



DLP® Projector

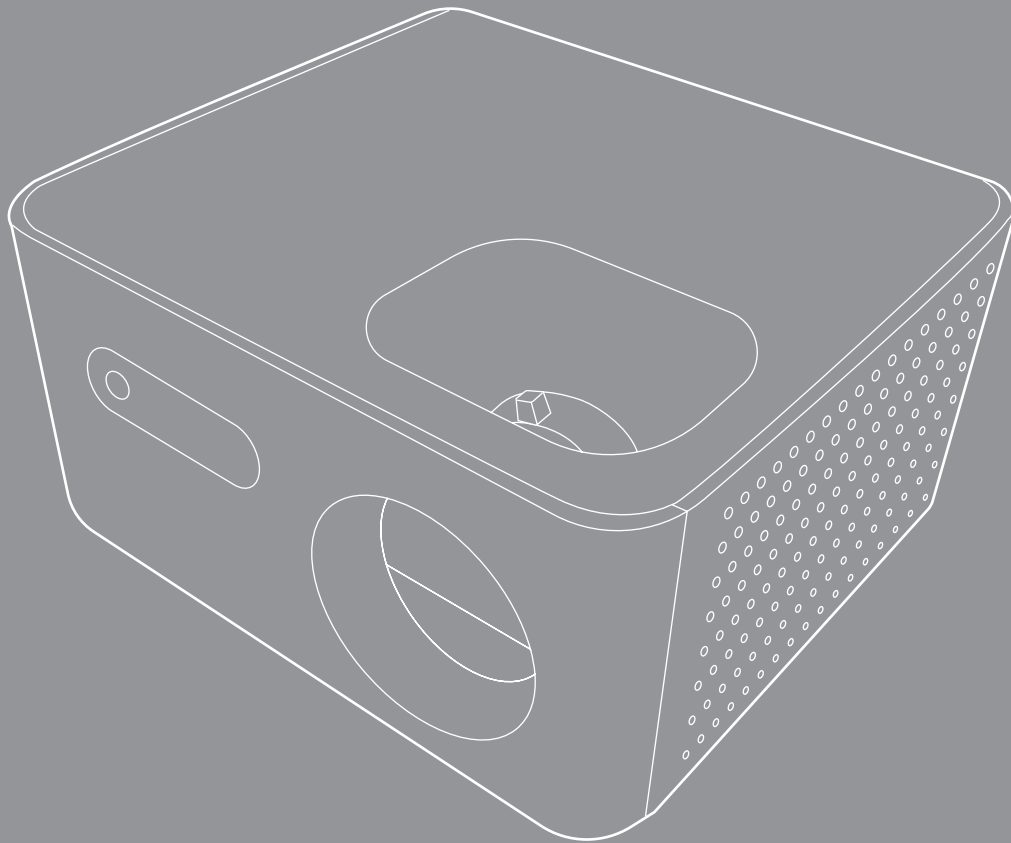




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SAFETY

	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.

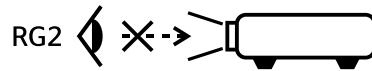
Important safety instructions

- Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from over heating, it is recommended to install the projector in a location that does not block ventilation. As an example, do not place the projector on a crowded coffee table, sofa, bed, etc. Do not put the projector in an enclosure such as a book case or a cabinet that restricts air flow.
- To reduce the risk of fire and/or electric shock, do not expose the projector to rain or moisture. Do not install near heat sources such as radiators, heaters, stoves or any other apparatus such as amplifiers that emits heat.
- Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.
- Do not use under the following conditions:
 - In extremely hot, cold or humid environments.
 - (i) Ensure that the ambient room temperature is within 0°C ~ 40°C
 - (ii) Relative humidity is up to 80%
 - 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.
- 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

SAFETY

disconnecting power.

- 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 projector 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.
- Do not look into the projector lens during operation. The bright light may harm your eyes.
- According to the classification of photobiological safety of light sources and light source systems, this product is Risk Group 2, IEC 62471-5:2015.



SAFETY

Copyright

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

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Disclaimer

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

Trademark recognition

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

The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

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

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

FCC

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

SAFETY

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.

Cleaning the lens

- Before cleaning the lens, be sure to turn off the projector and unplug the power cord to allow it to completely cool down.
- Use a compressed air tank to remove the dust.
- Use a special cloth for cleaning lens and gently wipe the lens. Do not touch the lens with your fingers.
- Do not use alkaline/acid detergents or volatile solvents such as alcohol for cleaning lens. If the lens is damaged due to the cleaning process, it is not covered by the warranty.



