



**Barcode**  
**Magstripe**

**Decoder & Scanner**

**Programming Manual**

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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"

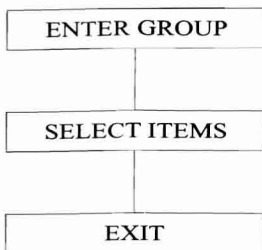
### Example 2

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

Note: (\*) denotes default setting options marked by ( )  
are only available upon request.

## Group 0: Interface Selection



ENTER GROUP



EXIT



KEYBOARD



RS-232



(WAND)



(OCIA)



(DTMF)



Reserved 2



Resered 3



Reserved 4

Note: The interface is pre-set at factory according to the model of the device.

## 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)



(KW105D/  
CT-700A/WANG 5120)



(WANG 5425)



(MAC\_SE)



(LC-6533)

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

## Group 1: Device Selection for Keyboard Interface



ENTER GROUP



EXIT



(IBM3196, 3197, 3476, 3477)



Reserved R



IBM3197



IBM3477



Reserved 6



Reserved 8



Reserved Q



Reserved T



IBM 3476



Reserved 5



Reserved 7



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



POLAND



JAPAN



Reserved 2



(IBM THINK-PAD FOR JAPAN)



HOLLAND

,



LATIN



Reserved 1



Reserved 3

,



(PANASONIC CF-II  
FOR JAPAN)

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

## Group 4: Terminator



ENTER GROUP



EXIT

## KEYBOARD

NONE



CR



(\*)

SPACE



TAB



ESC



CTRL-C



EXEC



#### 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 = ?

### Delay Timeout Setting:

Scan Enter Group 5 Label -->

Scan 3 or 8 Label -->

Scan two digit labels in Table-Hex -->

Scan Confirm Label in Table-Hex -->

Scan Exit Label

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

### **Group 5: Scan Mode**



ENTER GROUP



EXIT



FLASH OFF(\*)



FLASH ON

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

## Group 6: Preamble and Postamble



ENTER GROUP



EXIT



Preamble



Postamble

### Preamble & Postamble Setting:

Scan Enter Group 6 Label -->

Scan Preamble or Postamble Label -->

Refer to ASCII Table(page 46), scan two digits in Table-Hex (Page 45)

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

Scan Confirm Label in Table-Hex (Page 45)

Scan Exit Label



Clear

Clear Preamble & Postamble :

Scan Enter Group 6 Label -->

Scan Preamble or Postamble Label -->

Scan Clear Label-->

Scan Exit Label

## Group 7: RS-232 Parameters



ENTER GROUP



EXIT

## Baud Rate



600



1200



2400



4800



9600(\*)



19200



38400

## Data Bit



BIT 7



BIT 8 (\*)

## Group 7: RS-232 Parameters



ENTER GROUP



EXIT

## Parity :



NONE (\*)



ODD



EVEN

## Handshaking:



NONE (\*)



XON/XOFF



Scanner Ready



Data Ready



ACK/NAK

## Group 7: RS-232 Parameters



ENTER GROUP



EXIT

## (ACK/NAK Response Time CTS Observation Time:)



100 ms



300 ms



500 ms



1 sec



3 sec (\*)



5 sec



10 sec



00

**Group 8: CODE 39 / CODE 32**



ENTER GROUP



EXIT

**Code 39**



Enable (\*)



Disable



Full ASCII



Standard (\*)

**Transmit Start/End Character**



Enable



Disable (\*)

**Transmit Check Character**



Enable (\*)



Disable

**Verify Checksum**



Enable



Disable (\*)

**Group 8: CODE 39 / CODE 32**



ENTER GROUP



EXIT



Enable CODE 32



Disable CODE 32 (\*)



Verify Normal (\*)



Verify Strick

## Group 9-1: Interleaved 2 OF 5



ENTER GROUP



EXIT



Enable



Disable (\*)

### Transmit Check Character



Enable (\*)



Disable

### Verify Checksum



Enable



Disable (\*)



