

# **User's Manual**

## **Introduction**

Bar Code devices provide an accurate, easy, and fast method of data entry and data storage for computerized information systems.

The products we are offering now can be integrated into any host computer system by the following ways:

RS-232  
Dual RS-232  
USB

All the operating parameters are programmed by bar code programming menu and stored in non-volatile RAM which can retain the settings after power is turned off.

For the functions which are not listed in this menu, please consult your supplier for more details.

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## Features

- + Simple installation, Serial, Wand Emulation tc.
  
- + Over 180 configurable options
- + Auto detection of the type of computer (PC, XT, AT, PS/2, and XWindow terminals with a PC compatible keyboard interface)
  
- + Supports over twenty different keyboard country layouts
- + Map bar code data to any key on the keyboard
- + Supports editing, operations include (insert, Stripping, Filtering, Convert Case)
- + Programmable preamble, postamble ,and termination strings
- + READ/NO-READ indicators (buzzer and LED)
- + Superior reading performance utilizing advanced decoding algorithms
- + Extended ASCII support for Code 128 bar codes
- + Low power consumption

Note the use of automatic detection

1. Scanner is defaulted to be automatic detection mode. When the object close to the sensitive area, infrared light will sense the object automatically and initiate laser scanning on the barcode.
2. Keep pressing the button for 8 seconds, automatic detection mode will be converted to be normal mode and vice verse.
3. The distance from the sensor to the object is 20 ~ 25cm, scan rate is 0.2sec.


## Setup Category


Key	Category	Options
F1	Interface	Transmit Speed CTRL/Special Char Delay Wedge Interface Send Numerics As Keyboard Country Output Mode Serial Baud Rate Serial Data Bits Stop Bits Serial Parity Serial Duplex Serial Data Format Inverted Serial Output Serial Intercharacter Delay Serial Caps Lock Serial Num Lock Wand Emulation Append Mode Wand Emulation Max Segment Size Wand Emulation Segment Output Delay Setup Mode Lockout
F2	Decoders/Scanner	Decoders On/Off Code 39 UPC/EAN/JAN/Supplements Code 128 Interleaved 2of 5 Industrial 2of 5 Codabar Code 93 MSI/Plessey Code 11 Laser/CCD Other
F3	Editing	Edit #1 - Edit #10
F4	Macros/Special Keys	Macro #1 - Macro #10 keys
F5	Strings	String #1 - String #10
F6	Reserved	
F7	Buzzer/LED	Power Up Beep Good Read Beep Tone Beep Duration No Read LED Delay LED Power Save Mode
F8	Status/Diagnostics	Firmware Version and Release Date Laser/CCD Scanner Testing Keyboard Information Show Scan Codes
F9	Cloning	Lockout Cloned Reader Setup Mode Press ENTER To Begin Cloning
F10	Reset All Defaults?	Reset All Defaults?

## Editing Keys




For those categories which have more than one option, the UP and DOWN arrow and ENTER keys are used to move from one option to the next. In addition to the UP and DOWN arrow keys, the CTRL UP and CTRL DOWN arrow keys are used to move to the bottom and the top of the list. The following is a list of all special editing keys and a description of their function:

Key	Description
LeftArrow,Right Arrow	Toggles through the settings for the current option.
Up & Down Arrow	Moves from one option to the previous or next within the category or group.
CTRL UP & Down Arrow	Moves to the top or bottom of the category or group.
Home & End	Moves to the beginning or end of an input field.
ALT Backspace	Toggles the output mode during configuration, between destructive backspace and non-destructive backspace. Defaults to non-destructive backspace.
CTRL + Keypad	Increases transmit speed during setup.
CTRL - Keypad	Decreases transmit speed during setup.
CTRL F7	Test the current Beep Tone and Beep Duration.
CTRL F10	Resets the current option to the default setting.
SHIFT F10	If you are in a category with groups (F2-F5),SHIFT F10 resets the current group. If you are in a category without groups(F1,F7-F10),SHIFT F10 resets the entire category.
ALT F10	Resets all options in current category to default settings.
CTRL Escape	Exit configuration, saving changes(Permanent).
SHIFT Escape	Exit configuration, saving changes(Temporary).
ALT Escape	Exit configuration, without saving changes.

