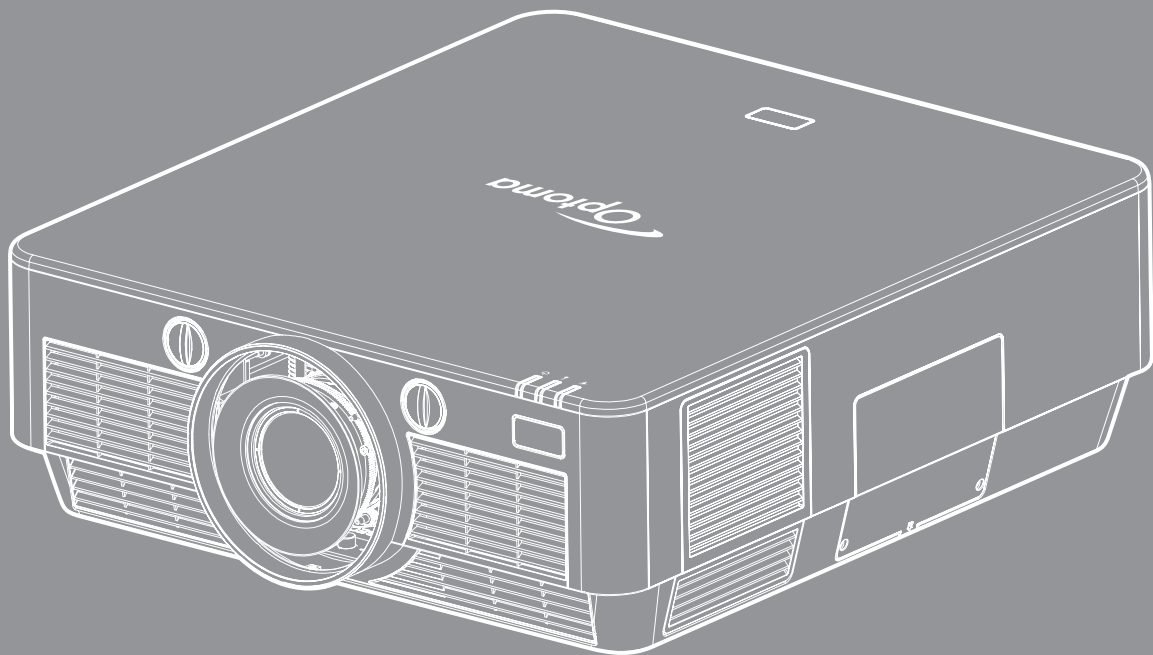




# DLP® Projector



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 5°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 may 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 appropriate service personnel.



- Only use attachments/accessories specified by the manufacturer.
- Do not look 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 pages 45-46.
- This projector will detect the life of the lamp itself. Please be sure to change the lamp when it shows warning messages.
- Reset the "Lamp Reset" function from the on-screen display "Setup lamp settings" menu after replacing the lamp module.
- 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.
- When the lamp is approaching to the end of its life time, the message "Lamp life exceeded." will show on the screen. Please contact your local reseller or service center to change the lamp as soon as possible.
- 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.

**Note:** *When the lamp reaches the end of its life, the projector will not turn back on until the lamp module has been replaced. To replace the lamp, follow the procedures listed under "Replacing the Lamp" section on pages 45-46.*

- *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.*

## Copyright

This publication, including all photographs, illustrations and software, is protected under international copyright laws, with all rights reserved. Neither this manual, nor any of the material contained herein, may be reproduced without written consent of the author.

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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.

HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

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.

DARBEE is a trademark by Darbee Products, Inc.

MHL, Mobile High-Definition Link and the MHL Logo are trademarks or registered trademarks of MHL Licensing, LLC.

## FCC

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

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on 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 B digital apparatus complies with Canadian ICES-003.

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## Declaration of Conformity for EU countries

- EMC Directive 2014/30/EC (including amendments)
- Low Voltage Directive 2014/35/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.

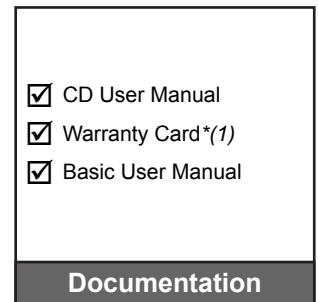
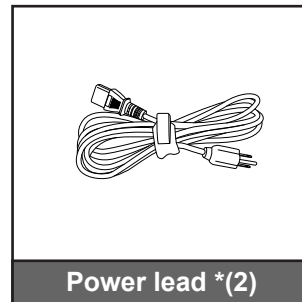
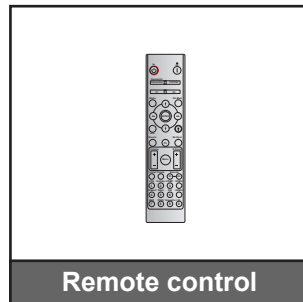
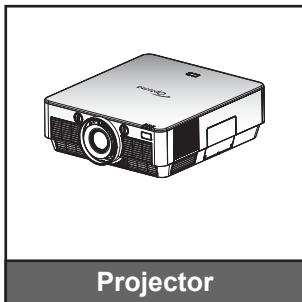
# INTRODUCTION

## 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.

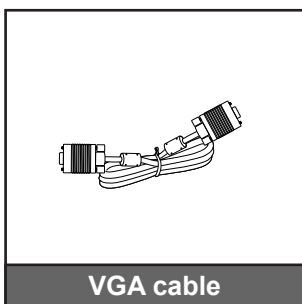
## Standard accessories



### Note:

- *The remote control is shipped with the battery.*
- *\*(1) For European warranty information please visit [www.optomaeurope.com](http://www.optomaeurope.com).*
- *\*(2) Power lead is depending on the region.*

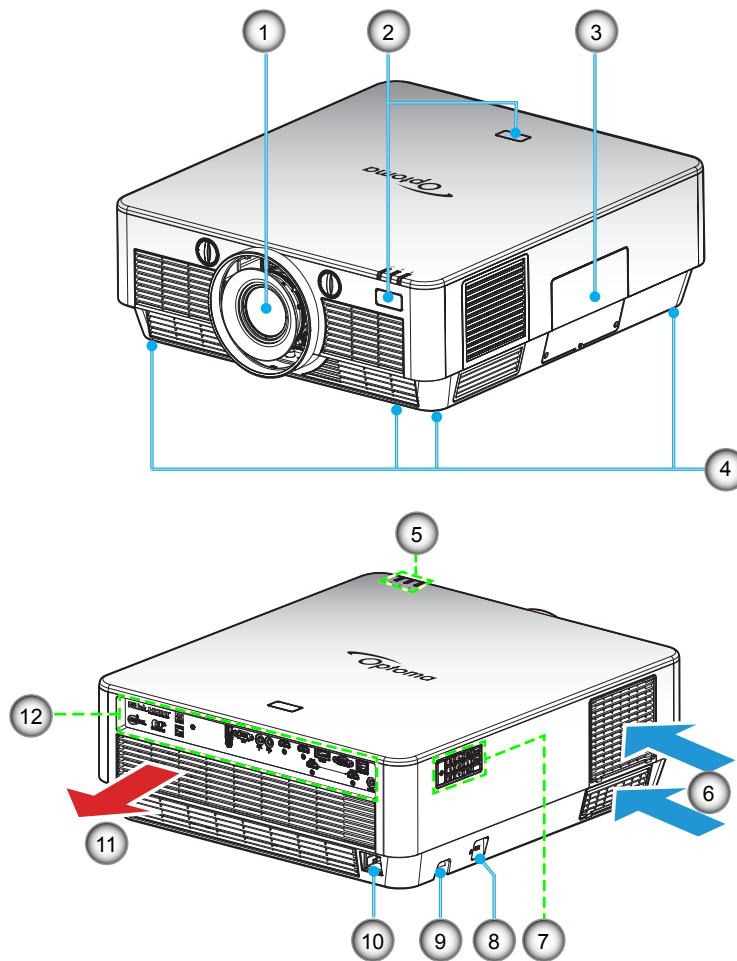
## Optional accessories



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

# INTRODUCTION

## Product overview

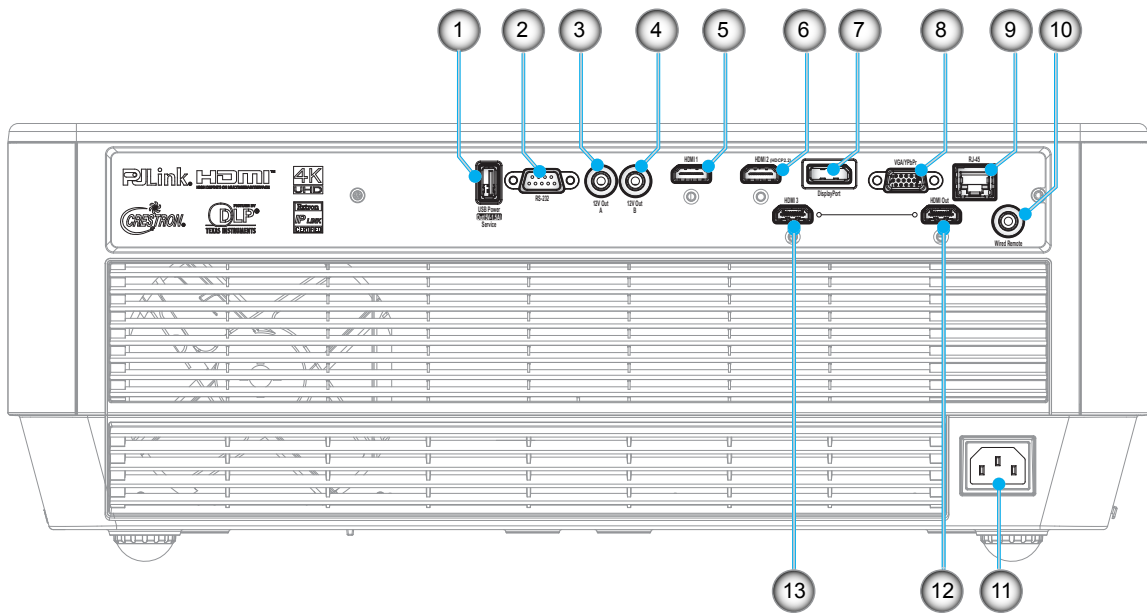


**Note:** Keep a minimum distance of 20 cm between the "inlet" and "outlet" labels.

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

# INTRODUCTION

## Connections



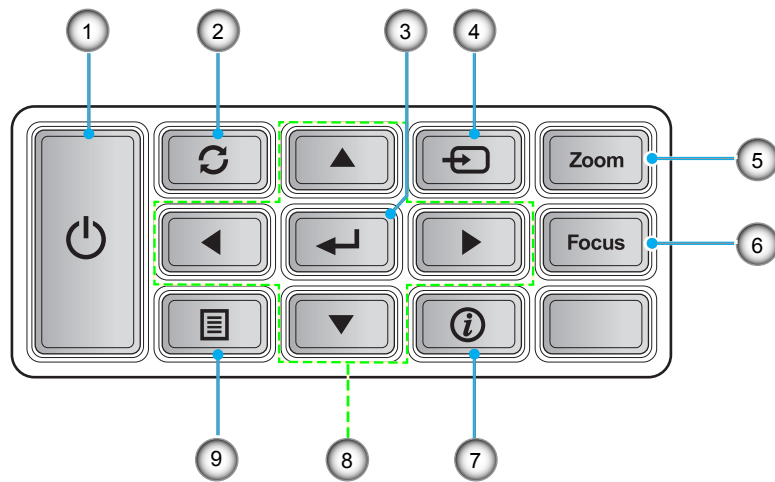
No	Item	No	Item
1.	USB Power Out (5V/1.5A)/Service Connector	8.	VGA/YpBPr Connector
2.	RS-232 Connector	9.	RJ-45 Connector
3.	12V Out A Connector	10.	Wired Remote Connector
4.	12V Out B Connector	11.	Power Socket
5.	HDMI 1 Connector	12.	HDMI Out Connector
6.	HDMI 2 (HDCP2.2) Connector(*)	13.	HDMI 3 Connector
7.	DisplayPort		

### Note:

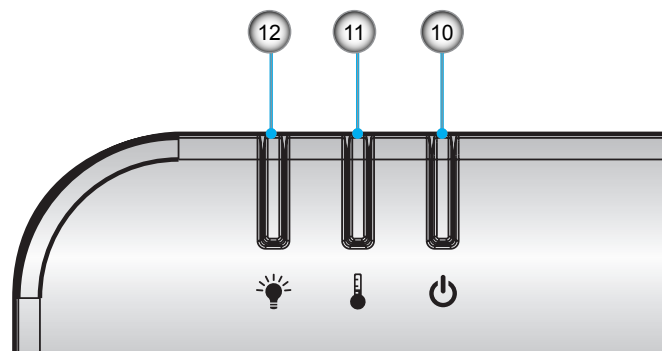
- Remote mouse requires special remote control.
- This model supports mouse / service capability.
- (\*)Only HDMI 2 (HDCP2.2) connector supports 4K (Ultra HD) at 60Hz refresh rate.

