVAL (LASER SCANNER ONLY)

NOTES:

1. The default of Same Code Interval is 30 Sec.
2. Same Code Interval is the time interval between two consecutive scans on the SAME bar code in Auto-Sensing Mode.
3. You can set the value of Same Code Interval by the following three steps:

Step 1: scan Same Code Interval
Step 2: scan two digits(Limit Range: 03 ~ 60sec.)from the Full ASCII numeric table.
Step 3: scan Same Code Interval

IDLE MODE SETTING

IDLE MODE

NOTES:

1. Idle Mode is only supported by certain models.
2. When Idle Mode is on, the scanner will enter idle state to save power after a period of inactivity, or Pre-Idle Time(the default is 1 min).
3. You can set the value of Pre-Idle Time by the following four steps:

Step 1: scan Idle Mode On
Step 2: scan Pre-Idle Time
Step 3: scan one digits(Limit Range: 1~9 Min.)from the Full ASCII numeric table.
Step 4: scan Pre-Idle Time

GROUP-17

TETHERED SCANNER - RS232 SETTINGS

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-18

TETHERED SCANNER - RS232 SETTINGS

STOP BITS

. E016$

1 STOP BIT

. E017$

2 STOP BITS

HANDSHAKING

. 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-19

TETHERED SCANNER - WAND EMULATION SETTINGS

.D001$

200us

.D002$

600uS

LEVEL DURATION OF MINI WIDTH

.D003$

LOW

.D004$

HIGH

POLARITY OF IDLE CONDITION

.D005$

Bar High / Space Low

.D006$

Bar Low / Space High

OUTPUT OF WAND EMULATION

.D007$

PEN TYPE

.D008$

FULL ASCII CODE 39

WAVE FORM

GROUP-20

WIRELESS SCANNER SETTINGS

INTERFACE

. E043$

BT HID

Emulates a **Bluetooth HID keyboard** that transmits each barcode data to the host after decode.

. E042$

BT SPP

Emulates a **Bluetooth SPP device** that transmits each barcode data in serial communication to the host after decode.

. C035$

Memory Mode

Emulates a **USB mass storage device** that saves each barcode data during off-line data collection.

. C008$

USB-HID

Emulates a **USB keyboard** that transmits each barcode data to the host after decode.

. C006$

USB-VCP

Emulates a **USB virtual com device** that transmit each barcode data to the host after decode. Driver is available on CD and our official website.

Function Support Matrix

Mode	Interface	On-line Operation	Off-line Operation	Ez Utility
Wireless	BT HID	✓		
	BT SPP	✓		
Tethered	Memory		✓	
	USB HID	✓		✓
	USB VCP	✓		✓

*Note: Ez Utility(PC-based software utility) is available for download on CD and our official website.

GROUP-21

WIRELESS SCANNER SETTINGS

BLUETOOTH PROFILE

. E043$

(Recommanded)

BT mode - HID

1. Press the trigger for 1 second to activate the scanner.
2. Scan [**DISCONNECT**]
3. Scan [**BT mode - HID**]; the scanner will emit several beeps.
4. Select "Wireless Scanner" from discovered device list. (For PC, please click "Create a pairing code for me")
5. The Bluetooth application may prompt you to scan a pincode.
6. Follow the steps in **PINCODE SETUP** section the on next page.
7. The scanner will beep twice to verify the connection.

. E042$

BT mode - SPP

1. Press the trigger for 1 second to activate the scanner.
2. Scan [**DISCONNECT**]
3. Scan [**BT mode - SPP**]; the scanner will emit several beeps.
4. Select "Wireless Scanner" from discovered device list. (For PC, please click "Enter the device's pairing code")
6. Enter "1234" from the host.
7. Open serial communication software with com port (see Device Manager) properly set up.
8. The scanner will beep twice to verify the connection.

. E041$

BT mode - HID plug & play

1. Connect the cradle to the host PC.
2. Scan [**DISCONNECT**]
3. Scan [**BT mode - HID plug & play**], and the scanner will emit several beeps.
4. Scan the Host Address barcode on the cradle's bottom.
5. The scanner will beep twice and cradle's blue indicator LED will stay on to verify a successful connection.

*Note: Only supported by model with charging cradle.

. E031$

Disconnect

GROUP-22

WIRELESS SCANNER SETTINGS

PINCODE SETUP

STEP 1

Pincode Start

STEP 2

Scan numeric barcodes (see **NUMERIC BARCODES** below) based on the pincode generated by the Bluetooth application.

NUMERIC BARCODES


1


6


2


7


3


8


4


9


5


0

STEP 3

Enter

STEP 4

Pincode Stop

GROUP-23

WIRELESS SCANNER SETTINGS

Getting Connected - iOS (Apple)

Simply follow instruction in [**BT mode - HID**]. (Group 21), in which step 5 & 6 can be skipped since Apple devices will not require pincode for connection.

