USA's primary source for projector lamps
myprojectorlamps

PROJECTOR OWNER'S MANUAL

Optoma

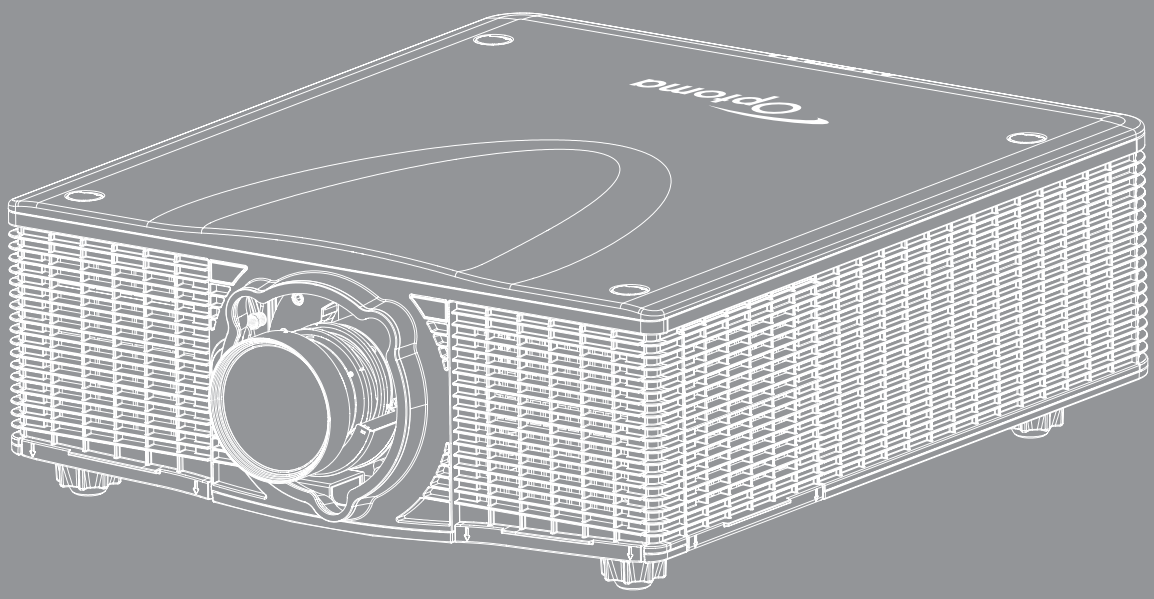
WU1500

Need a replacement lamp for this projector?

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DLP® Projector



User manual

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SAFETY

	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.

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

Important Safety Instruction

- 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.
- 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.
- 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.
- Do not use under the following conditions:
  - In extremely hot, cold or humid environments.
    (i) Ensure that the ambient room temperature is within 0°C ~ 40°C
    (ii) Relative humidity is 10% ~ 85%
  - In areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - In direct sunlight.
- Do not use the projector in places where flammable gases or explosives gases may be present in the atmosphere. The lamp inside the projector becomes very hot during operation and the gases may ignite and result in a fire.
- 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 place the projector on an unstable surface. The projector may fall over resulting in injury or the projector may become damaged.
- Do not block the light coming out of the projector lens when in operation. The light will heat the object and my melt, cause burns or start a fire.
- Please do not open or disassemble the projector as this may cause electric shock.
- 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.
- See projector enclosure for safety related markings.
- The unit should only be repaired by authorized service personnel.

- Only use attachments/accessories specified by the manufacturer.
- Do not look into straight into the projector lens during operation. The bright light may harm your eyes.
- When replacing the lamp, please allow the unit to cool down. Follow instructions as described on page 57.
- This projector will detect the life of the lamp itself. Please be sure to change the lamp when it shows warning messages.
- Reset the “Reset Light Source Hours” function from the on-screen display “OPTION|Light Source Settings” menu after replacing the lamp module(s) (refer to page 55).
- 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.
- 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. Do not use abrasive cleaners, waxes or solvents to clean the unit.
- Disconnect the power plug from AC outlet if the product is not being used for a long period of time.
- *Do not setup the projector in places where it might be subjected to vibration or shock.*
- *Do not touch the lens with bare hands.*
- *Remove battery/batteries from remote control before storage. If the battery/batteries are left in the remote for long periods, they may leak.*
- *Do not use or store the projector in places where smoke from oil or cigarettes may be present, as it can adversely affect the quality of the projector performance.*
- *Please follow the correct projector orientation installation as non standard installation may affect the projector performance.*
- *Use a power strip and or surge protector. As power outages and brown-outs can KILL devices.*

3D Safety Information

Please follow all warnings and precautions as recommended before you or your child use the 3D function.

Warning

Children and teenagers may be more susceptible to health issues associated with viewing in 3D and should be closely supervised when viewing these images.

Photosensitive Seizure Warning and Other Health Risks

- Some viewers may experience an epileptic seizure or stroke when exposed to certain flashing images or lights contained in certain Projector pictures or video games. If you suffer from, or have a family history of epilepsy or strokes, please consult with a medical specialist before using the 3D function.
- Even those without a personal or family history of epilepsy or stroke may have an undiagnosed condition that can cause photosensitive epileptic seizures.
- Pregnant women, the elderly, sufferers of serious medical conditions, those who are sleep deprived or under the influence of alcohol should avoid utilizing the unit’s 3D functionality.
- If you experience any of the following symptoms, stop viewing 3D pictures immediately and consult a medical specialist: (1) altered vision; (2) light-headedness; (3) dizziness; (4) involuntary movements such as eye or muscle twitching; (5) confusion; (6) nausea; (7) loss of awareness; (8) convulsions; (9) cramps; and/ or (10) disorientation. Children and teenagers may be more likely than adults to experience these symptoms. Parents should monitor their children and ask whether they are experiencing these symptoms.
- Watching 3D projection may also cause motion sickness, perceptual after effects, disorientation, eye strain and decreased postural stability. It is recommended that users take frequent breaks to lessen the potential of these effects. If your eyes show signs of fatigue or dryness or if you have any of the above symptoms, immediately discontinue use of this device and do not resume using it for at least thirty minutes after the symptoms have subsided.
- Watching 3D projection while sitting too close to the screen for an extended period of time may damage your eyesight. The ideal viewing distance should be at least three times the screen height. It is recommended that the viewer’s eyes are level with the screen.

- Watching 3D projection while wearing 3D glasses for an extended period of time may cause a headache or fatigue. If you experience a headache, fatigue or dizziness, stop viewing the 3D projection and rest.
- Do not use the 3D glasses for any other purpose than for watching 3D projection.
- Wearing the 3D glasses for any other purpose (as general spectacles, sunglasses, protective goggles, etc.) may be physically harmful to you and may weaken your eyesight.
- Viewing in 3D projection may cause disorientation for some viewers. Accordingly, DO NOT place your 3D PROJECTOR near open stairwells, cables, balconies, or other objects that can be tripped over, run into, knocked down, broken or fallen over.

Copyright

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Disclaimer

The information in this document is subject to change without notice. The manufacturer makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. The manufacturer reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of the manufacturer to notify any person of such revision or changes.

Trademark Recognition

Kensington is a U.S. registered trademark of ACCO Brand Corporation with issued registrations and pending applications in other countries throughout the world.

DLP®, DLP Link and the DLP logo are registered trademarks of Texas Instruments and BrilliantColor™ is a trademark of Texas Instruments.

All other product names used in this manual are the properties of their respective owners and are Acknowledged.

FCC

This device has been tested and found to comply with the limits for a Class A 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 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

2. This device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian users

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

Remarque à l’intention des utilisateurs canadiens

Cet appareil numerique de la classe A 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)

WEEE



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.

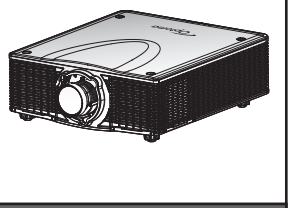
INTRODUCTION

Package Overview

Carefully unpack and verify that you have the items listed below under standard accessories. Some of the items under optional accessories may not be available depending on the model, specification and your region of purchase. Please check with your place of purchase. Some accessories may vary from region to region.

The warranty card is only supplied in some specific regions. Please consult your dealer for detailed information.

Standard accessories



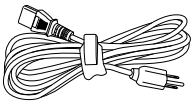
Projector



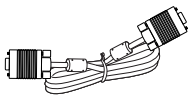
Remote control



2x AAA batteries



Power lead
(US Type*1 /
Euro Type*1 /
China Type*1 for China)

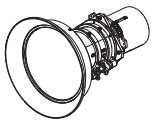


VGA cable

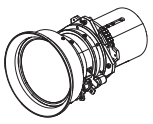
- ☑ CD User Manual
- ☑ Warranty Card
- ☑ Basic User Manual

Documentation

Optional accessories



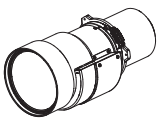
Optional lens A18
(0.84 ~ 1.02)



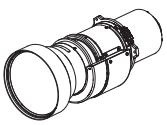
Optional lens A19
(1.02 ~ 1.36)



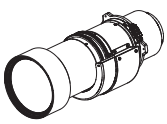
Optional lens A20
(1.2 ~ 1.5)



Optional lens A21
(1.5 ~ 2.0)



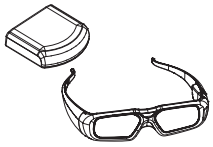
Optional lens A22
(2.0 ~ 4.0)



Optional lens A23
(4.0 ~ 7.2)



Wireless dongle
(WUSB Pro)

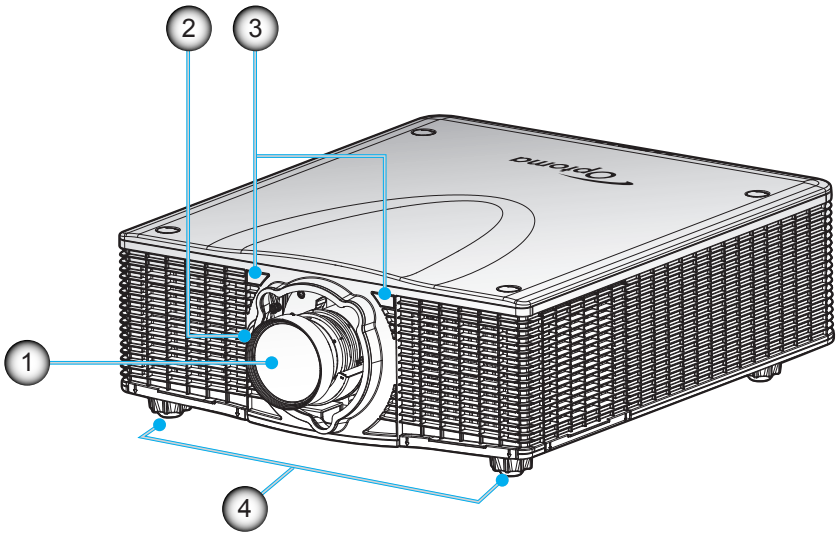


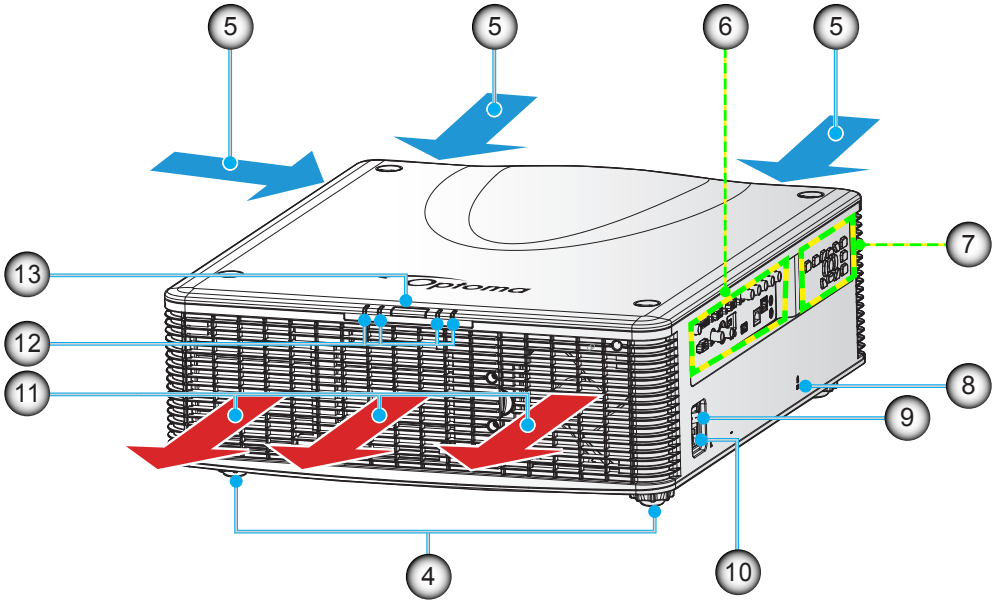
RF 3D glasses

Note: *Optional accessories vary depending on model, specification and region.*

INTRODUCTION

Product Overview



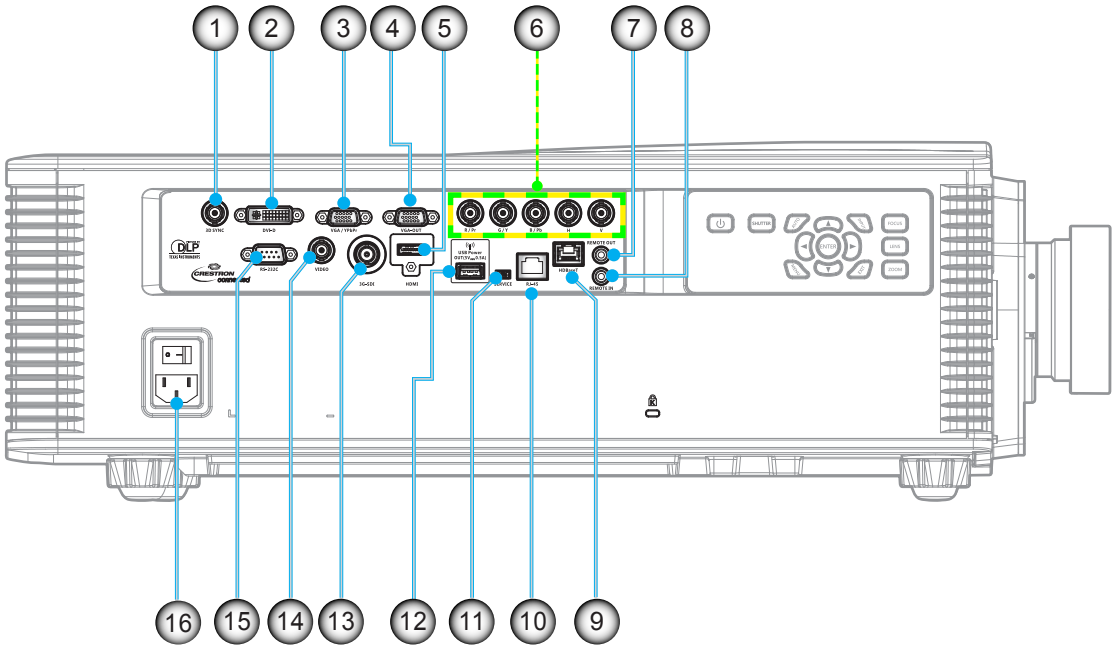


Note: *Do not block projector inlet or outlet air vents.*
(*) optional accessory varies depending on model, specification, and region.

No	Item	No	Item
1.	Lens	8.	Kensington™ Lock Port
2.	Lens Release Button	9.	Power Switch
3.	Front IR Receiver	10.	Power Socket
4.	Tilt-Adjustment Feet	11.	Ventilation (outlet)
5.	Ventilation (inlet)	12.	LED Status Indicators
6.	Input / Output	13.	Top IR Receiver
7.	Keypad		

INTRODUCTION

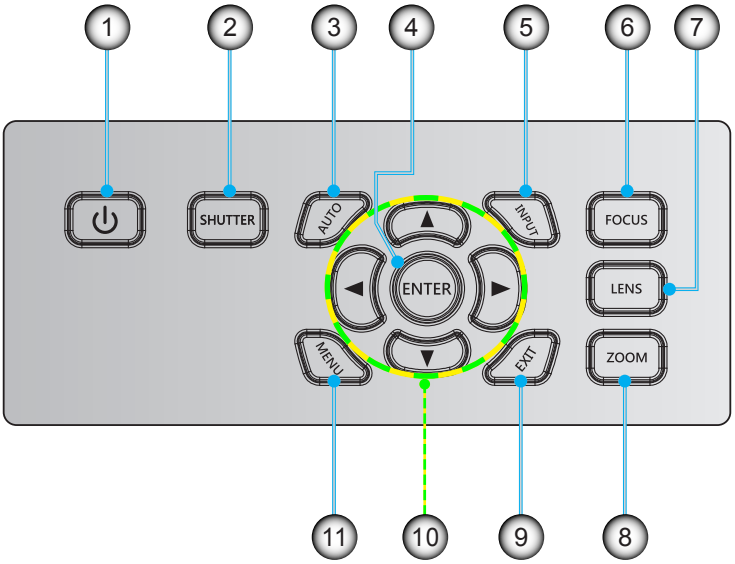
Connections



No	Item	No	Item
1.	3D Sync OUT Connector	9.	HDBaseT Connector
2.	DVI-D Connector	10.	RJ-45 Connector
3.	VGA IN / YPbPr Connector	11.	SERVICE Connector
4.	VGA OUT Connector	12.	USB Power Out (5V⎓0.5A) Connector
5.	HDMI Connector	13.	3G-SDI IN Connector
6.	Component/RGBHV IN Connector	14.	Video IN Connector
7.	Remote OUT Connector	15.	RS-232C Connector
8.	Remote IN Connector	16.	Power Socket

INTRODUCTION

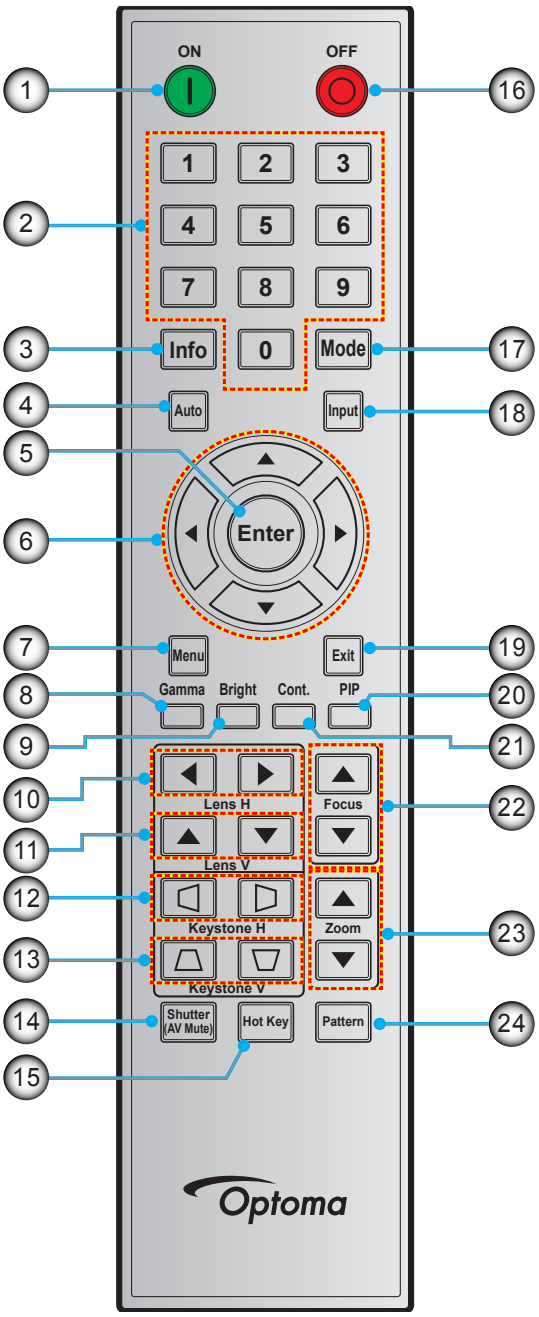
Keypad



No	Item	No	Item
1.	Power	7.	Lens
2.	Shutter	8.	Zoom
3.	Auto	9.	Exit
4.	Enter	10.	Four Directional Select Keys
5.	Input	11.	Menu
6.	Focus		

INTRODUCTION

Remote control



No	Item	No	Item	No	Item
1.	Power On	9.	Bright	17.	Mode
2.	Number Keys	10.	Lens H	18.	Input
3.	Info	11.	Lens V	19.	Exit
4.	Auto	12.	Keystone H	20.	PIP
5.	Enter	13.	Keystone V	21.	Cont.
6.	Four Directional Select Keys	14.	Shutter (AV Mute)	22.	Focus
7.	Menu	15.	Hot Key	23.	Zoom
8.	Gamma	16.	Power Off	24.	Pattern

SETUP AND INSTALLATION

Installing the projection lens

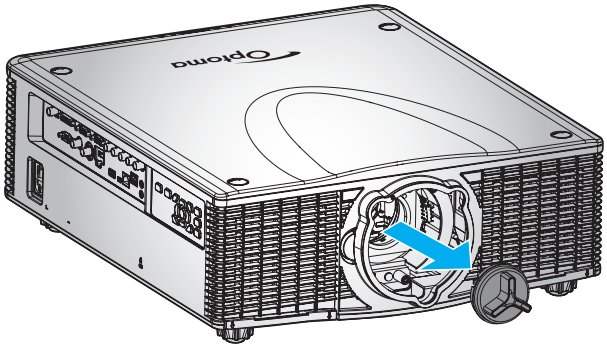
Before setting up the projector, install the projection lens on the projector.

