# **Table of Contents**

Table of Contents	1
Usage Notice	2
Safety Information	2
Precautions	3
Eye Safety Warnings	
Product Features	
Introduction	
Package Overview	
Product Overview	
Main Unit	
Control Panel	8
Input/Output Connections	9
Remote Control	10
Installation	11
Connecting the Projector	11
Connect to Computer/Notebook	11
Connect to Video Sources	12
Powering the projector On / Off	13
Powering On the Projector	13
Powering Off the Projector	14
Warning Indicator	14
Adjusting the Projected Image	15
Adjusting the Projector's Height	15
Adjusting the Projector's Focus	
Adjusting Projection Image Size	
User Controls	
Control Panel & Remote Control	18
Control Panel	18
Remote Control	
On-screen Display Menus	
How to operate	24
Menu Tree	25
IMAGE	
IMAGE   Advanced	
DISPLAY	
DISPLAY   3D	
SETUP	
SETUP   Signal (RGB)	
SETUP   Security	చర

SETUP   Advanced	40
SETUP   Network	41
OPTIONS	
OPTIONS   Advanced	
OPTIONS   Lamp Settings	48
ppendices	49
Troubleshooting	49
Replacing the lamp	54
Compatibility Modes	56
Computer Compatibility	56
Video Compatibility	57
RS232 Commands and Protocol	
tion List	58
RS232 Pin Assignments	58
RS232 Protocol Function List	59
Ceiling Mount Installation	63
Optoma Global Offices	64
Regulation & Safety Notices	66

### **Safety Information**



The lightning flash with arrow head within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

#### **Class B emissions limits**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

#### **Important Safety Instruction**

- 1. Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from over heating, it is recommended to install the projector in a location that does not block ventilation. As an example, do not place the projector on a crowded coffee table, sofa, bed, etc. Do not put the projector in an enclosure such as a book case or a cabinet that restricts air flow.
- Do not use the projector near water or moisture. To reduce the risk of fire and/or electric shock, do not expose the projector to rain or moisture.
- Do not install near heat sources such as radiators, heaters, stoves or any other apparatus such as amplifiers that emits heat.
- 4. Clean only with dry cloth.
- 5. Only use attachments/accessories specified by the manufacturer.
- 6. Do not use the unit if it has been physically damaged or abused. Physical damage/abuse would be (but not limited to):
  - Unit has been dropped.
  - Power supply cord or plug has been damaged.
  - Liquid has been spilled on to the projector.
  - Projector has been exposed to rain or moisture.
  - ☐ Something has fallen in the projector or something is loose inside.

    Do not attempt to service the unit yourself. Opening or removing covers may expose you to dangerous voltages or other hazards. Please call Optoma before you send the unit for repair.
- Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.
- 8. See projector enclosure for safety related markings.
- 9. The unit should only be repaired by appropriate service personnel.

### **Precautions**



Please follow all warnings, precautions and maintenance as recommended in this user's quide.

- Warning- Do not look into the projector's lens when the lamp is on. The bright light may hurt and damage your eyes.
- Warning- To reduce the risk of fire or electric shock, do not expose this projector to rain or moisture.
- Warning- Please do not open or disassemble the projector as this may cause electric shock.
- Warning- When replacing the lamp, please allow the unit to cool down. Follow instructions as described on pages 54-55.
- Warning- This projector will detect the life of the lamp itself. Please be sure to change the lamp when it shows warning messages.
- Warning- Reset the "Lamp Reset" function from the on-screen display "OPTIONS | Lamp Settings" menu after replacing the lamp module (refer to page 48).
- Warning- When switching the projector off, please ensure the cooling cycle has been completed before disconnecting power. Allow 90 seconds for the projector to cool down.
- Warning- Do not use lens cap when projector is in operation.
- Warning- When the lamp is approaching the end of its lifetime, the message "Lamp Warning: Lamp life exceeded." will show on the screen. Please contact your local reseller or service center to change the lamp as soon as possible.
- Warning- Do not look into or point the laser pointer on your remote control into your or someone's eyes. Laser pointer can cause permanent damage to eyesight.

#### Do:

- Turn off and unplug the power plug from the AC outlet before cleaning the product.
- Use a soft dry cloth with mild detergent to clean the display housing.
- Disconnect the power plug from AC outlet if the product is not being used for a long period of time.

#### Do not:

- Block the slots and openings on the unit provided for ventilation.
- Use abrasive cleaners, waxes or solvents to clean the unit.
- Use under the following conditions:
  - In extremely hot, cold or humid environments.
    - Ensure that the ambient room temperature is within 5 - 40°C.
    - Relative Humidity is 5 40°C, 80% (Max.), non-condensing.
  - In areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - In direct sunlight.

### **Eye Safety Warnings**



- Avoid staring/facing directly into the projector beam at all times. Keep your back to the beam as much as possible.
- When projector is used in a classroom, adequately supervise students when they are asked to point out something on the screen.
- In order to minimize the lamp power, use room blinds to reduce ambient light levels.

#### **Product Features**

- WXGA (1280x800) Native resolution
- HD compatible 1080p supported
- VGA monitor loop through (works on standby mode > 1W)
- BrilliantColor™ Technology
- Security Bar and Kensington Lock
- RS232 control
- Rapid shutdown
- Built-in speakers
- Network support



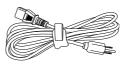
Monitor loop through only support in VGA1-In/ SCART/YPbPr.

### **Package Overview**

Unpack and inspect the box contents to ensure all parts listed below are in the box. If something is missing, please contact your nearest customer service center.



Projector with lens cap



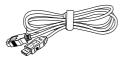
Power Cord 1.8m



VGA Cable 1.8m



Due to different applications in each Country, some regions may have different accessories.



USB Cable 1.8m



2 × AAA Batteries



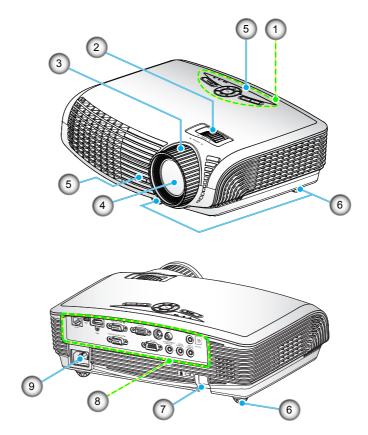
IR Remote Control

#### Documentation:

- ✓ User's Manual
- ✓ Warranty Card
- ✓ Quick Start Card
- **▼** WEEE Card (for EMEA only)

### **Product Overview**

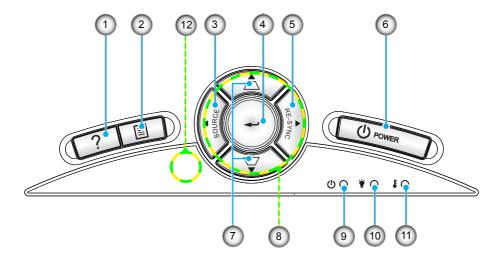
#### Main Unit



- 1. Control Panel
- 2. Zoom Ring
- 3. Focus Ring
- 4. Zoom Lens
- 5. IR Receivers

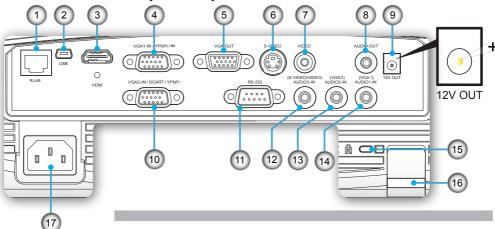
- 6. Tilt-Adjustment Feet
- 7. Security Bar
- 8. Input / Output Connections
- 9. Power Socket

#### **Control Panel**



- 1. Help
- 2. Menu
- 3. Source
- 4. Enter
- 5. Re-Sync
- 6. Power
- 7. Keystone Correction
- 8. Four Directional Select Keys
- 9. On/Standby LED
- 10. Lamp Fail LED
- 11. Temp LED
- 12. IR Receiver

#### **Input/Output Connections**

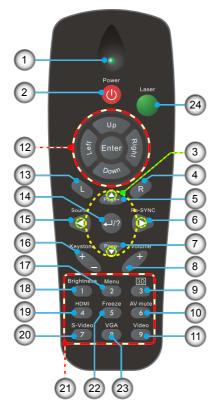


- RJ-45 Networking Connector
- 2. USB Connector (Connect to PC for Remote Mouse function)
- 3. HDMI Connector
- 4. VGA1-In/YPbPr/ (10) Connector (PC Analog Signal/Component Video Input/HDTV/YPbPr/ Wireless Dongle)
- VGA-Out Connector (Monitor Loop-through Output from VGA1-In)
- 6. S-Video Input Connector
- 7. Composite Video Input Connector
- 8. Audio Output Connector (3.5mm Mini Jack)
- 9. 12V Trigger Relay Connector (12V, 750mA)
  - VGA2-In/SCART/YPbPr Connector (PC Analog Signal/Component Video Input/HDTV/SCART/ YPbPr)
  - 11. RS-232 Connector (9-pin)
  - 12. Audio 3 Input connector (3.5mm mini jack) (for S-Video/Video)
  - 13. Audio 2 Input connector (3.5mm mini jack) (for VGA2)
  - 14. Audio 1 Input connector (3.5mm mini jack) (for VGA1)
  - 15. Kensington™ Lock Port
  - 16. Security Bar
  - 17. Power Socket



Monitor loop through only support in VGA1-In/ SCART/YPbPr.