Touch Keyboard

. E047$

ENABLE iOS HOTKEY

. E048$

DISABLE iOS HOTKEY

After enabling iOS Hotkey(disabled by default), you may simply double-click the trigger to toggle the iPhone/iPad Touch Keyboard.

For scanner with two buttons, please simply press the function button (the smaller one) to toggle iOS Touch Keyboard.

Getting Connected - Android (Samsung, hTC, Sony..)

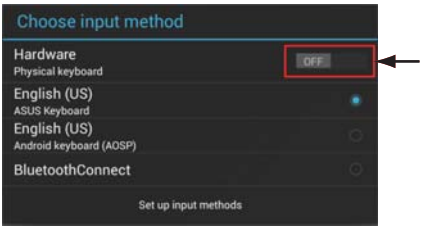
Simply follow instruction in [**BT mode - HID**]. (Group 21), in which step 5 & 6 can be skipped since Android devices will not require pincode for connection.

*Note: The BT HID profile is supported on Android 4.0 or newer versions.

Touch Keyboard

While connected with the scanner, the Touch Keyboard on the Android smartphone or tablet might disappear. To resolve this issue, please change settings on Android device with below steps:

1. Enter "Settings"
2. Enter "Language & input"
3. In Keyboard & input window, tap "Default" to continue.
4. Turn off "Hardware - Physical keyboard", and the Touch Keyboard will function properly again.



GROUP-24

WIRELESS SCANNER SETTINGS

POWER OFF TIMEOUT

Variable Timeout

. B030$

SET MINUTE
(Range: 00 ~ 60)

. B029$

SET SECOND
(Range: 00 ~ 60)

The timeout is 3 minutes by default, and is programmable to the second and minute, ranging from 10 seconds (00:10) to 60 minutes and 60 seconds (60:60)
For example, to set the timeout as 5 minutes 30 seconds:
1. Scan [Set Minute]
2. Scan [0] & [5] on below numeric barcode table.
3. Scan [Set Minute]
4. Scan [Set Second]
5. Scan [3] & [0] on below numeric barcode table.
6. Scan [Set Second]

No Timeout (Scanner Always On)

. B021$

DISABLE
TIMEOUT

NUMERIC BARCODES

1

2

3

4

5

6

7

8

9

0

GROUP-25

WIRELESS SCANNER SETTINGS

SET BLUETOOTH DEVICE ID

To customize your own Bluetooth device name for the wireless scanner, please follow below steps:

STEP 1

Default Wireless ID

. B022$

STEP 2

Set Wireless ID

. B023$

STEP 3

Scan up to 16 alphanumeric characters from Full ASCII Table (GROUP 52-60) as your desired ID name.

STEP 4

Set Wireless ID

. B023$

STEP 5

Scan a desired BT mode in **BLUETOOTH PROFILE** (GROUP 21) to complete the configuration.

*Note:

1. If you have connected the scanner with the host BEFORE customizing your Bluetooth device name, please remove the device and create a new connection to make sure device name is refreshed. For PC, it is recommended to restart the Bluetooth adaptor in order to refresh device name.
2. At Step 3, the scanner will beep three times as an alert that more than 16 characters are entered.
3. To reset the Bluetooth device name to default ("Wireless Scanner"), please simply do Step1 & Step 5, skipping Step 2 to Step 4.

SET SPP PINCODE

By default, the pincode under SPP profile for the scanner is "1234". You may customize this pincode with below steps:

STEP 1

. B024$

Set SPP Pincode

STEP 2

Scan numeric barcodes (see **NUMERIC BARCODES** below)
Up to 8 numbers can be set as SPP pincode.

NUMERIC BARCODES

	1	6	
	2	7	
	3	8	
	4	9	
	5	0	

STEP 3

. B024$

Set SPP Pincode

STEP 4

Scan a desired BT mode in **BLUETOOTH PROFILE** (GROUP 21) to complete the configuration.

GROUP-27

WIRELESS SCANNER SETTINGS

SPP MASTER MODE

First, please generate one configuration barcode for the target SPP slave device in below methods:
1. The barcode must be Code 39 with no checksum
2. Barcode data format: LTB + Target MAC address

For example, the target SPP slave device's MAC address is 001583522C3B.

Please encode:
LTB001583522C3B in Code39 barcode.

Then, follow below steps to create connection:

STEP 1

SPP - Master

STEP 2

(Your Target SPP Slave Device Barcode)

SPP REMOTE CONTROL

There are two ways to verify connection status by the host under SPP profile.

Command Response

Host sends:	CR,LF,{,A,L,},CR,LF	(8 bytes)
Scanner replys:	O,K,CR,LF	(4 bytes)

Beeper Response

Host sends:	CR,LF,{,M,1,},CR,LF	(8 bytes)
Scanner reacts:	a short beep	

SHUT DOWN

This configuration barcode will shut down the scanner immediately but still reserve the pairing record.

