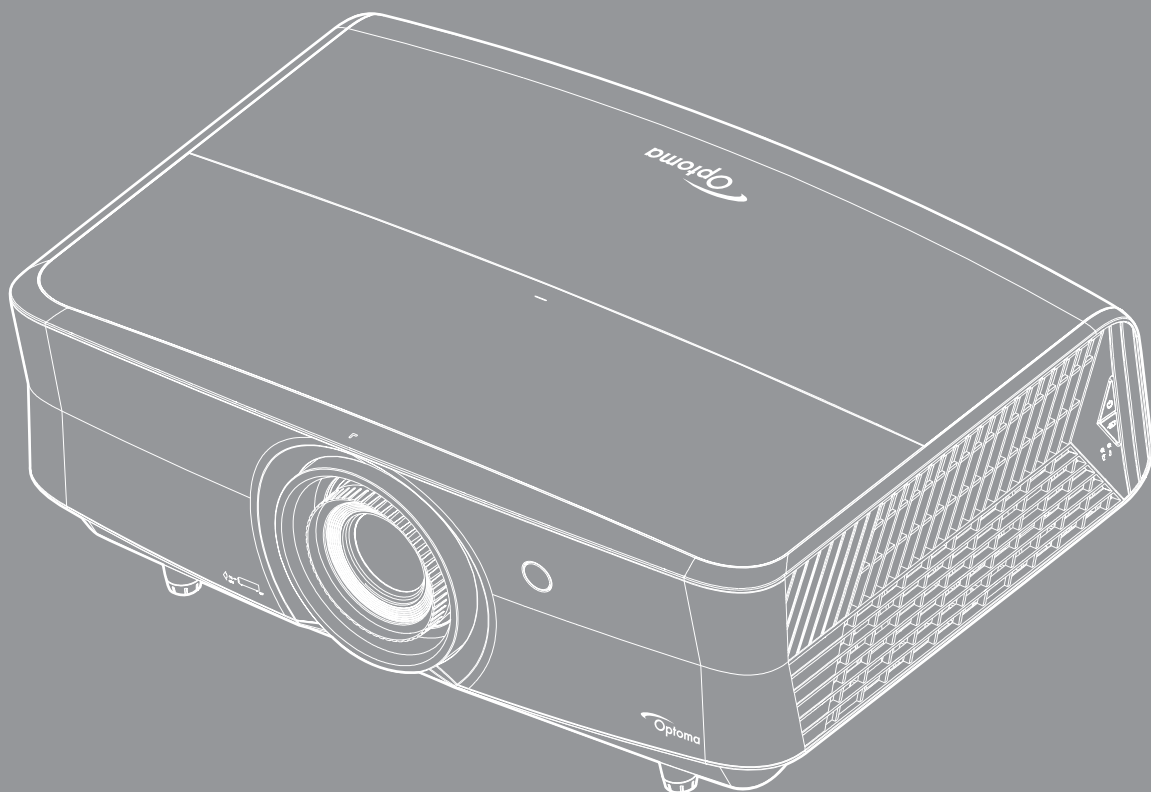




# DLP® Projector



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.

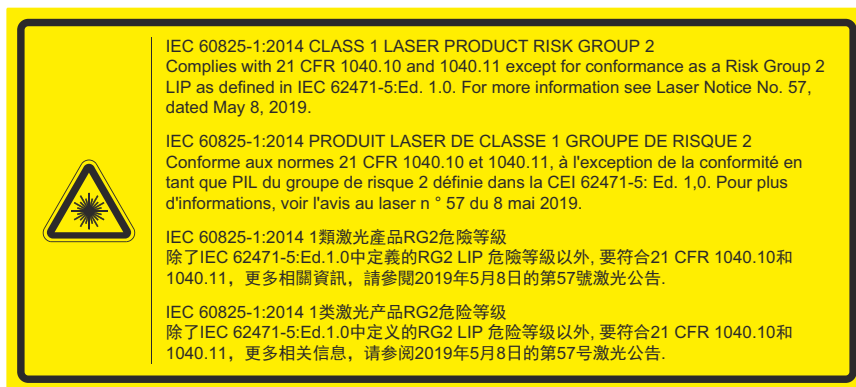
## Important Safety Instruction

- 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 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 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.
- This projector will detect the life of the light source itself.

- 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.

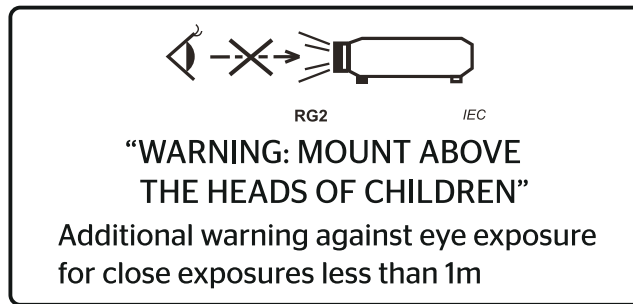
## Laser Radiation Safety Information

- Complies with 21 CFR 1040.10 and 1040.11 except for conformance as a Risk Group 2 LIP as defined in IEC 62471-5:Ed. 1.0. For more information see Laser Notice No. 57, dated May 8, 2019



### Failure to comply with the following could result in death or serious injury.

- This projector has built-in Class 4 laser module. Disassembly or modification is very dangerous and should never be attempted.
- Any operation or adjustment not specifically instructed by the user's guide creates the risk of hazardous laser radiation exposure.
- Do not open or disassemble the projector as this may cause damage by the exposure of laser radiation.
- Do not stare into beam when the projector is on. The bright light may result in permanent eye damage.
- When turning on the projector, make sure no one within projection range is looking at the lens.
- Without following the control, adjustment or operation procedure may cause damage by the exposure of laser radiation.
- Adequate instructions for assembly, operation, and maintenance, including clear warnings concerning precautions to avoid possible exposure to laser.



IEC 60825-1: 2014 Class 1 RG2  
IEC 62471-5:2015 RG2

- Additional instructions to supervise children, no staring, and not use optical aids.
- Additional instructions to install above the reach of children.
- Notice is given to supervise children and to never allow them to stare into the projector beam at any distance from the projector.
- Notice is given to use caution when using the remote control for starting the projector while in front of the projection lens.
- Notice is given to the user to avoid the use of optical aids such as binoculars or telescopes inside the beam.
- As with any bright light source, do not stare into the beam, RG2 IEC 62471-5:2015.
- **WARNING: MOUNT ABOVE THE HEADS OF CHILDREN.** The use of a ceiling mount is recommended with this product to place it above the eyes of children.

## 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.

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.

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

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 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/EU (including amendments)
- Low Voltage Directive 2014/35/EU
- RED 2014/53/EU (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.

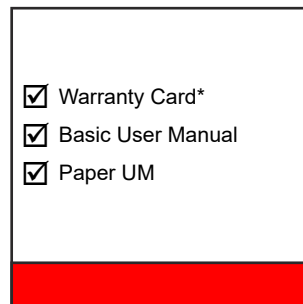
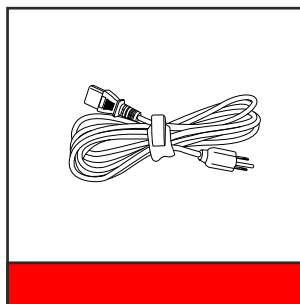
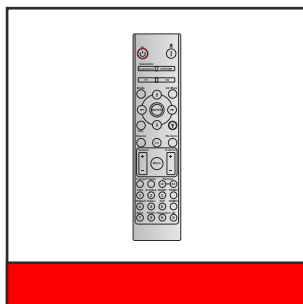
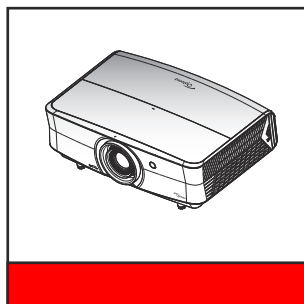
# INTRODUCTION

## 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.

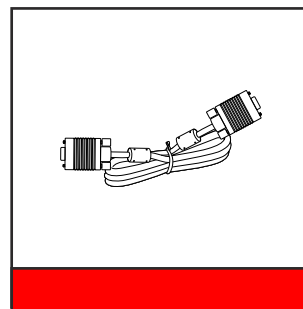
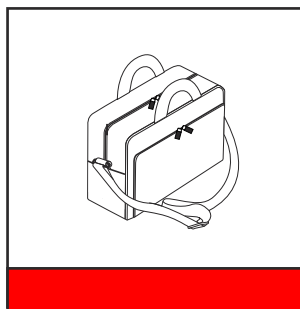
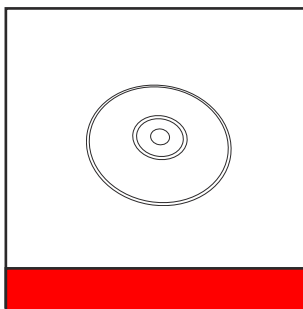
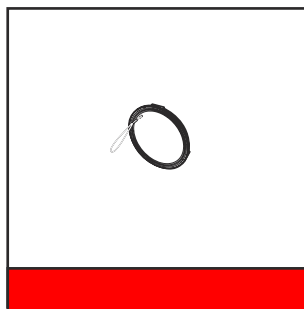
## Standard accessories



### Note:

- The remote control is shipped with the battery.
- \*For European warranty Information, please visit [www.optoma.com](http://www.optoma.com).

## Optional accessories

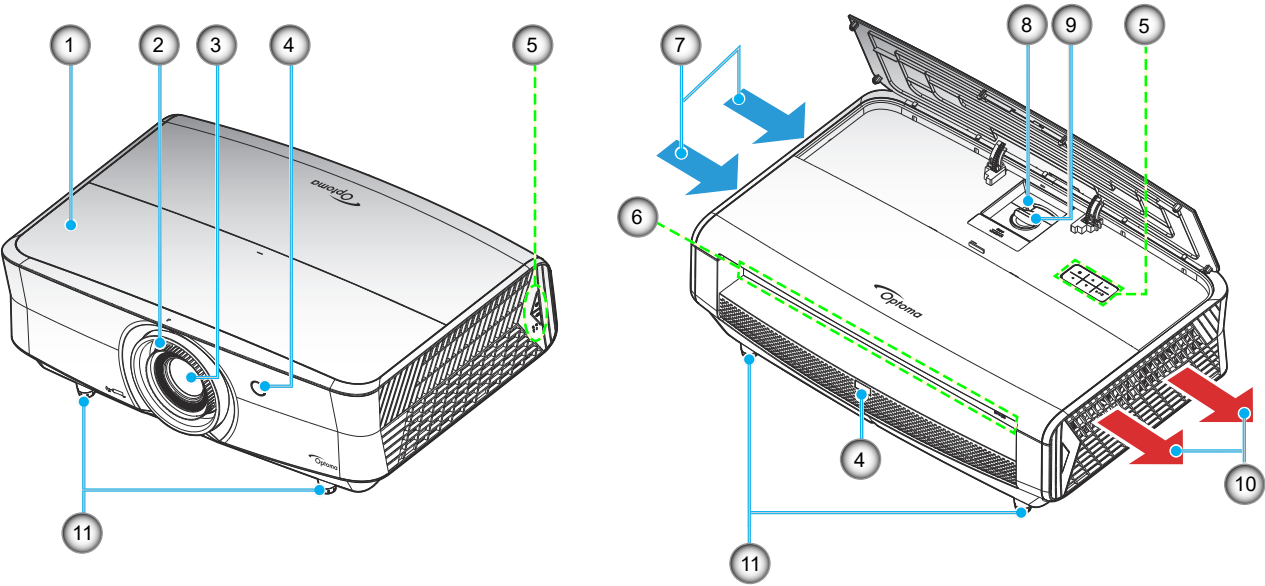


### Note:

- Optional accessories vary depending on model, specification and region.

