

RS-232C Specifications and Commands

Computer control

A computer can be used to control the projector by connecting an RS-232C serial control cable (cross type, commercially available) to the projector. (See page 24 of the projector owner's manual for connection.)

Communication conditions

Set the serial port settings of the computer to match that of the table.

Signal format: Conforms to RS-232C standard.

Parity bit: None

Baud rate*: 9,600 bps / 38,400 bps / 115,200 bps

Stop bit: 1 bit

Data length: 8 bits

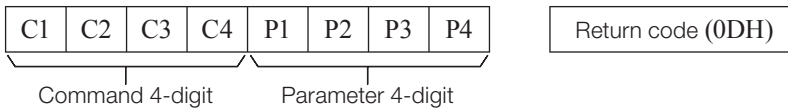
Flow control: None

*Set the projector's baud rate to the same rate as used by the computer.

Basic format

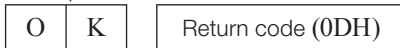
Commands from the computer are sent in the following order: command, parameter, and return code. After the projector processes the command from the computer, it sends a response code to the computer.

Command format



Response code format

Normal response



Problem response (communication error or incorrect command)



Info

- When controlling the projector using RS-232C commands from a computer, wait for at least 30 seconds after the power has been turned on, and then transmit the commands.
- After sending an input selection or picture adjustment command and then receiving an "OK" response code, the projector may take some time to process the command. If a second command is sent while the projector is still processing the first command, you may receive an "ERR" response code. If this happens, try resending the second command.
- When more than one code is being sent, send each command only after the response code for the previous command from the projector is verified.
- "POWR????", "TABN ___ 1", "TLPS ___ 1", "TPOW ___ 1", "TLPN ___ 1", "TLTT ___ 1", "TLTM ___ 1", "TLTL ___ 1", "TNAM ___ 1", "MNRD ___ 1", "PJNO ___ 1"
 - When the projector receives the special commands shown above:
 - * The on-screen display will not disappear.
 - * The "Auto Power Off" timer will not be reset.
 - The special commands are available for applications that require continuous polling.

Note

- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears in the parameter column, enter a value in the range indicated in brackets under Control Contents.

PJLink™ Compliant:

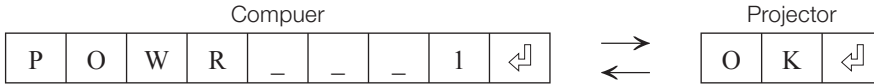
This product conforms with the PJLink standard Class 1 and all Class 1 commands are implemented.

This product conforms with the PJLink standard specification version 1.00.

For additional information, visit "<http://pjlink.jbmia.or.jp/english/>".

Commands

Example: When turning on the projector, make the following setting.