. E255$

SHUT DOWN

DISCONNECTION

. E031$

DISCONNECT
(CLEAR PAIRING RECORD)

. E046$

DISCONNECT
(KEEP PAIRING RECORD)

GROUP-29

WIRELESS SCANNER SETTINGS

BATCH MODE

ENABLE

DISABLE

When out of range, the scanner will temporarily keep scanned data in its memory buffer(2K RAM) until the buffer is full. When back in range, the scanner will send all stored data back to the host.

*Note:
1. Batch Mode will not function when Memory Mode is enabled, or no connection is made beforehand.

BINARY CHECK CHARACTER

ENABLE

DISABLE

Once enabled, a checksum will be added to the end of each data to conduct Xor calculation. For Bluetooth SPP & USB-VCP, the BCC is 1 byte. For Bluetooth HID, the BCC are 2 bytes.

Example:
The barcode data is "TEST" with terminator <CR><LF>

1. Bluetooth SPP & USB-VCP:
Data Format = <T> + <E> + <S> + <T> + <CR> + <LF> + <BCC>.
BCC = 54h ^ 45h ^ 53h ^ 54h ^ 0Dh ^ 0Ah = 11h

2. Bluetooth HID:
Data Format = <T> + <E> + <S> + <T> + <Enter> + <BCC>
BCC = 54h ^ 45h ^ 53h ^ 54h ^ E7h = F1h

However, since control character cannot be displayed in Bluetooth HID, BCC will be converted into 2 bytes of characters. As a result, the data will be: TEST + <Enter> + F + 1

GROUP-30

WIRELESS SCANNER SETTINGS

MEMORY MODE

For memory version only

. C035$

MEMORY MODE

After scanning the above barcode, the scanner will be able to collect barcode data off-line. The barcode data will be stored in the format of:
< **Date** >, < **Time** >, < **Barcode Data** > < **CR** >

To retrieve stored data, please connect the scanner to the host with cable, access removable storage device "**MiniScan**" from which you may open or copy the file "**BARCODE.txt**" to your computer.

To exit Memory Mode, simply scan any interface barcode in **INTERFACE** section (Group 20)

DELETE LAST RECORD

. R005$

DELETE LAST RECORD

To delete ONE stored data, please scan below barcode or press this button.

CLEAR ALL RECORD

To delete ALL stored data, simply delete the file "**BARCODE.txt**" in the removable storage device "**MiniScan**" until you hear two beeps.

GROUP-31

WIRELESS SCANNER SETTINGS

DATA FORMAT

For memory version only

. R011$

DATA FORMAT

The default Data Format is <Date>, <Time>, <Barcode Data>
below are items and their setup codes:

Code	Item	Code	Item
1	Date	3	Barcode Data
2	Time	4	Quantity

Example:
To change Data Format to <Barcode Data>, <Date>, <Time>
1. Scan [Data Format]
2. Scan [3], [1], [2] from Group 60.
3. Scan [Data Format]

. R010$

FIELD SEPARATOR

Default is comma (,) . You may replace it with any alphanumeric characters from the full ASCII table in User's Manual (on CD).

Example: To change Field Separator to Semicolon (;)
1. Scan [Field Separator]
2. Scan [;] from the full ASCII table (Group 52-60)
3. Scan [Field Separator]

DATE & TIME SETUP

For memory version only

SET DATE

. R006$

Example: To set Date to 2012-08-01 (Year-Month-Day):
1. Scan [Set Date]
2. Scan [1], [2], [0], [8], [0], [1] from Group 60.
3. Scan [Set Date]

SET TIME

. R007$

Example: To set Time to 08:10:30 am (Hr:Min:Sec)
1. Scan [Set Time]
2. Scan [0], [8], [1], [0], [3], [0] from Group 60.
3. Scan [Set Time]

* To avoid Time and Date being reset to factory default due to running out of battery, please fully charge the scanner for at least 3 hours before use.

GROUP-32

WIRELESS SCANNER SETTINGS

DATE FORMAT

For memory version only

. R008$

DATE FORMAT

The default Date Format is DD/MM/YYYY (Code = 09), below is full list of available formats and their setup codes:

Code	Format	Code	Format
01	DD-MM-YYYY	09	DD/MM/YYYY
02	MM-DD-YYYY	10	MM/DD/YYYY
03	DD-MM-YY	11	DD/MM/YY
04	MM-DD-YY	12	MM/DD/YY
05	YYYY-MM-DD	13	YYYY/MM/DD
06	YY-MM-DD	14	YY/MM/DD
07	DD-MM	15	DD/MM
08	MM-DD	16	MM/DD

Example:
To set Date Format to MM/DD/YY (Code =12)
1. Scan [Date Format]
2. Scan [1], [2] from Group 60.
3. Scan [Date Format]

TIME FORMAT

For memory version only

TIME FORMAT

. R009$

The default Time Format is HH:MM:SS (Code = 01), below are available formats and their setup codes:

