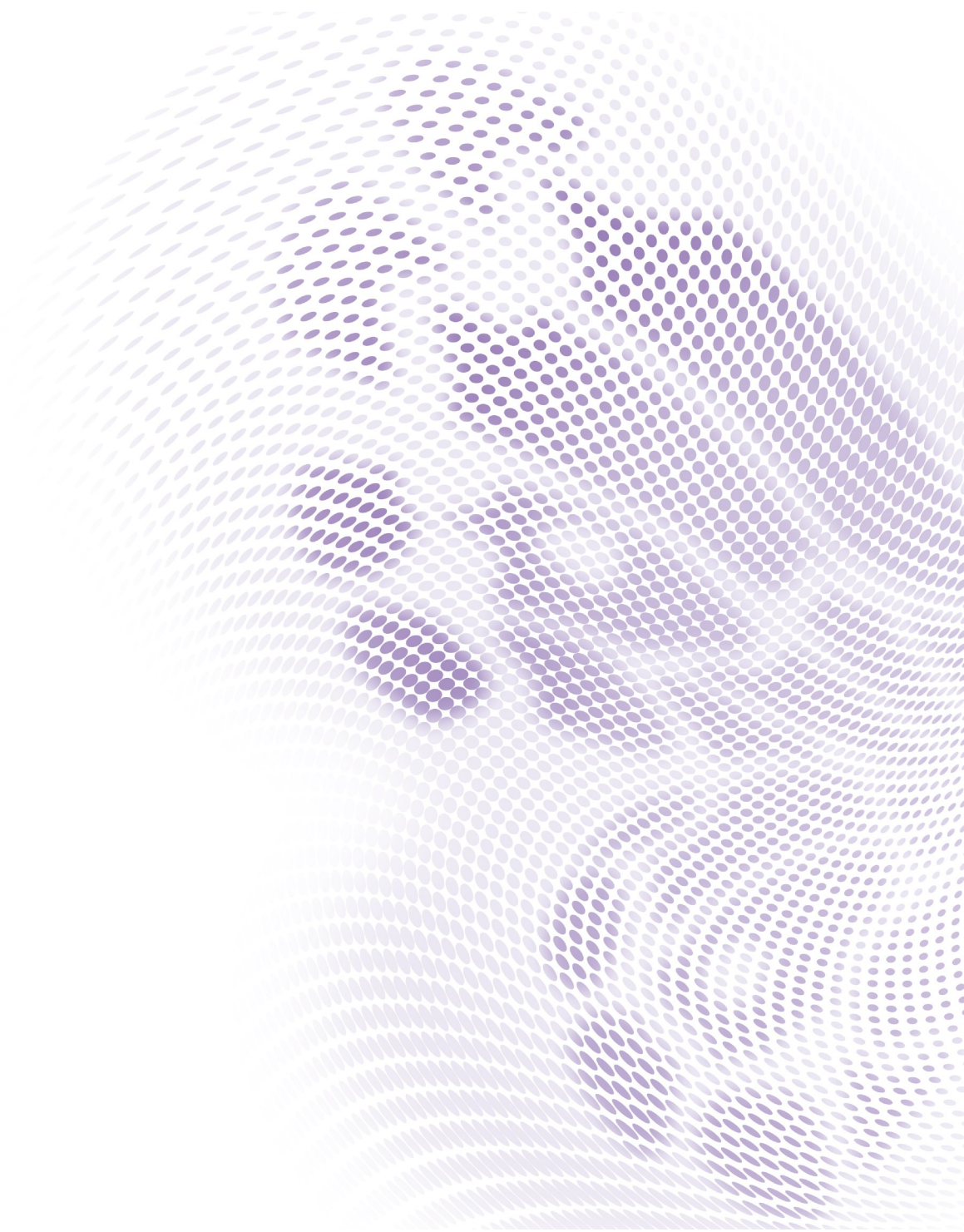




TK810

Projector RS232 Command Control

Installation Guide



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# Introduction

The document describes how to control your BenQ projector via RS232 from a computer. Follow the procedures to complete the connection and settings first, and refer to the command table for RS232 commands.



Available functions and commands vary by model. Check the specifications and user manual of the purchased projector for product functions.