IMPORTANT!

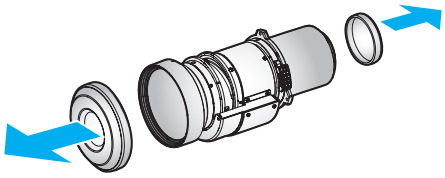
- *Make sure the projector is properly turned off before installing the lens.*
- *During lens installation, do not adjust the lens shift, zoom, or focus either using the remote control or the projector keypad.*
- After any lens replacement, lens calibration is necessary; otherwise, it may cause damage to the lens and system.
- Ensure that the lens is at or near the central location when installing or removing. Installing or removing lens at a large offset may cause damage to the lens and system.

Procedure:

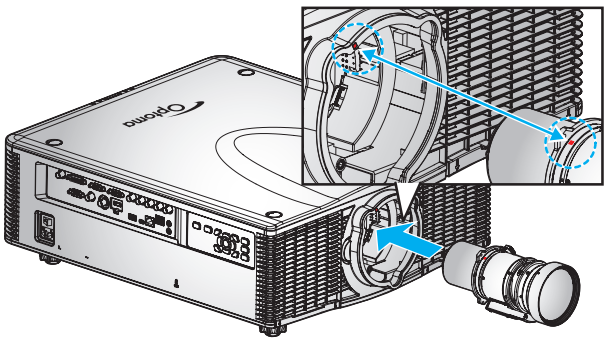
1. Remove the lens cap from the projector.



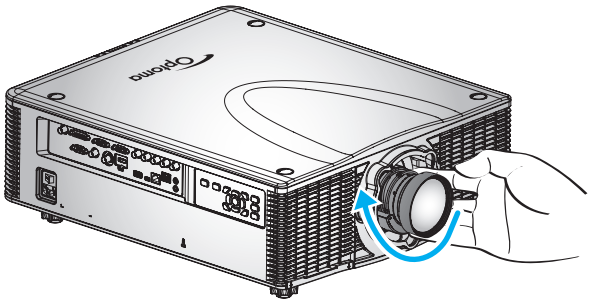
2. Remove both lens caps (front and back) on the lens.



3. Align the red dot label on the lens with the red dot label on the lens mount. Then install the lens assembly into the lens mount.



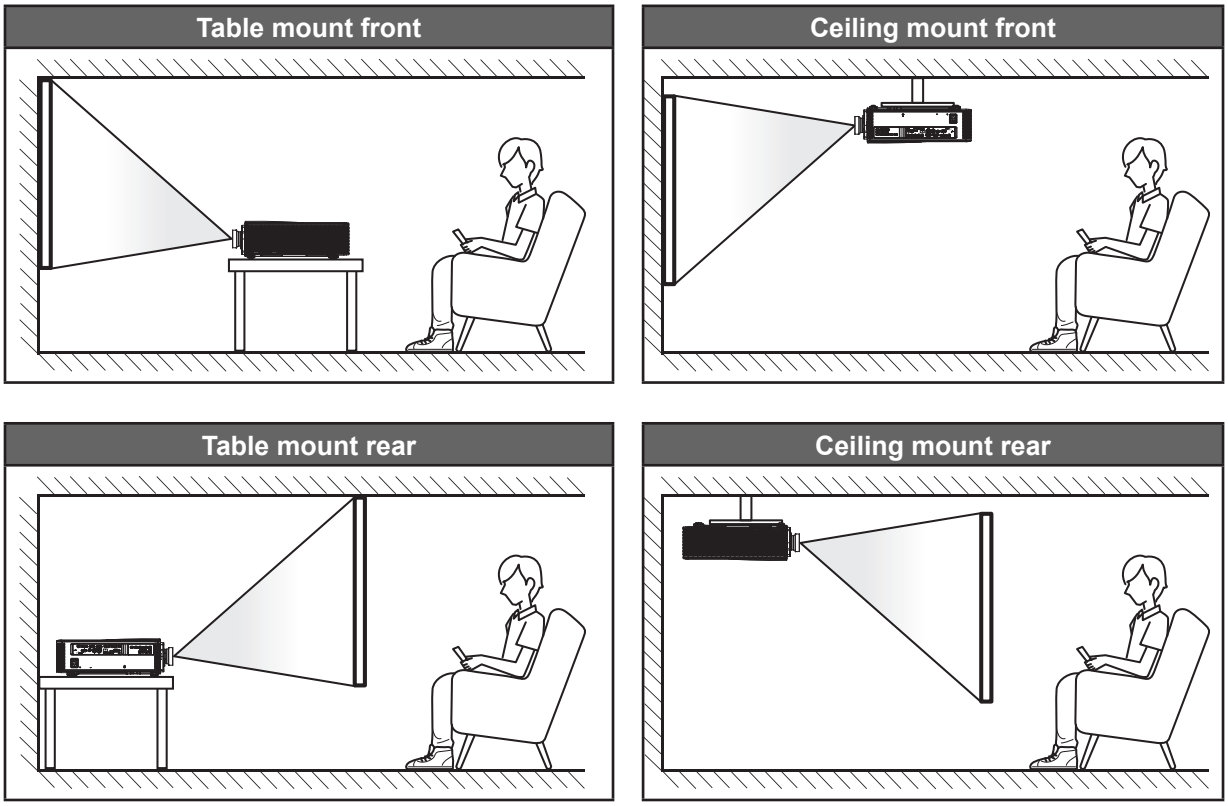
4. Rotate the lens clockwise to lock the lens in place.



Installing the projector

Your projector is designed to be installed in one of four possible positions.

Your room layout or personal preference will dictate which installation location you select. Take into consideration the size and position of your screen, the location of a suitable power outlet, as well as the location and distance between the projector and the rest of your equipment.



Projector should be placed flat on a surface and 90 degrees / perpendicular to the to the screen.

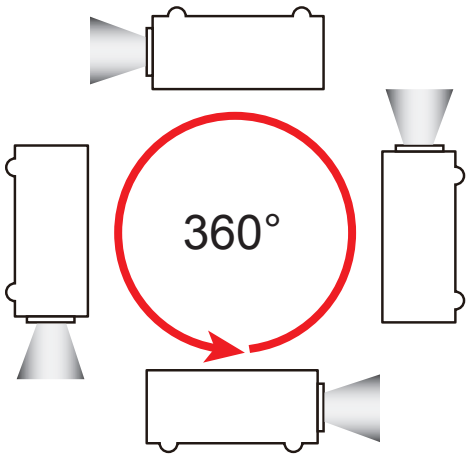
- How to determine projector location for a given screen size, please refer to distance table on page 63.
- How to determine screen size for a given distance, please refer to distance table on page 63.

SETUP AND INSTALLATION

Adjusting the projector position

When you select a position for the projector, consider the size and shape of your screen, the location of your power outlets, and the distance between the projector and the rest of your equipment. Follow these general guidelines:

- Position the projector on a flat surface at a right angle to the screen. The projector (with the standard lens) must be at least 3 feet (0.9m) from the projection screen.
- Position the projector to the desired distance from the screen. The distance from the lens of the projector to the screen, the zoom setting, and the video format determine the size of the projected image.
- For the fixed short lens, the image exits at a default angle. However, the lens shift feature makes the image offset variable.
- Lens throw ratio:
  - A18 (Short zoom lens): 0.84 ~ 1.02
  - A19 (Wide zoom lens): 1.02 ~ 1.36
  - A20 (Wide zoom lens): 1.2 ~ 1.5
  - A21 (Standard lens): 1.5 ~ 2.0
  - A22 (Standard zoom lens): 2.0 ~ 4.0
  - A23 (Long zoom lens): 4.0 ~ 7.2
- 360 degree operation (along the widest axis)

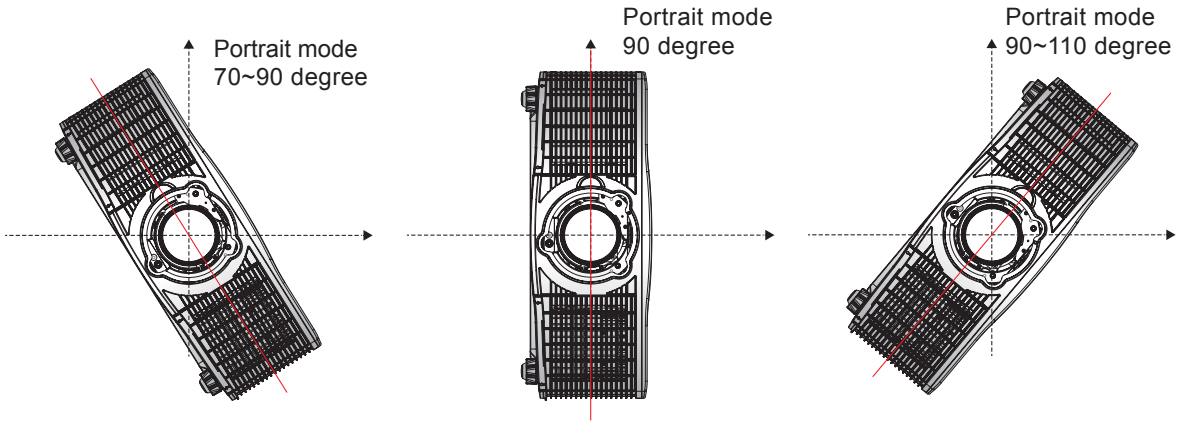


Note: *The maximum tilt of lamp axis from horizontal is ±20 degrees.*

SETUP AND INSTALLATION

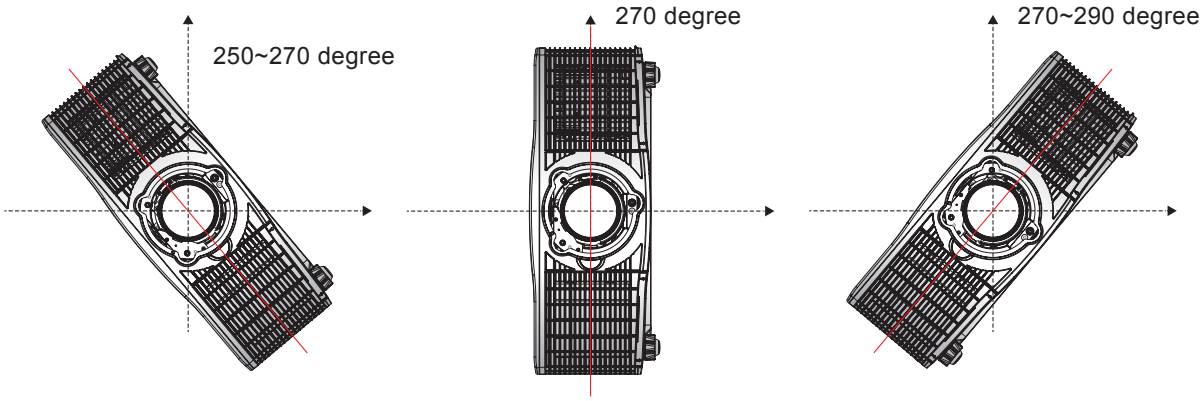
Portrait Mode

- The projector is in portrait mode when the viewing angle is from 70° to 110° as illustrated below.



Non-Portrait Mode

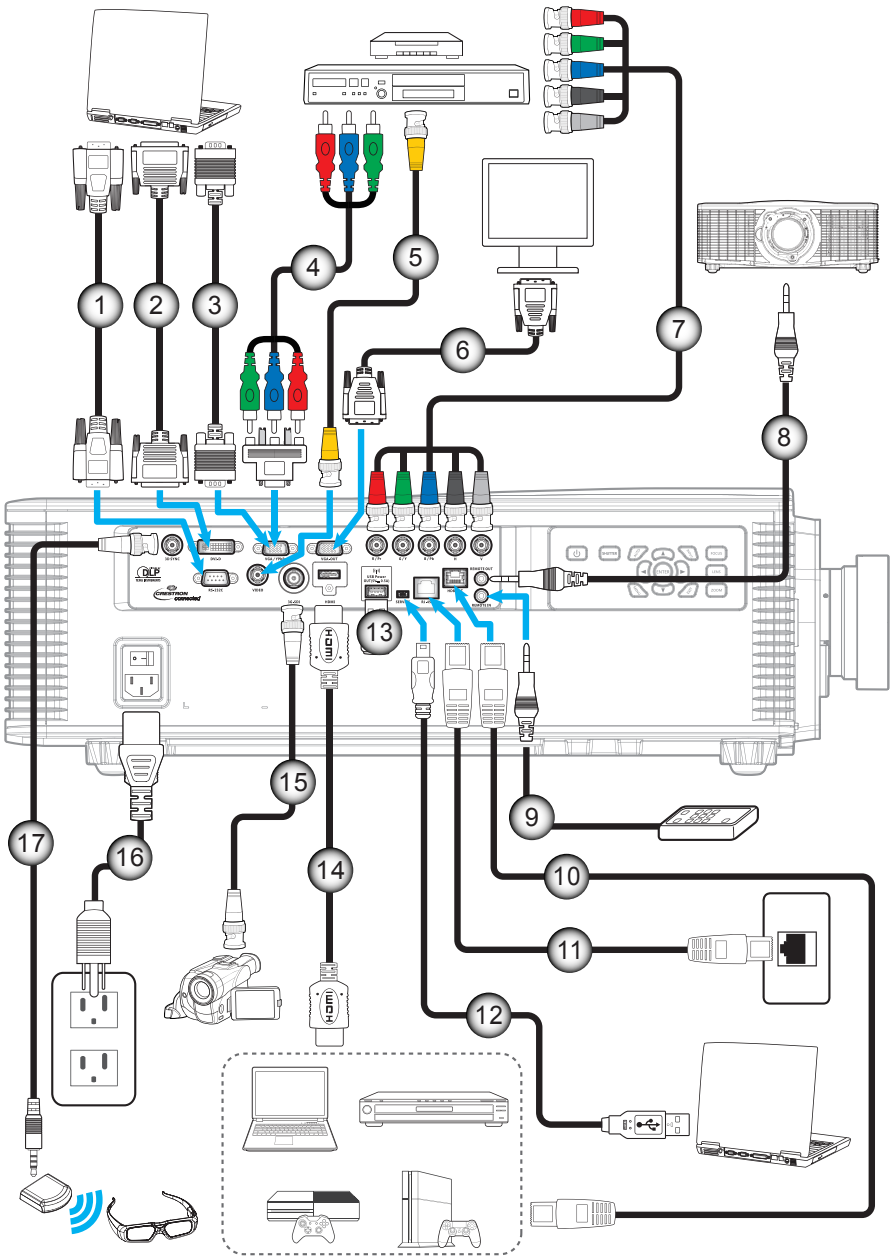
- The projector is in non-portrait mode when the viewing angle is 250° to 290° as illustrated below.



Warning: *The projector should not be operated in Non-Portrait Mode.*

SETUP AND INSTALLATION

Connecting sources to the projector



No	Item	No	Item
1.	RS-232C Cable	10.	CAT5e/6/6A Cable
2.	DVI-D Cable	11.	RJ-45 Cable
3.	VGA-In Cable	12.	Mini USB cable (service only)
4.	RCA Component Cable	13.	WiFi Dongle
5.	Composite Video Cable	14.	HDMI Cable
6.	VGA-Out Cable	15.	3G-SDI Cable
7.	Component (YPbPr) Cable + Stereo Audio Cable	16.	Power Cord
8.	Wired Remote-Out Cable	17.	3D Emitter Cable
9.	Wired Remote-In Cable		

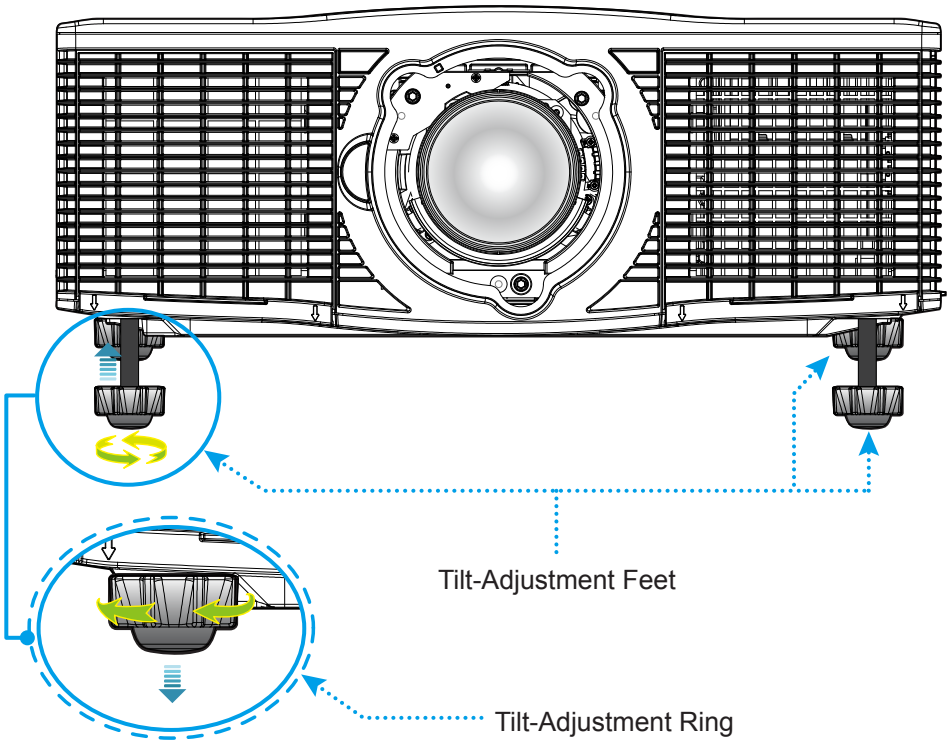
SETUP AND INSTALLATION

Adjusting the projector image

Image height

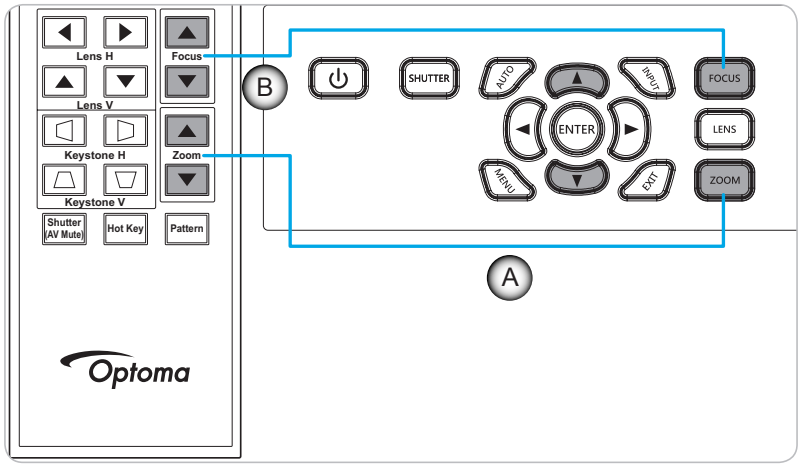
The projector is equipped with elevator feet for adjusting the image height.

