

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:

Keyboard
Wand
RS-232
Dual RS-232
USB
OTHERS

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.

*All rights reserved, including those to reprint this manual.

Table of Contents

FEATURES	4
NOTE THE USE OF AUTOMATIC DETECTION	5
USING THE SETUP MODE TO CONFIGURE THE DECODER	6
SETUP CATEGORY	7
EDITING KEYS	8
MULTISCAN FUNCTIONS	9
OUTPUT MODE	9
BUZZER/LED	9
IMAGE.....	10
CODE ID.....	10
READING MADE	10
INTERFACE-KBW	11
PC COMMUNICATION	11
TRANSMIT SPEED	11
LANGUAGE	11
RS-232	12
BAUD RATE	12
HAND SHAKE	12
PARAMETERS	13
SERIAL STOP BITS	13
CHECK DIGIT	13
INTERFACE-WAND	14
SPEED	14
BAR LEVEL	14
SYMBOLOGIES ON/OFF	14
Code11	14
Code39	14
Code93	15
Code128	15
Codabar	15
Interleaved 2 of 5	15
Industrial 2 of 5.....	15
MSI/Plessey.....	16
UPC/EAN.....	16

Symbologies Set Up	17
Code11	17
Code39	17
Code93	18
Code128	18
Codabar	18
Interleaved 2 of 5	19
Industrial 2 of 5	19
MSI/Plessey	20
UPC/EAN	20
EDIT SETUP BAR CODES	23
MACRO/SPECIAL KEYS SETUP BAR CODES	24
TERMINATION STRING SETUP BAR CODES	25
OPTION NUMBERS AND DESCRIPTIONS	27
<i>F1 - Interface Options</i>	27
<i>F2 - Code 39 Options</i>	27
<i>F2 - UPC/EAN Options</i>	28
<i>F2 - UPC/EAN Supplements Options</i>	28
<i>F2 - Code 93 Options</i>	29
<i>F2- Code 128 Options</i>	29
<i>F2 - Codabar Options</i>	29
<i>F2 - Interleaved 2 of 5 Options</i>	30
<i>F2 - Industrial 2 of 5 Options</i>	30
<i>F2 - MSI Options</i>	30
<i>F2 - Code 11 Options</i>	31
<i>F2 - Laser/CCD Options</i>	31
<i>F2 - Other Decoding Options</i>	31
<i>F7 - Define The Buzzer and LED Options</i>	31
<i>F4 - Define The Macro Key Mapping Options</i>	32
<i>F3 - Edit Setup Bar Code</i>	33
<i>F4 - Macro Setup Bar Code</i>	34
<i>F5 - String Setup Bar Code</i>	35
Appendix-A Special Characters	36
Appendix-B Decoder Pinouts and Specifications	38
Appendix-C Troubleshooting and Error Beeps	39

Features

- + Simple installation, Keyboard Wedge, Serial, Wand Emulation tc.
- + Superior keyboard wedge interface - NOVELL compatible - auto Caps Lock detection ensures that the data always appears on the computer just the way it is encoded in the bar code
- + Simple programming from your keyboard or scan bar codes!
- + 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)
- + Can be used with or without the keyboard
- + 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 BC-6000S

1. Call for the automatic detection time code. When objects near sensitive areas, infrared sensors to objects automatically initiate a bar code laser. Object left sensory region to close out the second time code.
2. If the need for the cessation of automatic induction
Reading continued to Press the bar code functions click eight seconds, the open click the eight seconds and automatically restore sensory Reading codes.
3. 25~30cm sensory objects in the distance, 0.2sec scan rate.

Using The Setup Mode To Configure The Decoder

The decoder can be configured through the use of the computer keyboard.

The decoder must be installed and powered to enter the setup mode. Once the unit is powered up, press and hold the following keys:

Left-Control, Caps Lock, Right-Shift, and Backspace¹

- or -

Left-Control, F2, Right-Shift, and Backspace²

Once you release the keys, the decoder will produce a series of beeps, change the LED to orange and display a message similar to the following on your display:

F1-F10=Options, Use ARROW KEYS to Toggle/Move, ESC=Exit

To ensure that you have enough space on your command line for the decoder options to be displayed, we recommend that you either have your command prompt located at the root directory, or that you load an editor with a new file. This will allow the decoder to use most of the characters on your computer display. For example: in Windows load Write and in OS/2 load the Notepad program.

