USA's primary source for projector lamps

myprojectorlamps

PROJECTOR OWNER'S MANUAL

Optoma

HD28DSE

Need a replacement lamp for this projector?

www.myprojectorlamps.com

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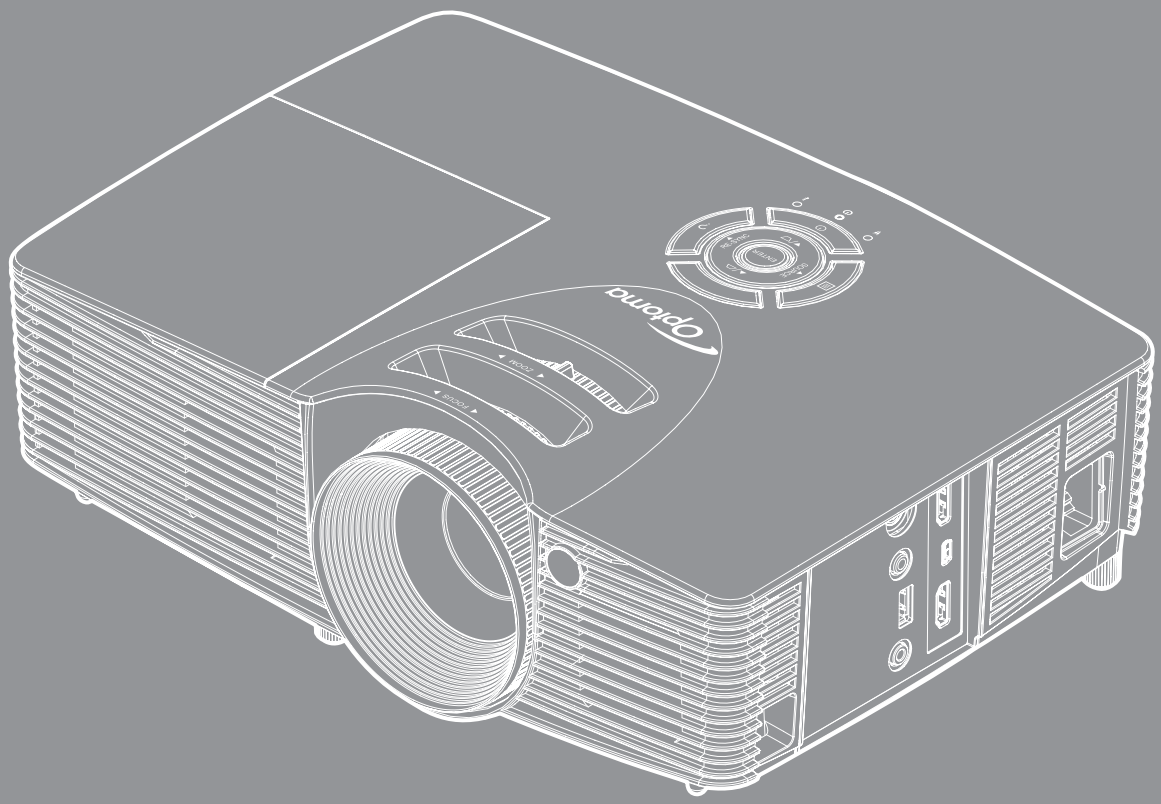
Optoma

DLP® Projector



User manual

MHL

DARBEE VISUAL PRESENCE™

HDMI™ HIGH DEFINITION MULTIMEDIA INTERFACE

PICTURE BY DLP® TEXAS INSTRUMENTS

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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 my ignite and result in a fire.
- Do not use the unit if it has been physically damaged or abused. Physical damage/abuse would be (but not limited to):
  - Unit has been dropped.
  - Power supply cord or plug has been damaged.
  - Liquid has been spilled on to the projector.
  - Projector has been exposed to rain or moisture.
  - Something has fallen in the projector or something is loose inside.
- Do not place the projector on an unstable surface. The projector may fall over resulting in injury or the projector may become damaged.
- Do not block the light coming out of the projector lens when in operation. The light will heat the object and my melt, cause burns or start a fire.
- Please do not open or disassemble the projector as this may cause electric shock.
- Do not attempt to service the unit yourself. Opening or removing covers may expose you to dangerous voltages or other hazards. Please call Optoma before you send the unit for repair.
- See projector enclosure for safety related markings.
- The unit should only be repaired by appropriate service personnel.

- Only use attachments/accessories specified by the manufacturer.
- Do not look into straight into the projector lens during operation. The bright light may harm your eyes.
- When replacing the lamp, please allow the unit to cool down. Follow instructions as described on pages *54-55*.
- 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 "Options|Lamp Settings" menu after replacing the lamp module (refer to page *47*).
- 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 54-55.*

- *Do not setup the projector in places where it might be subjected to vibration or shock.*
- *Do not touch the lens with bare hands*
- *Remove battery/batteries from remote control before storage. If the battery/batteries are left in the remote for long periods, they may leak.*
- *Do not use or store the projector in places where smoke from oil or cigarettes may be present, as it can adversely affect the quality of the projector performance.*
- *Please follow the correct projector orientation installation as non standard installation may affect the projector performance.*
- *Use a power strip and or surge protector. As power outages and brown-outs can KILL devices*.

3D Safety Information

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

Warning

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

Photosensitive Seizure Warning and Other Health Risks

- Some viewers may experience an epileptic seizure or stroke when exposed to certain flashing images or lights contained in certain Projector pictures or video games. If you suffer from, or have a family history of epilepsy or strokes, please consult with a medical specialist before using the 3D function.
- Even those without a personal or family history of epilepsy or stroke may have an undiagnosed condition that can cause photosensitive epileptic seizures.
- Pregnant women, the elderly, sufferers of serious medical conditions, those who are sleep deprived or under the influence of alcohol should avoid utilizing the unit's 3D functionality.
- If you experience any of the following symptoms, stop viewing 3D pictures immediately and consult a medical specialist: (1) altered vision; (2) light-headedness; (3) dizziness; (4) involuntary movements such as eye or muscle twitching; (5) confusion; (6) nausea; (7) loss of awareness; (8) convulsions; (9) cramps; and/ or (10) disorientation. Children and teenagers may be more likely than adults to experience these symptoms. Parents should monitor their children and ask whether they are experiencing these symptoms.

- Watching 3D projection may also cause motion sickness, perceptual after effects, disorientation, eye strain and decreased postural stability. It is recommended that users take frequent breaks to lessen the potential of these effects. If your eyes show signs of fatigue or dryness or if you have any of the above symptoms, immediately discontinue use of this device and do not resume using it for at least thirty minutes after the symptoms have subsided.
- Watching 3D projection while sitting too close to the screen for an extended period of time may damage your eyesight. The ideal viewing distance should be at least three times the screen height. It is recommended that the viewer's eyes are level with the screen.
- Watching 3D projection while wearing 3D glasses for an extended period of time may cause a headache or fatigue. If you experience a headache, fatigue or dizziness, stop viewing the 3D projection and rest.
- Do not use the 3D glasses for any other purpose than for watching 3D projection.
- Wearing the 3D glasses for any other purpose (as general spectacles, sunglasses, protective goggles, etc.) may be physically harmful to you and may weaken your eyesight.
- Viewing in 3D projection may cause disorientation for some viewers. Accordingly, DO NOT place your 3D PROJECTOR near open stairwells, cables, balconies, or other objects that can be tripped over, run into, knocked down, broken or fallen over.

Copyright

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

Declaration of Conformity for EU countries

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

WEEE

Disposal instructions

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

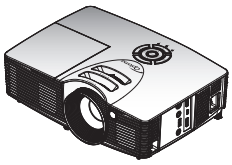
INTRODUCTION

Package Overview

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

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

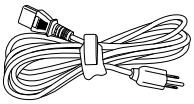
Standard accessories



Projector

Remote control

2x AAA batteries



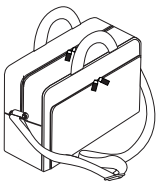
Power lead

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

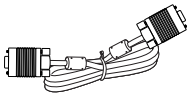
Documentation

Note: ** For European warranty Information, please visit www.optomaeurope.com.*

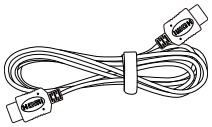
Optional accessories



Carry bag



VGA cable

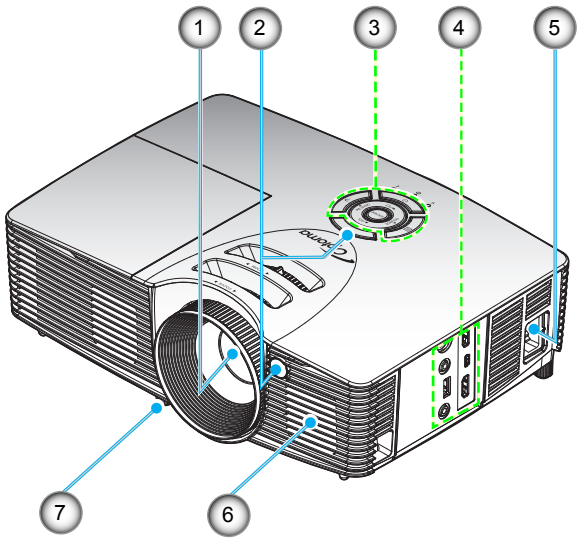


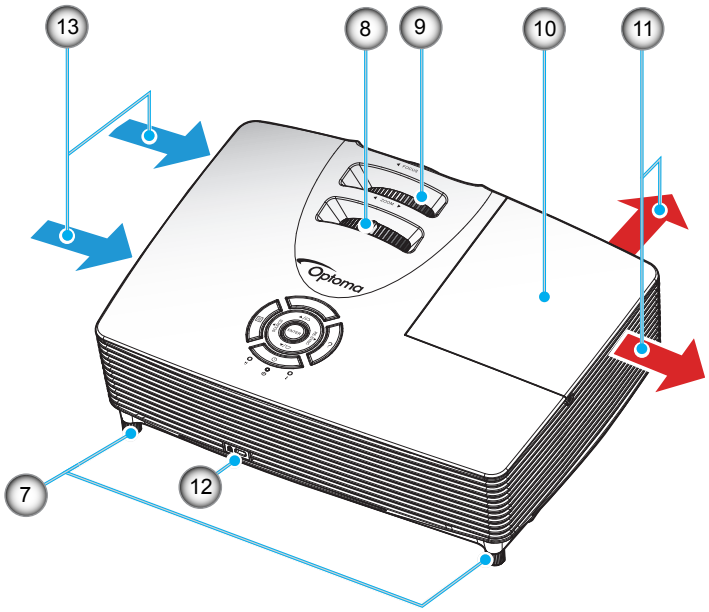
HDMI cable

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

INTRODUCTION

Product Overview



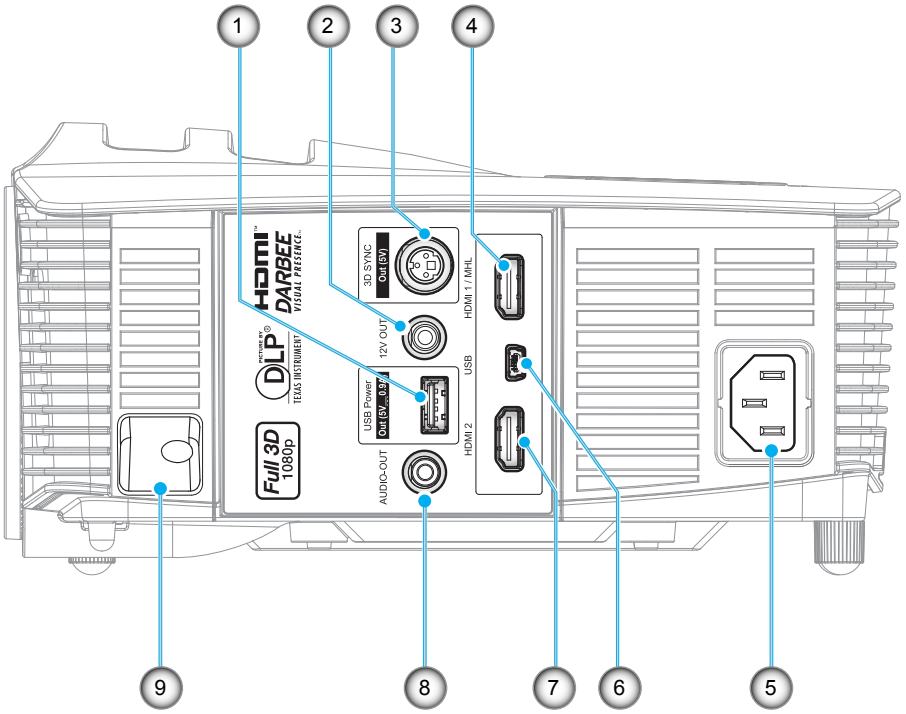


Note: *Do not block projector inlet or outlet air vents.*
(*) optional accessory varies depending on model, specification, and region.