1. Locate the adjustable foot you wish to adjust on the underside of the projector.
2. Rotate the adjustable foot clockwise or counterclockwise to raise or lower the projector.



Zoom and focus

- To adjust the image size, press the **Zoom** button (A) to increase or decrease the projected image size.
- To adjust the focus, press the **Focus** button (B) until the image is sharp and legible.



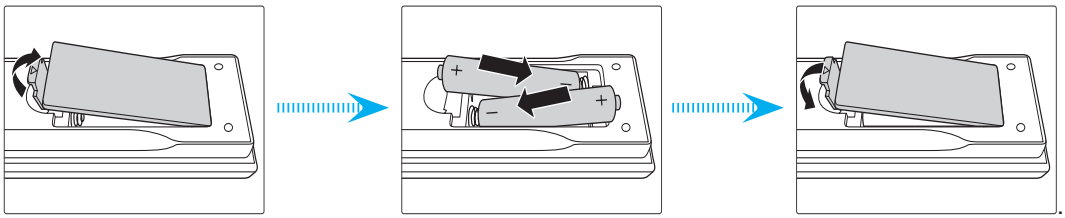
SETUP AND INSTALLATION

Remote setup

Installing / replacing the batteries

Two AAA size batteries are supplied for the remote control.

1. Remove the battery cover on the back of the remote control.
2. Insert AAA batteries in the battery compartment as illustrated.
3. Replace back cover on remote control.



Note: *Replace only with the same or equivalent type batteries.*

CAUTION

Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.

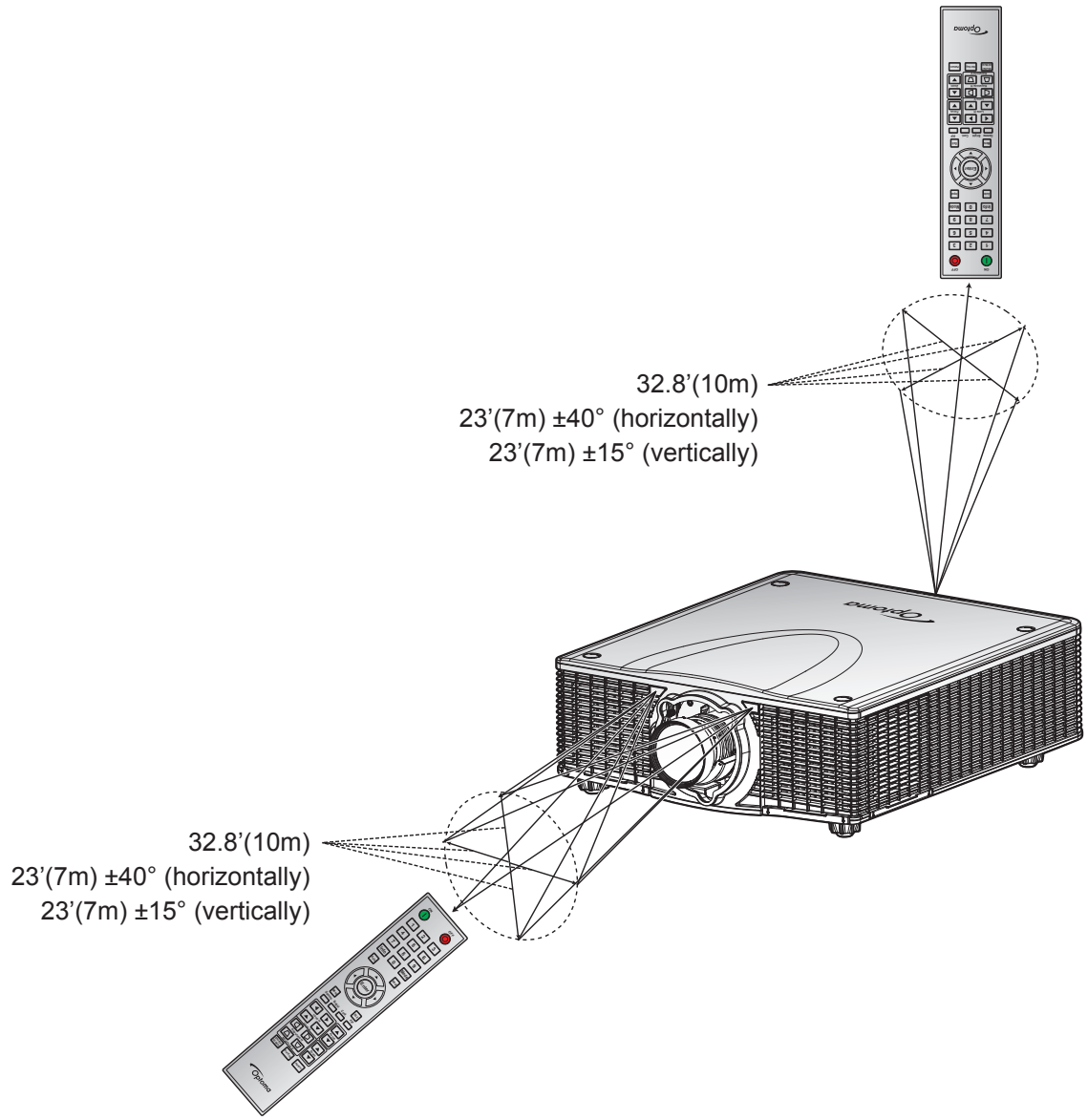
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as the are depleted. Chemicals that leak from batteries that come in contact with skin can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control for an extended period of time, remove the batteries.
- When you dispose of the batteries, you must obey the law in the relative area or country.

Effective range

Infra-Red (IR) remote control sensors are located on the front and top sides of the projector. Ensure to hold the remote control at an angle within 23’(7m) ±40° (horizontally) or 23’(7m) ±15° (vertically) to the projector's IR remote control sensor to function correctly. The distance between the remote control and the sensor should not be longer than 10 meters (32.8 feet).

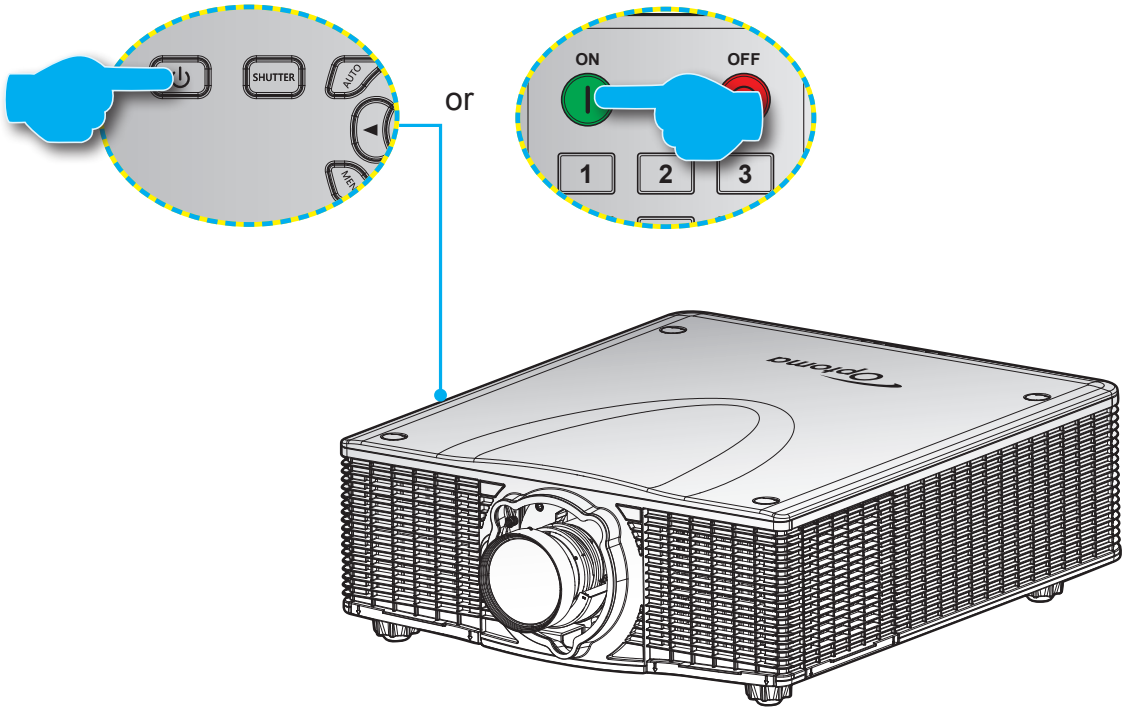
- Make sure that there are no obstacles between the remote control and the IR sensor on the projector that might obstruct the infra-red beam.
- Make sure the IR transmitter of the remote control is not being shined by sunlight or fluorescent lamps directly.
- Please keep the remote controller away from fluorescent lamps for over 2 m or the remote controller might become malfunction.
- If the remote control is closed to Inverter-Type fluorescent lamps, it might become ineffective from time to time.
- If the remote control and the projector are within a very short distance, the remote control might become ineffective.
- When you aim at the screen, the effective distance is less than 5 m from the remote control to the screen and reflecting the IR beams back to the projector. However, the effective range might change according to screens.

SETUP AND INSTALLATION



USING THE PROJECTOR

Powering on / off the projector



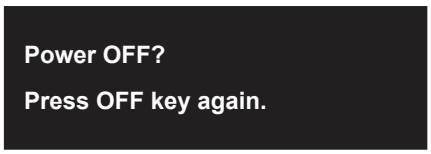
Powering on

1. Securely connect the power lead and signal/source cable.
2. Set the **Power** switch to the “ON” position.
3. Turn on the projector by pressing “” on the remote control or pressing “” on the projector keypad. The Status LED is Green with a long blink.

Note: *The first time the projector is turned on, you will be prompted to select the preferred language, projection orientation, and other settings.*

Powering off

1. Turn off the projector by pressing “” on the projector keypad or pressing “” on the remote control. A warning message will appear on the displayed image.



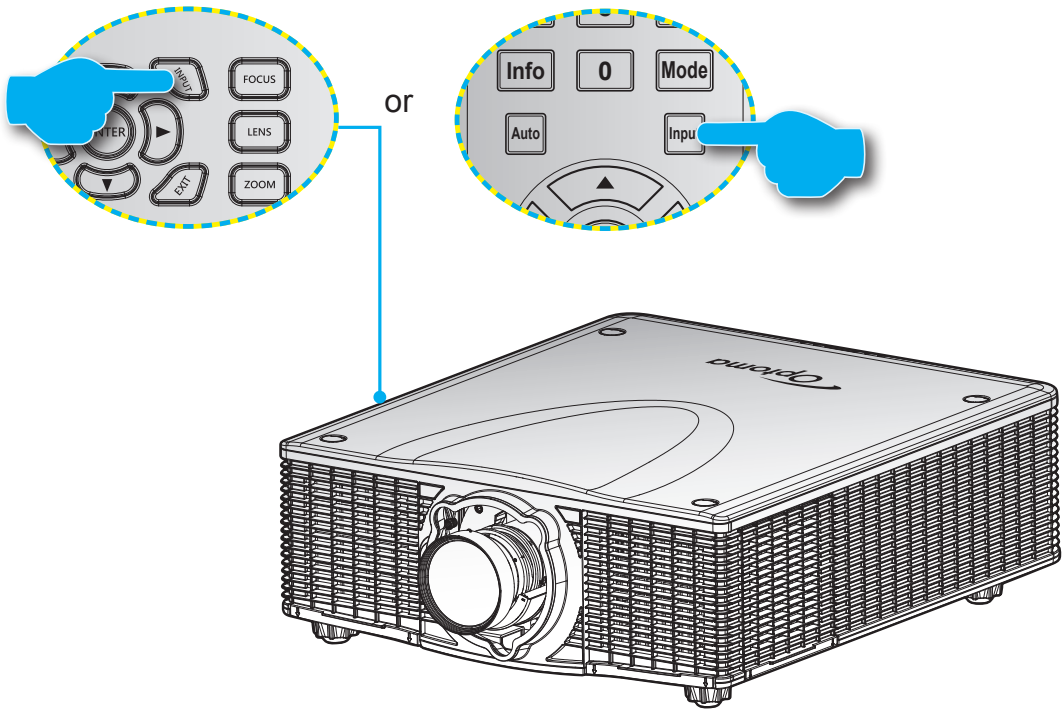
2. Press “” on the projector keypad or press “” on the remote control again to confirm, otherwise the warning message will disappear after 3 seconds. When you press “” on the projector keypad or press “” on the remote control for the second time, the projector will shut down.
3. Set the **Power** switch to the “OFF” position.
4. Disconnect the power lead from the electrical outlet and the projector.

Note: *It is not recommended that the projector is turned on immediately, right after a power off procedure.*

USING THE PROJECTOR

Selecting an input source

Turn on the connected source that you want to display on the screen, such as computer, notebook, video player, etc. The projector will automatically detect the source. If multiple sources are connected, press the **Input** button on the projector keypad or the remote control to select the desired input.

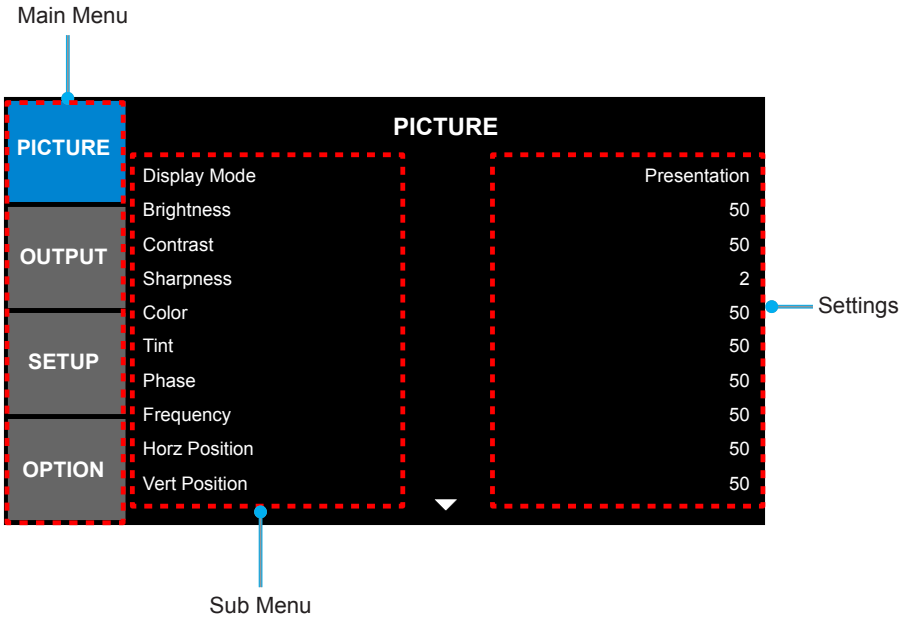


USING THE PROJECTOR

Menu navigation and features

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.

1. To open the OSD menu, press "Menu" on the remote control or the projector keypad.
2. When OSD is displayed, use ▲▼◀▶ to navigate within the menu and adjust a setting up or down.
3. Press "Enter" to enter the submenu or confirm the selection/setting.
4. Press "Exit" to return to the previous menu or exit menus if at top level.



USING THE PROJECTOR

OSD Menu tree

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
PICTURE	Display Mode	Presentation			By source set
		Video			
		Bright			
		DICOM SIM			
		2D High Speed			
		3D			
		User			
		Save to User			
	Brightness	0 ~ 100			50
	Contrast	0 ~ 100			50
	Sharpness	0 ~ 4			2
	Color	0 ~ 100			50
	Tint	0 ~ 100			50
	Phase	0 ~ 100			50
	Frequency	0 ~ 100			50
	Horz Position	0 ~ 100			50
	Vert Position	0 ~ 100			50
	Auto Image				
	3D Display	3D Enable	Auto		Auto
			Frame Packing		
			Side by Side		
			Top and Bottom		
			Frame Sequential		
			Off		
		3D Invert	Off		Off
			On		
		DLP Link	Off		On
			On		
	Color Matching	Enable	On/Off		Off
		Auto Test Pattern	On/Off		On
		Red Part of Red	0 - 1000		1000
		Green Part of Red	0 - 1000		0
		Blue Part of Red	0 - 1000		0
		Green Part of Green	0 - 1000		1000
		Red Part of Green	0 - 1000		0
		Blue Part of Green	0 - 1000		0
		Blue Part of Blue	0 - 1000		1000
		Red Part of Blue	0 - 1000		0
		Green Part of Blue	0 - 1000		0
		Red Part of White	0 - 1000		1000
		Green Part of White	0 - 1000		1000

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
PICTURE	Color Matching	Blue Part of White	0 - 1000		1000
		Reset to Default	Yes/No		
	Advanced	BrilliantColor™	Normal Look		Bright Look
			Bright Look		
		White Peaking	0 - 100		By source set
		Gamma	VIdeo		By source set
			Film		
			Bright		
			CRT		
			DICOM		
		Color Temperature	Warmest		By source set
			Warm		
			Cool		
			Bright		
		Color Space	RGB		Auto
			REC709		
			REC601		
			RGB Video		
			Auto		
		Color Settings	Red Gain	0 ~ 100	50
			Green Gain	0 ~ 100	50
			Blue Gain	0 ~ 100	50
			Red Offset	0 ~ 100	50
			Green Offset	0 ~ 100	50
			Blue Offset	0 ~ 100	50
			Reset RGB Gain/ Offset		
		Color Enhancement	0 ~ 2		0
		Color Wheel Speed	2X		2X
			3X		
		DynamicBlack™	Off		Off
			On		
		Noise Reduction	0 ~ 100		0
		Flesh Tone Correction	0 ~ 100		0
		Video Black Level	Off		Off
			On		
		Film Mode	Off		Off
			On		
OUTPUT	Aspect Ratio	Auto			Auto
		4:3			
		16:10			
		Native			
		3D Mode			

USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
OUTPUT	Overscan	Off			By source set
		Zoom			
		Crop			
	H Digital Zoom	50% ~ 400%			100
	V Digital Zoom	50% ~ 400%			100
	H Digital Shift	0 ~ 100			50
	V Digital Shift	0 ~ 100			50
	Image Warping	PC Mode	Off		Off
			On		
		H Keystone	0 ~ 40		20
		V Keystone	0 ~ 40		20
		H Pincushion	0 ~ 100		50
		V Pincushion	0 ~ 100		50
	PIP/PBP	PIP/PBP Enable	Off		Off
			On		
		Main Source	VGA		VGA
			BNC		
			HDMI		
			DVI-D		
			3G-SDI		
			HDBaseT		
			CVBS		
			Network Display		
		Sub Source	VGA		
			BNC		
			HDMI		
			DVI-D		
			3G-SDI		
			HDBaseT		
			CVBS		
			Network Display		
		Swap			
		Size	Small		Large
			Medium		
			Large		
		Layout	PBP, Main Left		PBP, Main Left
			PBP, Main Top		
			PBP, Main Right		
			PBP, Main Bottom		
			PIP-Bottom Right		
			PIP-Bottom Left		
			PIP-Top Left		
			PIP-Top Right		

USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
SETUP	Language	English			English
		French			
		Spanish			
		German			
		Italian			
		Russian			
		Chinese Simplified			
		Chinese Traditional			
		Japanese			
		Korean			
		Portuguese			
		Indonesian			
		Dutch			
	Ceiling Mount	Off			Auto
		On			
		Auto			
	Rear Projection	Off			Off
		On			
	Lens Function	Focus			
		Zoom			
		Lens Shift			
		Lens Calibration	Yes/No (Dialog box)		
		Lens Lock	No		No
			Yes		
	Menu Preferences	Menu Transparency	0 ~ 9		0
		Show Messages	Off		On
			On		
	Keypad LED Settings	Off			On
		On			
	Pin	Pin Protect	Off		Off PIN default : 12345
			On		
		Change PIN			
	Closed Captioning	Off			Off
		CC1			
		CC2			
	Communications	LAN	DHCP		Off
					On
			IP Address		192.168.000.100
			Subnet Mask		255.255.255.000
			Default Gateway		192.168.000.100
			MAC Address		XX:XX:XX:XX:XX:XX
			Apply		No
					Yes

USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
SETUP	Communications	WLAN	Enable		Off
					On
			Start IP		192.168.001.100
			End IP		192.168.001.120
			Subnet Mask		255.255.255.000
			Default Gateway		192.168.001.100
			MAC Address		XX:XX:XX:XX:XX:XX
			SSID		SSID@XXXXX
		Network	Projector Name		SSID@XXXXX
			Restart Network		Off
					On
			Network Factory Reset		Off
					On
		Serial Port Baud Rate	9600		19200
			14400		
			19200		
			38400		
			57600		
			115200		
		Serial Port Echo	Off		Off
			On		
		Serial Port Path	RS232		RS232
			HDBaseT		
		Projector Address	0 - 9		0
OPTION	Auto Source	Off			On
		On			
	High Altitude	Off			Off
		On			
	Test Pattern	Off			Off
		Grid			
		Red			
		Green			
		Blue			
		Yellow			
		Magenta			
		Cyan			
		White			
		Black			
	Background Color	Logo			Logo
		Blue			
		Black			
		White			

USING THE PROJECTOR

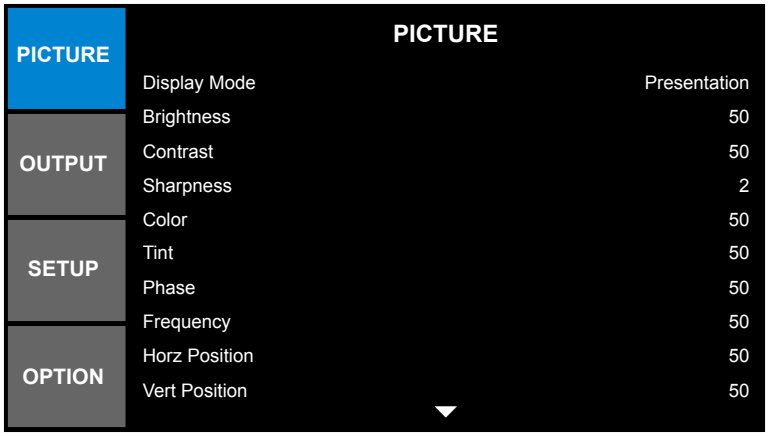
Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
OPTION	Hot-Key settings	Blank Screen			Blank Screen
		Aspect Ratio			
		Freeze Screen			
		Overscan			
		Closed Captions			
	Power Settings	Standby Power Mode	0.5W mode		Communication mode
			Communication mode		
		Direct Power On	Off		Off
			On		
		Auto Power Off	No		20 Mins
			5 Mins		
			10 Mins		
			15 Mins		
			20 Mins		
			25 Mins		
			30 Mins		
		Sleep Timer	No		No
			2 Hours		
			4 Hours		
			6 Hours		
	Light Source Settings	Light Source Mode	Constant Power		Constant Power
			Constant Luminance		
			Eco Mode		
		Constant Power Settings	0 - 10		10
		Constant Luminance Settings	0 - 10		7
		Current Light Source	Lamp 1		Both
			Lamp 2		
			Both		
		Auto Switch	On Failure Only		On Failure Only
			At Power-Up		
			After X Hours		
		Auto Switch Time (Hours)	5 - 3000		100
		Light Source Info	Lamp 1 Hours		
			Lamp 2 Hours		
			Total Projector Hours		
		Reset Light Source Hours	Lamp 1 Hours		
			Lamp 2 Hours		
			Both		

USING THE PROJECTOR

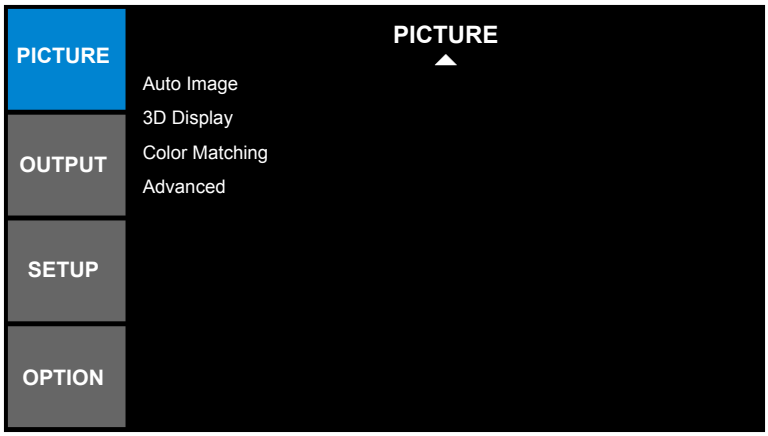
Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
OPTION	Light Sensor	Light Sensor Calibration			
		Calibrated?	(Display Yes/No)		
	Information	Model Name			
		Serial Number			
		Native Resolution			
		Firmware			
		Main Source			
		- Resolution			
		- Signal Format			
		- Pixel Clock			
		- Horz Refresh			
		- Vert Refresh			
		Sub Source			
		- Resolution			
		- Signal Format			
		- Pixel Clock			
		- Horz Refresh			
		- Vert Refresh			
		Light Source Mode			
		Current Light Source			
		Lamp 1 Hours			
		Lamp 2 Hours			
		Standby Power Mode			
		IP Address			
		DHCP			
		System Temperature			
	Factory Reset	Yes/No (Dialog box)			
	Service				

USING THE PROJECTOR

PICTURE menu



PICTURE (1/2)



PICTURE (2/2)

Display Mode

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

- **Presentation**: This mode is suitable for showing PowerPoint presentations when the projector is connected to the PC.
- **Video**: This mode is suitable for watching video.
- **Bright**: Maximum brightness from PC input.
- **DICOM SIM**: This mode can project a monochrome medical image such as an X ray radiography, MRI, etc.
- **2D High Speed**: Display the status of 2D High Speed mode.

  Note: *If the resolution of the input source is 800x600 at 120Hz, 1024x768 at 120Hz, or 1280x720 120Hz, then the display mode will automatically switch to 2D High Speed.*
- **3D**: Recommended setting for 3D mode enabled. Any further adjustments by the user in 3D will be saved in this mode for further use.
- **User**: Memorize user's settings.
- **Save to User**: Save the display mode settings in user profile.

Brightness

Adjust the brightness of the image.

Contrast

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

Sharpness

Adjust the sharpness of the image.

Color

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

Tint

Adjust the color balance of red and green.

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 flickering vertical lines.

Horz Position

Move the image right or left within the area of available pixels.

Vert Position

Move the image up or down within the area of available pixels.

Auto Image

Force the projector to reacquire and lock to the input signal. This is useful when signal quality is marginal.

3D Display

Configure the 3D display settings. Refer to "3D Display menu" on page 33.

Color Matching

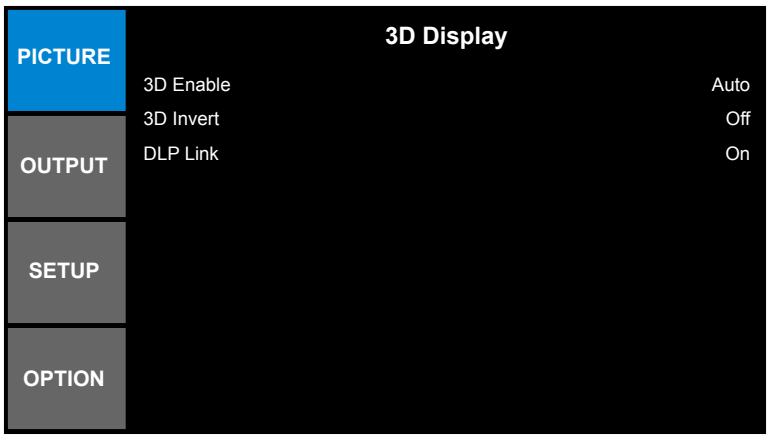
Configure the color matching settings. Refer to "Color Matching menu" on page 34.

Advanced

Configure the advanced image settings. Refer to "Advanced menu" on page 36.

USING THE PROJECTOR

3D Display menu



3D Enable

Set 3D format. Supports Mandatory 3D formats and frame sequential 3D@120Hz.

- **Auto**: When a 3D identification signal is detected, the 3D format is selected automatically.
- **Frame Packing**: Display 3D signal in “Frame Packing” format.
- **Side by Side**: Display 3D signal in “Side by Side” format.
- **Top and Bottom**: Display 3D signal in “Top and Bottom” format.
- **Frame Sequential**: Display 3D signal in “Frame Sequential” format.
- **Off**: Disable the function.

3D Invert

Choose to enable or disable inverting 3D sync signal for the application of using single projector.

- **On**: Invert the left and right frame contents.
- **Off**: Display the default frame contents.

DLP Link

Select 3D Sync source.

- **On**: 3D Sync type is DLP Link.
- **Off**: 3D Sync source is from the **3D Sync OUT** connector.

USING THE PROJECTOR

Color Matching menu



Enable

You may require a unique color gamut (range) for a single projector or application, or you may need to precisely match colors across multiple adjacent displays. Enable this feature to allow color matching.

Auto Test Pattern

Set to “On” to enable displaying an internal solid colored test pattern or set to “Off” to disable the auto test pattern.

Red Part of Red

Adjust the intensity of the red color component in red color. This will also affect the hue of the color.

Green Part of Red

Adjust the intensity of the green color component in red color. This will also affect the hue of the color.

Blue Part of Red

Adjust the intensity of the blue color component in red color. This will also affect the hue of the color.

Green Part of Green

Adjust the intensity of the green color component in green color. This will also affect the hue of the color.

Red Part of Green

Adjust the intensity of the red color component in green color. This will also affect the hue of the color.

Blue Part of Green

Adjust the intensity of the blue color component in green color. This will also affect the hue of the color.

Blue Part of Blue

Adjust the intensity of the blue color component in blue color. This will also affect the hue of the color.

Red Part of Blue

Adjust the intensity of the red color component in blue color. This will also affect the hue of the color.

Green Part of Blue

Adjust the intensity of the green color component in blue color. This will also affect the hue of the color.

Red Part of White

Adjust the intensity of the red color component in white color. This will also affect the hue of the color.

Green Part of White

Adjust the intensity of the green color component in white color. This will also affect the hue of the color.

Blue Part of White

Adjust the intensity of the blue color component in white color. This will also affect the hue of the color.

Reset to Default

Select “Yes” to reset all the color matching adjustments to the factory defaults or select “No” to keep the current values.

About Color Matching

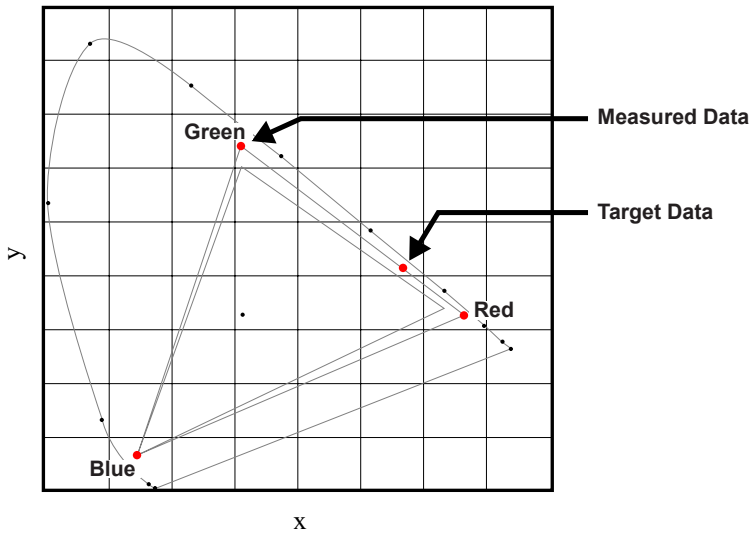
You may require a unique color gamut (range) for a single projector or application, or you may need to precisely match colors across multiple adjacent displays. Use Color Matching by Meter Adjustment or by Manual Adjustment to define the precise hue of each primary color component (red, green, blue and white).

The x/y coordinates for each color define its location on the standard CIE chromaticity graph. Changing either or both of these numbers will change the hue of the color, and modify the range of possible colors. For example, changing the x/y coordinates for red may move the color closer to orange or closer to violet, which will in turn affect all displayed colors having a red component. Adjust the slide bars or enter new specific coordinates as desired to define or change the color gamuts needed for your environment and applications.

Enable the selected method (Meter or Manual Adjustment)- this will automatically disable the other method. For both methods, if Auto Test Pattern is enabled, the solid colored test pattern will be displayed according to the menu item on which you are positioned.

- **Meter Adjustment**

1. Using a color meter, enter the current x and y co-ordinates of Red, Green, Blue and White for the projector image into the Measured Data menu. This is the reference point for the projector. The default values in the menu are based on the average for all projectors.
2. After measuring the values for all the projectors to be matched, calculate the target values.
3. Enter the target values for x, y and gain for each color into the Target Data menu.

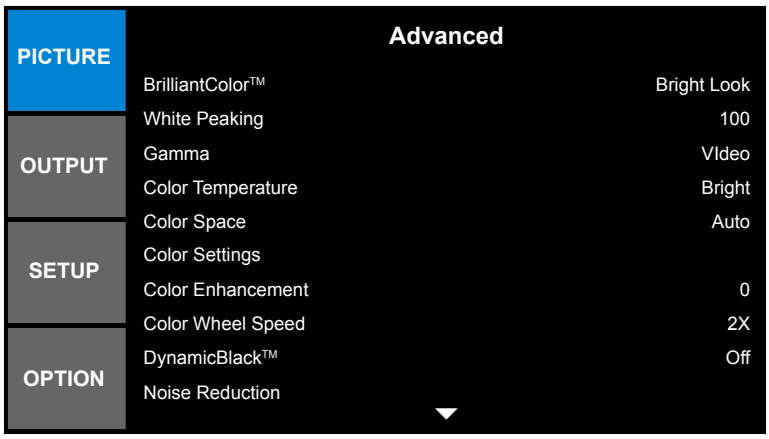


- **Manual Adjustment**

1. Adjust color slide bars and judge image color by eye or meter. A user-defined color “adjustment” can be applied.
2. Use this submenu if you do not have specific color coordinates in mind and will judge color performance by eye or meter. As for Meter Adjustment, each color control actually defines new x/y coordinates for that color and changes its hue. The main colors (red part of red, green part of green and blue part of blue) adjust the intensity of that color component, while the modifying colors (e.g. green part of red and blue part of red) modify the x and y value and change the hue of that color. At the same time the main colors also are used to control the color of the white point.

USING THE PROJECTOR

Advanced menu



BrilliantColor™

This adjustable item utilizes a new color-processing algorithm and enhancements to enable higher brightness while providing true, more vibrant colors in picture.

White Peaking

(Video source only) Increase the brightness of whites that are near 100%.

Gamma

This allows you to set up gamma curve type. After the initial setup and fine tuning is completed, utilize the Gamma adjustment steps to optimize your image output.

- **Video**: for video or TV source.
- **Film**: for home theater.
- **Bright**: for emphasizing brightness.
- **CRT**: for CRT monitor.
- **DICOM**: for simulated DICOM.

Color Temperature

Select a color temperature from Warmest, Warm, Cool, or Bright.

Color Space

Select an appropriate color matrix type from RGB, REC709, REC601, RGB Video, or Auto.

Color Settings

Configure the brightness (gain) and contrast (offset) of an image.

- **Red Gain/Green Gain/Blue Gain/Red Offset/Green Offset/Blue Offset**: Adjust the gain of the red, green, or blue channel of the image. Adjust the offset of the red, green, or blue channel of the image. It will affect the black and white.
- **Reset RGB Gain/Offset**: Reset the gain and offset adjustments to the factory defaults.

Color Enhancement

Apply the color enhancement process.

Color Wheel Speed

Higher speed will reduce the appearance of color artifacts seen by some people.

DynamicBlack™

Dynamic Black enables the projector to automatically optimize the brightness of the display during dark / light movie scenes to be shown in incredible detail.

Noise Reduction

Select a filter sensitivity to be applied on noise. A higher value may improve noisy sources, but it will soften the image.

Flesh Tone Correction

Control the amount of flesh tone correction applied to the image.

Video Black Level

Analyze the current input image and calculate an offset value which is then added to the analog to digital converter black level value. This ensures optimum black level for each analog source.

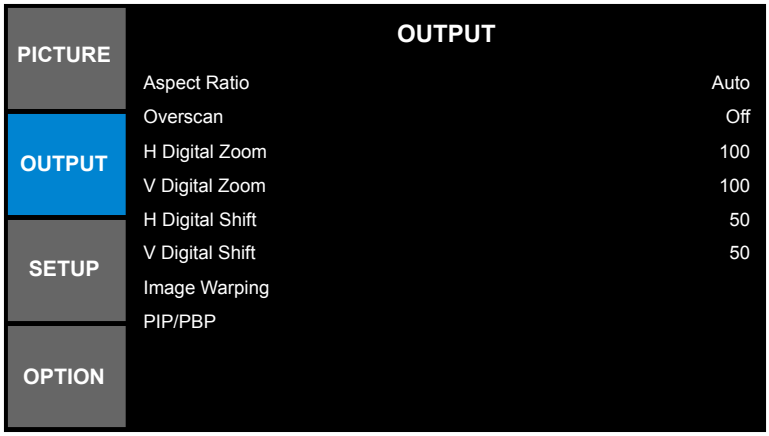
Film Mode

Control film mode detection and determine whether the original source of the input video was film or video.

Note: *This function is available for interlaced video signals.*

USING THE PROJECTOR

OUTPUT menu



Aspect Ratio

Choose your desired aspect ratio.

- **Auto**: Automatically selects the appropriate display format.
- **4:3**: This format is for 4:3 input sources.
- **16:10**: This format is for 16:10 aspect input sources, like HDTV and DVD enhanced for Wide screen TV.
- **Native**: This format displays the original image without any scaling.
- **3D Mode**: This format is for 3D input source.

Overscan

Remove noise around the image. Overscan Zoom enlarges image 3% from original size. Overscan Crop cuts 3% of active pixels in four edges of original image.

H Digital Zoom

Change the size of projector's display area horizontally. If the display area has been resized by this setting, it can be moved by changing the H Digital Shift and V Digital Shift settings.

V Digital Zoom

Change the size of projector's display area vertically. If the display area has been resized by this setting, it can be moved by changing the H Digital Shift and V Digital Shift settings.

H Digital Shift

Shift the display area horizontally if its size has been changed by the Digital Zoom setting.

V Digital Shift

Shift the display area vertically if its size has been changed by the Digital Zoom setting.

Image Warping

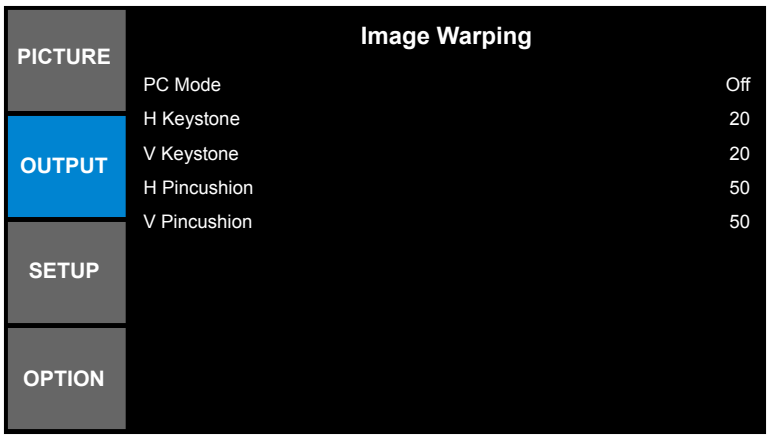
Configure the image warping settings. Refer to "Image Warping menu" on page 39.

PIP/PBP

Configure the PIP/PBP settings. Refer to "PIP/PBP menu" on page 40.

USING THE PROJECTOR

Image Warping menu

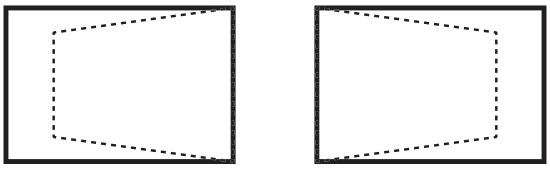


PC Mode

Enable PC software to control advanced geometry using multi-point grid adjustment.

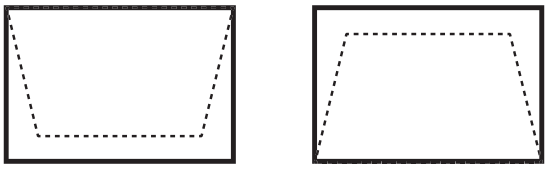
H Keystone

Adjust image distortion horizontally and make a squarer image. Horizontal keystone is used to correct a keystoned image shape in which the left and right borders of the image are unequal in length. This is intended for use with horizontally on-axis applications.