# INTRODUCTION

## Keypad



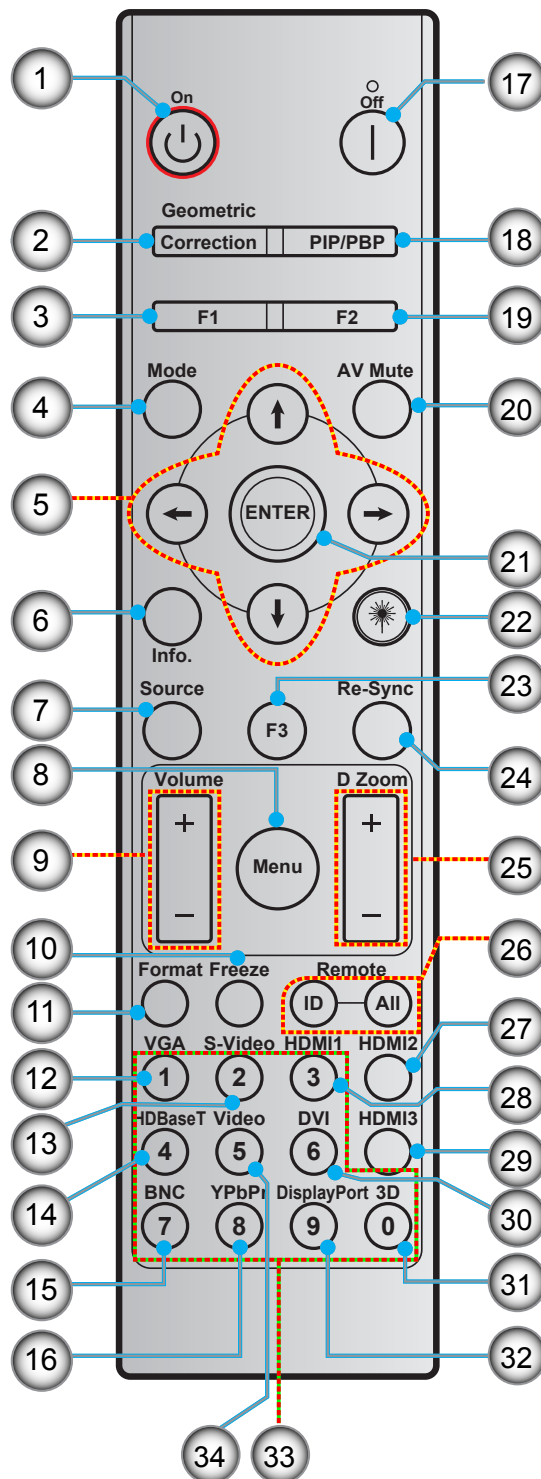
## LED status indicators



No	Item	No	Item
1.	Power	7.	Information
2.	Re-Sync	8.	Four Directional Select Keys
3.	Enter	9.	Menu
4.	Source	10.	On/Standby LED
5.	Zoom	11.	Temp LED
6.	Focus	12.	Lamp LED

# INTRODUCTION

## Remote control





# INTRODUCTION

No	Item	No	Item
1.	Power on	18.	PIP/PBP
2.	Geometric Correction	19.	Function button (F2) (Assignable)
3.	Function button (F1) (Assignable)	20.	AV mute
4.	Mode	21.	Enter
5.	Four directional select keys	22.	Laser
6.	Information	23.	Function button (F3) (Assignable)
7.	Source	24.	Re-sync
8.	Menu	25.	D (Digital) Zoom
9.	Volume - / +	26.	Remote ID / Remote all
10.	Freeze	27.	HDMI2
11.	Format (Aspect Ratio)	28.	HDMI1
12.	VGA	29.	HDMI3
13.	S-Video	30.	DVI
14.	HDBaseT	31.	3D
15.	BNC	32.	DisplayPort
16.	YPbPr	33.	Numeric keypad (0-9)
17.	Power off	34.	Video

**Note:**

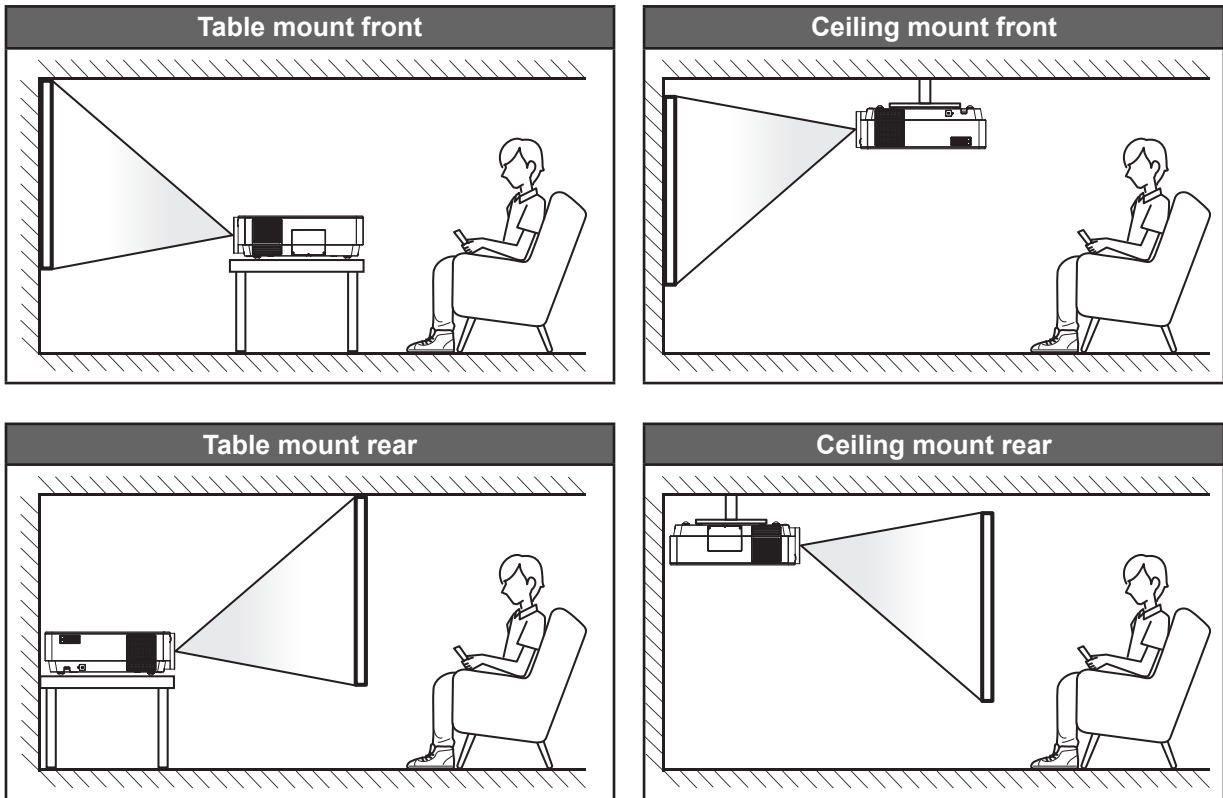
- *Some keys may have no function for models that do not support these features.*

# SETUP AND INSTALLATION

## 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 screen.

- How to determine projector location for a given screen size, please refer to distance table on page 49.
- How to determine screen size for a given distance, please refer to distance table on pages 49.

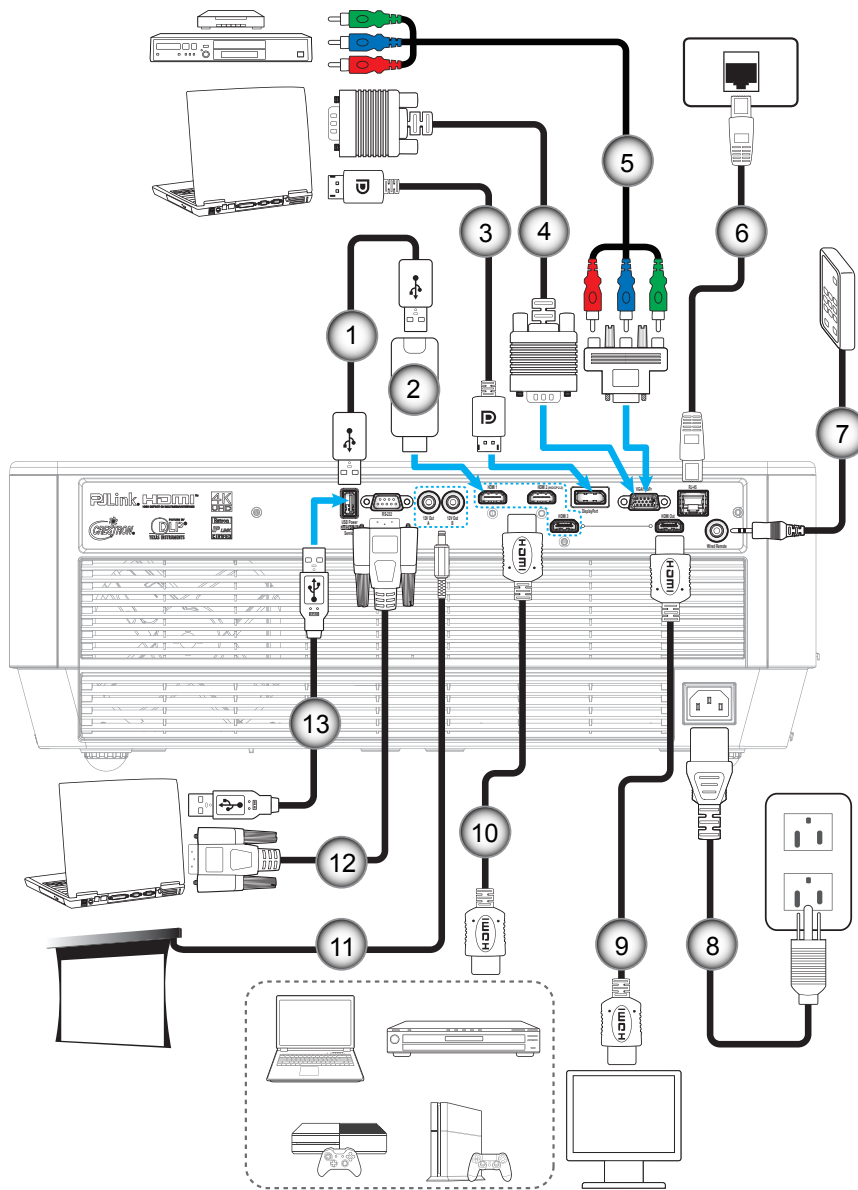
**Note:** *The further away the projector is placed from the screen the projected image size increases and vertical offset also increases proportionally.*

### **IMPORTANT!**

*Do not operate the projector in any orientation other than table top or ceiling mount. The projector should be horizontal and not tilted either forwards/backwards or left/right. Any other orientation will invalidate the warranty and may shorten the lifetime of the projector lamp or the projector itself. For non-standard installation advise please contact Optoma.*

# SETUP AND INSTALLATION

## Connecting sources to the projector



No	Item	No	Item
1.	USB Power Cable	8.	Power Cord
2.	HDMI Stick	9.	HDMI Cable
3.	DisplayPort Cable	10.	HDMI Cable(*)
4.	VGA In Cable	11.	12V DC Jack
5.	RCA Component Cable	12.	RS232 Cable
6.	RJ-45 Cable	13.	USB Cable
7.	Wired Remote Control Cable		

**Note:** (\*) The HDMI 2 (HDCP2.2) connector supports 4K (Ultra HD) at 60Hz refresh rate.

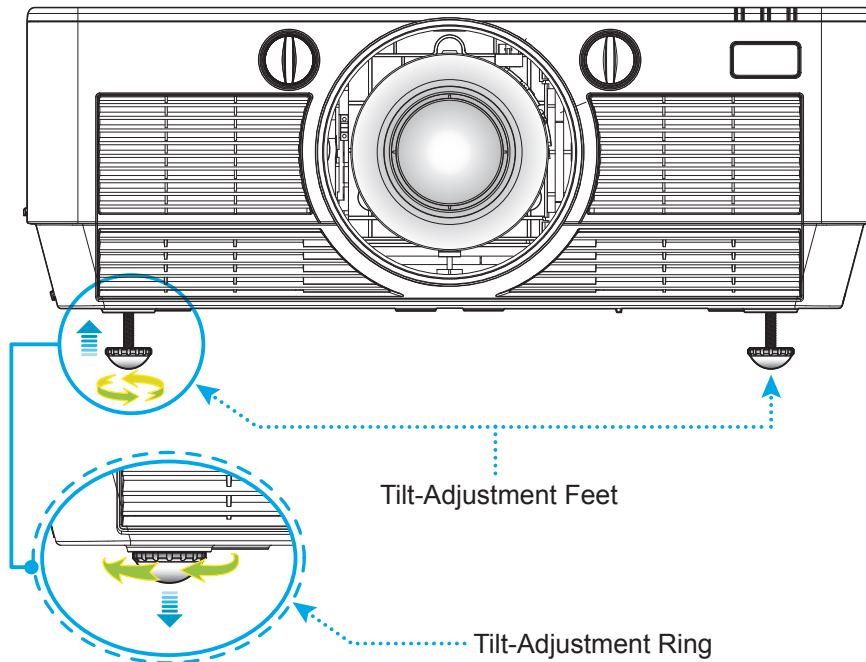
# SETUP AND INSTALLATION

## Adjusting the projector image

### Image height

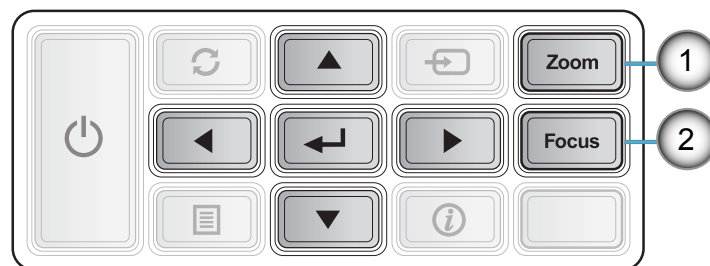
The projector is equipped with elevator feet for adjusting the image height.

