Control commands

IMPORTANT: When formatting commands sent from a control system or computer, enclose commands in parentheses “(“ and “)”.

Serial Communication Configuration

Visit our website for additional RS-232 settings and information.

To control this projector via RS-232, connect a straight through cable and set the control system serial port settings to match the following communication configuration:

RS-232 Port Settings	
Setting	**Value**
Bits per second	38,400
Data bits	8
Parity	None
Stop bits	1
Flow control	None
Emulation	VT100

Network Communication Configuration

For network control, you can access the projector through Port 23 (Telnet).

We use the same control codes on serial as we do over the network. InFocus network control uses the Telnet packet structure.

Command Format

All commands consist of 3 alpha characters followed by a request, all enclosed in parentheses. The request can be a read request (indicated by a "?") or a write request (indicated by 1 to 4 ASCII digits).

A read request example:

(AAA?) where
(starts the command
AAA denotes the command
? denotes the read request
) ends the command

A read command returns the range and the current setting, for example:

Read Command Examples		
Function	**Command**	**Response**
Brightness	(BRT?)	(0-200, 100)
Lamp Hours	(LMP?)	(0-32766, 42)

A write request example:

(AAA####) where
(starts the command
AAA denotes the command
denotes the value to be written

(leading zeros not necessary)

) ends the command

Some commands have ranges, while others are absolute. If a number greater than the maximum range is received, it is automatically set to the maximum number for that function. If a command is received that is not understood, a "?" is returned. With absolute settings, "0" is off, 1-9999 is on. The one exception is the Power command, where 0 is off and 1 is on.

To assure the projector can process a command, wait 3 seconds before entering the next command.

Write Command Examples		
Function	**Command**	**Response**
Brightness	(BRT100)	Sets the brightness to 100
Power	(PWR0)	Turns power off
Power	(PWR1)	Turns power on

Error Conditions

Not all commands are supported for all projectors. If an unsupported command is issued, the command will be ignored. If a command is received that is not understood, a '?' character will be returned indicating the command was not understood.

Limitations

The projector cannot respond to commands coming in at a high-rate. Therefore, a delay must occur between commands to ensure that the command gets properly executed. To assure the projector can process a command, wait 3 seconds before entering the next command.

Function	Command	RW	Min	Max	Default	Step
AC Power On 0: Disable; 1: Enable	APO	RW	0	1	0	1
Active Source 0: HDMI 1: DVI 2: VGA 3: Component / BNC 4: Composite 5: S-Video 6: 3G-SDI	SRA	RW	0	6	0	1
Aspect Ratio 0: 5:4 1: 4:3 2: 16:10 3: 16:9 4: 1.8 5: 2.35 6: Letterbox 7: Native 8: Unscaled	AZT	RW	0	8	2	1
Auto Off Time 0: Off (never) 1: On (20 minutes)	AOT	RW	0	1	0	1
Auto Source 0: Disable; 1: Enable	ASC	RW	0	1	0	1
Auto Sync 0: Off 1: On	AIM	W	0	1	1	1
Blank Bottom	BBO	RW	0	360	0	1
Blank Left	BLE	RW	0	534	0	1
Blank Reset 1: Reset	BRS	W		1		
Blank Right	BRI	RW	0	534	0	1
Blank Screen 0: Disable; 1: Enable	BLK	RW	0	1	0	1
Blank Top	BTO	RW	0	360	0	1
Blue Gain	BCG	RW	0	200	100	1
Blue Offset	BCO	RW	0	200	100	1
Blue Only 0: Off 1: On	BON	RW	0	1	0	1
Brightness	BRT	RW	0	200	100	1
Center Lens 1: Center Lens	MHC	W		1		
Color	COL	RW	0	200	100	1
Color Space 0: Auto 1: YCbCr (REC709) 2: YPbPr (REC601) 3: RGB-PC (0-255) 4: RGB-Video (16-235)	CSM	RW	0	4	0	1