No	Item	No	Item
1.	Lens	8.	Zoom Lever
2.	IR Receiver	9.	Focus Ring
3.	Keypad	10.	Lamp Cover
4.	Input / Output	11.	Ventilation (outlet)
5.	Power Socket	12.	Kensington™ Lock Port
6.	Speaker	13.	Ventilation (inlet)
7.	Tilt-Adjustment Feet		

INTRODUCTION

Connections

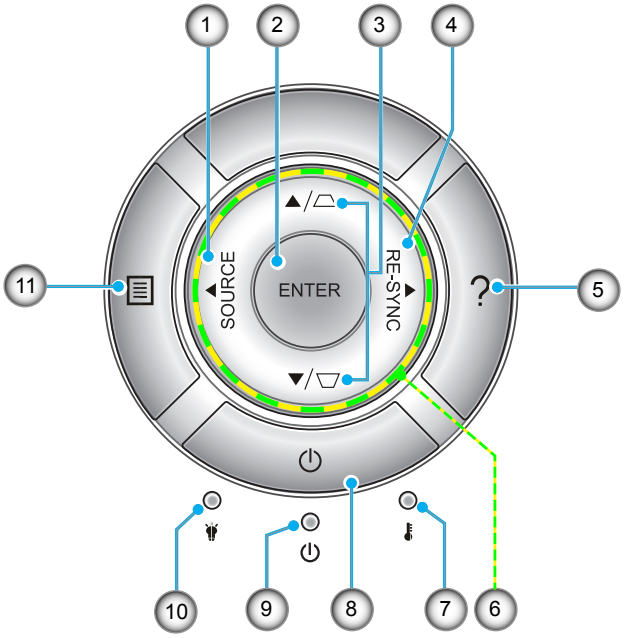


Note: *Remote mouse requires special remote control.*

No	Item	No	Item
1.	USB Power Out (5V⎓0.9A) Connector	6.	MOUSE / SERVICE Connector
2.	12V Out Connector	7.	HDMI 2 Connector
3.	3D Sync Out (5V) Connector	8.	Audio Out Connector
4.	HDMI 1 / MHL Connector	9.	Security Bar
5.	Power Socket		

INTRODUCTION

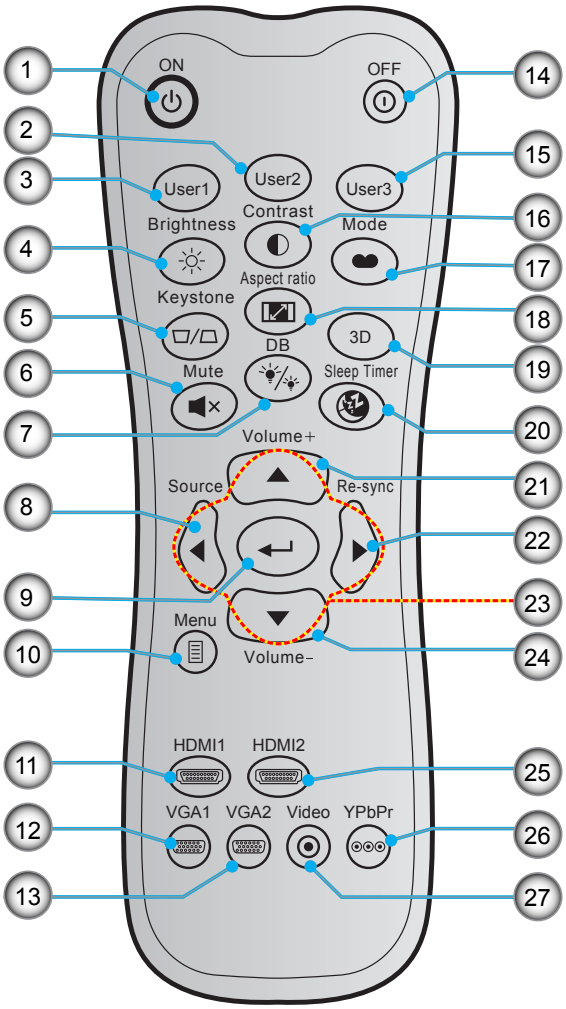
Keypad



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

INTRODUCTION

Remote control



No	Item	No	Item
1.	Power On	15.	User 3
2.	User 2	16.	Contrast
3.	User 1	17.	Display Mode
4.	Brightness	18.	Aspect Ratio
5.	Keystone	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 (not supported)	26.	YPbPr (not supported)
13.	VGA2 (not supported)	27.	Video (not supported)
14.	Power Off		

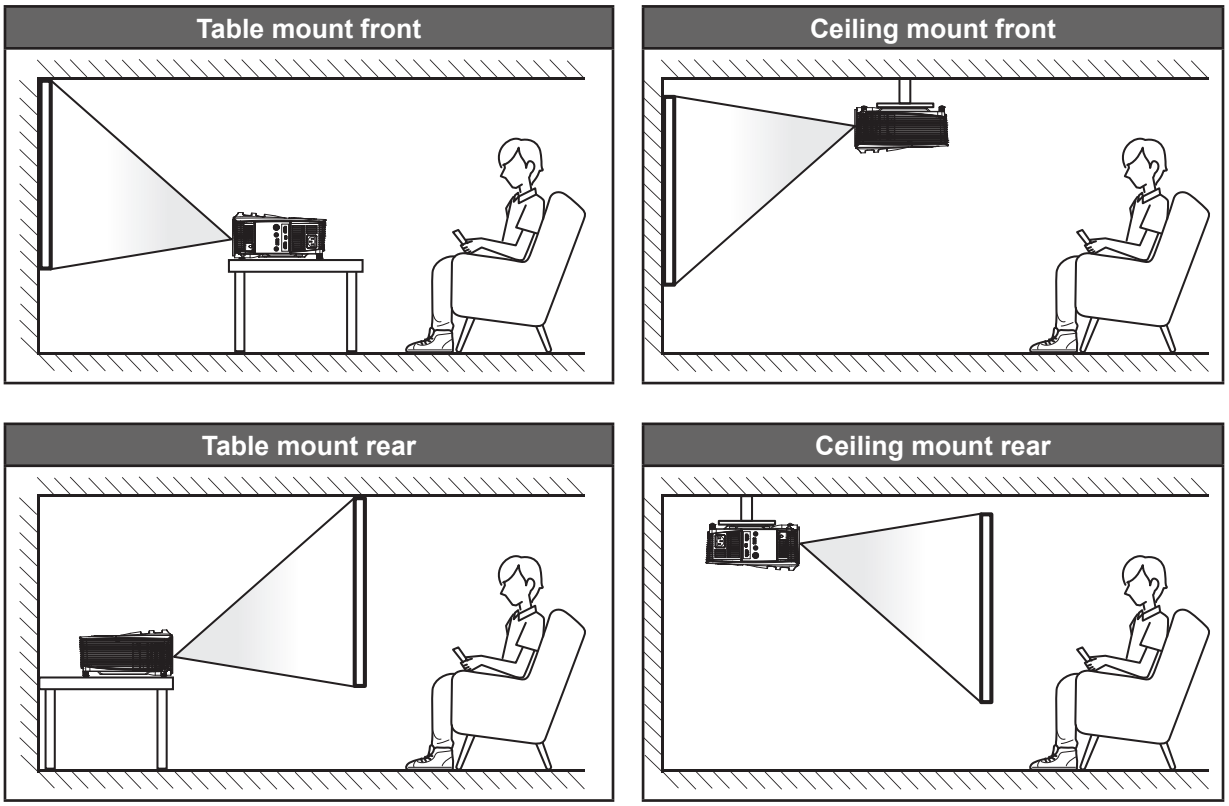
Note: *Some keys may have no function for models that do not support these features.*

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 to the screen.

- How to determine projector location for a given screen size, please refer to distance table on page *58*.
- How to determine screen size for a given distance, please refer to distance table on page *58*.

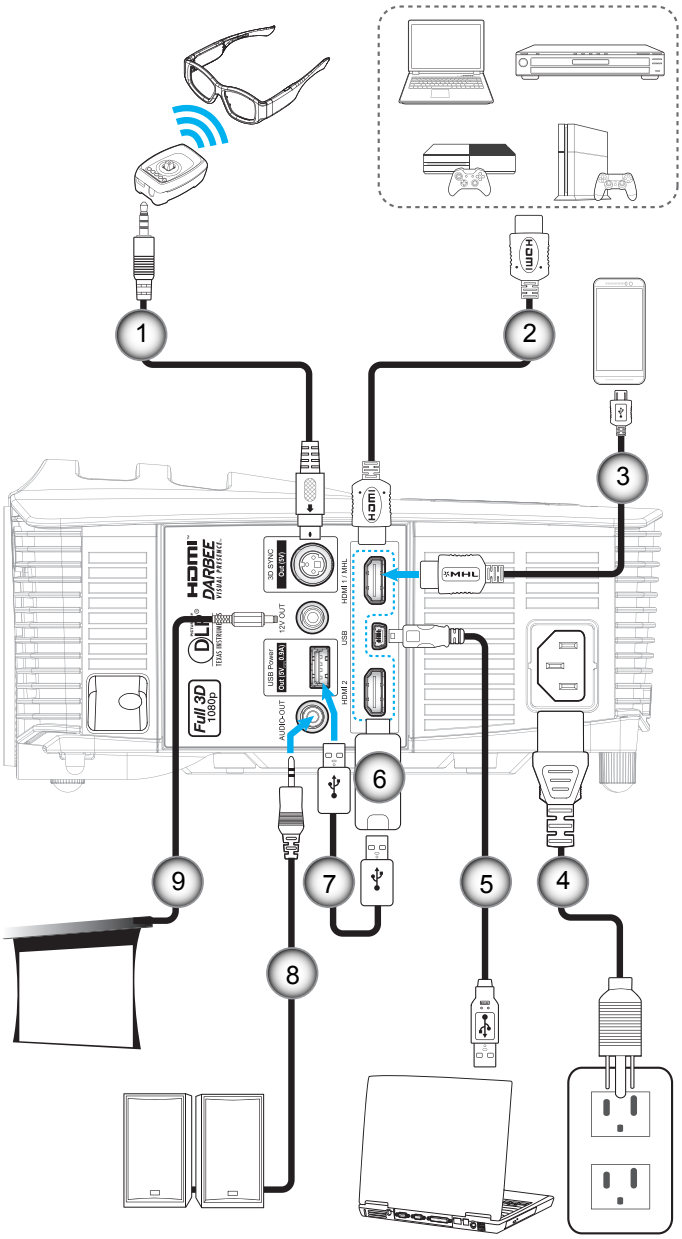
Note: *The further away the projector is placed from the screen the projected image size increases and vertical offset also increases proportionally.*

IMPORTANT!

Do not operate the projector in any orientation other that 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 none standard installation advise please contact Optoma.

SETUP AND INSTALLATION

Connecting sources to the projector



No	Item	No	Item
1.	3D Emitter Cable	6.	HDMI Dongle
2.	HDMI Cable	7.	USB Power Cable
3.	MHL Cable	8.	Audio Out Cable
4.	Power Cord	9.	12V DC Jack
5.	USB Cable (mouse control)		

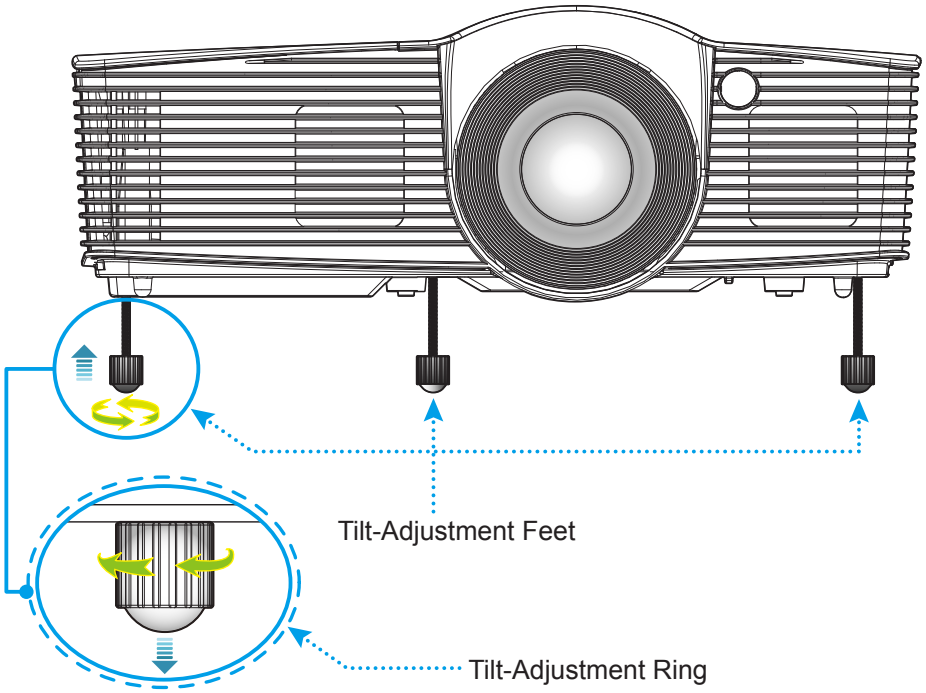
SETUP AND INSTALLATION

Adjusting the projector image

Image height

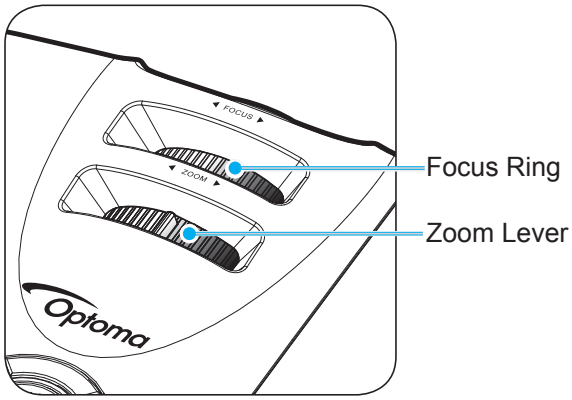
The projector is equipped with elevator feet for adjusting the image height.

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



Zoom and focus

- To adjust the image size, turn the zoom lever clockwise or counterclockwise to increase or decrease the projected image size.
- To adjust the focus, turn the focus ring clockwise or counterclockwise until the image is sharp and legible.