## Wire arrangement

Wire Arrangement		
P1	Color	P2
1	Black	1
2	Brown	3
3	Red	2
4	Orange	4
5	Yellow	5
6	Green	6
7	Blue	7
8	Purple	8
9	Gray	9
Case	Drain wire	Case

## RS232 pin assignment

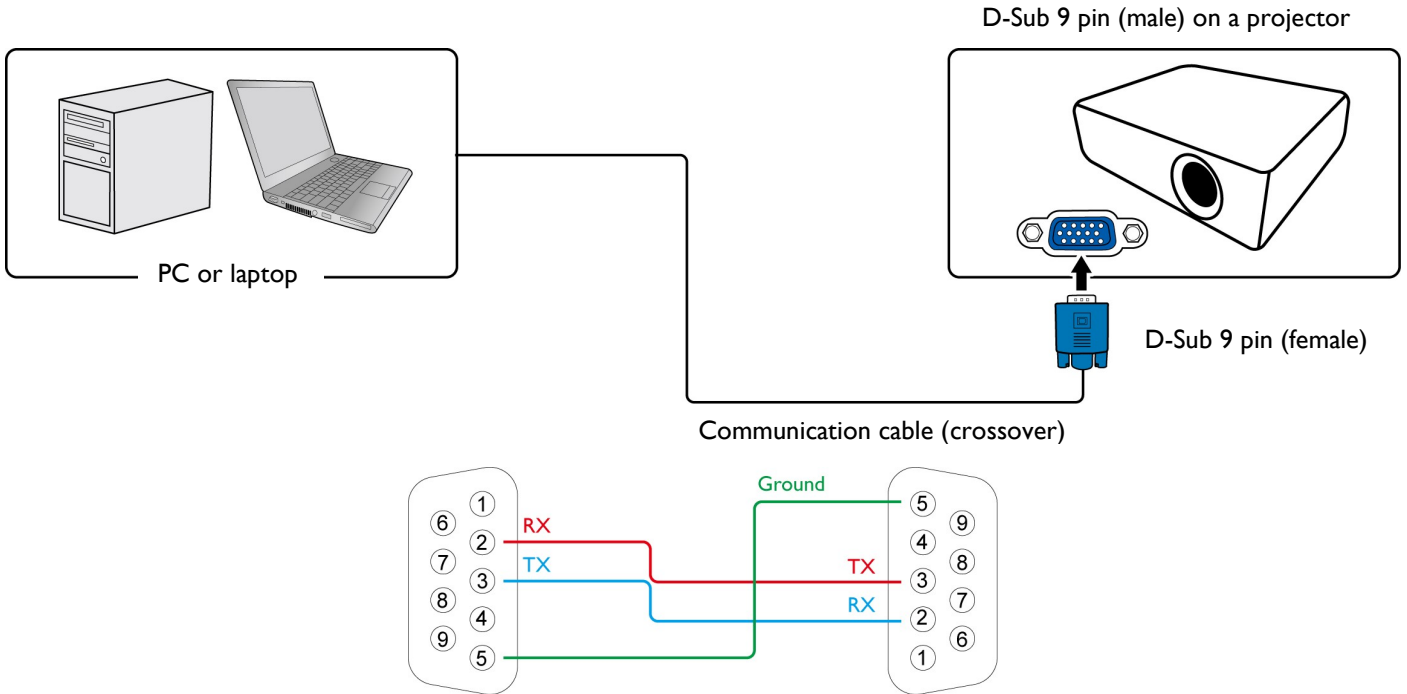


Pin	Description	Pin	Description
1	NC	2	RXD
3	TXD	4	NC
5	GND	6	NC
7	RTS	8	CTS
9	NC		


# Connections and communication settings

Choose one of the connections and set up properly before RS232 control.

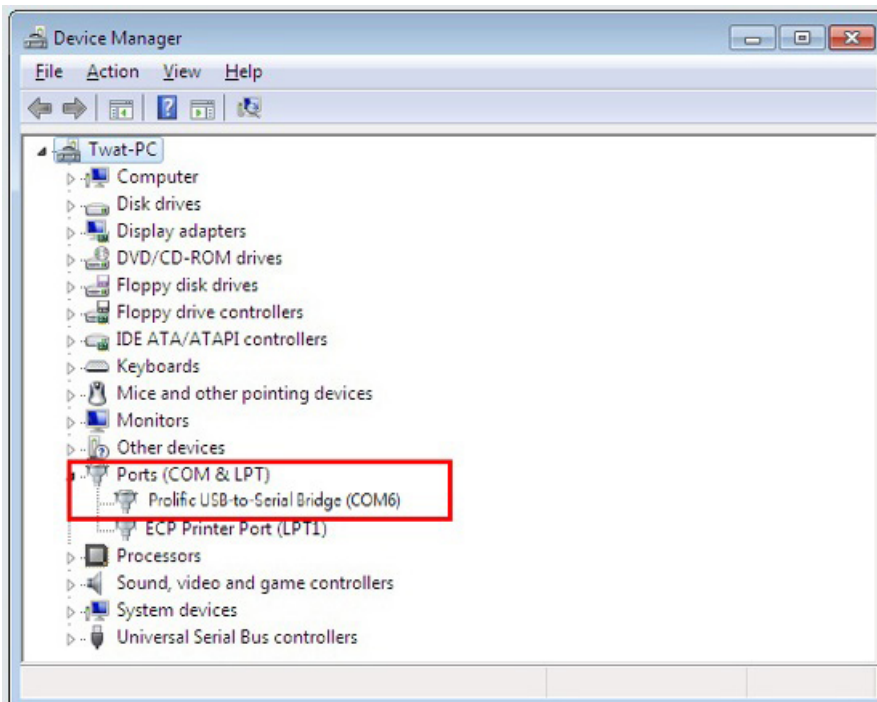
## RS232 serial port with a crossover cable