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

- Use the **Zoom** button to resize the projected image and screen size. ①
- Use the **Focus** button to sharpen the projected image. ②



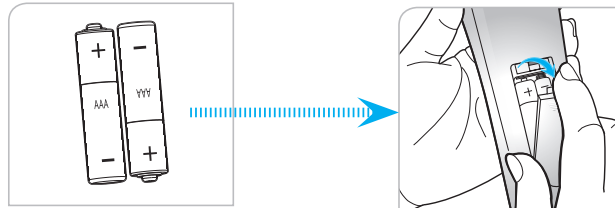
# SETUP AND INSTALLATION

## 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.

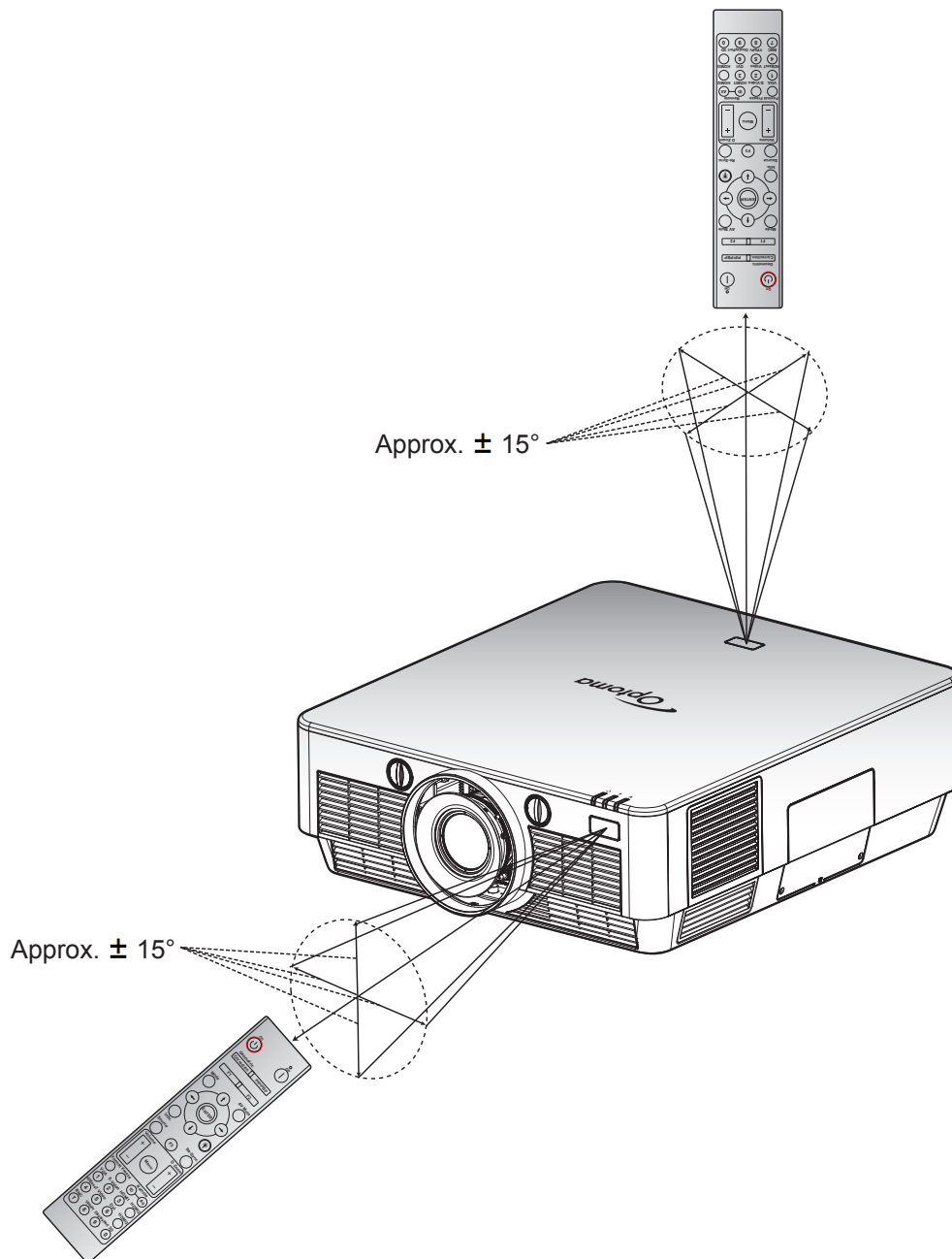
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they are depleted. Chemicals 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 sensor is located on the top side and on the front side of the projector. Ensure to hold the remote control at an angle within 30 degrees perpendicular to the projector's front IR remote control sensor and 20 degrees perpendicular to the projector's top IR remote control sensor to function correctly. The distance between the remote control and the sensor should not be longer than 7 meters (~ 23 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 meters 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 10 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



## Wired Remote Control

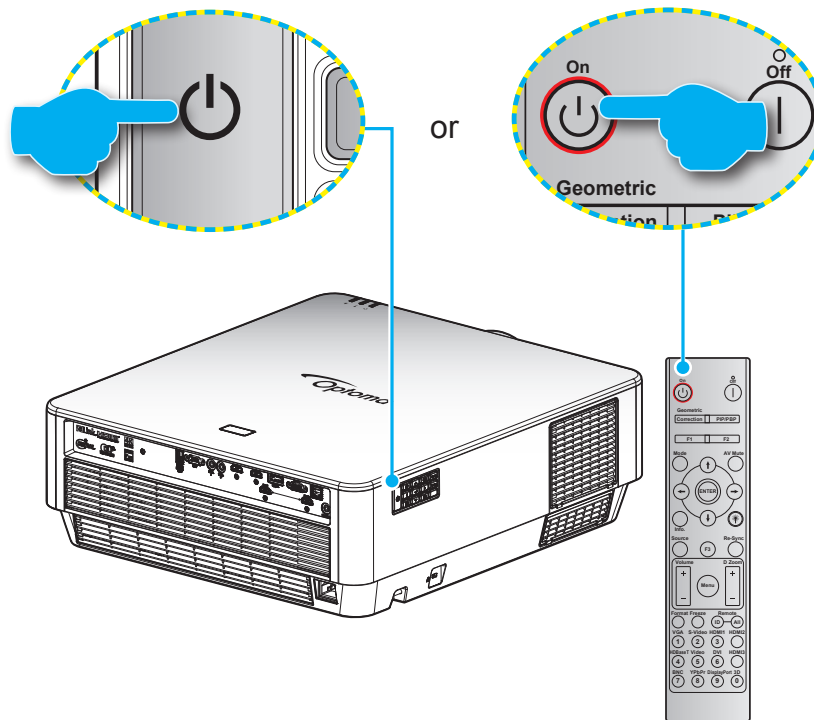
Your projector supports also wired remote control connection. Wired remote control helps you to work outside of the operating range (7m/ ~23 feet). Connect the remote control to the projector with the remote control cable (not supplied). The remote control cable maximum length depends on the wired cable quality as follows:

- $5.0V \geq V_{IH} \geq 2.0V$  (High-level input voltage)
- $0.6V \geq V_{IL} \geq 0V$  (Low-level input voltage)

**Note:** If the remote control is connected to the projector using a cable, then the remote control does not emit wireless signal.

# USING THE PROJECTOR

## Powering on / off the projector



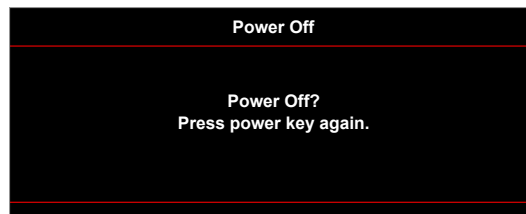
### Powering on

1. Securely connect the power lead and signal/source cable. When connected, the On/Standby LED will turn red.
2. Turn on the projector by pressing the "⏻" either on the projector keypad or the remote control.
3. A start up screen will display in approximately 10 seconds and the On/Standby LED will be flashing blue.

**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 the "⏻" either on the projector keypad or the remote control.
2. The following message will be displayed:



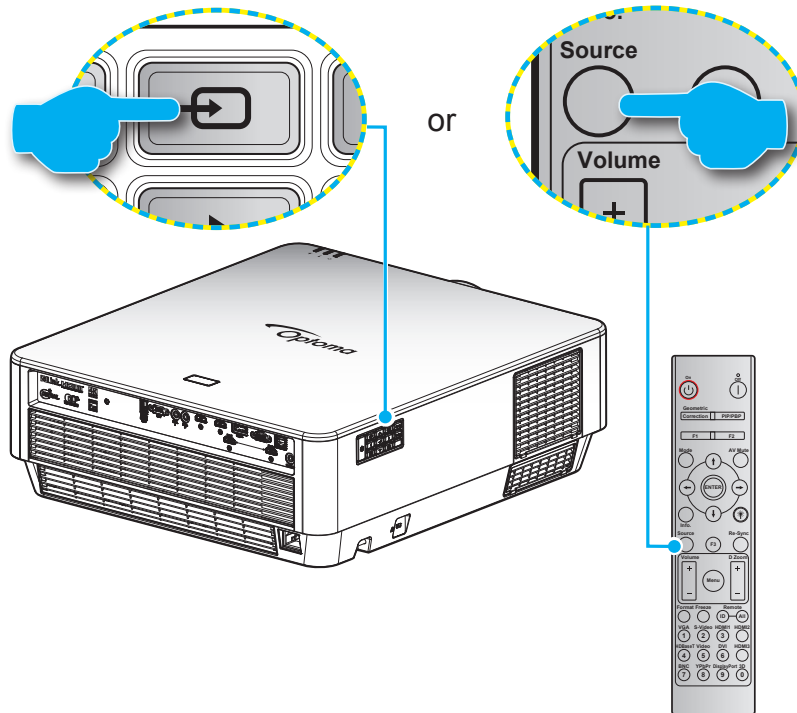
3. Press the "⏻" again to confirm, otherwise the message will disappear after 15 seconds. When you press the "⏻" button for the second time, the projector will shut down.
4. The cooling fans will continue to operate for about 10 seconds for the cooling cycle and the On/Standby LED will flash blue. When the On/Standby LED turns solid red, this indicates the projector has entered standby mode. If you wish to turn the projector back on, you must wait until the cooling cycle has finished and the projector has entered standby mode. When the projector is in standby mode, simply press the "⏻" button again to turn on the projector.
5. 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, push the source button on the projector keypad or the remote control to select the desired input.