 Note: If you experience some character during setup, you may press the CTRL-(Keypad Minus)key to slow character transmission. To speed up character transmission, press the CTRL+(Keypad Plus)key.

 Note: After 5 minutes of inactivity no key presses the decoder will exit setup mode and save all changes.

The following sections document all of the setup mode categories and the groups and individual options within each category. Next to the option name is the default setting for the option. In addition to the default setting, the keys that are used for editing are listed to the right of the option name. The meaning of each of the key icons is as follows:

Key Icon	Meaning
	The left and right arrow keys scroll through available settings for the option.
	An ALT keypad sequence may be used to enter characters for the setting.
	All ASCII data is valid for the option. All characters are available for entry into the field.
GROUP	Used to indicate that the option represents a group of sub-options. The left and Right arrows scroll through the list of option groups. After selecting the option group, up and down arrows are used to configure the sub-options.
OPERATION	Used to indicate that the option represents an edit operation and that all of the Options listed below it are specific to that operation until the next operation is defined.
STRING TYPE	Used to indicate that the option represents a string type and that all of the options listed below it are specific to that type of string until the next string type is defined.



## Multiscan Functions - 1

OUTPUT FIRMWARE VERSION



0A

RESET CONFIGURATION TO DEFAULTS



0B

### OUTPUT MODE

OUTPUT MODE - USB



000600

OUTPUT MODE - SERIAL



000601

OUTPUT MODE - RESET



0B006

### BUZZER/LED

GOOD READ BEEP TONE - NONE



014200

GOOD READ BEEP TONE - RESET



0B142

GOOD READ BEEP DURATION - MEDIUM



014301

LED POWER SAVE MODE - ENABLE



01451

## Multiscan Functions - 2

### IMAGE

DECODE OPTIONS REVERSE IMAGE - ENABLE



01391

DECODE OPTIONS REVERSE IMAGE - DISABLE



01390

### CODE ID

DECODE OPTIONS SEND BAR CODE ID - DISABLE



01400

DECODE OPTIONS SEND BAR CODE ID - AS A PREFIX



01401

DECODE OPTIONS SEND BAR CODE ID - RESET



0B140

DECODE OPTIONS SEND BAR CODE ID - AS A SUFFIX



01402

### READING MODE

LASER/CCD MODE - SINGLE SCAN



013300

LASER/CCD MODE - SINGLE SCAN NO TRIGGER



013301

LASER/CCD MODE - MULTISCAN



013302

LASER/CCD MODE - MULTISCAN NO TRIGGER



013303

LASER/CCD MODE - CONTINUOUS SCAN



013304

LASER/CCD MODE - PULSE



013305

## Interface - KBW

### PC Communication

WEDGE MODE - AUTODETECT



000200

WEDGE MODE - SCAN SET 2 PASS THRU



000204

### Transmit Speed

TRANSMIT SPEED - 0



000000

TRANSMIT SPEED - 25



000025

### LANGUAGE

KEYBOARD COUNTRY - USA



000500

KEYBOARD COUNTRY - GERMAN