Note: *The projector will focus at a distance of 1.5m to 10m.*

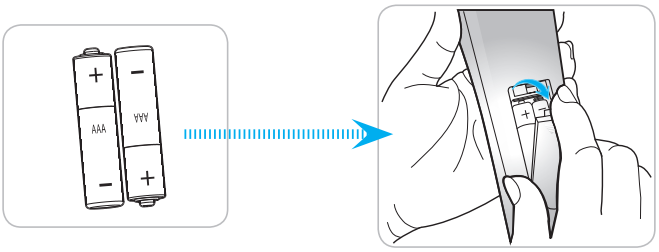
SETUP AND INSTALLATION

Remote setup

Installing / replacing the batteries

Two AAA size batteries are supplied for the remote control.

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



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

CAUTION

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

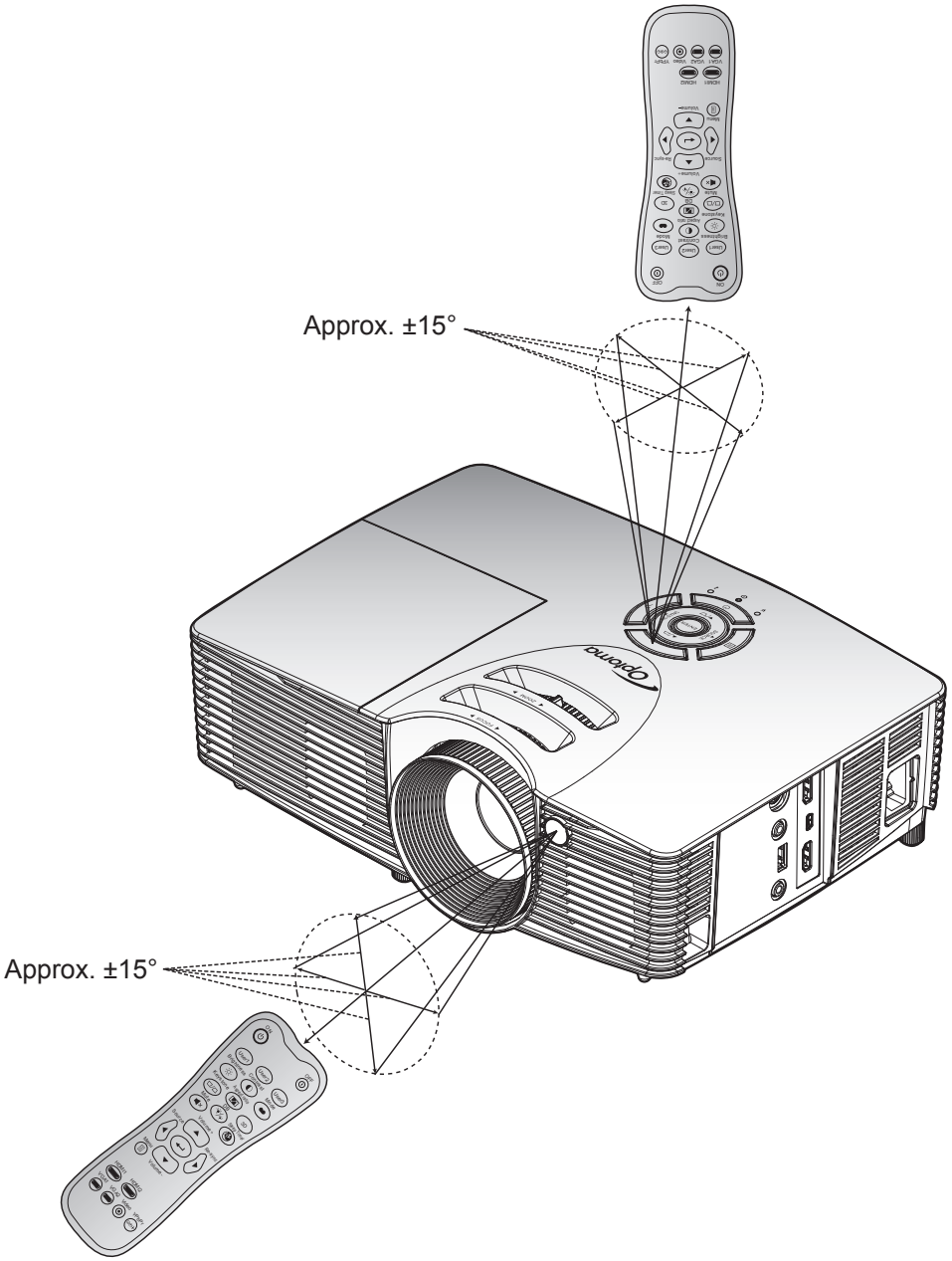
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as the are depleted. Chemicals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

Effective range

Infra-Red (IR) remote control sensor is located on the top side and front 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 6 meters (~ 20 feet).

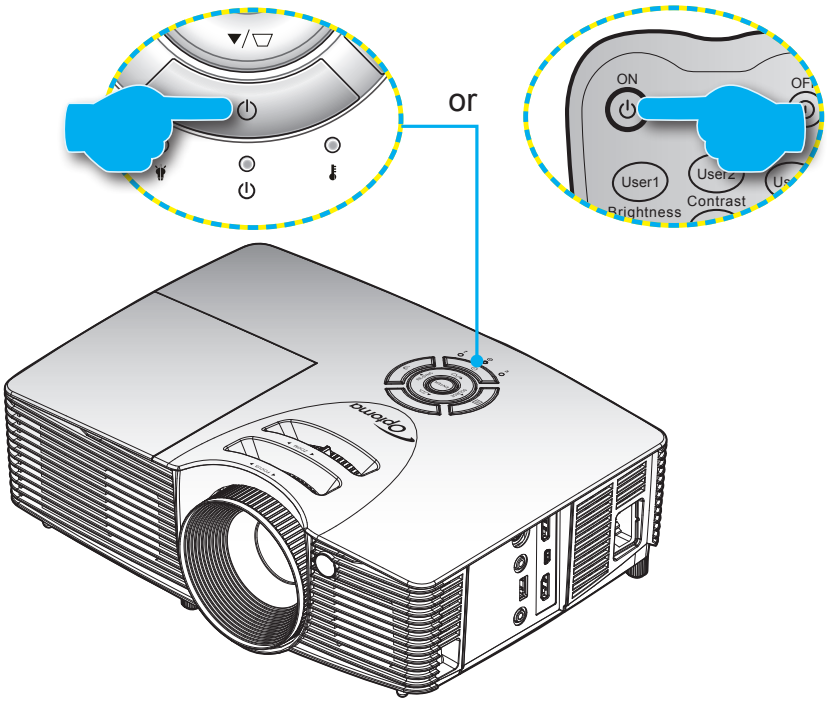
- Make sure that there are no obstacles between the remote control and the IR sensor on the projector that might obstruct the infra-red beam.
- Make sure the IR transmitter of the remote control is not being shined by sunlight or fluorescent lamps directly.
- Please keep the remote controller away from 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 5 meters from the remote control to the screen and reflecting the IR beams back to the projector. However, the effective range might change according to screens.

SETUP AND INSTALLATION



USING THE PROJECTOR

Powering on / off the projector



Powering on

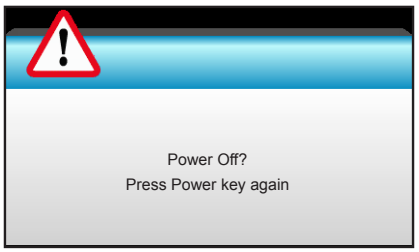
1. Securely connect the power lead and signal/source cable. When connected, the On/Standby LED will turn red.
2. Turn on the projector by pressing the "⏻" either on the projector keypad or the remote control.
3. A start up screen will display in approximately 10 seconds and the On/Standby LED will be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

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

USING THE PROJECTOR

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 "⏻" button on the projector keypad or the "⏻" button on the remote control again to confirm,

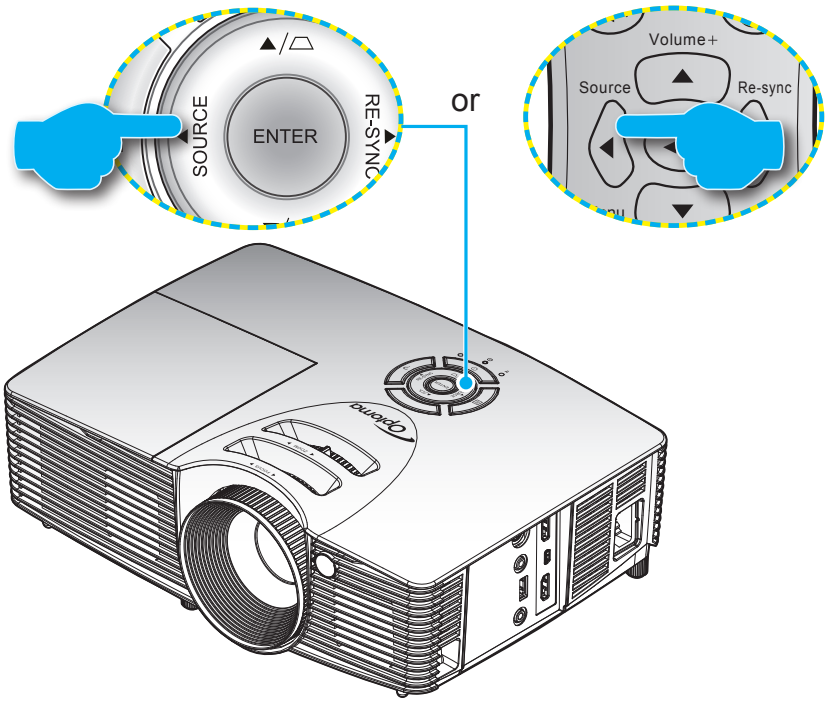
   otherwise the message will disappear after 15 seconds. When you press the "⏻" or "⏻" button for the second time, the projector will shut down.
4. The cooling fans will continue to operate for about 10 seconds for the cooling cycle and the On/Standby LED will flash green or blue. When the On/Standby LED 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.

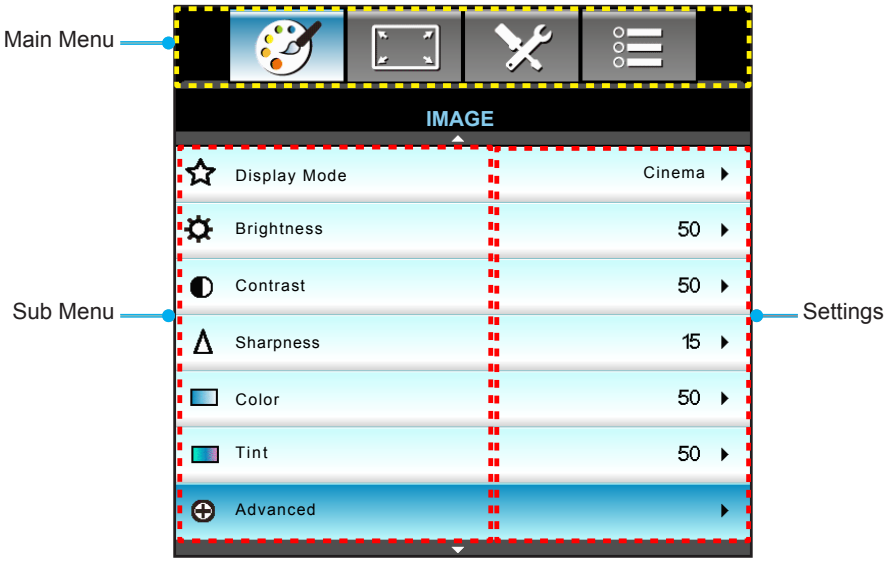


USING THE PROJECTOR

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 the projector keyboard.
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 "Enter" key to enter sub menu.
3. Use ▲ ▼ keys to select the desired item in the sub menu and then press ▶ or "Enter" 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 "Enter" or "Menu" to confirm, and the screen will return to the main menu.
6. To exit, press "Menu" again. The OSD menu will close and the projector will automatically save the new settings.