# INTRODUCTION

## Product Overview



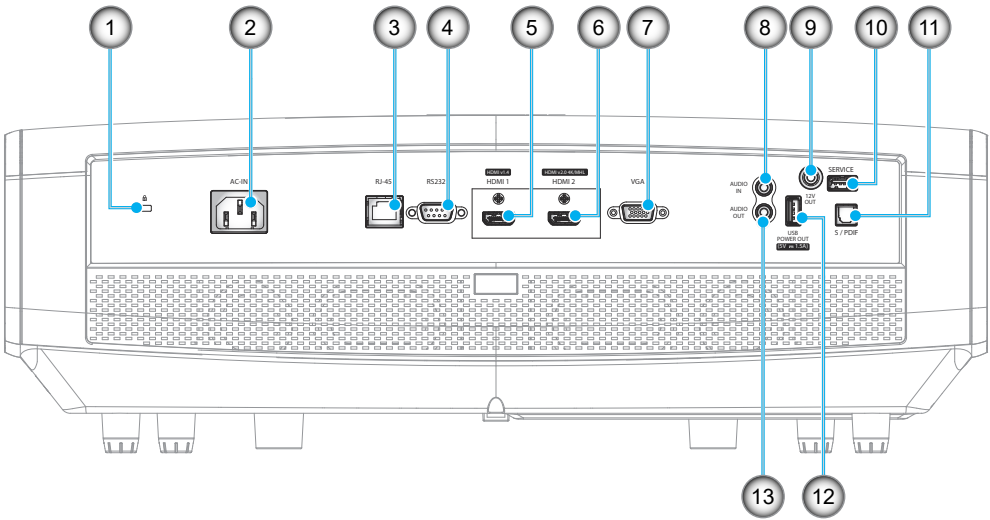
**Note:**

- Do not block projector intake and exhaust vents.
- When operating the projector in an enclosed space, allow at least 30 cm clearance around the intake and exhaust vents.

1.	Top Cover	7.	Ventilation (inlet)
2.	Focus Ring	8.	Zoom Lever
3.	Lens	9.	Lens Shift Dial
4.	IR Receiver	10.	Ventilation (outlet)
5.	Keypad	11.	Tilt-Adjustment Foot
6.	Input / Output		

# INTRODUCTION

## Connections



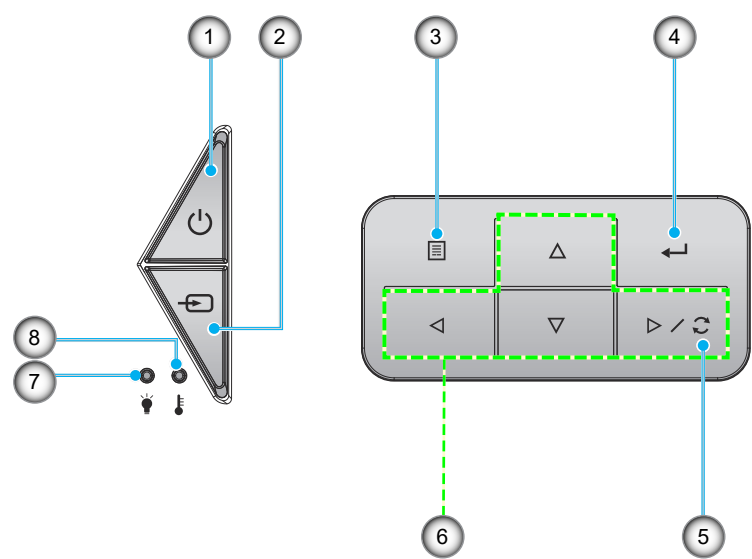
1.	Kensington™ Lock Port	8.	AUDIO IN Connector
2.	Power Socket	9.	12V OUT Connector
3.	RJ-45 Connector	10.	Service Connector (*2)
4.	RS232 Connector	11.	S/PDIF Connector
5.	HDMI 1 (v1.4) Connector	12.	USB Power Out (5V---1.5A) (*3)
6.	HDMI 2 (v2.0) 4K / MHL Connector (*1;*3)	13.	AUDIO OUT Connector
7.	VGA Connector		

**Note:**

- (\*1)HDMI 2 connector supports HDCP2.2 and MHL V2.2.
- (\*2)For firmware upgrade.
- (\*3)MHL and USB DC5V are alternately powered on. For example, USB DC 5V is off when MHL is on or DC 5V is on when MHL is off.

# INTRODUCTION

## Keypad

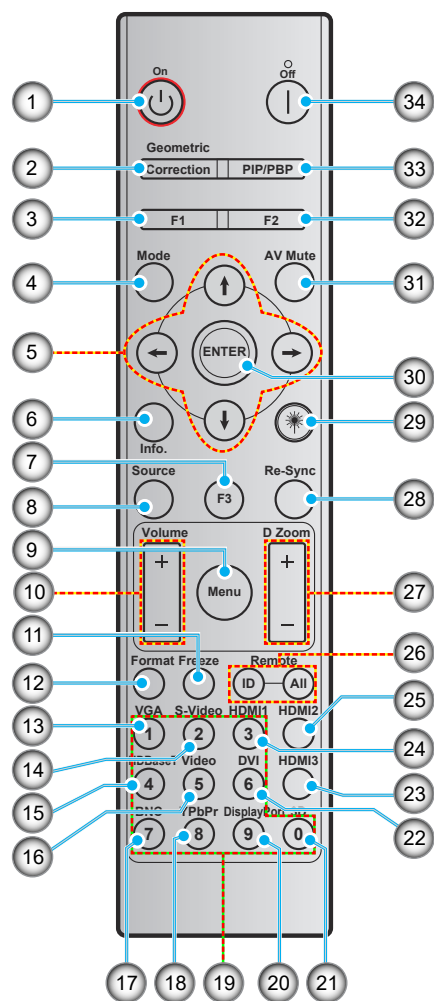


1.	Power and On/Standby LED	5.	Re-Sync
2.	Source	6.	Four Directional Select Keys
3.	Menu	7.	Laser LED
4.	Enter	8.	Temp LED

# INTRODUCTION

## Remote control

For Data Model

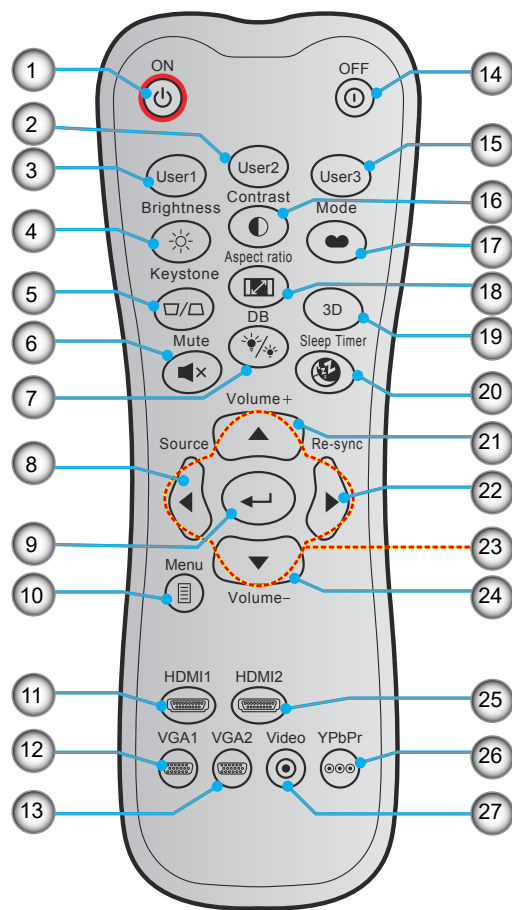


1.	Power on	18.	YPbPr (not supported)
2.	Geometric Correction	19.	Numeric keypad (0-9)
3.	Function button (F1) (Assignable)	20.	Display port (not supported)
4.	Mode	21.	3D
5.	Four directional select keys	22.	DVI (not supported)
6.	Information	23.	HDMI3 (not supported)
7.	Function button (F3) (Assignable)	24.	HDMI1
8.	Source	25.	HDMI2
9.	Menu	26.	Remote ID / Remote all
10.	Volume - / +	27.	Digital Zoom - / +
11.	Freeze	28.	Re-sync
12.	Format (Aspect Ratio)	29.	Laser (not supported)
13.	VGA	30.	Enter
14.	S-Video	31.	AV Mute
15.	HDBase-T	32.	Function button (F2) (Assignable)
16.	Video	33.	PIP/PBP (not supported)
17.	BNC (not supported)	34.	Power off

# INTRODUCTION

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

## For Home Model



1.	Power On	15.	User 3
2.	User 2	16.	Contrast
3.	User 1	17.	Display Mode
4.	Brightness	18.	Aspect Ratio
5.	Keystone (not supported)	19.	3D Menu On / Off
6.	Mute	20.	Sleep Timer
7.	DB (Dynamic Black)	21.	Volume +
8.	Source	22.	Re-Sync
9.	Enter	23.	Four Directional Select Keys
10.	Menu	24.	Volume -
11.	HDMI1	25.	HDMI2
12.	VGA1	26.	YPbPr (not supported)
13.	VGA2 (not supported)	27.	Video (not supported)
14.	Power Off		

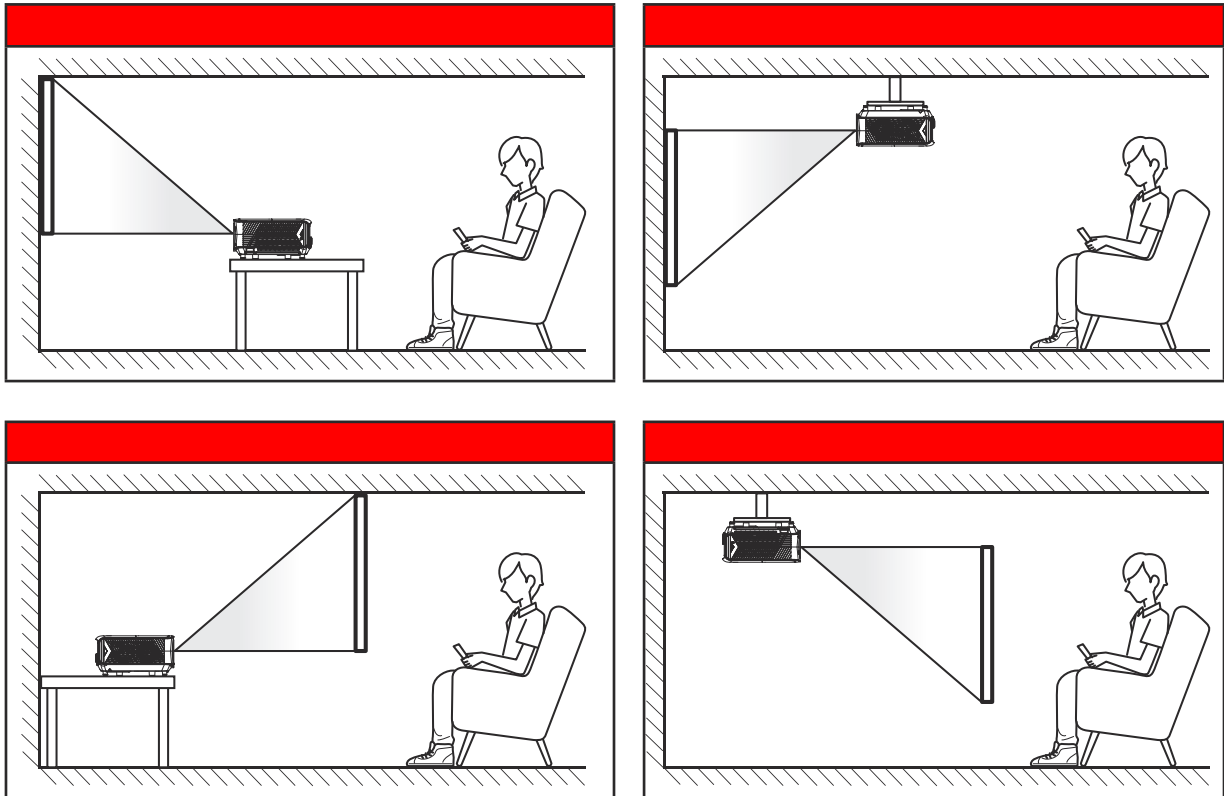
**Note:** Some keys may have no function for models that do not support these features.

# 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 56.
- How to determine screen size for a given distance, please refer to distance table on page 56.