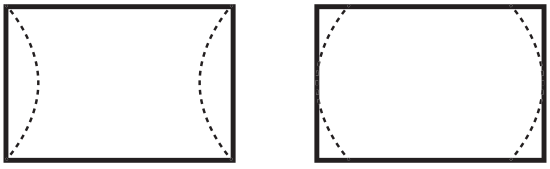
V Keystone

Adjust image distortion vertically and make a squarer image. Vertical keystone is used to correct a keystoned image shape in which the top and bottom are slanted to one of the sides. This is intended when for use with vertically on-axis applications.



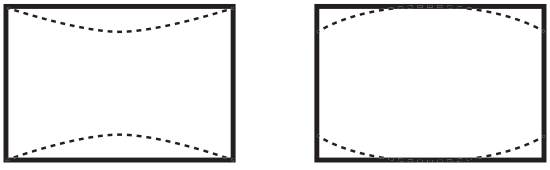
H Pincushion

Adjust the pincushion horizontally and make a more square image.



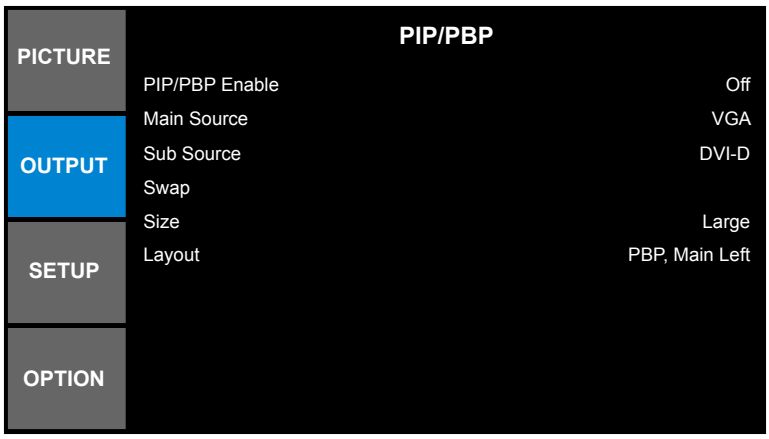
V Pincushion

Adjust the pincushion vertically and make a more square image.



USING THE PROJECTOR

PIP/PBP menu



PIP/PBP Enable

Toggle between displaying two sources at once (Main and PIP/PBP images) or one source only.

Main Source

From the list of active inputs, select one to be used as the main image.

Sub Source

From the list of active inputs, select one to be used as the sub image.

Swap

Swap the sources of main window and PIP/PBP window.

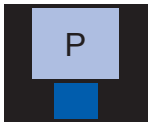
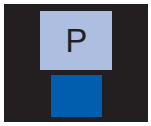
Size

Select the PIP/PBP size.

Layout

Set the location of the PIP/PBP image on the screen.

PBP layout and size table as described below:

PBP Layout	PBP Size		
	Small	Medium	Large
PBP, Main Left			
PBP, Main Top			
PBP, Main Right			
PBP, Main Bottom			

USING THE PROJECTOR

PIP layout and size table as described below:

PIP Layout	PIP Size		
	Small	Medium	Large
PIP-Bottom Right			
PIP-Bottom Left			
PIP-Top Left			
PIP-Top Right			

PIP/PBP compatibility table as described below:

PIP/PBP Matrix	VGA	BNC	DVI	3G-SDI	CVBS	HDMI	HDBaseT	Network Display
VGA	—	—	—	—	V	V	V	V
BNC	—	—	—	—	V	V	V	V
DVI	—	—	—	—	V	V	V	V
3G-SDI	—	—	—	—	V	V	V	V
CVBS	V	V	V	V	—	—	—	—
HDMI	V	V	V	V	—	—	—	—
HDBaseT	V	V	V	V	—	—	—	—
Network Display	V	V	V	V	—	—	—	—

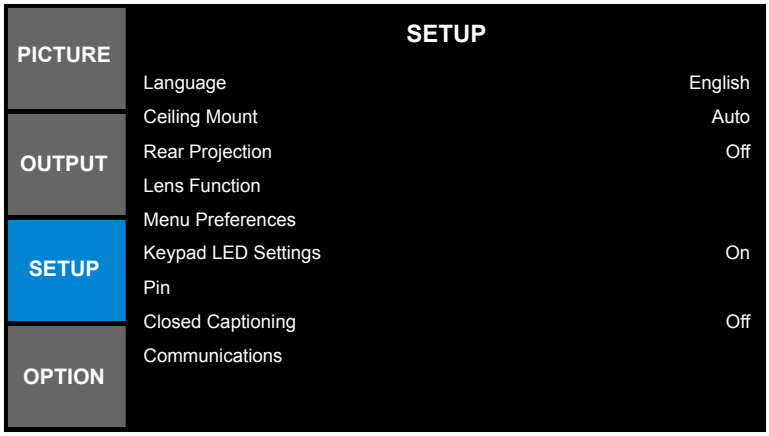
Note:

V : PIP/PBP combinations are enabled

— : PIP/PBP combinations are disabled

USING THE PROJECTOR

SETUP menu



Language

Choose the multilingual OSD menu.

Ceiling Mount

Turn the image upside down for ceiling-mounted projection.

Rear Projection

Reverse the image so you can project from behind a translucent screen.

Lens Function

Configure the lens function settings. Refer to “Lens Function menu” on page 43.

Menu Preferences

Configure the menu preferences settings. Refer to “Menu Preferences menu” on page 44.

Keypad LED Settings

Turn the backlight of keypad on or off.

Pin

Configure the pin settings. Refer to “Pin menu” on page 44.

Closed Captioning

The closed captioning broadcasting multiplexes caption signals (character information) in the video signal to allow the displaying of characters on the screen.

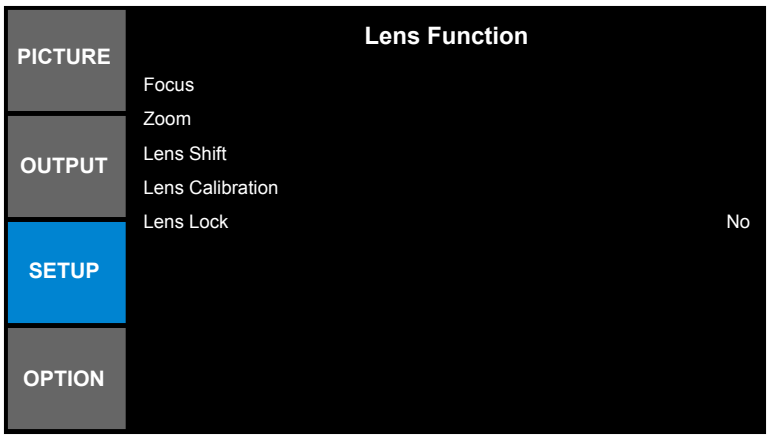
- **Off**: Disable the function.
- **CC1**: CC1 language.
- **CC2**: CC2 language.

Communications

Configure the communications settings. Refer to “Communications menu” on page 45.

USING THE PROJECTOR

Lens Function menu



Focus

Adjust focus function on the projected image.

Zoom

Adjust zoom function on the projected image.

Lens Shift

Shift the projected image.

Lens Calibration

Perform calibration and return lens to the center position.

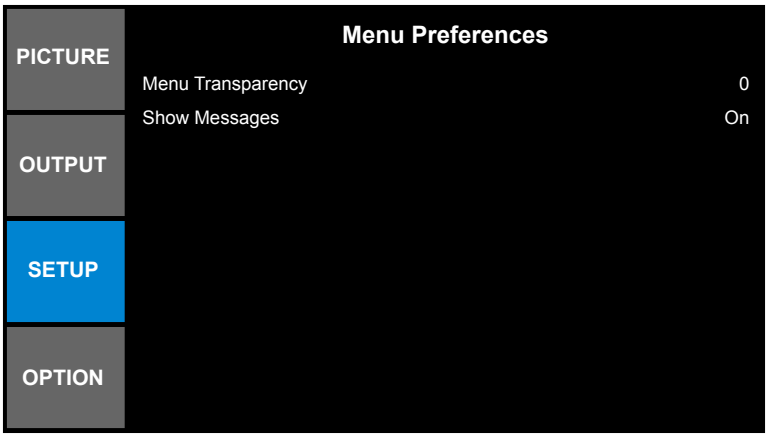
Lens Lock

Select this function to prevent all lens motors from moving.

- **No**: Lens shift can be used by user.
- **Yes**: Lens shift will be locked.

USING THE PROJECTOR

Menu Preferences menu



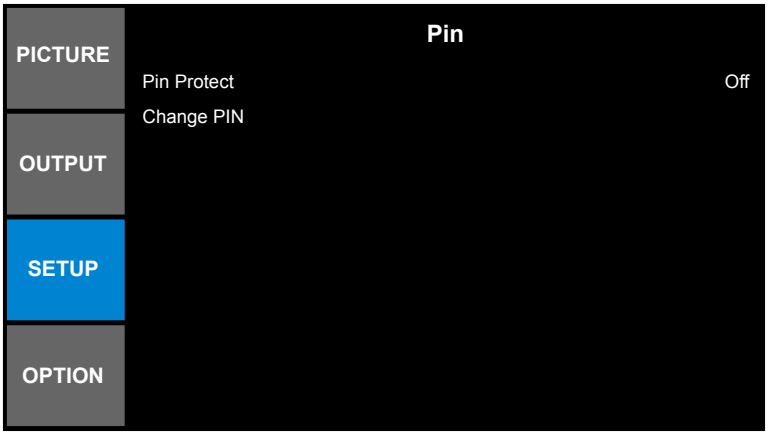
Menu Transparency

Change OSD menu background to be transparent.

Show Messages

Display status messages on the screen.

Pin menu



Pin Protect

The PIN (personal identification number) feature allows you to password protect your projector. Once you enable the PIN feature, you must enter the PIN before you can project an image.

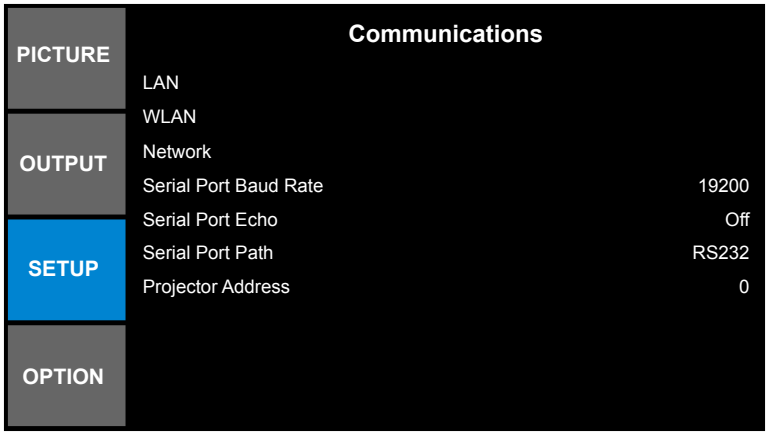
Note: *The PIN default value is "12345".*

Change PIN

Change the PIN.

USING THE PROJECTOR

Communications menu



LAN

Configure the local area network (LAN) settings.

- **DHCP**: Turn the DHCP ON/OFF.
- **IP Address**: Select an IP address.
- **Subnet Mask**: Select subnet mask number.
- **Default Gateway**: Select the default gateway of the network connected to the projector.
- **MAC Address**: Display the network MAC Address value.
- **Apply**: Apply Network settings.

WLAN

Configure the wireless local area network (WLAN) settings.

- **Enable**: Enable/Disable WLAN.
- **Start IP**: Start of IP Address.
- **End IP**: End of IP Address.
- **Subnet Mask**: Assign Network Subnet Mask.
- **Default Gateway**: Assign Network Default Gateway.
- **MAC Address**: Display network MAC Address value.
- **SSID**: Assign Network Service Set Identifier.

Network

Configure the general network settings.

- **Projector Name**: Display the projector hostname for Network.
- **Restart Network**: Restart the network.
- **Network Factory Reset**: Perform factory reset on the network settings. The Projector Name, LAN IP, WLAN IP, and SNMP settings will be reset

Serial Port Baud Rate

Select the serial port and baud rate.

Serial Port Echo

Control whether the serial port echoes characters.

Serial Port Path

Select the serial port path from either RS232 or HDBaseT.

USING THE PROJECTOR

Projector Address

Set the projector address. The projector will respond to IR remotes set either at the same address as the projector or to IR remotes set to address 0.

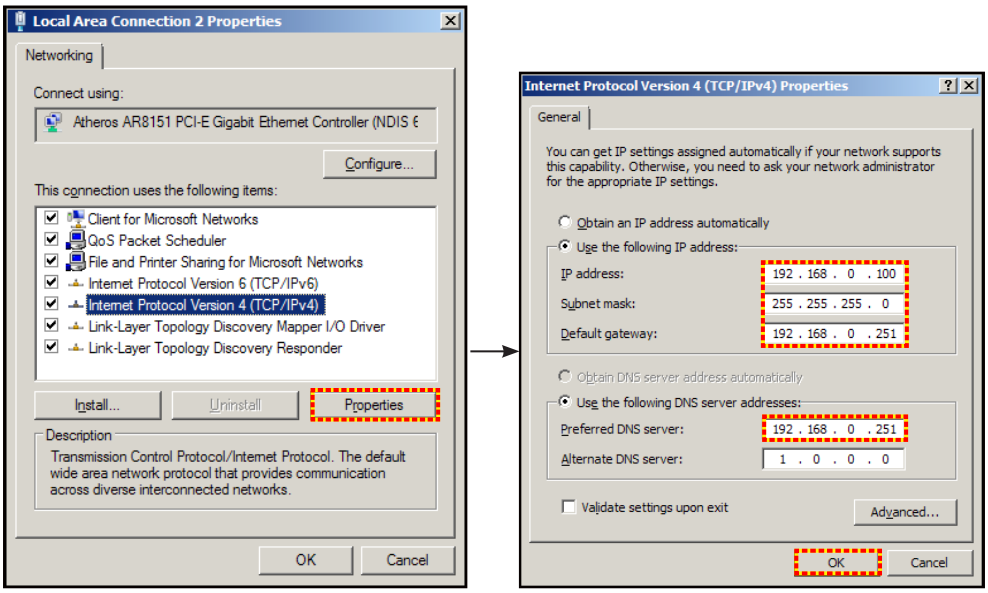
How to use web browser to control your projector

1. Make sure your PC is in the area with the projector.
2. Open the web browser in your PC and type in the projector's IP address ("SETUP: Communications > LAN > IP Address").

Note: *The steps in this section is based on Windows 7 operating system.*

Making a direct connection from your computer to the projector*

1. Turn "Off" the DHCP option on the projector.
2. Configure the IP address, Subnet Mask, and Gateway on projector. Refer to "Communications menu" on page 41.
3. Open ***Network and Sharing Center*** page on your PC, and assign the identical network parameters to your PC as set on projector. Click "OK" to save the parameters.



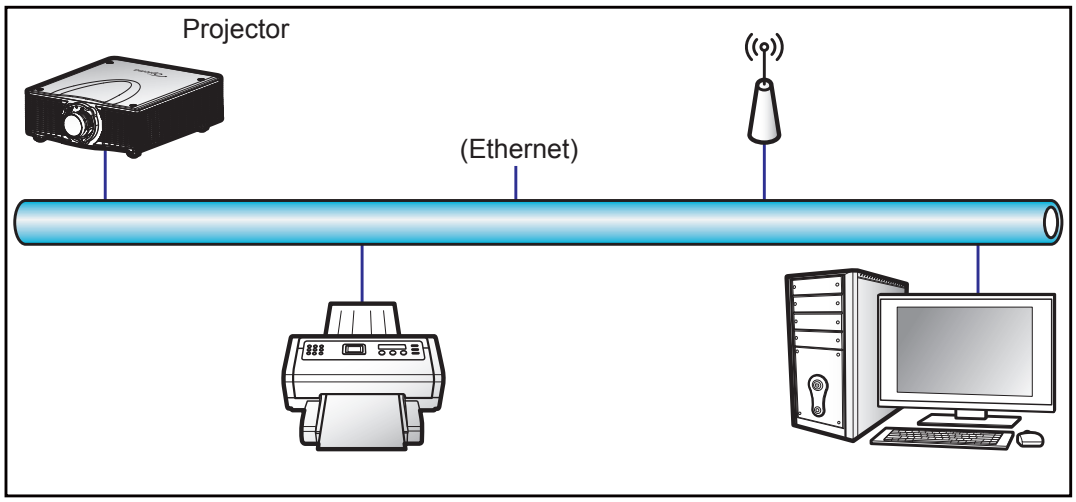
4. Open the web browser on your PC and type in to the URL field the IP address, assigned in step 3. Then press "Enter".

USING THE PROJECTOR

Setup network control settings menu

LAN_RJ45 function

For simplicity and ease of operation, the projector provides diverse networking and remote management features. The LAN / RJ45 function of the projector through a network, such as remotely manage: Power On / Off, Brightness and Contrast settings. Also you can view the projector status information, such as: Video- Source, Sound-Mute, etc.



Wired LAN terminal functionalities

This projector can be controlled by using a PC (laptop) or other external device via RJ-45 connector and compatible with Crestron / Extron / AMX (Device Discovery) / PJLink.

- Crestron is a registered trademark of Crestron Electronics, Inc. of the United States.
- Extron is a registered trademark of Extron Electronics, Inc. of the United States.
- AMX is a registered trademark of AMX LLC of the United States.
- PJLink applied for trademark and logo registration in Japan, the United States of America, and other countries by JBMIA.

The projector is supported by the specified commands of the Crestron Electronics controller and related software, for example RoomView®.

http://www.crestron.com/

This projector is compliant to support Extron device(s) for reference.

http://www.extron.com/

This projector is supported by AMX (Device Discovery).

http://www.amx.com/

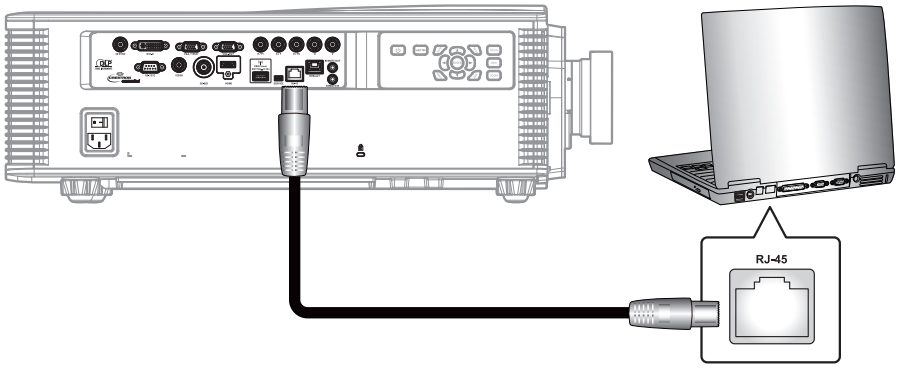
This projector supports all commands of PJLink Class1 (Version 1.00).

http://pjlink.jbmia.or.jp/english/

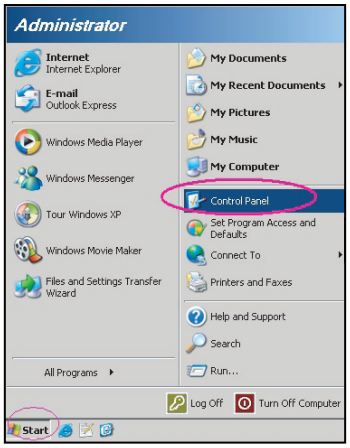
For more detailed information about the various types of external devices which can be connected to the LAN / RJ45 port and remote control the projector, as well as the supported commands for these external devices, please contact the Support-Service directly.

LAN RJ45

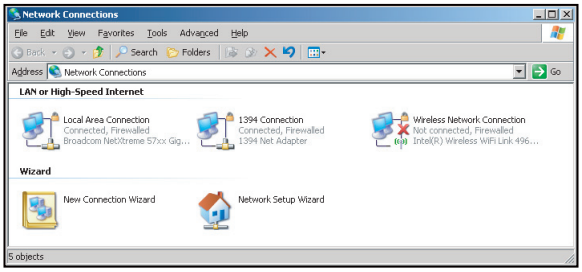
1. Connect an RJ45 cable to RJ-45 connector on the projector and the PC (laptop).