## Settings

 On-screen images in this document are for reference only. The screens may vary depending on your Operating System, I/O ports used for connection, and the specifications of the connected projector.

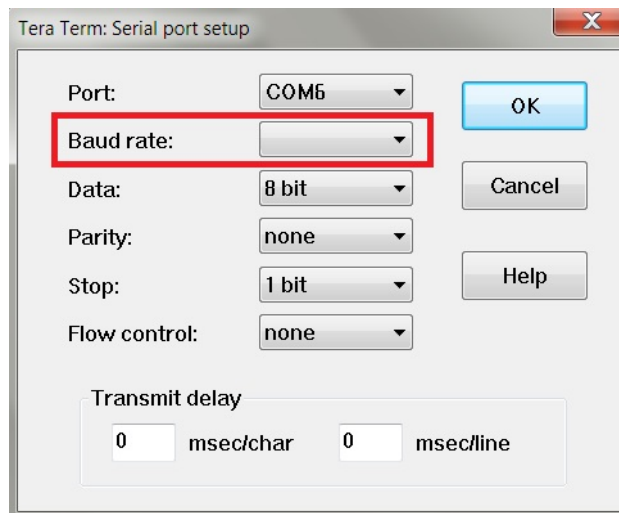
- I. Determine the COM Port name used for the RS232 communications in **Device Manager**.