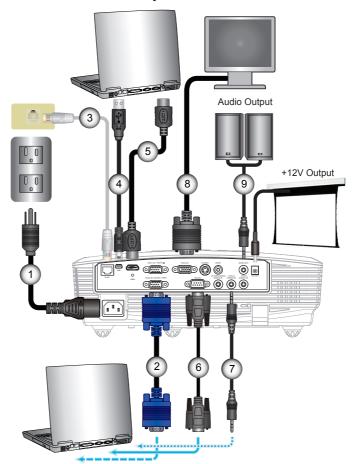
#### **Remote Control**



- 1. LED Indicator
- 2. Power On/Off
- 3. Four Directional Select Keys
- 4. Mouse Right Click
- 5. Page Up
- 6. Re-Sync
- 7. Page Down
- 8. Volume +/-
- 9. 3D
- 10. AV mute
- 11. Video
- 12. PC/Mouse control
- 13. Mouse Left Click
- 14. Enter/Help
- 15. Source
- 16. Keystone +/-
- 17. Menu
- 18. Brightness
- 19. HDMI
- 20. S-Video
- 21. Numbered keypad (for password input)
- 22. Freeze
- 23. VGA
- 24. Laser Pointer

### **Connecting the Projector**

### **Connect to Computer/Notebook**

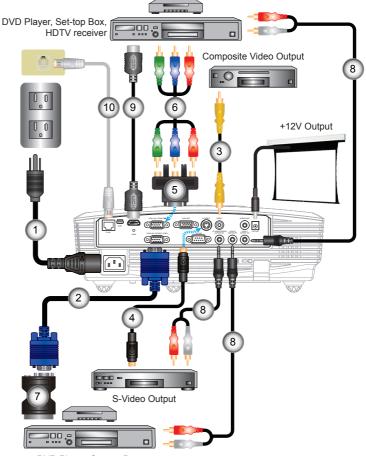


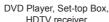


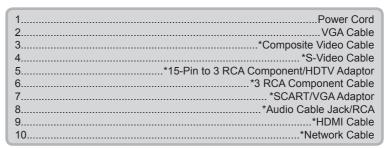
- Due to the difference in applications for each country, some regions may have different accessories.
- (\*) Optional accessory

1	Power Cord
2	VGA Cable
3	*Network Cable
4	USB Cable
5	*DVI/HDMI Cable
6	*RS232 Cable
7	*Audio Input Cable
	*VGA Output Cable
9	*Audio Output Cable
	•

#### **Connect to Video Sources**









- Due to the difference in applications for each country, some regions may have different accessories.
- \* (\*) Optional accessory

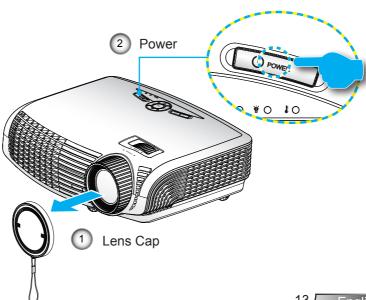
### Powering the projector On / Off

### **Powering On the Projector**

- 1. Remove the lens cap. •
- 2. Securely connect the power cord and signal cable. When connected, the POWER/STANDBY LED will turn Amber.
- 3. Turn on the lamp by pressing "U" button either on the top of the projector or on the remote. The POWER/STANDBY LED will now turn Green. 2

The startup screen will display in approximately 10 seconds. The first time you use the projector, you will be asked to select the preferred language and power saving mode.

- 4. Turn on and connect the source that you want to display on the screen (computer, notebook, video player, etc). The projector will detect the source automatically. If not, push menu button and go to "OPTIONS". Make sure that the "Source Lock" has been set to "Off".
- If you connect multiple sources at the same time, press the "SOURCE" button on the control panel or direct source keys on the remote control to switch between inputs.





When Power mode (Standby) is set to Eco (<1W), the VGA output, Audio pass-through and RJ45 will be deactivated when the projector is in standby.



Turn on the projector first and then select the signal sources.

### **Powering Off the Projector**

1. Press the ""button on the remote control or on the control panel to turn off the projector.

The following message will be displayed on the screen.



Press the "**U**" button again to confirm otherwise the message will disappear after 15 seconds. When you press the "**U**" button for the second time, the projector will display countdown timer and will shut down.

- 2. The cooling fans continue to operate for about 10 seconds for cooling cycle and the POWER/STANDBY LED will Flash Green. When the POWER/STANDBY LED lights solid Amber, the projector has entered standby mode. If you wish to turn the projector back on, you must wait until the projector has completed the cooling cycle and has entered standby mode. Once in standby mode, simply press "O" button to restart the projector.
- 3. Disconnect the power cord from the electrical outlet and the projector.
- 4. Do not turn on the projector immediately following a power off procedure.

### **Warning Indicator**

When the warning indicators (see below) come on, the projector will automatically shutdown:

- "LAMP" LED indicator is lit red and if "POWER/STANDBY" indicator flashes amber.
- "TEMP" LED indicator is lit red and if "POWER/STANDBY" indicator flashes amber. This indicates the projector has overheated. Under normal conditions, the projector can be switched back on.
- "TEMP" LED indicator flashes red and if "POWER/STAND-BY" indicator flashes amber.

Unplug the power cord from the projector, wait for 30 seconds and try again. If the warning indicator light up again, please contact your nearest service center for assistance.





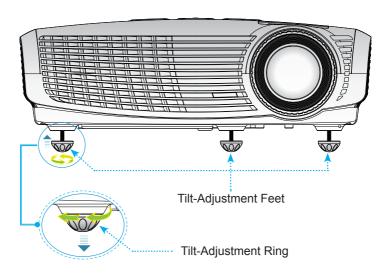
Contact the nearest service center if the projector displays these symptoms. See pages 64-65 for more information.

# Adjusting the Projected Image

### Adjusting the Projector's Height

The projector is equipped with elevator feet for adjusting the image height.

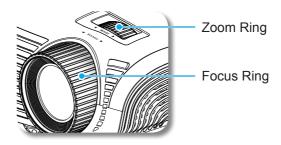
- 1. Locate the adjustable foot you wish to modify on the underside of the projector.
- Rotate the adjustable ring clockwise to raise the projector or counter clockwise to lower it. Repeat with the remaining feet as needed.



### **Adjusting the Projector's Focus**

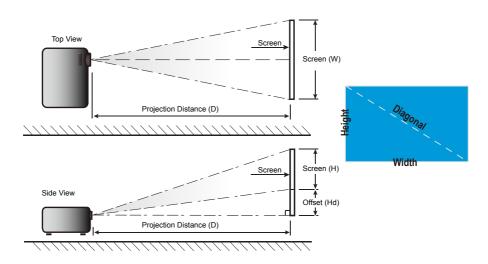
To focus the image, rotate the focus ring until the image is clear.

WXGA series: The projector will focus at distances from 3.93 to 32.8 feet (1.2 to 10.0 meters).



### **Adjusting Projection Image Size**

WXGA series: Projection Image Size from 36.3" to 362.0" (0.9 to 9.2 meters).

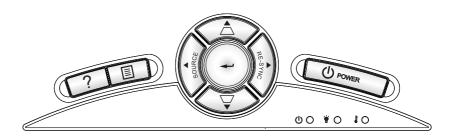


### WXGA

Diagonal length (inch) size of	Screen Size W x H			Projection Distance (D)			Offset (Hd			
	(m)		(inch)		(m)		(fe	et)	Olise	ι (πα) 
16:10 Screen	Width	Height	Width	Height	wide	tele	wide	tele	(m)	(feet)
44.00	0.95	0.59	37.40	23.23	1.20	1.50	3.94	4.92	0.07	0.24
60.00	1.29	0.81	50.79	31.89	1.70	2.00	5.58	6.56	0.10	0.33
70.00	1.51	0.94	59.45	37.01	1.90	2.30	6.23	7.54	0.12	0.38
80.00	1.72	1.08	67.72	42.52	2.20	2.60	7.22	8.53	0.13	0.44
90.00	1.94	1.21	76.38	47.64	2.50	3.00	8.20	9.84	0.15	0.49
100.00	2.15	1.35	84.65	53.15	2.80	3.30	9.18	10.82	0.17	0.55
120.00	2.58	1.62	101.57	63.78	3.30	4.00	10.82	13.12	0.20	0.66
150.00	3.23	2.02	127.17	79.53	4.10	5.00	13.45	16.40	0.25	0.82
180.00	3.88	2.42	152.76	95.28	5.00	6.00	16.40	19.68	0.30	0.98
250.00	5.38	3.37	211.81	132.68	6.90	8.30	22.63	27.22	0.42	1.37
302.00	6.50	4.07	255.91	160.24	8.30	10.00	27.22	32.80	0.50	1.66

This table is for user's reference only.

# Control Panel & Remote Control Control Panel



Using the Control Panel					
POWER	மு	Refer to the "Power On/Off the Projector" section on pages 13-14.			
RE-SYNC		Automatically synchronize the projector to the input source.			
Enter	<b>→</b>	Confirm your item selection.			
SOURCE		Press "SOURCE" to select an input signal.			
Menu		Press "Menu" to launch the on-screen display (OSD) menu. To exit OSD, Press "Menu" again.			
Four Directions Select Keys	al	Use ▲ ▼ ◀▶ to select items or make adjustments to your selection.			
Keystone		Use  ☐ ☐ to adjust image distortion caused by tilting the projector. (±40 degrees)			
HELP	?	Help Menu (refer to page 21).			
Lamp LED	₩ ○	Indicate the projector's lamp status.			
Temp LED	<b>!</b> O	Indicate the projector's temperature status.			
POWER/ STANDBY LED	<b>U</b> O	Indicate the projector's status.			

### **Remote Control**





Using the Remote Control					
Power (1)	Refer to the "Power On/Off the Projector" section on pages 13-14.				
Laser	Press to use laser pointer.				
L Button	Mouse left click.				
R Button	Mouse right click.				
Page +	Use this button to page up.				
Page -	Use this button to page down.				
	← Confirm your item selection.				
Enter ←/ Help?	? Help Menu (refer to page 21).				
Source	Press "Source" to select an input signal.				
Re-SYNC	Automatically synchronizes the projector to the input source.				
Four Directional Select Keys	Use ▲ ▼ ◀▶ to select items or make adjustments to your selection.				
Keystone +/-	Adjust image distortion caused by tilting the projector.				
Volume +/-	Adjust to increase / decrease the volume.				
Brightness	Adjust the brightness of the image.				
3D	Press the "3D" to turn the 3D OSD menu on/off.				
Menu	Press "Menu" to launch the on-screen display (OSD) menu. To exit OSD, press "Menu" again.				
HDMI	Press "HDMI" to choose HDMI source.				
•	<del></del>				



Using the Remote Control				
Freeze	Press "Freeze" to pause the screen image. Press this button again to unlock.			
AV mute	Momentarily turns off/on the audio and video.			
S-Video	Press "S-Video" to choose S-Video source.			
VGA	Press "VGA" to choose VGA sources.			
Video	Press "Video" to choose Composite video source.			

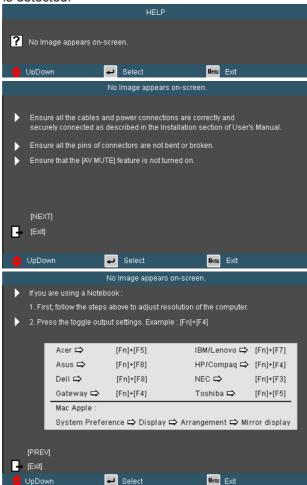
### Using the HELP button

The HELP function ensures easy setup and operation.