Code	Format	Code	Format
01	HH:MM:SS	02	HH:MM

Example:
To set Time Format to HH:MM (Code = 02)
1. Scan [Time Format]
2. Scan [0], [2] from Group 60.
3. Scan [TimeFormat]

GROUP-33

WIRELESS SCANNER SETTINGS

QUANTITY

For memory version only

ENABLE QUANTITY INPUT

. R017$

Once you enable quantity input, the operation procedure under memory mode will be as follows:

1. Scan [MEMORY MODE] (Group 30)
2. Set DATA FORMAT (Group 31) as appropriate. For example, your data format is <Barcode Data>, <Quantity>.
3. Scan any random barcode; it will be stored as <Barcode Data>.
4. Scan [SET QUANTITY]
5. Scan the numeric barcodes in Group 60 as desired (ranges from 1 to 99999); it will be stored as <Quantity>.
6. Scan [SAVE DATA]
7. Repeat Step 3 – 6 to complete your task.
8. Retrieve memory data (refer to **Memory Mode** section in Group 30) and the result will be:

   <Barcode Data 1>, <Quantity 1>
   <Barcode Data 2>, <Quantity 2>
   <Barcode Data 3>, <Quantity 3>
   .....
   .....

SET QUANTITY

. R015$

SAVE DATA

. R016$

. R018$

DISABLE QUANTITY INPUT

Once quantity input is diabled, the operation procedure under memory mode will be as follows:

1. Scan [ENABLE MEMORY] (Group 30)
2. Set DATA FORMAT (Group 31) as appropriate. For example, your data format is <Barcode Data>, <Quantity>.
3. Scan any random barcode; it will be stored as <Barcode Data>
4. Repeat Step 3 to complete your task.
5. Retrieve memory data (refer to **Memory Mode** section in Group 30) and the result will be:

   <Barcode Data 1>, 00001
   <Barcode Data 2>, 00001
   <Barcode Data 3>, 00001
   .....
   .....

*By default, <Quantity> = 00001. To remove <Quantity> from the data format, simply repeat Step 2 but set <Barcode Data> only.

GROUP-34

ENABLE/ DISABLE SYMBOLOGIES

ENABLE

. A002$

ENABLE ALL CODE

. K010$

CODE 32

. K001$

CHINA POSTAL CODE

. L010$

UK PLESSEY CODE

. N001$

INDUSTRIAL 2 OF 5

. M010$

MATRIX 2 OF 5

. J001$

INTERLEAVED 2 OF 5

. J010$

CODE 128

. I001$

CODABAR

. L014$

TELEPEN

DISABLE

. A003$

DISABLE ALL CODE

. K011$

CODE 32

. K002$

CHINA POSTAL CODE

. L011$

UK PLESSEY CODE

. N002$

INDUSTRIAL 2 OF 5

. M011$

MATRIX 2 OF 5

. J002$

INTERLEAVED 2 OF 5

. J011$

CODE 128

. I002$

CODABAR

. L015$

TELEPEN

GROUP-35

ENABLE/ DISABLE SYMBOLOGIES

ENABLE

. 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

DISABLE

. 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-36

ENABLE/DISABLE SYMBOLOGIES, CHINA POSTAL CODE

ENABLE

. N032$

GS1 Databar ENABLE

. N038$

GS1 Databar STACKED ENABLE

. N010$

GS1 Databar LIMITED ENABLE

. N026$

GS1 Databar EXPANDED ENABLE

. N028$

GS1 Databar EXPANDED STACKED ENABLE

. G021$

PDF 417 ENABLE

DISABLE

. N033$

GS1 Databar DISABLE

. N039$

GS1 Databar STACKED DISABLE

. N011$

GS1 Databar LIMITED DISABLE

. N027$

GS1 Databar EXPANDED DISABLE

. N029$

GS1 Databar EXPANDED STACKED DISABLE

. G022$

PDF417 DISABLE

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-37

SYMBOLOGIES: MSI CODE, UK PLESSEY CODE

MSI

. L001$

ENABLE

. L002$

DISABLE

. L004$

CDV & SEND CD

. L003$

CDV & NOT SEND CD

. L007$

CHECK DIGIT DOUBLE MOD 10

. L008$

CHECK DIGIT DOUBLE 11 PLUS MOD 10

. L009$

CHECK DIGIT SINGLE MOD 10

. L005$

MIN LENGTH (6)

. L006$

MAX LENGTH (48)

UK PLESSEY CODE

. L010$

ENABLE

. L011$

DISABLE

. 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-38

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-39

SYMBOLOGIES: INTERLEAVED 2 OF 5, CODE 11

INTERLEAVED 2 OF 5

.J001$

ENABLE

.J002$

DISABLE

.J003$

DISABLE CDV

.J004$

CDV & SEND CD

.J005$

CDV & NOT SEND CD

.J008$

First digit suppressed

.J009$

Last digit suppressed

.J014$

NO suppressed

.J006$

MIN LENGTH (6)