CONTROL CONTENTS		COMMAND	PARAMETER	RETURN		
				Power ON	Standby mode (or 30-second startup time)	
Power	On	P O W R	_ _ _ 1	OK or ERR	OK	
	Off	P O W R	_ _ _ 0	OK	OK or ERR	
	Status	P O W R	? ? ? ?	1	0	
Projector Condition		T A B N	_ _ _ 1	0: Normal 1: Temp High 8: Lamp Life 5% or less 16: Lamp Burn-out 32: Lamp Ignition Failure	0: Normal 1: Temp High 2: Fan Error 4: Cover Open 8: Lamp Life 5% or less 16: Lamp Burn-out 32: Lamp Ignition Failure 64: Temp Abnormally High	
Lamp	Status	T L P S	_ _ _ 1	0: Off, 1: On, 2: Retry 3: Waiting, 4: Lamp Error	0: Off, 4: Lamp Error	
	Power Status	T P O W	_ _ _ 1	1: On, 2: Cooling	0: Standby	
	Quantity	T L P N	_ _ _ 1	1		
	Usage Time(Hour)	T L T T	_ _ _ 1	0 - 9999(Integer)		
	Usage Time(Minute)	T L T M	_ _ _ 1	0, 15, 30, 45		
Name	Life(Percentage)	T L T L	_ _ _ 1	0% - 100%(Integer)		
	Model Name Check	T N A M	_ _ _ 1	EIPD450		
	Model Name Check	M N R D	_ _ _ 1	EIP-D450		
	Projector Name Setting 1 (First 4 characters) *1	P J N 1	* * * *	OK or ERR		
	Projector Name Setting 2 (Middle 4 characters) *1	P J N 2	* * * *	OK or ERR		
Input Change	Projector Name Setting 3 (Last 4 characters) *1	P J N 3	* * * *	OK or ERR		
	Projector Name Check	P J N 0	_ _ _ 1	Projector Name		
	Computer	I R G B	_ _ _ 1	OK or ERR	ERR	
	DVI	I R G B	_ _ _ 2	OK or ERR	ERR	
	DVI-D-Computer select *2	I B D S	_ _ _ 1	OK or ERR	ERR	
DVI-D-Video select *2	I B D S	_ _ _ 2	OK or ERR	ERR		
DVI-Analog select *2	I B D S	_ _ _ 3	OK or ERR	ERR		
S-Video	I V E D	_ _ _ 1	OK or ERR	ERR		
Video	I V E D	_ _ _ 2	OK or ERR	ERR		
Input RGB Check	I R G B	? ? ? ?	1: Computer, 2: DVI or ERR	ERR		
Input Video Check	I V E D	? ? ? ?	1: S-Video, 2: Video or ERR	ERR		
Input Mode Check	I M O D	? ? ? ?	1: RGB, 2: Video	ERR		
Input Check	I C H K	? ? ? ?	1: Computer 2: DVI 3: S-Video 4: Video	ERR		
Volume	Volume(0 - 60)	V O L A	_ _ _ * *	OK or ERR	ERR	
	Volume up/down(-10 - +10)	V O U D	_ _ _ * *	OK or ERR	ERR	
Keystone	-80 - +80	K E Y S	* * * *	OK or ERR	ERR	
AV Mute	On	I M B K	_ _ _ 1	OK or ERR	ERR	
	Off	I M B K	_ _ _ 0	OK or ERR	ERR	
Freeze	On	F R E Z	_ _ _ 1	OK or ERR	ERR	
	Off	F R E Z	_ _ _ 0	OK or ERR	ERR	
Auto Sync	Start	A D J S	_ _ _ 1	OK or ERR	ERR	
Resize	Computer	Normal	R A S R	_ _ _ 1	OK or ERR	ERR
		Stretch	R A S R	_ _ _ 2	OK or ERR	ERR
		Dot By Dot	R A S R	_ _ _ 3	OK or ERR	ERR
		Full	R A S R	_ _ _ 5	OK or ERR	ERR
		Border	R A S R	_ _ _ 6	OK or ERR	ERR
		Area Zoom	R A S R	_ _ _ 1 0	OK or ERR	ERR
	DVI	V-Stretch	R A S R	_ _ _ 1 1	OK or ERR	ERR
		Normal	R B S R	_ _ _ 1	OK or ERR	ERR
		Stretch	R B S R	_ _ _ 2	OK or ERR	ERR
		Dot By Dot	R B S R	_ _ _ 3	OK or ERR	ERR
		Full	R B S R	_ _ _ 5	OK or ERR	ERR
		Border	R B S R	_ _ _ 6	OK or ERR	ERR
	S-Video	Area Zoom	R B S R	_ _ _ 1 0	OK or ERR	ERR
		V-Stretch	R B S R	_ _ _ 1 1	OK or ERR	ERR
		Normal	R A S V	_ _ _ 1	OK or ERR	ERR
		Stretch	R A S V	_ _ _ 2	OK or ERR	ERR
		Border	R A S V	_ _ _ 3	OK or ERR	ERR
		Area Zoom	R A S V	_ _ _ 1 0	OK or ERR	ERR
V-Stretch	R A S V	_ _ _ 1 1	OK or ERR	ERR		