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

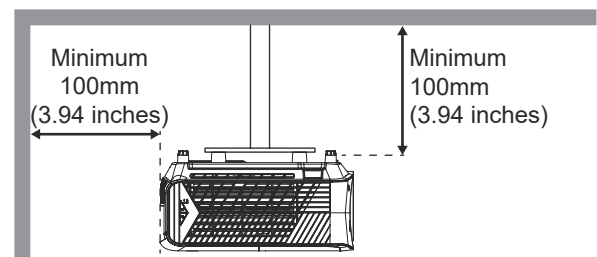
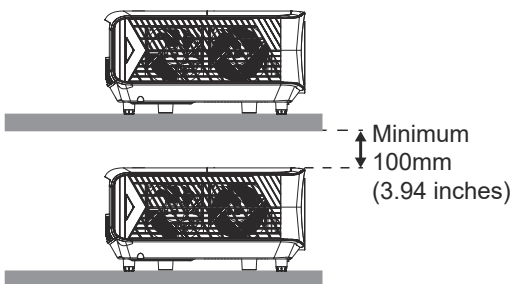
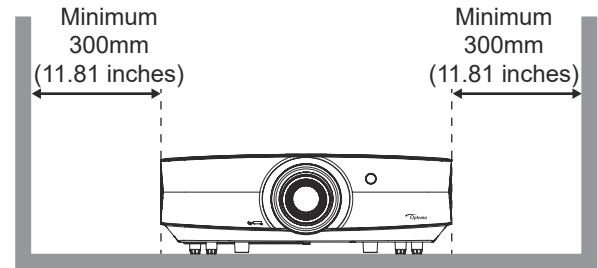
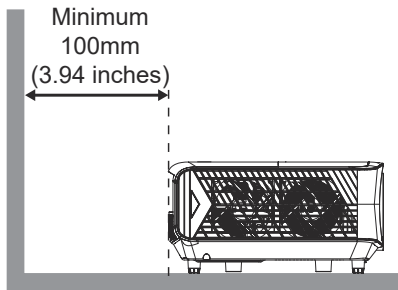
### IMPORTANT!

*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 light source or the projector itself. For none standard installation advise please contact Optoma.*

# SETUP AND INSTALLATION

## Projector installation notice

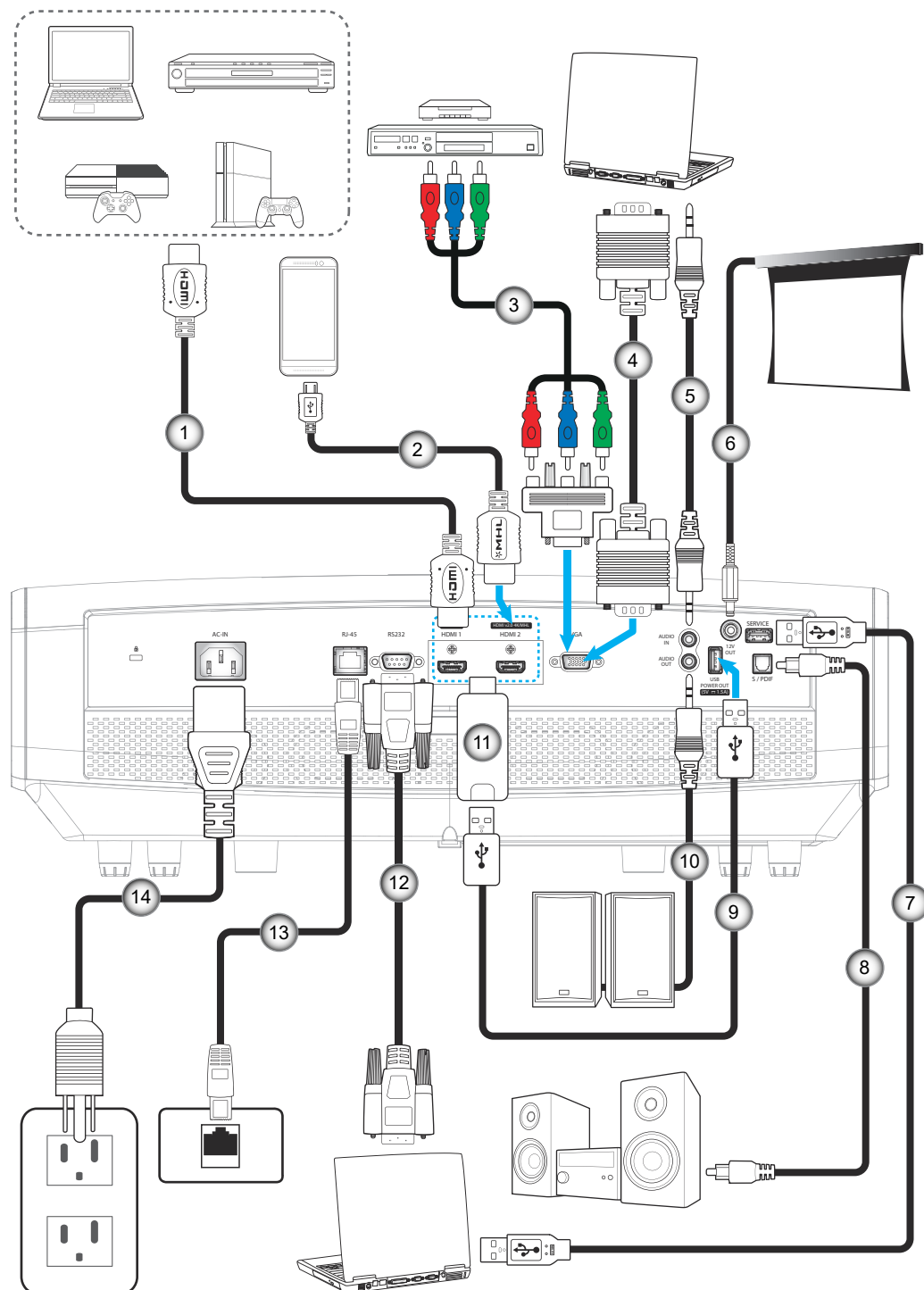
- Allow at least 30 cm clearance around the exhaust vent.



- Ensure that the intake vents do not recycle hot air from the exhaust vent.
- When operating the projector in an enclosed space, ensure that the surrounding air temperature within the enclosure does not exceed operation temperature while the projector is running, and the air intake and exhaust vents are unobstructed.
- All enclosures should pass a certified thermal evaluation to ensure that the projector does not recycle exhaust air, as this may cause the device to shutdown even if the enclosure temperature is within the acceptable operation temperature range.

# SETUP AND INSTALLATION

## Connecting sources to the projector



1.	HDMI Cable	8.	S/PDIF Out Cable
2.	HDMI / MHL Cable	9.	USB Power Cable
3.	RCA Component Cable	10.	Audio Out Cable
4.	VGA In Cable	11.	HDMI Dongle
5.	Audio In Cable	12.	RS232 Cable
6.	12V DC Jack	13.	RJ-45 Cable
7.	USB Cable	14.	Power Cord

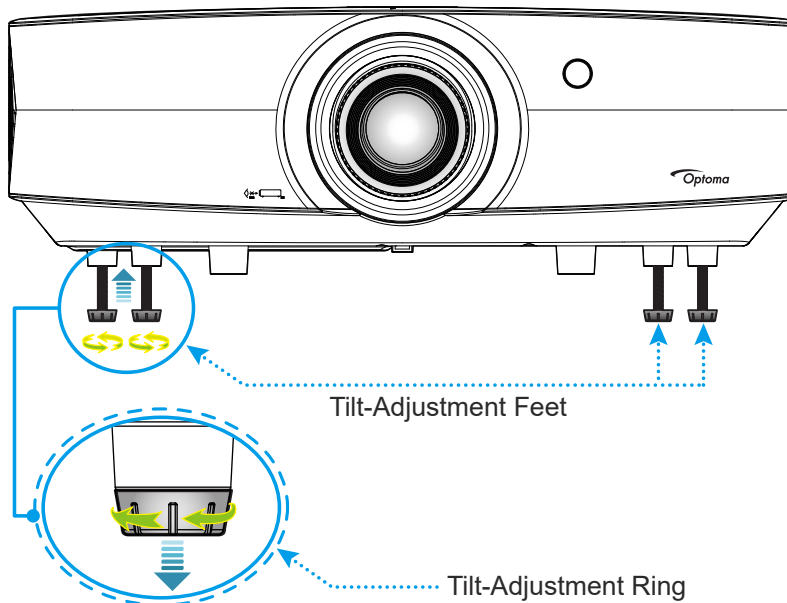
# SETUP AND INSTALLATION

## Adjusting the projector image

### Image height

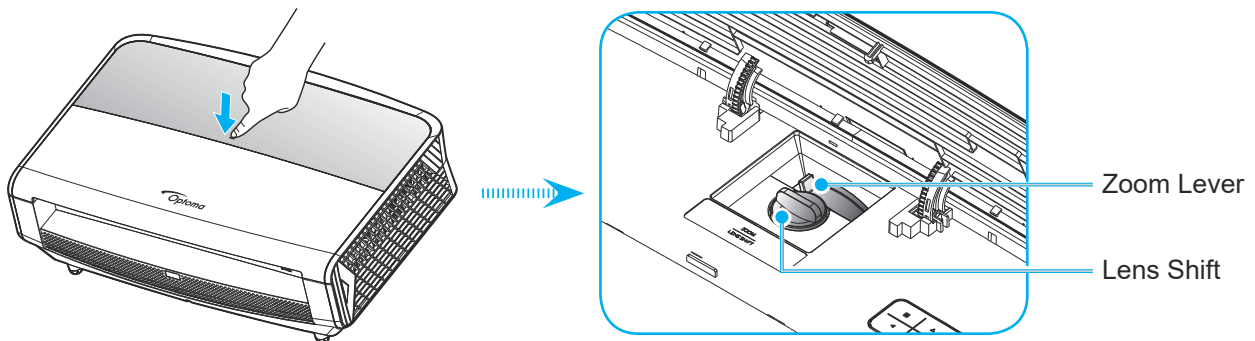
The projector is equipped with elevator feet for adjusting the image height.

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, lens shift, and focus

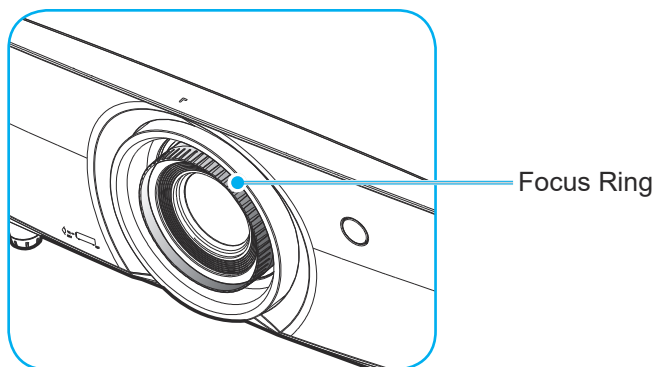
- To adjust the image size and position, do the following:
  - a. Push down firmly on the middle of the top cover to unlock the latch. Then open the top cover.



- b. To adjust the image size, turn the zoom lever clockwise or counterclockwise to increase or decrease the projected image size.
- c. To adjust the image position, turn the lens shift dial clockwise or counterclockwise to adjust the position of the projected image vertically.

# SETUP AND INSTALLATION

- To adjust the focus, turn the focus ring clockwise or counterclockwise until the image is sharp and legible.