USING THE PROJECTOR

OSD Menu tree

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
Image	Display Mode				Cinema
					Reference
					Game
					Vivid [Default]
					Bright
					3D
					User
					ISF Day
					ISF Night
	Brightness				-50~50
	Contrast				-50~50
	Sharpness				-50~50 [Default: 0]
	Color				-50~50 [Default: 0]
	Tint				1~15
	Advanced	Gamma	Film		
			Video		
			Graphics		
			Standard		
		BrilliantColor™			1 ~ 10
		Dynamic Black			Off.
					On **Note:** *[Default: Cinema], other modes are off.*
		Color Temp.			Warm
					Standard
					Cool
					Cold
		Color Matching	Red	Hue	-50~50
				Saturation	-50~50
				Gain	-50~50
			Green	Hue	-50~50
				Saturation	-50~50
				Gain	-50~50
			Blue	Hue	-50~50
				Saturation	-50~50
				Gain	-50~50
			Cyan	Hue	-50~50
				Saturation	-50~50
				Gain	-50~50
			Magenta	Hue	-50~50
				Saturation	-50~50
				Gain	-50~50

USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
Image	Advanced	Color Matching	Yellow	Hue	-50~50
				Saturation	-50~50
				Gain	-50~50
			White	Red	-50~50
				Green	-50~50
				Blue	-50~50
			Reset		Yes / No [Default: No]
			Exit		
		DARBEE	Mode	Hi-Def	0~120%
				Gaming	0~120%
				Full Pop	0~120%
				Off	
			Demo mode	Split Screen	
				Swipe Screen	
				Off	
		Exit			
	Reset			Yes/ No	[Default: No]
	Exit				
Display	Format				4:3
					16:9 [Default]
					LBX
					Native
					SuperWide
	Edge Mask				0~5 [Default: 0]
	Zoom				-5~25 [Default: 0]
	Image Shift	H		Right / Left (Icon in the center)	-100~+100 [Default: 0]
		V		Up / Down (Icon in the center)	-100~+100 [Default: 0]
	H Keystone				-40~+40 [Default: 0]
	V Keystone				-40~+40 [Default: 0]
	Four Corner				Top-Left / Top-Right / Bottom-Left / Bottom-Right (ICONS)
	Four Corner Reset				Yes
					No [Default]
	3D	3D Mode			Off [Default]
					DLP-Link
					VESA 3D
		3D Format			Auto [Default]
					SBS
					Top and Bottom
					Frame Sequential
		3D→2D			3D [Default]
					L
					R

USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
Display	3D	3D Sync. Invert			On
					Off [Default]
		Exit			
	Exit				
Setup	Language				English [Default]
					Deutsch
					Français
					Italiano
					Español
					Português
					Svenska
					Nederland
					Norsk
					Dansk
					Polski
					Русский
					Suomi
					Ελληνικά
					Magyar
					Čeština
					عربي
					繁體中文
					簡体中文
					日本語
					한국어
					ไทย
					Türkçe
					Farsi
					Vietnamese
					Romanian
					Indonesian
	Projection				[Default]
	Menu Location				
					[Default]

USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
Setup	Audio Settings	Internal Speaker			On [Default]
					Off
		Mute			On
					Off [Default]
		Volume			0-10 [Default: 5]
		Exit			
	Security	Security			On
					Off [Default]
		Security Timer	Month		0~12 [Default: 0]
			Day		0~30 [Default: 0]
			Hour		0~24 [Default: 0]
			Exit		
		Change Password			
		Exit			
	Advanced	Logo			Default [Default]
					Neutral
					User
		Logo capture			
		Exit			
	Exit				
Options	Input Source				HDMI1 / MHL [Default]
					HDMI2
	Source Lock				On
					Off [Default]
	High Altitude				On
					Off [Default]
	Information Hide				On
					Off [Default] **Note:** *The Warning and Power off message will not be hidden.*
	Keypad Lock				On
					Off [Default]
	Test Pattern				None [Default]
					Grid
					White Pattern
	IR Function				All [Default]
					Front
					Top
					Off **Note:** *"All" and "Off" can be only selected in Standby mode.*

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
Options	12V Trigger				Off [Default]
					On
					Auto 3D
	USB Power				Off [Default]
					On
					Auto
	Background Color				Black [Default]
					Red
					Blue
					Green
					White
	Lamp Settings	Lamp Hours			0~9999 [Default: 0] **Note:** *Display only.*
		Lamp Reminder			On [Default]
					Off
		Lamp Mode			Bright [Default]
					Eco.
					Dynamic
		Lamp Reset			Yes
					No [Default]
		Exit			
	HDMI Link Settings	HDMI Link			Off [Default]
					On
		Inclusive of TV			Yes
					No [Default]
		Power On Link			Mutual
					PJ→Device
					Device→PJ [Default]
		Power Off Link			Off [Default]
					On
		Exit			
	Remote Settings	USER 1		[Default: DARBEE]	Color Settings
					Color Temp.
					Gamma
					HDMI Link
					Test Pattern
					AV Mute
					DARBEE
		USER 2		[Default: Color Temp]	Color Settings
					Color Temp.
					Gamma
					HDMI Link
					Test Pattern
					AV Mute
					DARBEE

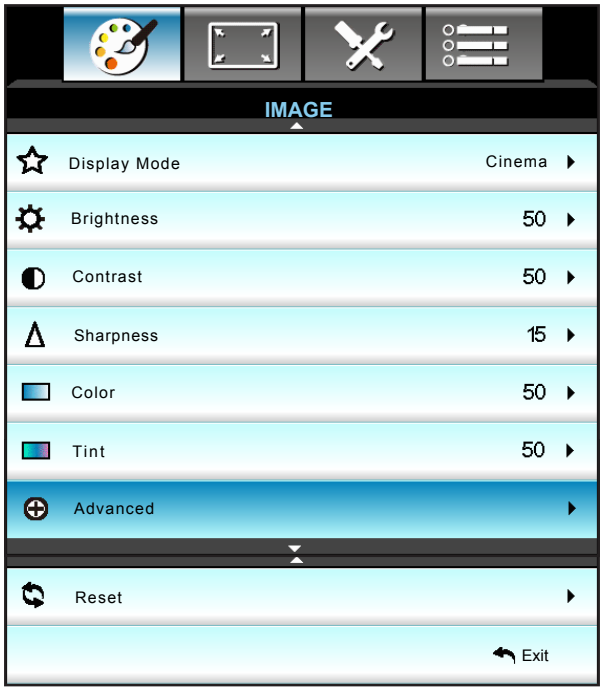
Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
Options	Remote Settings	USER 3		[Default: Gamma]	Color Settings
					Color Temp.
					Gamma
					HDMI Link
					Test Pattern
					AV Mute
					DARBEE
		Exit			
	Advanced	Direct Power On			On
					Off [Default]
		Auto Power Off (min.)			0-180 [Default: 20] **Note:** *One step is 5 minutes.*
		Sleep Timer (min.)			0-990 [Default: 0] **Note:** *One step is 30 minutes.*
					Always On [Default: Unchecked] **Note:** *"Always On" is a check box type parameter.*
		Power Mode (Standby)			Active
					Eco. [Default]
		Exit			
	Reset				Current [Default]
					All

Note:

- *If the Signal setting is set to Automatic, the Phase, frequency items are grayed out. If the "Signal" setting is set to a specific input source, the phase, frequency items will appear for user to manually tune and saved in settings.*
- *The "LAMP RESET" in OSD will only reset both Lamp Hours in OSD and Lamp Hours in service mode. The Projection Hours in service mode will not be reset.*
- *When you made the changes on the "IR Function", "Projection", or "Keypad Lock" function, a confirmation message will appear on the screen. Select "Yes" to save the settings.*
- *Each display mode can be adjusted and saved the value.*
- *In 3D timing mode, the zoom/edge mask will be disabled to prevent from image break.*

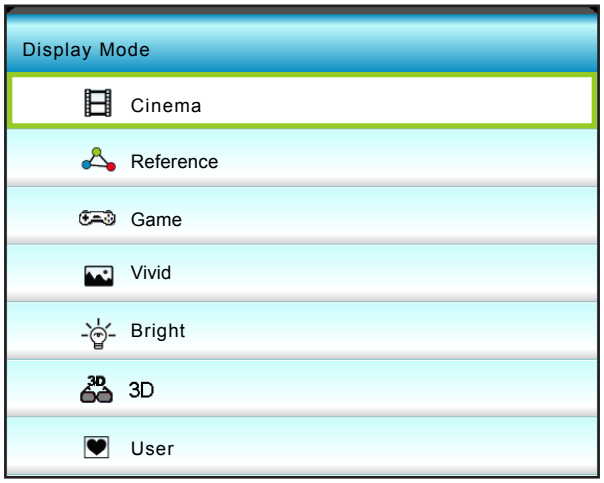
USING THE PROJECTOR

Image menu



Display Mode

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



- Cinema: Use this mode for home movie theatre.
- Reference: This mode is intended to reproduce, as close as possible, the image the way the movie director intended. Color, color temperature, brightness, contrast and gamma settings are all configured to standard reference levels.
- Game: Use this mode for playing video games.
- Vivid: Optimized to produce strikingly bright colorful images.
- Bright: Maximum brightness from PC input.
- 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.
- User: Memorize user's settings.

- ISF Day: Optimize the image with the ISF Day mode to be perfectly calibrated and high picture quality.
- ISF Night: Optimize the image with the ISF Night mode to be perfectly calibrated and high picture quality.

Brightness

Adjust the brightness of the image.

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

Contrast

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

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

Sharpness

Adjust the sharpness of the image.

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

Color

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

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

Tint

Adjust the color balance of red and green.

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

Reset

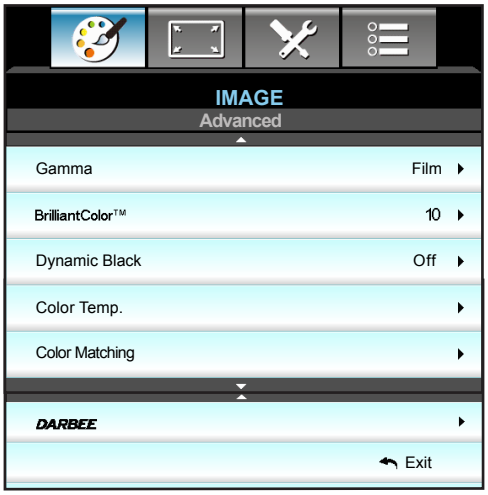
Choose "Yes" to return the factory default settings for "IMAGE".

Exit

Choose "Exit" to exit the menu.

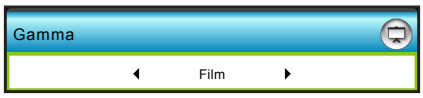
USING THE PROJECTOR

Image advanced menu



Gamma

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



- Film: For home theater.
- Video: For video or TV source.
- Graphics: For PC / Photo source.
- Standard: For standardized setting.
- Press the ◀ or ▶ to choose your preferred gamma.

BrilliantColor™

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

- Press the ▶ to stronger enhance the image.
- Press the ◀ to less enhance the image.

Dynamic Black

Dynamic Black enables the projector to automatically optimize the brightness of the display during dark/light movie scenes to be shown in incredible detail. Choose “On” or “Off” to enable or disable this feature.

Color Temp.

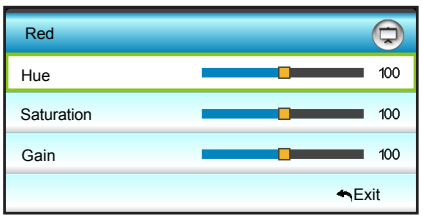
Press the ◀ or ▶ to select a color temperature from Warm, Standard, Cool, or Cold.

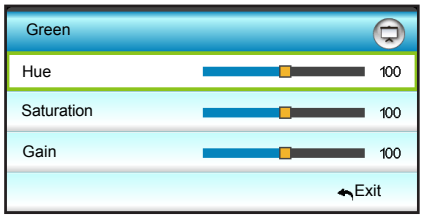
USING THE PROJECTOR

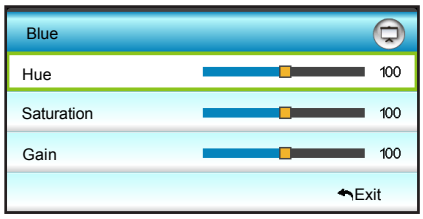
Color Matching

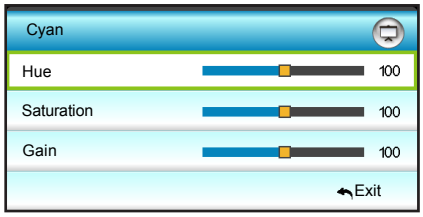
Press the ▶ into the next menu and then use ▲, ▼, ◀, or ▶ to select the item.

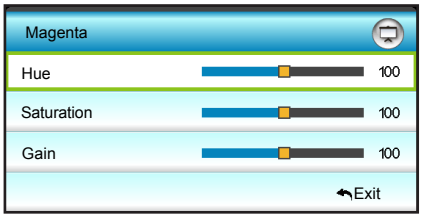
- Red/Green/Blue/Cyan/Magenta/Yellow/White: Use ◀ or ▶ to adjust Hue, Saturation, or Gain Colors.

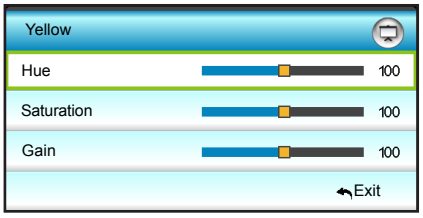


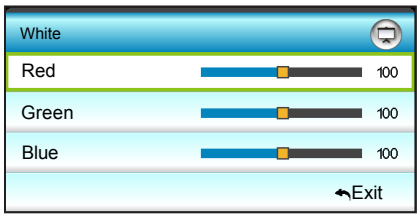












Reset

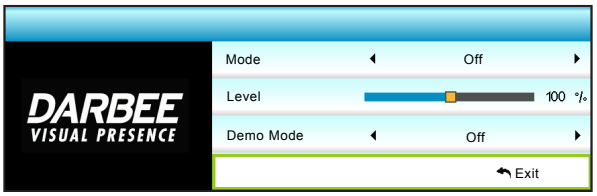
Choose "Reset" to return the factory default settings for color adjustments.

Exit

Choose "Exit" to exit the menu.

Image advanced DARBEE menu

Use this mode to project enhanced video quality from an HDMI video source.



Mode

Choose your preferred DARBEE mode between the following options:

- Hi-Def: The least aggressive form of the algorithm. Suitable for high quality content like Blu-ray video.
- Gaming: Moderately aggressive form of the algorithm. Suitable for computer generated content.
- Full Pop: Most aggressive form of the algorithm. Suitable especially for low-resolution or low-quality video sources in order to improve the video quality.
- Off: Switch off the DARBEE mode.

Note: *After you have chosen your preferred DARBEE mode, use the Level option to adjust the mode value.*

Demo Mode

Allows to check the difference between the original image and the DARBEE image. Press the ◀ or ▶ to choose your preferred screen view for Demo mode. The available options include split screen and swipe screen.