000510

KEYBOARD COUNTRY - FRANCE



000509

RESET



0005025

## Interface - Serial - 1

### BAUD RATE

SERIAL BAUD RATE - 2400



000703

SERIAL BAUD RATE - 4800



000704

SERIAL BAUD RATE - 9600



000705

SERIAL BAUD RATE - 19200



000706

SERIAL HANDSHAKE - NONE



001200

SERIAL HANDSHAKE - XON/XOFF



001201

### HAND SHAKE

SERIAL HANDSHAKE - RTS/CTS



001202

SERIAL HANDSHAKE - ACK/NAK



001203

SERIAL HANDSHAKE TIMEOUT - 2 SECONDS



0013020

SERIAL HANDSHAKE TIMEOUT - 5 SECONDS



0013050

## Interface - Serial - 2

### PARAMETERS

SERIAL DATA BITS - 8



SERIAL DATA BITS - 7



### SERIAL STOP BITS

SERIAL STOP BITS - 1



SERIAL STOP BITS - 2



### CHECK DIGIT

SERIAL PARITY - NONE



SERIAL PARITY - ODD



SERIAL PARITY - EVEN



SERIAL PARITY - MARK



SERIAL PARITY - SPACE



SERIAL PARITY - RESET



## Interface - WAND

CODE 128 WAND EMULATION - ENABLE



00141

CODE 128 WAND EMULATION - DISABLE



00140

### SPEED

WAND EMULATION SPEED - FASTEST (0)



001500

WAND EMULATION SPEED - SLOWEST (3)



001503

### BAR LEVEL

WAND EMULATION - BAR=1(HIGH)



00161

WAND EMULATION - BAR=0(LOW)



00160

### CODE 11

CODE 11 - ENABLE



01261

CODE 11 - DISABLE



01260

### CODE 39

CODE 39 ENABLE



00221

CODE 39 DISABLE



00220

FULL ASCII ENABLE



00231

FULL ASCII DISABLE



00230

Symbologies On/Off - 1

CODE 93

CODE 93 - ENABLE



CODE 93 - DISABLE



CODE 128

CODE 128 - ENABLE



CODE 128 - DISABLE



CODE 128 ISBT - ENABLE



CODE 128 ISBT - DISABLE



CODABAR

CODABAR - ENABLE



CODABAR - DISABLE



INTERLEAVED 2 OF 5

I2OF5 - ENABLE



I2OF5 - DISABLE



INDUSTRIAL 2 OF 5

ID2OF5 - ENABLE



ID2OF5 - DISABLE



Symbologies On/Off - 2

MSI/PLESSEY

MSI - ENABLE



01151

MSI - DISABLE



01150

UPC/EAN

UPC-A ENABLE



00341

UPC-A DISABLE



00340

UPC-E ENABLE



00351

UPC-E DISABLE



00350

EAN-13 ENABLE



00361

EAN-13 DISABLE



00360

EAN-8 ENABLE



00371

EAN-8 DISABLE



00370



## Symbologies Set Up - 1

### CODE 11

CODE 11 ID CHARACTER - 'm'



0131m

CODE 11 ID CHARACTER - 'Z'



0131z

CODE 11 LASER/CCD REDUNDANCY - ENABLE



01321

CODE 11 LASER/CCD REDUNDANCY - DISABLE



01320

### CODE 39

CODE 39 SS CHAR - NONE



002700

CODE 39 SS CHAR '+'



002704

CODE 39 SEND START/STOP CHARS ENABLE



00281

CODE 39 SEND START/STOP CHARS DISABLE



00280

CODE 39 ID CHARACTER 'a'



0031a

CODE 39 ID CHARACTER 'Z'



0031z

CODE 39 LASER/CCD REDUNDANCY ENABLE



00331

CODE 39 LASER/CCD REDUNDANCY DISABLE



00330

## Symbologies Set Up - 2

### CODE 93

CODE 93 ID CHARACTER 'h'



0066h

CODE 93 ID CHARACTER 'z'



0066z

CODE 93 LASER/CCD REDUNDANCY - ENABLE



00681

CODE 93 LASER/CCD REDUNDANCY - DISABLE



00680

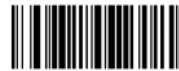
### CODE 128

CODE 128 ID CHARACTER - 'g'



0081g

CODE 128 ID CHARACTER - 'z'