Focus adjustment

**Note:** The projector will focus at a distance of 1.3m to 9.3m.

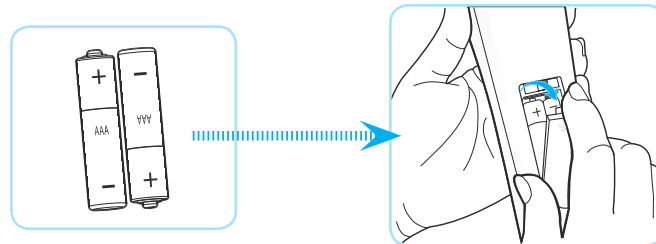
# SETUP AND INSTALLATION

## 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.

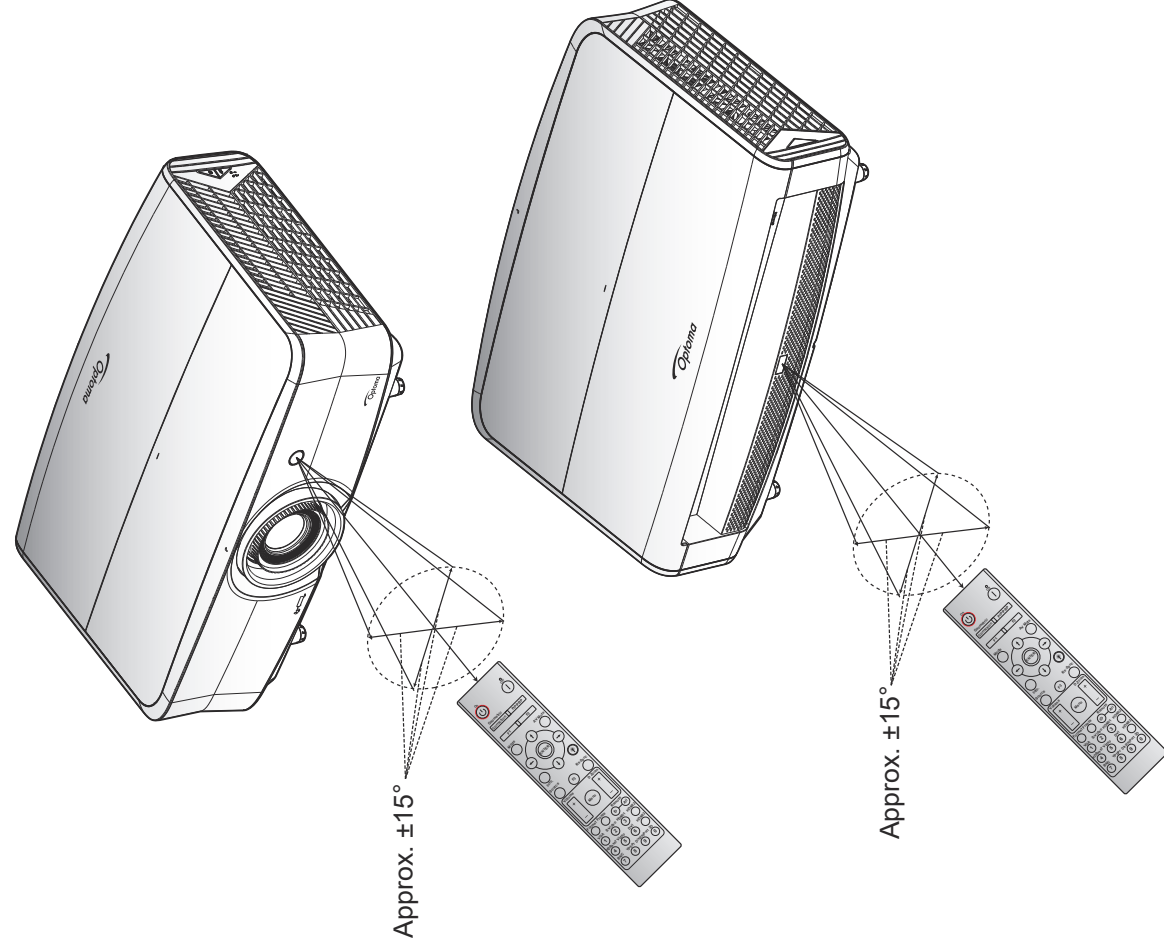
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they are depleted. Chemicals 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 front side and rear side of the projector. Ensure to hold the remote control at an angle within 30 degrees perpendicular 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 7 meters (~ 23 feet).

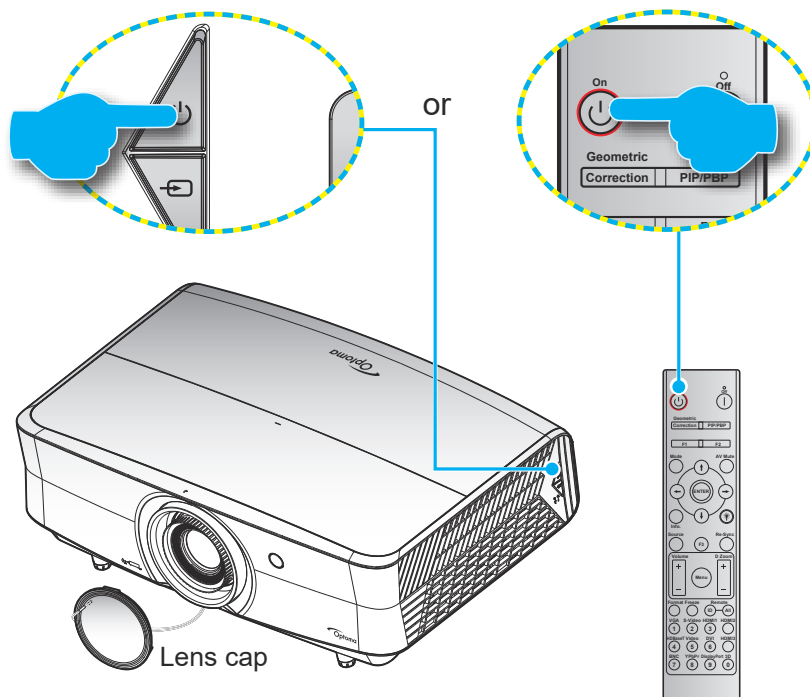
- Make sure that there are no obstacles between the remote control and the IR sensor on the projector that might obstruct the infra-red beam.
- Make sure the IR transmitter of the remote control is not being shined by sunlight or fluorescent lamps directly.
- Please keep the remote controller away from fluorescent lamps for over 2 m or the remote controller might become malfunction.
- If the remote control is close 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





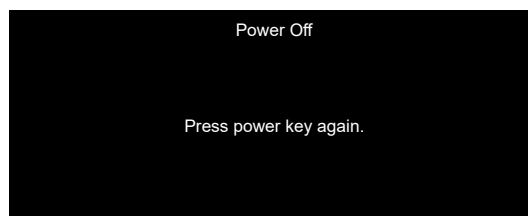
### Powering on






1. Remove the lens cap.
2. Securely connect the power lead and signal/source cable. When connected, the Power LED will turn red.
3. Turn on the projector by pressing the  button on the projector keypad or remote control.
4. A start up screen will display in approximately 10 seconds and the Power 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  button on the projector keypad or the  button on the remote control.
2. The following message will be displayed:



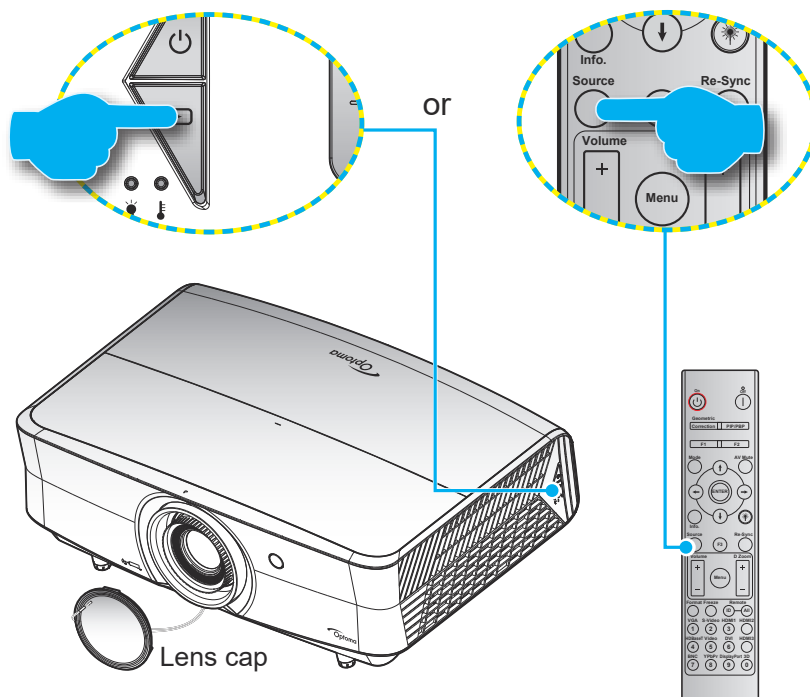
3. Press the  or  button again to confirm, otherwise the message will disappear after 15 seconds. When you press the  or  button for the second time, the projector will shut down.
4. The cooling fans will continue to operate for about 10 seconds for the cooling cycle and the Power LED will flash blue. When the Power 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.

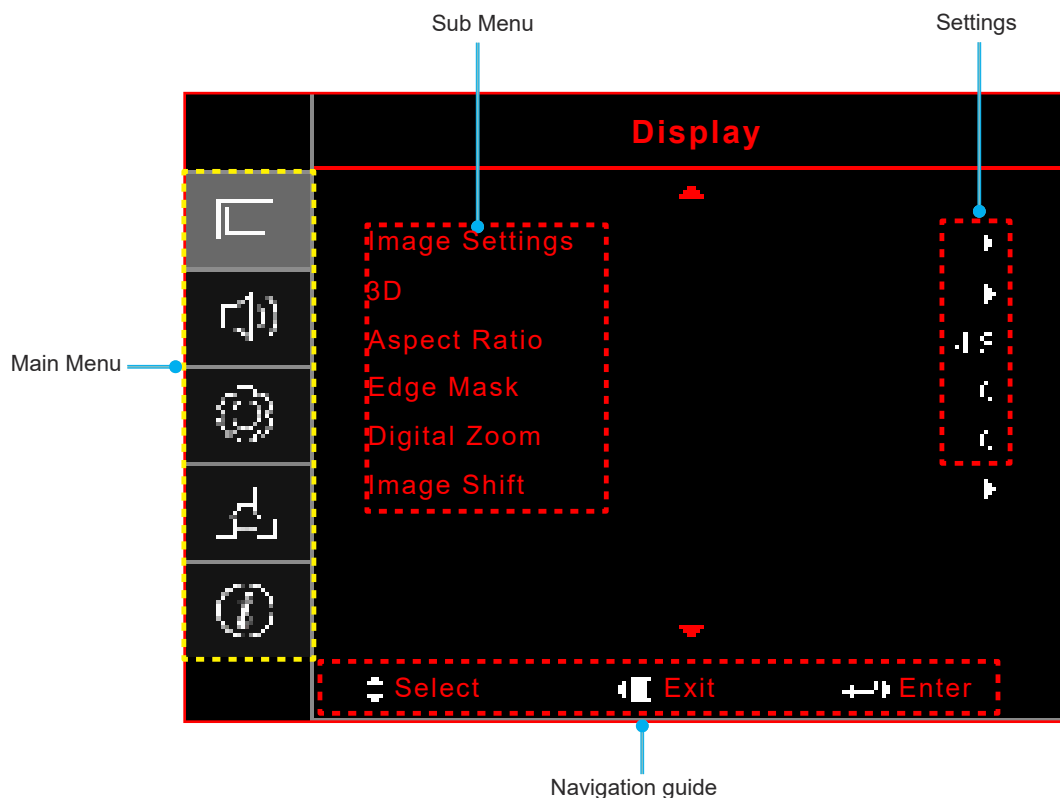


# USING THE PROJECTOR

## 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 the  button on the projector keypad or the **Menu** button on the remote control.
2. When OSD is displayed, use **▲▼** keys to select any item in the main menu. While making a selection on a particular page, press the **←** button on the projector keypad or the **Enter** button on the remote control to enter sub menu.
3. Use **◀▶** keys to select the desired item in the sub menu and then press the **←** or **Enter** button 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 **Enter** button to confirm, and the screen will return to the main menu.
6. To exit, press the  or **Menu** button again. The OSD menu will close and the projector will automatically save the new settings.