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CONTROL CONTENTS			COMMAND	PARAMETER	RETURN		
					Power ON	Standby mode (or 30-second startup time)	
Resize	Video	Normal	R B S V	- - - 1	OK or ERR	ERR	
		Stretch	R B S V	- - - 2	OK or ERR	ERR	
		Border	R B S V	- - - 3	OK or ERR	ERR	
		Area Zoom	R B S V	- - 1 0	OK or ERR	ERR	
		V-Stretch	R B S V	- - 1 1	OK or ERR	ERR	
ALL Reset			A L R E	- - - 1	OK or ERR	ERR	
Computer INPUT	Picture Mode	Standard	R A P S	- - 1 0	OK or ERR	ERR	
		Presentation	R A P S	- - 1 1	OK or ERR	ERR	
		Movie	R A P S	- - 1 2	OK or ERR	ERR	
		Game	R A P S	- - 1 3	OK or ERR	ERR	
		sRGB	R A P S	- - 1 4	OK or ERR	ERR	
	Contrast	-30 ~ +30	R A P I	- * * *	OK or ERR	ERR	
	Bright	-30 ~ +30	R A B R	- * * *	OK or ERR	ERR	
	Red	-30 ~ +30	R A R D	- * * *	OK or ERR	ERR	
	Blue	-30 ~ +30	R A B E	- * * *	OK or ERR	ERR	
	Color	-30 ~ +30	R A C O	- * * *	OK or ERR	ERR	
	Tint	-30 ~ +30	R A T I	- * * *	OK or ERR	ERR	
	Sharp	-30 ~ +30	R A S H	- * * *	OK or ERR	ERR	
	CLR Temp	-1 ~ +1	R A C T	- - * *	OK or ERR	ERR	
	BrilliantColor™	0 ~ +2	R A W E	- - - *	OK or ERR	ERR	
	Progressive	2D Progressive	R A I P	- - - 0	OK or ERR	ERR	
		3D Progressive	R A I P	- - - 1	OK or ERR	ERR	
		Film Mode	R A I P	- - - 2	OK or ERR	ERR	
	DNR	Off	R A N R	- - - 0	OK or ERR	ERR	
		Level 1	R A N R	- - - 1	OK or ERR	ERR	
		Level 2	R A N R	- - - 2	OK or ERR	ERR	
	Picture Reset		R A R E	- - - 1	OK or ERR	ERR	
	Signal Type	Auto	J A S I	- - - 0	OK or ERR	ERR	
		RGB	I A S I	- - - 1	OK or ERR	ERR	
		Component	I A S I	- - - 2	OK or ERR	ERR	
	Audio Input	Audio 1	R A A I	- - - 1	OK or ERR	ERR	
		Audio 2	R A A I	- - - 2	OK or ERR	ERR	
	DVI INPUT	Picture Mode	Standard	R B P S	- - 1 0	OK or ERR	ERR