Press the "?" button on the remote control or press the "HELP" button on the control panel to open the Help Menu.



▶ Help menu button functions only when no input source is detected.



If input source is detected and help button is pressed, the following pages will appear to help diagnose any problems.





Please refer to the "Troubleshooting" section on pages 49-53 for more details.

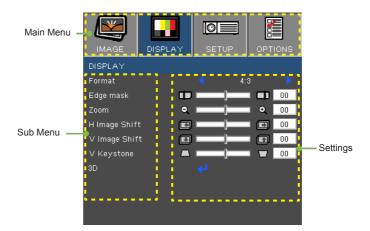


### **On-screen Display Menus**

The Projector has multilingual On-screen Display menus that allow you to make image adjustments and change a variety of settings. The projector will automatically detect the source.

#### How to operate

- To open the OSD menu, press "Menu" on the Remote Control or Projector Keypad.
- When OSD is displayed, use ◀ ▶ keys to select any item in the main menu. While making a selection on a particular page, press ▼ or "Enter" key to enter sub menu.
- 3. Use ▲ ▼ keys to select the desired item and adjust the settings using ◀▶ key.
- Select the next item to be adjusted in the sub menu and adjust as described above.
- 5. Press "Enter" to confirm, and the screen will return to the main menu.
- 6. To exit, press "MENU" again. The OSD menu will close and the projector will automatically save the new settings.



### **Menu Tree**

Display Mode  Brightness  Contrast  Sharpness  *' Color  *' Tint  Advanced	Gamma BrilliantColor™ Color Temp.	Presentation / Bright / Movie / sRGB / Blackboard / Classroom / User / 3D -50~50 -50~5
Contrast Sharpness *1 Color *1 Tint	BrilliantColor™	-50~50 1~15 -50~50 -50~50 Film / Video / Graphics / PC
Sharpness  #1 Color  #1 Tint	BrilliantColor™	1~15 -50~50 -50~50 Film / Video / Graphics / PC
*1 Color *1 Tint	BrilliantColor™	-50~50 -50~50 Film / Video / Graphics / PC
#1 Tint	BrilliantColor™	-50~50 Film / Video / Graphics / PC
	BrilliantColor™	Film / Video / Graphics / PC
Advanced	BrilliantColor™	<u> </u>
		0~10
	Color Temp.	
		Warm / Medium / Cold
	Color Settings	Red Gain / Green Gain / Blue Gain / Red Bias / Green Bias / Blue Bias / Cyan / Magenta / Yellow / Reset / Exit
	Color Space	AUTO / RGB / YUV
	·	*2 AUTO / RGB (0-255) / RGB (16-235) / YUV
	Input Source	VGA1 / VGA2 / Video / S-Video / HDMI
	Exit	
Format		*3 4:3 / 16:9 or 16:10 / LBX / Native / AUTO
Edge Mask		0~10
Zoom		-5~25 (80%~200%)
H Image Shift		-50~50
V Image Shift		-50~50
V Keystone		-40~40
3D	( 3D	Off / DLP-Link / IR
	#43D Sync. Invert	On / Off
	Exit	
Language		English / Deutsch / Français / Italiano / Español / Portugués / Svenska / Nederlands / Norsk/Dansk / Polski / Suomi / Русский / ελληνικά / Magyar / Čeština / طربی افرسی / 繁體中文 / 简体中文 日本語 / 한국어 / ไพย / Türkçe
*3 Screen Type		16:10 / 16:9
Projection		
Menu Location		
*5 Signal		On / Off
		0~31
		-5~5
		-5~5
	` '	-5~5
Oit		0-105
Security	1	On / Off
		Month / Day / Hour
	Edge Mask Zoom H Image Shift V Image Shift V Keystone 3D Language	Color Space

Main Menu	Sub Menu		Settings
Setup	Projector ID		0~99
•	Mute		On / Off
	Volume		0~10
	Audio Input		Default / Audio1 / Audio2 / Audio3
	Advanced	Logo	Optoma / Neutral / User
		Logo Capture	
		Exit	
	RS232		RS232 / Network
	Network	Network State	
		DHCP	
		IP Address	
		Subnet mask	
		Gateway	
		DNS	
		Apply	Yes / No
	·	Exit	
	Wireless		On / Off
Options	Source Lock		On / Off
	High Altitude		On / Off
	Information Hide		On / Off
	Keypad Lock		On / Off
	Background Color		Black / Red / Blue / Green / White
	Advanced	Direct Power On	On / Off
		Auto Power Off (min.)	0~180
		Sleep Timer (min.)	0~995
		Power Mode (Standby)	Eco. / Active
		Exit	
	Lamp Settings	Lamp Hours	
	İ	Lamp Reminder	On / Off
		Brightness Mode	STD/Bright
		Lamp Reset	Yes / No
		Exit	
	Reset	·	



- Please note that the on-screen display (OSD) menus vary according to the signal type selected and the projector model you are using.
- (#1) "Color" and "Tint" are only supported in Video mode.
- (#2) For HDMI source only.
- \* (#3) 16:9 or 16:10 depend on "Screen Type" setting.
- \* (#4) "3D Sync Invert" is only available when 3D is enabled.
- \* (#5) "Signal" is only supported in Analog VGA (RGB) signal.

### **IMAGE**



#### Display Mode

There are many factory presets optimized for various types of images.

- ▶ Presentation: Good color and brightness from PC input.
- ▶ Bright: Maximum brightness from PC input.
- Movie: For home theater.
- sRGB: Standardised accurate color.
- ▶ Blackboard: This mode should be selected to achieve optimum color settings when projecting onto a blackboard (green).
- Classroom: This mode is recommended for projecting in a classroom.
- ▶ User: User's settings.
- 3D: Recommended setting for 3D mode enabled. Any further adjustments by the user in 3D will be saved in this mode for further use.

#### <u>Brightness</u>

Adjust the brightness of the image.

- ▶ Press the ◀ to darken image.
- ▶ Press the ▶ to lighten the image.

#### Contrast

The contrast controls the degree of difference between the lightest and darkest parts of the picture.

- ▶ Press the ◀ to decrease the contrast.
- ▶ Press the ▶ to increase the contrast.

#### Sharpness

Adjust the sharpness of the image.

- ▶ Press the ◀ to decrease the sharpness.
- ▶ Press the ▶ to increase the sharpness.

#### Color

Adjust a video image from black and white to fully saturated color.

- ▶ Press the ◀ to decrease the amount of color in the image
- ▶ Press the ▶ to increase the amount of color in the image.

#### Tint

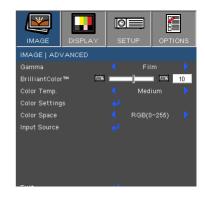
Adjust the color balance of red and green.

- ▶ Press the ◀ to increase the amount of green in the image.
- ▶ Press the ▶ to increase the amount of red in the image.



 "Color" and "Tint" functions are only supported under Video mode.

### IMAGE | Advanced



#### <u>Gamma</u>

This allows you to choose a degamma table that has been fine-tuned to bring out the best image quality for the input.

- Film: for home theater.
- Video: for video or TV source.
- ▶ Graphics: for image source.
- ▶ PC: for PC or computer source.

#### BrilliantColor™

This adjustable item utilizes a new color-processing algorithm and system level enhancements to enable higher brightness while providing true, more vibrant colors in picture. The range is from "0" to "10". If you prefer a stronger enhanced image, adjust toward the maximum setting. For a smoother, more natural image, adjust toward the minimum setting.

#### Color Temp

If set to cold temperature, the image looks more blue. (cold image) If set to warm temperature, the image looks more red. (warm image)

#### **Color Settings**

Press  $\checkmark$  into the next menu as below and then use  $\blacktriangle$  or  $\blacktriangledown$  to select item.

- Red/Green/Blue/Cyan/Magenta/Yellow: Use ◀ or ▶ to select Red, Green, Blue, Cyan, Magenta and Yellow Colors.
- Reset: Choose "Yes" to return the factory default settings for color adjustments.



#### Color Space

Select an appropriate color matrix type from AUTO, RGB or YUV.

#### **Input Source**

Use this option to enable / disable input sources. Press  $\checkmark$  to enter the sub menu and select which sources you require. Press "Enter" to finalize the selection. The projector will not search for inputs that are not selected.

### **DISPLAY**



#### **Format**

Use this function to choose your desired aspect ratio.

- ▶ 4:3: This format is for 4×3 input sources.
- ▶ 16:9: This format is for 16×9 input sources, like HDTV and DVD enhanced for Wide screen TV.
- ▶ 16:10: This format is for 16×10 input sources, like widescreen laptops.
- ▶ LBX: This format is for non-16x9, letterbox source and for users who use external 16x9 lens to display 2.35:1 aspect ratio using full resolution.
- Native: This format displays the original image without any scaling.
- AUTO: Automatically selects the appropriate display format.

16:10 Screen	480i/p	576i/p	1080i/p	720p	PC	
4:3	1066 x 800 center					
16:10			1280 x 800 c	enter		
LBX	1280 x 960 center, then get the central 1280 x 800 image to display					
Native	1:1 ma		1:1 map- ping display 1280 x 800	1280 x 720 center	1:1 mapping centered.	



 16:9 or 16:10 depend on "Screen Type" setting.

16:9 Screen	480i/p	576i/p	1080i/p	720p	PC	
4:3	960 x 720 center					
16:9		1280 x 720 center				
LBX	1280 x 960 center, then get the central 1280 x 720 image to display					
Native	1:1 ma	apping ered.	1:1 map- ping display 1280 x 720	1280 x 720 center	1:1 mapping centered.	



- Each I/O has different setting of "Edge Mask".
- "Edge Mak" and "Zoom" can't work at same time.

#### Edge Mask

Edge mask function removes the noise in a video image. Edge mask the image to remove video encoding noise on the edge of video source.

#### Zoom

- ▶ Press the ◀ to reduce the size of an image.
- ▶ Press the ▶ to magnify an image on the projection screen.

#### H Image Shift

Shift the projected image position horizontally.

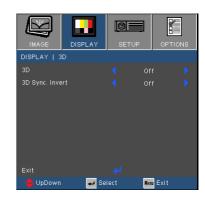
#### V Image Shift

Shift the projected image position vertically.

#### V Keystone

Press the ◀ or ▶ to adjust image distortion vertically. If the image looks trapezoidal, this option can help make the image rectangular.