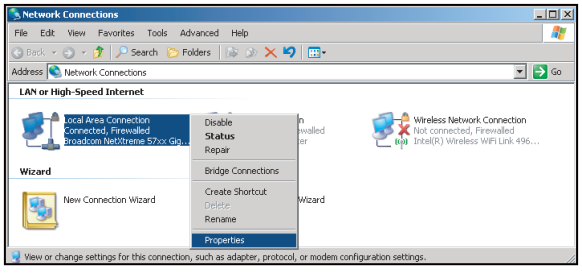
2. On the PC (Laptop), select **Start** > **Control Panel** > **Network Connections**.



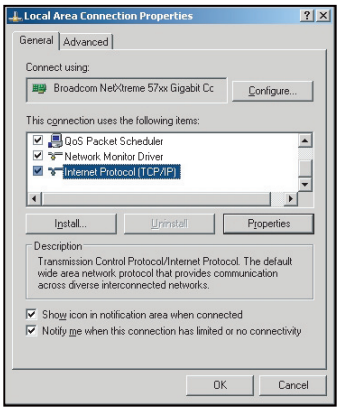
3. Right-click on the L**ocal Area Connection**, and select **Property**.



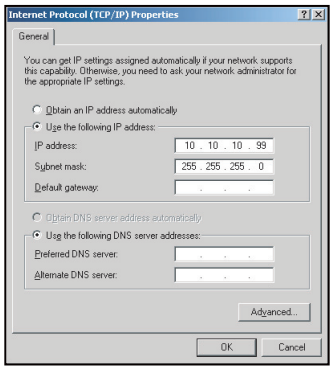
4. In the **Properties** window, select the **General tab**, and select **Internet Protocol (TCP / IP)**.



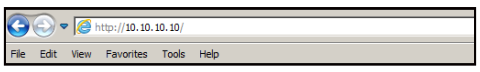
5. Click “Properties”.



6. Type in the IP address and Subnet mask, then press “OK”. In this example, the PC IP address is 10.10.10.99, and the projector IP address is 10.10.10.10.



7. Press the “Menu” button on the projector.
8. Select **SETUP** > **Communications** > **LAN**.
9. Enter the following connection parameters:
   - DHCP: Off
   - IP Address: 10.10.10.10
   - Subnet Mask: 255.255.255.0
   - Default Gateway: 0.0.0.0
10. Press “Apply” to confirm settings.
11. Open a web browser, for example Microsoft Internet Explorer with Adobe Flash Player 9.0 or higher installed.
12. In the Address bar, input the projector’s IP address: 10.10.10.10.

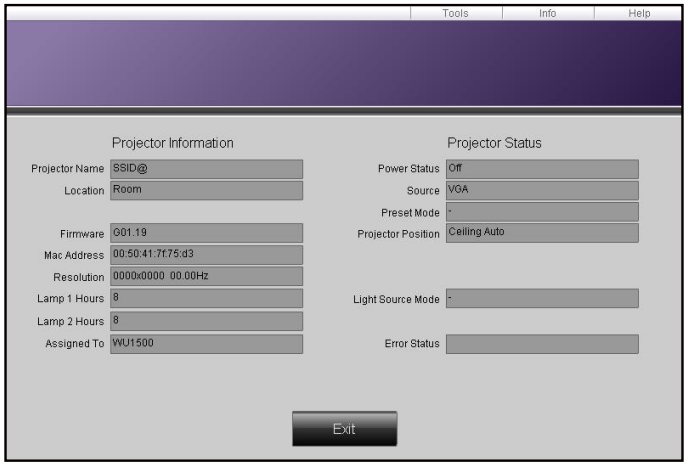


13. Press “Enter”.
The projector is setup for remote management. The LAN / RJ45 function displays as follows:

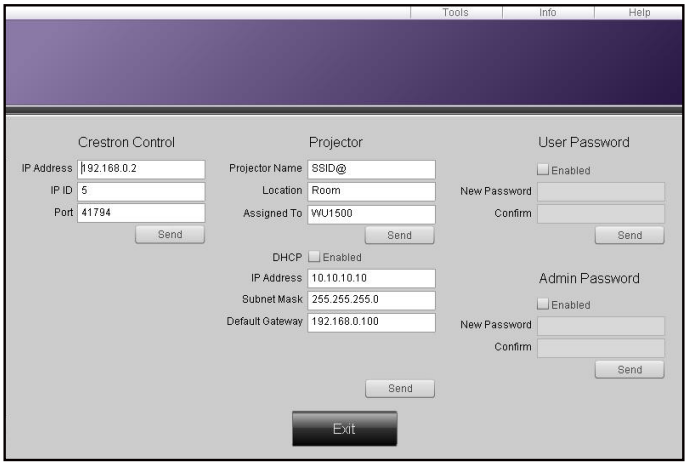
Main page



Information page



Tool page



Contact IT helpdesk



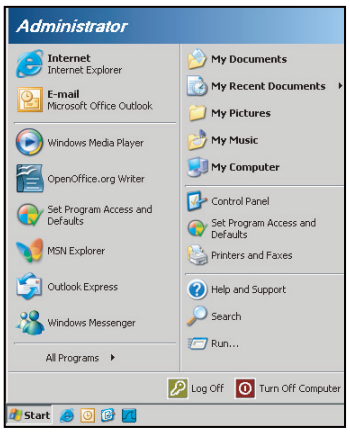
USING THE PROJECTOR

RS232 by Telnet Function

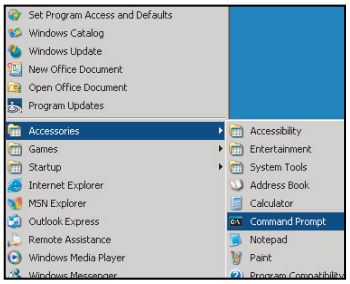
There is different method to control the projector using RS232 commands but without using serial (RS232) connection, this method is called TELNET and uses LAN/RJ45 interface.

Quick Start-Guide for "RS232 by Telnet"

- Check and get the IP address on OSD of the projector.
- Make sure that the PC / laptop can access the web-page of the projector.
- Make sure that "Windows Firewall" setting is set disabled in case of "TELNET" function filtering out by PC / laptop.



1. Select **Start** > **All Programs**.> **Accessories** > **Command Prompt**.



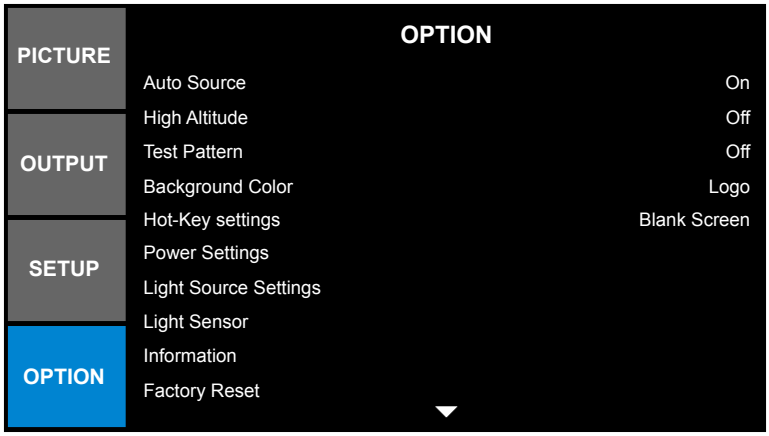
2. Input the command format as follows:
   - telnet ttt.xxx.yyy.zzz 23 ("Enter" key pressed)
   - (ttt.xxx.yyy.zzz: IP-Address of the projector)
3. If Telnet-Connection ready, and user can have RS232 command input, then "Enter" key pressed, the RS232 command will be workable.

Specification for "RS232 by TELNET":

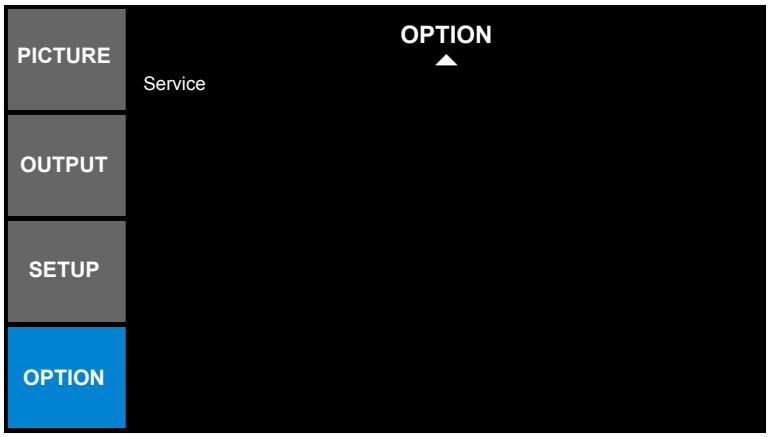
1. Telnet: TCP.
2. Telnet port: 23 (for more detail, kindly please get contact with the service agent or team).
3. Telnet utility: Windows "TELNET.exe" (console mode).
4. Disconnection for RS232-by-Telnet control normally: Close
5. Windows Telnet utility directly after TELNET connection ready.
   - Limitation 1 for Telnet-Control: there is less than 50 bytes for successive network payload for Telnet-Control application.
   - Limitation 2 for Telnet-Control: there is less than 26 bytes for one complete RS232 command for Telnet-Control.
   - Limitation 3 for Telnet-Control: Minimum delay for next RS232 command must be more than 200 (ms).

USING THE PROJECTOR

OPTION menu



OPTION (1/2)



OPTION (2/2)

Auto Source

Use this option to enable/disable input sources.

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

High Altitude

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

Test Pattern

Display a test pattern or select “Off” to turn off a test pattern.

Background Color

Use this feature to display a “Logo”, “Blue”, “Black”, or “White” screen when no signal is available.

Hot-Key settings

Assign a different function to the hot-key on the remote control by highlighting the function in the list and pressing “Enter”. Choose a function that does not already have a dedicated button, and assign the hot-key to that function, allowing you to quickly and easily use the chosen function.

Power Settings

Configure the power settings. Refer to “Power Settings menu” on page 54.

Light Source Settings

Configure the light source settings. Refer to “Light Source Settings menu” on page 55.

Light Sensor

- **Light Sensor Calibration**: Calibrate the Light Sensor for use with the Constant Luminance mode, which allows the projector to be set for constant brightness. If the Light Sensor has not been calibrated, Constant Luminance mode will be disabled.
- **Calibrated**:
  - **Yes**: Light Sensor has been calibrated.
  - **No**: Light Sensor has not been calibrated.

Information

Display the projector information for source, resolution, and software version on the screen.

Factory Reset

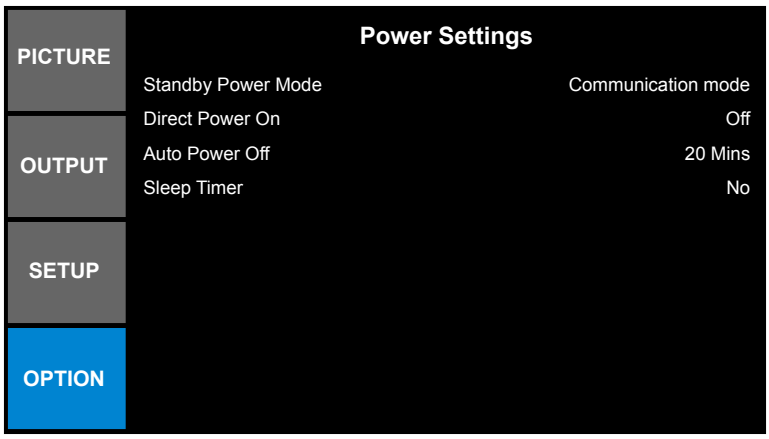
Restore all settings to their default value. It will not reset network.

Service

Service only.

USING THE PROJECTOR

Power Settings menu



Standby Power Mode

Set the standby power mode setting.

- **0.5W mode**: The projector is in standby mode when connected to AC power. (<0.5W)
- **Communication mode**: The projector could be controlled via the LAN terminal during power standby.

Direct Power On

Choose “On” to activate Direct Power mode. The projector will automatically power on when AC power is supplied, without pressing “” on the remote control or press “” on the projector keypad.

Auto Power Off

Set 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).

Note:

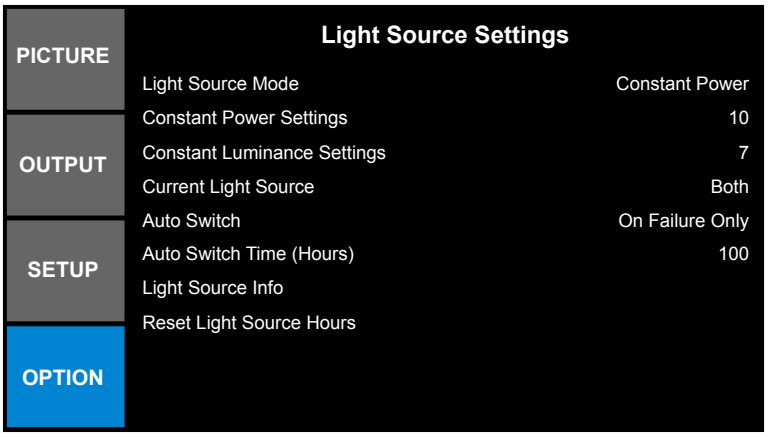
- *The value of sleep timer will be reset to zero after the projector is powered off.*
- *The projector will automatically power off when the countdown has finished.*

Sleep Timer

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.

USING THE PROJECTOR

Light Source Settings menu



Light Source Mode

Set the light source mode setting. When “Eco Mode” is selected, the projector will adjust to the lowest fan speed and switch the light source power to the minimum setting.

Constant Power Settings

Set the value of the light source power (in Watts).

Constant Luminance Settings

Set the value for the Constant Luminance to maintain constant brightness. The light sensor will monitor the light level and will apply more power as the light source brightness decays naturally over time. When the light source setting reaches maximum power, it will remain at this setting.

Note: *The light sensor needs to be calibrated for Constant Luminance mode to work properly.*

Current Light Source

Select which lamp(s) is in use.

Auto Switch

Control when the projector switches lamps.

Auto Switch Time (Hours)

Set the number of hours for Lamp Auto Switch.
For example:

1. Lamp conditions: lamp 1 = 50 hours, lamp 2 = 60 hours.
2. Set the current lamp to lamp 1 - the lamp with the lower lamp hour usage.
3. Set the Lamp Auto Switch to After (N) hours and the Lamp Auto Switch Time to 100 hours.
4. When lamp 1 reaches 150 hours, projector will auto switch to lamp 2.
5. When lamp 2 reaches 160 hours, projector will auto switch to lamp 1.

Light Source Info

Display current lamp(s) projection time.

Reset Light Source Hours

Resets the lamp hour counter after replacing the lamp(s).

USING THE PROJECTOR

3D Setup

1. Turn on your projector.
2. Connect your 3D source. For example, 3D Blu ray, Games console, PC, Set top box, etc.
3. Ensure you have inserted 3D content or selected the 3D channel.
4. Turn on your 3D glasses. Please refer to the 3D glasses user manual on how to operate the 3D glasses.
5. Your projector will automatically display 3D from a 3D Blu-ray. For 3D via a set top box or PC, you will be required to adjust the settings in the 3D menu.

For 3D via Blu ray

3D will automatically be displayed.

- Menu > “PICTURE” > “3D Display” > “DLP Link” > “On”.

For 3D via a PC or Set top box

3D will not be displayed automatically. Depending on the 3D content the image will either be displayed side by side or top and bottom. Please refer to the following table.

SBS	SBS

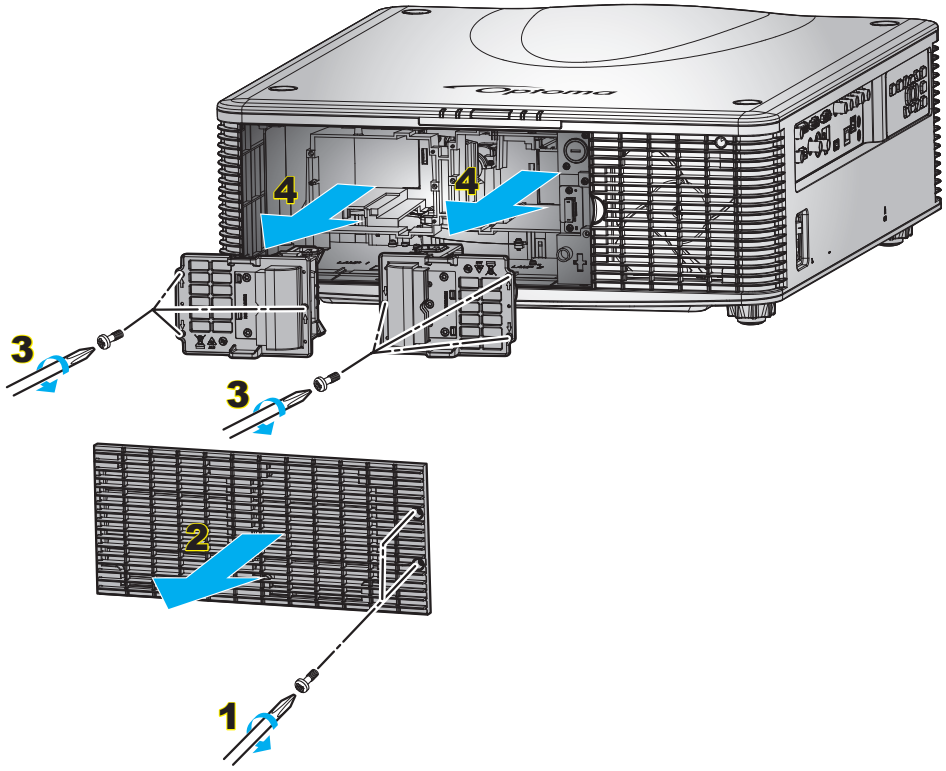
Top and bottom
Top and bottom

- For side by side images, select “Side by Side” in the menu. Menu > “PICTURE” > “3D Display” > “3D Enable” > “Side by Side”.
- For top and bottom images, select “top and bottom” in the menu. Menu > “PICTURE” > “3D Display” > “3D Enable” > “Top and Bottom”.
- If the 3D image does not look correct, you may also be required to adjust the 3D sync invert. Turn this on if the image looks odd. Menu > “PICTURE” > “3D Display” > “3D Invert” > “On”.

Note: *If input video is normal 2D, set the “3D Enable” setting to “Auto”. If “Side by Side” mode is active, 2D video content will not be displayed correctly. Please change back to “Auto” when 3D via a PC only works with certain resolutions. Please check the compatibility on page 59.*

MAINTENANCE

Replacing the lamp



Procedure:

1. Switch off the power to the projector by pressing "⏻" on the projector keypad or pressing "⏺" on the remote control.
2. Set the **Power** switch to the "OFF" position. Allow the projector to cool down for at least 30 minutes.
3. Disconnect the power cord.
4. Unscrew the screws on the cover. 1
5. Open the cover. 2
6. Unscrew the screws on the lamp module(s). 3
7. Remove the lamp module(s) carefully. 4
8. To replace the lamp module(s), reverse the previous steps.
9. Turn on the projector and reset the lamp timer.
10. Lamp Reset: (i) Press "Menu" → (ii) Select "OPTION" → (iii) Select "Light Source Settings" → (iv) Select "Reset Light Source Hours" → (v) Select the desired option ("Lamp 1 Hours", "Lamp 2 Hours", or "Both").