			Presentation	R B P S	- - 1 1	OK or ERR	ERR
			Movie	R B P S	- - 1 2	OK or ERR	ERR
			Game	R B P S	- - 1 3	OK or ERR	ERR
			sRGB	R B P S	- - 1 4	OK or ERR	ERR
		Contrast	-30 ~ +30	R B P I	- * * *	OK or ERR	ERR
		Bright	-30 ~ +30	R B B R	- * * *	OK or ERR	ERR
Red		-30 ~ +30	R B R D	- * * *	OK or ERR	ERR	
Blue		-30 ~ +30	R B B E	- * * *	OK or ERR	ERR	
Color		-30 ~ +30	R B C O	- * * *	OK or ERR	ERR	
Tint		-30 ~ +30	R B T I	- * * *	OK or ERR	ERR	
Sharp		-30 ~ +30	R B S H	- * * *	OK or ERR	ERR	
CLR Temp		-1 ~ +1	R B C T	- - * *	OK or ERR	ERR	
BrilliantColor™		0 ~ +2	R B W E	- - - *	OK or ERR	ERR	
Progressive		2D Progressive	R B I P	- - - 0	OK or ERR	ERR	
		3D Progressive	R B I P	- - - 1	OK or ERR	ERR	
		Film Mode	R B I P	- - - 2	OK or ERR	ERR	
DNR		Off	R B N R	- - - 0	OK or ERR	ERR	
		Level 1	R B N R	- - - 1	OK or ERR	ERR	
		Level 2	R B N R	- - - 2	OK or ERR	ERR	
Picture Reset			R B R E	- - - 1	OK or ERR	ERR	
Signal Type		Auto	J B S I	- - - 0	OK or ERR	ERR	
		RGB	I B S I	- - - 1	OK or ERR	ERR	
		Component	I B S I	- - - 2	OK or ERR	ERR	
Audio Input		Audio 1	R B A I	- - - 1	OK or ERR	ERR	
		Audio 2	R B A I	- - - 2	OK or ERR	ERR	
Dynamic Range		Auto	H M B D	- - - 0	OK or ERR	ERR	
		Standard	H M B D	- - - 1	OK or ERR	ERR	
		Enhanced	H M B D	- - - 2	OK or ERR	ERR	
S-Video INPUT		Picture Mode	Standard	V A P S	- - 1 0	OK or ERR	ERR
			Presentation	V A P S	- - 1 1	OK or ERR	ERR
			Movie	V A P S	- - 1 2	OK or ERR	ERR
			Game	V A P S	- - 1 3	OK or ERR	ERR
	Contrast	-30 ~ +30	V A P I	- * * *	OK or ERR	ERR	
	Bright	-30 ~ +30	V A B R	- * * *	OK or ERR	ERR	
	Red	-30 ~ +30	V A R D	- * * *	OK or ERR	ERR	
	Blue	-30 ~ +30	V A B E	- * * *	OK or ERR	ERR	
	Color	-30 ~ +30	V A C O	- * * *	OK or ERR	ERR	

