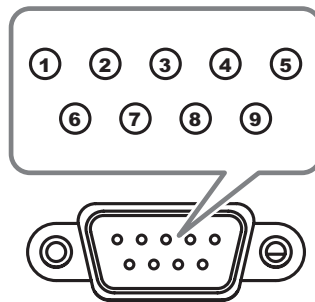


RS232 Commands

RS232 Connector (projector side)



Pin No	Specification
1	N/A
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	N/A

Appendices

RS232 Protocol Function List

RS232 Commands

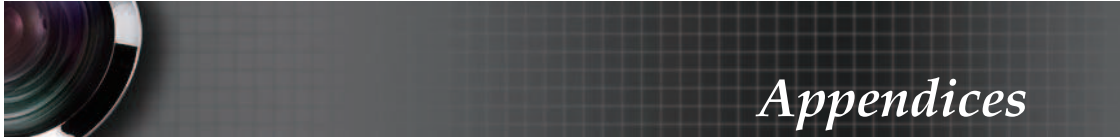
Baud Rate	9600
Data Bits	8
Parity Check	None
Stop Bits	1
Flow Control	None
UART16550 FIFO	Disable

Lead Code	Projector ID		Command ID			space	variable	carriage return
~	X	X	X	X	X		n	CR
Fix code One Digit	Set in OSD 00-99 Two Digit 00 is for universal use		Defined by Optoma 2 or 3 Digit See the Follow content			One Digit	Per item Definition	Fix code One Digit



❖ Due to the difference application for each model. Function is dependent on the model purchased.

Item	Key Definition	Command ID	ASCII	Pass	Fail
1	Power	n=1	~XX140 n	P	F
2	Laser	N/A			
3	Remote Mouse Up	n=3		P	F
4	Remote Mouse Left	n=4		P	F
5	Remote Mouse Enter	n=5		P	F
6	Remote Mouse Right	n=6		P	F
7	Remote Mouse Down	n=7		P	F
8	Mouse Left Click	n=8		P	F
9	Mouse Right Click	n=9		P	F
10	Up/Page +	n=10		P	F
11	Left/Source	n=11		P	F
12	Enter (for projection MENU)	n=12		P	F
13	Right/Re-SYNC	n=13		P	F
14	Down/Page -	n=14		P	F
15	Keystone +	n=15		P	F
16	Keystone -	n=16		P	F
17	Volume -	n=17		P	F
18	Volume +	n=18		P	F
19	DVI-D/YpBPr/1	n=19		P	F
20	Menu/2	n=20		P	F
21	Zoom/3	n=21		P	F
22	HDMI	n=22		P	F
23	Freeze/5	n=23		P	F
24	AV Mute/6	n=24		P	F
25	S-Video/7	n=25		P	F
26	VGA/8	n=26		P	F
27	Video/9	n=27		P	F



Appendices

Keypad Command

Function			ASCII	Pass	Fail
Power	On/Off	n=1/n=2 & 0	-XX00 n	P	F
Power On with Password			-XX00 1mmnn	P	F
Re-sync		n=1	-XX01 n	P	F
AV Mute	On/Off	n=1/n=2 & 0	-XX02 n	P	F
Mute	On/Off	n=1/n=2 & 0	-XX03 n	P	F
Freeze		n=1	-XX04 n	P	F
UnFreeze		n=2 & 0	-XX04 n	P	F
HDMI		n=1	-XX12 n		
DVI-D		n=2			
VGA 1		n=5			
VGA 2		n=6			
VGA 1 SCART		n=7			
VGA 1 Component		n=8			
S-Video		n=9			
Video		n=10			
VGA 2 Component		n=13			

OSD/Image

Function			ASCII	Pass	Fail	
Display Mode	Presentation		n=1	-XX20 n	P	F
	Bright		n=2			
	Movie		n=3			
	sRGB		n=4			
	Classroom		n=7			
	Blackboard		n=8			
	User		n=5			
	3D		n=11			
Brightness		n= -50 - +50	-XX21 n	P	F	
Contrast		n= -50 - +50	-XX22 n	P	F	
Sharpness		n= -15 - +15	-XX23 n	P	F	
Saturation		n= -50 - +50	-XX45 n	P	F	
Tint		n= -50 - +50	-XX44 n	P	F	
IMAGE /Advanced	BrilliantColor™		n= 0 - 10	-XX34 n	P	F
	Degamma	Film	n=1	-XX35 n	P	F
		Video	n=2			
		Graphics	n=3			
		PC	n=4			
	Color Temp.	Warm	n=1	-XX36 n	P	F
		Medium	n=2			
		Cold	n=3			