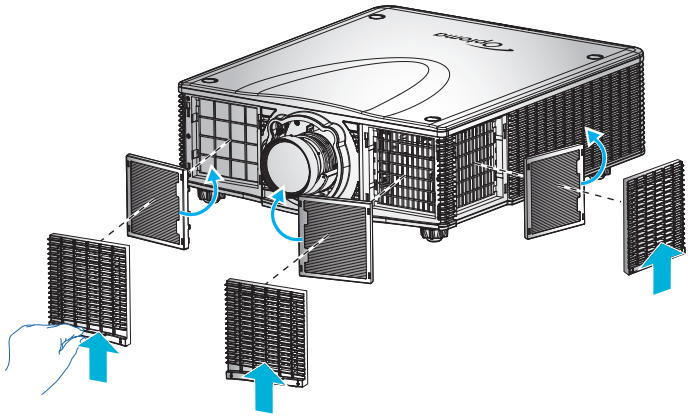
Note:

- *The screw 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 shatter. Use a dry cloth to clean the lamp module if it was accidentally touched.*

MAINTENANCE

Installing and cleaning the dust filter (optional)

Installing the dust filter



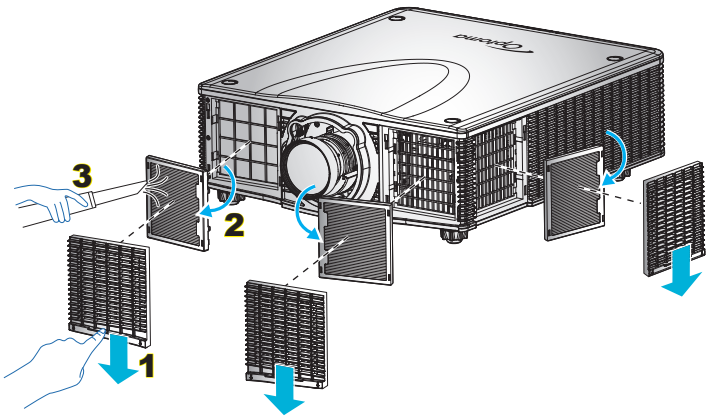
Note: *Dust filters are only required/supplied in the selected regions with excessive dust.*

Cleaning the dust filter

We recommend you to clean the dust filter every three months. Clean it more often if the projector is used in a dusty environment.

Procedure:

1. Switch off the power to the projector by pressing "⏻" on the projector keypad or pressing "⏺" on the remote control.
2. Set the **Power** switch to the "OFF" position. Then disconnect the power cord.
3. Push the filter cover downwards to remove it. 1
4. Remove the filter from its compartment. 2
5. Clean or replace the dust filter. 3
6. To install the dust filter, reverse the previous steps.



ADDITIONAL INFORMATION

Compatible resolutions

Signal Type	Resolution	Frame rate (Hz)	QD881	VGA	BNC	HDMI	DVI	3G-SDI	HDBaseT	CVBS
PC	640x480	60	DMT0660	V	V	V	V	—	V	—
	640x480	72	DMT0672	V	V	V	V	—	V	—
	640x480	75	DMT0675	V	V	V	V	—	V	—
	640x480	85	DMT0685	V	V	V	V	—	V	—
	640x480	66.6	APP0667			V	V	—	V	—
	720x400	70	IBM0770H	V	V	V	V	—	V	—
	800x600	60	DMT0860	V	V	V	V	—	V	—
	800x600	72	DMT0872	V	V	V	V	—	V	—
	800x600	75	DMT0875	V	V	V	V	—	V	—
	800x600	85	DMT0885	V	V	V	V	—	V	—
	800x600	120	CVR0812	V		V	V	—	V	—
	832x624	75	8362A75	V	V	V	V	—	V	—
	848x480	50	CVT0850H	—	—	V	V	—	V	—
	848x480	60	CVT0860H	—	—	V	V	—	V	—
	848x480	75	CVT0875H	—	—	V	V	—	V	—
	848x480	85	CVT0885H	—	—	V	V	—	V	—
	1024x768	60	DMT1060	V	V	V	V	—	V	—
	1024x768	75	DMT1075	V	V	V	V	—	V	—
	1024x768	85	DMT1085	V	V	V	V	—	V	—
	1024x768	120	CVR1012	V	—	V	V	—	V	—
	1152x720	50	CVT1150D	—	—	V	V	—	V	—
	1152x720	60	CVT1160D	—	—	V	V	—	V	—
	1152x720	75	CVT1175D	—	—	V	V	—	V	—
	1152x720	85	CVT1185D	—	—	V	V	—	V	—
	1152x864	60	CVT1160	V	V	V	V	—	V	—
	1152x864	70	DMT1170	V	V	V	V	—	V	—
	1152x864	75	DMT1175	V	V	V	V	—	V	—
	1152x864	85	DMT1185	V	V	V	V	—	V	—
	1152x870	75	APP1175	—	—	V	V	—	V	—
	1280x720	50	CVT1250H	—	—	V	V	—	V	—
	1280x720	60	CVT1260H	V	V	V	V	—	V	—
	1280x720	75	CVT1275H	V	V	V	V	—	V	—
	1280x720	85	CVT1285H	V	V	V	V	—	V	—
	1280x720	120		V	—	V	V	—	V	—
	1280x768	60	CVT1260E	V	V	V	V	—	V	—
	1280x768	75	CVT1275E	V	V	V	V	—	V	—
	1280x768	85	CVT1285E	V	V	V	V	—	V	—
	1280x800	50	CVT1250_	V	V	V	V	—	V	—
	1280x800	60	DMT1260D	V	V	V	V	—	V	—

ADDITIONAL INFORMATION

Signal Type	Resolution	Frame rate (Hz)	QD881	VGA	BNC	HDMI	DVI	3G-SDI	HDBaseT	CVBS
PC	1280x800	75	CVT1275_	V	V	V	V	—	V	—
	1280x800	85	CVT1285_	V	V	V	V	—	V	—
	1280x960	50	CVT1250	—	—	V	V	—	V	—
	1280x960	60	CVT1260	V	V	V	V	—	V	—
	1280x960	75	CVT1275	V	V	V	V	—	V	—
	1280x960	85	CVT1285	V	V	V	V	—	V	—
	1280x1024	50	CVT1250G	—	—	V	V	—	V	—
	1280x1024	60	DMT1260G	V	V	V	V	—	V	—
	1280x1024	75	DMT1275G	V	V	V	V	—	V	—
	1280x1024	85	DMT1285G	V	V	V	V	—	V	—
	1360x768	50	CVT1350H	—	—	V	V	—	V	—
	1360x768	60	DMT1360H	—	—	V	V	—	V	—
	1360x768	75	CVT1375H	—	—	V	V	—	V	—
	1360x768	85	CVT1385H	—	—	V	V	—	V	—
	1366x768	60	DMR1360H	V	V	V	V	—	V	—
	1400x1050	50	CVT1450	—	—	V	V	—	V	—
	1400x1050	60	CVT1460	—	—	V	V	—	V	—
	1400x1050	75	CVT1475	V	V	V	V	—	V	—
	1440x900	60	CVT1460D	V	V	V	V	—	V	—
	1440x900	75	CVT1475D	—	—	V	V	—	V	—
	1600x900	60	DMR1660H	—	—	V	V	—	V	—
	1600x1200	60	DMT1660	V	V	V	V	—	V	—
	1680x1050	60	CVT1660D	V	V	V	V	—	V	—
	1920X1080	50	CVT1950H	—	—	V	V	—	V	—
	1920X1080	60	CVR1960H	V	V	V	V	—	V	—
	1920X1200RB	60	CVR1960D	V	V	V	V	—	V	—
	1920X1200RB	50	CVT1950D	V	V	V	V	—	V	—
NTSC	NTSC (M, 4.43)	60		—	—	—	—	—	—	V
PAL	PAL (B,G,H,I)	50		—	—	—	—	—	—	V
	PAL (N)	50		—	—	—	—	—	—	V
	PAL (M)	60		—	—	—	—	—	—	V
SECAM	SECAM (M)	50		—	—	—	—	—	—	V
SDTV	480i	60		V	V	V	V	—	V	—
	576i	50		V	V	V	V	—	V	—
EDTV	480p	60		V	V	V	V	—	V	—
	576p	50		V	V	V	V	—	V	—
HDTV	1080i	25		V	V	V	V	—	V	—
	1080i	29		V	V	V	V	—	V	—
	1080i	30		V	V	V	V	—	V	—
	720p	50		V	V	V	V	—	V	—
	720p	59		V	V	V	V	—	V	—

ADDITIONAL INFORMATION

Signal Type	Resolution	Frame rate (Hz)	QD881	VGA	BNC	HDMI	DVI	3G-SDI	HDBaseT	CVBS
HDTV	720p	60		V	V	V	V	—	V	—
	1080p	23		V	V	V	V	—	V	—
	1080p	24		V	V	V	V	—	V	—
	1080p	25		V	V	V	V	—	V	—
	1080p	29		V	V	V	V	—	V	—
	1080p	30		V	V	V	V	—	V	—
	1080p	50		V	V	V	V	—	V	—
	1080p	59		V	V	V	V	—	V	—
	1080p	60		V	V	V	V	—	V	—
Mandatory 3D	Frame Packing 1080p	24		—	—	V	—	—	V	—
	Frame Packing 720p	50		—	—	V	—	—	V	—
	Frame Packing 720p	60		—	—	V	—	—	V	—
	Side by Side 1080i	50		—	—	V	—	—	V	—
	Side by Side 1080i	60		—	—	V	—	—	V	—
	Top and Bottom 720p	50		—	—	V	—	—	V	—
	Top and Bottom 720p	60		—	—	V	—	—	V	—
	Top and Bottom 1080p	24		—	—	V	—	—	V	—
Frame sequential 3D	800x600	120		—	—	V	—	—	V	—
	1024x768	120		—	—	V	—	—	V	—
	1280x720	120		—	—	V	—	—	V	—
SD-SDI	480i YcbCr422 10bit	59.94		—	—	—	—	V	—	—
	576i YcbCr422 10bit	50		—	—	—	—	V	—	—
HD-SDI	720p YcbCr422 10bit	50		—	—	—	—	V	—	—
		59.94		—	—	—	—	V	—	—
		60		—	—	—	—	V	—	—
	1080i YcbCr422 10bit	50		—	—	—	—	V	—	—
		59.94		—	—	—	—	V	—	—
		60		—	—	—	—	V	—	—
	1080p YcbCr422 10bit	23.98		—	—	—	—	V	—	—
		24		—	—	—	—	V	—	—
		25		—	—	—	—	V	—	—
		29.97		—	—	—	—	V	—	—
		30		—	—	—	—	V	—	—
	1080sF YcbCr422 10bit	25		—	—	—	—	V	—	—
		29.97		—	—	—	—	V	—	—
		30		—	—	—	—	V	—	—

ADDITIONAL INFORMATION

Signal Type	Resolution	Frame rate (Hz)	QD881	VGA	BNC	HDMI	DVI	3G-SDI	HDBaseT	CVBS
3GA-SDI	1080p YcbCr422 10bit	50		—	—	—	—	V	—	—
		59.94		—	—	—	—	V	—	—
		60		—	—	—	—	V	—	—
3GB-SDI	1080p YcbCr422 10bit With 352M Payload ID	50		—	—	—	—	V	—	—
		59.94		—	—	—	—	V	—	—
		60		—	—	—	—	V	—	—

Note: *"RB" means "reduced blanking".*

ADDITIONAL INFORMATION

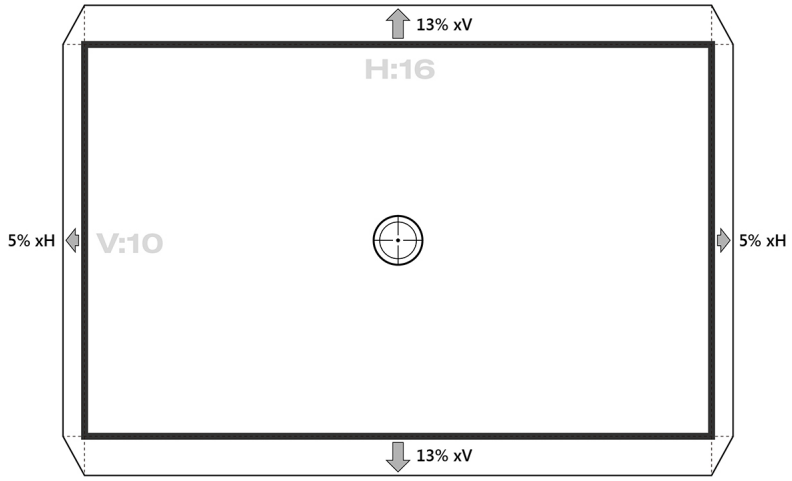
Image size and projection distance

Diagonal Length Size of Screen (inch)	Screen Size W x H		Lens Type											
			A18		A19		A20		A21		A22		A23	
	Width (m)	Height (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)
50	1.08	0.67	0.9	1.1	1.1	1.5	1.3	1.6	1.6	2.2	2.2	4.3	4.3	7.8
60	1.29	0.81	1.1	1.3	1.3	1.8	1.6	1.9	1.9	2.6	2.6	5.2	5.2	9.3
70	1.51	0.94	1.3	1.5	1.5	2.1	1.8	2.3	2.3	3.0	3.0	6.0	6.0	10.9
80	1.72	1.08	1.4	1.8	1.8	2.3	2.1	2.6	2.6	3.4	3.4	6.9	6.9	12.4
90	1.94	1.21	1.6	2.0	2.0	2.6	2.3	2.9	2.9	3.9	3.9	7.8	7.8	14.0
100	2.15	1.35	1.8	2.2	2.2	2.9	2.6	3.2	3.2	4.3	4.3	8.6	8.6	15.5
110	2.37	1.48	2.0	2.4	2.4	3.2	2.8	3.6	3.6	4.7	4.7	9.5	9.5	17.1
120	2.59	1.62	2.2	2.6	2.6	3.5	3.1	3.9	3.9	5.2	5.2	10.3	10.3	18.6
130	2.80	1.75	2.4	2.9	2.9	3.8	3.4	4.2	4.2	5.6	5.6	11.2	11.2	20.2
140	3.02	1.89	2.5	3.1	3.1	4.1	3.6	4.5	4.5	6.0	6.0	12.1	12.1	21.7
150	3.23	2.02	2.7	3.3	3.3	4.4	3.9	4.8	4.8	6.5	6.5	12.9	12.9	23.3
160	3.45	2.15	2.9	3.5	3.5	4.7	4.1	5.2	5.2	6.9	6.9	13.8	13.8	24.8
170	3.66	2.29	3.1	3.7	3.7	5.0	4.4	5.5	5.5	7.3	7.3	14.7	14.7	26.4
180	3.88	2.42	3.3	4.0	4.0	5.3	4.7	5.8	5.8	7.8	7.8	15.5	15.5	27.9
190	4.09	2.56	3.4	4.2	4.2	5.6	4.9	6.1	6.1	8.2	8.2	16.4	16.4	29.5
200	4.31	2.69	3.6	4.4	4.4	5.9	5.2	6.5	6.5	8.6	8.6	17.2	17.2	31.0
210	4.53	2.83	3.8	4.6	4.6	6.2	5.4	6.8	6.8	9.1	9.1	18.1	18.1	32.6
220	4.74	2.96	4.0	4.8	4.8	6.4	5.7	7.1	7.1	9.5	9.5	19.0	19.0	34.1
230	4.96	3.10	4.2	5.1	5.1	6.7	5.9	7.4	7.4	9.9	9.9	19.8	19.8	35.7
240	5.17	3.23	4.3	5.3	5.3	7.0	6.2	7.8	7.8	10.3	10.3	20.7	20.7	37.2
250	5.39	3.37	4.5	5.5	5.5	7.3	6.5	8.1	8.1	10.8	10.8	21.5	21.5	38.8
260	5.60	3.50	4.7	5.7	5.7	7.6	6.7	8.4	8.4	11.2	11.2	22.4	22.4	40.3
270	5.82	3.64	4.9	5.9	5.9	7.9	7.0	8.7	8.7	11.6	11.6	23.3	23.3	41.9
280	6.03	3.77	5.1	6.2	6.2	8.2	7.2	9.1	9.1	12.1	12.1	24.1	24.1	43.4
290	6.25	3.91	5.2	6.4	6.4	8.5	7.5	9.4	9.4	12.5	12.5	25.0	25.0	45.0
300	6.46	4.04	5.4	6.6	6.6	8.8	7.8	9.7	9.7	12.9	12.9	25.9	25.9	46.5
310	6.68	4.17	5.6	6.8	6.8	9.1	8.0	10.0	10.0	13.4	13.4	26.7	26.7	48.1
320	6.90	4.31	5.8	7.0	7.0	9.4	8.3	10.3	10.3	13.8	13.8	27.6	27.6	49.6
330	7.11	4.44	6.0	7.3	7.3	9.7	8.5	10.7	10.7	14.2	14.2	28.4	28.4	51.2
340	7.33	4.58	6.2	7.5	7.5	10.0	8.8	11.0	11.0	14.7	14.7	29.3	29.3	52.8
350	7.54	4.71	6.3	7.7	7.7	10.3	9.1	11.3	11.3	15.1	15.1	30.2	30.2	54.3
360	7.76	4.85	6.5	7.9	7.9	10.6	9.3	11.6	11.6	15.5	15.5	31.0	31.0	55.9
370	7.97	4.98	6.7	8.1	8.1	10.8	9.6	12.0	12.0	15.9	15.9	31.9	31.9	57.4
380	8.19	5.12	6.9	8.4	8.4	11.1	9.8	12.3	12.3	16.4	16.4	32.8	32.8	59.0
390	8.40	5.25	7.1	8.6	8.6	11.4	10.1	12.6	12.6	16.8	16.8	33.6	33.6	60.5
400	8.62	5.39	7.2	8.8	8.8	11.7	10.3	12.9	12.9	17.2	17.2	34.5	34.5	62.1
410	8.83	5.52	7.4	9.0	9.0	12.0	10.6	13.3	13.3	17.7	17.7	35.3	35.3	63.6
420	9.05	5.66	7.6	9.2	9.2	12.3	10.9	13.6	13.6	18.1	18.1	36.2	36.2	65.2
430	9.27	5.79	7.8	9.5	9.5	12.6	11.1	13.9	13.9	18.5	18.5	37.1	37.1	66.7
440	9.48	5.93	8.0	9.7	9.7	12.9	11.4	14.2	14.2	19.0	19.0	37.9	37.9	68.3
450	9.70	6.06	8.1	9.9	9.9	13.2	11.6	14.5	14.5	19.4	19.4	38.8	38.8	69.8
460	9.91	6.20	8.3	10.1	10.1	13.5	11.9	14.9	14.9	19.8	19.8	39.6	39.6	71.4
470	10.13	6.33	8.5	10.3	10.3	13.8	12.2	15.2	15.2	20.3	20.3	40.5	40.5	72.9
480	10.34	6.46	8.7	10.6	10.6	14.1	12.4	15.5	15.5	20.7	20.7	41.4	41.4	74.5
490	10.56	6.60	8.9	10.8	10.8	14.4	12.7	15.8	15.8	21.1	21.1	42.2	42.2	76.0
500	10.77	6.73	9.1	11.0	11.0	14.7	12.9	16.2	16.2	21.5	21.5	43.1	43.1	77.6

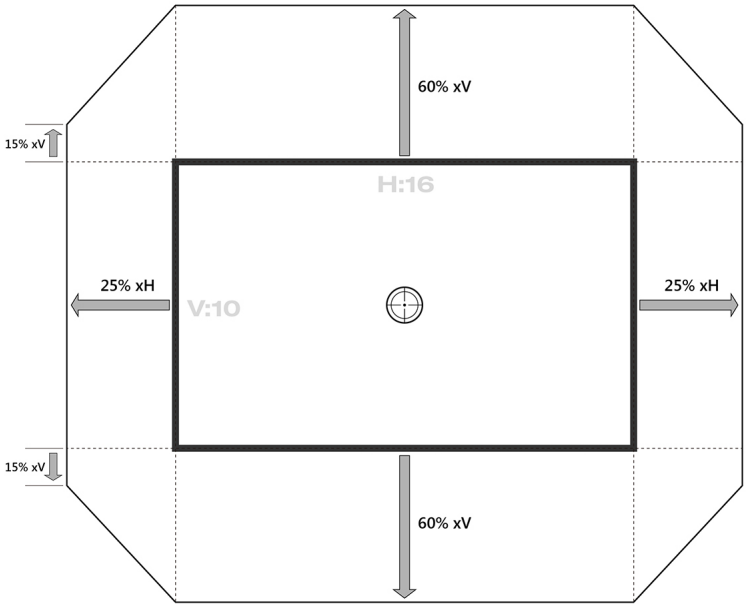
ADDITIONAL INFORMATION

Lens shift adjustment range

A18/A19



A20/A21/A22/A23



ADDITIONAL INFORMATION

Calculate lens offset

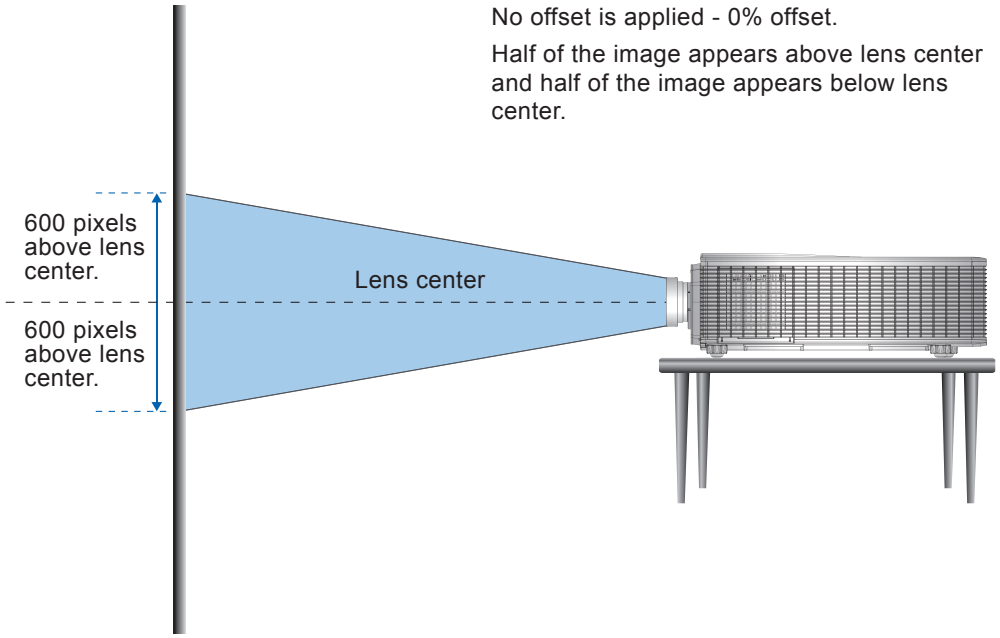
The vertical image offset (shift) ranges for the projector are +/-120% (WUXGA) and +/-140% (HD). The horizontal image offset (shift) range for the projector is +/-50% (HD/WUXGA).