 *Note: In addition to using your keyboard to enter Setup Mode, you may scan the bar code below.*



Enter Setup Mode

 *Note: This page is only for KBW interface reader, never execute any action if you are using Rs232 interface reader.*

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 - KEYBOARD WEDGE



000600

OUTPUT MODE - SERIAL



000601

OUTPUT MODE - WAND EMULATION



000602

OUTPUT MODE - RESET



0B006

OUTPUT MODE - OCIA (NOT AVAILABLE YET)



000603

OUTPUT MODE - MAC (NOT AVAILABLE YET)



000604

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



WEDGE MODE - SCAN SET 2 PASS THRU



Transmit Speed

TRANSMIT SPEED - 0



TRANSMIT SPEED - 25



LANGUAGE

KEYBOARD COUNTRY - USA



KEYBOARD COUNTRY - GERMAN



KEYBOARD COUNTRY - FRANCE



KEYBOARD COUNTRY - UNIVERSAL



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



00081

SERIAL DATA BITS - 7



00080

SERIAL STOP BITS

SERIAL STOP BITS - 1



00090

SERIAL STOP BITS - 2



00091

CHECK DIGIT

SERIAL PARITY - NONE



001000

SERIAL PARITY - ODD



001001

SERIAL PARITY - EVEN



001002

SERIAL PARITY - MARK



001003

SERIAL PARITY - SPACE



001004

SERIAL PARITY - RESET



0B010

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



00621

CODE 93 - DISABLE



00620

CODE 128

CODE 128 - ENABLE



00691

CODE 128 - DISABLE



00690

CODE 128 ISBT - ENABLE



00701

CODE 128 ISBT - DISABLE



00700

CODABAR

CODABAR - ENABLE



00851

CODABAR - DISABLE



00850

INTERLEAVED 2 OF 5

I2OF5 - ENABLE



00961

I2OF5 - DISABLE



00960

INDUSTRIAL 2 OF 5

ID2OF5 - ENABLE



01061

ID2OF5 - DISABLE



01060

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'



0094k

CODABAR ID CHARACTER - 'Z'



0094z

CODABAR LASER/CCD REDUNDANCY - ENABLE



00951

CODABAR LASER/CCD REDUNDANCY - DISABLE



00950

Interleaved 2 of 5

I2 OF 5 ID CHARACTER - 'i'



0104i

I2 OF 5 ID CHARACTER - 'Z'



0104z

I2OF5LASER/CCD REDUNDANCY - ENABLE



01051

I2OF5LASER/CCD REDUNDANCY - DISABLE



01050

Industrial 2 of 5

ID2OF5 ID CHARACTER - 'j'



0113j

ID2OF5 ID CHARACTER - 'Z'



0113z

ID2OF5LASER/CCD REDUNDANCY - ENABLE



01141

ID2OF5LASER/CCD REDUNDANCY - DISABLE



01140

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'



0050z

UPC-E ID CHARACTER 'Z'



0050z

EAN-13 ID CHARACTER 'e'



0051e

EAN-13 ID CHARACTER 'Z'



0051z

EAN-8 ID CHARACTER 'd'



0052d

EAN-8 ID CHARACTER 'Z'



0052z

ISBN ID CHARACTER 'f'



0053f

ISBN ID CHARACTER 'Z'



0053z

UPC/EAN SUPPLEMENTS - DISABLE



00550

UPC/EAN SUPPLEMENTS - 2 DIGIT ONLY



00551

UPC/EAN SUPPLEMENTS - 5 DIGIT ONLY



00552

UPC/EAN SUPPLEMENTS - 2 & 5 DIGIT



00553

Symbologies Set Up - 6

UPC/EAN

UPC/EAN LASER/CCD REDUNDANCY ENABLE



00541

UPC/EAN LASER/CCD REDUNDANCY DISABLE



00540

EDIT SETUP BAR CODES

EDIT #1 - STRIP 1 LEADING CHARACTER ON ALL BAR

CODES THAT START WITH '12345'

