

BenQ Projector RS232 Command Control Installation Guide

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**L720/L720D Series
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		
PI	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

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

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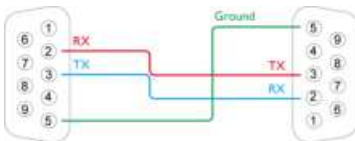
Connections and communication settings

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

RS232 serial port with a crossover cable



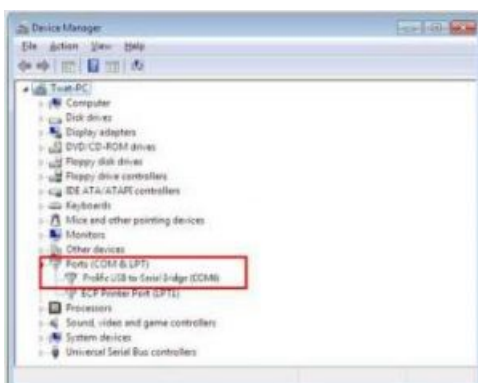
PC or laptop, D-Sub 9 pin (male) on a projector, D-Sub 9 pin (female), Communication cable (crossover)



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.

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



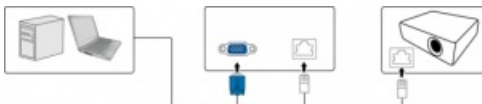
RJ45 port on a projector, PC or laptop, LAN cable

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



PC or laptop, HDBaseT compatible device, RJ45 port on a projector, D-Sub 9 pin, LAN cable

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.

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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 behaviours 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
	Write	COMPUTER/YPbPr	<CR>*sour=RGB#<CR>	Yes
	Write	COMPUTER 2/YPbPr 2	<CR>*sour=RGB2#<CR>	Yes
	Write	COMPUTER 3/YPbPr 3	<CR>*sour=RGB3#<CR>	No
	Write	Component	<CR>*sour=ypbr#<CR>	No
	Write	Component2	<CR>*sour=ypbr2#<CR>	No
	Write	DVI-A	<CR>*sour=dviA#<CR>	No
	Write	DVI-D	<CR>*sour=dvid#<CR>	No

Source Selection	Write	HDMI(MHL)	<CR>*sour=hdmi#<CR>	Yes
	Write	HDMI 2(MHL2)	<CR>*sour=hdmi2#<CR>	Yes
	Write	Composite	<CR>*sour=vid#<CR>	Yes
	Write	S-Video	<CR>*sour=svid#<CR>	Yes
	Write	Network	<CR>*sour=network#<CR>	No
	Write	USB Display	<CR>*sour=usbdisplay#<CR>	No
	Write	USB Reader	<CR>*sour=usbreader#<CR>	No
	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
	Write	Mute On	<CR>*mute=on#<CR>	Yes

Audio Control	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>	Yes
	Write	Mic. Volume –	<CR>*micvol=-#<CR>	Yes
	Read	Mic. Volume Status	<CR>*micvol=?#<CR>	Yes
	Write	Audio pass Through of f	<CR>*audiosour=off#<CR>	Yes

Audio source select	Write	Audio-Computer1	<CR>*audiosour=RGB#<CR>	Yes
	Write	Audio-Computer2	<CR>*audiosour=RGB2#<CR>	Yes
	Write	Audio-Video/S-Video	<CR>*audiosour=vid#<CR>	Yes
	Write	Audio-Component	<CR>*audiosour=ypbr#<CR>	No
	Write	Audio-HDMI	<CR>*audiosour=hdmi#<CR>	Yes
	Write	Audio-HDMI2	<CR>*audiosour=hdmi2#<CR>	Yes
	Read	Audio pass Status	<CR>*audiosour=?#<CR>	Yes
	Write	Dynamic	<CR>*appmod=dynamic#<CR>	No
	Write	Presentation	<CR>*appmod=preset#<CR>	Yes
	Write	sRGB	<CR>*appmod=srgb#<CR>	Yes
	Write	Bright	<CR>*appmod=bright#<CR>	Yes