.J007$

MAX LENGTH (48)

CODE 11

.I010$

ENABLE

.I011$

DISABLE

.I012$

DISABLE CDV

.I013$

CDV & SEND CD

.I042$

CDV & SEND CD
(1 DIGIT)

.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-40

SYMBOLOGIES: INDUSTRIAL 2 OF 5, MATRIX 2 OF 5

INDUSTRIAL 2 OF 5

. N001$

ENABLE

. N002$

DISABLE

. N003$

DISABLE CDV

. N004$

CDV & SEND CD

. N005$

CDV & NOT SEND CD

. N006$

MIN LENGTH (6)

. N007$

MAX LENGTH (48)

MATRIX 2 OF 5

. M010$

ENABLE

. M011$

DISABLE

. M012$

DISABLE CDV

. M013$

CDV & SEND CD

. 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-41

SYMBOLOGIES: CODABAR

.I001$

ENABLE

.I002$

DISABLE

.I005$

DISABLE CDV

.I006$

CDV & SEND CD

CODABAR

.I007$

CDV & NOT SEND CD

.I008$

MIN LENGTH (6)

.I009$

MAX LENGTH (48)

.I030$

ST/SP: abcd/abcd

.I029$

ST/SP: ABCD/ABCD

.I031$

ST/SP: ABCD/TN*E

.I032$

ST/SP: abcd/tn*e

START / STOP

.I003$

SEND START / STOP

.I004$

Not Send 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**

.I027$

CLSI FORMAT ON

.I028$

CLSI FORMAT OFF

CLSI FORMAT

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

APPENDIX

FULL ASCII (Code 39) NUMERIC TABLE

0

1

2

3

4

5

6

7

8

9

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

. P023$

GROUP-42

SYMBOLOGIES: ABC- CODABAR, CX- CODABAR

ABC- CODABAR

.I017$

ON

.I018$

OFF

.I035$

SET INSERT DATA*

.I039$

INSERT DATA- ON

.I036$

INSERT DATA- OFF

* *The data can be any alphanumerics of FULL ASCII Table (GROUP 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 the 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.

CX CODE- CODABAR

.I022$

ON

.I023$

OFF

.I037$

SET INSERT DATA*

.I040$

INSERT DATA- ON

.I038$

INSERT DATA- OFF

* *The data can be any alphanumerics of FULL ASCII Table (GROUP 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-43

SYMBOLOGIES: CODABAR COUPLING, ADJACENT REQUIRED

.I019$

ON

.I020$

OFF

.I021$

SET INSERT DATA*

CODABAR COUPLING

.I041$

INSERT DATA - ON

.I026$

INSERT DATA - OFF

ABC-Codabar and 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 will be sent.

* *The data can be any alphanumerics of FULL ASCII Table (GROUP 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 the same time, the scanner will read only Codabar-Coupling, that is, ABC-Codabar, CX-Codabar will 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 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-44

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-45

SYMBOLOGIES FORMATTING: UPC-E

UPC-E

. H007$

ENABLE

. H008$

DISABLE

. H009$

LEAD DIGIT SEND

. H010$

LEAD DIGIT NO SEND

. H011$

CHECK DIGIT SEND

. H012$

CHECK DIGIT NO SEND

ADD ON SUPPLEMENT

. H037$

+5 ON

. H038$

+ 5 OFF

. H039$

+2 ON

. H040$

+ 2 OFF

. H047$

ADD A SPACE ON

. H048$

ADD A SPACE OFF

. H056$

ADDENDA REQUIRED ON

. H055$

ADDENDA REQUIRED OFF

NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-E bar code that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

GROUP-46

SYMBOLOGIES: UPC-E SYSTEM NUMBER

UPC-E0

.H064$

E (0) OFF

.H063$

E (0) ON

UPC-E1

.H065$

E (1) ON

.H066$

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 E(1) selection.

UPC-E EXPAND TO UPC-A

.H053$

ENABLE

.H054$

DISABLE

NOTE:

1. If UPC-E EXPAND TO UPC A FORMAT is 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-47

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 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

. H060$

ADDENDA REQUIRED ON

. H059$

ADDENDA REQUIRED OFF

NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-E bar code that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

GROUP-48

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

. H062$

ADDENDA REQUIRED ON

. H061$

ADDENDA REQUIRED OFF

NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-E bar code that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

GROUP-49

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

. H058$

ADDENDA REQUIRED ON

. H057$

ADDENDA REQUIRED OFF

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 ISSN or ISBN will be considered as an extension of EAN-13. If ISSN or ISBN needs to be read, EAN-13 must be enabled. If ISSN and ISBN need to be read with addenda, EAN-13 must be enabled with ADDENDA REQUIRED set to ON, and +2 ON or +5 ON must be enabled as well.