Appendices

Function			ASCII	Pass	Fail	
IMAGE /Advanced	Color Settings	Red Gain	n=-50 - 50	-XX24 n	P	F
		Green Gain	n=-50 - 50	-XX25 n	P	F
		Blue Gain	n=-50 - 50	-XX26 n	P	F
		Red Bias	n=-50 - 50	-XX27 n	P	F
		Green Bias	n=-50 - 50	-XX28 n	P	F
		Blue Bias	n=-50 - 50	-XX29 n	P	F
		Cyan	n=-50 - 50	-XX30 n	P	F
		Yellow	n=	-XX31 n	P	F
		Magenta	n=	-XX32 n	P	F
	Reset	n=1	-XX33 n	P	F	
	Color Space	Auto	n=1	-XX37 n	P	F
		RGB	n=2			
		YUV	n=3			
IMAGE /Advanced	Input Source Filters	HDMI	n=1	-XX39 n	P	F
		DVI-D	n=2			
		VGA 1	n=5			
		VGA 2	n=6			
		S-Video	n=9			
		Video	n=10			
IMAGE /Advanced	De-Interlace	On	n=1	-XX40 n	P	F
		Off	n=2 & 0			

OSD/Display

Function			ASCII	Pass	Fail
Format	4:3	n=1	-XX60 n	P	F
	16:9 I	n=2			
	16:9 II	n=3			
	Native	n=6			
	Auto	n=7			
Overscan		n=0-10	-XX61 n	P	F
Zoom		n= -30 - +50	-XX62 n	P	F
H Image Shift		n= -50 - +50	-XX63 n	P	F
V Image Shift (16:9)		n= -24 - +24	-XX64 n	P	F
V Keystone		n= -30 - +30	-XX66 n	P	F
3D mode	Off	n = 1	-XX230 n		
	DLP Link	n = 2			
	IR	n = 3			
3D sync invert	Off/ON	n=2 & 0	-XX231 n		



Appendices

OSD/Setup

Function			ASCII	Pass	Fail	
Language	English		n=1	-XX70 n	P	F
	German		n=2			
	French		n=3			
	Italian		n=4			
	Spanish		n=5			
	Portuguese		n=6			
	Polish		n=7			
	Dutch		n=8			
	Swedish		n=9			
	Norwegian/Danish		n=10			
	Finnish		n=11			
	Greek		n=12			
	Traditional Chinese		n=13			
	Simplified Chinese		n=14			
	Japanese		n=15			
	Korean		n=16			
	Russian		n=17			
	Hungarian		n=18			
	Czechoslovak		n=19			
	Arabic		n=20			
	Thai		n=21			
	Turkish		n=22			
Projection	Front-Desktop		n=1	-XX71 n	P	F
	Rear-Desktop		n=2			
	Front-Ceiling		n=3			
	Rear-Ceiling		n=4			
Menu Location	Top Left		n=1	-XX72 n	P	F
	Top Right		n=2			
	Centre		n=3			
	Bottom Left		n=4			
	Bottom Right		n=5			
Signal	Automatic	Enable/Disable	n=1/n =0 &2	-XX91 n	P	F
	Frequency		n= 0-31	-XX73 n	P	F
	Phase		n= -5 - +5	-XX74 n	P	F
	H. Position		n= -5 - +5	-XX75 n	P	F
	V. Position		n= -5 - +5	-XX76 n	P	F
Security	Security Timer	Hour/Day/Month	nnmnn	-XX77 n	P	F
	Change Password				send back the password to confirm	
	Security Settings	Enable/Disable	n=1/n=2 &0	-XX78 n	P	F