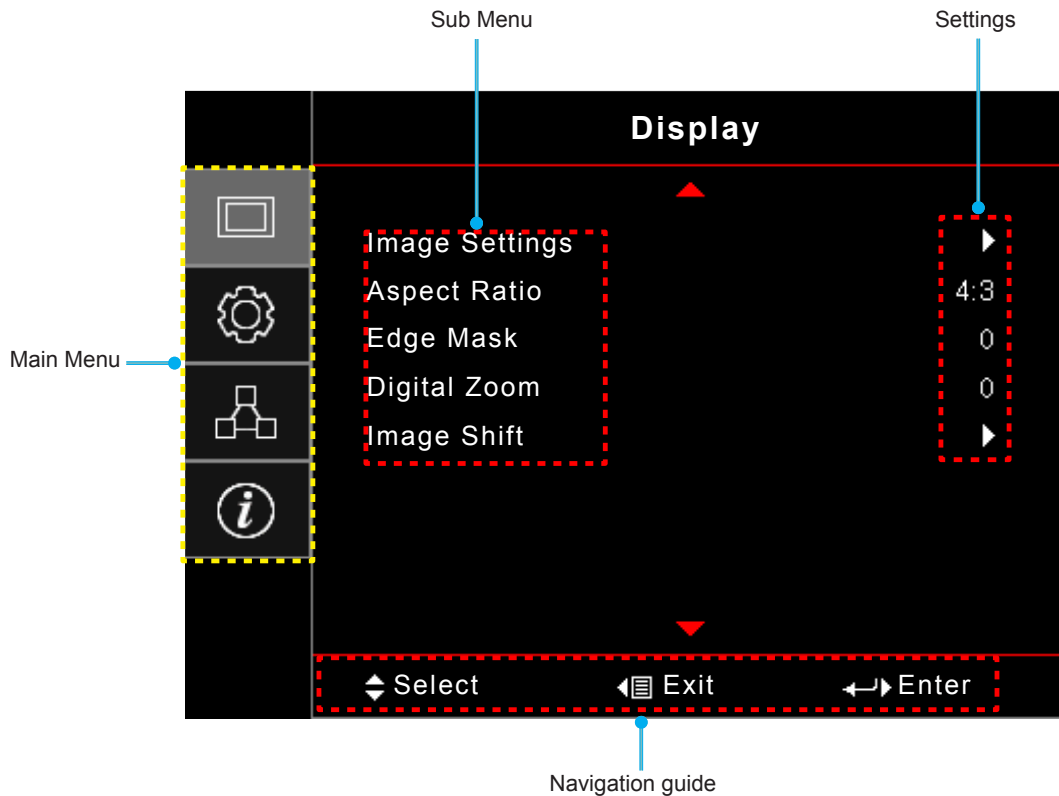


# USING THE PROJECTOR

## 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  on the projector keypad.
2. When OSD is displayed, use **▲▼** keys to select any item in the main menu. While making a selection on a particular page, press **↵** or **▶** key to enter sub menu.
3. Use **◀▶** keys to select the desired item in the sub menu and then press **↵** or **▶** key to view further settings. Adjust the settings by using **◀▶** keys.
4. Select the next item to be adjusted in the sub menu and adjust as described above.
5. Press the **↵** or **▶** to confirm, and the screen will return to the main menu.
6. To exit, press the **◀** or  again. The OSD menu will close and the projector will automatically save the new settings.



# USING THE PROJECTOR







## OSD Menu tree

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values		
Display	Image Settings	Display Mode [Data]			Presentation		
					Bright		
					Cinema		
					Game		
					sRGB		
					DICOM SIM.		
					Blending		
					User		
		Wall Color				Off [Default]	
						Blackboard	
						Light Yellow	
						Light Green	
						Light Blue	
						Pink	
						Gray	
		Dynamic Range				Auto [Default]	
						SDR	
						HDR1	
						HDR2	
						HDR3	
						HDR4	
		Brightness				-50~50	
		Contrast				-50~50	
		Sharpness				1~15	
		Color				-50~50	
		Tint				-50~50	
		Gamma		Film			
				Video			
				Graphics			
				Standard(2.2)			
				1.8			
				2.0			
				2.4			
	Blackboard						
	DICOM SIM.						
Color Settings		BrilliantColor™			1~10		
	Color Temperature				D55		
					D65		
					D75		
					D83		
					D93		
					Native		

# USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values	
Display	Image Settings	Color Settings	Color Gamut		Native	
					HDTV	
					Presentation	
					Cinema	
					Game	
			CMS	Color		R [Default]
						G
						B
						C
						Y
						M
						W
					x offset	-50~50 [Default: 0]
					y offset	-50~50 [Default: 0]
					Brightness	-50~50 [Default: 0]
				Reset	Cancel [Default]	
					Yes	
				Exit		
			RGB Gain/Bias	Red Gain	-50~50	
				Green Gain	-50~50	
				Blue Gain	-50~50	
				Red Bias	0~100	
				Green Bias	0~100	
				Blue Bias	0~100	
				Reset	Cancel [Default]	
					Yes	
				Exit		
			Color Space [Not HDMI Input]		Auto [Default]	
					RGB	
					YUV	
			Color Space [HDMI Input]		Auto [Default]	
					RGB(0~255)	
					RGB(16~235)	
					YUV	
			Signal	Automatic		Off
						On [Default]
				Frequency	-50~50 (depends on signal) [Default: 0]	
				Phase	0~31 (depends on signal) [Default: 0]	
				H. Position	-50~50 (depends on signal) [Default: 0]	
				V. Position	-50~50 (depends on signal) [Default: 0]	
				Exit		
			Lens Iris		1~12	
Dynamic Contrast		Off				
		On				

# USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values		
Display	Image Settings	Brightness Mode			Bright		
					Eco.		
		PureEngine	UltraDetail				Off
							1
							2
							3
							Off
			PureColor				1
							2
							3
							4
		PureMotion				5	
						Off	
						1	
		PureMotion Demo				2	
					3		
					Off [Default]		
					H Split		
					V Split		
		Reset					
	Aspect Ratio					4:3	
						16:9	
						LBX [except SVGA XGA models]	
					Superwide [Video]		
					Native		
					Auto		
Edge Mask					0~10 [Default: 0]		
Digital Zoom					-5~25 [Default: 0]		
Image shift	H: -100~100				[Default:0]		
	V: -100~100						
Setup	Projection				Front  [Default]		
					Rear 		
					Ceiling-top 		
					Rear-top 		
	Lamp Settings	Lamp Reminder				Off	
						On [Default]	
		Lamp Reset				Cancel [Default]	
						Yes	






# USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values	
Setup	Filter Settings	Filter Usage Hours			(Read only)	
		Optional Filter Installed			Yes	
					No	
		Filter Reminder				Off
						300hr
						500hr [Default]
						800hr
		Filter Reset				1000hr
					Cancel [Default]	
	Lens Function	Zoom/Focus			Lock	
					Unlock	
		Zoom			+	
					-	
		Focus			+	
					-	
		Compensate Focus			Off [Default]	
					On	
	Power Settings	Direct Power On				Off [Default]
						On
		Auto Power Off (min)				0~180 (5 min increments) [Default: 0]
		Sleep Timer (min)				0~990 (30 min increments) [Default: 0]
			Always On			No [Default]
						Yes
		Power Mode (Standby)				Active
						Eco [Default]
	Security	Security				Off
						On
		Security Timer	Month			
			Day			
			Hour			
	Change Password					
	Test Pattern					Green Grid
						Magenta Grid
						White Grid
						White
					Off	

# USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values	
Setup	Remote Settings [depends on remote]	IR Function			On	
					Front	
					Top	
					Off	
			Remote Code			0~99
			F1			Test Pattern
						LAN
						Brightness
						Contrast
						Sleep Timer
						CMS
						Color Temp
						Gamma
						Auto Source
						Projection
						Lamp Settings
						Zoom [Default]
						Focus
						Lens Iris
			F2			Test Pattern
						LAN
						Brightness
						Contrast
						Sleep Timer
						CMS
						Color Temp
						Gamma
						Auto Source
						Projection
						Lamp Settings
						Zoom
						Focus [Default]
						Lens Iris
			F3			Test Pattern
						LAN
						Brightness
						Contrast
						Sleep Timer
						CMS
						Color Temp

# USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values	
Setup	Remote Settings [depends on remote]	F3			Gamma	
					Auto Source	
					Projection	
					Lamp Settings	
					Zoom	
					Focus	
					Lens Iris [Default]	
	Projector ID				0~99	
	12V Trigger	12V Trigger A			On	
					Off	
		12V Trigger B			On	
					Off	
	Options	Language				English [Default]
						Deutsch
						Français
						Italiano
						Español
						Português
						繁體中文
						簡體中文
						日本語
						한국어
						Русский
	Menu Settings	Menu Location				Top left 
						Top right 
						Center  [Default]
						Bottom left 
Bottom right 						
Menu Timer						Off
						5sec
					10sec [Default]	

# USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
Setup	Options	Auto Source			Off [Default]
					On
		Input Source			HDMI1
					HDMI2
					HDMI3
					VGA
					DisplayPort
		High Altitude			Off [Default]
					On
		Display Mode Lock			Off [Default]
					On
		Keypad Lock			Off [Default]
					On
		Information Hide			Off [Default]
					On
		Logo			Default [Default]
					Neutral
		Background Color			None [Default]
					Blue
					Red
					Green
					Gray
		HDMI 2 Setting			EDID 1 [Default]
					EDID 2
	HDMI1 EQ			1~7 [Default: 4]	
	HDMI2 EQ			1~7 [Default: 4]	
	HDMI3 EQ			1~7 [Default: 4]	
	Detail Filter			0	
				1 [Default]	
				2	
	Reset	Reset OSD			Cancel [Default]
					Yes
		Reset to Default			Cancel [Default]
				Yes	
Network	LAN	Network Status			(read only)
		MAC Address			(read only)
		DHCP			Off [Default]
					On
		IP Address			192.168.0.100 [Default]
		Subnet Mask			255.255.255.0 [Default]
		Gateway			192.168.0.254 [Default]
		DNS			192.168.0.51 [Default]
Reset					



# USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values	
Network	Control	Crestron			Off	
					On [Default] <b>NOTE:</b> Port 41794.	
		Extron			Off	
					On [Default] <b>NOTE:</b> Port 2023.	
		PJ Link			Off	
					On [Default] <b>NOTE:</b> Port 4352	
		AMX Device Discovery			Off	
			On [Default] <b>NOTE:</b> Port 9131			
Telnet			Off			
			On [Default] <b>NOTE:</b> Port 23			
HTTP			Off			
			On [Default] <b>NOTE:</b> Port 80			
Information	Regulatory					
	Serial Number					
	Source					
	Resolution				00x00	
	Refresh Rate				0.00Hz	
	Display Mode					
	Power mode(standby)					
	Lamp Hours	Bright				0 hr
		Eco.				0 hr
		Total				
	Remote Code				00~99 <b>NOTE:</b> Show remote in system.	
	Remote Code (Active)				00~99 <b>NOTE:</b> Show remote from Remote.	
	Network Status					
	IP Address					
	Projector ID				00~99	
	Filter Usage Hours					
	Brightness Mode					
FW Version	System					
	LAN					
	MCU					

**Note:** Each display mode can be adjusted and saved the value.

# USING THE PROJECTOR

## *Display menu*

### Display image settings menu

#### Display Mode [Data]

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.
- **Bright:** Maximum brightness from PC input.
- **Cinema:** Select this mode for home theater.
- **Game:** Select this mode to increase the brightness and response time level for enjoying video games.
- **sRGB:** Standardized accurate color.
- **DICOM SIM.:** This mode can project a monochrome medical image such as an X ray radiography, MRI, etc.
- **Blending:** Select this mode when projecting one image from different projectors.
- **User:** Memorize user's settings.

#### Wall Color

Use this function to obtain an optimized screen image according to the wall color. Select between off, blackboard, light yellow, light green, light blue, pink, and gray.

#### Dynamic Range

Set the dynamic range level when displaying video from 4K Blu-ray players and streaming devices. Select between auto (set the level automatically), SDR (Standard Dynamic Range), HDR1 ~ HDR4 (High Dynamic Range).

#### 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.

#### Gamma

Set up gamma curve type. After the initial setup and fine tuning is completed, utilize the Gamma Adjustment steps to optimize your image output.

- **Film:** For home theater.
- **Video:** For video or TV source.
- **Graphics:** For PC / Photo source.
- **Standard(2.2):** For standardized setting.
- **1.8/ 2.0/ 2.4:** For specific PC / Photo source.

# USING THE PROJECTOR

- **Blackboard:** This mode should be selected to achieve optimum color settings when projecting onto a blackboard (green).
- **DICOM SIM.:** This mode can project a monochrome medical image such as an X ray radiography, MRI, etc.

## Color Settings

Configure the color settings.

- **BrilliantColor™:** This adjustable item utilizes a new color-processing algorithm and enhancements to enable higher brightness while providing true, more vibrant colors in picture.
- **Color Temperature:** Select a color temperature from D55, D65, D75, D83, D93, or Native.
- **Color Gamut:** Select an appropriate color gamut from Native, HDTV, Presentation, Cinema, or Game.
- **CMS (Color Management System):** Select one of the colors (R/G/B/C/Y/M/W) to adjust its x/y offset and brightness.
  - Color: Select between red (R), green (G), blue (B), cyan (C), yellow (Y), magenta (M), and white(W) color.
  - x offset: Adjust the x offset value of the selected color.
  - y offset: Adjust the y offset value of the selected color.
  - Brightness: Adjust the brightness value of the selected color.
  - Reset: Return the factory default settings for color adjustments.
  - Exit: Exit the “CMS” menu.
- **RGB Gain/Bias:** This settings allows to configure the brightness (gain) and contrast (bias) of an image.
  - Reset: Return the factory default settings for RGB gain/bias.
  - Exit: Exit the “RGB Gain/Bias” menu.
- **Color Space (non-HDMI input only):** Select an appropriate color matrix type from the following: AUTO, RGB, or YUV.
- **Color Space (HDMI input only):** select an appropriate color matrix type from the following: Auto, RGB(0-255), RGB(16-235), and YUV.