0081z

CODE 128 LASER/CCD REDUNDANCY - ENABLE



00841

CODE 128 LASER/CCD REDUNDANCY - DISABLE



00840

### CODABAR

CODABAR SEND START/STOP CHARS - ENABLE



00861

CODABAR SEND START/STOP CHARS - DISABLE



00860

CODABAR WIDE GAPS ALLOWED - ENABLE



00901

CODABAR WIDE GAPS ALLOWED - DISABLE



00900

### Symbologies Set Up - 3

#### CODABAR

CODABAR ID CHARACTER - 'k'



CODABAR ID CHARACTER - 'Z'



CODABAR LASER/CCD REDUNDANCY - ENABLE



CODABAR LASER/CCD REDUNDANCY - DISABLE



#### Interleaved 2 of 5

I2 OF 5 ID CHARACTER - 'i'



I2 OF 5 ID CHARACTER - 'Z'



I2OF5LASER/CCD REDUNDANCY - ENABLE



I2OF5LASER/CCD REDUNDANCY - DISABLE



#### Industrial 2 of 5

ID2OF5 ID CHARACTER - 'j'



ID2OF5 ID CHARACTER - 'Z'



ID2OF5LASER/CCD REDUNDANCY - ENABLE



ID2OF5LASER/CCD REDUNDANCY - DISABLE



## Symbologies Set Up - 4

### MSI/PLESSEY

MSI ISBN ID CHARACTER - I



0053f

MSI ISBN ID CHARACTER - Z



0053z

MSI LASER/CCD REDUNDANCY - ENABLE



01251

MSI LASER/CCD REDUNDANCY - DISABLE



01250

### UPC/EAN

EXPAND UPC-E TO UPC-A ENABLE



00381

EXPAND UPC-E TO UPC-A DISABLE



00380

EXPAND UPC-E TO EAN-13 ENABLE



00391

EXPAND UPC-E TO EAN-13 DISABLE



00390

CONVERT EAN-13 TO ISBN ENABLE



00481

CONVERT EAN-13 TO ISBN DISABLE



00480

UPC-A ID CHARACTER - b



0049b

UPC-A ID CHARACTER - Z



0049z

## Symbologies Set Up - 5

### UPC/EAN

UPC-E ID CHARACTER 'c'



UPC-E ID CHARACTER 'z'



EAN-13 ID CHARACTER 'e'



EAN-13 ID CHARACTER 'z'



EAN-8 ID CHARACTER 'd'



EAN-8 ID CHARACTER 'z'



ISBN ID CHARACTER 'f'



ISBN ID CHARACTER 'z'



UPC/EAN SUPPLEMENTS - DISABLE



UPC/EAN SUPPLEMENTS - 2 DIGIT ONLY



UPC/EAN SUPPLEMENTS - 5 DIGIT ONLY



UPC/EAN SUPPLEMENTS - 2 & 5 DIGIT



## Symbologies Set Up - 6

### UPC/EAN

UPC/EAN LASER/CCD REDUNDANCY ENABLE

UPC/EAN LASER/CCD REDUNDANCY DISABLE



00541



00540

## EDIT SETUP BAR CODES

EDIT #1 - STRIP 1 LEADING CHARACTER ON ALL BAR

CODES THAT START WITH '12345'



02000101000000100000000112345

EDIT #1 - OFF



0B20001

EDIT #2 - STRIP 1 TRAILING CHARACTER



020002020000001

EDIT #2 - OFF



0B20002

EDIT #1 - FILTER LEADING SPACES



020001030000032

EDIT #1 - OFF



0B20001

EDIT #1 - FILTER TRAILING SPACES



020001040000032

EDIT #1 - OFF



0B20001

EDIT - FILTER ALL '-' CHARACTERS



020000050000045

EDIT - DISABLE FILTERING OF ALL '-' CHARS



0B20000050000045

EDIT - INSERT LEADING ZERO



02000006000000048

EDIT - DISABLE INSERT LEADING ZERO



0B2000006000000048

## MACRO/SPECIAL KEYS SETUP BAR CODES

MACRO #1 - FIND '1' AND REPLACE WITH ONE



MACRO #1 - DISABLED



MACRO #2 - FIND 2 AND REPLACE WITH  
TWO FOR CODE 39 ONLY



MACRO #2 - DISABLED



MACRO - FIND '0' AND REPLACE WITH 'A'