EDIT #1 - OFF



02000101000000100000000112345



0B20001

EDIT #2 - STRIP 1 TRAILING CHARACTER

EDIT #2 - OFF



020002020000001



0B20002

EDIT #1 - FILTER LEADING SPACES

EDIT #1 - OFF



020001030000032



0B20001

EDIT #1 - FILTER TRAILING SPACES

EDIT #1 - OFF



020001040000032



0B20001

EDIT - FILTER ALL '-' CHARACTERS

EDIT - DISABLE FILTERING OF ALL '-' CHARS



020000050000045



0B20000050000045

EDIT - INSERT LEADING ZERO

EDIT - DISABLE INSERT LEADING ZERO



020000060000000048



0B20000060000000048

MACRO/SPECIAL KEYS SETUP BAR CODES

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



02010101011ONE

MACRO #1 - DISABLED



0B20101

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



02010203012TWO

MACRO #2 - DISABLED



0B20102

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



02010001010A

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



0B2010001010A

SPECIAL KEY - MAP F3 TO '0'



0162048

SPECIAL KEY - DISABLE F3 KEY MAPPING



0B162

SPECIAL KEY - MAP DEYPAD ENTER TO 2



0182050

SPECIAL KEY - DISABLE KEYPAD ENTER MAPPING



0B182

TERMINATION STRING SETUP BAR CODES

STRING #1 - TERMINATION CHAR - CR



0202011000\$0D

STRING #1 - TERMINATION - LF



0202011000\$0A

STRING #1 - TERMINATION CR+LF



0202011000\$0D\$0A

STRING #1 - DISABLED



0B20201

STRING #2 - CODE 128 TERMINATION CHAR - CR



0202021080\$0D

STRING #2 - CODE 128 TERMINATION CHAR - LF



0202021080\$0A

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



0202021080\$0D\$0A

STRING #2 - CODE 128 TERMINATION CHAR - REMOVED



0B20202

STRING - CODE 39 TERMINATION CHAR - TAB



0202001020\$09

STRING - CODE 39 TERMINATION CHAR - TAB - REMOVED



0B202001020\$09

STRING - ALL CODES PREAMBLE - STX



0202002000\$02

STRING - ALL CODES POSTAMBLE - ETX



0202003000\$03

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

OPTION NUMBERS AND DESCRIPTIONS

; F1 - INTERFACE OPTIONS

OPTIONS

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
000	KEYBOARD WEDGE TRANSMIT SPEED	BYTE	0	99	0 - FASTEST
001	SPECLAL CHAR TRANSMIT DELAY	BYTE	0	255	50 - (MSECS)
002	KEYBOARD WEDGE MODE	4BIT	0	6	0 - (AUTODETECT)
003	AUTODETECT CAPS LOCK	BIT	0	1	0 - (AUTODETECT)
004	NUMERIC KEY OUTPUT MODE	BIT	0	1	0 - (MAIN KBD KEYS)
005	KEYBOARD COUNTRY	BYIE	0	25	0 - (USA)
006	DECODER OUTPUT MODE	4BIT	0	2	0 - (KEYBRD WEDGE)
007	SERIAL BAUD RATE	4BIT	0	7	5 - (9600)
008	SERIAL DATA BITS	BIT	0	1	1 - 8BITS
009	SERIAL STOP BITS	BIT	0	1	0 - 1 STO PBIT
010	SERIAL PAITY	4BIT	0	4	0 - NONE
011	SERIAL INTERCHARACTER DELAY	BYIE	0	50	0 - (MSECS)
012	SERIAL HANDSHAKE MODE	4BIT	0	3	0 - NONE
013	SERIAL HANDSHAKE TIMEOUT	BYIE	0	100	20 - (1 SECONDS)
014	CODE 128 WAND EMULATION	4BIT	0	1	0 - (DISABLED)
015	WAND EMULATION OUTPUT SPEED	4BIT	0	3	2 - (SLOW)
016	WAND EMULIOM BAR MODE	BIT	0	1	1 - (BAR=1)
017	RESERVED				
018	RESERVED				
019	RESERVED				
020	RESERVED				
021	PROGRAM MODE LOCKOUT	BIT	0	1	0 - DISABLED