## Signal

Adjust the signal options.

- **Automatic:** Configure automatically the signal (the frequency and phase items are grayed out). If automatic is disabled, the frequency and phase items will appear for tuning and saving the settings.
- **Frequency:** Change the display data frequency to match the frequency of your computer’s graphic card. Use this function only if the image appears to flicker vertically.
- **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.
- **H. Position:** Adjust the horizontal positioning of the image.
- **V. Position:** Adjust the vertical positioning of the image.
- **Exit:** Exit the “Signal” menu.

## Lens Iris

Adjust the Lens Iris. Lens Iris is an aperture structure in lens and it can change the amount of light output.

## Dynamic Contrast

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

# USING THE PROJECTOR

## Brightness Mode

Adjust the brightness mode settings.

- **Bright:** Choose “Bright” to increase the brightness.
- **Eco.:** Choose “Eco” to dim the projector lamp which will lower power consumption and extend the lamp life.

## PureEngine

Adjust the PureEngine parameters.

- **UltraDetail:** Adjust the edges of the projected image in order to provide more perceived details.
- **PureColor:** Use to significantly increase the image’s vividness.
- **PureMotion:** Use to preserve a natural motion of the displayed image.
- **PureMotion Demo:** This feature enables you to see the difference in the image quality between the raw unprocessed image and the image processed as processed by the PureMotion. Use this mode to check the adjustments that you make to the PureMotion settings.

## Reset

Return the factory default settings for color settings.

## Display aspect ratio menu

### Aspect Ratio

Select the aspect ratio of the displayed image between the following options:

- **4:3:** This format is for 4:3 input sources.
- **16:9:** This format is for 16:9 input sources, like HDTV and DVD enhanced for Wide screen TV.
- **LBX [except SVGA XGA models]:** This format is for non-16x9, letterbox source and if you use external 16x9 lens to display 2.35:1 aspect ratio in full resolution.
- **Superwide [Video]:** Use this special 2.0:1 aspect ratio to display both 16:9 and 2.35:1 aspect ratio movies without black bars at the top and bottom of the screen.
- **Native:** This format displays the original image without any scaling.
- **Auto:** Automatically selects the appropriate display format.

### **Note:**

- *Detailed informations about LBX mode:*
  - *Some Letter-Box Format DVDs are not enhanced for 16x9 TVs. In this situation, the image will not look right when displaying image in 16:9 mode. In this situation, please try to use the 4:3 mode to view the DVD. If the content is not 4:3, there will be black bars around the image in 16:9 display. For this type of content, you can use LBX mode to fill the image on the 16:9 display.*
  - *If you use an external anamorphic lens, this LBX mode also allows you to watch a 2.35:1 content (include Anamorphic DVD and HDTV film source) that supports anamorphic wide is enhanced for 16x9 Display in a wide 2.35:1 image. In this case, there are no black bars. Lamp power and vertical resolution are fully utilized.*
- *To use the superwide format, do the following:*
  - a) *Set the screen aspect ratio to 2.0:1.*
  - b) *Select “Superwide” format.*
  - c) *Align the projector image correctly on the screen.*

# USING THE PROJECTOR

## 4K UHD scaling table:

16 : 9 screen	480i/p	576i/p	720p	1080i/p	2160p
<b>4x3</b>	Scale to 2880x2160.				
<b>16x9</b>	Scale to 3840x2160.				
<b>LBX</b>	Get the central 3840x1620 image, and then scale to 3840x2160 for display.				
<b>Native mode</b>	1:1 mapping centered. No scaling will be made; the displayed resolution depends on input source.				
<b>Auto</b>	-If source is 4:3, the screen type will be scaled to 2880x2160. -If source is 16:9, the screen type will be scaled to 3840x2160. -If source is 15:9, the screen type will be scaled to 3600x2160. -If source is 16:10, the screen type will be scaled to 3456x2160.				

## Auto mapping rule:

	Input resolution		Auto/Scale	
	H-resolution	V-resolution	3840	2160
<b>4:3</b>	640	480	2880	2160
	800	600	2880	2160
	1024	768	2880	2160
	1280	1024	2880	2160
	1400	1050	2880	2160
	1600	1200	2880	2160
<b>Wide Laptop</b>	1280	720	3840	2160
	1280	768	3600	2160
	1280	800	3456	2160
<b>SDTV</b>	720	576	2700	2160
	720	480	3240	2160
<b>HDTV</b>	1280	720	3840	2160
	1920	1080	3840	2160

## Display edge mask menu

### Edge Mask

Use this function to remove the video encoding noise on the edge of video source.

## Display digital zoom menu

### Digital Zoom

Use to digitally reduce or magnify an image on the projection screen.

## Display image shift menu

### Image Shift

Adjust the projected image position horizontally (H) or vertically (V).

# USING THE PROJECTOR

## Setup menu

### Setup projection menu

#### Projection

Select the preferred projection between front, rear, ceiling-top, and rear-top.

### Setup lamp settings menu

#### Lamp Reminder

Choose this function to show or to hide the warning message when the changing lamp message is displayed. The message will appear 30 hours before suggested replacement of lamp.

#### Lamp Reset

Resets the lamp hour counter after replacing the lamp.

### Setup filter settings menu

#### Filter Usage Hours

Display the filter time.

#### Optional Filter Installed

Set the warning message setting.

- **Yes:** Display warning message after 500 hours of use.

**Note:** “Filter Usage Hours / Filter Reminder / Filter Reset” will only appear when “Optional Filter Installed” is “Yes”.

- **No:** Turn off warning message.

#### Filter Reminder

Choose this function to show or hide the warning message when the changing filter message is displayed. The available options include 300hr, 500hr, 800hr, and 1000hr.

#### Filter Reset

Reset the dust filter counter after replacing or cleaning the dust filter.

### Setup lens function menu

#### Lens Function

Configure the lens functions.

- **Zoom/Focus:** Enable/Disable the zoom and focus adjustment functions.
- **Zoom:** Adjust the zoom on the projected image.
- **Focus:** Adjust the focus on the projected image.
- **Compensate Focus:**
  - Off: Focus compensation is inactive.
  - On: Focus compensation is active.
  - Calibration: Execute focus calibration function.

# USING THE PROJECTOR

## Setup power settings menu

### Direct Power On

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

### Auto Power Off (min.)

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

### Sleep Timer (min.)

Configure the sleep timer.

- **Sleep Timer (min.):** Sets the countdown timer interval. The countdown timer will start, with or without a signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).  
**Note:** *The Sleep Timer is reset every time when the projector is powered off.*
- **Always On:** Check to set the sleep timer always on.

### Power Mode (Standby)

Set the power mode setting.

- **Active:** Choose “Active” to return to normal standby.
- **Eco:** Choose “Eco.” to save power dissipation further < 0.5W.

## Setup security menu

### Security

Enable this function to prompt for a password before using the projector.

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

### Security Timer

Can be select the time (Month/Day/Hour) function to set the number of hours the projector can be used. Once this time has elapsed you will be requested to enter your password again.

### Change Password

Use to set or modify the password that is prompted when turning the projector on.

## Setup test pattern menu

### Test Pattern

Select the test pattern from green grid, magenta grid, white grid, white or disable this function (off).

## Setup remote settings menu

### IR Function

Set the IR function setting.

- **On:** Choose “On”, the projector can be operated by the remote control from top and front IR receivers.
- **Front:** Choose “Front”, the projector can be operated by the remote control from the front IR receiver.
- **Top:** Choose “Top”, the projector can be operated by the remote control from the top IR receiver.
- **Off:** Choose “Off”, the projector can't be operated by the remote control. By selecting “Off”, you will be able to use the Keypad keys.

# USING THE PROJECTOR

## Remote Code

Set the remote custom code by pressing the remote ID button for 3 seconds and you will notice the remote indicator (above the **Off** button) starts blinking. Then, input a number between 00-99 using the keyboard numbered keys. After inserting the number, the remote indicator blinks twice quickly indicating that the remote code has changed.

## F1/ F2/ F3

Assign the default function for F1, F2, or F3 between Test Pattern, LAN, Brightness, Contrast, Sleep Timer, CMS, Color Temp, Gamma, Auto Source, Projection, Lamp Settings, Zoom, Focus, or Lens Iris.

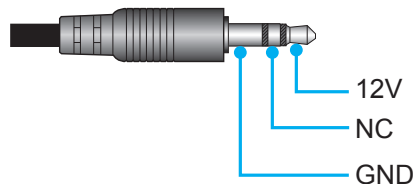
## Setup projector ID menu

### Projector ID

ID definition can be set up by menu (range 0-99), and allow user control an individual projector by using RS232 command.

## Setup 12V trigger menu

### 12V Trigger A / 12V Trigger B



- **Off:** Choose “Off” to disable the 12V trigger for 3.5mm ear phone.
- **On:** Choose “On” to enable the 12V trigger for 3.5mm ear phone.

## Setup options menu

### Language


Select the multilingual OSD menu between English, German, French, Italian, Spanish, Portuguese, traditional Chinese, simplified Chinese, Japanese, Korean, Russian.

### Menu Settings

Set the menu location on the screen and configure menu timer settings.

- **Menu Location:** Select the menu location on the display screen.
- **Menu Timer:** Set the duration where the OSD menu stays visible on the screen.

### Auto Source

If you set this option “On” and press the  button on the projector keypad or **Source** button on the remote control then the next available input source is selected automatically. Set “Off” to disable auto source function.

### Input Source

Select the input source between HDMI1, HDMI2, HDMI3, VGA, and DisplayPort.

### High Altitude

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

### Display Mode Lock

Choose “On” or “Off” to lock or unlock adjusting display mode settings.

### Keypad Lock

When the keypad lock function is “On”, the Keypad will be locked. However, the projector can be operated by the remote control. By selecting “Off”, you will be able to reuse the Keypad.



# USING THE PROJECTOR

## Information Hide

Enable this function to hide the information message.

- **Off:** Choose “On” to hide the info message.
- **On:** Choose “Off” to show the “searching” message.

## Logo

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

- **Default:** The default startup screen.
- **Neutral:** Logo is not displayed on startup screen.

## Background Color

Use this function to display a blue, red, green, grey color, or none when no signal is available.

## HDMI 2 Setting

Configure the HDCP2.2-compatible HDMI 2 connector settings.

- **EDID 1:** For 480i/p, 576i/p, 720p, 1080i/p, or 2160p input signal.
- **EDID 2:** For non-interlaced signals only.

## HDMI 1 EQ/ HDMI 2 EQ/ HDMI3 EQ

Set the HDMI1/ HDMI2/ HDMI3 port EQ value.

## Detail Filter

Apply detail filter between 0, 1, and 2.

## Setup reset menu

### Reset OSD

Return the factory default settings for OSD menu settings.

### Reset to Default

Return the factory default settings for Setup menu settings.

## Network LAN menu

### Network Status

Display the network connection status (read-only).

### MAC Address

Display the MAC address (read-only).

### DHCP

Use this option to enable or disable the DHCP function.

- **On:** Projector will obtain an IP address automatically from your network.
- **Off:** To assign IP, subnet mask, gateway, and DNS configuration manually.

**Note:** *Exiting OSD will automatically apply the entered values.*

### IP Address

Display the IP address.

### Subnet Mask

Display subnet mask number.

# USING THE PROJECTOR

## Gateway

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

## DNS

Display the DNS number.

## How to use web browser to control your projector

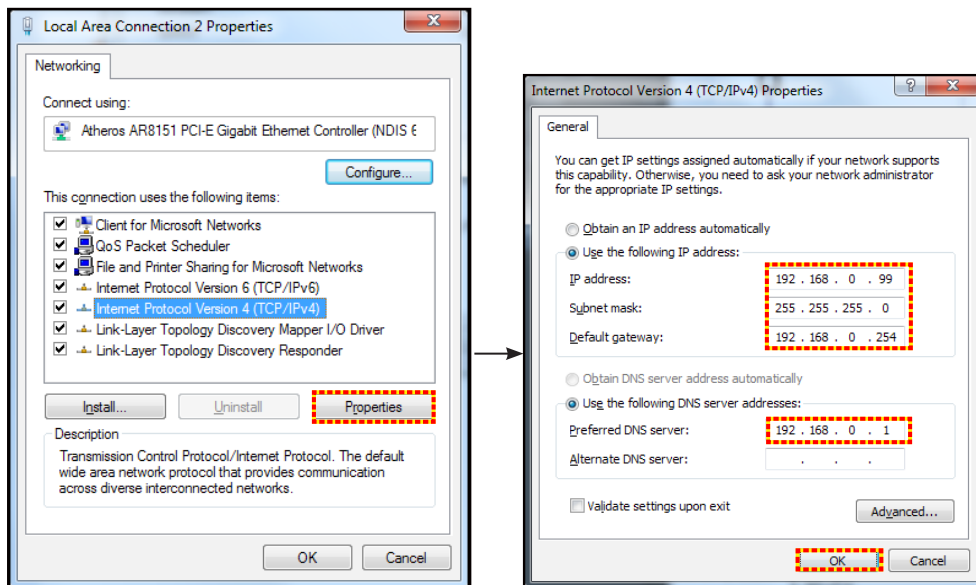
1. Turn “On” the DHCP option on projector to allow a DHCP server to automatically assign an IP address.
2. Open the web browser in your PC and type in the projector’s IP address (“Network > LAN > IP Address”).
3. Enter the user name and password, and click “Login”.  
The projector’s configuration web interface opens.

