

## PC Control Codes and Cable Connections

This projector provides a function to control and monitor the projector's operations by using the RS-232C serial port.

1. Connect a RS-232C serial cross cable (NULL Modem) to SERIAL PORT IN on the projector and serial port on the PC.
2. Launch a communication software provided with PC and setup the communication condition as follows:

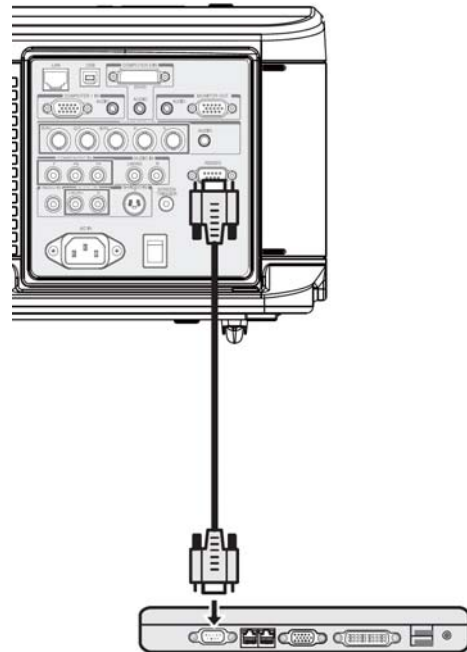
Baud rate	: 9600 bps
Parity check	: none
Stop bit	: 1
Flow control	: none
Data bit	: 8

Note: Minimum delay for next command: **1ms**  
 Bard rate must match with projector

3. Type the command for controlling the projector and then enter the "Enter" key.

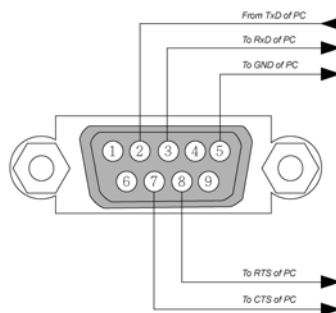
**Example:**

When you want to change the input to Computer 2, Type “~S2CR”



The below table shows the typical command lists for controlling the projector. Please consult your local dealer for further information of another commands.

### PC Control Connector (DIN-9P)



**Note:**

1. Pin 1, 4, 6 and 9 are not used.
2. Pin 7 (Clear to Send) and Pin 8 (Request to Send) are not necessary
3. For long cables, it is recommended to set communication speed within projector menus to 9600 bps.

### Control Command Diagram

The command is structured by the Header code, command code, data code and end code. Most of the commands are structured except some for the compatibility issue with other projectors.

	Header code	Command code	Data code	End code
HEX	7Eh	Command	Data	0Dh
ASCII	'~'	Command	Data	CR

### Control Sequence

The projector may send a return code after it received a command. If the command isn't received correctly, the projector will not send the return code

### Operation Commands

The operation commands execute the basic operation setting of this projector.

Operation	ASCII	HEX
Power On	~ P N CR ※	7Eh 50h 4Eh 0Dh
Power Off	~ P F CR	7Eh 50h 46h 0Dh
Auto Image	~ A I CR	7Eh 41h 49h 0Dh
Input Select 1 (COMPUTER1)	~ S 1 CR	7Eh 53h 31h 0Dh
Input Select 2 (COMPUTER2)	~ S 2 CR	7Eh 53h 32h 0Dh
Input Select 3 (COMPUTER3)	~ S 3 CR	7Eh 53h 33h 0Dh
Input Select 4 (COMPONENT)	~ S 4 CR	7Eh 53h 34h 0Dh
Input Select 5 (Video)	~ S 5 CR	7Eh 53h 35h 0Dh
Input Select 6 (S-Video)	~ S 6 CR	7Eh 53h 36h 0Dh

- ※ Power On command will not work for 1 minute after the power off command triggered.
- ※ CR: Carriage Return.

### Remote Commands

The remote commands simulate the code send from IR remote handset.