MACRO - FIND '0' AND REPLACE WITH 'A' - DISABLE



SPECIAL KEY - MAP F3 TO '0'



SPECIAL KEY - DISABLE F3 KEY MAPPING



SPECIAL KEY - MAP DEYPAD ENTER TO 2



SPECIAL KEY - DISABLE KEYPAD ENTER MAPPING





## TERMINATION STRING SETUP BAR CODES

STRING #1 - TERMINATION CHAR - CR



STRING #1 - TERMINATION - LF



STRING #1 - TERMINATION CR+LF



STRING #1 - DISABLED



STRING #2 - CODE 128 TERMINATION CHAR - CR



STRING #2 - CODE 128 TERMINATION CHAR - LF



STRING #2 - CODE 128 TERMINATION CHAR - CR+LF



STRING #2 - CODE 128 TERMINATION CHAR - REMOVED



STRING - CODE 39 TERMINATION CHAR - TAB



STRING - CODE 39 TERMINATION CHAR - TAB - REMOVED



STRING - ALL CODES PREAMBLE - STX



STRING - ALL CODES POSTAMBLE - ETX



## ACTION DESCRIPTION

A DISPLAY DECODER FIRMWARE VERSION NUMBER

B RESET DECODER OR OPTION TO DEFAULT SETTINGS

C ENTER KEYBOARD PROGRAMMING MODE-ACTIVE ONLY WHEN IN KEYBOARD WEDGE MODE

## Appendix-A Special Characters

### Special Characters Table


The Special Characters Table is a list of all of the characters that can be entered with the \$ special character designator. The \$ special character can be used in any of the string inputs in the decoder. Locate the key that you want to embed and enter the value in the Hex column of the table.

Hex	Dec	Description	Hex	Dec	Description	Hex	Dec	Description
\$00	0	NUL(CTRL @)	\$81	129	F2	\$A3	163	5 Keypad
\$01	1	SOH(CTRL A)	\$82	130	F3	\$A4	164	6 Keypad
\$02	2	STX(CTRL B)	\$83	131	F4	\$A5	165	7 Keypad
\$03	3	ETX(CTRL C)	\$84	132	F5	\$A6	166	8 Keypad
\$04	4	EOT(CTRL D)	\$85	133	F6	\$A7	167	9 Keypad
\$05	5	ENQ(CTRL E)	\$86	134	F7	\$A8	168	Insert Keypad
\$06	6	ACK(CTRL F)	\$87	135	F8	\$A9	169	Delete Keypad
\$07	7	BEL(CTRL G)	\$88	136	F9	\$AA	170	Home Keypad
\$08	8	BS(Backspace)	\$89	137	F10	\$AB	171	End Keypad
\$09	9	HT(Tab)	\$8A	138	F11	\$AC	172	Page Up Keypad
\$0A	10	LF(CTRL J)	\$8B	139	F12	\$AD	173	Page Down Keypad
\$0B	11	VT(CTRL K)	\$8C	140	Left Shift Make	\$AE	174	Up Arrow Keypad
\$0C	12	FF(CTRL L)	\$8D	141	Left Shift Break	\$AF	175	Down Arrow Keypad
\$0D	13	CR(Enter)	\$8E	142	Right Shift Make	\$B0	176	Left Arrow Keypad
\$0E	14	SO(CTRL N)	\$8F	143	Right Shift Break	\$B1	177	Right Arrow Keypad
\$0F	15	SI(CTRL O)	\$90	144	Left ALT Make	\$B2	178	Center Keypad
\$10	16	DLE(CTRL P)	\$91	145	Left ALT Break	\$B3	179	Insert
\$11	17	DC1(CTRL Q)	\$92	146	Right ALT Make	\$B4	180	Delete
\$12	18	DC2(CTRL R)	\$93	147	Right ALT Break	\$B5	181	Home
\$13	19	DC3(CTRL S)	\$94	148	Left Control Make	\$B6	182	End
\$14	20	DC4(CTRL T)	\$95	149	Left Control Break	\$B7	183	Page Up
\$15	21	NAK(CTRL U)	\$96	150	Right Control Make	\$B8	184	Page Down
\$16	22	SYN(CTRL V)	\$97	151	Right Control Break	\$B9	185	Up Arrow
\$17	23	ETB(CTRL W)	\$98	152	/ Keypad	\$BA	186	Down Arrow
\$18	24	CAN(CTRL X)	\$99	153	* Keypad	\$BB	187	Left Arrow
\$19	25	EM(CTRL Y)	\$9A	154	- Keypad	\$BC	188	Right Arrow
\$1A	26	SUB(CTRL Z)	\$9B	155	+ Keypad	\$BD	189	
\$1B	27	ESC(ESC)	\$9C	156	- Keypad	\$BE	190	Num Lock
\$1C	28	FS(CTRL \)	\$9D	157	Enter Keypad	\$BF	191	Caps Lock
\$1D	29	GS(CTRL ])	\$9E	158	0 Keypad	\$C0	192	Scroll Lock
\$1E	30	RS(CTRL ^)	\$9F	159	1 Keypad	\$C1	193	Print Screen
\$1F	31	US(CTRL _)	\$A0	160	2 Keypad	\$C2	194	Pause
\$7F	127	DEL(CTRL BKSpC)	\$A1	161	3 Keypad			
\$80	128	F1	\$A2	162	4 Keypad			