### **Note:**

- The default user name and password is “admin”.
- 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, Gateway, and DNS on projector (“Network > LAN”).
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” key.

## Reset

Reset all values for LAN parameters.

## Network control menu

### Crestron

Use this function to select the network function (port: 41794).

For more information, please visit <http://www.crestron.com> and [www.crestron.com/getroomview](http://www.crestron.com/getroomview).

### Extron

Use this function to select the network function (port: 2023).

# USING THE PROJECTOR

## PJ Link

Use this function to select the network function (port: 4352).

## AMX Device Discovery

Use this function to select the network function (port: 9131).

## Telnet

Use this function to select the network function (port: 23).

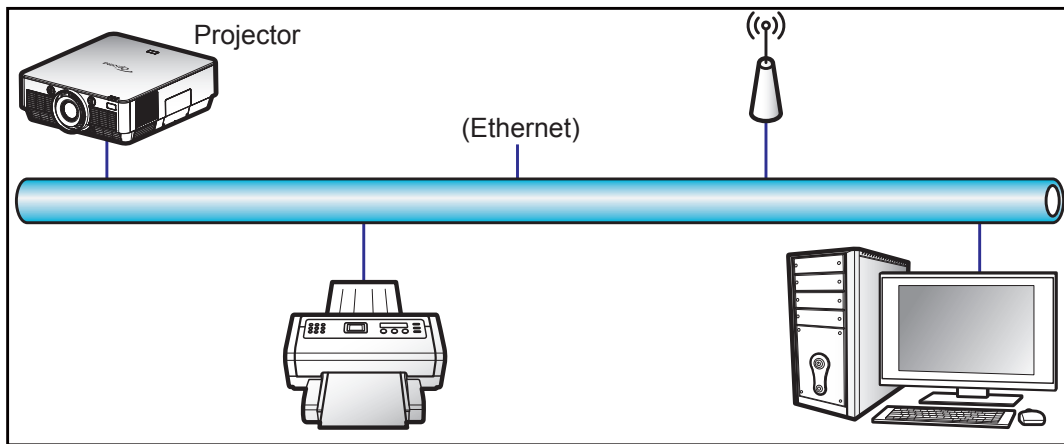
## HTTP

Use this function to select the network function (port: 80).

## 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 LAN / RJ45 port 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/>

# USING THE PROJECTOR

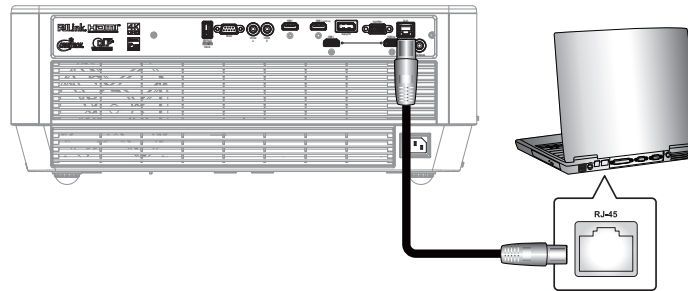
This projector supports all commands of PJLink Class1 (Version 1.00).

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

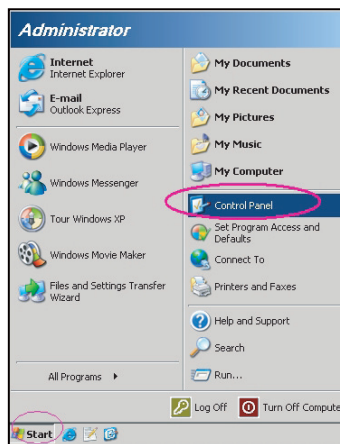
For more detailed information about the various types of external devices which can be connected to the LAN / RJ45 port and remote control the projector, as well as the supported commands for these external devices, please contact the Support-Service directly.

## LAN RJ45

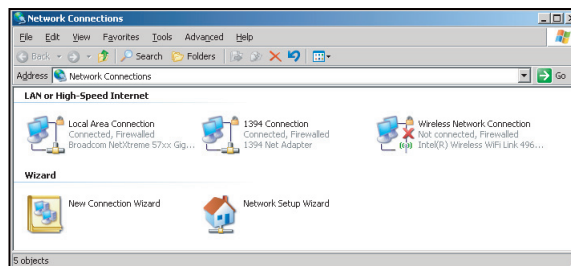
1. Connect an RJ45 cable to RJ45 ports on the projector and the PC (laptop).



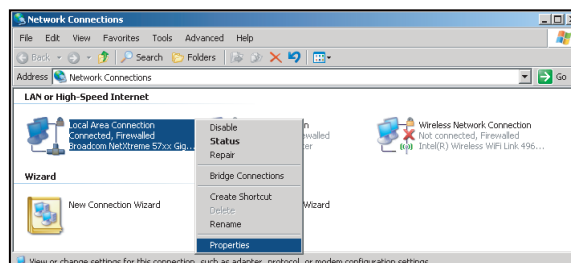
2. On the PC (Laptop), select **Start > Control Panel > Network Connections**.



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

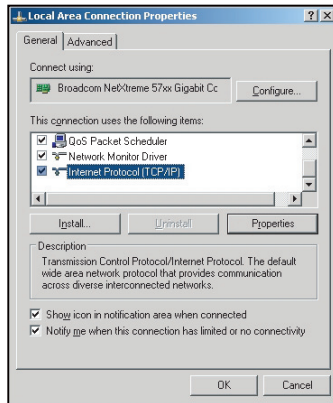


4. In the **Properties** window, select the **General** tab, and select **Internet Protocol (TCP / IP)**.

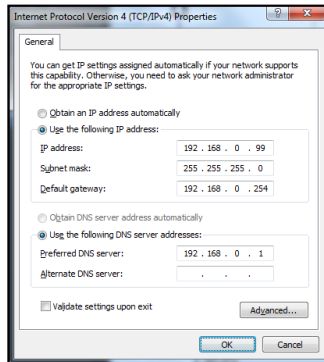


# USING THE PROJECTOR

5. Click “Properties”.



6. Type in the IP address and Subnet mask, then press “OK”.



7. Press the “Menu” button on the projector.
8. Open on projector **Network > LAN**.
9. Enter the following connection parameters:
  - DHCP: Off
  - IP Address: 192.168.0.100
  - Subnet Mask: 255.255.255.0
  - Gateway: 192.168.0.254
  - DNS: 192.168.0.1
10. Press “Enter” 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: 192.168.0.100.



13. Press “Enter”.

# USING THE PROJECTOR

The projector is setup for remote management. The LAN / RJ45 function displays as follows:

Information page

Projector Information		Projector Status	
Projector Name	Optoma 4K500	Power Status	Power On
Location		Source	HDMI 2
Firmware Version	B01	Display Mode	Cinema
MAC Address	00:60:E9:16:56:17	Projection	Front
Resolution	1080p 60Hz	Brightness Mode	Bright
Lamp Hours	0	Error Status	0:No Error
Assigned to	Optoma Projector		

Main page

Interface 2.7.2.7

Tool page

Crestron Control	Projector	User Password
IP Address: 192.168.0.199	Projector Name: Optoma 4K500	<input type="checkbox"/> Enabled
IP ID: 7	Location:	New Password:
Port: 41794	Assigned to: Optoma Projector	Confirm:
<input type="button" value="Send"/>	<input type="button" value="Send"/>	<input type="button" value="Send"/>
	DHCP <input type="checkbox"/> Enabled	Admin Password
	IP Address: 192.168.0.100	<input type="checkbox"/> Enabled
	Subnet Mask: 255.255.255.0	New Password:
	Default Gateway: 192.168.0.254	Confirm:
	DNS Server: 192.168.0.51	<input type="button" value="Send"/>
	<input type="button" value="Send"/>	

Contact IT helpdesk

Title [ ] X

[ ] Send

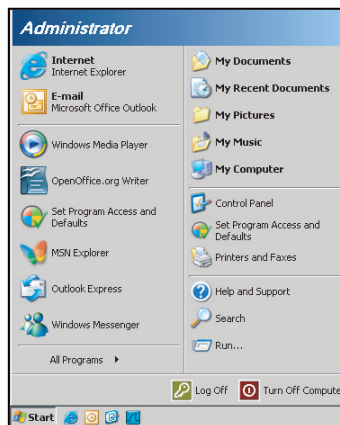
# USING THE PROJECTOR

## RS232 by Telnet Function

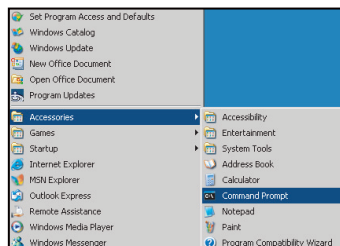
There is alternative RS232 command control way, in projector so called “RS232 by TELNET” for LAN / RJ45 interface.

### 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

## *Info menu*

### **Info menu**

View the projector information as listed below:

- Regulatory
- Serial Number
- Source
- Resolution
- Refresh Rate
- Display Mode
- Power Mode (Standby)
- Lamp Hours
- Remote Code
- Remote Code(Active)
- Network Status
- IP Address
- Projector ID
- Filter Usage Hours
- Brightness Mode
- FW Version



# MAINTENANCE

## Replacing the lamp

The projector automatically detects the lamp life. When the lamp life is nearing the end of use, a warning message will appear on the screen.



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



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



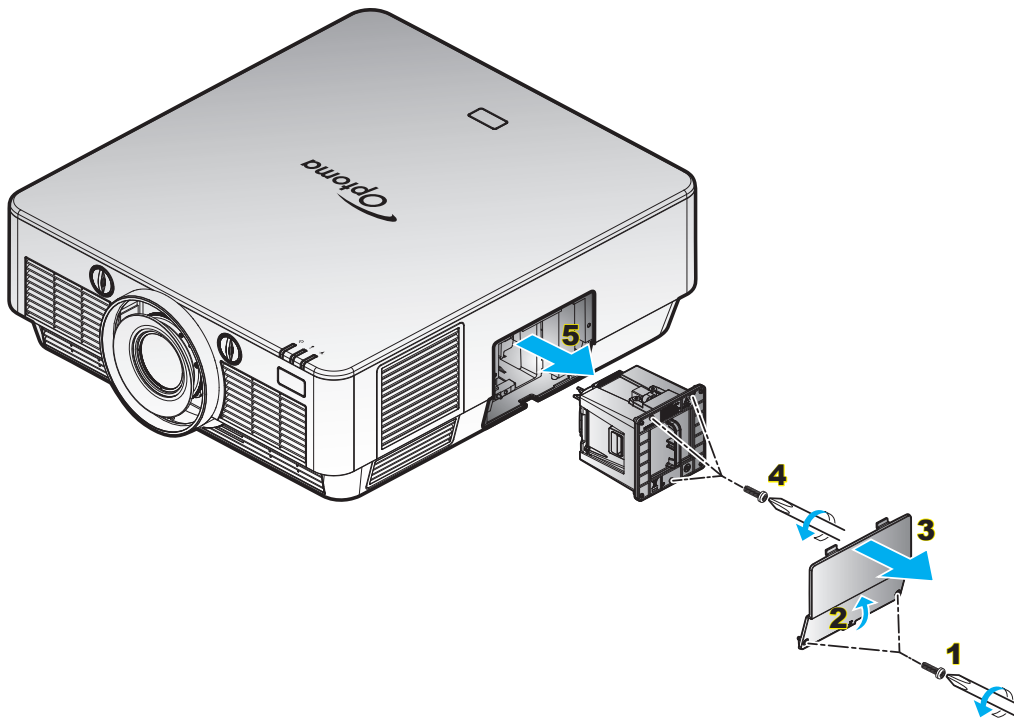
Warning: Lamp compartment is hot! Allow it to cool down before changing lamp!



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

# MAINTENANCE

## Replacing the lamp (continued)



### Procedure:

1. Switch off the power to the projector by pressing the "⏻" button on the remote control or the projector keypad.
2. 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. Slightly flip the cover to release the hinges. **2**
6. Remove the cover. **3**
7. Unscrew the screws on the lamp module. **4**
8. Remove the lamp module carefully. **5**
9. To replace the lamp module, reverse the previous steps.
10. Turn on the projector and reset the lamp timer.
11. Lamp Reset: (i) Press "Menu" → (ii) Select "Setup" → (iii) Select "Lamp Settings" → (iv) Select "Lamp Reset" → (v) Select "Yes".

