GROUP-47
TROUBLE SHOOTING

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

GROUP-48

TROUBLE SHOOTING

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	1.Beep Medium
		Beep Tone Mode 2.7k	1.Beep Medium
		Capital lock Mode	3.Caplock Off
4		Preamble & Postamble	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)
		Terminator	CR, CR+LF
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		China Post Code	
	1	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 ASC**II** /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	1	**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

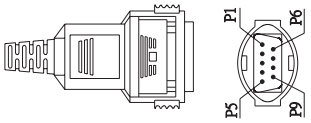
Cable Pin Assignment

INTERFACES:

1. TTL , Wand Emulation

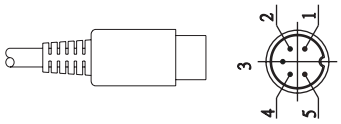
1.1) AMP (D-Sub 9Pin):

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

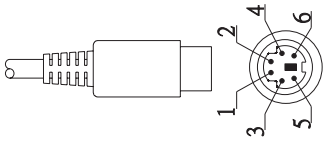


---

2. Keyboard Interface:

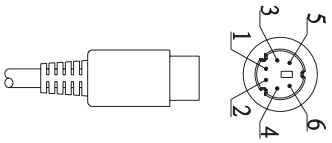
Type of connector:
2.1) PS/2 Mini Din6 Female:

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



2.2) PS/2 Mini Din6 Male:

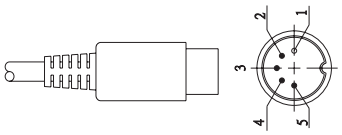
Pin	Signal
1	KB- Data
2	NC
3	GND
4	+5Vcc
5	KB-CLK
6	NC



Type of connector:

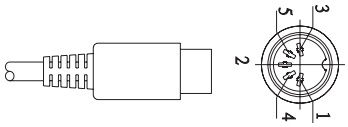
2.3) PC-AT : Din 5 Male :

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



2.4) PC-AT : Din 5 Female

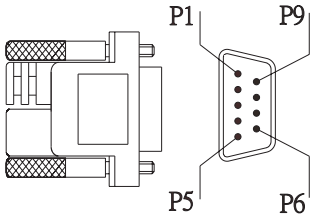
Pin	Signal
1	PC-Clk
2	PC-Data
3	NC
4	GND
5	+5VCC



3.RS232 Interfaces:

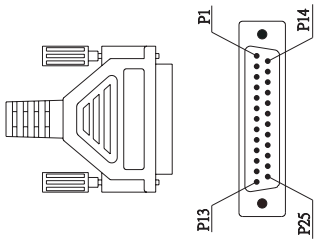
3.1) DB9F

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

LOW DENSITY

C9876543210D

CODE-39 TEST

0012345690

4 716415 942052

0 8
71589 81230

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

The information contained herein is provided to the user as a convenience. While every effort has been made to ensure accuracy, we are not responsible for damages that might occur because of errors or omissions, including any loss of profit or other commercial damage. The specifications described herein were current at the time of publication, but are subject to change at any time without prior notice.

CE Compliance :
This device has been tested and found comply with the limits for a Class B digital pursuant to part 15 of the FCC Rules.

This device has been tested and found compliant with the following listed standards as required by the EMC Directive 89/336/EEC as amended by directives 92/EEC and 93/68/EEC: EN55022(1992); EN55024(1992); EN55082-1 (1998)

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 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 installation. , May cause harmful interference to radio communication. 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 or more 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
You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC RF radiation exposure statement
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter .
Industry Canada - Class B
This digital apparatus does not exceed the Class B limits for radio noise emissions
from digital apparatus as set out in the interference-causing equipment standard
entitled “ Digital Apparatus, ” ICES-003 of Industry Canada.
Cet appareil num é rique respecte les limites de bruits radio é lectriques applicables
aux appareils num é riques de Classe B prescrites dans la norme sur le mat é rial
brouilleur: “ Appareils Num é riques, ” NMB-003 é dict é e par l ’ Industrie.
This device may not cause interference,and (2) this device must accept any interference, including interference that may cause undesired operation of the device."