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, EAN-13 must be enabled. Otherwise the scanner will not be able to read ISSN or ISBN.

ISMN

. H070$

ISMN OFF

. H069$

ISMN ON

GROUP-50

SYMBOLOGIES: EAN/UCC-128, CODE 128

EAN/ UCC-128

. M001$

ENABLE

. M002$

DISABLE

. M003$

CODE ID ENABLE

. M004$

CODE ID DISABLE

. M005$

FUNC 1 CHAR SEND

. M006$

FUNC 1 CHAR 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 56-60)

String format:

]C1	DATA CHARACTERS	<GS>	DATA CHARACTERS

Setting Procedure:

1: Scan DEFINE EAN128.
2: Scan ASCII Code (Group 56-60)
3: Scan DEFINE EAN128.

CODE 128

. J010$

ENABLE

. J011$

DISABLE

. J012$

MIN LENGTH (5)

. J013$

MAX LENGTH (48)

PDF417

. G021$

ENABLE

. G022$

DISABLE

GROUP-51

GS1 DataBar, LIMITED, EXPANDED

GS1 DataBar (RSS) - OMNI & STACKED

. N032$

GS1 DataBar ENABLE

. N033$

GS1 DataBar DISABLE

. N034$

GS1 DataBar CHECK DIGIT SEND

. N035$

GS1 DataBar CHECK DIGIT NOT SEND

. N036$

GS1 DataBar PREFIX SEND

. N037$

GS1 DataBar PREFIX NOT SEND

. N038$

GS1 DataBar STACKED ENABLE

. N039$

GS1 DataBar STACKED DISABLE

. P024$

GS1 DataBar SET ID

GS1 DataBar (RSS) - LIMITED

. N010$

GS1 DataBar LIMITED ENABLE

. N011$

GS1 DataBar LIMITED DISABLE

. N012$

GS1 DataBar LIMITED CHECK DIGIT SEND

. N013$

GS1 DataBar LIMITED CHECK DIGIT NOT SEND

. N024$

GS1 DataBar LIMITED PREFIX SEND

. N025$

GS1 DataBar LIMITED PREFIX NOT SEND

. P019$

GS1 DataBar LIMITED SET ID

GS1 DataBar (RSS) - EXPANDED

. N026$

GS1 DataBar EXPANDED ENABLE

. N027$

GS1 DataBar EXPANDED DISABLE

. N028$

GS1 DataBar EXPANDED STACKED ENABLE

. N029$

GS1 DataBar EXPANDED STACKED DISABLE

. N030$

GS1 DataBar EXPANDED MIN LENGTH

. N031$

GS1 DataBar EXPANDED MAX LENGTH

. P020$

GS1 DataBar EXPANDED SET ID

GROUP-52

FULL ASCII TABLE (CODE 39)
CONTROL CODES

%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-53

FULL ASCII TABLE (CODE 39)
CONTROL CODES

DLE	$P
DC1	$Q
DC2	$R
DC3	$S
DC4	$T
NAK	$U
SYN	$V
ETB	$W
CAN	$X
EM	$Y
SUB	$Z
ESC	%A
FS	%B
GS	%C
RS	%D
US	%E
SP	

GROUP-54

FULL ASCII TABLE (CODE 39)
SYMBOLS

+	+
-	-
.	.
$	$
%	%
/	/
%L	\
/ A	!
%V	@
/ C	#
%N	^
%S	~
/ F	&
/ J	*
%O	_
%H	=
%Q	|

GROUP-55

FULL ASCII TABLE (CODE 39)
SYMBOLS

{	%P
}	%R
[	%K
]	%M
(	/ H
)	/ I
<	%G
>	%I
`	%W
"	/ B
'	/ G
,	/ L
;	%F
:	/ Z
?	%J
DEL	%T

GROUP-56

FULL ASCII TABLE (CODE 39)
UPPER CASE ALPHABETS

A

B

C

D

E

F

G

H

I

J

K

L

M

GROUP-57

FULL ASCII TABLE (CODE 39)
UPPER CASE ALPHABETS

N	
O	
P	
Q	
R	
S	
T	
U	
V	
W	
X	
Y	
Z	

GROUP-58

FULL ASCII TABLE (CODE 39)
LOWER CASE ALPHABETS

+A  a

+B  b

+C  c

+D  d

+E  e

+F  f

+G  g

+H  h

+I  i

+J  j

+K  k

+L  l

+M  m

GROUP-59

FULL ASCII TABLE (CODE 39)
LOWER CASE ALPHABETS

n

o

p

q

r

s

t

u

v

w

x

y

z

GROUP-60

FULL ASCII TABLE (CODE 39)
NUMBERS


0


1


2


3


4


5


6


7


8


9

GROUP-61

FULL ASCII TABLE (CODE 39)
FUNCTION KEYS

F1 $TA

F2 $TB

F3 $TC

F4 $TD

F5 $TE

F6 $TF

F7 $TG

F8 $TH

F9 $TI

F10 $TJ

F11 $TK

F12 $TL

Home $TM

End $TN

Enter (Numeric Key) $T+D

App $T+O

GROUP-62

FULL ASCII TABLE (CODE 39)
NAVIGATION KEYS

$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-63

FULL ASCII TABLE (CODE 39)
MODIFIER KEYS

$T%L
Alt (Left) make*1

$T+E
Alt (Right) make

$T%N
Shift (Left) make *2

$T+I
Shift (Right) make

$T+K
Win (Left) make

$T+M
Win (Right) make

$T%W
Ctrl (Left) make *3

$T+G
Ctrl (Right) make

$T%M
Alt (Left) break

$T+F
Alt (Right) break

$T%O
Shift (Left) break

$T+J
Shift (Right) break

$T+L
Win (Left) break

$T+N
