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Getting Started

Installing Keyboard Wedge Scanner

To install a keyboard wedge scanner, follow the steps listed below:

- 1) Make sure that the scanner has the correct Y (U)- cable for the system (a PC or terminal)
- 2) Turn off the power of the system
- 3) Unplug the keyboard from the system
- 4) Connect the Y (U)- cable to the system and keyboard
- 5) Turn on the power of the system
- 6) If the indicator LED lights up and the buzzer sounds, the scanner is ready for reading

Installing a RS-232 Interface Scanner

To install a RS-232 interface scanner, the host device should have a RS-232 port to receive data from the scanner, follow the steps listed below:

- 1) Make sure that the scanner has the right connector for the RS-232 port of the host device
- 2) Make sure that there is a power supply to the scanner (if necessary)
- 3) Connect the cable to the RS-232 port of the device
- 4) If the indicator LED lights up and the buzzer sounds, the scanner is ready for reading

Setup Procedures

- 1) Locate a group that contains the parameters to be changed.
- 2) Scan the “Enter Group #” label. The scanner will sound beeps indicate that setup is in progress
- 3) Scan the label representing the parameter to be changed
- 4) Scan the “Exit” to end the group currently selected, the scanner will sound beeps.
- 5) Repeat the procedure for other groups including the parameters to be changed

Example 1:

Set the operating mode to “Continuous mode”

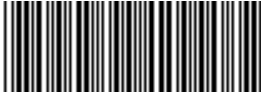
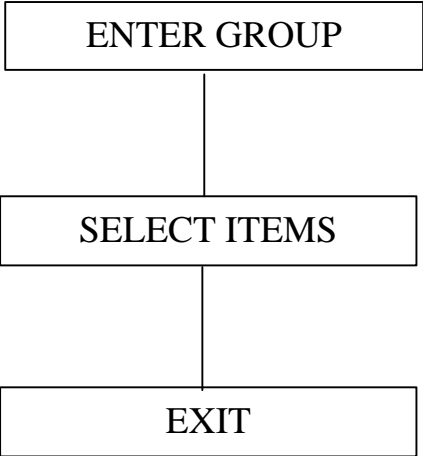
- 1) Scan “Enter Group 5”
- 2) Scan “Continuous/Trigger off”
- 3) Scan “Exit”

Example 2

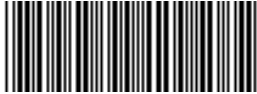
Assign Preamble string as “#”, and postamble string as “END”

- 1) Scan “Enter Group 6”
- 2) Scan Preamble”
- 3) Scan “#” from “Full ASCII Table and Table-Hex.”
- 4) Scan “Confirm” Label in Table-Hex
- 5) Scan “Postamble”
- 6) Scan “E”, “N”, “D” from “Full ASCII Table and Table Hex” consecutively
- 7) Scan “Confirm” Label in Table-Hex.
- 8) Scan Exit

Setup Flow Chart

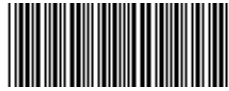


Set All Defaults

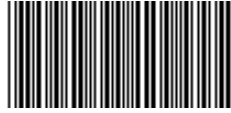


Show Version

Group 0: Interface Selection



ENTER GROUP



EXIT



KEYBOARD



RS-232



WAND



OCIA



RS-232



Reserved 2



DTMF

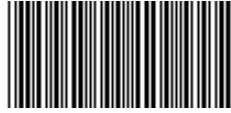


Reserved 4

Group 1: Device Selection for Keyboard Interface



ENTER GROUP



EXIT



PC/AT, PS/2 50,60,70,80(*)



PC/XT



PS/2 25, 30



(NEC 9801)



(IBM 5550)



(PS 55)



(NEC N5520)



(ACER 7300)



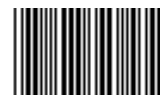
(KW1050D/CT-700A/WANG 5120)



(WANG 5425)



(MAC_SE)

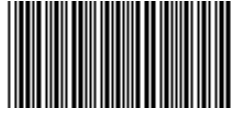


(LC-6533)