## ALT Keypad Table

The # designator is used to output any character value between 1 and 255. The following table shows the keypad sequence sent to the computer for the # sequence entered. The actual character displayed will depend upon on the software running and the country setting of your computer. In some cases, no actual character is displayed.

Hex	KeyPad	Hex	KeyPad	Hex	KeyPad	Hex	KeyPad	Hex	KeyPad	Hex	KeyPad	Hex	KeyPad
#01	ALT 001	#26	ALT 038	#4B	ALT 075	#70	ALT 112	#95	ALT 149	#BA	ALT 186	#DF	ALT 223
#02	ALT 002	#27	ALT 039	#4C	ALT 076	#71	ALT 113	#96	ALT 150	#BB	ALT 187	#E0	ALT 224
#03	ALT 003	#28	ALT 040	#4D	ALT 077	#72	ALT 114	#97	ALT 151	#BC	ALT 188	#E1	ALT 225
#04	ALT 004	#29	ALT 041	#4E	ALT 078	#73	ALT 115	#98	ALT 152	#BD	ALT 189	#E2	ALT 226
#05	ALT 005	#2A	ALT 042	#4F	ALT 079	#74	ALT 116	#99	ALT 153	#BE	ALT 190	#E3	ALT 227
#06	ALT 006	#2B	ALT 043	#50	ALT 080	#75	ALT 117	#9A	ALT 154	#BF	ALT 191	#E4	ALT 228
#07	ALT 007	#2C	ALT 044	#51	ALT 081	#76	ALT 118	#9B	ALT 155	#C0	ALT 192	#E5	ALT 229
#08	ALT 008	#2D	ALT 045	#52	ALT 082	#77	ALT 119	#9C	ALT 156	#C1	ALT 193	#E6	ALT 230
#09	ALT 009	#2E	ALT 046	#53	ALT 083	#78	ALT 120	#9D	ALT 157	#C2	ALT 194	#E7	ALT 231
#0A	ALT 010	#2F	ALT 047	#54	ALT 084	#79	ALT 121	#9E	ALT 158	#C3	ALT 195	#E8	ALT 232
#0B	ALT 011	#30	ALT 048	#55	ALT 085	#7A	ALT 122	#9F	ALT 159	#C4	ALT 196	#E9	ALT 233
#0C	ALT 012	#31	ALT 049	#56	ALT 086	#7B	ALT 123	#A0	ALT 160	#C5	ALT 197	#EA	ALT 234
#0D	ALT 013	#32	ALT 050	#57	ALT 087	#7C	ALT 124	#A1	ALT 161	#C6	ALT 198	#EB	ALT 235
#0E	ALT 014	#33	ALT 051	#58	ALT 088	#7D	ALT 125	#A2	ALT 162	#C7	ALT 199	#EC	ALT 236
#0F	ALT 015	#34	ALT 052	#59	ALT 089	#7E	ALT 126	#A3	ALT 163	#C8	ALT 200	#ED	ALT 237
#10	ALT 016	#35	ALT 053	#5A	ALT 090	#7F	ALT 127	#A4	ALT 164	#C9	ALT 201	#EE	ALT 238