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CONTROL CONTENTS		COMMAND	PARAMETER	RETURN			
				Power ON	Standby mode (or 30-second startup time)		
S-Video INPUT	Tint	-30 ~ +30	V A T I	- * * *	OK or ERR	ERR	
	Sharp	-30 ~ +30	V A S H	- * * *	OK or ERR	ERR	
	CLR Temp	-1 ~ +1	V A C T	- * * *	OK or ERR	ERR	
	BrilliantColor™	0 ~ +2	V A W E	- - - *	OK or ERR	ERR	
	Progressive	2D Progressive		V A I P	- - - 0	OK or ERR	ERR
		3D Progressive		V A I P	- - - 1	OK or ERR	ERR
		Film Mode		V A I P	- - - 2	OK or ERR	ERR
	DNR	Off		V A N R	- - - 0	OK or ERR	ERR
		Level 1		V A N R	- - - 1	OK or ERR	ERR
		Level 2		V A N R	- - - 2	OK or ERR	ERR
	Picture Reset		V A R E	- - - 1	OK or ERR	ERR	
	Audio Input	Audio 1		V A A I	- - - 1	OK or ERR	ERR
		Audio 2		V A A I	- - - 2	OK or ERR	ERR
	Video INPUT	Picture Mode	Standard	V B P S	- - 1 0	OK or ERR	ERR
Presentation			V B P S	- - 1 1	OK or ERR	ERR	
Movie			V B P S	- - 1 2	OK or ERR	ERR	
Game			V B P S	- - 1 3	OK or ERR	ERR	
Contrast		-30 ~ +30	V B P I	- * * *	OK or ERR	ERR	
Bright		-30 ~ +30	V B B R	- * * *	OK or ERR	ERR	
Red		-30 ~ +30	V B R D	- * * *	OK or ERR	ERR	
Blue		-30 ~ +30	V B B E	- * * *	OK or ERR	ERR	
Color		-30 ~ +30	V B C O	- * * *	OK or ERR	ERR	
Tint		-30 ~ +30	V B T I	- * * *	OK or ERR	ERR	
Sharp		-30 ~ +30	V B S H	- * * *	OK or ERR	ERR	
CLR Temp		-1 ~ +1	V B C T	- - * *	OK or ERR	ERR	
BrilliantColor™		0 ~ +2	V B W E	- - - *	OK or ERR	ERR	
Progressive		2D Progressive		V B I P	- - - 0	OK or ERR	ERR
		3D Progressive		V B I P	- - - 1	OK or ERR	ERR
		Film Mode		V B I P	- - - 2	OK or ERR	ERR
DNR		Off		V B N R	- - - 0	OK or ERR	ERR
		Level 1		V B N R	- - - 1	OK or ERR	ERR
		Level 2		V B N R	- - - 2	OK or ERR	ERR
Picture Reset			V B R E	- - - 1	OK or ERR	ERR	
Audio Input		Audio 1		V B A I	- - - 1	OK or ERR	ERR
		Audio 2		V B A I	- - - 2	OK or ERR	ERR
C.M.S. Setting		On	C M C S	- - 1 1	OK or ERR	ERR	
		Off	C M C S	- - 0 0	OK or ERR	ERR	
C.M.S.		Hue	Red	C M H R	- * * *	OK or ERR	ERR
			Yellow	C M H Y	- * * *	OK or ERR	ERR
			Green	C M H G	- * * *	OK or ERR	ERR
			Cyan	C M H C	- * * *	OK or ERR	ERR
			Blue	C M H B	- * * *	OK or ERR	ERR
			Magenta	C M H M	- * * *	OK or ERR	ERR
	Reset		C M R E	- - - 2	OK or ERR	ERR	
	Saturation	Red	C M S R	- * * *	OK or ERR	ERR	
		Yellow	C M S Y	- * * *	OK or ERR	ERR	
		Green	C M S G	- * * *	OK or ERR	ERR	
		Cyan	C M S C	- * * *	OK or ERR	ERR	
		Blue	C M S B	- * * *	OK or ERR	ERR	
		Magenta	C M S M	- * * *	OK or ERR	ERR	
		Reset	C M R E	- - - 3	OK or ERR	ERR	
	Value	Red	C M V R	- * * *	OK or ERR	ERR	
		Yellow	C M V Y	- * * *	OK or ERR	ERR	
		Green	C M V G	- * * *	OK or ERR	ERR	
		Cyan	C M V C	- * * *	OK or ERR	ERR	
		Blue	C M V B	- * * *	OK or ERR	ERR	
		Magenta	C M V M	- * * *	OK or ERR	ERR	
		Reset	C M R E	- - - 4	OK or ERR	ERR	
	C.M.S. All Reset		C M R E	- - - 1	OK or ERR	ERR	
	Clock	-150 ~ +150	I N C L	* * * *	OK or ERR	ERR	
	Phase	-30 ~ +30	I N P H	- * * *	OK or ERR	ERR	
	H-position	-150 ~ +150	J A H P	* * * *	OK or ERR	ERR	
	V-position	-60 ~ +60	I A V P	- * * *	OK or ERR	ERR	
	Fine Sync Adjustment Reset		I A R E	- - - 1	OK or ERR	ERR	
Image Shift	-96 ~ +96	L N D S	- * * *	OK or ERR	ERR		
Overscan	On	O V S N	- - - 1	OK or ERR	ERR		
	Off	O V S N	- - - 0	OK or ERR	ERR		
OSD Display	On	I M D I	- - - 1	OK or ERR	ERR		
	Off	I M D I	- - - 0	OK or ERR	ERR		