Picture
Mode

Write	Living Room	<CR>*appmod=livingroom#<CR>	No
Write	Game	<CR>*appmod=game#<CR>	No
Write	Cinema	<CR>*appmod=cine#<CR>	No
Write	Standard/Vivid	<CR>*appmod=std#<CR>	No
Write	Football	<CR>*appmod=football#<CR>	No
Write	Football Bright	<CR>*appmod=footballbt#<CR>	No
Write	DICOM	<CR>*appmod=dicom#<CR>	No
Write	THX	<CR>*appmod=thx#<CR>	No
Write	Silence mode	<CR>*appmod=silence#<CR>	No
Write	DCI-P3 mode	<CR>*appmod=dcI-p3#<CR>	No
Write	Vivid	<CR>*appmod=vivid#<CR>	Yes

	Write	Infographic	<CR>*appmod=infographic#<CR>	Yes
	Write	User1	<CR>*appmod=user1#<CR>	Yes
	Write	User2	<CR>*appmod=user2#<CR>	Yes
	Write	User3	<CR>*appmod=user3#<CR>	No
	Write	ISF Day	<CR>*appmod=isfday#<CR>	No
	Write	ISF Night	<CR>*appmod=isfnight#<CR>	No
	Write	3D	<CR>*appmod=threed#<CR>	Yes
	Read	Picture Mode	<CR>*appmod=?#<CR>	Yes
Picture Setting	Write	Contrast +	<CR>*con=+#<CR>	Yes
	Write	Contrast –	<CR>*con=-#<CR>	Yes
	Read	Contrast value	<CR>*con=?#<CR>	Yes

	Write	Brightness +	<CR>*bri=+#<CR>	Yes
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	Write	Brightness –	<CR>*bri=-#<CR>	Yes
	Read	Brightness value	<CR>*bri=?#<CR>	Yes
	Write	Color +	<CR>*color=+#<CR>	Yes
	Write	Color –	<CR>*color=-#<CR>	Yes
	Read	Color value	<CR>*color=?#<CR>	Yes
	Write	Sharpness +	<CR>*sharp=+#<CR>	Yes
	Write	Sharpness –	<CR>*sharp=-#<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=warmer#<CR>	Yes
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>	Yes
Write	Color Temperature-lamp native	<CR>*ct=native#<CR>	No
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>	Yes
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>	Yes
	Write	Digital Zoom out	<CR>*zoomO#<CR>	Yes
	Write	Auto	<CR>*auto#<CR>	Yes
	Write	Brilliant color on	<CR>*BC=on#<CR>	Yes

	Write	Brilliant color off	<CR>*BC=off#<CR>	Yes
	Read	Brilliant color status	<CR>*BC=?#<CR>	Yes
	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>	Yes
Write	Quick auto search	<CR>*QAS=off#<CR>	Yes
Read	Quick auto search status	<CR>*QAS=?#<CR>	Yes

Operation Settings

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>	Yes
Write	Signal Power On-off	<CR>*autopower=off#<CR>	Yes
Read	Signal Power On-Status	<CR>*autopower=?#<CR>	Yes
Write	Standby Settings-Net work on	<CR>*standbynet=on#<CR>	Yes

	Write	Standby Settings-Net work off	<CR>*standbynet=off#<CR>	Yes
	Read	Standby Settings-Net work Status	<CR>*standbynet=?#<CR>	Yes
	Write	Standby Settings-Micr ophone on	<CR>*standbymic=on#<CR>	Yes
	Write	Standby Settings-Micr ophone off	<CR>*standbymic=off#<CR>	Yes
	Read	Standby Settings-Micr ophone Status	<CR>*standbymic=?#<CR>	Yes
	Write	Standby Settings-Moni tor Out on	<CR>*standbymnt=on#<CR>	Yes

	Write	Standby Settings-Monitor Out off	<CR>*standbymnt=off#<CR>	Yes
	Read	Standby Settings-Monitor Out Status	<CR>*standbymnt=?#<CR>	Yes