; F2 - CODE 39 OPTIONS

OPTIONS

OPTION	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
022	Code39 DECODER	BIT	0	1	1-ENABLED
023	FULL ASCII	BIT	0	1	0-DISABLED
024	MODULO 43 CHECK DIGIT	BIT	0	1	0-DISABLED
025	SEND CHECK DIGIT	BIT	0	1	0-DISABLED
026	APPEND MODE	BIT	0	1	0-DISABLED
027	SECONDARY START/STOP CHARS	4BIT	0	1	0-NONE
028	SEND START/STOP CHARS	BIT	0	1	0-DISABLED
029	MAXIMUM LENGTH	BYTE	0	49	49
030	MIXIMUM LENGTH	BYTE	0	49	0
031	ID CHARACTER	CHAR	1	1	'a'
032	CONTROL CHARACTER OVERRIDE	BIT	0	1	0
033	LASER/CCD REDUNDANCY	BIT	0	1	0

; F1 - UPC/EAN OPTIONS

OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
034	UPC - A DECODER	BIT	0	1	1 - ENABLED
035	UPC - E DECODER	BIT	0	1	1 - ENABLED
036	EAN/JAN -13 DECOER	BIT	0	1	1 - ENABLED
037	EAN/JAN -8 DECODER	BIT	0	1	1 - ENABLED
038	EXPAND UPC-E TO UPC -A	BIT	0	1	1 - ENABLED
039	EXPAND UPC-A TO EAN-13	BIT	0	1	1 - ENABLED
040	SEND UPC -A NUMBER SYSTEM CHAR	BIT	0	1	1 - ENABLED
041	SEND UPC -E NUMBER SYTEM CHAR	BIT	0	1	1 - ENABLED
042	SEND UPC -A CHECK DIGIT	BIT	0	1	1 - ENABLED
043	SEND UPC -E CHECK DIGIT	BIT	0	1	1 - ENABLED
044	SEND EAN -13 COUNTRY CODE	BIT	0	1	1 - ENABLED
045	SEND EAN -8 COUNTRY CODE	BIT	0	1	1 - ENABLED
046	SEND EAN -13 CHECK DIGIT	BIT	0	1	1 - ENABLED
047	SEND EAN -8 CHECK DIGIT	BIT	0	1	1 - ENABLED
048	CONVERT EAN -13 TO ISBN	BIT	1	1	0 - DISABLED
049	UPC - A ID CHARACTER	CHAR	1	1	'b'
050	UPC - E ID CHARACTER	CHAR	1	1	'c'
051	EAN - 13 ID CHARCTER	CHAR	1	1	'e'
052	EAN - 8 ID CHARACTER	CHAR	1	1	'd'
053	ISBN ID CHARACTER	CHAR	1	1	'f'
054	LASER/CCD REDUNDANCY	BIT	0	1	O - DISABLED

; F2 - UPC/EAN SUPPLEMENTS OPTIONS

OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
055	UPC/EAN SUPPLEMENTS DECODER	2BIT	0	3	0 - DISABLED
056	UPC - A SUPPLEMNTS	2BIT	0	2	1 - OPTIONAL
057	UPC - E SUPPLEMNTS	2BIT	0	2	1 - OPTIONAL
058	EAN - 13 SUPPLEMENTS	2BIT	0	2	1 - OPTIONAL
059	EAN - 8 SUPPLEMENTS	2BIT	0	2	1 - OPTIONAL
060	ISBN SUPPLEMENTS	2BIT	0	2	1 - OPTIONAL
061	SUPPLEMENTS SEPARATOR	STRING	0	9	NONE

; F2 - CODE-93 OPTIONS
OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
062	Code 93 DECODER	BIT	0	1	1 - ENABLED
063	APPEND MODE	BIT	0	1	0 - DISABLED
064	MAXIMUM LENGTH	BYTE	0	81	81
065	MINIMUM LENGTH	BYTE	0	81	0
066	ID CHARACTER	CHAR	1	1	'h'
067	CONTROL CHARACTER OVERRIDE	BIT	0	1	0 - DISABLED
068	LASER/CCD REDUNDANCY	BIT	0	1	0 - DISABLED