Appendices

Function				ASCII	Pass	Fail
Projector ID			n=00-99	--XX79 n	P	F
Audio Settings	Mute	On/Off	n=1/n=2 & 0	--XX80 n	P	F
	Volume		n=0-10	--XX81 n	P	F
	Mini-jack		n=1	--XX89 n	P	F
	RCA		n=2	--XX89 n	P	F
Advanced	Logo	Optoma/User	n=1/n=2	--XX82 n	P	F
	Logo Capture		n=1	--XX83 n	P	F
	Closed Captioning	On/Off	n=1/n=2 & 0	--XX88 n	P	F
RS232		RS232	n=1	--XX86 n	P	F
		Network	n=2		P	F

OSD/Option

Function				ASCII	Pass	Fail
Source Lock		On/Off	n=1/n=2 & 0	--XX100 n	P	F
High Altitude		On/Off	n=1/n=2 & 0	--XX101 n	P	F
Information Hide		On/Off	n=1/n=2 & 0	--XX102 n	P	F
Keypad Lock		On/Off	n=1/n=2 & 0	--XX103 n	P	F
Background Color	Blue		n=1	--XX104 n	P	F
	Black		n=2			
	Red		n=3			
	Green		n=4			
	White		n=5			
Advanced	Direct Power On	On/Off	n=1/n=2 & 0	--XX105 n	P	F
	Signal Power On	On/Off	n=1/n=2 & 0	--XX113 n	P	F
	Auto Power Off (min)		n=0-180	--XX106 n	P	F
	Sleep Timer (min)		n=000-995	--XX107 n	P	F
	Power Mode(Standby)	Eco/Active	n=1/n=2 & 0	--XX114 n	P	F
Lamp Setting	Lamp Hour		n=1	--XX108 n	nmn	F
	Lamp Reminder	On/Off	n=1/n=2 & 0	--XX109 n	P	F
	Brightness Mode	Bright/STD	n=1/n=2	--XX110 n	P	F
	Lamp Reset	Yes		n=1	--XX111 n	P
No			n=2			
Reset	Yes		n=1	--XX112 n	P	F
	No		n=2			
12V Trigger		Off/On	n=2 & 0/n=1	--XX192 n	P	F



Appendices

Information Format: INFOa	Standby Mode	a=0
	Warming up	a=1
	Cooling Down	a=2
	Out of Range	a=3
	Lamp Fail	a=4
	Lamp Door Open Error / Thermal Switch Error	a=5
	Fan Lock	a=6
	Over Temperature	a=7
	Lamp Hours Running Out	a=8

Function	RS232 command	Response		
Information display	-XX150 1	Okabbbccddde		
		a = Power State	On	a=1
			Off	a=0
		b = Lamp Hour		bbbb
		c = Input Source	None	c=0
			HDMI	c=1
			DVI-D	c=2
			VGA 1	c=3
			VGA 2	c=4
			S-video	c=5
			Video	c=6
		d = Firmware Version		dddd
		e = Display mode	None	e=0
			Presentation	e=1
			Bright	e=2
			Movie	e=3
			sRGB	e=4
			Blackboard	e=5
			Classroom	e=6
			User	e=7
			3D	e=8
Input Source	-XX121 1	Oka	None	a=0
			HDMI	a=1
			DVI-D	a=2
			VGA 1	a=3
			VGA 2	a=4
			S-video	a=5
			Video	a=6
Software Version	-XX122 1	Okdddd		
Display Mode	-XX123 1	Oka	None	a=0
			Presentation	a=1

Appendices

Function	RS232 command	Response		
			Bright	a=2
			Movie	a=3
			sRGB	a=4
			Blackboard	a=5
			Classroom	a=6
			3D	a=7
			User	a=8
Power State	--XX124 1	Oka	On	a=1
			Off	a=0
Brightness	--XX125 1	Oka		
Contrast	--XX126 1	Oka		
Aspect Ratio	--XX127 1	Oka	4:3	a=0
			16:9-I	a=1
			16:9-II	a=2
			Native	a=3
			Auto	a=4
Color Temperature	--XX128 1	Oka	Warm	a=0
			Medium	a=1
			Cold	a=2
Projection Mode	--XX129 1	Oka	Front-Desktop	a=0
			Rear-Desktop	a=1
			Front-Ceiling	a=2
			Rear-Ceiling	a=3
Model Name	--XX151 1	Oka	EX779	a=1
RS232 Version No	--XX152 1	Oka		