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CONTROL CONTENTS		COMMAND	PARAMETER	RETURN	
				Power ON	Standby mode (or 30-second startup time)
Video System	Auto	M E S Y	-- -- 1	OK or ERR	ERR
	PAL	M E S Y	-- -- 2	OK or ERR	ERR
	SECAM	M E S Y	-- -- 3	OK or ERR	ERR
	NTSC4.43	M E S Y	-- -- 4	OK or ERR	ERR
	NTSC3.58	M E S Y	-- -- 5	OK or ERR	ERR
	PAL-M	M E S Y	-- -- 6	OK or ERR	ERR
	PAL-N	M E S Y	-- -- 7	OK or ERR	ERR
	PAL-60	M E S Y	-- -- 8	OK or ERR	ERR
Background	Logo	I M B G	-- -- 1	OK or ERR	ERR
	Blue	J M B G	-- -- 3	OK or ERR	ERR
	None	I M B G	-- -- 4	OK or ERR	ERR
Eco+Quiet	On	T H M D	-- -- 1	OK or ERR	ERR
	Off	T H M D	-- -- 0	OK or ERR	ERR
Auto Sync	On	A A D J	-- -- 1	OK or ERR	ERR
	Off	A A D J	-- -- 0	OK or ERR	ERR
Auto Power Off	On	A P O W	-- -- 1	OK or ERR	ERR
	Off	A P O W	-- -- 0	OK or ERR	ERR
Auto Restart	On	A R E S	-- -- 1	OK or ERR	ERR
	Off	A R E S	-- -- 0	OK or ERR	ERR
STANDBY Mode	Standard	M O U T	-- -- 1	OK or ERR	ERR
	Eco	M O U T	-- -- 0	OK or ERR	ERR
PRJ Mode	Reverse	On	I M R E	-- -- 1	OK or ERR
		Off	J M R E	-- -- 0	OK or ERR
	Invert	On	I M I N	-- -- 1	OK or ERR
		Off	I M I N	-- -- 0	OK or ERR
Language	English	M E L A	-- -- 1	OK or ERR	ERR
	Deutsch	M E L A	-- -- 2	OK or ERR	ERR
	Español	M E L A	-- -- 3	OK or ERR	ERR
	Nederlands	M E L A	-- -- 4	OK or ERR	ERR
	Français	M E L A	-- -- 5	OK or ERR	ERR
	Italiano	M E L A	-- -- 6	OK or ERR	ERR
	Svenska	M E L A	-- -- 7	OK or ERR	ERR
	日本語	M E L A	-- -- 8	OK or ERR	ERR
	Português	M E L A	-- -- 9	OK or ERR	ERR
	汉语	M E L A	-- -- 1 0	OK or ERR	ERR
	한국어	M E L A	-- -- 1 1	OK or ERR	ERR
	Русский	M E L A	-- -- 1 2	OK or ERR	ERR
	عربي	M E L A	-- -- 1 3	OK or ERR	ERR
	polski	M E L A	-- -- 1 4	OK or ERR	ERR
	Türkçe	M E L A	-- -- 1 5	OK or ERR	ERR
فارسی	M E L A	-- -- 1 6	OK or ERR	ERR	
Magyar	M E L A	-- -- 1 7	OK or ERR	ERR	
System Sound	On	S S N D	-- -- 1	OK or ERR	ERR
	Off	S S N D	-- -- 0	OK or ERR	ERR
Audio Out	FAO	A O U T	-- -- 1	OK or ERR	ERR
	VAO	A O U T	-- -- 2	OK or ERR	ERR
Internal Speaker	On	A S P K	-- -- 1	OK or ERR	ERR
	Off	A S P K	-- -- 0	OK or ERR	ERR
RGB Frequency Check	Horizontal	T F R Q	-- -- 1	kHz(*** or ERR)	ERR
	Vertical	T F R Q	-- -- 2	Hz(*** or ERR)	ERR
Fan Mode	Normal	H L M D	-- -- 0	OK or ERR	ERR
	High	H L M D	-- -- 1	OK or ERR	ERR
Balance	-30 ~ +30	A A B L	-- * *	OK or ERR	ERR
Treble	-30 ~ +30	A A T E	-- * *	OK or ERR	ERR
Bass	-30 ~ +30	A A B A	-- * *	OK or ERR	ERR
Audio Adjustment Reset		A A R E	-- -- 1	OK or ERR	ERR
DLP® Link™	Off	3 D E N	-- -- 0	OK or ERR	ERR
	On	3 D E N	-- -- 1	OK or ERR	ERR
DLP® Link™ Invert		3 D I V	-- -- 1	OK or ERR	ERR
Video Setup	0 IRE	V I S U	-- -- 0	OK or ERR	ERR
	7.5 IRE	V I S U	-- -- 1	OK or ERR	ERR
Closed Caption (For Americas only)	Off	C L C A	-- -- 0	OK or ERR	ERR
	CC1	C L C A	-- -- 1	OK or ERR	ERR
	CC2	C L C A	-- -- 2	OK or ERR	ERR
Lamp Timer Reset *3		L P R E	0 0 0 1	ERR	OK or ERR

*1 For setting the projector name, send the commands in the order of PJN1, PJN2 and PJN3.

*2 This command should be sent only after the "IRGB _ _ _ 2" command is sent and an "OK" response code is received.

*3 The Lamp Timer Reset command is available only in standby mode.