#11	ALT 017	#36	ALT 054	#5B	ALT 091	#80	ALT 128	#A5	ALT 165	#CA	ALT 202	#EF	ALT 239
#12	ALT 018	#37	ALT 055	#5C	ALT 092	#81	ALT 129	#A6	ALT 166	#CB	ALT 203	#F0	ALT 240
#13	ALT 019	#38	ALT 056	#5D	ALT 093	#82	ALT 130	#A7	ALT 167	#CC	ALT 204	#F1	ALT 241
#14	ALT 020	#39	ALT 057	#5E	ALT 094	#83	ALT 131	#A8	ALT 168	#CD	ALT 205	#F2	ALT 242
#15	ALT 021	#3A	ALT 058	#5F	ALT 095	#84	ALT 132	#A9	ALT 169	#CE	ALT 206	#F3	ALT 243
#16	ALT 022	#3B	ALT 059	#60	ALT 096	#85	ALT 133	#AA	ALT 170	#CF	ALT 207	#F4	ALT 244
#17	ALT 023	#3C	ALT 060	#61	ALT 097	#86	ALT 134	#AB	ALT 171	#D0	ALT 208	#F5	ALT 245
#18	ALT 024	#3D	ALT 061	#62	ALT 098	#87	ALT 135	#AC	ALT 172	#D1	ALT 209	#F6	ALT 246
#19	ALT 025	#3E	ALT 062	#63	ALT 099	#88	ALT 136	#AD	ALT 173	#D2	ALT 210	#F7	ALT 247
#1A	ALT 026	#3F	ALT 063	#64	ALT 100	#89	ALT 137	#AE	ALT 174	#D3	ALT 211	#F8	ALT 248
#1B	ALT 027	#40	ALT 064	#65	ALT 101	#8A	ALT 138	#AF	ALT 175	#D4	ALT 212	#F9	ALT 249
#1C	ALT 028	#41	ALT 065	#66	ALT 102	#8B	ALT 139	#B0	ALT 176	#D5	ALT 213	#FA	ALT 250
#1D	ALT 029	#42	ALT 066	#67	ALT 103	#8C	ALT 140	#B1	ALT 177	#D6	ALT 214	#FB	ALT 251
#1E	ALT 030	#43	ALT 067	#68	ALT 104	#8D	ALT 141	#B2	ALT 178	#D7	ALT 215	#FC	ALT 252
#1F	ALT 031	#44	ALT 068	#69	ALT 105	#8E	ALT 142	#B3	ALT 179	#D8	ALT 216	#FD	ALT 253
#20	ALT 032	#45	ALT 069	#6A	ALT 106	#8F	ALT 143	#B4	ALT 180	#D9	ALT 217	#FE	ALT 254
#21	ALT 033	#46	ALT 070	#6B	ALT 107	#90	ALT 144	#B5	ALT 181	#DA	ALT 218	#FF	ALT 255
#22	ALT 034	#47	ALT 071	#6C	ALT 108	#91	ALT 145	#B6	ALT 182	#DB	ALT 219		
#23	ALT 035	#48	ALT 072	#6D	ALT 109	#92	ALT 146	#B7	ALT 183	#DC	ALT 220		
#24	ALT 036	#49	ALT 073	#6E	ALT 110	#93	ALT 147	#B8	ALT 184	#DD	ALT 221		
#25	ALT 037	#4A	ALT 074	#6F	ALT 111	#94	ALT 148	#B9	ALT 185	#DE	ALT 222		