#### Barcode Length Setting:

Scan Enter Group 9-1 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: 4

Max: 48



#### User Define Length Setting:

Scan Enter Group 9-1 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

User Define

3 Sets Available

## Group 9-2: Industrial 2 OF 5 / IATA



ENTER GROUP



EXIT



Enable



Disable (\*)

### Transmit Check Character



Enable (\*)



Disable

### Transmit Check Character



Enable



Disable (\*)



#### Barcode Length Setting:

Scan Enter Group 9-2 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: 24



#### User Define Length Setting:

Scan Enter Group 9-2 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

User Define

3 Sets Available

### IATA



Enable



Disable (\*)

### Group 9-3: Matrix 2 OF 5



ENTER GROUP



EXIT



Enable



Disable (\*)

#### Transmit Check Character



Enable (\*)



Disable

#### Verify Checksum



Enable



Disable (\*)



#### Barcode Length Setting:

Scan Enter Group 9-3 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 9-3 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 9-4: CHINA POSTAGE



ENTER GROUP



EXIT



Enable



Disable (\*)

### Transmit Check Character



Enable (\*)



Disable

### Verify Checksum



Enable



Disable (\*)



#### Barcode Length Setting:

Scan Enter Group 9-4 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 Length Setting:

Scan Enter Group 9-4 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

User Define

3 Sets Available

**Group 10: Code 128**



**ENTER GROUP**



**EXIT**



**Enable (\*)**



**Disable**

**Enable/Disable Checkdigit**



**Enable (\*)**  
**(not send checkdigit)**



**Disable**

**UCC/EAN/128**



**Enable**



**Disable (\*)**

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

**Group 11: CODE 11**



ENTER GROUP



EXIT



Enable (\*)



Disable

**Number of Check Character**



Two (\*)



One

**Transmit Check Character**



Enable



Disable (\*)

**Enable/Disable Checkdigit**



Enable (\*)



Disable

**Group 12: Code 93**



ENTER GROUP



EXIT



Enable



Disable (\*)

**Verify Checkdigit**



Enable (\*)



Disable

### Group 13: MSI-PLESSEY



ENTER GROUP



EXIT



Enable (\*)



Disable

#### Verify Checkdigit



Enable (\*)



Disable

#### Enable MOD



Enable MOD 10-10



Enable MOD 10 (\*)



Enable MOD 11-10

#### Transmit/Truncate Checkdigit



Truncate 1<sup>st</sup> checkdigit



Transmit checkdigit (\*)



Truncate 1<sup>st</sup> & 2<sup>nd</sup> checkdigit

**Group 14: 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 15: Code 4**



ENTER GROUP



EXIT



Enable



Disable (\*)

**Group 16-1: EAN-13/JAN-13**



ENTER GROUP



EXIT



Enable (\*)



Disable

**ADD-ON 2/5**



Enable



Disable (\*)

**Transmit Check Character**



Enable (\*)



Disable

**Truncate 1<sup>st</sup> digit**



Enable



Disable (\*)

**Truncate 2<sup>nd</sup> digit**



Enable



Disable (\*)

**EAN Checkdigit**



Enable (\*)



Disable

## Group 16-2: UPC-A



ENTER GROUP



EXIT



Enable (\*)



Disable

### ADD-ON 2/5



Enable



Disable (\*)

### Transmit Check Character



Enable (\*)



Disable

### Truncate Leading Digit



Enable



Disable (\*)

### UPC-A Convert to EAN-13



Enable



Disable (\*)

**Group 16-3: EAN-8/JAN-8**



ENTER GROUP



EXIT



Enable (\*)



Disable

**ADD-ON 2/5**



Enable



Disable (\*)

**Transmit Check Character**



Enable (\*)



Disable

**Truncate Leading Digit**



Enable



Disable (\*)

**EAN-8 Convert to EAN-13**



Enable 1  
(add zeros in the front  
of barcode)



Disable (\*)



Enable 2  
(add zeros in the middle  
of barcode)

#### **Group 16-4: UPC-E**



ENTER GROUP



EXIT



Enable (\*)



Disable

#### **ADD-ON 2/5**



Enable



Disable (\*)

