

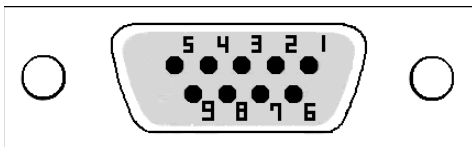
## RS232C Command Protocol

### -RS232 Control

### -Communication Protocol

Items	Specification
Standard Baud rate	9600 bps
Data length	8 bits
Parity	None
Stop bit	1 bit
Flow Control	None

### -RS232 Cable Define



Pin	Signal name	Pin	Signal name
1	CD	6	DSR
2	RX 2	7	RTS
3	TX 3	8	CTS
4	DTR	9	RI
5	GND 5		

### -Command Transference Protocol

- The projector command is defined one command/one line that starts “C” and ends carriage return “CR”.
- There are two types of command, functional execution commands and status read commands.
- Response for status read command after accepting has different character.

Note :

As using some software of RS232 communication, the lamp (RED) LED indicator of the projector will be lighted. It is normal status for projector.

### Example:

#### - Functional execution command

- Power ON (C00) command is sent to the projector with a CR, the projector returns a ACK (\*1) CR (\*3) or NAK(\*2) CR code., ,

Command (ASCII)

PC → Projector “C” “0” “0” “CR”



Projector → PC    processing command    ACK (or NAK) CR

**- Status read command**

b. Power Status (CR0) command is sent to the projector with a CR, the projector returns a power status plus CR or NAK CR code.

Command (ASCII)

PC → Projector    “C” “R” “0” “CR”



Projector → PC    processing command    “0” “0” “0” (or NAK) CR

**-Command List**

TYPE1 Command (HEX+CR)	Function	Remarks
C00 (43 30 30 0D) #1	POWER ON	
C01 (43 30 31 0D)	POWER OFF	
C02 (43 30 32 0D)	COMPUTER1	
C04 (43 30 34 0D)	COMPUTER2	
C03 (43 30 33 0D)	YPBPR	
C05 (43 30 35 0D)	DVI	
C06 (43 30 36 0D)	VIDEO	
C07 (43 30 37 0D)	S-VIDEO	
C08 (43 30 38 0D)	COMPONENT	
C09 (43 30 39 0D)	VOLUME +	
C0A (43 30 41 0D)	VOLUME -	
C1D (43 31 44 0D)	MENU	
C30 (43 33 30 0D)	UP	
C31 (43 33 31 0D)	DOWN	
C32 (43 33 32 0D)	LEFT	
C33 (43 33 33 0D)	RIGHT	
C34 (43 33 34 0D)	MUTE	
C0B (43 30 42 0D)	MUTE ON	
C0C (43 30 43 0D)	MUTE OFF	
C43 (43 34 33 0D)	FREEZE	
C44 (43 34 34 0D)	FREEZE ON	
C45 (43 34 35 0D)	FREEZE OFF	
C80 (43 38 30 0D)	ZOOM+	
C81 (43 38 31 0D)	ZOOM-	
C90 (43 39 33 0D)	ESC	
C91 (43 39 31 0D)	SOURCE	
C92 (43 39 32 0D)	AUTO	
C93 (43 39 33 0D)	CONTRAST+	
C94 (43 39 34 0D)	CONTRAST-	
C95 (43 39 35 0D)	BRIGHTNESS+	
C96 (43 39 36 0D)	BRIGHTNESS-	
C97 (43 39 37 0D)	BLANK	
C9A (43 39 41 0D)	BLANK ON	
C9B (43 39 42 0D)	BLANK OFF	
C98 (43 39 38 0D)	KEystone+	
C99 (43 39 39 0D)	KEystone-	

CR0 (43 52 30 0D) #1	POWER-STATUS	STATUS feedback "000" - projector is on "800" - projector is standby "200" - projector is cooling down "500" - projector is warm up
CR1 (43 52 31 0D)	SOURCE-STATUS	STATUS feedback "001" - COMPUTER1 "002" - DVI "003" - COMPUTER2 "010" - VIDEO "020" - S-VIDEO "004" - YPbPr
CR2 (43 52 32 0D) #1	LAMP TIMER-STATUS	STATUS feedback "xxxxxxx Mins" – Lamp usage time on minutes
CR3 (43 52 32 0D) #1	FILTER TIMER-STATUS	STATUS feedback "xxxxxxx Mins" – Filter usage time on minutes
CR9 (43 52 39 0D) #1	SYSTEM ERROR CODE	A : Lamp temperature switch fail B : Lamp cover switch fail C : Lamp/Ballast fail D : Fan: Exhaust fan fail E : Fan: Lamp blower fail F : Fan: Image blower fail G : Inlet temp sensor fail H : Image temp sensor fail I : Lamp temp sensor fail J : Over temp : Inlet temp sensor K : Over temp : Image temp sensor *4 L : Over temp : Lamp temp sensor M : Blank feature time out N : No signal time out

Note:

\*1 ACK (acknowledge) is 0x06 in hexadecimal.

\*2 NAK (negative acknowledge) is 0x15 in hexadecimal.

\*3 CR (carriage return) is 0x0D in hexadecimal.

#1 At standby mode, only these commands can be accepted.

(All the above commands are available at normal operation mode except the "POWER ON" command.)

\*4 The temperature of image temp sensor – Inlet temp sensor is greater than 18 degree Celsius.