### DISPLAY | 3D



### \_\_3D



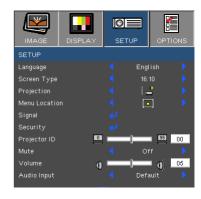
- "IR" options may vary according to model.
- "3D Sync Invert" is only available when 3D is enabled and this mode 3D is for DLP link glass only.
- Compatible 3D source, 3D content and active shutter glasses are required for 3D viewing.

- ▶ Off: Select "Off" to turn 3D settings off for 3D images.
- DLP Link: Select "DLP Link" to use optimized settings for DLP Link 3D images.
- IR: Select "IR" to use optimized settings for IR-based 3D images.

#### 3D Sync. Invert

- ▶ Press the "On" to invert left and right frame contents.
- Press the "Off" for default frame contents.

### **SETUP**



#### <u>Language</u>

Choose the multilingual OSD menu. Press ◀ or ▶ into the sub menu and then use the ▲ or ▼ key to select your preferred language. Press "Enter" to finalize the selection.



# Note

Rear-Desktop and Rear-Ceiling are to be used with a translucent screen.

### Screen Type

Choose the screen type from 16:10 or 16:9.

#### **Projection**



Front-Desktop

This is the default selection. The image is projected straight on the screen.

Rear-Desktop

When selected, the image will appear reversed.

Front-Ceiling

When selected, the image will turn upside down.

Rear-Ceiling

When selected, the image will appear reversed in upside down position.

#### Menu Location

Choose the menu location on the display screen.

#### Projector ID

ID definition can be set up by menu (range 0~99), and allow user control an individual projector by RS232. Refer to page 59-62 for the complete list of RS232 commands.

#### Mute

- Choose the "On" to turn mute on.
- ▶ Choose the "Off" to turn mute off.

#### Volume

- ▶ Press the ◀ to decrease the volume.
- ▶ Press the ▶ to increase the volume.

#### Audio Input

The default audio settings are on the back panel of the projector. Use this option to reassign any of the Audio Inputs (1,2 or 3) to the current image source. Each Audio input can be assigned to more than one video source.

- Audio 1: VGA 1.
- Audio 2: VGA 2.
- Audio 3: S-Video/Video.
- Default: Set Input back to default video source.

### **SETUP**



#### RS232

- RS232: Allow RS232 control of an individual projector. (Default setting)
- Network: Allow projector control via web browser (Internet Explorer) using the network.

#### Wireless

Choose the "On" to turn on the Wireless.



 "Wireless" is onlyfunctional with VGA connector.

Marning:

Wired VGA will not function and the projector maybe shut down if Wireless is turned on

# SETUP | Signal (RGB)



 "Signal" is only supported in Analog VGA (RGB) signal.



#### Automatic

Automatically selects the singal. If you use this function, the Phase, frequency items are grayed out, and if Signal is not automatic, the phase, frequency items will appear for user to manually tune and saved in settings after that for next time projector turns off and on again.

#### Phase

Synchronize the signal timing of the display with the graphic card. If the image appears to be unstable or flickers, use this function to correct it.

### Frequency

Change the display data frequency to match the frequency of your computer's graphic card. Use this function only if the image appears to flicker vertically.

### H. Position

- ▶ Press the ◀ to move the image left.
- ▶ Press the ▶ to move the image right.

### V. Position

- ▶ Press the ◀ to move the image down.
- ▶ Press the ▶ to move the image up.

# SETUP | Security



### Security

- ▶ On: Choose "On" to use security verification when the turning on the projector.
- Off: Choose "Off" to be able to switch on the projector without password verification.

### Security Timer

Use this function to set the how long (Month/Day/Hour) the projector can be used. Once this time has elapsed you will be requested to enter your password again.

### Change Password

- First time:

  - 2. The password has to be 4 digits.
  - Use number button on the remote to enter your new password and then press "

    " key to confirm your password.
- Change Password:
  - 1. Press "

    " to input old password.
  - 2. Use number button to enter current password and then press "◄" to confirm.
  - 3. Enter new password (4 digits in length) using the number buttons on the remote, then press "←" to confirm.



 Password default value is "1234" (first time).



- ▶ If the incorrect password is entered 3 times, the projector will automatically shut down.
- If you have forgotten your password, please contact your local office for support.

# SETUP | Advanced



### Logo

Use this function to set the desired startup screen. If changes are made they will take effect the next time the projector is powered on.

- Doptoma: The default startup screen.
- Neutral: Neutral startup screen.
- ▶ User: Use stored picture from "Logo Capture" function.

### Logo Capture

Press 
to capture an image of the picture currently displayed on screen.



For successful logo capture, please ensure that the input signal does not exceed the projector's native resolution. (WXGA:1280x800).

# SETUP | Network



### Network State

Display the network connection status.

#### DHCP

Use this function to select your desired startup screen. If you change the setting from one to another, when you exit the OSD menu, the new setting will take effect on next open.

- On: Assign an IP address to the projector from an external DHCP server automatically.
- ▶ Off: Assign an IP address manually.

### IP Address

Select an IP address.

### Subnet Mask

Select subnet mask number.

### Gateway

Select the default gateway of the network connected to the projector.

### <u>DNS</u>

Select DNS number.

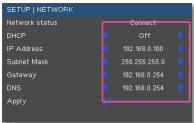
### Apply

Press "

" and then choose "Yes" to apply the selection.

### How to use web browser to control your projector

 Turn on DHCP to allow the DHCP server to automatically assign an IP, or manually enter the required network information.

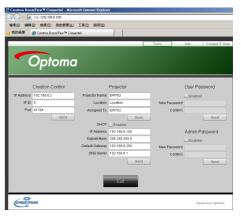


- Then choose apply and press "
   —
   " button to complete the configuration process.
- Open your web browser and type in the projector's IP address from the OSD LAN screen. The following web page will display as below:





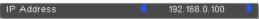
• When you used the projector IP address, you will can not link to your service server. 4. The crestron control settings can be found in the [tools] tab.(see picture) Please note, each field can only contain a limited number of characters, as shown in the table below. (spaces and the other punctuation included):



Category	Item	Input-Length (characters)
	IP Address	15
Crestron Control	IP ID	2
	Port	5
	Projector Name	10
Projector	Location	9
	Assigned To	9
	DHCP (Enabled)	(N/A)
	IP Address	15
Network Configuration	Subnet Mask	15
Comgaration	Default Gateway	15
	DNS Server	15
	Enabled	(N/A)
User Password	New Password	15
	Confirm	15
	Enabled	(N/A)
Admin Password	New Password	15
	Confirm	15

#### When making a direct connection from your computer to the projector

Step 1: Find an IP Address (192.168.0.100) from LAN function of projector.



- Step 2: Select apply and press "Enter" button to submit function or press "menu" key to exit.
- Step 3: To open Network Connections, click Start. click Control Panel. click Network and Internet Connections, and then click Network Connections. Click the connection you want to configure. and then, under Network Tasks , click Change settings of this connection.
- Step 4: On the General tab, under This connection uses the following items, click Internet Protocol (TCP/IP), and then click "Properties."



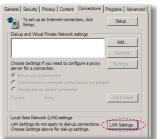
- Step 5: Click Use the following IP address, and type in as below:
  - 1) IP address: 192.168.0.100
  - 2) Subnet mask: 255.255.255.0 3) Default gateway:192.168.0.254
  - You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. Use the following IP address: 192 . 168 . 0 . 100 255 . 255 . 255 . 0

192 - 168 - 0 - 254

Subnet mask:

Default gateway:

Step 6: To open Internet Options, click IE web browser, click Internet Options, click the Connections tab and click "LAN Settings..."



Step 7: The Local Area Network (LAN) Setting dialog box appears, In the Proxy Server area, cancel the Use a proxy server for your LAN check box.. then click "OK" button twice.



Step 8: Open your IE and type in the IP address of 192.168.0.100 in the URL then press "Enter" key.

#### **Crestron RoomView Control Tool**

Crestron RoomView™ provides a central monitoring station for 250+ control systems on a single Ethernet network (more are possible, the number depends on the combination of IP ID and IP address). Crestron RoomView monitors each projector, including projector's online status, system power, lamp life, network setting and hardware faults, plus any custom attribute as defined by the Administrator. The Administrator can add, delete, or edit room information, contact information and events, which are logged automatically by the software for all users. (Operation UI as following image)

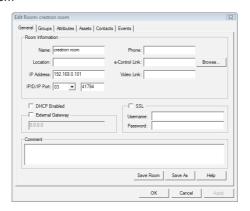
#### 1. Main Screen



#### 2. Fdit Room



 Crestron Room-View function support is dependent on models.



#### 3. Edit Attribute



#### 4. Edit Event



For more information, please visit http://www.crestron.com/getroomview.

# **OPTIONS**



# Моте

With dust filter installed, High Altitude mode must be turned on. Dust filter is Optional and may not be required in some regions.



To turn off the keypad lock, press and hold "Enter" key on top of the projector for 5 seconds.

#### Source Lock

- ▶ On: The projector will only search current input connection.
- Off: The projector will search for other signals if the current input signal is lost.

#### High Altitude

When "On" is selected, the fans will spin faster. This feature is useful in high altitude areas where the air is thin.

### Information Hide

- ▶ On: Choose "On" to hide the info message.
- ▶ Off: Choose "Off" to show the "searching" message.

### Keypad Lock

When the keypad lock function is "On", the control panel will be locked however, the projector can be operated by the remote control. By selecting "Off", you will be able to reuse the control panel.

### Background Color

Use this feature to display a "Black", "Red", "Blue", "Green" or "White", screen when no signal is available.

### Reset

Choose "Yes" to return the display parameters on all menus to the factory default settings.

# OPTIONS | Advanced



#### **Direct Power On**

Choose "On" to activate Direct Power mode. The projector will automatically power on when AC power is supplied, without pressing the "�" key on the projector control panel or on the remote control.

### Auto Power Off (min)

Sets the countdown timer interval. The countdown timer will start, when there is no signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

### Sleep Timer (min)

Sets the countdown timer interval. The countdown timer will start, with or without a signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

### Power Mode (Standby)

- ▶ Eco.: Choose "Eco." to save power dissipation further < 1W.
- Active: Choose "Active" to return to normal standby and the VGA out port will be enabled.



When Power mode (Standby) is set to Eco (<1W), the VGA output, Audio pass-through and RJ45 will be deactivated when the projector is in standby.

# OPTIONS | Lamp Settings



#### Lamp Hours

Display the projection time.