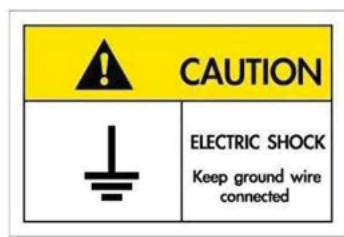
Warning: Do not use a spray containing flammable gases to remove dust or dirt from the lens. This may cause a fire due to excessive heat inside the projector.



Warning: Do not clean the lens if the projector is warming up as this may cause the lens' surface film to peel off.



Warning: Do not wipe or tap the lens with a hard object.



To avoid electric shock, the unit and its peripherals must be properly grounded (earthed).

INTRODUCTION

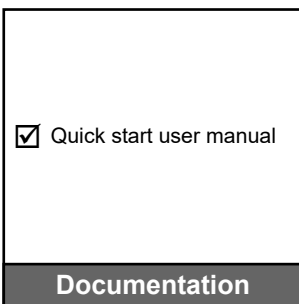
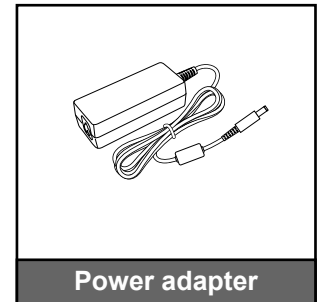
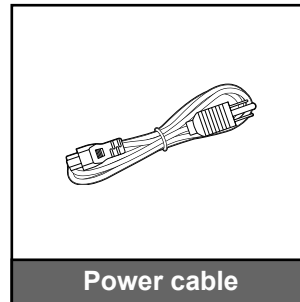
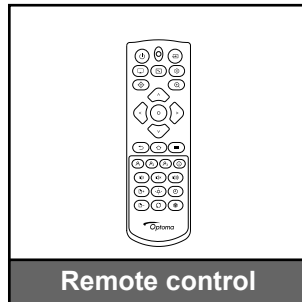
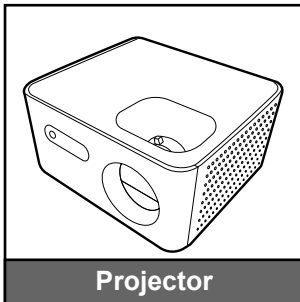
Thank you for purchasing an Optoma projector. For full list of features please visit the product page on our website, where you will also find additional information and documentation such as FAQs.

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



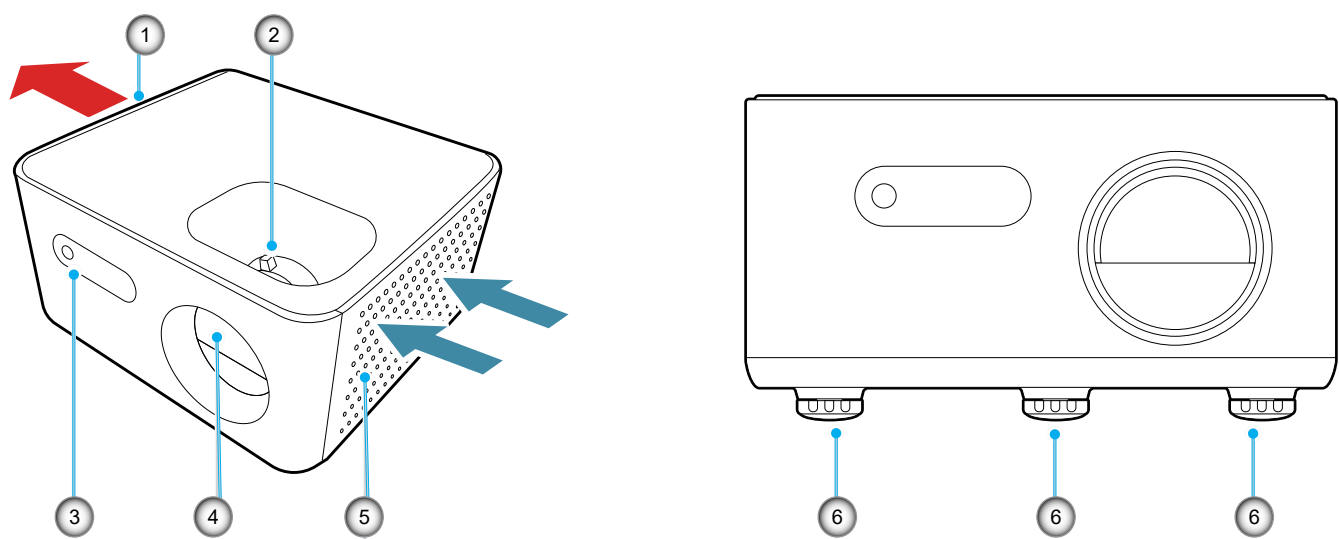
Note:

- For access to the setup information, user manual, warranty information, and product updates – please scan the QR Code or visit the following URL:
<https://www.optoma.com/support/download>
- The accessories may vary depending on the region.