# USING THE PROJECTOR

## OSD Menu tree

Display	Image Settings	Display Mode			Presentation [Default]
					Bright
					HDR
					HLG <b>Note:</b> HLG functions vary by model.
					HDR SIM.
					Cinema
					Game
					sRGB
					DICOM SIM.
					HDR2
					3D
		Wall Color			Off [Default]
					Blackboard
					Light Yellow
					Light Green
					Light Blue
					Pink
					Gray
		Dynamic Range	HDR/HLG		Off
					Auto [Default]
			HDR Picture Mode		Bright
					Standard [Default]
					Film
					Detail
			HLG Picture Mode		Bright
					Standard [Default]
					Film
					Detail
		Brightness			-50 ~ 50
		Contrast			-50 ~ 50
		Sharpness			1 ~ 15
		Color			-50 ~ 50
		Tint			-50 ~ 50


# USING THE PROJECTOR

Display	Image Settings	Gamma	Film		
			Video		
			Graphics		
			Standard(2.2)		
			1.8		
			2.0		
			2.4		
			2.6		
			3D		
			Blackboard		
			DICOM SIM.		
		Color Settings	BrilliantColor™		1 ~ 10
			Color Temperature		Warm
					Standard
					Cool
					Cold
			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	

# USING THE PROJECTOR

Display	Image Settings	Color Settings	Color Space	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]
		UltraDetail			Off
					1
					2
					3
		Brightness Mode			DynamicBlack 1
					DynamicBlack 2
					DynamicBlack 3
					Power (Power = 100%/ 95%/ 90%/ 85%/ 80%/ 75%/ 70%/ 65%/ 60%/ 55%/ 50%)
		PureEngine	PureContrast		Off
					On
			PureColor		Off
					1
					2
					3
					4
					5
			PureMotion		Off
					1
					2
					3
			PureMotion Demo		Off [Default]
					H Split
					V Split
		Reset			






# USING THE PROJECTOR

Display	3D	3D Mode			Off [Default]
					On
		3D Sync Invert			On
					Off [Default]
		3D Format			Auto [Default]
					SBS
					Top and Bottom
					Frame Sequential
					Frame Packing
	Aspect Ratio				4:3
					16:9
					LBX
					Superwide
					Native
Audio	Edge Mask				Auto
					0 ~ 10 [Default: 0]
					4:3
	Digital Zoom				16:9
					LBX
					Superwide
	Image Shift				Native
					Auto
					0 ~ 10 [Default: 0]
	Internal Speaker				-5 ~ 25 [Default: 0]
					-100 ~ 100 [Default: 0]
					-100 ~ 100 [Default: 0]
	Mute				Auto [Default]
					Off
					On
Setup	Volume				Off [Default]
					On
					0 ~ 10 [Default: 5]
	Audio Input				Default [Default]
					Audio In
					Default [Default]
	Audio Out				Audio In
					Off [Default]
					On
	Projection				Front  [Default]
					Rear 
					Ceiling-Top 
	Filter Settings				Rear-Top 
					(read only)
					Yes
	Optional Filter Installed				No
					No

# USING THE PROJECTOR

Setup	Filter Settings	Filter Reminder			Off
					300hr
					500hr [Default]
					800hr
					1000hr
		Filter Reset			Cancel [Default]
					Yes
	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
	Remote Settings [depends on remote]	IR Function			On
					Front
					Back
					Off
		F1			Test Pattern
					Brightness
					Contrast
					Sleep Timer
					Color Temp
					Gamma
					Projection
					MHL

# USING THE PROJECTOR

Setup	Remote Settings [depends on remote]	F2			Test Pattern
					Brightness
					Contrast
					Sleep Timer
					Color Temp
					Gamma
					Projection
					MHL
		F3			Test Pattern
					Brightness
					Contrast
					Sleep Timer
					Color Temp
					Gamma
					Projection
					MHL
	Projector ID				00 ~ 99
	12V Trigger				On
					Off
	Options	Language			English [Default]
					Deutsch
					Français
					Italiano
					Español
					Português
					简体中文
					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]
		Auto Source			Off [Default]
					On
		Input Source			HDMI1
					HDMI2/MHL
					VGA

# USING THE PROJECTOR

Setup	Options	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
	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			
	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

# USING THE PROJECTOR

Info	Regulatory				
	Serial Number				
	Source				
	Resolution				00x00
	Refresh Rate				0.00Hz
	Display Mode				
	Power Mode (Standby)				
	Light Source Hours				
	Network Status				
	IP Address				
	Projector ID				00 ~ 99
	Color Depth				<b>Note:</b> 12bit 4:2:2
	Color Format				<b>Note:</b> BT.2020 HDR
	Filter Usage Hours				
	Brightness Mode				
	FW Version	System			
		LAN			
		MCU			

# USING THE PROJECTOR

## Display menu

### Display image settings menu

#### Display Mode

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

- **Presentation:** This mode is suitable for showing in front of public in connection to the PC.
- **Bright:** Maximum brightness from PC input.
- **HDR:** Decodes and displays High Dynamic Range (HDR) content for the deepest blacks, brightest whites, and vivid cinematic color using REC.2020 color gamut. This mode will be automatically enabled if HDR is set to ON (and HDR Content is sent to projector – 4K UHD Blu-ray, 1080p/4K UHD HDR Games, 4K UHD Streaming Video). While HDR mode is active, other display modes (Cinema, Reference, etc.) cannot be selected as HDR delivers color that is highly accurate, exceeding the color performance of the other display modes.
- **HLG:** For HDR movies with Hybrid Log content.
- **HDR SIM.:** Enhances non-HDR content with simulated High Dynamic Range (HDR). Choose this mode to enhance gamma, contrast, and color saturation for non-HDR content (720p and 1080p Broadcast/Cable TV, 1080p Blu-ray, non-HDR Games, etc). This mode can ONLY be used with non-HDR content.
- **Cinema:** Provides the best colors for watching movies.
- **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.
- **HDR2:** This mode produces less bright image but adds more details to the projected image. Suitable for rooms with some ambient light.
- **3D:** To experience the 3D effect, you need to have 3D glasses, make sure your PC/portable device has a 120 Hz signal output quad buffered graphics card and have a 3D Player installed.

#### 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

Configure the High Dynamic Range (HDR) setting and its effect when displaying video from 4K Blu-ray players and streaming devices.

**Note:** *HDMI1 and VGA do not support Dynamic Range.*

##### ➤ HDR/HLG

- **Off:** Turn off HDR or HLG processing. When set to Off, the projector will NOT decode HDR or HLG content.
- **Auto:** Auto detect HDR or HLG signal.

##### ➤ HDR Picture Mode

- **Bright:** Choose this mode for brighter more saturated colors.
- **Standard:** Choose this mode for natural looking colors with a balance of warm and cool tones.
- **Film:** Choose this mode for improved detail and image sharpness.
- **Detail:** The signal comes from OETF conversion to achieve the best color matching.

# USING THE PROJECTOR

## ► HLG Picture Mode

- **Bright:** Choose this mode for brighter more saturated colors.
- **Standard:** Choose this mode for natural looking colors with a balance of warm and cool tones.
- **Film:** Choose this mode for improved detail and image sharpness.
- **Detail:** The signal comes from OETF conversion to achieve the best color matching.

## **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 / 2.6:** For specific PC / Photo source.
- **3D:** To experience the 3D effect, you need to have 3D glasses. Make sure your PC/portable device has a 120 Hz signal output quad buffered graphics card and a 3D Player installed.
- **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.

## **Note:**

- *These options are only available if the 3D mode function is disabled, the **Wall Color** setting is not set to **Blackboard**, and the **Display Mode** setting is not set to **DICOM SIM.** or **HDR**.*
- *If the **Display Mode** setting is set to **HDR**, user can only select **HDR** for **Gamma** setting.*
- *In 3D mode, user can only select **3D** for **Gamma** setting.*
- *If the **Wall Color** setting is set to **Blackboard**, user can only select **Blackboard** for **Gamma** setting.*
- *If the **Display Mode** setting is set to **DICOM SIM.**, user can only select **DICOM SIM.** for **Gamma** setting.*

## **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 Warm, Standard, Cool, or Cold.

# USING THE PROJECTOR

- **Color Gamut:** Select this menu to optimize the color gamut color range for Native, HDTV, Presentation, Cinema, and Game.
- **CMS:** Select the following options:
  - Color: Select one of the colors (R/G/B/C/Y/M/W) to adjust its x/y offset and brightness.
  - x Offset: Adjust the x offset value of selected color.
  - y Offset: Adjust the y offset value of selected color.
  - Brightness: Adjust the brightness value of selected color.
  - Reset: Choose “Yes” to 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: Choose “Yes” to 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.

**Note:** This menu is only available if the input source is RGB/Component.

## Ultra Detail

Adjust the edges of the projected image in order to provide more perceived details.

## Brightness Mode

Adjust the brightness mode settings.

- **DynamicBlack1/ DynamicBlack2/ DynamicBlack3:** Use to automatically adjust the picture brightness in order to give optimum contrast performance.
- **Power:** Choose the power percentage for brightness mode.

# USING THE PROJECTOR

## PureEngine

Adjust the PureEngine parameters.

- **PureContrast:** Use to automatically optimize the brightness of the display during dark / light movie scenes to be shown in incredible detail.
- **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.

**Note:** *This menu is only available for certain models.*

## Reset

Return the factory default settings for color settings.

# USING THE PROJECTOR

## Display 3D menu

### Note:

- *This projector is a 3D ready projector with DLP-Link 3D solution.*
- *Please make sure your 3D glasses are use for DLP-Link 3D before enjoy your video.*
- *This projector supports frame sequential (page-flip) 3D via HDMI1/HDMI2/VGA ports.*
- *To enable 3D mode, the input frame rate should be set to 120Hz only, lower or higher frame rate is not supported.*
- *To reach the best performance, resolution 1920x1080 is recommended, please be noted that 4K (3840x2160) resolution is not supported in 3D mode.*

### 3D Mode

Use this option to enable/disable the 3D function.

**Note:** *If the 2D and 3D sources enter PJ at the same time, if the ghosting image appears in the 2D source, make sure to manually turn off the 3D function.*

### 3D Sync Invert

Use this option to enable/disable the 3D sync invert function.

### 3D Format

Use this option to select the appropriate 3D format content.

- **Auto:** When a 3D identification signal is detected, the 3D format is selected automatically.
- **SBS:** 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.
- **Frame Packing:** Display 3D signal in “Frame Packing” format.

## 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:** 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:** 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.

# USING THE PROJECTOR

## 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. Light source 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.

## 4D UHD scaling table:

4x3	Scale to 2880 x 2160.				
16x9	Scale to 3840 x 2160.				
LBX	Scale to 3840 x 1620, then get the central 3840 x 2160 image to display.				
Native mode	- 1:1 mapping centered. - No scaling will be made; the image is displayed with the resolution based on input source.				
Auto	- If source is 4:3, the screen type will be scaled to 2880 x 2160. - If source is 16:9, the screen type will be scaled to 3840 x 2160. - If source is 15:9, the screen type will be scaled to 3600 x 2160. - If source is 16:10, the screen type will be scaled to 3456 x 2160.				

## 4D UHD auto mapping rule:

4:3	640	480	2880	2160
	800	600	2880	2160
	1024	768	2880	2160
	1280	1024	2880	2160
	1400	1050	2880	2160
	1600	1200	2880	2160
Wide Laptop	1280	720	3840	2160
	1280	768	3600	2160
	1280	800	3456	2160
SDTV	720	576	2700	2160
	720	480	3240	2160
HDTV	1280	720	3840	2160
	1920	1080	3840	2160

# USING THE PROJECTOR

## 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 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

## *Audio menu*

### Audio internal speaker menu

#### Internal Speaker

Use this option to temporarily turn off the sound.

- **Auto:** Choose “Auto” to automatically turn off the internal speaker when an external speaker is connected to the projector
- **On:** Choose “On” to turn on the internal speaker.
- **Off:** Choose “Off” to turn off the internal speaker.

### Audio mute menu

#### Mute

Use this option to temporarily turn off the sound.

- **On:** Choose “On” to turn mute on.
- **Off:** Choose “Off” to turn mute off.

**Note:** “Mute” function affects both internal and external speaker volume.

### Audio volume menu

#### Volume

Adjust the volume level.

### Audio audio input menu

#### Audio Input

Select the audio input port for the video sources as follows:

- **HDMI:** Default or Audio In.
- **HDMI/MHL:** Default or Audio In.

### Audio audio out menu

#### Audio Out

Enable or disable the audio out function.

# USING THE PROJECTOR

## Setup menu

### Setup projection menu

#### Projection

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

### 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 Off, 300hr, 500hr, 800hr, and 1000hr.

#### Filter Reset

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

### 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.

# USING THE PROJECTOR

## 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 the top and front IR receivers.
- **Front:** Choose “Front”, the projector can be operated by the remote control from the front IR receiver.
- **Back:** Choose “Back”, the projector can be operated by the remote control from the rear 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.

### F1/F2/F3

Assign the default function for F1, F2, or F3 between Test Pattern, Brightness, Contrast, Sleep Timer, Color Temp, Gamma, Projection, or MHL.

## Setup projector ID menu

### Projector ID

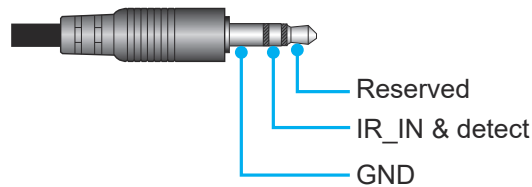
ID definition can be set up by menu (range 0-99), and allow user control an individual projector by using RS232 command.

# USING THE PROJECTOR

## Setup 12V trigger menu

### 12V Trigger

Use this function to enable or disable the trigger.