2. Choose **Serial** and the corresponding COM port as the communication port. In this given example, COM6 is selected.

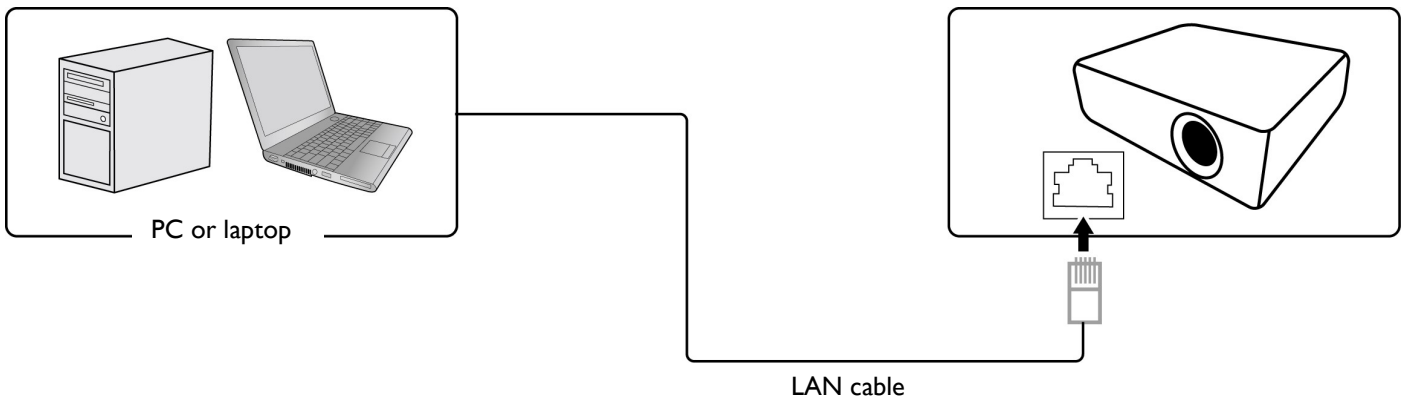


3. Finish **Serial port setup**.



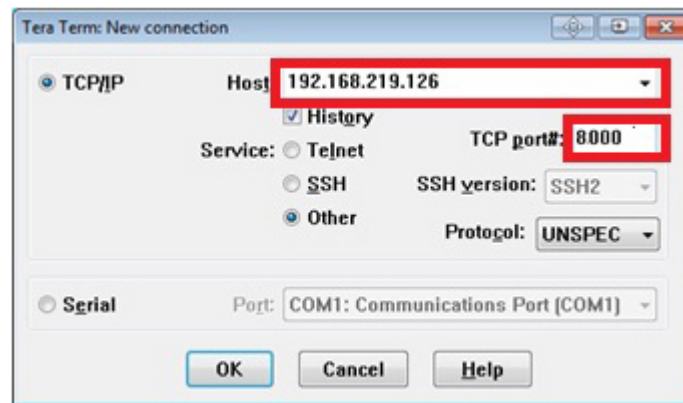
Baud rate	9600 / 14400 / 19200 / 38400 / 57600 / 115200 bps  Check the baud rate of the connected projector from its OSD menu.
Data length	8 bit
Parity check	None
Stop bit	1 bit
Flow control	None

## RS232 via LAN

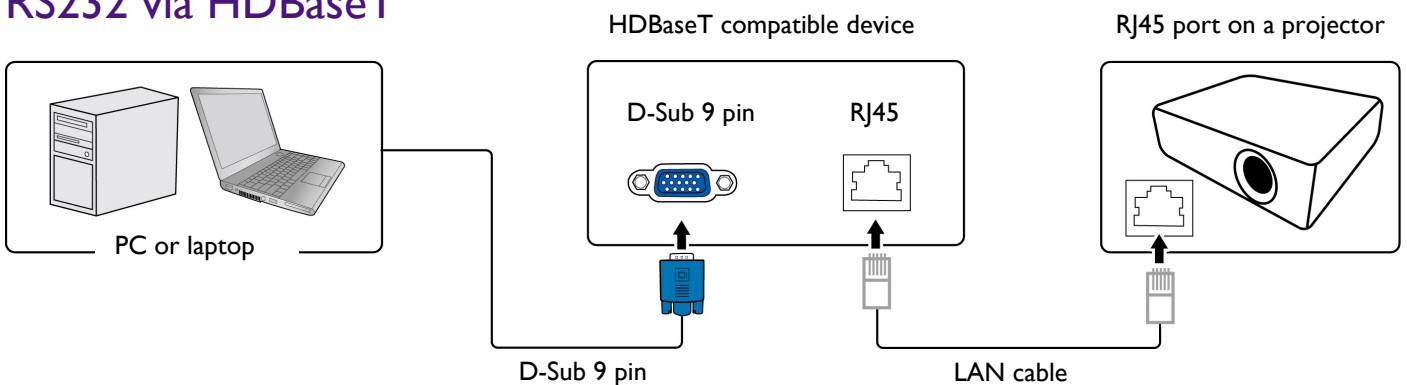


## Settings

1. Find the Wired LAN IP address of the connected projector from the OSD menu and make sure the projector and the computer are within the same network.
2. Input **8000** in the **TCP port #** field.



## RS232 via HDBaseT

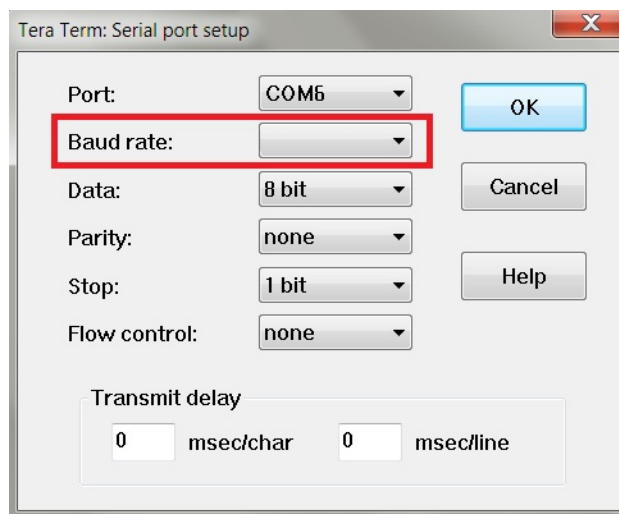



## Settings

1. Determine the COM Port name used for the RS232 communications in **Device Manager**.
2. Choose **Serial** and the corresponding COM port as the communication port. In this given example, COM6 is selected.



3. Finish **Serial** port setup.



Baud rate	9600 / 14400 / 19200 / 38400 / 57600 / 115200 bps  Check the baud rate of the connected projector from its OSD menu.
Data length	8 bit
Parity check	None
Stop bit	1 bit
Flow control	None



# Command table



- Available features differ by projector specification, input sources, settings, etc..
- Commands are working if the standby power is 0.5W or a supported baud rate of the projector is set.
- Uppercase, lowercase, and a mixture of both types of characters are accepted for a command.
- If a command format is illegal, it will echo **Illegal format**.
- If a command with correct format is not valid for the projector model, it will echo **Unsupported item**.
- If a command with correct format cannot be executed under certain condition, it will echo **Block item**.
- If RS232 control is performed via LAN, a command works whether it starts and ends with **<CR>**. All the commands and behaviors are identical with the control through a serial port.