### Lamp Reminder

Choose this function to show or to hide the warning message when the changing lamp message is displayed.

The message will appear 30 hours before suggested replacement of lamp.

### Brightness Mode

- STD: Choose "STD" to dim the projector lamp which will lower power consumption and extend the lamp life.
- ▶ BRIGHT: Choose "BRIGHT" to increase the brightness.

### Lamp Reset

Reset the lamp hour counter after replacing the lamp.

# Nоте

 When ambient temperature is over 40°C in operating, the projector will switch to STD automatically.

# **Troubleshooting**

If you experience a problem with your projector, please refer to the following information. If a problem persists, please contact your local reseller or service center.

# ? No image appears on-screen

- Ensure all the cables and power connections are correctly and securely connected as described in the "Installation" section.
- ▶ Ensure all the pins of connectors are not bent or broken.
- Check if the projection lamp has been securely installed. Please refer to the "Replacing the lamp" section.
- Make sure you have removed the lens cap and the projector is switched on.
- Ensure that the "AV mute" feature is not turned on.

# Partial, scrolling or incorrectly displayed image

- Press "Re-SYNC" on the remote.
- If you are using a PC:

#### For Windows 95, 98, 2000, XP, Windows 7:

- 1. Open the "My Computer" icon, the "Control Panel" folder, and then double click on the "Display" icon.
- 2. Select the "Settings" tab.
- 3. Verify that your display resolution setting is lower than or equal to UXGA (1600 × 1200).
- 4. Click on the "Advanced Properties" button.

If the projector is still not projecting the whole image, you will also need to change the monitor display you are using. Refer to the following steps.

- Verify the resolution setting is lower than or equal to UXGA (1600 × 1200).
- 6. Select the "Change" button under the "Monitor" tab.

- Click on "Show all devices". Next, select "Standard monitor types" under the SP box; choose the resolution mode you need under the "Models" box.
- 8. Verify that the resolution setting of the monitor display is lower than or equal to UXGA (1600 × 1200).
- If you are using a Notebook:
  - First, follow the steps above to adjust resolution of the computer.
  - Press the appropriate keys listed below for your notebook manufacturer to send signal out from notebook to projector. Example: [Fn]+[F4]

Acer ⇒	[Fn]+[F5]	IBM/Lenovo ⇔	[Fn]+[F7]			
Asus ⇒	[Fn]+[F8]	HP/Compaq ⇔	[Fn]+[F4]			
Dell ⇒	[Fn]+[F8]	NEC ⇔	[Fn]+[F3]			
Gateway ⇒	[Fn]+[F4]	Toshiba ⇔	[Fn]+[F5]			
Mac Apple: System Prefedisplay	Mac Apple: System Preference ⇒ Display ⇒ Arrangement ⇒ Mirror					

- If you experience difficulty changing resolutions or your monitor freezes, restart all equipment including the projector.
- **?** The screen of the Notebook or PowerBook computer is not displaying your presentation
- If you are using a Notebook PC Some Notebook PCs may deactivate their own screens when a second display device is in use. Each has a different way to be reactivated. Refer to your computer's manual for detailed information.
- Image is unstable or flickering
- ▶ Use "Phase" to correct it. See page 37 for more information.
- ▶ Change the monitor color setting on your computer.
- [7] Image has vertical flickering bar
- Use "Frequency" to make an adjustment. See page 37 for more information.
- Check and re-configure the display mode of your graphic card to make it compatible with the projector.

# ? Image is out of focus

- Make sure the lens cap is removed.
- Adjust the Focus Ring on the projector lens.
- Make sure the projection screen is between the required distance. See page 16.

# The image is stretched when displaying 16:9 DVD title

- ▶ When you play anamorphic DVD or 16:9 DVD, the projector will show the best image when the projector display mode is set to 16:9 in the OSD.
- ▶ If you play 4:3 format DVD titles, please change the format to 4:3 in the projector OSD.
- If the image is still stretched, you will also need to adjust the aspect ratio by referring to the following:
- Please setup the display format as 16:9 (wide) aspect ratio type on your DVD player.

# ? Image is too small or too large

- Move the projector closer to or further from the screen.
- Press "Menu" button on the remote control or projector panel, go to "DISPLAY → Format" and try the different settings.

### 7 Image has slanted sides

- If possible, reposition the projector so that it is horizontally centered on the screen and below the bottom of the screen.
- ▶ Press "Keystone +/-" button on the remote control or press "☐ / ☐" on the projector panel, until the sides are vertical.

# ? Image is reversed

▶ Select "SETUP → Projection" from the OSD and adjust the projection direction.



 Use of Keystone is not recommended.

# The projector stops responding to all controls

- ▶ If possible, turn off the projector, then unplug the power cord and wait at least 60 seconds before reconnecting power.
- ▶ Check that "Keypad Lock" is not activated by trying to control the projector with the remote control.

# 2 Lamp burns out or makes a popping sound

▶ When the lamp reaches its end of life, it will burn out and may make a loud popping sound. If this happens, the projector will not turn on until the lamp module has been replaced. To replace the lamp, follow the procedures in the "Replacing the Lamp" section on pages 54-55.

### ? LED lighting message

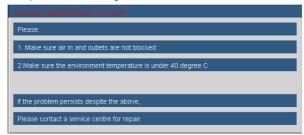
Message	O O POWER/STAND- BY LED	<b>∦</b> ○ Temp-LED	₩ ○ Lamp-LED
	(Green/Amber)	(Red)	(Red)
Standby State (Input power cord)	Amber	0	0
Power on (Warming)	Flashing Green	0	0
Lamp lighting	Green	0	0
Power off (Cooling)	Flashing Green	0	0
Error (Over Temp.)	Flashing Amber	*	0
Error (Fan fail)	Flashing Amber	Flashing	0
Error (Lamp fail)	Flashing Amber	0	<b>*</b>



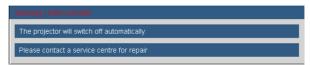
<sup>\*</sup> POWER/STANDBY LED be ON when OSD appears, be OFF when OSD disappears.

# ? On Screen Messages

▶ Temperature warning:



Fan failed:



Lamp warning:



Out of display range:



# ? If the remote control does not work

- Check the operating angle of the remote control is within ±15° both horizontally and vertically of one of the IR receivers on the projector.
- Make sure there are not any obstructions between the remote control and the projector. Move to within 7 m (±0°) of the projector.
- Make sure the batteries are inserted correctly.
- ▶ Replace batteries if they are exhausted.

# Replacing the lamp

The projector automatically detects the lamp life. When the lamp life is nearing the end of use, you will receive a warning message.



When you see this message, please contact your local reseller or service center to change the lamp as soon as possible. Make sure the projector has been cooled down for at least 30 minutes before changing the lamp.

### ⚠ A CAUTION!

HIGH PRESSURE LAMP MAY EXPLODE IF IMPROPERLY HANDED. REFER TO LAMP REPLACEMENT INSTRUCTIONS.

#### ATTENTION:

Les lampes à haute pression peuvent exploser si elles sont mal utilisées.

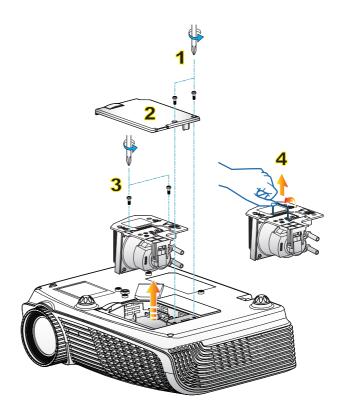
Confier l'entretien à une personne qualifiée.

⚠ Warning: If ceiling mounted, please use caution when opening the lamp access panel. It is recommended to wear safety glasses if changing the bulb when ceiling mounted. "Caution must be used to prevent any loose parts from falling out of projector."

 Warning: To reduce the risk of personal injury, do not drop the lamp module or touch the lamp bulb. The bulb may shatter and cause injury if it is dropped.



- The screws on the lamp cover and the lamp cannot be removed.
- The projector cannot be turned on if the lamp cover has not been placed back on the projector.
- Do not touch the glass area of the lamp. Hand oil can cause the lamp to shatter. Use a dry cloth to clean the lamp module if it was accidentally touched.



### - Lamp Replacement Procedure: -

- 1. Switch off the power to the projector by pressing the "**也**" button.
- 2. Allow the projector to cool down for at least 30 minutes.
- 3. Disconnect the power cord.
- 4. Unscrew the two screws on the cover. 1
- 5. Lift up and remove the cover. 2
- 6. Unscrew the two screws on the lamp module. 3
- 7. Lift up the lamp handle and remove the lamp module slowly and carefully. 4 To replace the lamp module, reverse the previous steps.
- 8. Turn on the projector and use "Lamp Reset" after the lamp module is replaced.

Lamp Reset: (i) Press "Menu" → (ii) Select "OPTIONS" → (iii) Select "Lamp Settings" → (iv) Select "Lamp Reset" → (v) Select "Yes".

# **Compatibility Modes**

# Computer Compatibility

Comp	uter Con	ipatibility	
Marila	Deschiffen	Anglog	ı/Digital
Mode	Resolution	V-Sync (Hz)	H-Sync (KHz)
VGA	640 × 350	70	31.50
VGA	640 × 350	85	37.90
VGA	640 × 400	85	37.90
VGA	640 × 480	60	31.50
VGA	640 × 480	67	-
VGA	640 × 480	72	37.90
VGA	640 × 480	75	37.50
VGA	720 × 400	70	31.50
VGA	720 × 400	85	37.90
SVGA	800 × 600	56	35.20
SVGA	800 × 600	60	37.90
SVGA	800 × 600	72	48.10
SVGA	800 × 600	75	46.90
SVGA	800 × 600	120	-
	832 × 624	75	-
XGA	1024 × 768	60	48.40
XGA	1024 × 768	70	56.50
XGA	1024 × 768	75	60.00
XGA	1024 × 768	120	-
	1152 × 870	75	-
HD	1280 x 720	60	45.00
HD	1280 x 720	120	-
WXGA-800	1280 x 800	60	-
SXGA	1280 x 1024	60	64.00
	1366 x 768	60	-
	1440 x 900	60	55.935
SXGA+	1400 x 1050	60	-
UXGA	1600 × 1200	60	75.00
	1680 x 1050	60	-
HDTV	1920 x 1080	30 33.80	



- For widescreen resolution (WXGA), the compatibility support is dependent on Notebook/PC models.
- 120Hz input signals may be dependent on graphics cards support.
- Please note that using resolutions other than native 1024 x 768 (XGA model), 1280 x 800 (WXGA model) may result in some loss of image clarity.