; F2 - CODE 128 OPTIONS
OPTIONS

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
069	CODE128 DECODER	BIT	0	1	1 - ENABLED
070	ISBT DECODER	BIT	0	1	0 - DISABLED
071	ISBT CONCATENATION PAIRS	STRING	0	4	NONE
072	ISBT PAIR #1	STRING	0	4	NONE
073	ISBT PAIR #2	STRING	0	4	NONE
074	ISBT PAIR #3	STRING	0	4	NONE
075	ISBT PAIR #4	STRING	0	4	NONE
076	ISBT PAIR #5	STRING	0	4	NONE
077	ISBT PAIR #6	STRING	0	4	NONE
078	FIELD SEPARATOR CHARACTER	CHAR	1	1	01DH(ASCH 'GS')
079	MAXIMUM LENGTH	BYIE	0	164	164
080	MINIMUM LENGTH	BYIE	0	164	0
081	ID CHARACTER	CHAR	1	1	'g'
082	UCC/EAN OUTPUT PREFIX	STRING	0	3	NONE
083	CONTROL CHARACTER OVERRIDE	BIT	0	1	0 - DISABLED
084	LASER/CCD REDUNDANCY	BIT	0	1	0 - DISABLED

; F2 - CODABAR OPTIONS
OPTIONS

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
085	CODABAR DECODER	BYTE	0	1	1 - ENABLED
086	SEND START/STOP CHARACTERS	2BIT	0	3	0 - DISABLED
087	CHECK DIGIT	2BIT	0	2	0 - DISABLED
088	SEND CHECK DIGIT	BIT	0	1	0 - DISABLED
089	CLSL FORMATTING	BIT	0	1	0 - DISABLED
090	WIDE INTER CHARACTER GAPS	BIT	0	1	0 - DISABLED
091	ABC CONCATENATION	BIT	0	1	0 - DISABLED
092	MAXIMUM LENGTH	BYTE	1	62	62
093	MINIMUM LENGTH	BYTE	1	62	2
094	ID CHARACTER	CHAR	1	1	'k'
095	LASER/CCD REDUNDANCY	BIT	0	1	0 - DISABLED

; F2 - INTERLEAVED 2 OF 5 OPTIONS

OPTIONS

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
096	I 2 of 5 DECODER	BIT	0	1	1 - ENABLED
097	CHECK DIGIT	BIT	0	2	0 - DISABLED
098	SEND CHECK DIGIT	BIT	0	1	0 - DISABLED
099	MAXIMUM LENGIH	BYTE	0	100	100
100	MINIMUM LENGTH	BYTE	0	100	0
101	FIXED LENGTH	BIT	0	1	0 - DISABLED
102	FIXED LENGTH SIZE #1	BYTE	2	100	6
103	FIXED LENGTH SIZE #2	BYTE	2	100	14
104	ID CHARACTER	CHAR	1	1	'i'
105	LASER/CCD REDUNDANCY	BIT	0	1	1 - ENABLED

; F2 - INDUSTRIAL 2 OF 5 OPTIONS

OPTIONS

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
106	INDUSTRIAL 2 OF 5 DECODER	BIT	0	1	1 - ENABLED
107	START/STOP CHARACTERS	BIT	0	1	0 - 3 BAR START/STOP
108	MAXIMUM LENGIH	BYTE	2	49	49
109	MINIMUM LENGTH	BYTE	2	49	2
110	FIXED LENGTH	BIT	0	1	0 - DISABLED
111	FIXED LENGTH SIZE #1	BYTE	2	49	6
112	FIXED LENGTH SIZE #2	BYTE	2	49	10
113	ID CHARACTER	CHAR	1	1	'i'
114	LASER/CCD REDUNDANCY	BIT	0	1	1 - ENABLED