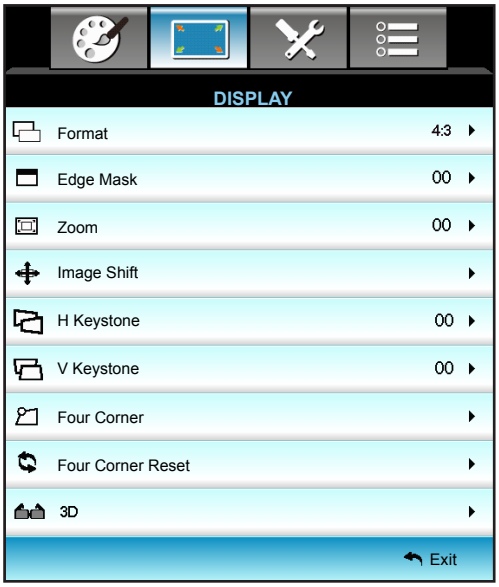
- Split Screen: View the original image and DARBEE image in a split screen.
- Swipe Screen: View the original image and DARBEE image by swiping the screen.
- Off: Demo mode is off.

Exit

Choose “Exit” to exit the menu.

USING THE PROJECTOR

Display menu



Format

Press the ◀ or ▶ to choose your desired aspect ratio between 4:3, 16:9, LBX, Native, SuperWide.

- 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 for users who use external 16x9 lens to display 2.35:1 aspect ratio using full resolution.
- Native: This format displays the original image without any scaling.
- SuperWide: This mode scales 2.35:1 sources to fill 100% of image height to remove black bars. (The left and right side of image will be cropped).

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.*

1080P scaling table:

16 : 9 screen	480i/p	576i/p	1080i/p	720p	PC
4x3	Scale to 1440x1080.				
16x9	Scale to 1920x1080.				
LBX	Scale to 1920x1440, then get the central 1920x1080 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.				
SuperWide	First scales to 2534x1426 (132% Enlarge), then displays the central image in 1920x1080 screen format. **Note:** Use this format for not subtitled 2.35:1 video source to fulfill 100% of 1080p DMD.				

Edge Mask

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

Note:

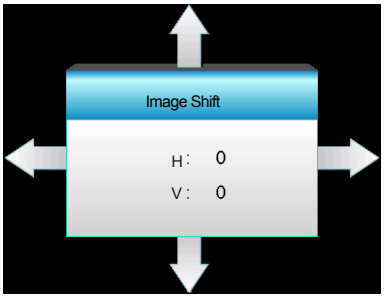
- *Each I/O has different setting of "Edge Mask".*
- *"Edge Mask" and "Zoom" cannot work at the same time.*

Zoom

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

Image Shift

Press the ▶ into the next menu as below and then use the ▲, ▼, ◀, or ▶ to select item.



- H: Press the ◀▶ to shift the projected image position horizontally.
- V: Press the ▲ ▼ to shift the projected image position vertically.

H Keystone

Press the ◀ or ▶ to adjust image distortion horizontally and make a squarer image.

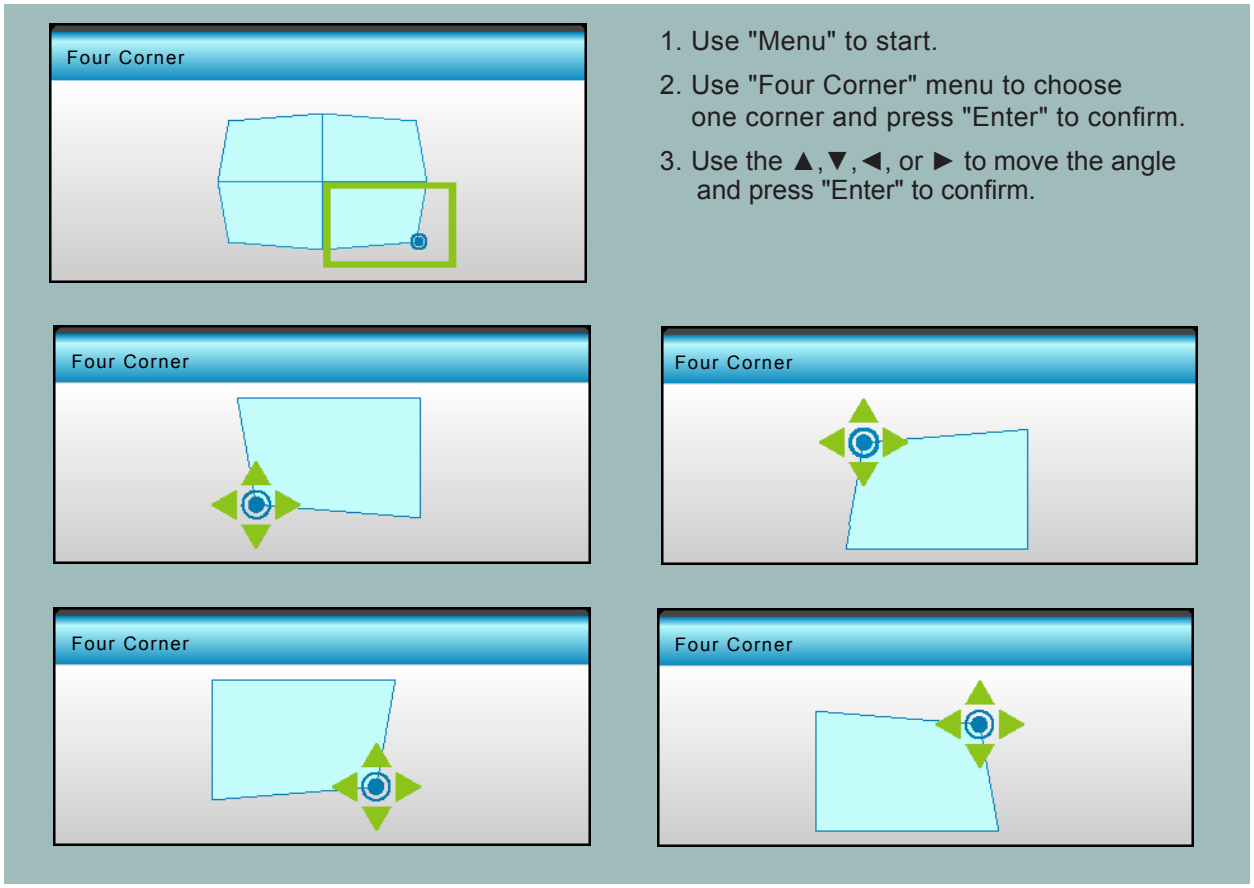
USING THE PROJECTOR

V Keystone

Press the ◀ or ▶ to adjust image distortion vertically and make a squarer image.

Four Corner

Compensate for image distortion by adjusting one corner at a time.



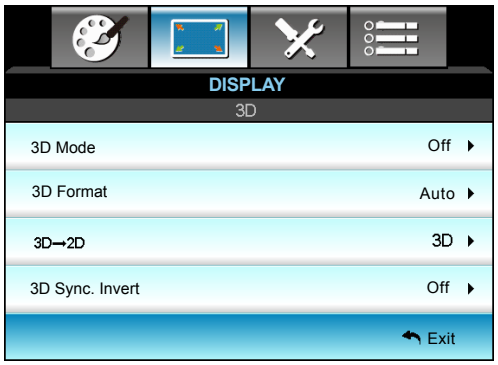
Note: *When Four Corner is adjusted, Format/Edge Mask/Zoom/Image Shift will grey out. They will be available when Four Corner is reset.*

Four Corner Reset

Choose “Yes” to return the factory default settings for “Four Corner Reset”.

USING THE PROJECTOR

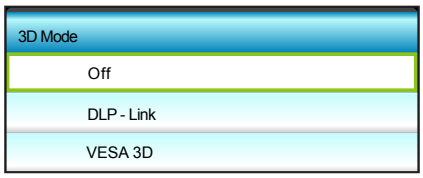
Display 3D menu



3D Mode

Use this option to disable the 3D function or select the appropriate the 3D function.

- Off: Select "Off" to turn off 3D mode.
- DLP-Link: Select "DLP-Link" to use optimized settings for DLP Link 3D Glasses.
- VESA 3D: Select “VESA 3D” to use optimized setting for VESA 3D Glasses.



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.

Note:

- *“3D Format” is only supported on 3D Timing on page 57.*
- *“3D Format” is only supported on non-HDMI 1.4a 3D timing.*

3D→2D

Use this option to specify how the 3D content should appear on the screen.

- 3D: Display 3D signal.
- L (Left): Display the left frame of 3D content.
- R (Right): Display the right frame of 3D content.

3D Sync. Invert

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

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

Exit

Choose "Exit" to exit the menu.

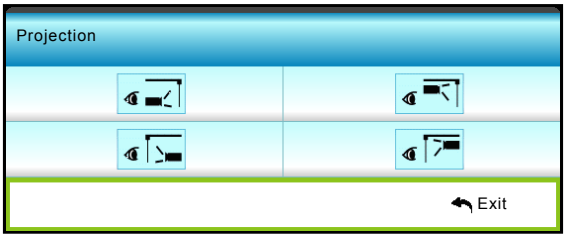
USING THE PROJECTOR

Setup menu

Language

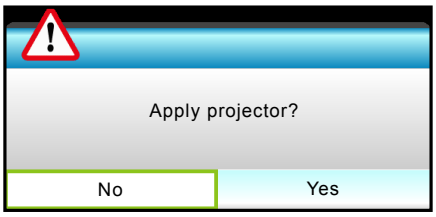
Choose the multilingual OSD menu. Press ► into the sub menu and then use the ▲, ▼, ◄, or ► key to select your preferred language. Press "Enter" to finalize the selection.

Projection



- Front
  This is the default selection. The image is projected straight on the screen.
- Rear
  When selected, the image will appear reversed.
- Front-Ceiling
  When selected, the image will turn upside down.
- Rear-Ceiling

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



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

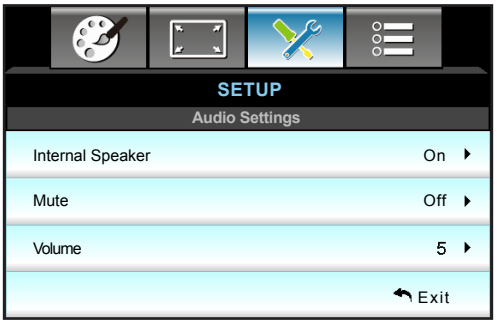
Menu Location

Choose the menu location on the display screen.

Exit

Choose "Exit" to exit the menu.

Setup audio settings menu



Internal Speaker

Choose “On” or “Off” to turn on or off the internal speaker.

Mute

Use this option to temporarily turn off the sound.

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

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

Volume

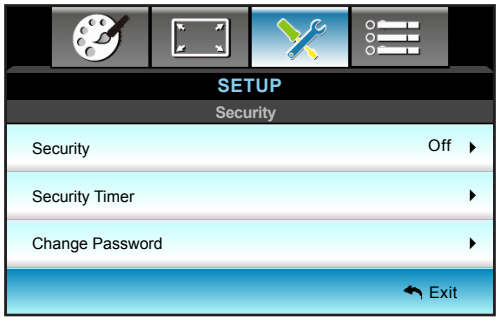
Adjust the volume level.

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

Exit

Choose "Exit" to exit the menu.

Setup security menu



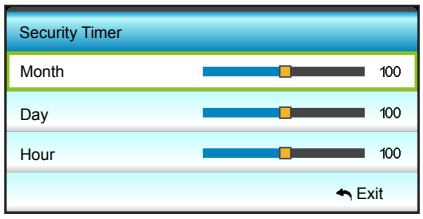
Security

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

Change the password.

- *First time*:

1. Press the "Enter" key to set the password.
2. The password has to be 4 digits.
3. Use number button on the remote control or on-screen numeric keypad to enter your new password and then press the "Enter" key to confirm your password.

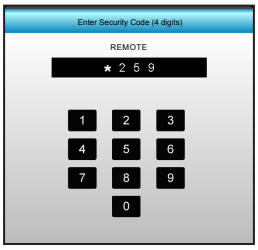
- *Change Password*:
  (If your remote does not have a number keypad, please use the ▲ ▼ arrows to change each digit of the password, then press the “Enter” key to confirm).

1. Press the "Enter" key to input old password.
2. Use the number button or on-screen numeric keypad to enter the current password and then press the "Enter" key to confirm.
3. Enter new password (4 digits in length) using the number buttons on the remote control, then press the "Enter" key to confirm.
4. Enter the new password again and press the "Enter" key to confirm.

   If the incorrect password is entered 3 times, the projector will automatically shut down.

   If you have forgotten your password, please contact your local office for support.

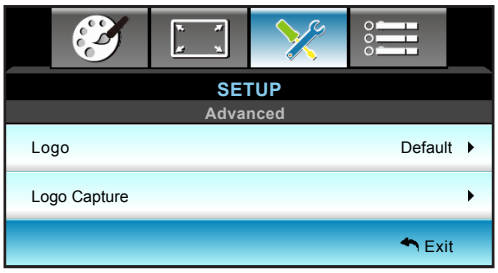
Note: *The password default value is "1234" (first time).*



Exit

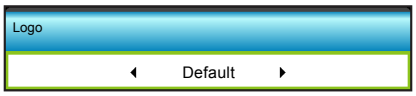
Choose "Exit" to exit the menu.

Setup advanced menu



Logo

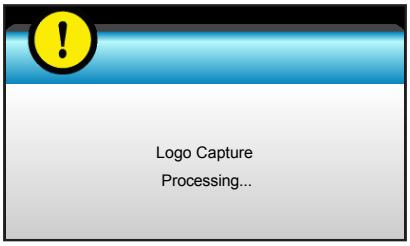
Use this function to set the desired startup screen. If changes are made, they will take effect the next time the projector is powered on.



- Default: The default startup screen.
- Neutral: Logo is not displayed on startup screen.
- User: Use stored picture from “Logo Capture” function.