Group 1: Device Selection for Keyboard Interface



ENTER GROUP



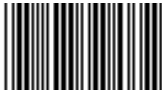
EXIT



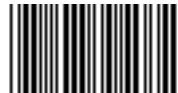
(IBM3196,3197,3476,3477)



Reserved Q



Reserved R



Reserved T



IBM3197



IBM 3476



IBM3477



RESERVED 5



Reserved 6



RESERVED 7



Reserved 8

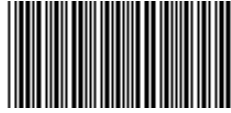


RESERVED 9

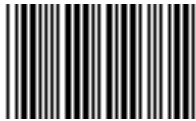
Group 2: Intercharacter Delay



ENTER GROUP



EXIT



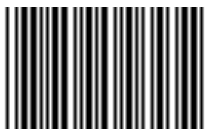
Start Keyboard Setting

Scan Enter Group 2 Label -- >

Scan Start Keyboard (or RS-232) Setting Label -->

Scan two digits labels in "Table-Hex" -->

Scan Exit Label



Start RS-232 Setting

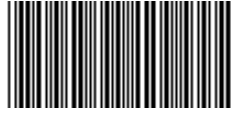
Keyboard Default Value: 05

RS-232 Default Value : 00

Group 3: Language for Keyboard Interface



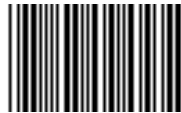
ENTER GROUP



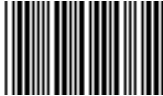
EXIT



U.S. (*)



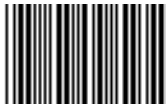
ENGLAND



FRANCE



GERMANY



ITALY



BELGIUM



SWEDEN/FINLAND



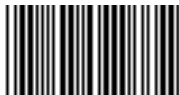
SPANISH



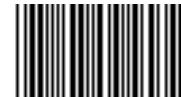
DENMARK



PORTUGAL



SWISS

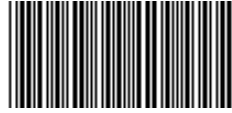


NORWAY

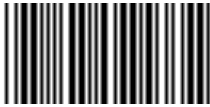
Group 3: Language for Keyboard Interface



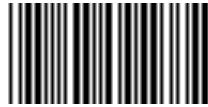
ENTER GROUP



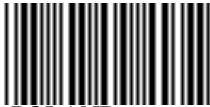
EXIT



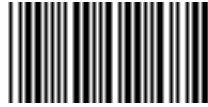
CANADA



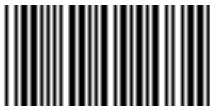
HOLLAND



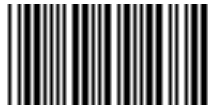
POLAND



LATIN



JAPAN



RESERVED 1



RESERVED 2



RESERVED 3



(IBM THINK-PAD FOR JAPAN)

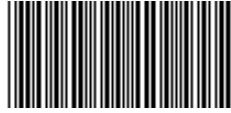


(PANASONIC CF-II FOR JAPAN)

Group 4: Terminator



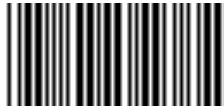
ENTER GROUP



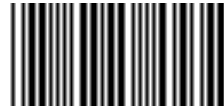
EXIT

KEYBOARD

NONE



CR



SPACE



TAB



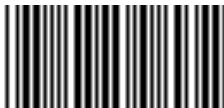
ESC



CTRL-C



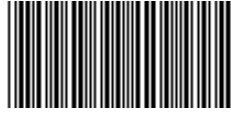
ESC



Group 4: Terminator



ENTER GROUP



EXIT

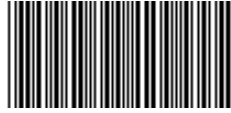
RS-232

NONE	
CR	
CR/LF	
LF	
SPACE	
TAB	
ESC	
CTRL-C	
STX..ETX	
XON.. XOFF	
EOT	

Group 5: Scan Mode



ENTER GROUP



EXIT



1: Trigger On/Off



2: Trigger On/Good Read Off (*)



3: Trigger On/Good Read Off/
Delay Timeout = ?