 **Note: The char #00 cannot be output as an ALT keypad character.**

## Appendix-B Troubleshooting and Error Beeps

### Troubleshooting

**Problem:** My computer beeps and some of my bar code data is missing.

**Cause:** The decoder's transmit speed is too fast.

**Solution:** Slow down the decoder's transmit speed.

**Problem:** Some of the characters of my bar code are garbled or incorrect.

**Cause:** The decoder's Keyboard Country setting does not match the computer's keyboard setup.

**Solution:** Set the decoder's Keyboard Country to the same setting as the Keyboard on your computer.

**Problem:** My bar code cannot be read by the decoder.

**Cause:** The decoder for the bar code you are attempting to read is turned off.

**Solution:** Enter Setup Mode using the CTRL+F2+SHIFT+BACKSPACE key sequence, press F2, select the DECODERS ON/OFF group, cursor down each decoder and set it to on. Press CTRL+ESC to exit configuration and save changes and attempt to read the bar code. You may also use the Bar Code Type ID to determine the type of the bar code that was just read.

-OR-

**Cause:** your bar code is possible encoded incorrectly.

**Solution:** Call technical support for assistance.

-OR-

**Cause:** the decoder is damaged or is no longer functioning.

**Solution:** Call technical support for assistance.

**Problem:** My computer gets a keyboard error while booting up.

**Cause:** The decoder is damaged or is no longer functioning.

**Solution:** Disconnect the decoder from your computer and use your keyboard only. Reboot your computer. If your computer still gets a keyboard error, then the problem may not be the decoder. Call technical support for assistance.

**Problem:** My caps lock LED on my keyboard flickers when I read a bar code.

**Cause:** The Keyboard Country that you are using requires shifting in and out of the Shift Lock made to send the data properly.

**Solution:** This is normal operation. You can reduce the flickering and speed the data transmit by sending numerics as keypad numerics, or setting the Keyboard Country to UNIVERSAL mode.

**Problem:** I can't activate the Setup Mode on the decoder.

**Cause:** The decoder is currently configured to lockout the Setup Mode after a bar code is read.

**Solution:** Turn the power off and then back on to your computer, and reenter the Setup Mode before reading any bar codes.

-OR-

**Cause:** The keyboard that you are using does not work properly when you hold down the Left-Control and Caps lock keys.

**Solution:** Use the alternate programming key sequence: Left-Control, F2, Right-Shift, and Backspace.

**Problem:** The decoder beeps, but no data is displayed on my computer.  
**Cause:** The decoder is set to strip the same number of characters as there are in your bar code.  
**Solution:** Reconfigure the decoder to not strip characters from the bar code.

**Problem:** When I connected **RS232** interface reader to **PC**, I could not get power up signal.  
**Cause:** There is no power from **PC** series port.  
**Solution:** Use external power supply or take the power from **PC**.

**Problem:** When I connected **RS232** interface reader to **PC** or terminal, I got power up signal but no data transmitted.  
**Cause:** This may cause by wrong pin out or wrong communication protocol.  
**Solution:** Check the pin out and communication protocol to match the **PC** or terminal you are using.

**Problem:** I can not find the bar code label I need.  
**Cause:** There are more than hundreds of bar codes need to be printed. All the bar code shows on this manual only the most common ones.  
**Solution:** Follow the Bar Code Formats and print what you need.