Win (Right) break

$T+A
Ctrl (Left) break

$T+H
Ctrl (Right) break

For UK Keyboard Special Character

$T+B
¬

$T+C
£

Note:

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

GROUP-64
TROUBLE SHOOTING

Our Barcode Scanners are simple to install and use.
Most operational issues can be attributed to:

INCORRECT INTERFACE CONNECTION
INCORRECT CONFIGURATION SETUP
POOR BARCODE 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 there is no output of data to the monitor, please check the cabling connection.

KEYBOARD INTERFACES PROBLEMS

In general, the Keyboard Wedge interface is trouble free, but there is still something 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).

GROUP-65
TROUBLE SHOOTING

RS232 INTERFACE PROBLEMS

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

1. 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. Please check if the cable pinout assignment of bar code match to the pinout assignment of PC terminal?

No power supply to the 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 con guration 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 set up 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 select the correct interface based upon the cable and input you are using.

Symptom ---- 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 scanning of other symbologies.

Does the selected bar code symbology con guration match the bar code(s) being read?
Scanned data from each bar code symbology can be restricted to eliminate the scanning of unused symbologies.
The restrictions are individually set for each symbology.

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 when choosing 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 procedure high quality bar codes. Also check to make sure the ink, ribbon, or toner in good supply.

APPENDIX 1

DEFAULT TABLE 1

GROUP	PARAMETER	DEFAULT
1	Computer Type	PC-AT
	Interface	(depends on customer order)
	Setup Code	On
2	Reading Mode	Trigger
2.2	Bi-color Light Source	Green > Red
2.3	Magnetic Switch	On
	Green LED/ Supplement Light (CCD Scanner)	On
2.4	Deactivation Time (CCD & Laser Scanner)	3 Sec
	Same Code Interval (Laser Scanner)	30 Sec
	Idle Mode	Off
	Pre-Idle Time	1 Min
2.6	Connection Options	BT HID
2.8	Wireless ID	Wireless Scanner
2.9	Power Off Timeout	3 Min
2.10	SSP (Secure Simple Pairing)	Disable
	iOS Hotkey	Disable
2.11	Link Quality	Disable
	Batch Mode	Disable
2.13	SPP Pincode	1234
2.15	Memory Mode	Disable
	Data Output Method	Wireless
2.16	Data Format	<Item No.><Date><Time><Barcode Data>
	Field Separator	,
2.17	Date Format	DD/MM/YYYY
	Time Format	HH:MM:SS
3	Beep Tone Mode 2.1k	Beep Medium
	Beep Tone Mode 2.7k	Beep Medium
	Terminator	CR(KB, USB); CR+LF(RS232)
4	Send Data Length	Off
	Preamble & Postamble	None
5	Accuracy Adjustment	0
6	Label Type Positive/ Negative	Disable
6~9	Enable & Disable Code ID	Off
10	Interblock Delay	0ms
	Intercharacter Delay	140us
11	Keyboard Layout	English(USA)
	Caplock	Off
	Numeric Key	Alphanumeric Key
12	Baud Rate	9600
	Data Bits & Parity	8 Bits None
13	Stop Bits	1 stop bit
	Handshaking	None
	ACK/NAK	Off
	Flow Control Timeout	1 Sec
	BCC	Off
14	Level duration of Mini Width	200us
	Polarity of Idle Condition	High
	Output of Wand Emulation	Bar High/ Space Low
	Wave Form	Full ASCII 39
	Idle Mode	Off
	Pre-Idle Time	1 Min
15	Enable and Disable Symbologies	
	Code 32	Disable
	China Postal Code	Enable
	UK Plessey Code	Disable
	Industrial 2 of 5	Disable
	Matrix 2 of 5	Disable
	Interleaved 2 of 5	Enable
	Code 128	Enable
	Codabar	Enable
	Telepen	Disable