4: Continuous/Trigger Off



5: Continuous/LED Always on



6: Continuous/No Trigger

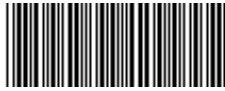


7: Continuous/Testing



8: Continuous/Trigger Off/
Delay Timeout = ?

Group 5: Scan Mode



ENTER GROUP



EXIT



FLASH OFF(*)



FLASH ON



SHORT ZONE



LONG ZONE



LASER DELAY

For Laser Scanner Mode

Default Laser Delay Timeout = 60 sec.

Scan Enter Group 5 Label

Scan Laser Delay -->

Refer to the Table-Hex at page 41 and select a value -->

Scan Confirm in Table Hex.

Scan Exit Label

LAG-960TR - Auto Trigger mode



AUTO TRIGGER

Scan Enter Group 5 Label -->

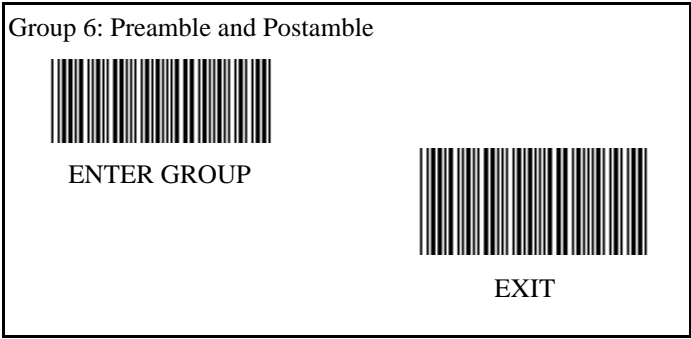
Scan 8: Continuous/Trigger off/Delay timeout=? (Page 13) -->

Scan two digit label and "confirm" label in Page 43 -->

Scan Above "Auto Trigger Label)

Switch on the LAG-960 bottom switch

Note: Scan mode setting is only available for CCD/Laser type scanner.



Preamble



Postamble

Preamble & Postamble Setting:

Scan Enter Group 6 Label -->

Scan Preamble or Postamble Label -->

Refer to ASCII Table(page 44), scan two digits in Table-Hex (Page 43)

Representing one character, maximum 10 characters can be accepted. -->

Scan Confirm Label in Table-Hex (Page 43)

Scan Exit Label



Clear

Clear Preamble & Postamble :

Scan Enter Group 6 Label -->

Scan Preamble or Postamble Label -->

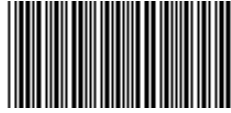
Scan "Clear" Label-->

Scan "Exit" Label

Group 8: RS-232 Parameters



ENTER GROUP



EXIT

Baud Rate



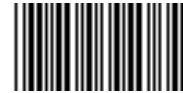
300



600



1200



2400



4800



9600(*)



19200



38400

Data Bit


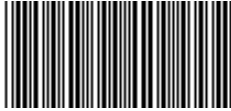


BIT 7



BIT 8

Group 8: RS-232 Parameters

 ENTER GROUP	 EXIT
--	---

Parity :


NONE (*)


ODD


EVEN

Handshaking:


NONE (*)



XON/OFF


Scanner Ready

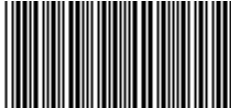

Data Ready


ACK/NAK

Group 8: RS-232 Parameters



ENTER GROUP



EXIT

**(CK/NAK Response Time
CTS Observation Time:)**



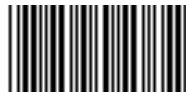
100 ms



300 ms



500 ms



1 sec.



3 sec (*)



5 sec.





10 sec.