- **Off:** Choose “Off” to disable the trigger.
- **On:** Choose “On” to enable the trigger.

## Setup options menu

### Language

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

Choose this option to let the projector automatically find an available input source.

### Input Source

Select the input source between HDMI1, HDMI2/MHL, and VGA.

### 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.

### Information Hide

Enable this function to hide the information message.

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

# USING THE PROJECTOR

## **Background Color**

Use this function to display a blue, red, green, or gray screen when no signal is available.

**Note:** *If the background color is set to “None”, then the background color is black.*

## **Setup reset OSD menu**

### **Reset OSD**

Return the factory default settings for OSD menu settings.

### **Reset to Default**

Return the factory default settings for all settings.

## **Network menu**

### **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.

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

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

#### **IP Address**

Display the IP address.

#### **Subnet Mask**

Display subnet mask number.

#### **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.

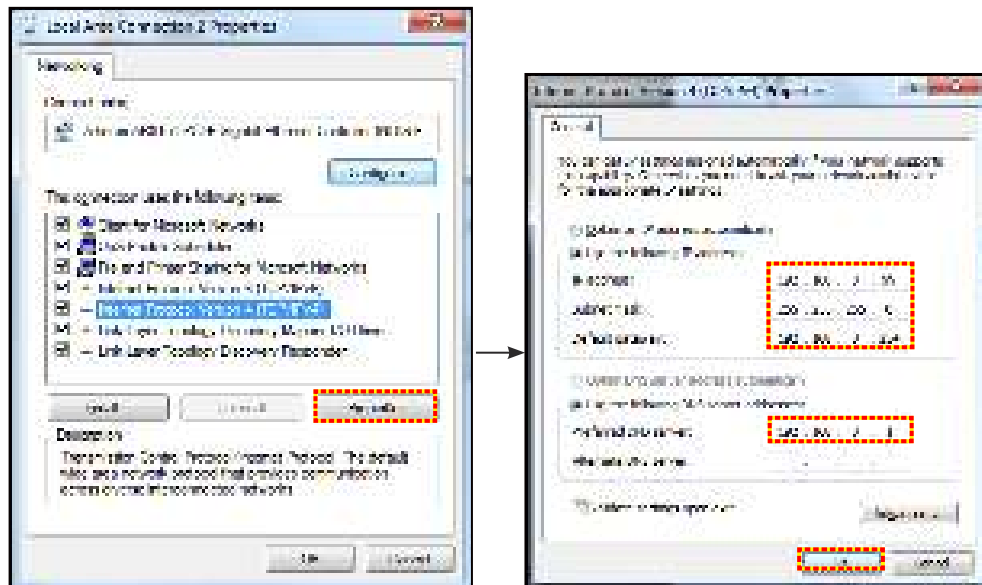
**Note:**

- *The default user name and password is “admin”.*
- *The steps in this section is based on Windows 7 operating system.*

# USING THE PROJECTOR

## 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).

### 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

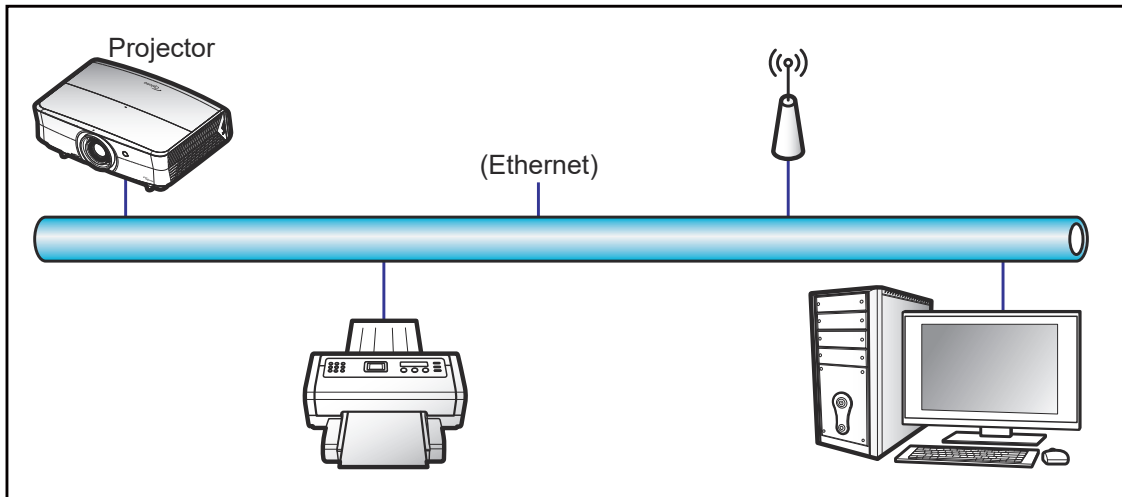
Use this function to select the network function (port: 80).

# 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 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/>

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

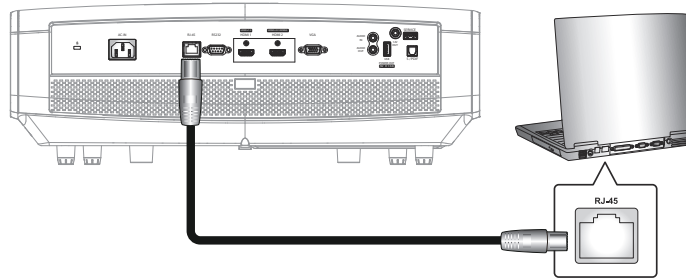
<http://pjlink.jbmia.or.jp/english/>

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.

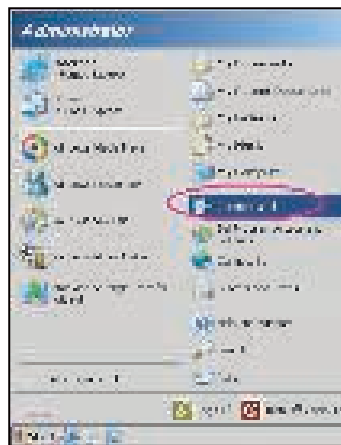
# USING THE PROJECTOR

## LAN RJ45

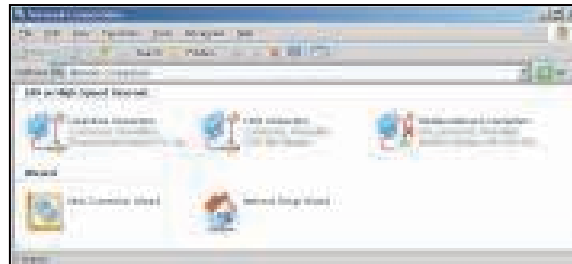
1. Connect an RJ45 cable to RJ45 ports on the projector and the PC (laptop).



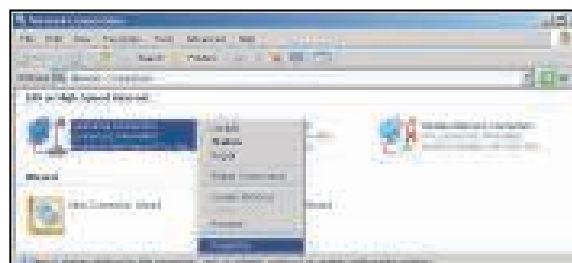
2. On the PC (Laptop), select **Start > Control Panel > Network Connections**.



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

1. Click “Properties”.



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



3. Press the “Menu” button on the projector.
4. Open on projector **Network > LAN**.
5. 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: 192.168.0.51
6. Press “Enter” to confirm settings.
7. Open a web browser, for example Microsoft Internet Explorer with Adobe Flash Player 9.0 or higher installed.
8. In the Address bar, input the projector’s IP address: 192.168.0.100.



9. Press “Enter”.

# USING THE PROJECTOR

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

Information page

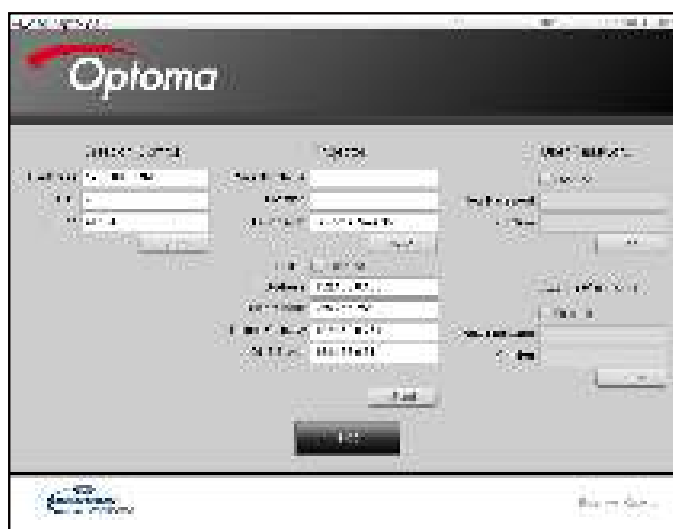


The screenshot shows the 'Information' page of the Optoma remote management interface. It features the Optoma logo at the top. Below the logo, there are two main sections: 'Product Information' on the left and 'Device Status' on the right. Each section contains several input fields for configuration. At the bottom, there is a 'Save' button. The footer includes the Optoma logo and the text 'Optoma Corp.'.

Main page



Tool page



The screenshot shows the 'Tool' page of the Optoma remote management interface. It features the Optoma logo at the top. Below the logo, there are three main sections: 'Device Control' on the left, 'Network' in the center, and 'Device Settings' on the right. Each section contains several input fields for configuration. At the bottom, there is a 'Save' button. The footer includes the Optoma logo and the text 'Optoma Corp.'.

Contact IT helpdesk



The screenshot shows a small window titled 'Contact IT helpdesk'. It contains a text input field and a 'Send' button.

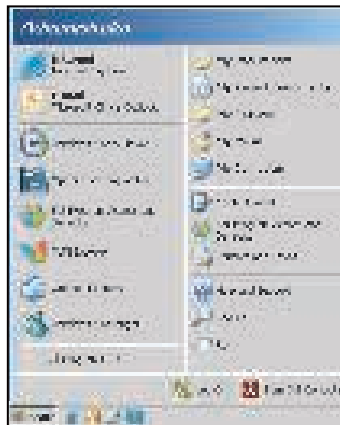
# USING THE PROJECTOR

## RS232 by Telnet Function

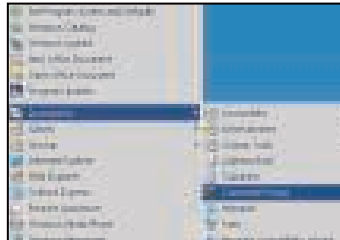
There is alternative RS232 command control way, in projector so called “RS232 by TELNET” for LAN / RJ45 interface.

### 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**

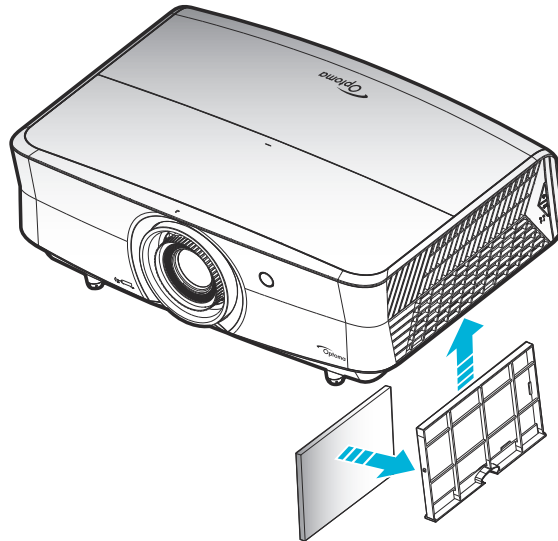
View the projector information as listed below:

- Regulatory
- Serial Number
- Source
- Resolution
- Refresh Rate
- Display Mode
- Power Mode (Standby)
- Light Source Hours
- Network Status
- IP Address
- Projector ID
- Color Depth
- Color Format
- Filter Usage Hours
- Brightness Mode
- FW Version

# MAINTENANCE

## Installing and cleaning the dust filter

### Installing the dust filter



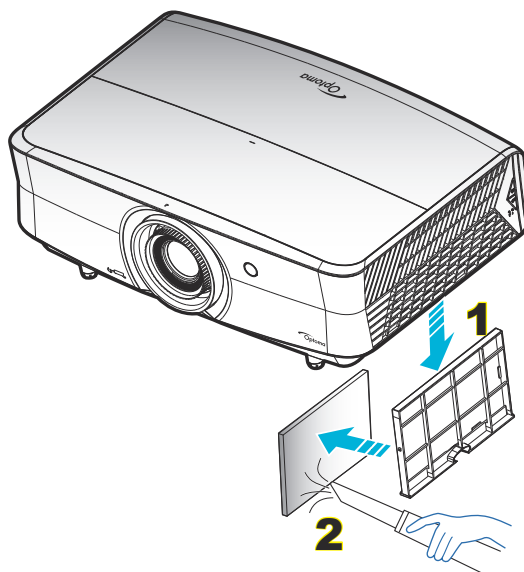
**Note:** Dust filters are only required/supplied in the selected regions with excessive dust.