# Computer Compatibility

Mode	Resolution	V-Sync (Hz)	H-Sync (KHz)
MAC LC 13"	640 × 480	66.66	34.98
MAC II 13"	640 × 480	66.68	35.00
MAC 16"	832 × 624	74.55	49.73
MAC 19"	1024 × 768	75	60.24
MAC	1152 × 870	75.06	68.68
MAC G4	640 × 480	60	31.35
i MAC DV	1024 × 768	75	60.00
i MAC DV	1152 × 870	75	68.49

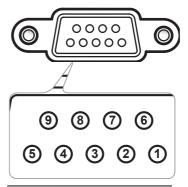
# Video Compatibility

NTSC	M (3.58MHz), 4.43 MHz
PAL	B, D, G, H, I, M, N
SECAM	B, D, G, K, K1, L
SDTV	480i/p@60Hz, 576i/p@50Hz
HDTV	720p@50Hz/60Hz, 1080i@50Hz/60Hz, 1080p@24Hz/25Hz/30Hz/50Hz/60Hz

# **RS232 Commands and Protocol Function List**

# **RS232 Pin Assignments**





Pin no.	Spec. (from projector side)
1	N/A
2	RXD
3	TXD
4	N/A
5	GND
6	N/A
7	N/A
8	N/A
9	N/A

### **RS232 Protocol Function List**



1. There is a <CR> after all ASCII commands.

2. 0D is the HEX code for <CR> in ASCII code.

Baud Rate: 9600 Data Bits: 8 Parity: None Stop Bits: 1

Flow Control: None

UART16550 FIFO: Disable Projector Return (Pass): P Projector Return (Fail): F XX=00-99, projector's ID, XX=00 is for all projectors

222 ACCII C .	HEV C. I.	D		D 2.0
232 ASCII Code	HEX Code	Function		Description
~XX00 1	7E 30 30 30 30 20 31 0D	Power ON		
~XX00 0	7E 30 30 30 30 20 30 0D	Power OFF		(0/2 for backward compatible)
~XX00 1 ~nnnn	7E 30 30 30 30 20 31 20 a 0D	Power ON with Password		~nnnn = ~0000 (a=7E 30 30 30 30)
				~9999 (a=7E 39 39 39 39)
~XX01 1	7E 30 30 30 31 20 31 0D	Resync		
~XX02 1	7E 30 30 30 32 20 31 0D	AV Mute	On	
~XX02 0	7E 30 30 30 32 20 30 0D		Off (0/2 for backward	compatible)
~XX03 1	7E 30 30 30 33 20 31 0D	Mute	On	• /
~XX03 0	7E 30 30 30 33 20 30 0D		Off (0/2 for backward	compatible)
~XX04 1	7E 30 30 30 34 20 31 0D	Freeze		•
~XX04 0	7E 30 30 30 34 20 30 0D	Unfreeze	(0/2 for backward com	patible)
~XX05 1	7E 30 30 30 35 20 31 0D	Zoom Plus		
~XX06 1	7E 30 30 30 36 20 31 0D	Zoom Minus		
~XX12 1	7E 30 30 31 32 20 31 0D	Direct Source Commands	HDMI	
~XX12 5	7E 30 30 31 32 20 35 0D		VGA 1	
~XX12 6	7E 30 30 31 32 20 36 0D		VGA 2	
~XX12 8	7E 30 30 31 32 20 38 0D		VGA 1 Component	
~XX12 9	7E 30 30 31 32 20 39 0D		S-Video	
~XX12 10	7E 30 30 31 32 20 31 30 0D		Video	
~XX12 12	7E 30 30 31 32 20 31 33 0D		VGA 2 SCART	
~XX12 13	7E 30 30 31 32 20 31 33 0D		VGA 2 Component	
~XX20 1	7E 30 30 32 30 20 31 0D	Display Mode	Presentation	
~XX20 2	7E 30 30 32 30 20 32 0D	-1 -9	Bright	
~XX20 3	7E 30 30 32 30 20 33 0D		Movie	
~XX20 4	7E 30 30 32 30 20 34 0D		sRGB	
~XX20 5	7E 30 30 32 30 20 35 0D		User	
~XX20 7	7E 30 30 32 30 20 37 0D		Blackboard	
~XX20 8	7E 30 30 32 30 20 38 0D		Classroom	
~XX20 9	7E 30 30 32 30 20 39 0D		3D	
~XX21 n	7E 30 30 32 31 20 a 0D	Brightness		n = 0 (a=30) ~ 100 (a=31 30 30)
~XX22 n	7E 30 30 32 32 20 a 0D	Contrast		n = 0 (a=30) ~ 100 (a=31 30 30)
~XX23 n	7E 30 30 32 33 20 a 0D	Sharpness		n = 0 (a=30) ~ 31 (a=33 31)
~XX24 n	7E 30 30 32 34 20 a 0D	Color Settings	Red Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX25 n	7E 30 30 32 35 20 a 0D	color bettings	Green Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX26 n	7E 30 30 32 36 20 a 0D		Blue Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX27 n	7E 30 30 32 37 20 a 0D		Red Bias	n = -50 (a=2D 35 30) ~ 50 (a=35 30) n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX28 n	7E 30 30 32 38 20 a 0D		Green Bias	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX29 n	7E 30 30 32 39 20 a 0D		Blue Bias	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX30 n	7E 30 30 33 30 20 a 0D		Cyan	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX31 n	7E 30 30 33 31 20 a 0D		Yellow	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX32 n	7E 30 30 33 32 20 a 0D		Magenta	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX33 1	7E 30 30 33 33 20 31 0D		Reset	
~XX34 n	7E 30 30 33 34 20 a 0D	BrilliantColorTM		n = 0 (a=30) ~ 10 (a=31 30)
~XX34 II ~XX35 I	7E 30 30 33 34 20 a 0D 7E 30 30 33 35 20 31 0D	Gamma	Film	0 (4 50) - 10 (4 51 50)
-XX35 2	7E 30 30 33 35 20 31 0D	Chillian III	Video	
-XX35 2	7E 30 30 33 35 20 32 0D		Graphics	
~XX35 4	7E 30 30 33 35 20 34 0D		PC	
~XX36 1	7E 30 30 33 36 20 31 0D	Color Temp.	Warm	
~XX36 1 ~XX36 2	7E 30 30 33 36 20 31 0D 7E 30 30 33 36 20 32 0D	Color Temp.	Medium	
~XX36 2 ~XX36 3	7E 30 30 33 36 20 32 0D 7E 30 30 33 36 20 33 0D		Cold	
~XX30 3 ~XX37 1	7E 30 30 33 36 20 33 0D 7E 30 30 33 37 20 31 0D	Color Space	Auto	
~XX37 1 ~XX37 2	7E 30 30 33 37 20 31 0D 7E 30 30 33 37 20 32 0D	Color Space	RGB	
~XX37 2 ~XX37 3	7E 30 30 33 37 20 32 0D 7E 30 30 33 37 20 33 0D		YUV	
	50 55 57 20 55 5D			