00

Group 9: CODE 39 / (CODE 32)


ENTER GROUP


EXIT



Enable (*)



Disable


Standard (*)



Full ASCII


Transmit Start/End Character


Enable


Disable (*)

Transmit Check Character


Disable


Enable (*)

Verify Checksum


Disable (*)


Enable


Enable CODE 32

Group 9: CODE 39 / (CODE 32)



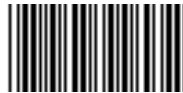
ENTER GROUP



EXIT




Verify Normal (*)



Verify Strick

Group 10-1: Interleaved 2 OF 5



ENTER GROUP



EXIT



Disable (*)




Enable

Transmit Check Character



Enable (*)



Disable


Verify Checksum



Enable




Disable



Barcode Length Setting

Length Define
Min: 4
Max: 48


Scan Enter Group 10-1 Label -->
Scan Length Define Label -->
Scan Four Digit Labels in Table Hex (Page 43) -->
Scan Confirm Label in Table-Hex -->
Scan Exit Label




User Define
3 Sets Available

User Define Length Setting:
Scan Enter Group 10-1 Label
Scan User Define Label-->
Scan Six Digit Labels in Table Hex (Only 3 sets of length can be defined)
Scan Confirm Label in Table Hex -->
Scan Exit Label

Group 10-2: Industrial 2 OF 5 / IATA



ENTER GROUP



EXIT




Disable (*)




Enable

Transmit Check Character




Enable (*)




Disable


Verify Checksum



Enable




Disable



Barcode Length Setting

Length Define
Min: 2
Max: 24

Scan Enter Group 10-2 Label -->
Scan Length Define Label -->
Scan Four Digit Labels in Table Hex (Page 43) -->
Scan Confirm Label in Table-Hex -->
Scan Exit Label



User Define Length Setting:

User Define
3 Sets Available

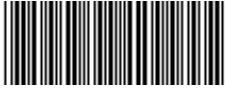
Scan Enter Group 10-2 Label
Scan User Define Label-->
Scan Six Digit Labels in Table Hex (Only 3 sets of length can be defined)
Scan Confirm Label in Table Hex -->
Scan Exit Label





Disable (*)


Enable

Group 10-3: Matrix 2 of 5



ENTER GROUP



EXIT


Disable (*)


Enable

Transmit Check Character



Disable


Enable (*)

Verify Checksum



Disable (*)


Enable


Barcode Length Setting

Length Define
Min: 2
Max: 40

Scan Enter Group 10-3 Label -->
Scan Length Define Label -->
Scan Four Digit Labels in Table Hex (Page 43) -->
Scan Confirm Label in Table-Hex -->
Scan Exit Label



User Define Length Setting:

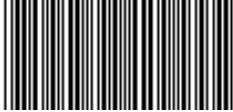
User Define
3 Sets Available

Scan Enter Group 10-3 Label
Scan User Define Label-->
Scan Six Digit Labels in Table Hex (Only 3 sets of length can be defined)

Scan Confirm Label in Table Hex -->
Scan Exit Label

Group 10-4: CHINA POSTAGE



ENTER GROUP



EXIT


Disable (*)


Enable

Transmit Check Character



Disable


Enable (*)


Verify Checksum


Disable (*)


Enable


Barcode Length Setting
Scan Enter Group 10-3 Label -->
Scan Length Define Label -->
Scan Four Digit Labels in Table Hex (Page 43) -->
Scan Confirm Label in Table-Hex -->
Scan Exit Label



Length Define
Min: 2
Max: 40




User Define
3 Sets Available





User Define Length Setting:
Scan Enter Group 10-3 Label
Scan User Define Label-->
Scan Six Digit Labels in Table Hex (Only 3 sets of length can be defined)

Scan Confirm Label in Table Hex -->
Scan Exit Label

Group 11: CODE 128/(CODE 93)/(CODE 11)/(MSI-PLESSEY)


	
ENTER GROUP	
	
	EXIT







CODE 128	
	Enable (*)
	
Disable	


CODE 93	
	Enable
	
Disable (*)	
Concatenation	
	Enable
	
Disable (*)	

Note: Options marked by () are only available upon request

Group 11: CODE 128/(CODE 93)/(CODE 11)/(MSI-PLESSEY)