#### **Transmit Check Character**



Enable (\*)



Disable

#### **Truncate Leading Digit**



Enable



Disable (\*)

#### **UPC-E Convert to UPC-A**



Enable



Disable (\*)

**Group 16-5: ISBN/ISSN**



ENTER GROUP



EXIT



Enable



Disable (\*)

## Group 17: General Parameters



ENTER GROUP



EXIT



Upper Case



Lower Case (\*)



Universal



ALT Mode



Buzzer Pitch  
(Default : 21)



Buzzer Duration  
(Default: AA)

Buzzer Pitch & Buzzer Duration Setting:

Scan Enter Group 17 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 18: Code ID Setting



ENTER GROUP



EXIT



CODE 39/CODE 32



INDUSTRIAL 2 OF 5



CHINA POSTAGE



CODE 93



MSI/PLESSEY



EAN-13



UPC-E



CODE 4



INTERLEAVED 2 OF 5



MATRIX 2 OF 5



CODE 128



CODE 11



CODABAR/NW7



EAN-8



UPC-A

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

### Group 19: 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 20-1: (Magnetic Parameters)



ENTER GROUP



EXIT



Enable (\*)



Disable

### Track Order



Track 1/3/2



Track 1/2/3 (\*)



Track 2/3/1



Track 2/1/3



Track 3/1/2



Track 3/2/1

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

### Group 20-1: (Magnetic Parameters)



ENTER GROUP



EXIT

### Track Selection



Track 1 only



Track 3 only



Track 2 and 3



Track 1&2&3 any (\*)



Track 2 only



Track 1 and 2



Track 1 and 2 and 3



ISO (\*)



(JIS-2)

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

## Group 20-2: (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 21: (Function Key Emulation)



ENTER GROUP



EXIT



Enable

Enable Function Key Emulation:

Scan Enter Group 21 Label -->

Scan Enable Label -->

Scan Exit Label



Disable (\*)

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 45) -->

Scan Confirm Label in Table-Hex (page 45) -->

Scan Exit Label

| Function Key Table (Full ASCII 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 ASCII must be enabled. Please refer to Full ASCII Code 39 Table to produce the function key barcode label.



Full ASCII Code 39 Enable

## Function Code for PC XT/AT

---



F1 (\$A)



F2 (\$B)



F3 (\$C)



F4 (\$D)



F5 (\$E)



F6 (\$F)



F7 (\$G)



F8 (\$H)



F9 (\$I)



F10 (\$J)



F11 (\$K)



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



E



Confirm



1



3



5



7



9



B



D



F

# ASCII TABLE

| H/I | 0    | 1   | 2  | 3 | 4 | 5 | 6 | 7   |
|-----|------|-----|----|---|---|---|---|-----|
| 0   | NULL | DLE | SP | 0 | @ | P | , | p   |
| 1   | SOH  | DC1 | !  | 1 | A | Q | a | q   |
| 2   | STX  | DC2 | "  | 2 | B | R | b | r   |
| 3   | ETX  | DC3 | #  | 3 | C | S | c | s   |
| 4   | EOT  | DC4 | \$ | 4 | D | T | d | t   |
| 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 | i | 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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| H/I | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | A   | B   | C   | D   | E   | F   |
| 0   | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  |
| 1   | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  |
| 2   | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  | 41  | 42  | 43  | 44  | 45  | 46  | 47  |
| 3   | 48  | 49  | 50  | 51  | 52  | 53  | 54  | 55  | 56  | 57  | 58  | 59  | 60  | 61  | 62  | 63  |
| 4   | 64  | 65  | 66  | 67  | 68  | 69  | 70  | 71  | 72  | 73  | 74  | 75  | 76  | 77  | 78  | 79  |
| 5   | 80  | 81  | 82  | 83  | 84  | 85  | 86  | 87  | 88  | 89  | 90  | 91  | 92  | 93  | 94  | 95  |
| 6   | 96  | 97  | 98  | 99  | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 |
| 7   | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 |
| 8   | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 |
| 9   | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 |
| A   | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 |
| B   | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 |
| C   | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 |
| D   | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 |
| E   | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 |
| F   | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 |