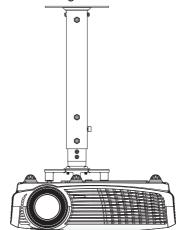
3/3/44	7F 20 20 24 24 20 . 0D	G-1(G-1		0 (- 20) 100 (- 212	10.20
~XX44 n ~XX45 n	7E 30 30 34 34 20 a 0D 7E 30 30 34 35 20 a 0D	Color (Saturation) Tint		= 0 (a=30) ~ 100 (a=31 3 = 0 (a=30) ~ 100 (a=31 3	
~XX60 1	7E 30 30 36 30 20 31 0D	Format	4:3		
~XX60 1 ~XX60 2	7E 30 30 30 30 20 31 0D 7E 30 30 36 30 20 32 0D	Politiat	16:9/16:10		
~XX60 5	7E 30 30 36 30 20 33 0D		LBX		
~XX60 6	7E 30 30 36 30 20 36 0D		Native		
~XX60 7	7E 30 30 36 30 20 37 0D		Auto		
~XX61 n	7E 30 30 36 31 20 a 0D	Edgemask		n = 0 (a=30) ~ 10 (a=	
~XX62 n	7E 30 30 36 32 20 a 0D	Zoom		n = -5 (a=2D 35) ~ 25	
~XX63 n ~XX64 n	7E 30 30 36 33 20 a 0D 7E 30 30 36 34 20 a 0D	H Image Shift V Image Shift		n = -50 (a=2D 35 30 n = -50 (a=2D 35 30	
~XX66 n	7E 30 30 36 36 20 a 0D	V Keystone		n = -40 (a=2D 34 30)	~ 40 (a=34 30)
~XX230 3	7E 30 30 32 33 30 20 31 0D	3D Mode	IR	( ==)	(2 2 . 2 . )
~XX230 1	7E 30 30 32 33 30 20 31 0D	3D Mode	DLP-Link		
~XX230 0	7E 30 30 32 33 30 20 30 0D	3D Mode	Off		
~XX231 1 ~XX231 0	7E 30 30 32 33 31 20 31 0D 7E 30 30 32 33 31 20 30 0D	3D Sync Invert 3D Sync Invert	On Off		
~XX70 1	7E 30 30 37 30 20 31 0D		English		
~XX70 1 ~XX70 2	7E 30 30 37 30 20 31 0D 7E 30 30 37 30 20 32 0D	Language	English German		
~XX70 3	7E 30 30 37 30 20 33 0D		French		
~XX70 4	7E 30 30 37 30 20 34 0D		Italian		
~XX70 5	7E 30 30 37 30 20 35 0D		Spanish		
~XX70 6	7E 30 30 37 30 20 36 0D		Portuguese		
~XX70 7 ~XX70 8	7E 30 30 37 30 20 37 0D 7E 30 30 37 30 20 38 0D		Polish Dutch		
~XX708 ~XX709	7E 30 30 37 30 20 38 0D 7E 30 30 37 30 20 39 0D		Swedish		
~XX70 9 ~XX70 10	7E 30 30 37 30 20 39 0D 7E 30 30 37 30 20 31 30 0D		Norwegian/Danish		
~XX70 11	7E 30 30 37 30 20 31 31 0D		Finnish		
~XX70 12	7E 30 30 37 30 20 31 32 0D		Greek		
~XX70 13	7E 30 30 37 30 20 31 33 0D		Traditional Chinese		
~XX70 14	7E 30 30 37 30 20 31 34 0D		Simplified Chinese		
~XX70 15 ~XX70 16	7E 30 30 37 30 20 31 35 0D 7E 30 30 37 30 20 31 36 0D		Japanese Korean		
~XX70 10 ~XX70 17	7E 30 30 37 30 20 31 37 0D		Russian		
~XX70 18	7E 30 30 37 30 20 31 38 0D		Hungarian		
~XX70 19	7E 30 30 37 30 20 31 39 0D		Czechoslovak		
~XX70 20	7E 30 30 37 30 20 32 30 0D		Arabic		
~XX70 21	7E 30 30 37 30 20 32 31 0D		Thai		
~XX70 22 ~XX70 23	7E 30 30 37 30 20 32 32 0D 7E 30 30 37 30 20 32 33 0D		Turkish Farsi		
~XX71 1	7E 30 30 37 31 20 31 0D	Projection	Front-Desktop		
~XX71 2	7E 30 30 37 31 20 31 0D	Trojection	Rear-Desktop		
~XX71 3	7E 30 30 37 31 20 33 0D		Front-Ceiling		
~XX71 4	7E 30 30 37 31 20 34 0D		Rear-Ceiling		
~XX72 1	7E 30 30 37 32 20 31 0D	Menu Location	Top Left		
~XX72 2	7E 30 30 37 32 20 32 0D		Top Right		
~XX72 3	7E 30 30 37 32 20 33 0D		Centre		
~XX72 4 ~XX72 5	7E 30 30 37 32 20 34 0D 7E 30 30 37 32 20 35 0D		Bottom Left Bottom Right		
~XX90 1	7E 30 30 39 31 20 31 0D	Screen Type	16:10		
~XX90 0	7E 30 30 39 31 20 30 0D	Selecti Type	16:9		
~XX91 n	7E 30 30 39 31 20 a 0D	Signal	Automatic	n=0 Off; n=1 On	
~XX73 n	7E 30 30 37 33 20 a 0D	~-0*****	Frequency	n = -5 (a=2D 35) ~ 5	(a=35) By signal
~XX74 n	7E 30 30 37 34 20 a 0D		Phase	n = 0 (a=30) ~ 31 (a=	33 31) By signal
~XX75 n	7E 30 30 37 35 20 a 0D		H. Position	n = -5 (a=2D 35) ~ 5	
~XX76 n	7E 30 30 37 36 20 a 0D		V. Position	n = -5 (a=2D 35) ~ 5	(a=35) By timing
~XX77 n	7E 30 30 37 37 20 aabbcc 0D	Security	Security Timer	Month/Day/Hour	$\begin{split} n &= mm/dd/hh \\ mm &= 00 \; (aa = 30 \; 30) \sim 12 \; (aa = 31 \; 32) \\ dd &= 00 \; (bb = 30 \; 30) \sim 30 \; (bb = 33 \; 30) \end{split}$
~XX78 1	7E 30 30 37 38 20 31 0D		Security Settings	Enable	hh= 00 (cc=30 30) ~ 24 (cc=32 34)
~XX78 1 ~XX78 2	7E 30 30 37 38 20 31 0D 7E 30 30 37 38 20 32 0D		Security Settings	Disable	
~XX79 n	7E 30 30 37 39 20 a 0D	Projector ID		n = 00 (a=30 30) ~ 9	9 (a=39 39)
~XX80 1	7E 30 30 38 30 20 31 0D	Mute	On		
~XX80 1 ~XX80 0	7E 30 30 38 30 20 31 0D 7E 30 30 38 30 20 30 0D		Off (0/2 for backward	compatible)	
~XX81 n	7E 30 30 38 31 20 a 0D	Volume	(	$n = 0 \text{ (a=30)} \sim 10 \text{ (a=}$	=31 30)
~XX82 1	7E 30 30 38 32 20 31 0D	Logo	Optoma		
~XX82 2	7E 30 30 38 32 20 32 0D		User		
~XX82 3	7E 30 30 38 32 20 33 0D		Neutral		
~XX82 3 ~XX83 1	7E 30 30 38 33 20 31 0D	Logo Capture	1 (Cuttur	(Option)	