 ENTER GROUP	 EXIT
--	---

	 Enable(*)
 Disable	
Number of Check Character	
	 One
 Two (*)	
Transmit Check Character	
 Disable (*)	 Enable

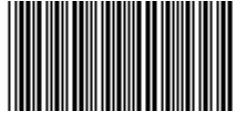
MSI/PLESSEY	 Enable (*)
 Disable	

Note: Options marked by () are only available upon request

Group 12: (ISBN/ISSN)



ENTER GROUP



EXIT





Disable (*)





Enable



Note: Options marked by () are only available upon request

Group 13: CODABAR / NW7



 ENTER GROUP	 EXIT
--	---

 Enable(*)	 Disable
--	--

Transmit Start/End Character

 Enable	 Disable (*)
---	---

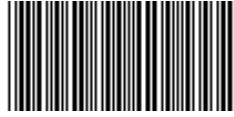
Start/End Transmit Type

 ABCD/ABCD	 ABCD/TN*E
 abcd/abcd (*)	 abcd/tn*e

Group 14: (Code 4)



ENTER GROUP



EXIT





Enable



Disable (*)

Note: Options marked by () are only available upon request

Group 15-1: EAN-13/JAN-13



 ENTER GROUP	 EXIT
--	---

 Enable (*)	 Disable
---	--

ADD-ON 2/5

 Enable (*)	 Disable (*)
---	--



Transmit Check Character


 Enable (*)	 Disable
---	--

Truncate Leading Digit

 Enable	 Disable (*)
---	--

Truncate Leading Zero

 Enable	 Disable (*)
---	--



	
---	---



Check-Digit On (*)	
	Check-Digit Off



Group 15-2: UPC-A	
	
ENTER GROUP	
	EXIT

	
Enable (*)	
	Disable



ADD-ON 2/5	
	
Enable (*)	
	Disable (*)

Transmit Check Character	
	
Enable (*)	
	Disable

Truncate Leading Digit	
	
Enable	
	Disable (*)

Truncate Leading Zero	
	
Enable	
	Disable (*)

Group 15-3: EAN-8/JAN-8


 ENTER GROUP	 EXIT
--	---

 Enable (*)	 Disable
---	--

ADD-ON 2/5

 Enable (*)	 Disable (*)
---	--



Transmit Check Character

 Enable (*)	 Disable
---	--


Truncate Leading


 Enable	 Disable (*)
---	--

EAN Convert to EAN-13

 Enable	 Disable (*)
---	--

Group 15-4: UPC-E / UCC EAN/128


ENTER GROUP


EXIT


Enable (*)



Disable


ADD-ON 2/5


Enable (*)


Disable (*)

Transmit Check Character


Enable (*)


Disable

Truncate Leading Digit


Enable


Disable (*)

UCC/EAN/128


Enable




Disable (*)





UPC-E Convert to UPC-A





 Enable	 Disable
---	--

Group 16: General Parameters



 ENTER GROUP	 EXIT
--	---


 Upper Case	 Lower Case
 Universal	 ALT Mode

	Buzzer Pitch (Default : 16)
	Buzzer Duration (Default: 04)



Buzzer Pitch & Buzzer Duration Setting:
 Scan Enter Group 16 Label -->
 Scan Buzzer Pitch or Buzzer Duration Label -->
 Scan Two Digit Labels in Table-Hex -->
 Scan Confirm Label in Table-Hex -->
 Scan Exit Label

Power Up Beeping

 Enable (*)	 Disable
---	--



 Turbo (*)	 Normal
--	---

Group 17: Code ID Setting	
 ENTER GROUP	 EXIT


 CODE 39


 INTERLEAVED 2 OF 5


 INDUSTRIAL 2 OF 5


 MATRIX 2 OF 5


 CHINA POSTAGE


 CODE 128


 CODE 93


 CODE 11


 MSI/PLESSEY


 CODABAR/NW7


 EAN-13/UPC-A




 EAN-8


 UPC-E


 UPC-A





Note: Refer to ASCII Table, scan two hexadecimal labels
in Table Hex to represent one character