Baud Rate	Write	2400	<CR>*baud=2400#<CR>	Yes
	Write	4800	<CR>*baud=4800#<CR>	Yes
	Write	9600	<CR>*baud=9600#<CR>	Yes
	Write	14400	<CR>*baud=14400#<CR>	Yes
	Write	19200	<CR>*baud=19200#<CR>	Yes
	Write	38400	<CR>*baud=38400#<CR>	Yes
	Write	57600	<CR>*baud=57600#<CR>	Yes
	Write	115200	<CR>*baud=115200#<CR>	Yes
	Read	Current Baud Rate	<CR>*baud=?#<CR>	Yes
	Read	Lamp	<CR>*ltim=?#<CR>	Yes
	Read	Lamp2 Hour	<CR>*ltim2=?#<CR>	No

Lamp
Control

Write	Normal mode	<CR>*lampm=lnor#<CR>	Yes
Write	Eco mode	<CR>*lampm=eco#<CR>	Yes
Write	SmartEco mode	<CR>*lampm=seco#<CR>	No
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>	Yes
Write	Custom mode	<CR>*lampm=custom#<CR>	Yes
Write	Light level for custom mode	<CR>*lampcustom=value#<CR>	Yes
Read	Light level status for custom mode	<CR>*lampcustom=?#<CR>	Yes
Write (dual lamp)	Dual Brightest	<CR>* lampm =dualbr#<CR>	No

	Write (dual lamp)	Dual Reliable	<CR>* lampm =dualre#<CR>	No
	Write (dual lamp)	Single Alternative	<CR>* lampm =single#<CR>	No
	Write (dual lamp)	Single Alternative Eco	<CR>* lampm =singleeco#<CR>	No

	Read	Lamp Mode Status	<CR>*lampm=?#<CR>	Yes
	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>	Yes
Write	3D Auto	<CR>*3d=auto#<CR>	Yes

Miscellaneous

Write	3D Sync Top Bottom	<CR>*3d=tb#<CR>	Yes
Write	3D Sync Frame Sequential	<CR>*3d=fs#<CR>	Yes
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>	Yes
Write	3D inverter	<CR>*3d=iv#<CR>	Yes
Write	2D to 3D	<CR>*3d=2d3d#<CR>	No
Write	3D nVIDIA	<CR>*3d=nvidia#<CR>	Yes
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>	Yes

	Write	Remote Receiver-rear	<CR>*rr=r#<CR>	No
	Write	Remote Receiver-top	<CR>*rr=t#<CR>	Yes
	Write	Remote Receiver-top+front	<CR>*rr=tf#<CR>	Yes
	Write	Remote Receiver-top+rear	<CR>*rr=tr#<CR>	No
	Read	Remote Receiver Status	<CR>*rr=?#<CR>	Yes
	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>	Yes
	Write	Lamp Saver Mode-off	<CR>*lpsaver=off#<CR>	Yes

Read	Lamp Saver Mode Status	<CR>*lpsaver=?#<CR>	Yes
Write	Projection Log In Code on	<CR>*prjlogincode=on#<CR>	No
Write	Projection Log In Code of f	<CR>*prjlogincode=off#<CR>	No
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>	Yes
Write	AMX Device Discovery-of f	<CR>*amxdd=off#<CR>	Yes

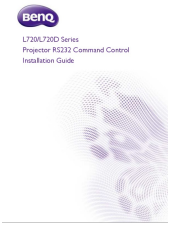
Read	AMX Device Discovery Status	<CR>*amxdd=?#<CR>	Yes
Read	Mac Address	<CR>*macaddr=?#<CR>	Yes
Write	High Altitude mode on	<CR>*Highaltitude=on#<CR>	Yes
Write	High Altitude mode off	<CR>*Highaltitude=off#<CR>	Yes
Read	High Altitude mode status	<CR>*Highaltitude=?#<CR>	Yes
Write	Load Lens memory 1	<CR>*lensload=m1#<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

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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

	BenQ Projector RS232 Command Control [pdf] Installation Guide Projector RS232 Command Control, L720, L720D Series
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References

- [BenQ LCD Monitors, Projectors, Speakers and Lighting | BenQ US](#)

Manuals+.