Logo Capture

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



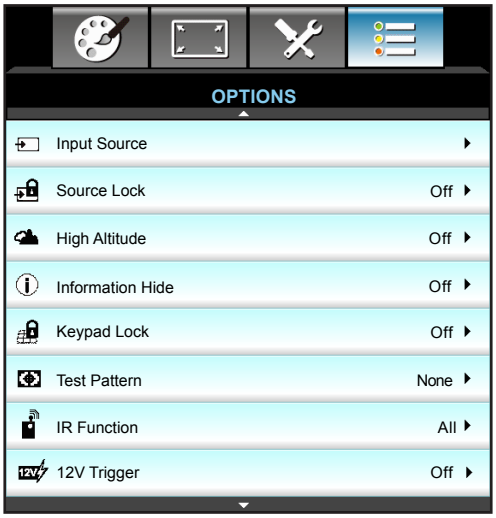
Note: *For a successful logo capture, ensure that the on-screen image does not exceed the projector native resolution. (1080p: 1920x1080).*

Exit

Choose "Exit" to exit the menu.

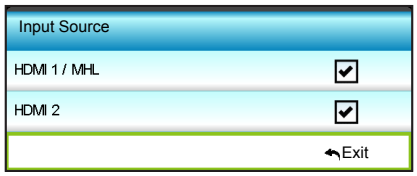
USING THE PROJECTOR

Options menu



Input Source

Use this option to enable/disable input sources. Press the ▶ to enter the sub menu and select which sources you require. Press the "Enter" key to finalize the selection. The projector will only search for inputs that are enabled.



Source Lock

Use this function to let the projector to search for current input only or any input signals.

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

High Altitude

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

Information Hide

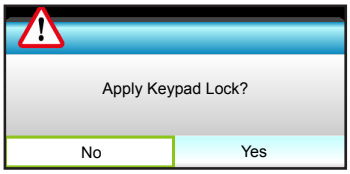
Enable this function to hide the information message.

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

USING THE PROJECTOR

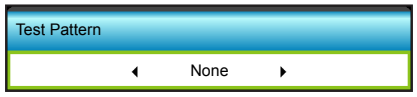
Keypad Lock

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.



Test Pattern

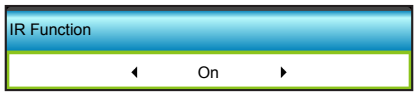
Display a test pattern. The available options are Grid, White Pattern and None.

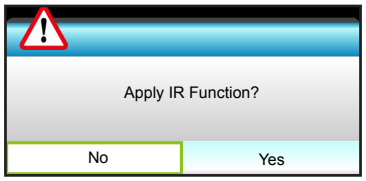


IR Function

Set the IR function setting.

- All: The projector can be operated by the remote control from front or top IR receiver.
- Front: The projector can be operated by the remote control from front IR receiver.
- Top: The projector can be operated by the remote control from top IR receiver.
- Off: The projector can't be operated by the remote control from front or top IR receiver. By selecting "Off", you will be able to use the Keypad keys.



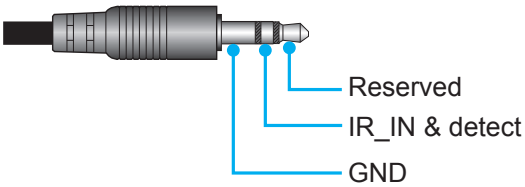


Note:

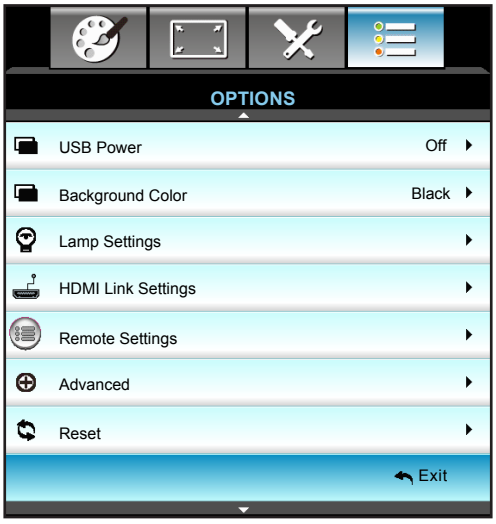
- *"Front" and "Top" cannot be selected in standby mode.*
- *IR mode can be switched to "NVIDIA 3D Vision" once implemented and verified by NVIDIA.*

12V Trigger

Use this function to enable or disable the trigger.



Options menu



USB Power

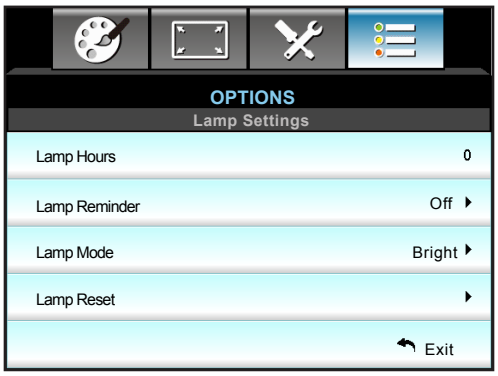
Enable or disable the USB power port function.

- On: Power over USB port.
- Off: Power over HDMI/MHL port.
- Auto: MHL gets priority over USB with USB being the default power source.

Background Color

Press the ◀ or ▶ to select a "Black", "Red", "Blue", "Green", or "White" screen when no signal is available.

Options lamp settings menu



Lamp Hours

Display the projection time.

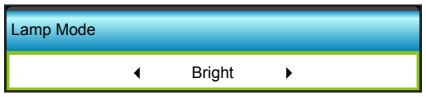
Lamp Reminder

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

Lamp Mode

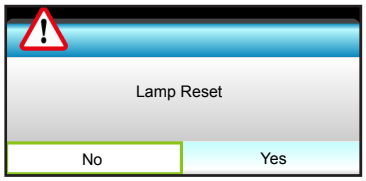
Set the lamp mode setting.

- Bright: Increase the brightness.
- Eco.: Dim the projector lamp which will lower power consumption and extend the lamp life.
- Dynamic: Dim the lamp power which will be based on brightness level of the content and adjust lamp power consumption between 100% and 30% dynamically. The lamp life will be extended.



Lamp Reset

Resets the lamp hour counter after replacing the lamp.



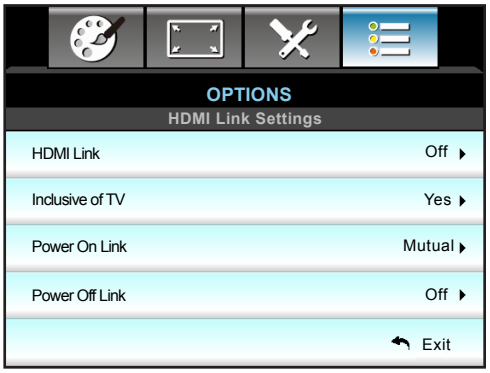
Exit

Choose "Exit" to exit the menu.

Note:

- *When ambient temperature is over 40°C during operation, the projector will switch to Eco automatically.*
- *The “Lamp Mode” can be independently set for 2D and 3D.*

Options HDMI link settings menu



Using HDMI Link

- When you connect HDMI CEC-compatible devices to the projector with HDMI cables, you can control them on same Power On or Power Off status using the HDMI Link control feature on the projector's OSD.
- This lets one device or multiple devices in a group Power On or Power Off via HDMI Link Feature.
- In a typical configuration, your DVD player may be connected to the projector through an amplifier or home theater system.

HDMI Link

Enable/Disable the HDMI Link function. The Inclusive TV, Power on Link, and Power off Link options will only available if the setting.

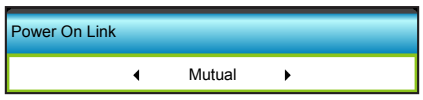
Inclusive of TV

If the setting is set to "Yes", both TV and projector will be automatically turned off at the same time. To prevent both devices to be turned off at the same time, set the setting to "No".

Power On Link

CEC power on command:

- Mutual: Both projector and CEC device will be turned on simultaneously.
- PJ -> Device: The CEC device will be turned on only after the projector is switched on.
- Device -> PJ: The projector will be switched on only after the CEC device is turned on.



- Press the ▶ into the next menu and then use the ◀ or ▶ to select "Mutual", "PJ -> Device", "Device -> PJ" item.

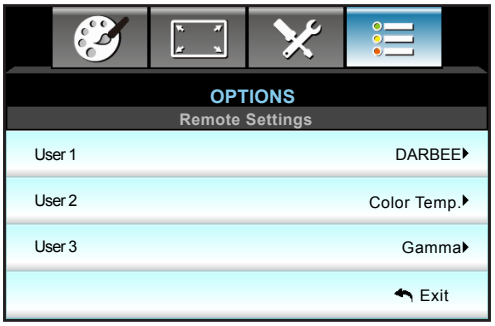
Power Off Link

If the setting is set to “On”, both HDMI Link and projector will be automatically turned off at the same time. Set to “Off”, both HDMI Link and projector will be not automatically turned off at the same time.

Exit

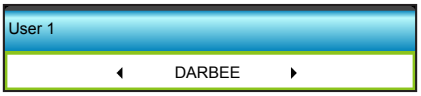
Choose “Exit” to exit the menu.

Options remote settings menu



USER 1

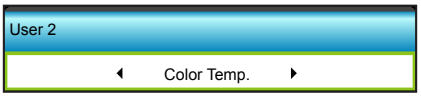
Assign the default function for USER 1. The default value is “DARBEE”.



- Press the ▶ into the next menu and then use the ◀ or the ▶ to select “Color Settings”, “Color Temp.”, “Gamma”, “HDMI Link”, “Test Pattern”, “AV Mute”, “DARBEE” item.

USER 2

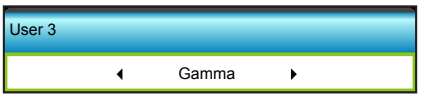
Assign the default function for USER 2. The default value is “Color Temp.”.



- Press the ▶ into the next menu and then use the ◀ or the ▶ to select “Color Settings”, “Color Temp.”, “Gamma”, “HDMI Link”, “Test Pattern”, “AV Mute”, “DARBEE” item.

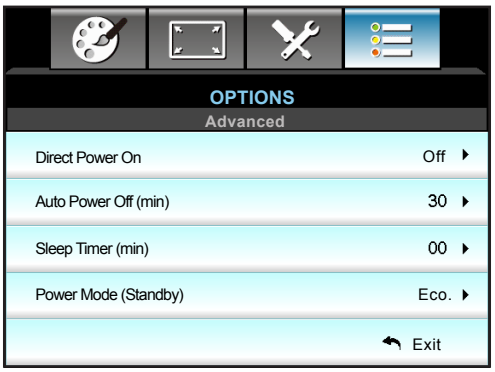
USER 3

Assign the default function for USER 3. The default value is “Gamma”.



- Press the ▶ into the next menu and then use the ◀ or the ▶ to select “Color Settings”, “Color Temp.”, “Gamma”, “HDMI Link”, “Test Pattern”, “AV Mute”, “DARBEE” item.

Options advanced 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 "⏻" key on the projector keypad or on the remote control.

Auto Power Off (min)

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

- Press the ◀ to decrease the timer interval.
- Press the ▶ to increase the timer interval.

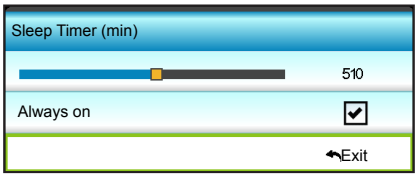
Note:

- *The value of sleep timer will be reset to zero after the projector is powered off.*
- *The projector will automatically power off when the countdown has finished. The default setting is 20 minutes.*

Sleep Timer (min)

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

- Press the ◀ to decrease the timer interval.
- Press the ▶ to increase the timer interval.



Power Mode (Standby)

Set the power mode setting.

- Active: Return to normal standby.
- Eco.: Save power dissipation further < 0.5W.

Exit

Choose "Exit" to exit the menu.

USING THE PROJECTOR

3D Setup

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

For 3D via Blu ray

3D will automatically be displayed.

- Menu > "Display" > "3D" > "3D Mode" > "DLP Link"

For 3D via a PC or Set top box

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

- For side by side images, select "SBS" in the menu. Menu > "Display" > "3D" > "3D Format" > "SBS".
- For top and bottom images, select "top and bottom" in the menu. Menu > "Display" > "3D" > "3D Format" > "Top and bottom".

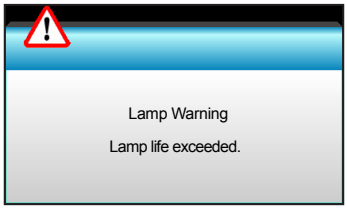
  If the 3D image does not look correct, you may also be required to adjust the 3D sync invert. Turn this on if the image looks odd. Menu > "Display" > "3D" > "3D Sync Invert" > "On".

Note: *If input video is normal 2D, please press “3D” and switch to “Auto”. If “SBS” mode is active, 2D video content will not be displayed correctly. Please change back to “Auto” when 3D via a PC only works with certain resolutions. Please check the compatibility on page 57.*

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.

