
Technical Bulletin

Additional RS-232 Commands for *Marquee* Projectors

This bulletin documents three new RS-232 binary commands available for *Marquee* projectors having v.4.1 software or higher:

- Contrast Modulation
- Select Color Temperature
- Color Temperature Modify

Refer to Technical Bulletin 97-01 for comprehensive RS-232 information.

NOTE: This bulletin is intended for technicians familiar with controller applications and programming. For highly specialized applications beyond simple projector control, please contact Electrohome for additional technical assistance.

- ***Contrast Modulation (CNM)***
Use this message to set or get the current contrast modulation values. There are 3 colors in each of 8 on-screen zones.
- ***Select Color Temperature (SCT)***
Use this message to set or get the current color temperature, selecting from a list of color temperatures. Note that white balance must be selected in order to provide a color temperature between 3200°K and 9300°K.
- ***Color Temperature Modify (CTM)***
Use this message to set (alter) or get the red, green and blue levels present for a defined color temperature. This command does *not* select a color temperature.

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Contrast Modulation CNM(0x2E -M)

Message = Adjust Zonal Contrast

<u>Parameter</u>	<u>Name</u>	<u>Description</u>
P1 (2 bytes)	Which adjustment byte 1: 0 = Left, 1 = Right, 2 = Top, 3 = Bottom, 4 = Top Left, 5 = Top Right, 6 = Bottom Left, 7 = Bottom Right, 8 = Save to Eeprom 9 = Restore from EEprom byte 2: 0 = red, 1 = green, 2 = blue	P1 is made of three characters. The first specifies zone or command, and the second red, green or blue. Example: 0,2 specifies an adjustment of blue left zone.
P2 (1 byte)	value	0 - 255 (8 bits)

Message = Read Zonal Contrast

<u>Parameter</u>	<u>Name</u>	<u>Description</u>
P1	Which adjustment	Specifies which color and zone of zonal contrast adjustment to return.

Reply to Read Zonal Contrast Message

<u>Parameter</u>	<u>Name</u>	<u>Description</u>
P1 (2 bytes)	Which adjustment	Specifies which color and zone of zonal contrast adjustment to return.
P2 (1 byte)	value	The value of the specified adjustment

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Example — contrast modulation message: 01 09 00 00 03 ff 2e 1b 81 00 41 00 0e = set right red zone to 65.

Saving and discarding contrast modulation values

Writing to hardware will change values & save values in shadow EEPROM memory structure but will not save permanently to EEPROM for next powerup. You must use the *Save* command to do this. When you use byte 1 of P1 for the save or restore operation, the rest of the message is unused.

Select Color Temperature SCT(0x1E -MV)

Value Range: 0 = 3200K, 2 = 6500K, 3 = 9300K, 5 = source custom, 6 = white balance

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Color Temperature Modify CTM(0x52 -MV)

Message = Adjust Color Temperature

Parameter	Name	Description
P1 (3 bytes)	Which adjustment byte 1: 0 = G2, 1 = drive, 2 = white balance 8 = Save to Eeprom 9 = Restore from EEprom byte 2: 0 = red, 1 = green, 2 = blue byte 3: 0 = 3200K, 1 = 5400K(Future), 2 = 6500K, 3 = 9300K, 5 = source custom	P1 is made of three characters. The first specifies G2, drive or white balance, the second red, green or blue, and the third what to set. Example: 0,2,3 specifies an adjustment of blue G2 for the 9300K temperature setting. 2 specifies an adjustment to the white balance setting Bytes 2 & 3 are not relevant (but must be used anyway) when adjusting white balance G2 similar to VistaPro brightness (black level) drive similar to VistaPro contrast (white)
P2 (2 bytes)	value	0-4095, G2 (12 bits) (MSB,LSB) (most significant digit, least significant digit) 0 - 255, drive (8 bits) (0,LSB) 0 - 255, white balance (8 bits) (0,LSB)

Message = Read Color Temperature

Parameter	Name	Description
P1	Which adjustment	Specifies which color temperature adjustment to return.

Reply to Read Color Temperature Message

Parameter	Name	Description
P1	Which adjustment	Specifies which color temperature adjustment to return.
P2	value	The value of the specified adjustment

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Example — Color Temperature Modify: 01 0b 00 00 03 ff 52 00 00 02 08 00 00 0e = set 6500K red G2 to 2048.

Saving and discarding modified color temperature values

Writing to hardware will change values & save values in shadow EEPROM memory structure but will not save permanently to EEPROM for next powerup. You must use the **Save** command to do this — this save applies only to the currently selected temperature, **not** all temperatures. When byte 1 of P1 is used for the save or restore operation, the rest of the message is unused.

If the requested data is unrecognized, no message is returned. If the requested adjustment is invalid (out of range), no adjustment is made.

If you query a parameter for a color temperature other than what is currently selected, a switch to the queried temperature **may** occur.

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