

# Boston Projector RS-232 Communication Format

## 1. Communication Protocol

Standard Baud rate: 9600 bps or 19200 bps (Selectable on some models)  
 Data length: 8 bits  
 Parity: None  
 Stop bit: 1 bit  
 Flow Control: None

## 2. RS-232 Cable Define for Seattle series Projectors (RX and TX specified here are in respect of PC)

(PC side with D-sub 9pin female) (Projector side with D-sub 9pin female)

RX 2	→	2 RX
TX 3	→	3 TX
GND 5	→	5 GND

## 3. Communication

- 3.1 The Projector command is defined one command/one line that starts “C” and ends carriage return CR .
- 3.2 There are two types of command, functional execution commands and status read commands

Command (HEX+CR)	Function	Remarks
C00(43 30 30 0D)	POWER ON	Used at standby mode only
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	No use in Boston series
C05(43 30 35 0D)	HDMI	
C06(43 30 36 0D)	S-VIDEO	
C07(43 30 37 0D)	VIDEO	
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+		3.3 Response for status read command after accepting has
C81(43 38 31 0D)	ZOOM-		
C90(43 39 30 0D)	ESC		

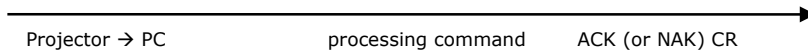
different characters.

Example:

A. Functional execution command:

Power ON command is sent to the projector with "C00" CR, the projector returns a \*ACK CR or NAK CR code

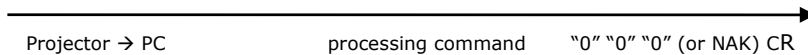
PC → Projector "C" "0" "0" CR



B. Status read command:

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

PC → Projector "C" "R" "0" CR



#### 4 .Command List

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-	
C51(43 35 31 0D)	USB	
C52(43 35 32 0D)	USB-UP	For USB source only
C53(43 35 33 0D)	USB-DOWN	For USB source only
C54(43 35 34 0D)	USB-LEFT	For USB source only
C55(43 35 35 0D)	USB_RIGHT	For USB source only
C56(43 35 36 0D)	USB-ENTER	For USB source only
C57(43 35 37 0D)	USB-ESC	For USB source only

CD0(43 44 30 0D) ~ CF8(43 46 38 0D)	SET VOLUME	CD0 → 0, CD1 → 1, ... CDF → 15 ... CF0 → 32, ... CF8 → 40
CR0(43 52 30 0D) #	POWER-STATUS	STATUS feedback "000" - projector is on "800" - projector is standby "200" - projector is cooling down "500" - Projector is warming up
CR1(43 52 31 0D)	SOURCE-STATUS	STATUS feedback "001" – RGB1 "002" – DVI / HDMI "003" – RGB2 "004" – YPbPr "005" – USB "010" – VIDEO "020" – S-VIDEO
CR2(43 52 32 0D) #	LAMP TIMER-STATUS	STATUS feedback "X,XXX,XXX Mins"– Lamp usage timer in minutes
CR3(43 52 33 0D) #	FILTER TIMER-STATUS	STATUS feedback "X,XXX,XXX Mins"– Filter usage timer in minutes
CRM(43 52 4D 0D)	MUTE STATUS	STATUS feedback "0,000,00X" – Mute status X → 1 : ON, 0 : OFF
CRV(43 52 56 0D)	VOLUME VALUE	STATUS feedback "0,000,0XX" – Volume setting value XX → 00 ~ 40
CR9(43 52 39 0D) #	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* L: Over temp: Lamp Temp sensor M: Blank feature time out N: No Signal time out
CRA(43 52 41 0D) #	SYSTEM ERROR CODE (10 last codes)	I,X,XXX,XXX,XXX I will be 0 to 9 to indicate the index position of upcoming error code.
CLN(43 4C 4E 0D)#	Set LAN POWER ON	
CLF(43 4C 46 0D)#	Set LAN POWER OFF	

\*ACK (acknowledge) is 0x06 in hexadecimal

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

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

# At standby mode, only these commands can be accepted. (All the above commands are available at normal operation mode except the "POWER ON" command.

\*The temperature of Image temp sensor - Inlet temp sensor is greater than 18 degrees Celsius