; F2 - MSI OPTIONS

OPTIONS

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
115	MSI DECODER	BIT	0	1	1 - ENABLED
116	CHECK DIGITS	2BIT	0	2	0 - MOD 10
117	SEND CHECK DIGITS	2BIT	0	2	0 - DISABLED
118	ISBN DECODER	BIT	0	1	0 - DISABLED
119	MAXIMUM LENGIH	BYTE	3	63	63
120	MINIMUM LENGTH	BYTE	3	63	3
121	FIXED LENGTH	BIT	0	3	0 - DISABLED
122	FIXED LENGTH SIZE #1	BYTE	3	63	6
123	FIXED LENGTH SIZE #2	BYTE	3	63	14
124	ID CHARACTER	CHAR	1	1	'I'
053	ISBN ID CHARACTER	(USES SAME ID AS ISBN IN UPC/EAN)			
125	LASER/CCD REDUNDANCY	BIT	0	1	1 - ENABLED

; F2 - CODE 11 OPTIONS

OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
126	CODE 11 DECODER	BIT	0	1	1 - ENABLED
127	CHECK DIGIT	BIT	0	1	0 - MOD 11
128	SEND CHECK DIGITS	2BIT	0	2	0 - DISABLED
129	MAXIMUM LENGTH	BYTE	2	83	83
130	MINIMUM LENGTH	BYTE	2	83	2
131	ID CHARACTER	CHAR	1	1	'M'
132	LASER/CCD REDUNDANCY	BIT	0	1	0 - DISABLED

; F2 - LASER/CCD OPTIONS

OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
133	OPERATING MODE	4BIT	0	5	0 - SINGLE SCAN
134	TIMEOUT	BYTE	1	12	2 - (2 SECONDS)
135	PULSE RATE	4BIT	2	7	3
136	PULSE TO CONTINUOUS THRESHOLD	BYTE	0	255	0 - OFF
137	DUPLICATE READ DELAY	BYTE	0	127	5 - (5 SECONDS)

; F2 - OTHER DECODING OPTIONS

OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
138	QUIET ZONES(MARGINS)	BIT	0	1	1 - LARGE
139	REVERSE IMAGE DECODING	BIT	0	1	0 - DISABLED
140	SEND BAR CODE TYPE ID	BIT	0	1	0 - DISABLED

; F2 - DEFINE THE BUZZER AND LED OPTIONS

OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
141	POWER UP BEEP	BIT	0	1	1 - ENABLED
142	GOOD READ BEEP TONE 4BIT	4BIT	0	5	2 - MEDIUM
143	GOOD READ BEEP DURATION	BYTE	0	2	2 - MEDIUM
144	NO READ LED DELAY	BYTE	0	65	20 - (2.0 SECONDS)
145	LED POWER SAVE MODEBIT	BIT	0	1	0 - DISABLED

; F4-DEFINE THE MACRO KEY MAPPING OPTIONS - MAP THE KEY TO A CHARACTER THAT CAN BE PRODUCED IN A BAR CODE SO THAT WHEN THE BAR CODE IS SCANNED -THE SPECIAL KEY IS OUTPUT.

OPTION					
NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
160	F1 MACRO	BYTE	0	255	255 - OFF
161	F2 MACRO	BYTE	0	255	255 - OFF
162	F3 MACRO	BYTE	0	255	255 - OFF
163	F4 MACRO	BYTE	0	255	255 - OFF
164	F5 MACRO	BYTE	0	255	255 - OFF
165	F6 MACRO	BYTE	0	255	255 - OFF
166	F7 MACRO	BYTE	0	255	255 - OFF
167	F8 MACRO	BYTE	0	255	255 - OFF
168	F9 MACRO	BYTE	0	255	255 - OFF
169	F10 MACRO	BYTE	0	255	255 - OFF
170	F11 MACRO	BYTE	0	255	255 - OFF
171	F12 MACRO	BYTE	0	255	255 - OFF
172	INSERT KEY MACRO	BYTE	0	255	255 - OFF
173	DELETET KEY MACRO	BYTE	0	255	255 - OFF
174	HOME KEY MACRO	BYTE	0	255	255 - OFF
175	END KEY MACRO	BYTE	0	255	255 - OFF
176	PAGE UP KEY MACRO	BYTE	0	255	255 - OFF
177	PAGE DOWN KEY MACRO	BYTE	0	255	255 - OFF
178	LEFT ARROW KEY MACRO	BYTE	0	255	255 - OFF
179	RIGHT ARROW KEY MACRO	BYTE	0	255	255 - OFF
180	UP ARROW KEY MACRO	BYTE	0	255	255 - OFF
181	DOWN ARROW KEY MACRO	BYTE	0	255	255 - OFF
182	KEY PAD ENTER KEY MACRO	BYTE	0	255	255 - OFF
183	ALT KEY MAKE MACRO	BYTE	0	255	255 - OFF
184	ALT KEY BREAK MACRO	BYTE	0	255	255 - OFF
185	CTRL KEY MAKE MACRO BYTE	BYTE	0	255	255 - OFF
186	CTRL KEY BREAK MACRO	BYTE	0	255	255 - OFF
187	SHIFT KEY MAKE MACRO	BYTE	0	255	255 - OFF
188	SHIFT KEY BREAK MACRO	BYTE	0	255	255 - OFF