Function	Type	Operation	ASCII	Support
Power	Write	Power On	<CR>*pow=on#<CR>	YES
	Write	Power off	<CR>*pow=off#<CR>	YES
	Read	Power Status	<CR>*pow=?#<CR>	YES
Source Selection	Write	COMPUTER/YPbPr	<CR>*sour=RGB#<CR>	NO
	Write	COMPUTER 2/YPbPr2	<CR>*sour=RGB2#<CR>	NO
	Write	COMPUTER 3/YPbPr3	<CR>*sour=RGB3#<CR>	NO
	Write	Component	<CR>*sour=yobr#<CR>	NO
	Write	Component2	<CR>*sour=yobr2#<CR>	NO
	Write	DVI-A	<CR>*sour=dviA#<CR>	NO
	Write	DVI-D	<CR>*sour=dvid#<CR>	NO
	Write	HDMI(MHL)	<CR>*sour=hdmi#<CR>	YES
	Write	HDMI 2(MHL2)	<CR>*sour=hdmi2#<CR>	YES
	Write	Composite	<CR>*sour=vid#<CR>	NO
	Write	S-Video	<CR>*sour=svid#<CR>	NO
	Write	Network	<CR>*sour=network#<CR>	YES
	Write	USB Display	<CR>*sour=usbdisplay#<CR>	NO
	Write	USB Reader	<CR>*sour=usbreader#<CR>	YES
	Write	HDbaseT	<CR>*sour=hdbaset#<CR>	NO
	Write	DisplayPort	<CR>*sour=dp#<CR>	NO
	Write	3G-SDI	<CR>*sour=sdi#<CR>	NO
Read	Current source	<CR>*sour=?#<CR>	YES	
Audio Control	Write	Mute On	<CR>*mute=on#<CR>	YES
	Write	Mute Off	<CR>*mute=off#<CR>	YES
	Read	Mute Status	<CR>*mute=?#<CR>	YES
	Write	Volume +	<CR>*vol=+#<CR>	YES
	Write	Volume -	<CR>*vol=-#<CR>	YES



	Write	Volume level for customer	<CR>*vol=value#<CR>	YES
	Read	Volume Status	<CR>*vol=?#<CR>	YES
	Write	Mic.Volume +	<CR>*micvol=+#<CR>	NO
	Write	Mic.Volume -	<CR>*micvol=-#<CR>	NO
	Read	Mic.Volume Status	<CR>*micvol=?#<CR>	NO
Audio source select	Write	Audio pass Through off	<CR>*audiosour=off#<CR>	NO
	Write	Audio-Computer1	<CR>*audiosour=RGB#<CR>	NO
	Write	Audio-Computer2	<CR>*audiosour=RGB2#<CR>	NO
	Write	Audio-Video/S-Video	<CR>*audiosour=vid#<CR>	NO
	Write	Audio-Component	<CR>*audiosour=ypr#<CR>	NO
	Write	Audio-HDMI	<CR>*audiosour=hdmi#<CR>	NO
	Write	Audio-HDMI2	<CR>*audiosour=hdmi2#<CR>	NO
	Read	Audio pass Status	<CR>*audiosour=?#<CR>	NO
	Write	Bright	<CR>*appmod=bright#<CR>	YES
	Write	Living Room	<CR>*appmod=livingroom#<CR>	NO
	Write	Game	<CR>*appmod=game#<CR>	YES
	Write	Cinema	<CR>*appmod=cine#<CR>	YES
	Write	Sport		YES
	Read	THX	<CR>*appmod=thx#<CR>	YES
	Read	Silence mode	<CR>*appmod=silence#<CR>	YES
	Write	Vivid	<CR>*appmod=vivid#<CR>	YES
	Write	User1	<CR>*appmod=user1#<CR>	YES
	Read	ISF Day	<CR>*appmod=isfday#<CR>	YES
	Read	ISF Night	<CR>*appmod=isfnight#<CR>	YES
	Read	3D	<CR>*appmod=threed#<CR>	YES
	Write	Cinema	<CR>*appmod=cine#<CR>	YES
	Write	D. Cinema	<CR>*appmod=d.cinema#<CR>	NO
	Read	HDR10	<CR>*appmod=hdr10<CR>	YES
	Read	HLG	<CR>*appmod=hlg<CR>	YES
	Write	Picture Mode	<CR>*appmod=?#<CR>	YES
	Picture Setting	Write	Contrast +	<CR>*con=+#<CR>
Write		Contrast -	<CR>*con=-#<CR>	YES
Write		Set Contrast value	<CR>*con=value#<CR>	YES
Read		Contrast value	<CR>*con=?#<CR>	YES
Write		Brightness +	<CR>*bri=+#<CR>	YES
Write		Brightness -	<CR>*bri=-#<CR>	YES
Write		Set Brightness value	<CR>*bri=value#<CR>	YES