### 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 projector keypad or the "ⓘ" button on the remote control.
2. Disconnect the power cord.
3. Pull the dust filter compartment downwards to remove it out from the bottom of the projector. **1**
4. Carefully remove the air filter. Then clean or replace the dust filter. **2**
5. To install the dust filter, reverse the previous steps.



# ADDITIONAL INFORMATION

## Compatible resolutions

### Digital (HDMI 1.4)

Native resolution: 3840 x 2160 @ 30Hz

720 x 400 @ 70Hz	1280 x 720 @ 60Hz	3840 x 2160 @ 30Hz [Default]	720 x 480i @ 60Hz 16:9	1920 x 1080p @ 60Hz
640 x 480 @ 60Hz	1280 x 800 @ 60Hz		720 x 480p @ 60Hz 4:3	1366 x 768 @ 60Hz
640 x 480 @ 67Hz	1280 x 1024 @ 60Hz		720 x 480p @ 60Hz 16:9	1920 x 1080 @ 120Hz
640 x 480 @ 72Hz	1920 x 1200 @ 60Hz (reduced)		720 x 576i @ 50Hz 16:9	
640 x 480 @ 75Hz			720 x 576p @ 50Hz 4:3	
800 x 600 @ 56Hz	640 x 480 @ 120Hz		720 x 576p @ 50Hz 16:9	
800 x 600 @ 60Hz	800 x 600 @ 120Hz		1280 x 720p @ 60Hz 16:9	
800 x 600 @ 72Hz	1024 x 768 @ 120Hz		1280 x 720p @ 50Hz 16:9	
800 x 600 @ 75Hz	1280 x 800 @ 120Hz		1920 x 1080i @ 60Hz 16:9	
832 x 624 @ 75Hz			1920 x 1080i @ 50Hz 16:9	
1024 x 768 @ 60Hz			1920 x 1080p @ 60Hz 16:9	
1024 x 768 @ 70Hz			1920 x 1080p @ 50Hz 16:9	
1024 x 768 @ 75Hz			1920 x 1080p @ 24Hz 16:9	
1280 x 1024 @ 75Hz			3840 x 2160 @ 24Hz	
1152 x 870 @ 75Hz			3840 x 2160 @ 25Hz	
			3840 x 2160 @ 30Hz	
			4096 x 2160 @ 24Hz	
			1920 x 1080p @ 120Hz	

### Digital (HDMI 2.0)

Native resolution: 3840 x 2160 @ 60Hz

720 x 400 @ 70Hz	1280 x 720 @ 60Hz	720 x 480i @ 60Hz 16:9	1920 x 1080p @ 120Hz
640 x 480 @ 60Hz	1280 x 800 @ 60Hz	720 x 480p @ 60Hz 4:3	1366 x 768 @ 60Hz
640 x 480 @ 67Hz	1280 x 1024 @ 60Hz	720 x 480p @ 60Hz 16:9	
640 x 480 @ 72Hz	1920 x 1200 @ 60Hz(reduced)	720 x 576i @ 50Hz 16:9	
640 x 480 @ 75Hz		720 x 576p @ 50Hz 4:3	
800 x 600 @ 56Hz	640 x 480 @ 120Hz	720 x 576p @ 50Hz 16:9	
800 x 600 @ 60Hz	800 x 600 @ 120Hz	1280 x 720p @ 60Hz 16:9	
800 x 600 @ 72Hz	1024 x 768 @ 120Hz	1280 x 720p @ 50Hz 16:9	
800 x 600 @ 75Hz	1280 x 800 @ 120Hz	1920 x 1080i @ 60Hz 16:9	
832 x 624 @ 75Hz		1920 x 1080i @ 50Hz 16:9	
1024 x 768 @ 60Hz		1920 x 1080p @ 60Hz 16:9	
1024 x 768 @ 70Hz		1920 x 1080p @ 50Hz 16:9	
1024 x 768 @ 75Hz		1920 x 1080p @ 24Hz 16:9	
1280 x 1024 @ 75Hz		1920 x 1080p @ 120Hz 16:9	
1152 x 870 @ 75Hz		3840 x 2160 @ 24Hz	
		3840 x 2160 @ 25Hz	
		3840 x 2160 @ 30Hz	
		3840 x 2160 @ 50Hz	

# ADDITIONAL INFORMATION

		3840 x 2160 @ 60Hz	
		4096 x 2160 @ 24Hz	
		4096 x 2160 @ 25Hz	
		4096 x 2160 @ 30Hz	
		4096 x 2160 @ 50Hz	
		4096 x 2160 @ 60Hz	

## Analog (VGA)

Native resolution: 1920 x 1080 @ 60Hz

720 x 400 @ 70Hz	1280 x 720 @ 60Hz	1920 x 1080 @ 60Hz [Default]	1366 x 768 @ 60Hz
640 x 480 @ 60Hz	1280 x 800 @ 60Hz		1280 x 800 @ 120Hz(RB)
640 x 480 @ 67Hz	1280 x 1024 @ 60Hz		
640 x 480 @ 72Hz			
640 x 480 @ 75Hz	1900 x 1200 @ 60Hz(RB)		
800 x 600 @ 56Hz	640 x 480 @ 120Hz		
800 x 600 @ 60Hz	800 x 600 @ 120Hz		
800 x 600 @ 72Hz	1024 x 768 @ 120Hz		
800 x 600 @ 75Hz			
832 x 624 @ 75Hz			
1024 x 768 @ 60Hz			
1024 x 768 @ 70Hz			
1024 x 768 @ 75Hz			
1280 x 1024 @ 75Hz			
1152 x 870 @ 75Hz			

## 3D timing for HDMI1.4b 3D supported

59/60Hz option	1920 x 1080p @ 23.98 / 24Hz	Frame packing
	1280 x 720p @ 59.94 / 60Hz	Frame packing
	1920 x 1080i @ 59.94/60Hz	Side-by-Side (Half)
	1920 x 1080p @ 23.98/24Hz	Top-and-Bottom
	1280x720p @ 59.94 / 60Hz	Top-and-Bottom
50Hz option	1920 x 1080p @ 23.98 / 24Hz	Frame packing
	1280 x 720p @ 50Hz	Frame packing
	1920 x 1080i @ 50Hz	Side-by-Side (Half)
	1920 x 1080p @ 23.98/24Hz	Top-and-Bottom
	1280 x 720p @ 50Hz	Top-and-Bottom

# ADDITIONAL INFORMATION

## *PC 3D timing*

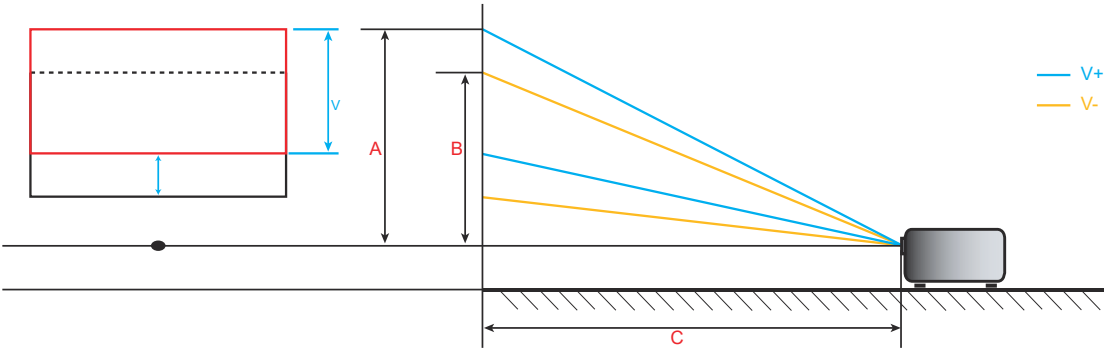
HDMI	1920 x 1080 @ 120Hz	Frame Sequential
	1280 x 800 @ 120Hz	Frame Sequential
	1024 x 768 @ 120Hz	Frame Sequential
	800 x 600 @ 120Hz	Frame Sequential
	640 x 480 @ 120Hz	Frame Sequential
VGA	1280 x 800 @ 120Hz	Frame Sequential
	1024 x 768 @ 120Hz	Frame Sequential
	800 x 600 @ 120Hz	Frame Sequential
	640 x 480 @ 120Hz	Frame Sequential

# ADDITIONAL INFORMATION

## Image size and projection distance

0.91	36	0.80	31.38	0.45	17.65	/	/	1.77	5.80
1.02	40	0.89	34.86	0.50	19.61	/	/	1.97	6.45
1.27	50	1.11	43.58	0.62	24.51	1.54	5.05	2.46	8.06
1.52	60	1.33	52.29	0.75	29.42	1.85	6.06	2.95	9.67
1.78	70	1.55	61.01	0.87	34.32	2.15	7.07	3.44	11.29
2.03	80	1.77	69.73	1.00	39.22	2.46	8.08	3.93	12.90
2.29	90	1.99	78.44	1.12	44.12	2.77	9.09	4.42	14.51
2.54	100	2.21	87.16	1.25	49.03	3.08	10.10	4.91	16.12
3.05	120	2.66	104.59	1.49	58.83	3.69	12.11	5.90	19.35
3.81	150	3.32	130.74	1.87	73.54	4.62	15.14	7.37	24.19
4.57	180	3.98	156.88	2.24	88.25	5.54	18.17	8.85	29.02
5.08	200	4.43	174.32	2.49	98.05	6.15	20.19	/	/
6.35	250	5.53	217.89	3.11	122.57	7.69	25.24	/	/
7.62	300	6.64	261.47	3.74	147.08	9.23	30.29	/	/

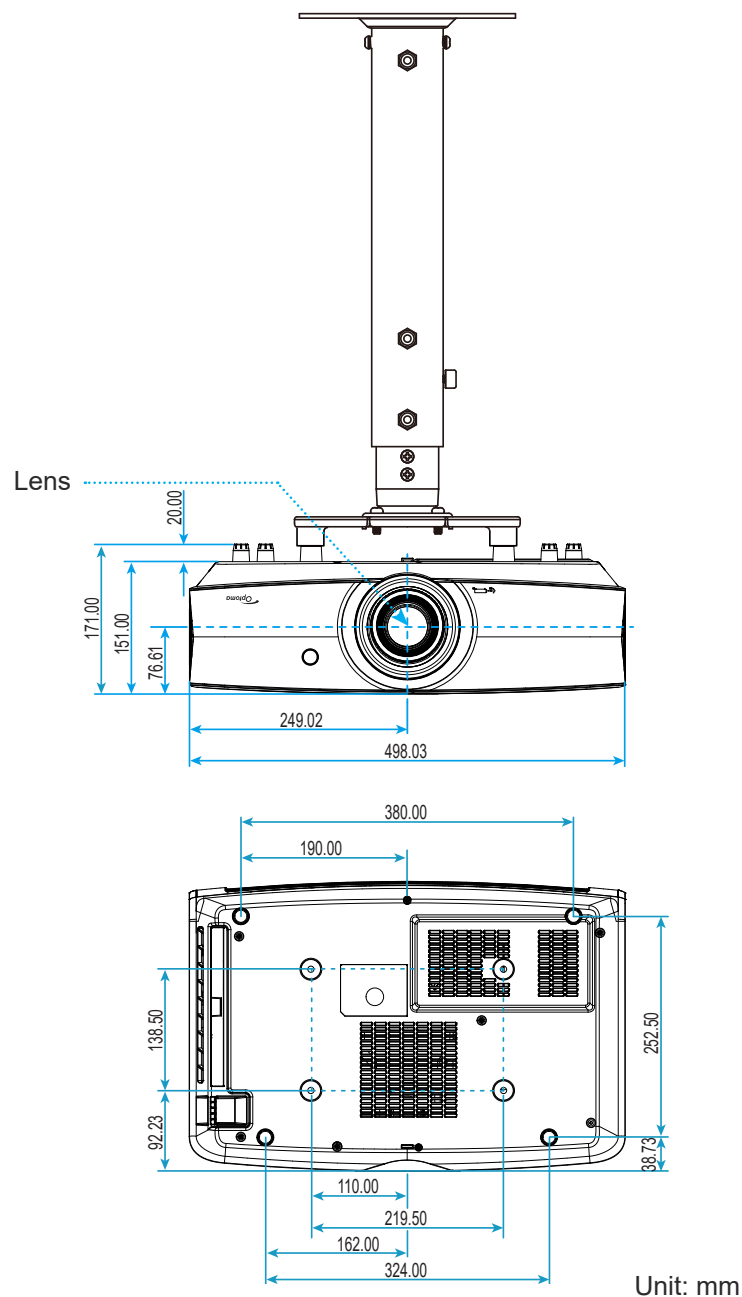
51.6	44.8	6.7	N/A	0	0
57.3	49.8	7.5	N/A	0	0
71.6	62.3	9.3	N/A	0	0
85.9	74.7	11.2	N/A	0	0
100.2	87.2	13.1	N/A	0	0
114.6	99.6	14.9	N/A	0	0
128.9	112.1	16.8	N/A	0	0
143.2	124.5	18.7	N/A	0	0
171.8	149.4	22.4	N/A	0	0
214.8	186.8	28.0	N/A	0	0
257.8	224.1	33.6	N/A	0	0
286.4	249.1	37.4	N/A	0	0
358.0	311.3	46.7	N/A	0	0
429.6	373.6	56.0	N/A	0	0