For Example:

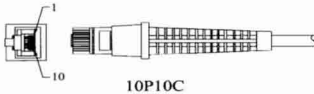
**Hexadecimal**  
56 -> H:5 L:3  
D5 -> H:D L:5

**Decimal**  
83  
213

# PIN ASSIGNMENTS

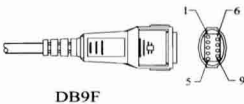
## 10Pin Modular Plug

| RJ-45 Male<br>10P10C | TTL       | WAND      | KB      | RS-232 | KB→USB  |
|----------------------|-----------|-----------|---------|--------|---------|
| 1                    | ×         | ×         | ×       | RTS    | ×       |
| 2                    | ×         | ×         | ×       | CTS    | ×       |
| 3                    | PWR-CTL   | ×         | ×       | TX     | ×       |
| 4                    | GND       | GND       | GND     | GND    | GND     |
| 5                    | GOOD-READ | GOOD-READ | PC-DATA | ×      | PC-DATA |
| 6                    | DATA      | DATA      | PC-CLK  | ×      | PC-CLK  |
| 7                    | VCC       | VCC       | VCC     | VCC    | VCC     |
| 8                    | SW-DET    | ×         | KB-CLK  | ×      | ×       |
| 9                    | S.O.S     | ×         | KB-DATA | ×      | ×       |
| 10                   | ×         | ×         | ×       | RX     | ×       |



## TTL Signal Output

| Function      | DB9F | Din6M/5M(240°) |
|---------------|------|----------------|
| Start of Scan | 1    | 6              |
| Signal Data   | 2    | 2              |
| Led Indicator | 3    | ---            |
| Trigger       | 5    | 5              |
| Power Enable  | 6    | 4              |
| GND           | 7    | 3              |
| VCC+5V        | 9    | 1              |



# PIN ASSIGNMENTS

## Wand Emulation Signal Output

| Function    | DB9F | Din5M (180°) | Din6M/Din5M (240°) |
|-------------|------|--------------|--------------------|
| Signal Data | 2    | 1            | 2                  |
| GND         | 7    | 2            | 3                  |
| VCC+5V      | 9    | 3            | 1                  |



DB9F



Din5M (180°)



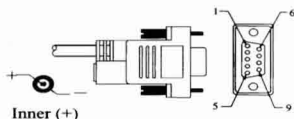
Din6M  
Din5M (without pin#6)

Note : "F" stands for a female connector, while "M" stands for a male connector.

## RS-232 Signal Output

| Function | DB9F+DC (or without DC) |
|----------|-------------------------|
| GND      | 5                       |
| CTS      | 7                       |
| RTS      | 8                       |
| RX       | 3                       |
| TX       | 2                       |
| VCC+5V   | 9                       |

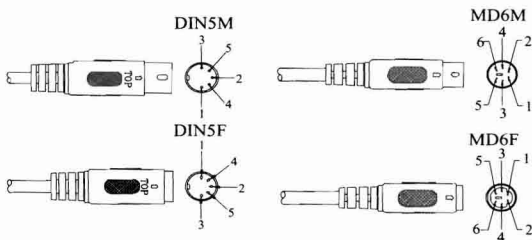
Note : For PC applications, a cable with DC power jack is required to accept external power input.



DB9F+DC -Jack

## Keyboard Signal Output

| Function | Din5F | Din5M | Mini-Din6M | Mini-Din6F |
|----------|-------|-------|------------|------------|
| GND      | 4     | 4     | 5          | 5          |
| PC_Data  | ---   | 2     | ---        | 4          |
| PC_CLK   | ---   | 1     | ---        | 6          |
| Vcc+5V   | 5     | 5     | 2          | 2          |
| KB_CLK   | 1     | ---   | 6          | ---        |
| KB_Data  | 2     | ---   | 4          | ---        |



## USB Signal Output

| FUNCTION | USB-A |
|----------|-------|
| GND      | 4     |
| Vcc      | 1     |
| D+       | 3     |
| D-       | 2     |