INTRODUCTION

Product overview



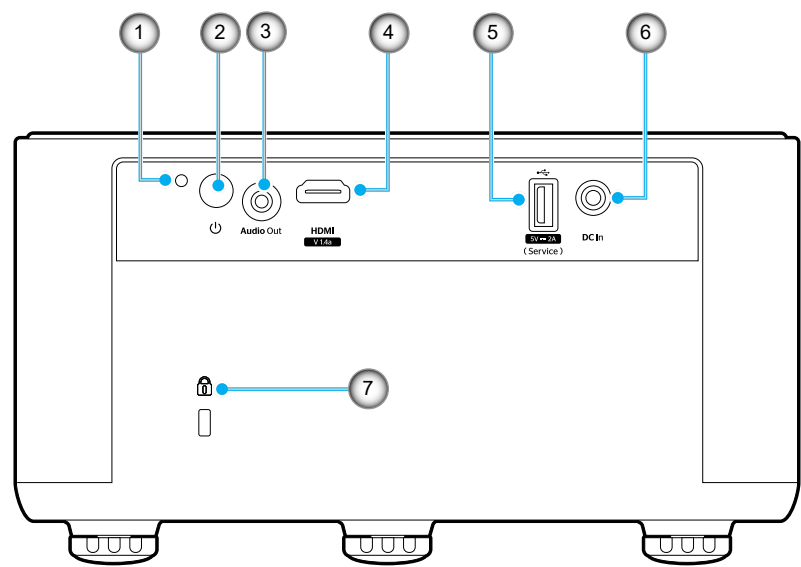
Note:

- 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.

No	Item	No	Item
1.	Ventilation (outlet)	4.	Lens
2.	Zoom lever/Focus ring	5.	Ventilation (inlet)
3.	IR receiver	6.	Tilt-adjustment feet

INTRODUCTION

Connections



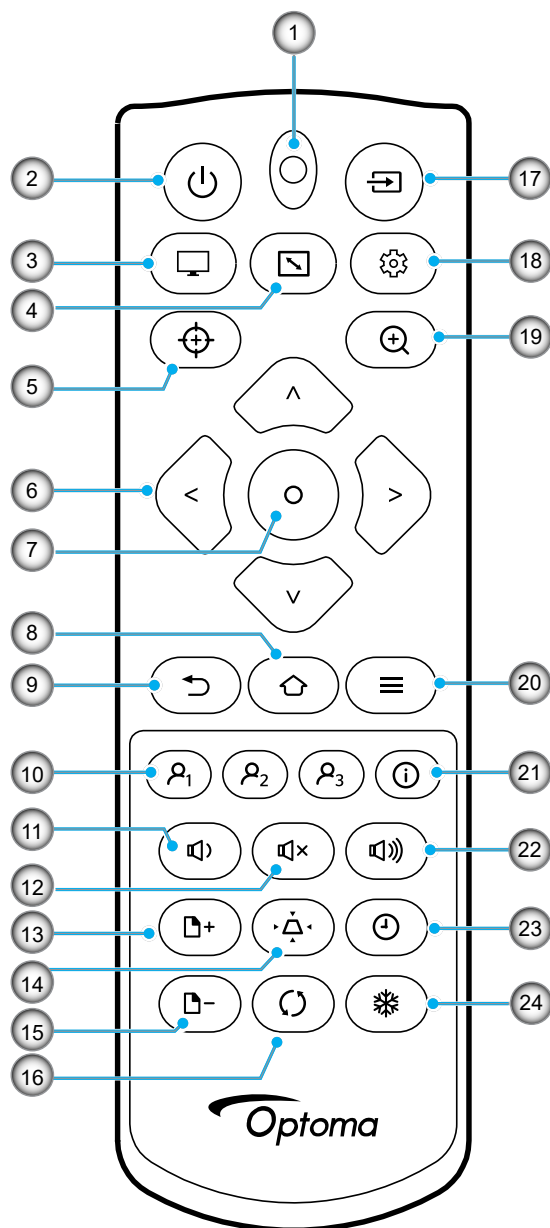
No	Item	No	Item
1.	LED indicator	5.	USB Power Out (5V $\overline{\text{---}}$ 2A) connector
2.	Power button	6.	DC jack
3.	Audio Out connector	7.	Kensington™ lock port
4.	HDMI connector		

Note:

- Supported signal modes vary by model and sales region.