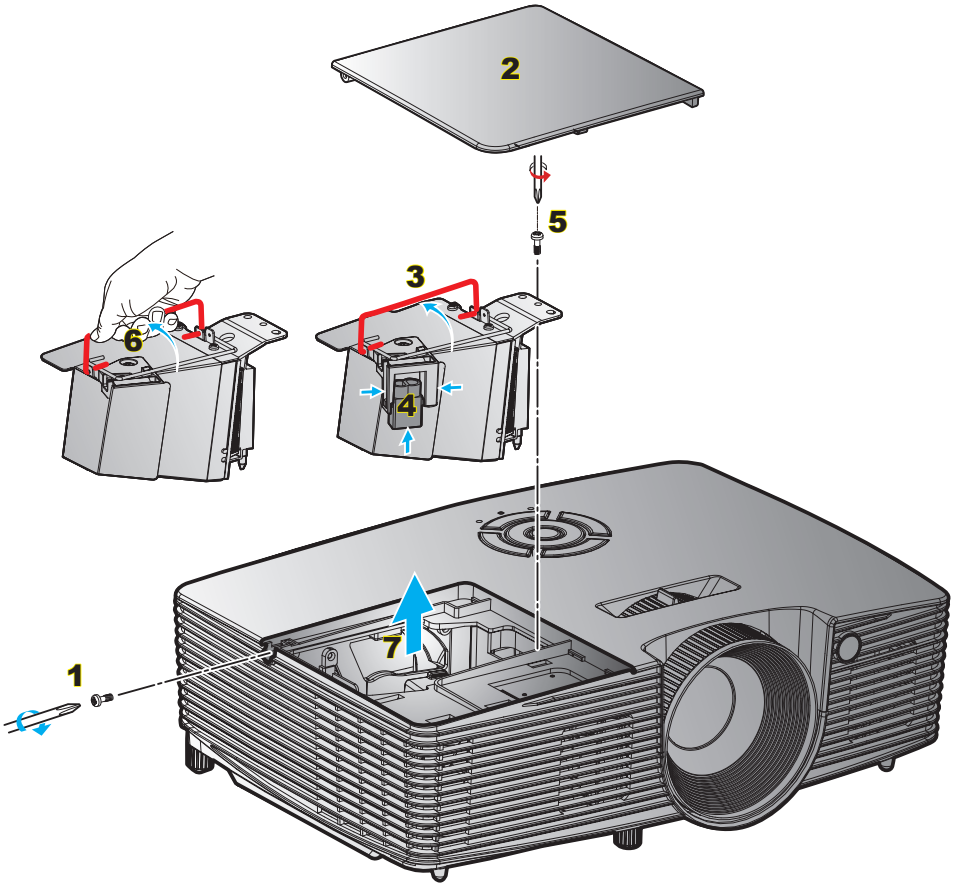
Warning: If ceiling mounted, please use caution when opening the lamp access panel. It is recommended to wear safety glasses if changing the bulb when ceiling mounted. Caution must be used to prevent any loose parts from falling out of projector.

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 screw on the cover. 1
5. Open the cover. 2
6. Lift up the lamp handle. 3
7. Press both sides, then lift up and remove the lamp cord. 4
8. Unscrew the screw on the lamp module. 5
9. Lift up the lamp handle 6 and remove the lamp module carefully. 7
10. To replace the lamp module, reverse the previous steps.
11. Turn on the projector and reset the lamp timer.
12. Lamp Reset: (i) Press "Menu" → (ii) Select "OPTIONS" → (iii) Select "Lamp Settings" → (iv) Select "Lamp Reset" → (v) Select "Yes".

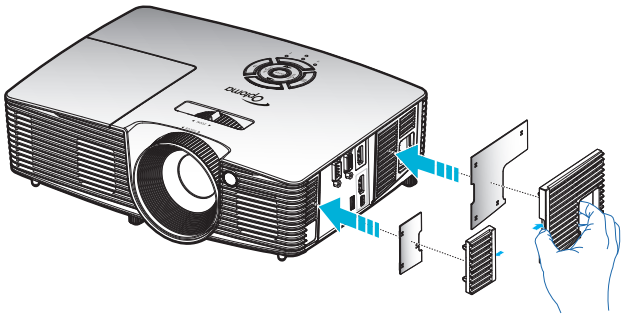
Note:

- *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



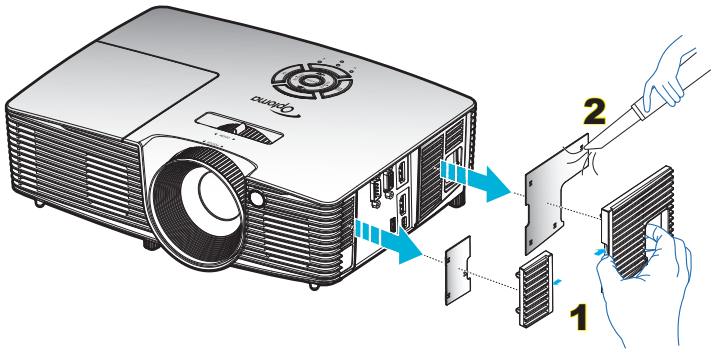
Note: *Dust filters are only required/supplied in the selected regions with excessive dust.*

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.
4. Clean or replace the dust filter.
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:	640x480p @ 60Hz	720x480p @ 60Hz
640x480 @ 60Hz	1280x800 @ 60Hz	XGA: 1024x768 @ 60Hz	720x480p @ 60Hz	1280x720p @ 60Hz
640x480 @ 67Hz	1280x1024 @ 60Hz	WXGA: 1280x800 @ 60Hz	1280x720p @ 60Hz	1366x768 @ 60Hz
640x480 @ 72Hz	1400x1050 @ 60Hz	1080P: 1920x1080 @ 60Hz	1920x1080i @ 60Hz	1920x1080i @ 50Hz
640x480 @ 75Hz	1600x1200 @ 60Hz		720(1440)x480i @ 60Hz	1920x1080p @ 60Hz
800x600 @ 56Hz			1920x1080p @ 60Hz	
800x600 @ 60Hz	1440x900 @60Hz		720x576p @ 50Hz	
800x600 @ 72Hz	1280x720 @ 120Hz		1280x720p @ 50Hz	
800x600 @ 75Hz	1024x768 @ 120Hz		1920x1080i @ 50Hz	
832x624 @ 75Hz			720(1440)x576i @ 50Hz	
1024x768 @ 60Hz			1920x1080p @ 50Hz	
1024x768 @ 70Hz			1920x1080p @ 24Hz	
1024x768 @ 75Hz			1920x1080p @ 30Hz	
1280x1024 @ 75Hz				
1152x870 @ 75Hz				

True 3D video compatibility

		Input timing		
Input resolution	HDMI 1.4a 3D Input	1280x720P @ 50Hz	Top - and - Bottom	
		1280x720P @ 60Hz	Top - and - Bottom	
		1280x720P @ 50Hz	Frame packing	
		1280x720P @ 60Hz	Frame packing	
		1920x1080i @50 Hz	Side- by-Side (Half)	
		1920x1080i @60 Hz	Side- by-Side (Half)	
		1920x1080P @24 Hz	Top - and- Bottom	
		1920x1080P @24 Hz	Frame packing	
	HDMI 1.3	1920x1080i @ 50Hz	Side-by-Side(Half)	SBS mode is on
		1920x1080i @ 60Hz		
		1280x720P @50Hz		
		1280x720P @60Hz		
		1920x1080i @ 50Hz	Top-and-Bottom	TAB mode is on
		1920x1080i @ 60Hz		
		1280x720P @50Hz		
		1280x720P @60Hz		
		480i 1024x768 @ 120Hz	HQFS	3D format is Frame sequential
		576i 1280x720 @120Hz		

Note:

- *If 3D input is 1080p@24Hz, the DMD should replay with integral multiple with 3D mode.*
- *Support for NVIDIA 3DTV Play if there is no patent fee from Optoma.*
- *1080i@25Hz and 720p@50Hz will run in 100Hz; 1080p@24Hz will run in 144Hz. Other 3D timings will run in 120Hz.*

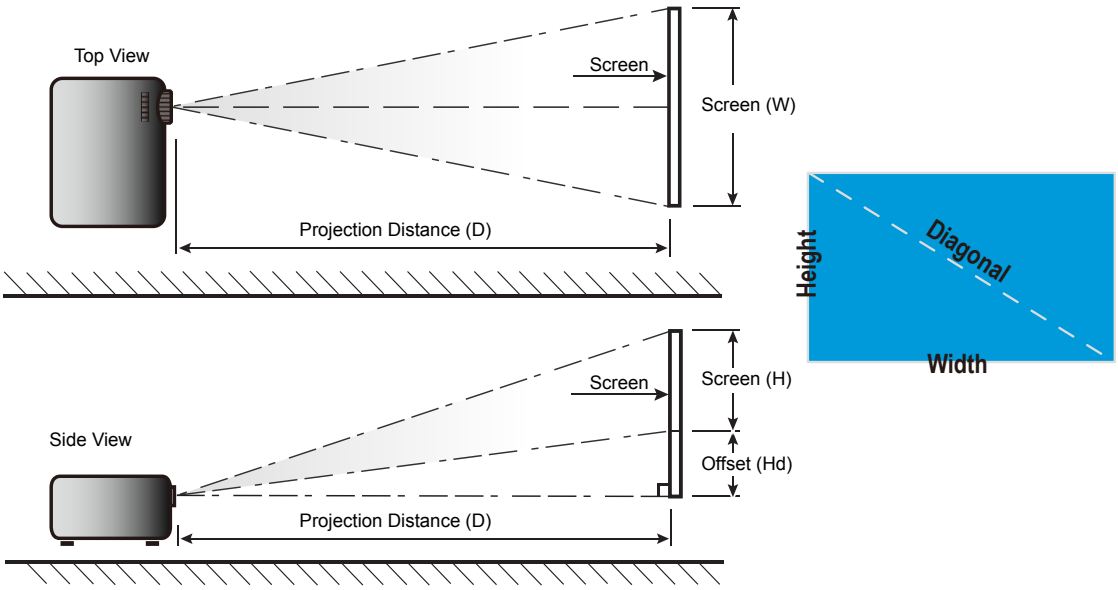
ADDITIONAL INFORMATION

Image size and projection distance

(1080P)

Diagonal Length Size of (16:9) Screen	Screen Size W x H				Projection Distance (D)				Offset	
	(m)		(inch)		(m)		(inch)			
	Width	Height	Width	Height	Wide	Tele	Wide	Tele	(m)	(inch)
36	0.80	0.45	31.38	17.65	1.2	1.3	3.94	4.27	0.07	2.76
40	0.89	0.5	34.86	19.6	1.3	1.4	4.27	4.59	0.08	3.15
50	1.11	0.62	43.58	24.5	1.6	1.8	5.25	5.91	0.10	3.94
60	1.33	0.75	52.29	29.4	2.0	2.2	6.56	7.22	0.12	4.72
70	1.55	0.87	61.01	34.3	2.3	2.5	7.55	8.20	0.14	5.51
80	1.77	1	69.73	39.2	2.6	2.9	8.53	9.51	0.16	6.30
90	1.99	1.12	78.44	44.1	2.9	3.2	9.51	10.50	0.18	7.09
100	2.21	1.25	87.16	49	3.3	3.6	10.83	11.81	0.19	7.48
120	2.66	1.49	104.59	58.8	3.9	4.3	12.80	14.11	0.24	9.45
150	3.32	1.87	130.74	73.5	4.9	5.4	16.08	17.72	0.30	11.81
180	3.98	2.24	156.88	88.2	5.9	6.5	19.36	21.33	0.36	14.17
200	4.43	2.49	174.32	98.1	6.6	7.2	21.65	23.62	0.40	15.75
250	5.53	3.11	217.89	122.6	8.2	9.0	26.90	29.53	0.50	19.69
300	6.64	3.74	261.47	147.1	9.8	10.8	32.15	35.43	0.59	23.23

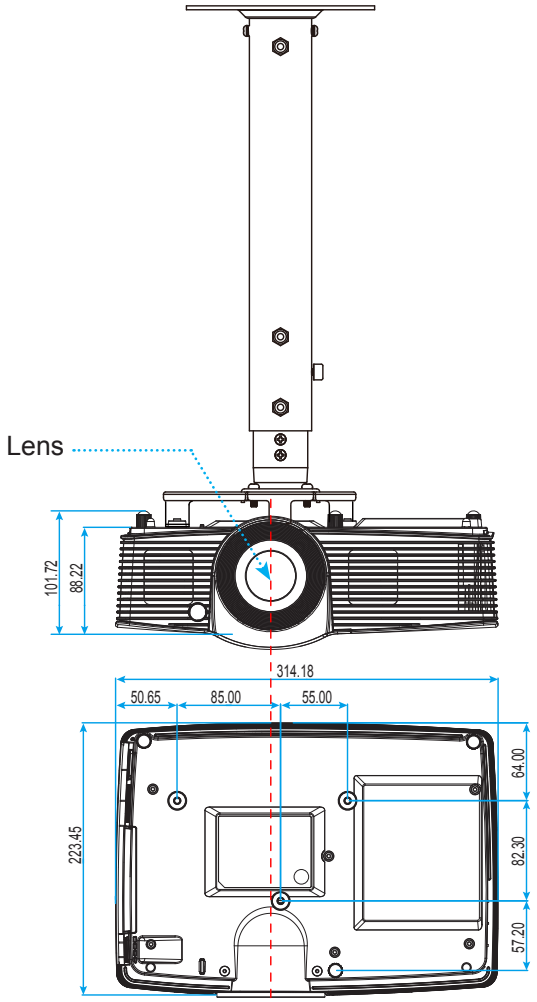
Note: *Zoom ratio is 1.1x.*



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: M4*3
- Minimum screw length: 10mm



Unit: mm

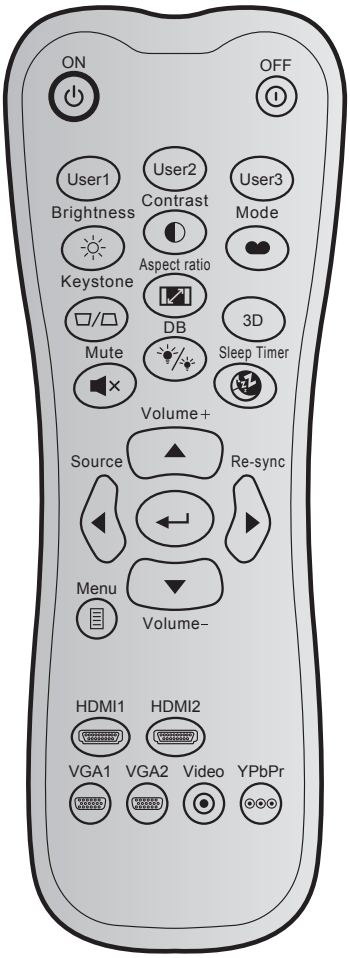
Note: *Please note that damage resulting from incorrect installation will void the warranty.*

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



Key		Custome code		Data code	Printing-key definition	Description
		Byte 1	Byte 2	Byte 3		
Power on		32	CD	02	ON	Press to turn on the projector.
Power off		32	CD	2E	OFF	Press to turn off the projector.
User 1		32	CD	36	User1	User defined keys. Please see page *50* to setup.
User 2		32	CD	65	User2	
User 3		32	CD	66	User3	
Brightness		32	CD	41	Brightness	Adjust the brightness of the image.
Contrast		32	CD	42	Contrast	Control the degree of difference between the lightest and darkest parts of the picture.
Display mode		32	CD	05	Mode	Select a display mode for optimized settings for different applications. Please see page *28*.
Keystone		32	CD	07	Keystone	Adjust image distortion caused by tilting the projector.