Color Temp 0: 5000K (Warmest) 2: 6500K (Warm) 3: 7800K 4: 9300K (Cool) 5: Native (Bright)	TMP	RW	0	5	Source Specific	1
Contrast	CON	RW	0	200	100	1
Custom Lamp Power	CLP	RW	0	25		1
DHCP Enable 0: Disable; 1: Enable	DHP	RW	0	1	0	1
Dual Lamp Mode 0: Single lamp 1: Both lamps	DLI	RW	0	1	1	1
Dynamic Black 0: Off 1: On	DYB	RW	0	1	0	1
Dynamic Contrast 0: Off 1: On	DYC	RW	0	1	0	1
Edge Blend Alignment Pattern 0: Off 1: On	EBL	RW	0	1	0	1
Edge Blend All	EBA	RW	0	32	0	1
Edge Blend Black Level Uplift Bottom	EUB	RW	0	0,8,16,24,32	0	1
Edge Blend Black Level Uplift Left	EUL	RW	0	0,4,8,12,16,20,24,28,32	0	1
Edge Blend Black Level Uplift Right	EUR	RW	0	0,4,8,12,16,20,24,28,32	0	1
Edge Blend Black Level Uplift Top	EUT	RW	0	0,8,16,24,32	0	1
Edge Blend Blue	EBB	RW	0	32	0	1
Edge Blend Green	EBG	RW	0	32	0	1
Edge Blend Red	EBR	RW	0	32	0	1
Edge Blend Reset	EBZ	W		1		
Edge Blend Status 0: Edge Blending Off 1: Edge Blending On	EBS	RW	0	1	0	1
Edge Blend Width Left	EWL	RW	0	0,200 - 800	0	1
Edge Blend Width Right	EWR	RW	0	0,200 - 800	0	1
Edge Blend Width Top	EWT	RW	0	0,200 - 500	0	1
Edge Blend Width Bottom	EWB	RW	0	0,200 - 500	0	1

Error Condition 0: No error 1: Lamp not lit after 5 attempts 3: Lamp went out unexpectedly 4: Fan failure 5: Overtemperature 6: Low voltage ?: Query	ERR	R	0	6	0	1
Factory Reset 1: Reset	RST	W		1		
Fan Position 0: Normal 1: Vertical 2: Down	FNP	RW	0	2	0	1
Firmware Version	FWV	R			string	
Focus Far 0: Fine Step 1: Large Step	MFF	W	0	1	1	1
Focus Near 0: Fine Step 1: Large Step	MFN	W	0	1	1	1
Gamma 0: Film 1: Graphics 2: Video 3: Linear	GTB	RW	0	3	Source Specific	1
Gateway Address GT1: 1st Octet GT2: 2nd Octet GT3: 3rd Octet GT4: 4th Octet	GT*n*	RW	0	255	0	1

Green Gain	GCG	RW	0	200	100	1
Green Offset	GCO	RW	0	200	100	1
High Altitude Mode	HAL	RW	0	1	0	1
Horz. Keystone	DHK	RW	-350	350	0	1
Horz. Refresh Rate	QHR	R			string	
Horz. Total	HZT	RW	0	200	100	1
Horz. Position	HPS	RW	0	200	100	1
Horz. Phase	HPH	RW	0	200	100	1
Input Lock 0: Auto 1: 48Hz 2: 50Hz 3: 60Hz	ILC	RW	0	3	0	1
IP Address IP1: 1st Octet IP2: 2nd Octet IP3: 3rd Octet IP4: 4th Octet	IP*n*	RW	0	255	0	1
Lamp 1 Hours ?: Query	LMP	R	0	n/a	string	1
Lamp 1 Reset 1: Reset	LMR	W		1		
Lamp 1 Status 0: Off 1: On	DLS	R	0	1	1	1
Lamp 2 Hours ?: Query	LDH	R	0	n/a	string	1
Lamp 2 Reset 1: Reset	LDR	W		1		

Lamp 2 Status 0: Off 1: On	DLD	R	0	1	1	1
Lamp Power 0: Eco 1: Normal 2: Dimming	IPM	RW	0	2	1	1
Language 0: English 1: French 2: Spanish 3: German 4: Portuguese 5: Chinese Simplified 6: Korean 7: Arabic 8: Indonesian 9: Italian 10: Norwegian 11: Dutch 12: Swedish 13: Russian 14: Finnish 15: Polish	LAN	RW	0	15	0 (5 for China models)	1
Lens Horizontal Shift Left 0: Fine Step 1: Large Step	MHL	W	0	1		1
Lens Horizontal Shift Right 0: Fine Step 1: Large Step	MHR	W	0	1		1
Lens Memory Load	LLO	W	1	10		1
Lens Memory Save	LSA	W	1	10		1
Lens Vertical Shift Down 0: Fine Step 1: Large Step	MVD	W	0	1		1