Read	Brightness value	<CR>*bri=?#<CR>	YES
Write	Color +	<CR>*color=+#<CR>	YES
Write	Color -	<CR>*color=-#<CR>	YES
Write	Set Color value	<CR>*color=value#<CR>	YES
Read	Color value	<CR>*color=?#<CR>	YES
Write	Tint +	<CR>*tint=+#<CR>	YES
Write	Tint -	<CR>*tint=-#<CR>	YES
Write	Set Tint value	<CR>*tint=value#<CR>	YES
Read	Get Tint value	<CR>*tint=?#<CR>	YES
Write	Sharpness +	<CR>*sharp=+#<CR>	YES
Write	Sharpness -	<CR>*sharp=-#<CR>	YES
Write	Set Sharpness value	<CR>*sharp=value#<CR>	YES
Read	Sharpness value	<CR>*sharp=?#<CR>	YES
Write	Flesh Tone +	<CR>*fleshtone=+#<CR>	NO
Write	Flesh Tone -	<CR>*fleshtone=-#<CR>	NO
Read	Flesh Tone value	<CR>*fleshtone=?#<CR>	NO
Write	Color Temperature-Warmer	<CR>*ct=warm#<CR>	NO
Write	Color Temperature-Warm	<CR>*ct=warm#<CR>	YES
Write	Color Temperature-Normal	<CR>*ct=normal#<CR>	YES
Write	Color Temperature-Cool	<CR>*ct=cool#<CR>	YES
Write	Color Temperature-Cooler	<CR>*ct=cooler#<CR>	NO
Write	Color Temperature-lamp native	<CR>*ct=normal#<CR>	YES
Read	Color Temperature Status	<CR>*ct=?#<CR>	YES
Write	Aspect 4:3	<CR>*asp=4:3#<CR>	YES
Write	Aspect 16:6	<CR>*asp=16:6#<CR>	NO
Write	Aspect 16:9	<CR>*asp=16:9#<CR>	YES
Write	Aspect 16:10	<CR>*asp=16:10#<CR>	NO
Write	Aspect Auto	<CR>*asp=AUTO#<CR>	YES
Write	Aspect Real	<CR>*asp=REAL#<CR>	YES
Write	Aspect Letterbox	<CR>*asp=LBOX#<CR>	NO

	Write	Aspect Wide	<CR>*asp=WIDE#<CR>	NO
	Write	Aspect Anamorphic	<CR>*asp=ANAM#<CR>	NO
	Write	Aspect Anamorphic 2.35	<CR>*asp=ANAM2.35#<CR>	NO
	Write	Aspect Anamorphic 16:9	<CR>*asp=ANAM16:9#<CR>	NO
	Read	Aspect Status	<CR>*asp=?#<CR>	YES
	Write	Digital Zoom In	<CR>*zoomI#<CR>	NO
	Write	Digital Zoom out	<CR>*zoomO#<CR>	NO
	Write	Auto	<CR>*auto#<CR>	NO
	Write	Brilliant color on	<CR>*BC=on#<CR>	YES
	Write	Brilliant color off	<CR>*BC=off#<CR>	YES
	Write	Reset current picture settings	<CR>*rstcurpicsetting#<CR>	YES
	Write	Reset all picture settings	<CR>*rstallpicsetting#<CR>	NO
	Read	Brilliant color status	<CR>*BC=?#<CR>	YES
Operation Settings	Write	Projector Position-Front Table	<CR>*pp=FT#<CR>	YES
	Write	Projector Position-Rear Table	<CR>*pp=RE#<CR>	YES
	Write	Projector Position-Rear Ceiling	<CR>*pp=RC#<CR>	YES
	Write	Projector Position-Front Ceiling	<CR>*pp=FC#<CR>	YES
	Write	Quick cooling on	<CR>*qcool=on<CR>	NO
	Write	Quick cooling off	<CR>*qcool=off<CR>	NO
	Read	Quick cooling status	<CR>*qcool=?<CR>	NO
	Write	Quick auto search	<CR>*QAS=on#<CR>	NO
	Write	Quick auto search	<CR>*QAS=off#<CR>	NO
	Read	Quick auto search status	<CR>*QAS=?#<CR>	NO
	Read	Projector Position Status	<CR>*pp=?#<CR>	YES
	Write	Direct Power On-on	<CR>*directpower=on#<CR>	YES
	Write	Direct Power On-off	<CR>*directpower=off#<CR>	YES
	Read	Direct Power On-Status	<CR>*directpower=?#<CR>	YES