APPENDIX 1

DEFAULT TABLE 2

GROUP		PARAMETER	DEFAULT
16		UPC-A	Enable
		UPC-E	Enable
		EAN-8	Enable
		EAN-13	Enable
		MSI	Disable
		Code 39	Enable
		Code 11	Disable
		Code 93	Disable
		EAN-128	Enable
		IATA	Disable
17	1	GS1 Databar	Disable
		GS1 Databar Stacked	Enable
		GS1 Databar Limited	Disable
		GS1 Databar Expanded	Disable
		GS1 Databar Expanded Stacked	Enable
		PDF417	Disable
	2	China Post Code	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	11 digits
		Max Length	48 digits
18	1	MSI	
		Enable/Disable	Disable
		Check Digits	CDV & send CD
		Check Digits Mode	Single MOD 10
	2	**UK Plesssy**	
		Enable/Disable	Disable
		Check Digits	CDV & not send CD
19	1	**Code 93**	
		Enable/Disable	Disable
		Min Length	6 digits
		Max Length	48 digits
	2	**Telepen**	
		Enable/Disable	Disable
		Telepen ASCII/ Number	Number
	3	**IATA**	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
20	1	**Interleaved 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	32 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

APPENDIX 1

DEFAULT TABLE 3

GROUP		PARAMETER	DEFAULT
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
		CLSI Format	On
23	1	**ABC-Codabar**	
		ON/OFF	Off
		Insert Data	Off
	2	**CX-Codabar**	
		ON/OFF	Off
		Insert Data	Off
24		**Codabar-Coupling**	
		ON/OFF	Off
		Insert Data	Off
		Adjacent Required	Off
25	1	**Code 39**	
		Full ASCII 39 Enable/Disable	Enable
		Check Digits	Disable CDV
		Start/Stop	Not Send
		Min Length	1 digit
		Max Length	48 digits
	2	Code 32	
		Enable/Disable	Disable
		Leading	send
		Tailing	send
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-E systems number**	
		UPC E(0) On/Off	On
		UPC E(1) On/Off	Off
		UPC-E expand to UPC-A	Disable
		UPC-A expand to EAN-13	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

APPENDIX 1

DEFAULT TABLE 4

GROUP		PARAMETER	DEFAULT
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 1 Char Send	Not Send
	2	**Code 128**	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	5 digits
		Max Length	48 digits
	3	**PDF417**	
		Enable/Disable	Disable
32		GS1 Databar	Disable
		GS1 Databar Check Digit	Not Send
		GS1 Databar Prefix	Not Send
		GS1 Databar Stacked	Enable
		GS1 Databar Limited	Disable
		GS1 Databar Limited Check Digit	Not Send
		GS1 Databar Limited Prefix	Not Send
		GS1 Databar Expanded	Disable
		GS1 Databar Expanded Stacked	Enable

APPENDIX 2

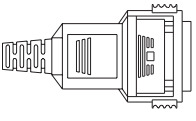
Cable Pin Assignment

INTERFACES:

1. TTL, Wand Emulation

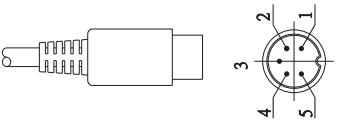
1.1) AMP (D-Sub 9Pin):

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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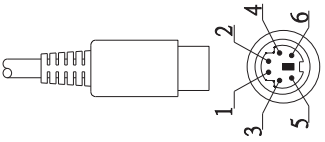
2. Keyboard Interface:

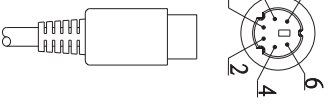
Type of connector:
2.1) PS/2 Mini Din6 Female:

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



APPENDIX 2

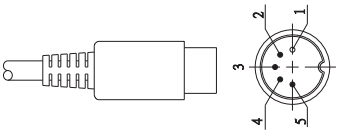
Cable Pin Assignment

2. Keyboard Interface:

Type of connector:

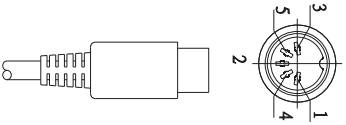
2.3) PC-AT: Din 5 Male:

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



2.4) PC-AT: Din 5 Female:

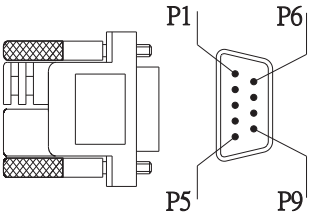
Pin	Signal
1	PC-Clk
2	PC-Data
3	NC
4	GND
5	+5VCC



3.RS232 Interfaces:

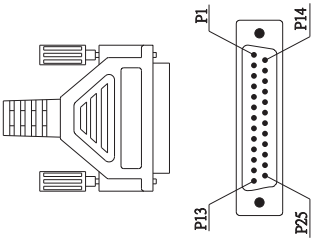
3.1) DB9F

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
LOW DENSITY	0.33(13)	0.825(32.5)	0.33(13)	1/2.5

LOW DENSITY

C9876543210D

CODE-39 TEST

0012345690