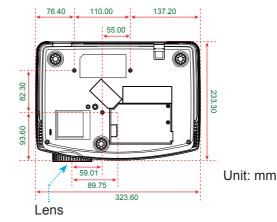
~XX100 1	7E 30 30 31 30 30 20 31 0D	Source Lock	On	
~XX100 0	7E 30 30 31 30 30 20 30 0D		Off (0/2 for backward of	compatible)
~XX100 3	7E 30 30 31 30 30 20 33 0D	Next Source		• /
~XX101 1	7E 30 30 31 30 31 20 31 0D	High Altitude	On	
~XX101 0	7E 30 30 31 30 31 20 30 0D		Off (0/2 for backward compatible)	
~XX102 1	7E 30 30 31 30 32 20 31 0D	Information Hide	On	
~XX102 0	7E 30 30 31 30 32 20 30 0D		Off (0/2 for backward compatible)	
~XX103 1	7E 30 30 31 30 33 20 31 0D	Keypad Lock	On	······································
~XX103 0	7E 30 30 31 30 33 20 30 0D	, p	Off (0/2 for backward of	compatible)
				······································
~XX104 1	7E 30 30 31 30 34 20 31 0D	Background Color	Blue	
~XX104 2	7E 30 30 31 30 34 20 32 0D	=	Black	
~XX104 3	7E 30 30 31 30 34 20 33 0D		Red	
~XX104 4	7E 30 30 31 30 34 20 34 0D		Green	
~XX104 5	7E 30 30 31 30 34 20 35 0D		White	
~XX105 1	7E 30 30 31 30 35 20 31 0D	Advanced	Direct Power On	On
~XX105 0	7E 30 30 31 30 35 20 30 0D			Off (0/2 for backward compatible)
~XX106 n	7E 30 30 31 30 36 20 a 0D		Auto Power Off (min)	n = 0 (a=30) ~ 180 (a=31 38 30) step:5
~XX107 n	7E 30 30 31 30 37 20 a 0D		Sleep Timer (min)	n = 0 (a=30) ~ 995 (a=39 39 39) step:5
~XX114 1	7E 30 30 31 31 34 20 31 0D		Power Mode(Standby)	Eco.(<=1W)
~XX114 0	7E 30 30 31 31 34 20 30 0D			Active (0/2 for backward compatible)
3/3/100.1	7E 20 20 21 20 20 20 21 25		I D 1	0
~XX109 1	7E 30 30 31 30 39 20 31 0D		Lamp Reminder	On
~XX109 0	7E 30 30 31 30 39 20 30 0D		D:1: 14.1	Off (0/2 for backward compatible)
~XX110 1	7E 30 30 31 31 30 20 31 0D		Brightness Mode	Bright
~XX110 0	7E 30 30 31 31 30 20 30 0D			STD (0/2 for backward compatible)
~XX1111	7E 30 30 31 31 31 20 31 0D		Lamp Reset	Yes
~XX111 0	7E 30 30 31 31 31 20 30 0D			No (0/2 for backward compatible)
~XX112 1	7E 30 30 31 31 32 20 31 0D	Reset		Yes
			Roset System Alert	Yes
	7E 30 30 31 31 32 20 31 0D 7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D	RS232 Alert Reset Display message on the OSD	Reset System Alert	Yes n: 1-30 characters
~XX99 1 ~XX210 n	7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D	RS232 Alert Reset	Reset System Alert	
~XX99 1 ~XX210 n	7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D te Remote	RS232 Alert Reset		
~XX99 1 ~XX210 n ————————————————————————————————————	7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D te Remote	RS232 Alert Reset	Power	
~XX99 1 ~XX210 n SEND to emular ~XX140 1 ~XX140 3	7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D te Remote 7E 30 30 31 34 30 20 31 0D 7E 30 30 31 34 30 20 33 0D	RS232 Alert Reset	Power Remote Mouse Up	
~XX99 1 ~XX210 n SEND to emula: ~XX140 1 ~XX140 3 ~XX140 4	7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D te Remote 7E 30 30 31 34 30 20 31 0D 7E 30 30 31 34 30 20 33 0D 7E 30 30 31 34 30 20 34 0D	RS232 Alert Reset	Power Remote Mouse Up Remote Mouse Left	
~XX99 1 ~XX210 n SEND to emular ~XX140 1 ~XX140 3 ~XX140 4 ~XX140 5	7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D TE Remote  7E 30 30 31 34 30 20 31 0D 7E 30 30 31 34 30 20 33 0D 7E 30 30 31 34 30 20 34 0D 7E 30 30 31 34 30 20 34 0D	RS232 Alert Reset	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter	
~XX99 1 ~XX210 n SEND to emular ~XX140 1 ~XX140 3 ~XX140 4 ~XX140 5 ~XX140 6	TE 30 30 39 39 20 31 0D TE 30 30 32 30 30 20 n 0D TE 30 30 32 30 30 20 n 0D TE Remote TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 34 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D	RS232 Alert Reset	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Right	
~XX99 1 ~XX210 n SEND to emula: ~XX140 1 ~XX140 3 ~XX140 4	7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D TE Remote  7E 30 30 31 34 30 20 31 0D 7E 30 30 31 34 30 20 33 0D 7E 30 30 31 34 30 20 34 0D 7E 30 30 31 34 30 20 34 0D	RS232 Alert Reset	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Right Remote Mouse Down	
~XX99 1 ~XX210 n SEND to emular ~XX140 1 ~XX140 3 ~XX140 4 ~XX140 5 ~XX140 6 ~XX140 7	TE 30 30 39 39 20 31 0D TE 30 30 32 30 30 20 n 0D TE 30 30 32 30 30 20 n 0D TE Remote TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 34 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D	RS232 Alert Reset	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Right	
XX99 1XX210 n XX210 n XX140 1XX140 3XX140 4XX140 5XX140 6XX140 7XX140 8XX140 9	7E 30 30 39 39 20 31 0D 7E 30 30 32 30 30 20 n 0D TE 30 30 32 30 30 20 n 0D TE 30 30 31 34 30 20 31 0D 7E 30 30 31 34 30 20 33 0D 7E 30 30 31 34 30 20 35 0D	RS232 Alert Reset	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Right Remote Mouse Down Mouse Left Click Mouse Right Click	
~XX99 1 ~XX210 n SEND to emular ~XX140 1 ~XX140 3 ~XX140 4 ~XX140 5 ~XX140 6	TE 30 30 30 39 20 31 0D TE 30 30 32 30 30 20 n 0D  TE Remote  TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 34 0D TE 30 30 31 34 40 20 35 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 37 0D	RS232 Alert Reset Display message on the OSD	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Right Remote Mouse Down Mouse Left Click	
~XX99 1 ~XX210 n SEND to emulai ~XX140 1 ~XX140 3 ~XX140 4 ~XX140 5 ~XX140 6 ~XX140 7 ~XX140 8 ~XX140 9	TE 30 30 39 39 20 31 0D TE 30 30 32 30 30 20 n 0D  TE 30 30 32 30 30 20 n 0D  TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 39 0D TE 30 30 31 34 30 20 39 0D	RS232 Alert Reset Display message on the OSD	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Right Remote Mouse Down Mouse Left Click Mouse Right Click	
XX99 1XX210 n  SEND to emularXX140 1XX140 3XX140 4XX140 5XX140 6XX140 7XX140 9XX140 10XX140 10	TE 30 30 30 39 20 31 0D TE 30 30 32 30 30 20 n 0D  TE Remote  TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 30 0D TE 30 30 31 34 30 20 30 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 38 0D	RS232 Alert Reset Display message on the OSD	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Right Remote Mouse Down Mouse Left Click Mouse Right Click UpPage +	n: 1-30 characters
~XX99 1 ~XX210 n SEND to emula ~XX140 1 ~XX140 3 ~XX140 4 ~XX140 5 ~XX140 6 ~XX140 7 ~XX140 7 ~XX140 9 ~XX140 10	TE 30 30 30 39 20 31 0D TE 30 30 32 30 30 20 n 0D  TE 30 30 32 30 30 20 n 0D  TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 31 30 0D TE 30 30 31 34 30 20 31 30 0D TE 30 30 31 34 30 20 31 30 0D	RS232 Alert Reset Display message on the OSD	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Right Remote Mouse Down Mouse Left Click Up/Page + Left/Source	n: 1-30 characters
~XX99 1 ~XX210 n  SEND to emular ~XX140 1 ~XX140 3 ~XX140 4 ~XX140 5 ~XX140 6 ~XX140 7 ~XX140 8 ~XX140 10 ~XX140 11 ~XX140 11	TE 30 30 30 39 20 31 0D TE 30 30 32 30 30 20 n 0D  TE 8cemote  TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 34 0D TE 30 30 31 34 30 20 34 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 36 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 31 30 0D TE 30 30 31 34 30 20 31 30 0D TE 30 30 31 34 30 20 31 31 30 0D TE 30 30 31 34 30 20 31 31 30 31 34 30 20 31 31 30 31 34 30 20 31 31 30 30 30 31 34 30 20 31 31 30 30 30 30 30 30 30 30 30 30 30 30 30	RS232 Alert Reset Display message on the OSD	Power Remote Mouse Up Remote Mouse Left Remote Mouse Engra Remote Mouse Bight Remote Mouse Down Mouse Left Click Mouse Right Click Up/Page + Left/Source Enter (for projection M	n: 1-30 characters
	TE 30 30 39 39 20 31 0D TE 30 30 32 30 30 20 n 0D  TE 30 30 32 30 30 20 n 0D  TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 30 0D TE 30 30 31 34 30 20 31 30 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 33 0D	RS232 Alert Reset Display message on the OSD	Power Remote Mouse Left Remote Mouse Left Remote Mouse Right Remote Mouse Right Remote Mouse Right Mouse Left Click Mouse Right Click UpPage + Left/Source Enter (for projection M Right/Re-SYNC	n: 1-30 characters
	TE 30 30 39 39 20 31 0D TE 30 30 32 30 30 20 n 0D  TE 30 30 32 30 30 20 n 0D  TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 33 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 38 0D TE 30 30 31 34 30 20 31 30 0D TE 30 30 31 34 30 20 31 30 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 32 0D TE 30 30 31 34 30 20 31 33 0D TE 30 30 31 34 30 20 31 33 30 T TE 30 30 31 34 30 20 31 33 30 T TE 30 30 31 34 30 20 31 34 30 20 31 34 0D	RS232 Alert Reset Display message on the OSD	Power Remote Mouse Up Remote Mouse Left Remote Mouse Enter Remote Mouse Buter Remote Mouse Right Remote Mouse Right Remote Mouse Night Click Up/Page + Left/Source Enter (for projection M Right/Re-SYNC Down/Page -	n: 1-30 characters
	TE 30 30 39 39 20 31 0D TE 30 30 32 30 30 20 n 0D  TE 30 30 32 30 30 20 n 0D  TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 31 0D TE 30 30 31 34 30 20 34 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 35 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 37 0D TE 30 30 31 34 30 20 31 30 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 31 0D TE 30 30 31 34 30 20 31 33 0D TE 30 30 31 34 30 20 31 33 0D TE 30 30 31 34 30 20 31 33 0D TE 30 30 31 34 30 20 31 33 0D TE 30 30 31 34 30 20 31 33 0D	RS232 Alert Reset Display message on the OSD	Power Remote Mouse Left Remote Mouse Left Remote Mouse Right Remote Mouse Right Remote Mouse Right Click Mouse Right Click Mouse Right Click UpPage + Left/Source Enter (for projection M Right/Re-SYNC Down/Page - Keystone +	n: 1-30 characters
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END from projector automatically						
232 ASCII Code	HEX Code	Function	Projector Return	Description		
Lamp fail/Fan Loc	rming/Cooling/Out of Range/ k/Over Temperature/ ing Out/Cover Open	System status	INFOn	n: 0/1/2/3/4/6/7/8/9 = Standby/Warming/Cooling/Out of Range/ Lamp fail/Fan Lock/Over Temperature/Lamp Hours Running Out/ Cover Open		
READ from proje	ector					
232 ASCII Code	HEX Code	Function	Projector Return	Description		
~XX121 1	7E 30 30 31 32 31 20 31 0D	Input Source Commands	OKn	n: 0/1/2/3/4/5 = None/VGA1/VGA2/S-Video/Video/HDMI		
~XX122 1	7E 30 30 31 32 32 20 31 0D	Sofware Version	OKdddd	dddd: FW version		
~XX123 1	7E 30 30 31 32 33 20 31 0D	Display Mode	OKn	n: 0/1/2/3/4/5/7/8/9 = None/Presentation/Bright/Movie/sRGB/		
				User/Blackboard/Classroom/3D		
~XX124 1	7E 30 30 31 32 34 20 31 0D	Power State	OKn	n: 0/1 = Off/On		
~XX125 1	7E 30 30 31 32 35 20 31 0D	Brightness	OKn			
~XX126 1	7E 30 30 31 32 36 20 31 0D	Contrast	OKn			
~XX127 1	7E 30 30 31 32 37 20 31 0D	Aspect Ratio	OKn	n: 0/1/2/3/4/5 = 4:3/16:9 /16:10//LBX/Native/AUTO		
~XX128 1	7E 30 30 31 32 38 20 31 0D	Color Temperature	OKn	n: 0/1/2 = Warm/Medium/Cold		
~XX129 1	7E 30 30 31 32 39 20 31 0D	Projection Mode	OKn	n: 0/1/2/3 = Front-Desktop/ Rear-Desktop/ Front-Ceiling/		
~XX150 1	7E 30 30 31 35 30 20 31 0D	Information	OKabbbbccdddde	Rear-Ceiling a: 0/1 = Off/On		
~XX150 I	/E 30 30 31 35 30 20 31 0D	information	OKabbbbccdddde	a: 0/1 = Off/On bbbb: LampHour		
				cc: source		
				00/01/02/03/04/05 = None/VGA1/VGA2/S-Video/Video/HDMI		
				dddd: FW version		
				e : Display mode 0/1/2/3/4/5//7/8/9=None/Presentation/Bright/		
				Movie/sRGB/User/Blackboard/Classroom/3D		
~XX151 1	7E 30 30 31 35 31 20 31 0D	Model name	OKn	n:8 = EW762		
~XX108 1	7E 30 30 31 30 38 20 31 0D	Lamp Hours	OKbbbb	bbbb: LampHour		
~XX108 2	7E 30 30 31 30 38 20 31 0D	Cumulative Lamp Hours	OKbbbbb	bbbbb; (5 digits) Total Lamp Hours		

# **Ceiling Mount Installation**

- 1. To prevent damage to your projector, please use the Optoma ceiling mount.
- If you wish to use a third party ceiling mount kit, please ensure the screws used to attach a mount to the projector meet the following specifications:
  - Screw type: M3\*3
  - Maximum screw length: 10mm
  - Minimum screw length: 7.5mm







Please note that damage resulting from incorrect installation will void the warranty.



### / Warning:

- If you buy a ceiling mount from another company, please be sure to use the correct screw size. Screw size will vary depending on the thickness of the mounting plate.
- Be sure to keep at least 10 cm gap between the ceiling and the bottom of the projector.
- Avoid installing the projector near a heat source.

# **Optoma Global Offices**

For service or support please contact your local office.

#### **USA**

3178 Laurelview Ct. Fremont, CA 94538, USA www.optomausa.com

888-289-6786

**6** 510-897-8601

🔀 services@optoma.com

#### Canada

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#### Latin America

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**(** 888-289-6786

**🗐** 510-897-8601

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WD18 8QZ, UK www.optoma.eu ( +44 (0) 1923 691 800 **| +44 (0) 1923 691 888** 

Service Tel: +44 (0)1923 691865

service@tsc-europe.com

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PO.BOX 9515 3038 Drammen Norway

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**| +49 (0) 211 506 66799** 

info@optoma.de

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**| +47 32 98 89 99** 

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**| +82+2+34430005** 

### Japan

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**+886-2-2218-2313** 

services@optoma.com.tw asia.optoma.com

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**| +852-2370-1222** www.optoma.com.hk

### China

5F, No. 1205, Kaixuan Rd., Changning District Shanghai, 200052, China

#### +86-21-62947376

**| +86-21-62947375** www.optoma.com.cn

# **Regulation & Safety Notices**

This appendix lists the general notices of your projector.

### FCC notice

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

### Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

# **Caution**

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this projector.

# **Operation conditions**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference and
- This device must accept any interference received, including interference that may cause undesired operation.

### Notice: Canadian users

This Class B digital apparatus complies with Canadian ICES-003.

# Remarque à l'intention des utilisateurs canadiens

Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

# Declaration of Conformity for EU countries

- EMC Directive 2004/108/EC (including amendments)
- Low Voltage Directive 2006/95/EC
- R & TTE Directive 1999/5/EC (if product has RF function)

# **Disposal instructions**



Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it.