Group 18: WAND Type Parameters




 ENTER GROUP	 EXIT
--	---

 BAR=LOW	 BAR=HIGH(*)
--	--


Scan Speed


 Low (*)	 Lowest
 Highest	 High


Data Format


 Transmit in Normal Format (*)	 Transmit in Code 39 Format
 Transmit in Code 128 Format	

Group 19-1: (Magnetic Parameters)



ENTER GROUP



EXIT



Disable


Enable (*)


Track Order



Track 1/3/2


Track 2/3/1


Track 3/1/2




Track 1/2/3 (*)


Track 2/1/3




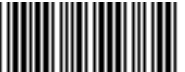

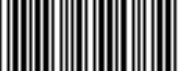


Track 3/2/1

Note: Options marked by () are only available upon request

Group 19-1: (Magnetic Parameters)

 ENTER GROUP	 EXIT
--	---



Track Selection

 Track 1 only	 Track 1&2&3 any (*)
 Track 3 only	 Track 2 only
 Track 2 and 3	 Track 1 and 2
	 Track 1 and 2 and 3




 ISO (*)	 (JIS-2)
--	--

Note: Options marked by () are only available upon request

Group 19-2: (Magnetic Parameters)

 ENTER GROUP	 EXIT
--	---

Start Sentinel:
(SS)

 Tk2 Default	 Tk1 Default : %
	 Tk3 Default : ; ?

End Sentinel:
(ES)

	 Tk1&2&3 Default: ?
--	---

DLE:

 Tk2 Default: Null	 Tk1 Default : Null
	 Tk3 Default: Null

STX:


	 Tk1&2&3 Default: Null
--	--

Magnetic Output Data Format:


STX - Tk1 Start Sentinel - Tk1 Data - End Sentinel - Tk1 - DLE
 STX - Tk2 Start Sentinel - Tk2 Data - End Sentinel - Tk2 - DLE
 STX - Tk3 Start Sentinel - Tk3 Data - End Sentinel - Tk3 - DLE

Note: Options marked by () are only available upon request


Group 20: (Function Key Emulation)




ENTER GROUP



EXIT



Enable



Disable (*)

Enable Function Key Emulation:
 Scan Enter Group 20 Label -->
 Scan Enable Label -->
 Scan Exit Label

1:
 To concatenate a function key with input data, please refer to
 Function Key Table for its hexadecimal representation.
 For Example:

Preamble data with F1
 Scan Enter Group 6 Label -->
 Scan Preamble Label -->
 Scan Label 0 and 1 respectively in Table-Hex (Page 43) -->
 Scan Confrim Label in Table-Hex (page 43) -->
 Scan Exit Label

Function Key Table (Full Code 39 Table)			
F1:01	F2:02	F3:04	F4:04
F5:05	F6:06	F7:07	F8:08
F9:09	F10:0A	F11:0B	F12:0C
Enter:0D	Tab:0E	BS:0F	Up:10
Down:11	Left:12	Home:14	End:15
PgUp:16	PgDn:17	Ins:18	Del:19
Esc:1B	Right:13	S-Tab:1C	

2:

To scan a function key barcode label, full CODE 39 must be enabled. Please refer to Full CODE 39 Table to produce the function key barcode label.



Full CODE 39 Enable

Function Code for PC XT/AT



F1 (\$A)



F7 (\$G)



F2 (\$B)



F8 (\$H)



F3 (\$C)



F9 (\$I)



F4 (\$D)



F10(\$J)



F5 (\$E)



F11 (\$K)



F6 (\$F)



F12 (\$L)

Function Code for PC XT/AT



Enter (\$M)



Tab (\$N)



BS (\$O)



Up (\$P)



Down (\$Q)



Left (\$R)



Right (\$S)



End (\$U) (\$B)



PgUp (\$V)



PgDn (\$W)



Ins (\$X)



Del (\$Y)



Esc (%A)





Home (\$T)