;F3-EDIT SETUP BAR CODE

OPTION					
NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
200	MACRO OPTION	SEE BELOW			DISABLED
	MACRO BAR CODE DATA FORMAT:				
		2 DIGIT MACRO # (00-10)			
		00 - WILL AUTOMATICALLY SELECT THE FIRST AVAILABLE EDIT#			
		2 DIGIT ACTIVE FOR TYPE(1-9)			
		00-OFF			
		01-STRIP LEADING CHARACTERS			
		02-STRIP TRAILING CHARACTERS			
		03-FILTER LEADING CHARACTERS			
		04-FILTER TRAILING CHARACTERS			
		05-FILTER CHARACTERS			
		06-INSERT LEADING CHARACTERS			
		07- INSERT TRAILING CHARACTERS			
		08-CONVERT TO UPPERCASE			
		09-CONVERT TO LOWERCASE			
		2 DIGIT ACTIVE FOR TYPE (00-14)			
		00-ALL BAR CODE TYPES			
		01-ALL BAR CODE TYPES ALWAYS			
		02-CODE 39			
		03-UPC-A			
		04-UPC-E			
		05-EAN-13			
		06-EAN-8			
		07-ISBN			
		08-CODE 128			
		09- 2 OF 5			
		10-CODABAR			
		11-CODE93			
		12-MSI			
		13-CODE11			
		14-INDUSTRIAL 2 OF 5			
		2 DIGIT ACTIVE FOR SIZE(00-99)			
		3 DIGIT BYTE 1 VALUE			
		3 DIGIT BYTE 2 VALUE			
		3 DIGIT BYTE 3 VALUE			
		3 DIGIT CONTAINS OFFSET			
		000=START CHARACTER+0 000-255			
		255=END CHARACTER-0			
		5 CHARACTER CONTAINS STRING -UP TO 5 CHARS			

;F4-MACRO SETUP BAR CODE

OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
201	MACRO OPTION	SEE BELOW			
	MACRO BAR CODE DATA FORMAT:				
	2 DIGIT MACRO # (00-10)				
		00-WILL AUTOMATICALLY SELECT THE FIRST AVAILABLE MACRO#			
	2 DIGIT ACTIVE FOR TYPE(00-15)				
		00-NONE			
		01-ALL BAR CODE TYPES			
		02-ALL BAR CODE TYPES ALWAYS			
		03-CODE 39			
		04-UPC-A			
		05-UPC-E			
		06-EAN-13			
		07-EAN-8			
		08-ISBN			
		09-CODE 128			
		10-I2OF5			
		11-CODABAR			
		12-CODE-93			
		13-MSI			
		14-CODE 11			
		15-INDUSTRIAL 2 OF 5			