Lens Vertical Shift Up 0: Fine Step 1: Large Step	MVU	W	0	1		1
Model	MDL	R			string	
Noise Reduction	NRL	RW	0	200	0	1
Overscan 0: Off; 1: Zoom; 2: Crop	OVS	RW	0	2	0	1
Picture-in-Picture Enable 0: PIP disable 1: PIP enable	SSC	RW	0	1	0	1
Picture-in-Picture Position 0: Top Left 1: Top Right 2: Bottom Left 3: Bottom Right 4: Split Left/Right	SSY	RW	0	7	0	1
Picture-in-Picture Source 1: HDMI 2: DVI 3: VGA 4: Component / BNC 5: Composite 6: S-Video 7: 3G-SDI	SSL	RW	1	7	Source Specific	
Picture-in-Picture Swap 1: Swap	SSS	W		1		
Pincushion Correction	WPP	RW	-100	100	0	1
Pixel Clock	QPC	R			string	
Power 0: Turn Off; 1: Turn On	PWR	RW	0	1	0	1
Power On Time	LMT	R			string	

Power Saving Mode 0: ECO standby mode 1: Standard standby mode	SPS	RW	0	1	1	1
Presets 0: High Bright 1: Presentation 2: Video	PST	RW	0	2	Source Specific	1
Projection Mode 0: Front 1: Rear 2: Ceiling + Front 3: Ceiling + Rear	CEL	RW	0	3		1
Projector Control 0: RS232 1: Network	PJC	RW	0	1	0	1
Projector ID 1...9: Projector ID 255: Empty ID	RSE	RW	1	255	255	1
Projector Status 0. Initializing Standby 1. Standby 2. Initializing Warmup 3. PreCooling 4. Attempting to strike Lamp 5. Checking Lamp Ignition Status 8. Initializing Image 9. Initializing OSD 10. Displaying Image 11. Initializing Cool-down 12. Cooling down 13. Initializing Error Msg 14. Displaying Error Msg 15. Low-Temp Warmup 16. Initializing DMD	SYS	R	0	17		1

Red Gain	RCG	RW	0	200	100	1
Red Offset	RCO	RW	0	200	100	1
Resolution	RES	R			string	
Rotate Image	WPR	RW	-20	+20	0	1
Search Screen 0: Logo 1: Blue 2: Black 3: White	DSU	RW	0	3	0	1
Serial Number	USN	R			string	
Sharpness	SHP	RW	0	200	0	1
Shutter Close 0: Open 1: Close	SHT	RW	0	1	0	1
Source Select 0: HDMI 1: DVI 2: VGA 3: Component / BNC 4: Composite 5: S-Video 6: 3G-SDI	SRC	RW	0	6	0	1
Startup Screen 0: Off 1: On	SLO	RW	0	1		1
Subnet Address NM1: 1st Octet NM2: 2nd Octet NM3: 3rd Octet NM4: 4th Octet	NM*n*	RW	0	255	0	1

Test Pattern 0: Color Bar 1: Cross Hatch 2: Burst 3: Red 4: Green 5: Blue 6: White 7: Black 8: Cross Mark 9: Cross Hatch + Mark 10: Red (TI) 11: Green (TI) 12: Blue (TI) 13: HRamp (TI) 14: Off	TPS	RW	0	14	14	1
Tint	TNT	RW	0	200	100	1
Total Projector Time	LMT	R			string	
Trigger Event 0: 5:4 1: 4:3 2: 16:10 3: 16:9 4: 1.88 5: 2.35 6: Letterbox 7: Native 8: Unscaled 9: Auto	SCT	RW	0	9	9	1
Vertical Keystone	DKV	RW	-200	200	0	1
Vertical Position	VPS	RW	0	200	100	1
Vertical Refresh Rate	VPC	R			string	

Video Standard 0: Auto 1: PAL 2: SECAM 3: NTSC	VSU	RW	0	3	0	1
W2 Recover	W2R	W		1		
Warp Bottom Left Corner x	WCX	RW	-192	192	0	1
Warp Bottom Left Corner y	WCY	RW	-120	120	0	1
Warp Bottom Right Corner x	WDX	RW	-192	192	0	1
Warp Bottom Right Corner y	WDY	RW	-120	120	0	1
Warp Reset 1: Reset	WRT	W		1		
Warp Top Left Corner x	WAX	RW	-192	192	0	1
Warp Top Left Corner y	WAY	RW	-120	120	0	1
Warp Top Right Corner x	WBX	RW	-192	192	0	1
Warp Top Right Corner y	WBY	RW	-120	120	0	1
Zoom In 0: Fine Step 1: Large Step	MZI	W	0	1		1
Zoom Out 0: Fine Step 1: Large Step	MZO	W	0	1		1