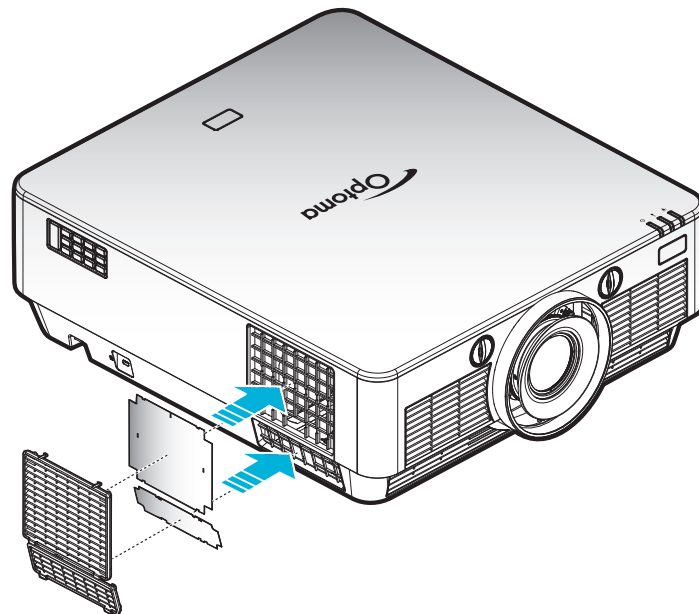
### Note:

- *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

### Installing the dust filter



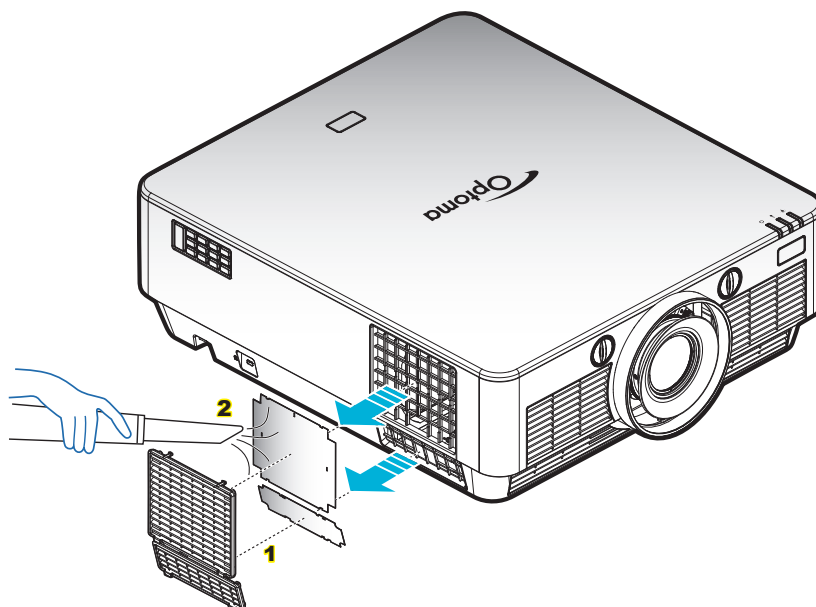
**Note:** Dust filters are only required/supplied in the selected regions with excessive dust.

### 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 the "⏻" button on the remote control or the projector keypad.
2. Disconnect the power cord.
3. Remove the dust filter carefully. **1**
4. Clean or replace the dust filter. **2**
5. To install the dust filter, reverse the previous steps.



# ADDITIONAL INFORMATION

## Compatible resolutions

### Digital compatibility

B0/Established Timing	B0/Standard Timing	B0/Detail Timing	B1/Video Mode	B1/Detail Timing
720x400 @ 70Hz	1280x720 @ 60Hz	Native timing:	720x480i @ 60Hz 16:9	1920x1080p @ 60Hz
640x480 @ 60Hz	1280x800 @ 60Hz	1920x1080 @ 60Hz	720x480p @ 60Hz 4:3	
640x480 @ 67Hz	1280x1024 @ 60Hz		720x480p @ 60Hz 16:9	
640x480 @ 72Hz	1400x1050 @ 60Hz		720x576i @ 50Hz 16:9	
640x480 @ 75Hz	1600x1200 @ 60Hz		720x576p @ 50Hz 4:3	
800x600 @ 56Hz			720x576p @ 50Hz 16:9	
800x600 @ 60Hz			1280x720p @ 60Hz 16:9	
800x600 @ 72Hz			1280x720p @ 50Hz 16:9	
800x600 @ 75Hz			1920x1080i @ 60Hz 16:9	
832x624 @ 75Hz			1920x1080i @ 50Hz 16:9	
1024x768 @ 60Hz			1920x1080p @ 60Hz 16:9	
1024x768 @ 70Hz			1920x1080p @ 50Hz 16:9	
1024x768 @ 75Hz			1920x1080p @ 24Hz 16:9	
1280x1024 @ 75Hz			3840x2160 @ 24Hz	
1152x870 @ 75Hz			3840x2160 @ 25Hz	
			3840x2160 @ 30Hz	
			3840x2160 @ 50Hz	
			3840x2160 @ 60Hz	
			4096x2160 @ 24Hz	
			4096x2160 @ 25Hz	
			4096x2160 @ 30Hz	
			4096x2160 @ 50Hz	
			4096x2160 @ 60Hz	

# ADDITIONAL INFORMATION

## Analog compatibility

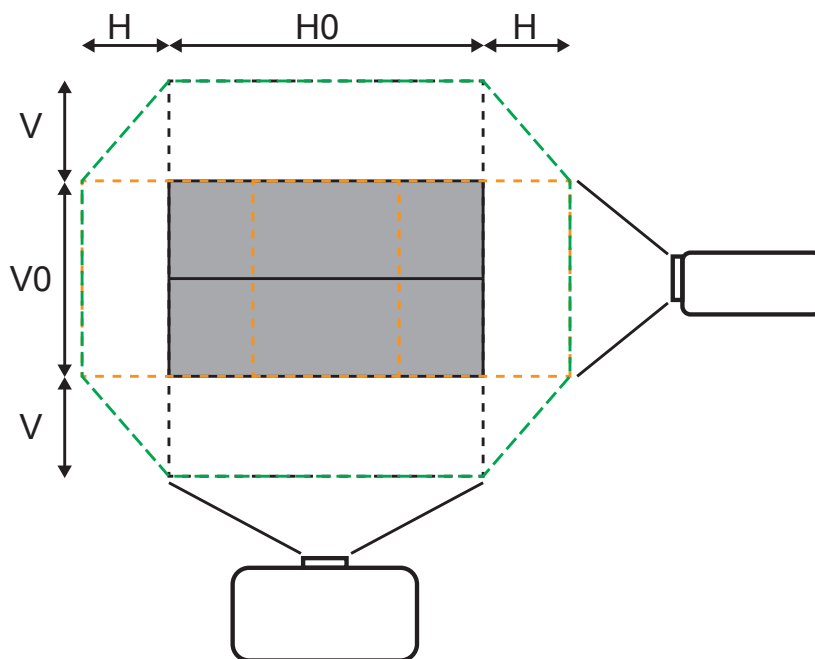
B0/Established Timing	B0/Standard Timing	B0/Detail Timing	B1/Video Mode	B1/Detail Timing
720x400 @ 70Hz	1280x720 @ 60Hz	Native timing		1366x768 @ 60Hz
640x480 @ 60Hz	1280x800 @ 60Hz	1920x1080 @ 60Hz		
640x480 @ 67Hz	1280x1024 @ 60Hz			
640x480 @ 72Hz	1400x1050 @ 60Hz			
640x480 @ 75Hz	1600x1200 @ 60Hz			
800x600 @ 56Hz				
800x600 @ 60Hz				
800x600 @ 72Hz				
800x600 @ 75Hz				
832x624 @ 75Hz				
1024x768 @ 60Hz				
1024x768 @ 70Hz				
1024x768 @ 75Hz				
1280x1024 @ 75Hz				
1152x870 @ 75Hz				

## Image size and projection distance

Diagonal Length Size of (16:9) Screen	Screen Size W x H				Projection Distance (D)			
	(m)		(inch)		(m)		(feet)	
	Width	Height	Width	Height	Wide	Tele	Wide	Tele
84	1.86	1.05	73.21	41.2	2.5	5.0	8.2	16.4
90	1.99	1.12	78.4	44.1	2.68	5.36	8.79	17.59
100	2.21	1.25	87.2	49.0	2.98	5.96	9.78	19.55
110	2.44	1.37	95.9	53.9	3.28	6.56	10.76	21.52
120	2.66	1.49	104.6	58.8	3.58	7.16	11.75	23.46
130	2.88	1.62	113.3	63.7	3.87	7.74	12.70	25.43
140	3.10	1.74	122.0	68.6	4.17	8.34	13.68	27.36
150	3.32	1.87	130.7	73.5	4.47	8.94	14.67	29.33
180	3.98	2.24	156.9	88.2	5.36	10.72	17.59	35.20
200	4.43	2.49	174.3	98.1	5.96	11.92	19.55	39.11
220	4.87	2.74	191.8	107.9	6.56	13.12	21.52	43.01
250	5.53	3.11	217.9	122.6	7.45	14.90	24.44	48.88
280	6.20	3.49	244.0	137.3	8.34	16.68	27.36	54.76
300	6.64	3.74	261.5	147.1	8.94	17.88	29.33	58.66

**Note:** Zoom ratio is 1.96x.

# ADDITIONAL INFORMATION



*Specification:*

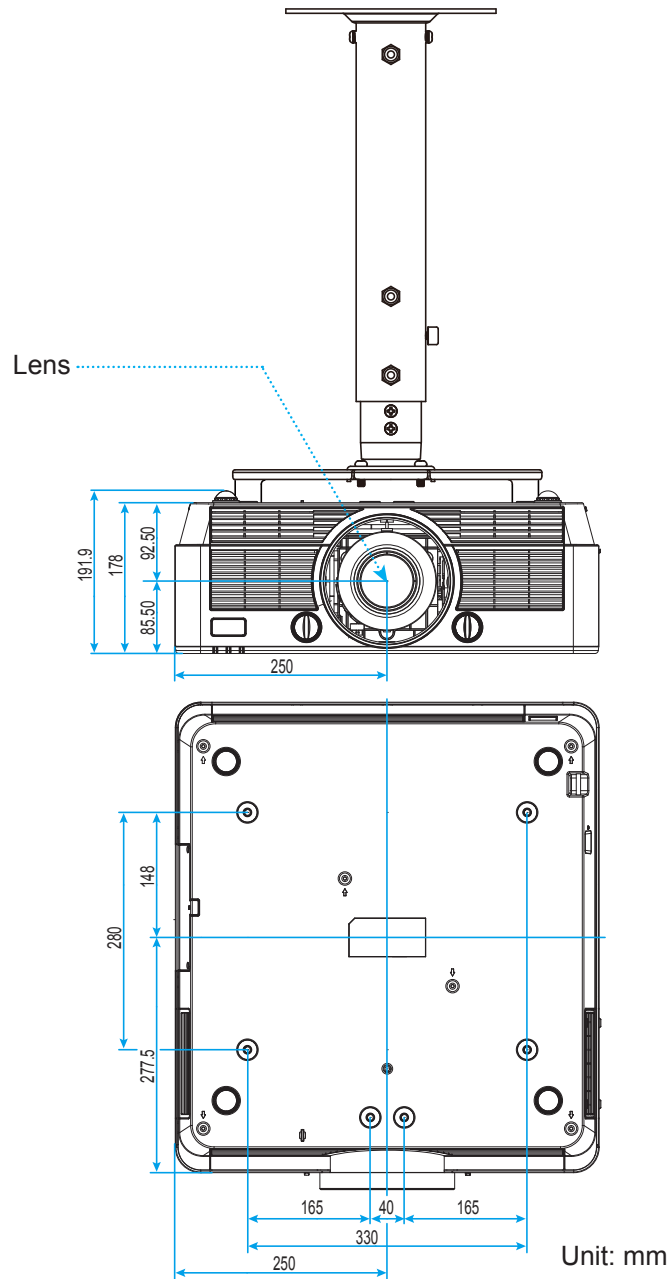
H	V
35%H0	80%V0

**Note:** The information in the Specification is given with the +/- 5% tolerance.

# 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\*10
  - Minimum screw length: 10mm



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

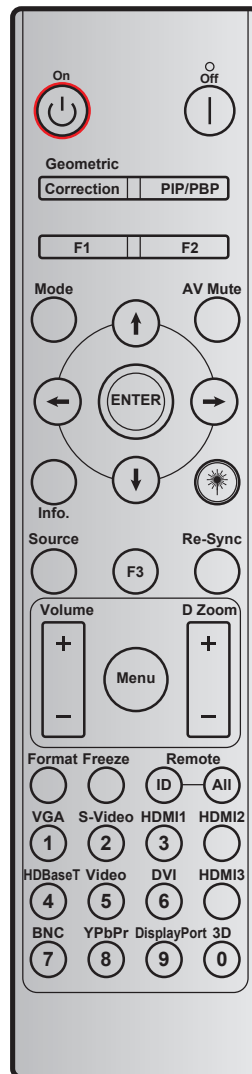


Warning:

- 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.
- Be sure to keep at least 10 cm gap between the ceiling and the bottom of the projector.
- Avoid installing the projector near a heat source.