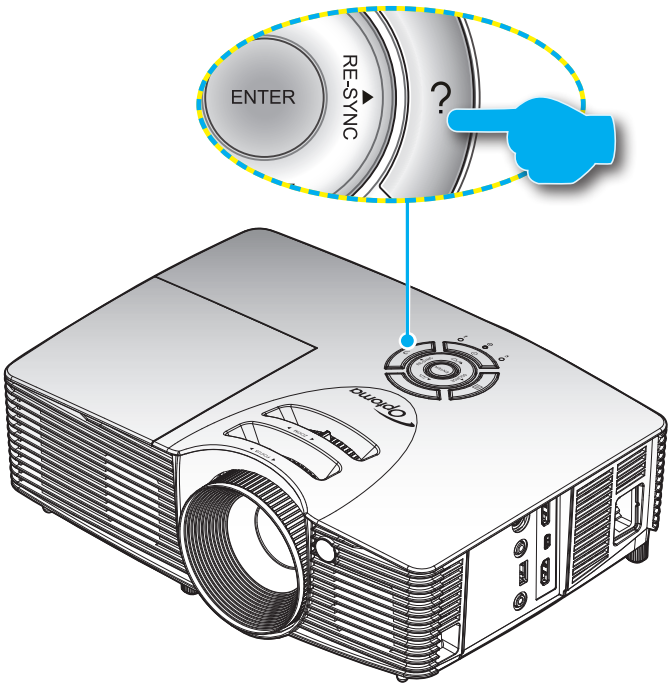
ADDITIONAL INFORMATION

Key		Custome code		Data code	Printing-key definition	Description
		Byte 1	Byte 2	Byte 3		
Aspect ratio		32	CD	64	Aspect ratio	Press to change aspect ratio of a displayed image.
3D		32	CD	89	3D	Manually select a 3D mode that matches your 3D content.
Mute		32	CD	52	Mute	Momentarily turns off / on the audio.
DB (Dynamic Black)		32	CD	44	DB	Automatically adjusts the picture brightness to give optimum contrast performance.
Sleep timer		32	CD	63	Sleep Timer	Sets the countdown timer interval.
Volume +		32	CD	09	Volume +	Adjust to increase volume.
Four direction keys		32	CD	11	▲	Use ▲, ◄, ►, or ▼ to select items or make adjustments to your selection.
		32	CD	10	◄	
		32	CD	12	►	
		32	CD	14	▼	
Source		32	CD	18	Source	Press “Source” to select an input signal.
Enter key		32	CD	0F	↵	Confirm your item selection.
Re-sync		32	CD	04	Re-sync	Automatically synchronizes the projector to the input source.
Volume -		32	CD	0C	Volume -	Adjust to decrease volume.
Menu		32	CD	0E	Menu	Display or exit the on-screen display menus for projector.
HDMI 1		32	CD	16	HDMI1	Press “HDMI1” to choose source from HDMI 1 / MHL connector.
HDMI 2		32	CD	30	HDMI2	Press “HDMI2” to choose source from HDMI 2 connector.
VGA 1		32	CD	1B	VGA1	No function
VGA 2		32	CD	1E	VGA2	No function
Video		32	CD	1C	Video	No function
YPbPr		32	CD	17	YPbPr	No function

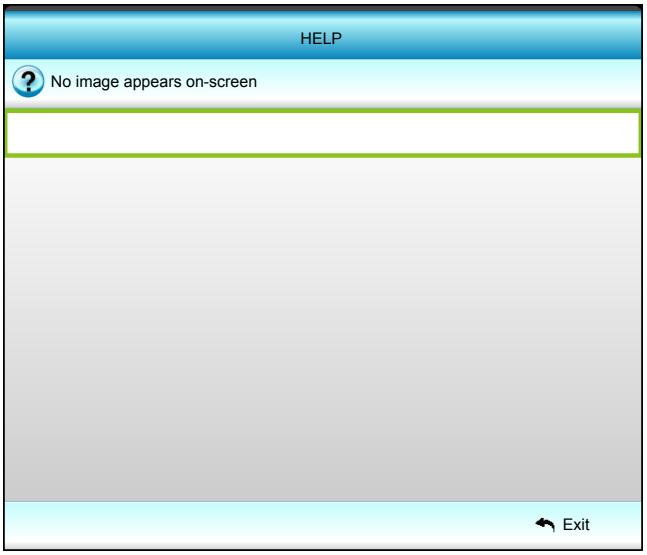
ADDITIONAL INFORMATION

Using the Help button

The Help function ensures easy setup and operation. Press the "**?**" button on the keypad to open the Help menu.



- **Help** button functions only when no input source is detected.



HELP

No image appears on-screen

- Ensure all the cables and power connections are correctly and securely connected as described in the Installation section of User's Manual.
- Ensure all the pins of connectors are not bent or broken.
- Ensure that the [AV MUTE] feature is not turned on.

[Next]

Exit

HELP

No image appears on-screen

- If you are using a Notebook :

1. First, follow the steps above to adjust resolution of the computer.

2. Press the toggle output settings. Example : [Fn]+[F4]

Acer →	[Fn]+[F5]	IBM/Lenovo →	[Fn]+[F7]
Asus →	[Fn]+[F8]	HP/Compaq →	[Fn]+[F4]
Dell →	[Fn]+[F8]	NEC →	[Fn]+[F3]
Gateway →	[Fn]+[F4]	Toshiba →	[Fn]+[F5]

Mac Apple:

System Preference -> Display -> Arrangement -> Mirror display

[Prev]

Exit

HELP

Image has slanted sides

Image is too small or too large

There is no audio heard or the volume is too low

Exit

HELP

Image has slanted sides

- If possible, reposition the projector so that is centered on the screen and below the bottom of the screen.
- Press [LEYSTONE + / -] button until the sides are vertical on the remote control.

[KEYSTONE + / -]

Exit

HELP

Image is too small or too large

- Adjust the Zoom Ring on the top of projector.
- Move the projector closer to or further from the screen.
- Press [MENU] button on the remote control or projector panel, go to DISPLAY | Format and try the different settings.

[DISPLAY | Format]

Exit

HELP

There is no audio heard or the volume is too low

Is the volume setting at the minimum?

- Turn up the volume setting.

Is the cable connected properly to the projector?

- Check the physical connection and ensure the cable is connected properly from the source to projector.

[Volume]

Exit

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 "Mute" feature is not turned on.

Image is out of focus

- Adjust the Focus Ring on the projector lens.
- Make sure the projection screen is between the required distance from the projector. (Please refer to page *58*).

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 zoom lever on the top of the projector.
- Move the projector closer to or further from the screen.
- Press "Menu" on the projector panel, go to "Display-->Format". 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-->V Keystone" or “Display-->H Keystone” from the OSD to make an adjustment.

Image is reversed

- Select "Setup-->Projection" from the OSD and adjust the projection direction.

Blurry double image

- Press "3D" button and switch to "Off" to avoid normal 2D image is blurry double image.

ADDITIONAL INFORMATION

Two images, side-by-side format

- Press "3D" button and switch to "SBS" for input signal is HDMI 1.3 2D 1080i side-by-side.

Image does not display in 3D

- Check if the battery of 3D glasses is drained.
- Check if the 3D glasses is turned on.
- When the input signal is HDMI 1.3 2D (1080i side-by-side half), press "3D" button and switch to "SBS".

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 *54-55*.

Remote control problems

If the remote control does not work

- Check the operating angle of the remote control is pointed within ±15° both horizontally and vertically to the IR receivers on the projector.
- Make sure there are not any obstructions between the remote control and the projector. Move to within 6m (20 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:

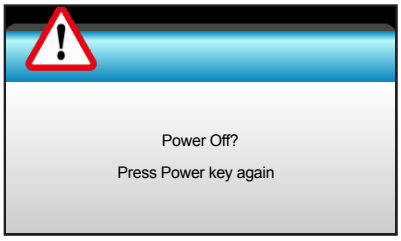
- "LAMP" LED indicator is lit red and if "On/Standby" indicator flashes amber.
- "TEMP" LED indicator is lit red and if "On/Standby" indicator flashes amber. This indicates the projector has overheated. Under normal conditions, the project can be switched back on.
- "TEMP" LED indicator flashes red and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

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 (Red)	Power LED (Green or Blue)	Temp-LED (Red)	Lamp-LED (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.	○	○
Quick Resume (100 secs)		Flashing (0.25 sec off / 0.25 sec light)	○	○
Error (Over temp.)	Flashing		☼	○
Error (Fan failure)	Flashing		Flashing	
Error (Lamp failure)	Flashing			☼

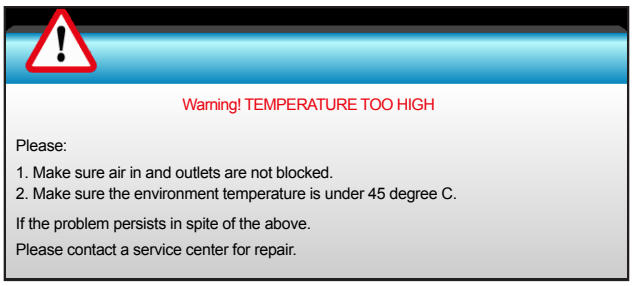
- Power off:



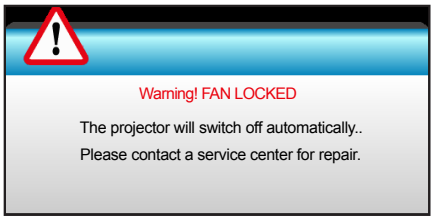
- Lamp warning:

ADDITIONAL INFORMATION

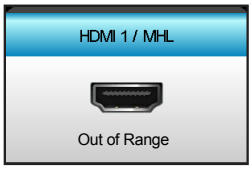
- Temperature warning:



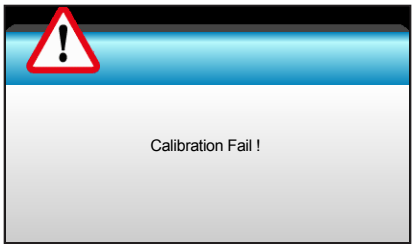
- Fan failed:



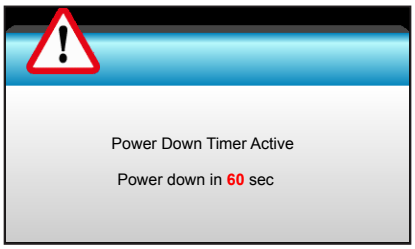
- Out of display range:



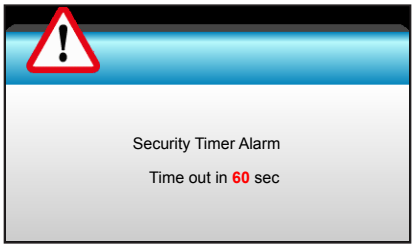
- Calibration failed:



- Power down warning:



- Security timer alarm:



ADDITIONAL INFORMATION

Specifications

Optical	Description
Maximum resolution	- Video timing maximum up to :1080p - Graphic up to WUXGA@60Hz
Lens	- Manual zoom and manual focus
Lamp	- ECO Mode < = 0.5 W @ 110/220VAC - Active Mode >0.5W @ 110/220VAC
Image size (diagonal)	41.8”~305”
Projection distance	1.5m~10m

Electrical	Description
Inputs	- HDMI1 - HDMI2 + MHL (2.2)
Outputs	- Audio 3.5mm - USB-A Power (0.9A) - 12V Trigger
Service port	- 3D Sync VESA - USB Mouse / Service
Color reproduction	1073.4 Million color
Scan rate	- Horizontal scan rate: 15.375~91.146 KHz - Vertical scan rate: 24~ 85 Hz (120Hz for 3D featured projector)
Built-in speaker	Yes, 10W
Power requirement	100 - 240V AC 50/60Hz
Input current	2.5-1.0 A

Mechanical	Description
Installation orientation	Desktop/Front, Desktop/Rear, Ceiling/Front, Ceiling/Rear
Dimensions	314.3 mm (W) x 223.6 mm (D) x 100.35 mm (H)
Weight	<2.7 kg
Environmental conditions	- Operating: 5°C ~ 40°C, humidity 10% ~ 85%, non-condensing - Non-operating: -10°C ~ 60°C, humidity 5% ~ 95%, non-condensing

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

ADDITIONAL INFORMATION

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ADDITIONAL INFORMATION

DARBEEVISION, INC.

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