;F5-STRING SETUP BAR CODE

OPTION

NUMBER	DESCRIPTION	TYPE	MIN	MAX	DEFAULT
202	STRING OPTION				\$0D(CR)
	STRING BAR CODE DATA FORMAT:				
	2 DIGIT STRING # (00-10)				
		00-WILL AUTO Matically SELECT THE FIRST AVAILABLE STRING#			
	1 DIGIT STRING TYPE (0-3)				
		0-OFF			
		1-TERMINATION			
		2-PREAMBLE			
		3-POSTAMBLE			
	2 DIGIT ACTIVE FOR TYPE (00-14)				
		00-ALL BAR CODE TYPES			
		01-ALL BAR CODE TYPES ALWAYS			
		02-CODE 39			
		03-UPC -A			
		04-UPC -E			
		05-EAN -13			
		06-EAN -8			
		07-ISBN			
		08-CODE 128			
		09-I20F5			
		10-CODABAR			
		11-CODE 93			
		12-MSI			
		13-CODE 11			
		14-INDUSTRIAL 2 OF 5			
	1 DIGIT SCAN DIRECTION (0-2)				
		0-ANY DIRECTION SCON			
		1-FORWARD SCAN			
		2-REVERSE SCAN			
	30 CHARACTER STRING TEXT-UP TO 30 CHARACTERS				

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.

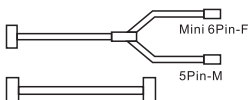
Appendix-B Decoder Pinouts and Specifications



Connector 9Pin D Male



DECODER



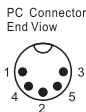
1. Start of scan
2. Bar Code Data In (wand Data In)
3. Good Read Out
4. No Connection
5. Laser Trigger In
6. Power Enable
7. Ground (Wand Ground)
8. Shield Ground
9. +5 VDC

- Rs232 Same as Built - in Type
KB Connector-6P mini-Din(Female)
- 1.Keyboard Data
 - 2.Reserved
 - 3.Ground
 4. +5 VDC
 - 5.Keyboard Clock
 - 6.Reserved

- PC Connector -5P Din (Male)
- 1.Keyboard Clock(Wand Data)
 - 2.Keyboard Data
 - 3.Reserved
 - 4.Ground
 5. +5VDC



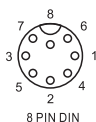
KB Connector
End View



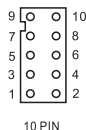
PC Connector
End View



9P DB Female
Connector



8 PIN DIN



10 PIN

TTL Type

Color	Function	9pin DSUB/AMP(F)	6Pin Din(M)	6Pin Din(M)	6Pin mini Din(M)
Brown	Start of Scan	1	-	6	6
Yellow	Signal Data	2	2	2	4
Green	LED Indicator	3	-	-	-
Red	Trigger	5	5	5	1
Blue	Power Enable	6	4	4	2
Black	GND	7	3	3	5
White	GND Shield	8	3	3	5
Orange	VCC +5V	9	1	1	3

Rs232 Type

Color	Function	9pin DSUB/AMP(F)	25Pin DSUB (F)
Brown	GND	5	7
Yellow	CTS	7	4
Green	RTS	8	5
Orange	RX	3	2
Blue	TX	2	3
White	VCC +5V	9	25, 16

OCIA Type

Color	Function	8pin Din (M)	9 Pin DSUB (F)	10 Pin (Casio)
Black	Clock Return	4	1	3
Green	Clock	3	2	9
Yellow	Data Return	1	3	5
Red	Data	2	4	7
White	VCC +5V	5	7	10
Brown	GND	7	8	1

WAND Emulation Type

Color	Function	9pin DSUB/AMP(F)	5pin Din (M)	6pin Din (M)
Blue	Signal Data	2	2	3
Brown	GND	7, 8	3	3
White	VCC +5V	9	1	1

RS232/Keyboard Type

Color	Function	9pin DSUB/AMP(F)	25Pin DSUB (F)
Brown	GND	5	7
Blue	TX	3	3
White	VCC +5V	9	25, 16
Orange	RX	2	2

Appendix-C 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 sown 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.

-OR-

Cause: The decoder is configured to send the numeric data as **KEYPAD NUMERICS**, or the Keyboard Country setting is set to **UNIVERSAL**.

Solution: Reconfigure the decoder to Send Numerics As MAIN KEYBOARD KEYS and set the **Keyboard Country** setting to the country setting of your computer.

Problem: My programmable keyboard fails to program when the decoder is installed.

Cause: The decoder responds to valid keyboard commands from the computer. Most programmable keyboard software programs send characters to the keyboard that are not valid commands.

Solution: Remove the decoder from the computer before programming your keyboard.

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.