# ADDITIONAL INFORMATION






## IR remote control codes



Key	Key code	Printing-key definition	Description
Power On	2	On	Refer to the "Power On/ Off the Projector" section on page 19.
Power Off	2E	Off	Refer to the "Power On/ Off the Projector" section on page 19.
Geometric Correction	34	Geometric Correction	Geometric correction.
PIP/PBP	3E	PIP/PBP	Press to use the PIP/PBP function.
F1	26	F1	By default Zoom.
F2	27	F2	By default Focus.
F3	66	F3	By default Lens IRIS.
Mode	95	Mode	Display mode menu on/ off.
Four directional select keys	⬆	C6	Up arrow
	⬇	C7	Down arrow
	⬅	C8	Left arrow
	➡	C9	Right arrow
Use ⬆⬇⬅➡ to select items or make adjustments to your selection.			



# ADDITIONAL INFORMATION

Key		Key code	Printing-key definition	Description
AV Mute		3	AV Mute	Press to hide/unhide the screen picture.
ENTER		C5	Enter	Confirm your item selection.
Info.		25	Info.	Display projector information.
Laser		N/A	Laser	Use as laser pointer.
Re-Sync	<b>Re-Sync</b>	4	Re-Sync	Automatically synchronize the projector to the input source.
Source	<b>Source</b>	18	Source	Press "Source" to select an input signal.
Volume		9	Volume +	Press to increase the volume.
		0C	Volume -	Press to decrease the volume.
Menu	<b>Menu</b>	88	Menu	Press "Menu" to launch the on-screen display (OSD) menu. To exit OSD, Press "Menu" again.
D Zoom +		8	D Zoom +	Use  to zoom in the projected image.
D Zoom -		B	D Zoom -	Use  to zoom out the projected image.
Format		15	Format	Press to choose the projector format.
Freeze		6	Freeze	Press to freeze the projector image.
Remote	<b>ID</b>	3201~3299		Press until Power LED is flashing then press 01~99 to set the particular remote code.
	<b>ALL</b>	32CD		Press to set remote code to all.
VGA / 1		8E	1/VGA1	<ul style="list-style-type: none"> <li>Press to choose VGA source.</li> <li>Use as numeric keypad number "1".</li> </ul>
S-Video / 2		1D	2/S-Video	<ul style="list-style-type: none"> <li>Press to choose S-video source.</li> <li>Use as numeric keypad number "2".</li> </ul>
HDMI1 / 3		16	3/HDMI1	<ul style="list-style-type: none"> <li>Press to choose HDMI source.</li> <li>Use as numeric keypad number "3".</li> </ul>
HDMI2		9B	HDMI2	Press to choose HDMI source.
HDBaseT / 4		70	4/HDBaseT	<ul style="list-style-type: none"> <li>Press to choose HDBaseT source.</li> <li>Use as numeric keypad number "4".</li> </ul>
Video / 5		1C	5/Video	<ul style="list-style-type: none"> <li>Press to choose composite video source.</li> <li>Use as numeric keypad number "5".</li> </ul>
DVI / 6		19	6/DVI	<ul style="list-style-type: none"> <li>Press to choose DVI source.</li> <li>Use as numeric keypad number "6".</li> </ul>
HDMI3		98	HDMI3	Press to choose HDMI source.
BNC / 7		1A	7/BNC	<ul style="list-style-type: none"> <li>Press to choose BNC source.</li> <li>Use as numeric keypad number "7".</li> </ul>
YPbPr / 8		17	8/YPbPr	<ul style="list-style-type: none"> <li>Press to choose component video source.</li> <li>Use as numeric keypad number "8".</li> </ul>
DisplayPort / 9		9F	9/DisplayPort	<ul style="list-style-type: none"> <li>Press to choose DisplayPort.</li> <li>Use as numeric keypad number "9".</li> </ul>
3D / 0		89	0/3D	<ul style="list-style-type: none"> <li>Press to choose 3D source.</li> <li>Use as numeric keypad number "0".</li> </ul>







**Note:** Some keys may have no function for models that do not support these features.

# 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 "AV Mute" feature is not turned on.
-  *Image is out of focus*
- Use the **Focus** button on the projector keypad to adjust focus. (Please refer to page 16).
  - Make sure the projection screen is between the required distance from the projector. (Please refer to page 49).
-  *The image is stretched when displaying 16:9 DVD title*
- When you play anamorphic DVD or 16:9 DVD, the projector will show the best image in 16: 9 format on projector side.
  - If you play the LBX format DVD title, please change the format as LBX in projector OSD.
  - If you play 4:3 format DVD title, please change the format as 4:3 in projector OSD.
  - Please setup the display format as 16:9 (wide) aspect ratio type on your DVD player.
-  *Image is too small or too large*
- Adjust the digital zoom.
  - Move the projector closer to or further from the screen.
  - Press "Menu" on the projector panel, go to "Display-->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 "Display-->Image Shift" from the OSD to make an adjustment.
-  *Image is reversed*
- Select "Setup-->Projection" from the OSD and adjust the projection direction.

# ADDITIONAL INFORMATION

## 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 pages 45-46.

## Remote control problems

- ? *If the remote control does not work*
  - Check the operating angle of the remote control is pointed within  $\pm 15^\circ$  to the IR receiver on the projector.
  - Make sure there are not any obstructions between the remote control and the projector. Move to within 7 m (23 ft) of the projector.
  - Make sure batteries are inserted correctly.
  - Replace batteries if they are exhausted.





## Warning indicators

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

- "LAMP" LED indicator is lit red and if "On/Standby" indicator flashes red.
- "TEMP" LED indicator is lit red and if "On/Standby" indicator flashes red. This indicates the projector has overheated. Under normal conditions, the project can be switched back on.
- "TEMP" LED indicator flashes red and if "On/Standby" indicator flashes red.

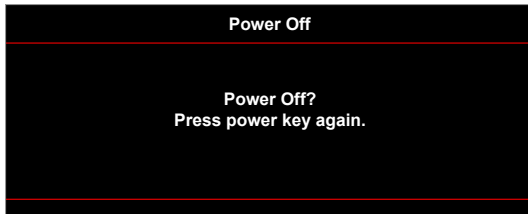
Unplug the power cord from the projector, wait for 30 seconds and try again. If the warning indicator light up or flash, please contact your nearest service center for assistance.

## LED lightning messages

Message	 Power LED	 Power LED	 TEMP-LED	 LAMP-LED
	(Red)	(Blue)	(Red)	(Red)
Standby state (Input power cord)	Steady light			
Power on (Warming)		Flashing (0.5 sec off / 0.5 sec on)		
Power on and Lamp lighting		Steady light		
Power off (Cooling)		Flashing (0.5 sec off / 0.5 sec light). Back to red steady light when cooling fan turns off.		
Error (Over temp.)	Flashing		Steady light	
Error (Fan failure)	Flashing		Flashing	
Error (Lamp failure)	Flashing			Steady light

# ADDITIONAL INFORMATION

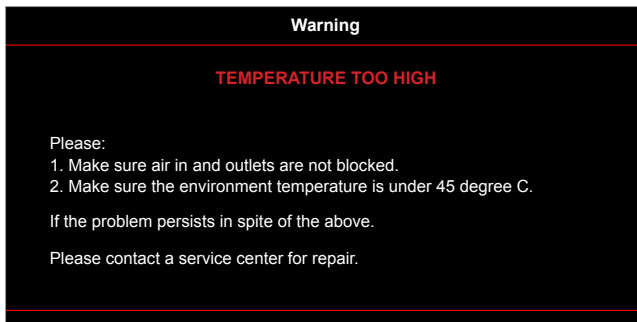
- Power off:



- Lamp warning:



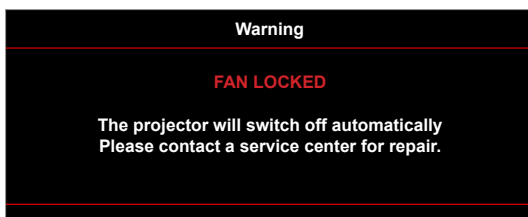
- Temperature warning:



- Remote control function not supported:



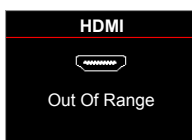
- Fan failed:



- Filter Warning:

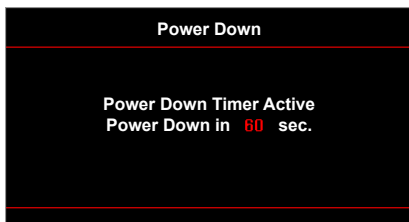


- Out of display range:



# ADDITIONAL INFORMATION

- Power down warning:



- Security timer alarm:



# USING THE PROJECTOR

## Specifications

Optical	Description
Lens	2x Zoom with IRIS
Image size (diagonal)	2160p: 80" to 200" inches for optical range
Projection distance	2.4 m (80") ~ 9m (300") for optical range

Electrical	Description
Color reproduction	1073.4 Million color
Scan rate	- Horizontal scan rate: 15.375~91.146 KHz - Vertical scan rate: 24Hz to 120Hz
Built-in speaker	N/A
Power requirement	100 - 240V AC 50/60Hz
Input current	2.8-1.0 A

Mechanical	Description
Installation orientation	Front, Rear, Ceiling - top, Rear - top
Dimensions	- 550 mm (W) x 500 mm (D) x 178 mm (H) (without feet) - 550 mm (W) x 500 mm (D) x 192 mm (H) (with feet)
Net Weight	16.9 kg
Gross Weight	21 kg
Environmental conditions	Operating in 5 ~ 40°C , 10% to 85% humidity (non-condensing)

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




# USING THE PROJECTOR

## Optoma global offices

For service or support, please contact your local office.




### USA

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

 888-289-6786  
 510-897-8601  
 [services@optoma.com](mailto:services@optoma.com)




### Canada

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

 888-289-6786  
 510-897-8601  
 [services@optoma.com](mailto:services@optoma.com)



### Latin America

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

 888-289-6786  
 510-897-8601  
 [services@optoma.com](mailto:services@optoma.com)



### Europe

Unit 1, Network 41, Bourne End Mills,  
Hemel Hempstead, Herts,  
HP1 2UJ, United Kingdom  
www.optoma.eu  
Service Tel : +44 (0)1923 691865

 +44 (0) 1923 691 800  
 +44 (0) 1923 691 888  
 [service@tsc-europe.com](mailto:service@tsc-europe.com)




### Benelux BV

Randstad 22-123  
1316 BW Almere  
The Netherlands  
www.optoma.nl

 +31 (0) 36 820 0252  
 +31 (0) 36 548 9052



### France

Bâtiment E  
81-83 avenue Edouard Vaillant  
92100 Boulogne Billancourt, France

 +33 1 41 46 12 20  
 +33 1 41 46 94 35  
 [savoptoma@optoma.fr](mailto:savoptoma@optoma.fr)




### Spain

C/ José Hierro,36 Of. 1C  
28522 Rivas VaciaMadrid,  
Spain

 +34 91 499 06 06  
 +34 91 670 08 32




### Deutschland

Wiesenstrasse 21 W  
D40549 Düsseldorf,  
Germany

 +49 (0) 211 506 6670  
 +49 (0) 211 506 66799  
 [info@optoma.de](mailto:info@optoma.de)

### Scandinavia



Lerpeveien 25  
3040 Drammen  
Norway

 +47 32 98 89 90  
 +47 32 98 89 99  
 [info@optoma.no](mailto:info@optoma.no)

PO.BOX 9515  
3038 Drammen  
Norway


### Korea

WOOMI TECH.CO.,LTD.  
4F, Minu Bldg.33-14, Kangnam-Ku,  
Seoul,135-815, KOREA  
korea.optoma.com

 +82+2+34430004  
 +82+2+34430005




### Japan

東京都足立区綾瀬3-25-18  
株式会社オーエス  
コンタクトセンター:0120-380-495

 [info@os-worldwide.com](mailto:info@os-worldwide.com)  
www.os-worldwide.com



### Taiwan

12F., No.213, Sec. 3, Beixin Rd.,  
Xindian Dist., New Taipei City 231,  
Taiwan, R.O.C.  
www.optoma.com.tw

 +886-2-8911-8600  
 +886-2-8911-6550  
 [services@optoma.com.tw](mailto:services@optoma.com.tw)  
asia.optoma.com



### Hong Kong

Unit A, 27/F Dragon Centre,  
79 Wing Hong Street,  
Cheung Sha Wan,  
Kowloon, Hong Kong

 +852-2396-8968  
 +852-2370-1222  
www.optoma.com.hk

### China

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

 +86-21-62947376  
 +86-21-62947375  
www.optoma.com.cn