# 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: M6\*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 codes

For Data Model

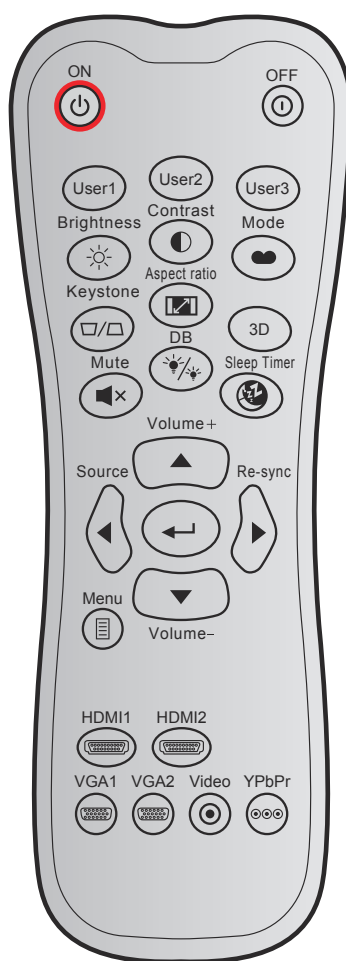


Power On	On	32	CD	02	#BYTE3	F1
Power Off	Off	32	CD	2E	#BYTE3	F1
Geometric Correction	Geometric Correction	32	CD	96	#BYTE3	F1
F1	F1	32	CD	26	#BYTE3	F1
F2	F2	32	CD	27	#BYTE3	F1
Mode	Mode	32	CD	95	#BYTE3	F1
Four directional select keys (↑/↓/←/→)	Up arrow	32	CD	C6	#BYTE3	F1
	Down arrow	32	CD	C7	#BYTE3	F1
	Left arrow	32	CD	C8	#BYTE3	F1
	Right arrow	32	CD	C9	#BYTE3	F1
Enter	Enter	32	CD	C5	#BYTE3	F1
AV Mute	AV Mute	32	CD	03	#BYTE3	F1
Information	Info.	32	CD	25	#BYTE3	F1












# ADDITIONAL INFORMATION

Laser ✱	Laser	N/A	N/A	N/A	N/A	N/A
Source	Source	32	CD	18	#BYTE3	F1
F3	F3	32	CD	66	#BYTE3	F1
Re-Sync	Re-Sync	32	CD	04	#BYTE3	F1
Volume	Volume +	32	CD	09	#BYTE3	F1
	Volume -	32	CD	0C	#BYTE3	F1
D Zoom	D Zoom +	32	CD	08	#BYTE3	F1
	D Zoom -	32	CD	0B	#BYTE3	F1
Menu	Menu	32	CD	88	#BYTE3	F1
Format	Format	32	CD	15	#BYTE3	F1
Freeze	Freeze	32	CD	06	#BYTE3	F1
Remote	Remote ID	3201~ 3299		N/A		
	Remote All	32CD		N/A		
VGA / 1	1/VGA	32	CD	8E	#BYTE3	F1
S-Video / 2	2/S-Video	32	CD	1D	#BYTE3	F1
HDMI1 / 3	3/HDMI1	32	CD	16	#BYTE3	F1
HDMI2	HDMI2	32	CD	9B	#BYTE3	F1
HDBaseT / 4	4/HDBaseT	32	CD	70	#BYTE3	F1
Video / 5	5/Video	32	CD	1C	#BYTE3	F1
6	6	32	CD	19	#BYTE3	F1
HDMI3	HDMI3	32	CD	98	#BYTE3	F1
7	7	32	CD	1A	#BYTE3	F1
YPbPr / 8	8/YPbPr	32	CD	17	#BYTE3	F1
9	9	32	CD	9F	#BYTE3	F1
3D / 0	0/3D	32	CD	89	#BYTE3	F1

## For Home Model



Power on		32	CD	02	FD	ON	Press to turn on the projector.
Power off		32	CD	2E	D1	OFF	Press to turn off the projector.
User 1		32	CD	36	C9	User1	User defined keys. Please see page 42 to setup.
User 2		32	CD	65	9A	User2	
User 3		32	CD	66	99	User3	
Brightness		32	CD	41	BE	Brightness	Adjust the brightness of the image.
Contrast		32	CD	42	BD	Contrast	Control the degree of difference between the lightest and darkest parts of the picture.
Display mode		32	CD	05	FA	Mode	Select a display mode for optimized settings for different applications. Please see page 33.
Keystone		32	CD	07	F8	Keystone	No function
Aspect ratio		32	CD	64	9B	Aspect ratio	Press to change aspect ratio of a displayed image.
3D		32	CD	89	76	3D	Press to manually select a 3D mode that matches your 3D content.
Mute		32	CD	52	AD	Mute	Momentarily turns off / on the audio.
DB (Dynamic Black)		32	CD	44	BB	DB	Automatically adjusts the picture brightness to give optimum contrast performance.







Sleep timer		32	CD	63	9C	Sleep Timer	Sets the countdown timer interval.
Volume +		32	CD	11	EE	Volume +	Adjust to increase volume.
Four direction keys		32	CD	11	EE	▲	Use ▲, ◀, ▶, or ▼ to select items or make adjustments to your selection.
		32	CD	10	EF	◀	
		32	CD	12	ED	▶	
		32	CD	14	EB	▼	
Source		32	CD	10	EF	Source	Press "Source" to select an input signal.
Enter key		32	CD	0F	F0		Confirm your item selection.
Re-sync		32	CD	12	ED	Re-sync	Automatically synchronizes the projector to the input source.
Volume -		32	CD	14	EB	Volume -	Adjust to decrease volume.
Menu		32	CD	0E	F1	Menu	Display or exit the on-screen display menus for projector.
HDMI 1		32	CD	16	E9	HDMI1	Press "HDMI1" to choose source from HDMI 1 connector.
HDMI 2		32	CD	30	CF	HDMI2	Press "HDMI2" to choose source from HDMI 2 connector.
VGA 1		32	CD	1B	E4	VGA1	Press "VGA1" to choose source from VGA connector.
VGA 2		32	CD	1E	E1	VGA2	No function
Video		32	CD	1C	E3	Video	No function
YPbPr		32	CD	17		YPbPr	No function

# 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.
  - Ensure that the "Mute" feature is not turned on.
-  *Image is out of focus*
- Turn the focus ring clockwise or counterclockwise until the image is sharp and legible. (Please see page 19).
  - Make sure the projection screen is between the required distance from the projector. (Please refer to page 56).
-  *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*
- Turn the zoom lever clockwise or counterclockwise to increase or decrease the projected image size. (Please see page 18).
  - 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.
-  *Image is reversed*
- Press "Menu" on the projector panel, go to "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.

## 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.

# ADDITIONAL INFORMATION

## Warning indicators

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

- “Laser” LED indicator is lit red and if “Power” indicator flashes red.
- “Temp” LED indicator is lit red and if “Power” 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 “Power” 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

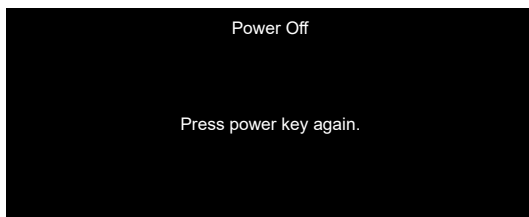
Standby state (Input power cord)	Steady light			
Power on (Warming)		Flashing (0.5 sec off / 0.5 sec on)		
Power on and Laser lighting		Steady light		
Power off (Cooling)		Flashing (0.5 sec off / 0.5 sec on). Back to red steady light when cooling fan turns off.		
Error (Laser failure)	Flashing			Steady light
Error (Fan failure)	Flashing		Flashing	
Error (Over temp.)	Flashing		Steady light	
Standby State (Burn in mode)		Flashing		
Burn-in (Warming) (*)		Flashing		
Burn-in (Cooling) (*)		Flashing		
Burn in (Laser lighting) (*)		Flashing (3 sec on / 1 sec off)		
Burn in (Laser off) (*)		Flashing (1 sec on / 3 sec off)		

### Note:

- (\*) If power is less than 0.5W and the power LED is red, change the power LED to flashing red.
  - a) Turn all LEDs off after the OSD menu disappears.
  - b) Power LED on: No signal; OSD disappears.
  - c) Power LED off: Signal is detected; OSD disappears.

# ADDITIONAL INFORMATION

- Power off:



- Temperature warning:



# ADDITIONAL INFORMATION

## Specifications

Optical	
Maximum resolution	4K UHD
Native resolution	2716 x 1528
Lens	Manual zoom and manual focus adjustment
Image size (diagonal)	26.45"~302.2" (focus range, optimized @ wide 60" image size)
Projection distance	1.3m ~ 9.3m (focus range, optimized @ wide 1.846m)
Color temperature	Standard D65: (0.313, 0.329)

Electrical	
Inputs	<ul style="list-style-type: none"><li>• HDMI 1.4b</li><li>• HDMI V2.0 HDCP2.2 / MHL V2.2</li><li>• VGA In (supports YpbPr)</li><li>• Audio In 3.5mm</li><li>• RS232C male (9-pin D-SUB)</li><li>• RJ-45 (supports web control)</li><li>• USB type A</li></ul>
Outputs	<ul style="list-style-type: none"><li>• Audio Out 3.5mm</li><li>• SPDIF Out</li><li>• 12V Trigger (3.5mm jack)</li></ul>
Control	USB type A for service
Color reproduction	1073.4 Million color
Scan rate	<ul style="list-style-type: none"><li>• Horizontal scan rate: 31.000~135.000KHz</li><li>• Vertical scan rate: 24~120Hz</li></ul>
Built-in speaker	Yes, 2x 5W
Power requirement	100 - 240V $\pm$ 10%, AC 50/60Hz
Input current	4.4A

Mechanical	
Installation orientation	Front, Rear, Ceiling-top, Rear-top
Dimensions	498.1mm (W) x 331.1mm (D) x 154mm (H) (without feet)
Weight	Less than 10kg
Environmental conditions	Operating in 5~40°C , 10% to 85% humidity (non-condensing)

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




# ADDITIONAL INFORMATION

## Optoma global offices

For service or support, please contact your local office.




### USA

47697 Westinghouse Drive,  
Fremont, CA 94539, USA  
[www.optomausa.com](http://www.optomausa.com)

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




### Canada

47697 Westinghouse Drive,  
Fremont, CA 94539, USA  
[www.optomausa.com](http://www.optomausa.com)

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


### Latin America

47697 Westinghouse Drive,  
Fremont, CA 94539, USA  
[www.optomausa.com](http://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](http://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](http://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](http://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](http://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](http://www.optoma.com.tw)

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



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