	Write	Signal Power On-on	<CR>*autopower=on#<CR>	NO
	Write	Signal Power On-off	<CR>*autopower=off#<CR>	NO
	Read	Signal Power On-Status	<CR>*autopower=?#<CR>	NO
	Write	Standby Settings-Network on	<CR>*standbynet=on#<CR>	NO
	Write	Standby Settings-Network off	<CR>*standbynet=off#<CR>	NO
	Read	Standby Settings-Network Status	<CR>*standbynet=?#<CR>	NO
	Write	Standby Settings-Microphone on	<CR>*standbymic=on#<CR>	NO
	Write	Standby Settings-Microphone off	<CR>*standbymic=off#<CR>	NO
	Read	Standby Settings-Microphone Status	<CR>*standbymic=?#<CR>	NO
	Write	Standby Settings-Monitor Out on	<CR>*standbymnt=on#<CR>	NO
	Write	Standby Settings-Monitor Out off	<CR>*standbymnt=off#<CR>	NO
	Read	Standby Settings-Monitor Out Status	<CR>*standbymnt=?#<CR>	NO
Baud Rate	Write	2400	<CR>*baud=2400#<CR>	NO
	Write	4800	<CR>*baud=4800#<CR>	NO
	Write	9600	<CR>*baud=9600#<CR>	NO
	Write	14400	<CR>*baud=14400#<CR>	NO
	Write	19200	<CR>*baud=19200#<CR>	NO
	Write	38400	<CR>*baud=38400#<CR>	NO
	Write	57600	<CR>*baud=57600#<CR>	NO
	Write	115200	<CR>*baud=115200#<CR>	NO
	Read	Current Baud Rate	<CR>*baud=?#<CR>	NO
Lamp Control	Read	Lamp Hour	<CR>*ltim=?#<CR>	YES

	Read	Lamp2 Hour	<CR>*ltim2=?#<CR>	NO
	Write	Normal mode	<CR>*lampm=lnor#<CR>	YES
	Write	Eco mode	<CR>*lampm=eco#<CR>	YES
	Write	SmartEco mode	<CR>*lampm=seco#<CR>	YES
	Write	SmartEco mode 2	<CR>*lampm= seco2#<CR>	NO
	Write	SmartEco mode 3	<CR>*lampm= seco3#<CR>	NO
	Write	Dimming mode	<CR>*lampm=dimming#<CR>	NO
	Write	Custom mode	<CR>*lampm=custom#<CR>	NO
	Write	Light level for custom mode	<CR>*lampcustom=value#<CR>	NO
	Read	Light level status for custom mode	<CR>*lampcustom=?#<CR>	NO
	Write(雙燈)	Dual Brightest	<CR>* lampm =dualbr#<CR>	NO
	Write(雙燈)	Dual Reliable	<CR>* lampm =dualre#<CR>	NO
	Write(雙燈)	Single Alternative	<CR>* lampm =single#<CR>	NO
	Write(雙燈)	Single Alternative Eco	<CR>* lampm =singleeco#<CR>	NO
	Read	Lamp Mode Status	<CR>*lampm=?#<CR>	YES
Miscellaneous	Read	Model Name	<CR>*modelname=?#<CR>	YES
	Write	Blank On	<CR>*blank=on#<CR>	YES
	Write	Blank Off	<CR>*blank=off#<CR>	YES
	Read	Blank Status	<CR>*blank=?#<CR>	YES
	Write	Freeze On	<CR>*freeze=on#<CR>	Yes
	Write	Freeze Off	<CR>*freeze=off#<CR>	YES
	Read	Freeze Status	<CR>*freeze=?#<CR>	YES
	Write	Menu On	<CR>*menu=on#<CR>	YES
	Write	Menu Off	<CR>*menu=off#<CR>	YES