INTRODUCTION

Remote control



No	Item	No function	No	Item	No function
1.	LED indicator		13.	Page Up	V
2.	Power On/Off		14.	Keystone Correction	V
3.	Picture Mode	V	15.	Page Down	V
4.	Aspect Ratio		16.	Re-sync	V
5.	Focus	V	17.	Source	V
6.	Four directional select keys		18.	Settings/Setup Menu	V
7.	Enter		19.	Zoom	V
8.	Home	V	20.	Menu	
9.	Return		21.	Information	V
10.	User 1/2/3 (assignable)	V	22.	Volume +	
11.	Volume -		23.	Sleep Timer	V
12.	Mute		24.	Freeze	V

INTRODUCTION

Note:

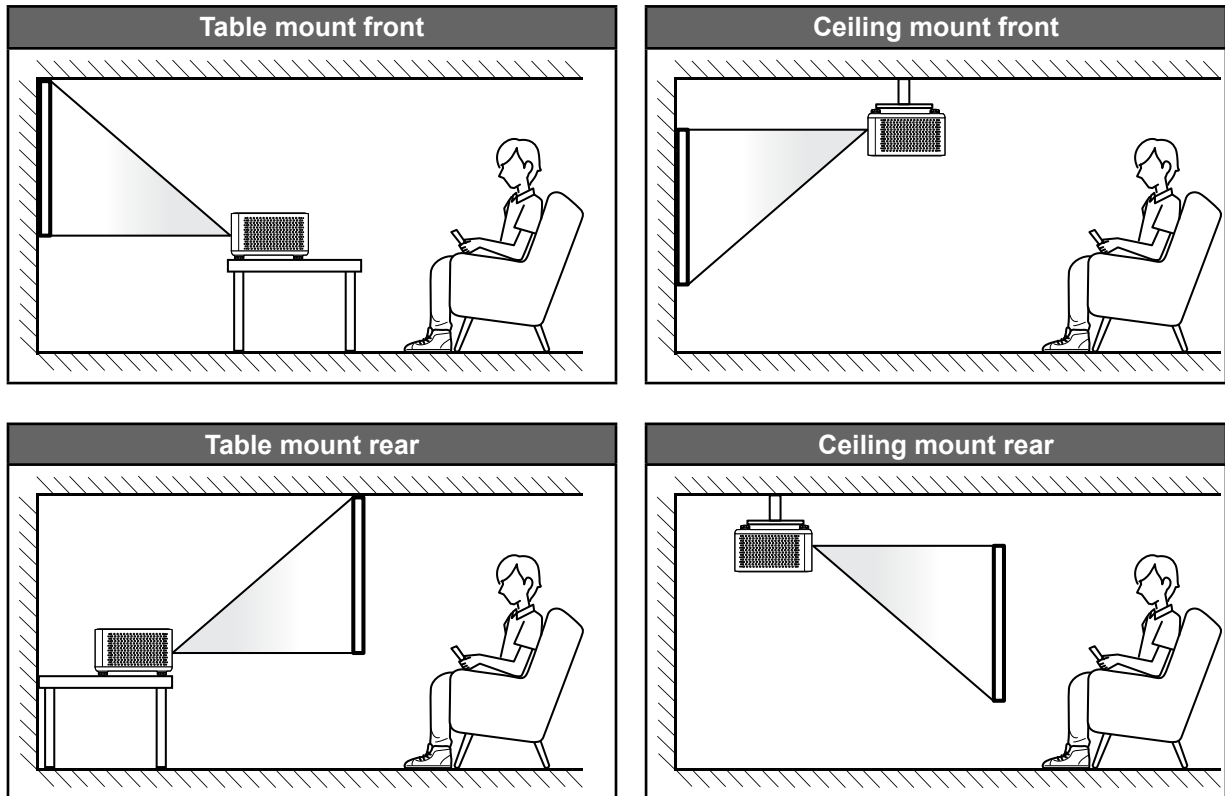
- *Some buttons may have no function for models that do not support these features.*
- *Before using the remote control for the first time, remove the transparent insulation tape. See page 16 for battery installation.*
- *The inclusion of the battery for the remote control may vary depending on the region.*
- *The remote control may vary depending on the region.*

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.