Button's name	ASCII	HEX
UP arrow	~ r U CR	7Eh 72h 55h 0Dh
DOWN arrow	~ r D CR	7Eh 72h 44h 0Dh
LEFT arrow	~ r L CR	7Eh 72h 4Ch 0Dh
RIGHT arrow	~ r R CR	7Eh 72h 52h 0Dh
POWER	~ r P CR	7Eh 72h 50h 0Dh
EXIT	~ r E CR	7Eh 72h 45h 0Dh
INPUT	~ r I CR	7Eh 72h 49h 0Dh
AUTO	~ r A CR	7Eh 72h 41h 0Dh
KEYSTONE+	~ r K CR	7Eh 72h 4Bh 0Dh
KEYSTONE-	~ r J CR	7Eh 72h 4Ah 0Dh
MENU	~ r M CR	7Eh 72h 4Dh 0Dh
STATUS	~ r S CR	7Eh 72h 53h 0Dh
MUTE	~ r T CR	7Eh 72h 54h 0Dh
ZOOM+ (Digital)	~ r Z CR	7Eh 72h 5Ah 0Dh
ZOOM- (Digital)	~ r Y CR	7Eh 72h 59h 0Dh
BLANK	~ r B CR	7Eh 72h 42h 0Dh
FREEZE	~ r F CR	7Eh 72h 46h 0Dh
VOLUME+	~ r V CR	7Eh 72h 56h 0Dh
VOLUME-	~ r W CR	7Eh 72h 57h 0Dh
ENTER (SELECT)	~ r N CR	7Eh 72h 4Eh 0Dh
FOCUS+	~ r 0 0 CR	7Eh 72h 30h 30h 0Dh
FOCUS-	~ r 0 1 CR	7Eh 72h 30h 31h 0Dh
ZOOM+	~ r 0 2 CR	7Eh 72h 30h 32h 0Dh
ZOOM-	~ r 0 3 CR	7Eh 72h 30h 33h 0Dh
KEYSTONE	~ r C CR	7Eh 72h 43h 0Dh
LENS SHIFT	~ r G CR	7Eh 72h 47h 0Dh
ASPECT RATIO	~ r Q CR	7Eh 72h 51h 0Dh

Set Value Command

ITEM	ASCII	HEX
Brightness	~ s B ? CR ※	7Eh 73h 42h ?h 0Dh
Contrast	~ s C ? CR	7Eh 73h 43h ?h 0Dh
Color(Saturation)	~ s R ? CR	7Eh 73h 52h ?h 0Dh
Tint	~ s N ? CR	7Eh 73h 4Eh ?h 0Dh
Scaling	~ s A ? CR	7Eh 73h 41h ?h 0Dh
Color Temperature	~ s T ? CR	7Eh 73h 54h ?h 0Dh
Projection Mode	~ s J ? CR	7Eh 73h 4Ah ?h 0Dh

※ ? : ASCII Data

Data Range

ITEM	Set Data Range	Source
Brightness	0 ~ 100(default 50)	All Source
Contrast	0 ~ 100(default 50)	All Source
Saturation	0 ~ 100(default 50) ※	All Source
Tint	0 ~ 100 (default 50) ※	All Source
Scaling	0: 4:3 1: 16:9 2: 15:9 3: Crop 4: Letterbox 5: Native 6: Normal	All Source
Color Temperature	0: 5000K 1: 6500K 2: 7800K 3: 8500K 4: 9300K 5: 10500K 6: High-Bright	All Source
Projection Mode	0: Front 1: Rear+Ceiling 2: Rear 3: Ceiling	All Source

※ Saturation and Tint is not available when Video Type(color space) change to "RGB"

Example 1. Adjust Brightness value to 100 Send Command : ~sB100CR

Example 2. Adjust Color Temperature to Warm Send Command : ~sT2CR

Query Command

ITEM	ASCII	HEX
Software Version	~ q V CR	7Eh 71h 56h 0Dh
Power State	~ q P CR	7Eh 71h 50h 0Dh
Input Select	~ q S CR	7Eh 71h 53h 0Dh
Lamp Hours	~ q L CR	7Eh 71h 4Ch 0Dh
Lamp1 Hours	~ q L 1 CR	7Eh 71h 4Ch 31h 0Dh
Lamp2 Hours	~ q L 2 CR	7Eh 71h 4Ch 32h 0Dh
Brightness	~ q B CR	7Eh 71h 42h 0Dh
Contrast	~ q C CR	7Eh 71h 43h 0Dh
Saturation	~ q R CR	7Eh 71h 52h 0Dh
Tint	~ q N CR	7Eh 71h 4Eh 0Dh
Aspect Ratio	~ q A CR	7Eh 71h 41h 0Dh
Color Temperature	~ q T CR	7Eh 71h 54h 0Dh
Projection Mode	~ q J CR	7Eh 71h 4Ah 0Dh

Response message

ITEM	Response Message examples
Software Version	DP3650-XXXX-DPXXX
Power State	On Off
Input Select	Computer1 Computer2 Computer3 Component Video S-Video
Lamp Hours	2000,2000
Lamp1 Hours	2000
Lamp2 Hours	2000
Brightness	0 ~ 100
Contrast	0 ~ 100
Saturation	0 ~ 100
Tint (Video)	0 ~ 100
Aspect Ratio	4:3 16:9 15:9 Crop Letterbox Native Normal
Color Temperature	5000K 6500K 7800K 8500K 9300K 10500K High-Bright
Projection Mode	Front Rear+Ceiling Rear Ceiling

Example 1. Get Brightness value Send Command : ~qB CR Response : 100

Example 2. Get Color Temperature Send Command : ~qT CR Response : Warm