Write	Up	<CR>*up#<CR>	YES
Write	Down	<CR>*down#<CR>	YES
Write	Right	<CR>*right#<CR>	YES
Write	Left	<CR>*left#<CR>	YES
Write	Enter	<CR>*enter#<CR>	YES
Write	3D Sync Off	<CR>*3d=off#<CR>	NO
Write	3D Auto	<CR>*3d=auto#<CR>	YES
Write	3D Sync Top Bottom	<CR>*3d=tb#<CR>	YES
Write	3D Sync Frame Sequential	<CR>*3d=fs#<CR>	NO
Write	3D Frame packing	<CR>*3d=fp#<CR>	YES
Write	3D Side by side	<CR>*3d=sbs#<CR>	YES
Write	3D inverter disable	<CR>*3d=da#<CR>	NO
Write	3D inverter	<CR>*3d=iv#<CR>	YES
Write	2D to 3D	<CR>*3d=2d3d#<CR>	NO
Write	3D nVIDIA	<CR>*3d=nvidia#<CR>	NO
Read	3D Sync Status	<CR>*3d=?#<CR>	YES
Write	Remote Receiver-front+rear	<CR>*rr=fr#<CR>	NO
Write	Remote Receiver-front	<CR>*rr=f#<CR>	NO
Write	Remote Receiver-rear	<CR>*rr=r#<CR>	NO
Write	Remote Receiver-top	<CR>*rr=t#<CR>	NO
Write	Remote Receiver-top+front	<CR>*rr=tf#<CR>	NO
Write	Remote Receiver-top+rear	<CR>*rr=tr#<CR>	NO
Read	Remote Receiver Status	<CR>*rr=?#<CR>	NO
Write	Instant On-on	<CR>*ins=on#<CR>	NO
Write	Instant On-off	<CR>*ins=off#<CR>	NO
Read	Instant On Status	<CR>*ins=?#<CR>	NO
Write	Lamp Saver Mode-on	<CR>*lpsaver=on#<CR>	NO
Write	Lamp Saver Mode-off	<CR>*lpsaver=off#<CR>	NO
Read	Lamp Saver Mode Status	<CR>*lpsaver=?#<CR>	NO
Write	Projection Log In Code on	<CR>*prjlogincode=on#<CR>	NO
Write	Projection Log In Code	<CR>*prjlogincode=off#<CR>	NO

		off		
	Read	Projection Log In Code Status	<CR>*prjlogincode=?#<CR>	NO
	Write	Broadcasting on	<CR>*broadcasting=on#<CR>	NO
	Write	Broadcasting off	<CR>*broadcasting=off#<CR>	NO
	Read	Broadcasting Status	<CR>*broadcasting=?<CR>	NO
	Write	AMX Device Discovery-on	<CR>*amxdd=on#<CR>	NO
	Write	AMX Device Discovery-off	<CR>*amxdd=off#<CR>	NO
	Read	AMX Device Discovery Status	<CR>*amxdd=?#<CR>	NO
	Read	Mac Address	<CR>*macaddr=?#<CR>	NO
	Write	High Altitude mode on	<CR>*Highaltitude=on#<CR>	YES
	Write	High Altitude mode off	<CR>*Highaltitude=off#<CR>	YES
	Read	High Altitude mode status	<CR>*Highaltitude=?#<CR>	YES
Installation	Write	Load Lens memory 1	<CR>*lensload=m1#<CR>	NO
	Write	Load Lens memory 2	<CR>*lensload=m2#<CR>	NO
	Write	Load Lens memory 3	<CR>*lensload=m3#<CR>	NO
	Write	Load Lens memory 4	<CR>*lensload=m4#<CR>	NO
	Write	Load Lens memory 5	<CR>*lensload=m5#<CR>	NO
	Write	Load Lens memory 6	<CR>*lensload=m6#<CR>	NO
	Write	Load Lens memory 7	<CR>*lensload=m7#<CR>	NO
	Write	Load Lens memory 8	<CR>*lensload=m8#<CR>	NO
	Write	Load Lens memory 9	<CR>*lensload=m9#<CR>	NO
	Write	Load Lens memory 10	<CR>*lensload=m10#<CR>	NO
	Read	Read Lens memory status	<CR>*lensload=?#<CR>	NO
	Write	save Lens memory 1	<CR>*lenssave=m1#<CR>	NO
	Write	save Lens memory 2	<CR>*lenssave=m2#<CR>	NO
	Write	save Lens memory 3	<CR>*lenssave=m3#<CR>	NO
	Write	save Lens memory 4	<CR>*lenssave=m4#<CR>	NO
	Write	save Lens memory 5	<CR>*lenssave=m5#<CR>	NO
	Write	save Lens memory 6	<CR>*lenssave=m6#<CR>	NO
	Write	save Lens memory 7	<CR>*lenssave=m7#<CR>	NO
	Write	save Lens memory 8	<CR>*lenssave=m8#<CR>	NO
	Write	save Lens memory 9	<CR>*lenssave=m9#<CR>	NO



	Write	save Lens memory 10	<CR>*lenssave=m10#<CR>	NO
	Write	Reset Lens to center	<CR>*lensreset=center#<CR>	NO

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