The method for calculating lens offset complies with Industry standards. Example for Vertical lens offset:

- At 0% offset (or on axis), the center of the image is on the lens center, so that half of the image appears above and half appears below the lens center.
- At +100% offset, all (or 100%) of the image will appear above the lens center.
- The % offset is calculated as the ratio of the number of pixels shifted up/down to half the image size. Examples for WUXGA:
  - Shifting up 600 pixels gives offset of 600/600 * 100% = 100%
  - Shifting down 600 pixels gives offset of -600/600 * 100% = -100%
  - Shifting up 720 pixels gives offset of 720/600 * 100% = 120%
  - Shifting up 240 pixels gives offset of 240/600 * 100% = 40%

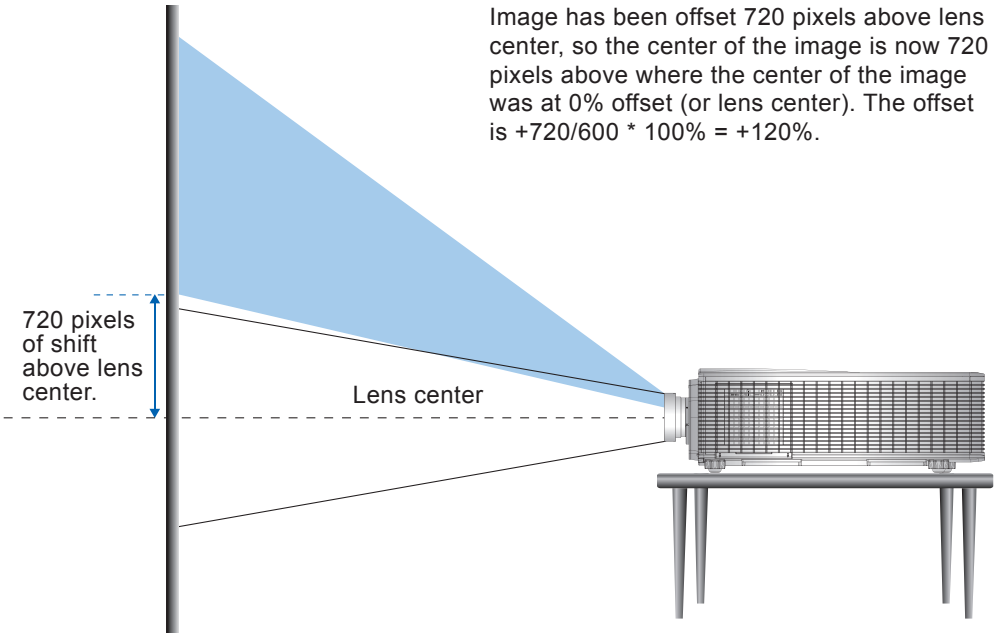
WUXGA Projectors:

Vertical Image Offset: 0% Offset (WUXGA)

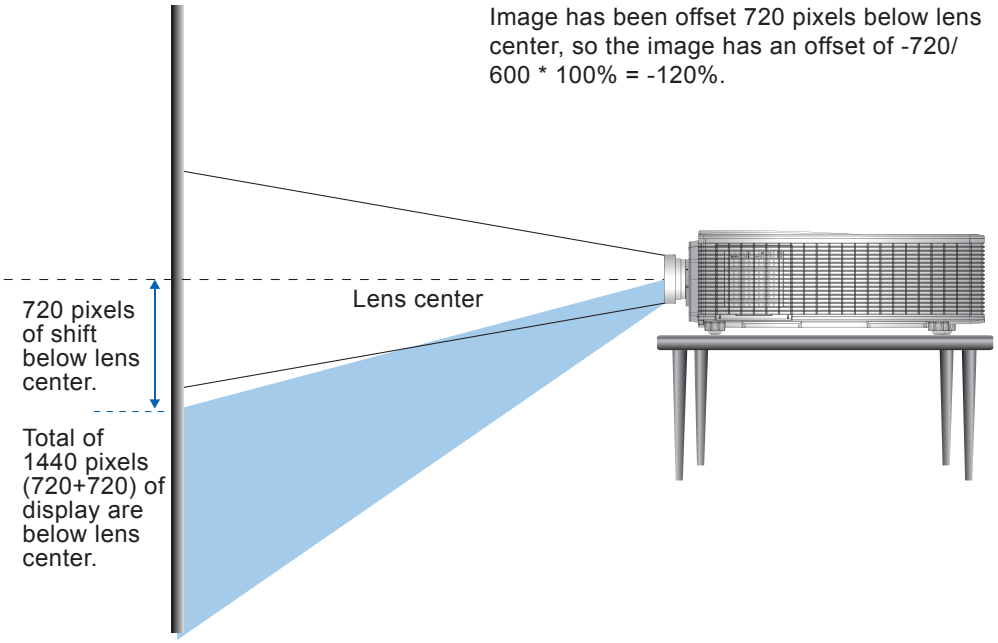


ADDITIONAL INFORMATION

Vertical Image Offset: 120% Offset (WUXGA)



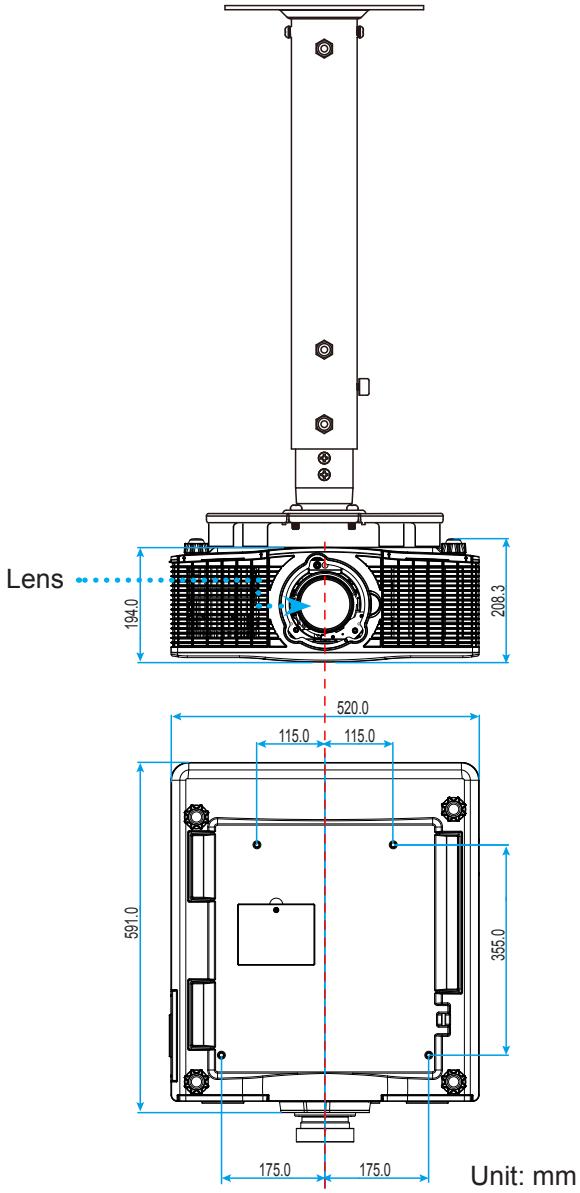
Vertical Image Offset: -120% Offset (WUXGA)



ADDITIONAL INFORMATION

Projector dimensions and ceiling mount installation

1. To prevent damage to your projector, please use the Optoma ceiling mount.
2. 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: M8
   - Screw holes maximum depth: 20mm



Note: *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.
- Only qualified personal is authorized for ceiling installation.
- We are not responsible for the hurt and damage caused by ceiling mount that purchased from unauthorized dealer even in warranty period.
- Avoid installing the projector near a heat source.

ADDITIONAL INFORMATION

IR remote codes



Key Legend	Key Position	Repeat Format	Address		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
ON (I)	1	F1	32	CD	02	FD	Press to turn on the projector.
OFF (O)	2	F1	32	CD	2E	D1	Press to turn off the projector.
1	3	F1	32	CD	72	8D	Use as numeric keypad number “1”.
2	4	F1	32	CD	73	8C	Use as numeric keypad number “2”.
3	5	F1	32	CD	74	8B	Use as numeric keypad number “3”.
4	6	F1	32	CD	75	8A	Use as numeric keypad number “4”.

ADDITIONAL INFORMATION

Key Legend	Key Position	Repeat Format	Address		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
5	7	F1	32	CD	77	88	Use as numeric keypad number “5”.
6	8	F1	32	CD	78	87	Use as numeric keypad number “6”.
7	9	F1	32	CD	79	86	Use as numeric keypad number “7”.
8	10	F1	32	CD	80	7F	Use as numeric keypad number “8”.
9	11	F1	32	CD	81	7E	Use as numeric keypad number “9”.
Info	12	F1	32	CD	82	7D	Press to display source image information.
0	13	F1	32	CD	25	DA	Use as numeric keypad number “0”.
Mode	14	F1	32	CD	05	FA	Press to select the preset display mode.
Auto	15	F1	32	CD	04	FB	Press to automatically synchronize the projector to the input source.
Input	16	F1	32	CD	18	E7	Press to select an input signal.
UP (▲)	17	F1	32	CD	0F	F0	Press to select items or make adjustments to our selection.
LEFT (◄)	18	F1	32	CD	11	EE	Press to select items or make adjustments to our selection.
Enter	19	F1	32	CD	14	EB	Press to confirm your item selection.
RIGHT (►)	20	F1	32	CD	10	EF	Press to select items or make adjustments to our selection.
DOWN (▼)	21	F1	32	CD	12	ED	Press to select items or make adjustments to our selection.
Menu	22	F1	32	CD	0E	F1	Press to display the on-screen display menus for projector.
Exit	23	F1	32	CD	2A	D5	Press to return to previous level or exit menus if at top level.
Gamma	24	F1	32	CD	2B	D4	Press to adjust mid-range levels..
Bright	25	F1	32	CD	28	D7	Press to adjust amount of light in the image.
Cont.	26	F1	32	CD	29	D6	Press to adjust difference between dark and light.
PIP	27	F1	32	CD	43	BC	Press to turn on/off the PIP/PBP function.
Lens H◄	28	F1	32	CD	41	BE	Press to adjust the position of the image horizontally.
Lens H ►	29	F1	32	CD	42	BD	
Focus ▲	30	F1	32	CD	86	79	Press to adjust focus to improve image clarity as desired.
Lens V ▲	31	F1	32	CD	34	CB	Press to adjust the position of the image vertically.
Lens V ▼	32	F1	32	CD	32	CD	Press to adjust the position of the image vertically.
Focus ▼	33	F1	32	CD	26	D9	Press to adjust focus to improve image clarity as desired.
Keystone ⏢	34	F1	32	CD	87	78	Press to adjust the vertical keystone.
Keystone ⏢	35	F1	32	CD	51	AE	Press to adjust the vertical keystone.

ADDITIONAL INFORMATION

Key Legend	Key Position	Repeat Format	Address		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
Zoom ▲	36	F1	32	CD	52	AD	Press to adjust zoom to achieve a desired image size.
Keystone ◁	37	F1	32	CD	53	AC	Press to adjust the horizontal keystone.
Keystone ▷	38	F1	32	CD	54	AB	Press to adjust the horizontal keystone.
Zoom ▼	39	F1	32	CD	55	AA	Press to adjust zoom to achieve a desired image size.
Shutter (AV Mute)	40	F1	32	CD	56	A9	Press to hide/unhide the screen picture.
Hot Key	41	F1	32	CD	57	A8	Press to select your preset keys quickly.
Pattern	42	F1	32	CD	58	A7	Press to display a test pattern.

ADDITIONAL INFORMATION

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.

Image problems

No image appears on-screen

- Ensure all the cables and power connections are correctly and securely connected as described in the "Installation" section.
- Ensure the pins of connectors are not crooked or broken.
- Check if the projection lamp has been securely installed. Please refer to the “Replacing the Lamp” section.
- Ensure that the "Shutter (AV Mute)" feature is not turned on.

Image is out of focus

- Press the **Focus ▲** or **Focus ▼** button on the remote control to adjust the focus until the image is sharp and legible.
- Make sure the projection screen is between the required distance from the projector. (Please refer to page 63).

The image is stretched when displaying 16:10 DVD title

- When you play anamorphic DVD or 16:10 DVD, the projector will show the best image in 16:10 format on projector side.
- If you play 4:3 format DVD title, please change the format as 4:3 in projector OSD.
- Please setup the display format as 16:10 (wide) aspect ratio type on your DVD player.

Image is too small or too large

- Press the **Zoom ▲** or **Zoom ▼** button on the remote control to increase or decrease the projected image size.
- Move the projector closer to or further from the screen.
- Press "Menu" on the projector panel, go to "OUTPUT-->Aspect Ratio". Try the different settings.

Image has slanted sides:

- If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.
- Use "OUTPUT-->Image Warping-->V Keystone" from the OSD to make an adjustment.

Image is reversed

- Select "SETUP-->Rear Projection-->On" from the OSD to reverse the image so you can project from behind a translucent screen.

ADDITIONAL INFORMATION

Blurry double image

- Select “PICTURE-->3D Display-->3D Enable-->Off” from the OSD to avoid normal 2D image is blurry double image.

Two images, side-by-side format

- Select “PICTURE-->3D Display-->3D Enable-->Side by Side” from the OSD for input signal is HDMI 1.3 2D 1080i side-by-side.

Image does not display in 3D

- Check if the battery of 3D glasses is drained.
- Check if the 3D glasses is turned on.
- When the input signal is HDMI 1.3 2D (1080i side-by-side half), select “PICTURE-->3D Display-->3D Enable-->Side by Side”.

Other problems

The projector stops responding to all controls

- If possible, turn off the projector, then unplug the power cord and wait at least 20 seconds before reconnecting power.

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 page 57.

Remote control problems

If the remote control does not work

- Check the operating angle of the remote control is pointed within 23’(7m) ±40° (horizontally) or 23’(7m) ±15° (vertically) to the IR receivers on the projector.
- Make sure there are not any obstructions between the remote control and the projector. Move to within 10 m (32.8 ft) of the projector.
- Make sure batteries are inserted correctly.
- Replace batteries if they are exhausted.

ADDITIONAL INFORMATION

Warning indicators

When the warning indicators (see below) light up or flash, the projector will automatically shutdown:

- Both “Lamp 1” LED or “Lamp 2” LED indicators (green and red) light up. This indicates the lamp 1 or lamp 2 time has expired and lamp should be replaced.
- “Lamp 1” LED or “Lamp 2” LED indicator is flashing red. This indicates the lamp 1 or lamp 2 failed to strike after 5 attempts or the lamp 1 or lamp 2 has unexpectedly shut down. The system goes to cooling state.
- “Status” LED, “Lamp 1” LED and “Lamp 2” LED indicators are lit red. This indicates the projector has overheated. Under normal conditions, the projector can be switched back on.

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

LED lightning messages

Message	Shutter LED	Status LED		Lamp 1 LED		Lamp 2 LED	
	Green	Green	Red	Green	Red	Green	Red
Color wheel unexpectedly Stop				Flashing	Flashing	Flashing	Flashing
Lamp1 time has expired and lamp should be replaced				On	On		
Lamp1 is on and operating correctly				On			
Lamp1 is switching on				Flashing			
Failed to strike lamp1 after 5 attempts (strike attempts will stop)					Flashing		
Lamp1 has unexpectedly shut down (system goes into cooling down state)					Flashing		
Lamp1 driver communication fail					On		
Lamp2 time has expired and lamp should be replaced						On	On
Lamp2 is on and operating correctly						On	
Lamp2 is switching on						Flashing	
Failed to strike lamp2 after 5 attempts (strike attempts will stop)							Flashing
Lamp2 has unexpectedly shut down (system goes into cooling down state)							Flashing

ADDITIONAL INFORMATION

Message	Shutter LED	Status LED		Lamp 1 LED		Lamp 2 LED	
	Green	Green	Red	Green	Red	Green	Red
Lamp2 driver communication fail							On
AC power is off (without AC plug in)		Off					
AC has been applied, projector is in standby mode		Off					
AC has been applied, projector is in communication standby mode			On				
Projector is powered up and operating normally		On					
Projector is in cooling down mode or startup mode		Flashing	Flashing				
Projector is in flash update state		Flashing	On				
Need to clean/change dust filter		On	On				
Over temperature			On		On		On
Fan failure			Flashing				
Picture mute is off and Shutter is Off (image is displayed)	Off						
Picture mute is on and Shutter is On (image is black)	Flashing						

ADDITIONAL INFORMATION

Specifications

Optical	Description
Maximum resolution	Native Resolution: WUXGA(1920 x 1200) Maximum Resolution: Graphic up to WUXGA@60Hz (Reduced blanking)
Lens	Power zoom and power focus
Lamp	1500 hrs typical @ 465W 2000 hrs typical @ 370W
Image size (diagonal)	50”~ 500” mechanism travel range
Projection distance	Depend on Lens

Electrical	Description
Inputs	1 x HDMI (version1.4a) 1 x DVI-D (only support digital signal) 1 x VGA (D-Sub 15pin) (Computer In) 1 x HDBaseT 5 x BNC (Y/Pb/Pr or R/G/B/H/V) 1 x 3G-SDI 1 x Video
Outputs	1 x VGA Out (Support VGA loops through to monitor) (Monitor Out) 1 x 3D-Sync
Control port	1 x RS232 (D-sub 9 pin) (PC Control) 1 x Wired in (3.5mm phone jack) (Remote In) 1 x Wired out (3.5mm phone jack) (Remote Out) 1 x USB type A (for WiFi dongle purpose) 1 x Mini USB (for Service only) 1 x IR Receiver (on the front and top sides) 1 x RJ45 (LAN)
Scan rate	Horizontal scan rate: 15.734~91.146KHz Vertical scan rate: 24~120Hz
Power requirement	AC 100 – 240 V @ 50/60 Hz
Input current (465W lamp mode)	100-120V ~ 50/60 Hz, 12A 200-240V ~ 50/60 Hz, 6A

Mechanical	Description
Installation orientation	Desktop/Front, Desktop/Rear, Ceiling/Front, Ceiling/Rear
Dimensions	520 (W) x 591 (D) x 194 (H) mm (without lens, w/o elevators)
Weight	23.8 kg (without lens)
Environmental conditions	Operating: 0°C ~ 40°C (10~85%RH, non-condensing) Storage: -10°C ~ 60°C (5~90%RH, non-condensing)

Note: *All specifications are subject to change without notice.*

ADDITIONAL INFORMATION

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