Table-Hex : HEXADECIMAL



0



2



4



6



8



A



C



1



3



5



7



9



B



D



E



F



Confirm

ASCII TABLE

L / H	0	1	2	3	4	5	6	7
0	NULL	DLE	SP	0	@	P		p
1	SOH DC1	DC1	!	1	A	Q	a	q
2	STX	DC2	"	1	A	Q	a	q
3	ETX	DC3	#	3	C	S	c	s
4	EOT	DC4	\$	3	C	S	c	s
5	ENQ	NAK	%	5	E	U	e	u
6	ACK	SYN	&	6	F	V	f	v
7	BEL	ETB		7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x
9	HT	EM	)	9	I	Y	l	y
A	LF	SUB	*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{
C	FF	FS	,	<	L	\	l	|
D	CR	GS	-	_	M	]	m	}
E	SO	RS	.	>	N	^	n	~
F	SI	US	/	?	O	-	o	DEL

Hexadecimal-Decimal Conversion Table

Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	
Dec	0	1	2	3	4	5	6	7	8	9	10	11	12	
Hex	1	16	17	18	19	20	21	22	23	24	25	26	27	28
Dec	32	33	34	35	36	37	38	39	40	41	42	43	44	
Hex	3	48	49	50	51	52	53	54	55	56	57	58	59	60
Dec	64	65	66	67	68	69	70	71	72	73	74	75	76	
Hex	5	80	81	82	83	84	85	86	87	88	89	90	91	92
Dec	96	97	98	99	100	101	102	103	104	105	106	107	108	
Hex	7	112	113	114	115	116	117	118	119	120	121	122	123	124
Dec	128	129	130	131	132	133	134	135	136	137	138	139	140	
Hex	9	144	145	146	147	148	149	150	151	152	153	154	155	156
Dec	160	161	162	163	164	165	166	167	168	169	170	171	172	
Hex	A	176	177	178	179	180	181	182	183	184	185	186	187	188
Dec	192	193	194	195	196	197	198	199	200	201	202	203	204	
Hex	D	208	209	210	211	212	213	214	215	216	217	218	219	220
Dec	224	225	226	227	228	229	230	231	232	233	234	235	236	
Hex	F	240	241	242	243	244	245	246	247	248	249	250	251	252

	D	E	F
	13	14	15
	29	30	31
	45	46	47
	61	62	63
	77	78	79
	93	94	95
	109	110	111
	125	126	127
	141	142	143
	157	158	159
	173	174	175
	189	190	191
	205	206	207
	221	222	223
	237	238	239
	253	254	255

For Example:

Hexadecimal
 56 -> H:5 L:3
 D5-> H:D L:5

Decimal
 83
 213

PIN ASSIGNMENTS

COLOR	Function	9 Pin DSUB/AM P (F)	25 PIN DIN(M)	6 PIN DIN (M)	6 PIN MINI DIN (M)
Yellow	Start of Scan	1	---	6	6
Orange	Signal Data	2	2	2	4
White	Led Indicator	3	---	---	---
Blue	Trigger	5	5	5	1
Green	Power Enable	6	4	4	2
Black	GND	7	3	3	5
Red	VCC+5V	9	1	1	3

Wand Emulation Signal Output

COLOR	Function	9 PIN DSUB/AM P (F)	5 PIN DIN (M)	6 PIN DIN (M)
Orange	Signal Data	2	2	2
Black	GND	7	3	3
Red	VCC+5V	9	1	1

Note : The pin numbers for the 5 or 6 pin connectors are viewed internally.

"F" stands for a female connector while "M" stands for a male connector.

PIN ASSIGNMENTS

RS-232 Signal Output

COLOR	FUNCTION	9 PIN DSUB/AMP(F)	25PIN DSUB(F)
Black	GND	5	7
Brown	CTS	7	4
Grey	RTS	8	5
Violet	RX	3	2
Green	TX	2	3
Red	VCC+5V	9	25

Note : For PC applications , a cable with DC power jack is required to accept external power input.

Keyboard Signal Output

COLOR	FUNCTION	5 PIN DIN (F)	5 PIN DIN (M)
Black	GND	4	4
White	PC_Data	---	2
Orange	PC_CLK	---	1
Red	Vcc+5V	5	5
Blue	KB_CLK	1	---
Yellow	KB_Data	2	---