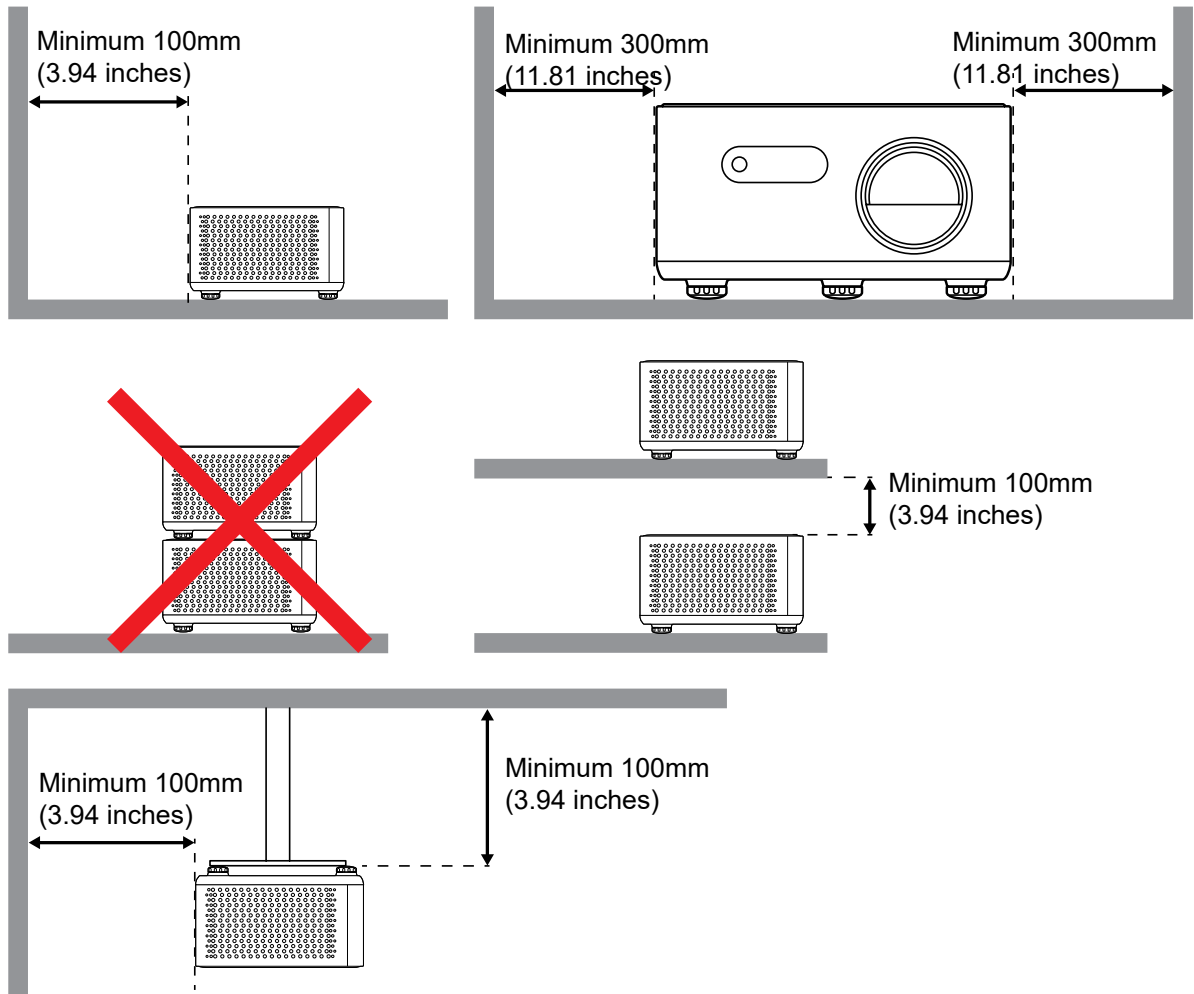
- How to determine projector location for a given screen size, please refer to distance table on page 28.
- How to determine screen size for a given distance, please refer to distance table on page 28.

Note: As the projector is moved farther away from the screen, the size of the projected image increases and the vertical offset also increases in proportion.

SETUP AND INSTALLATION

Projector installation notice

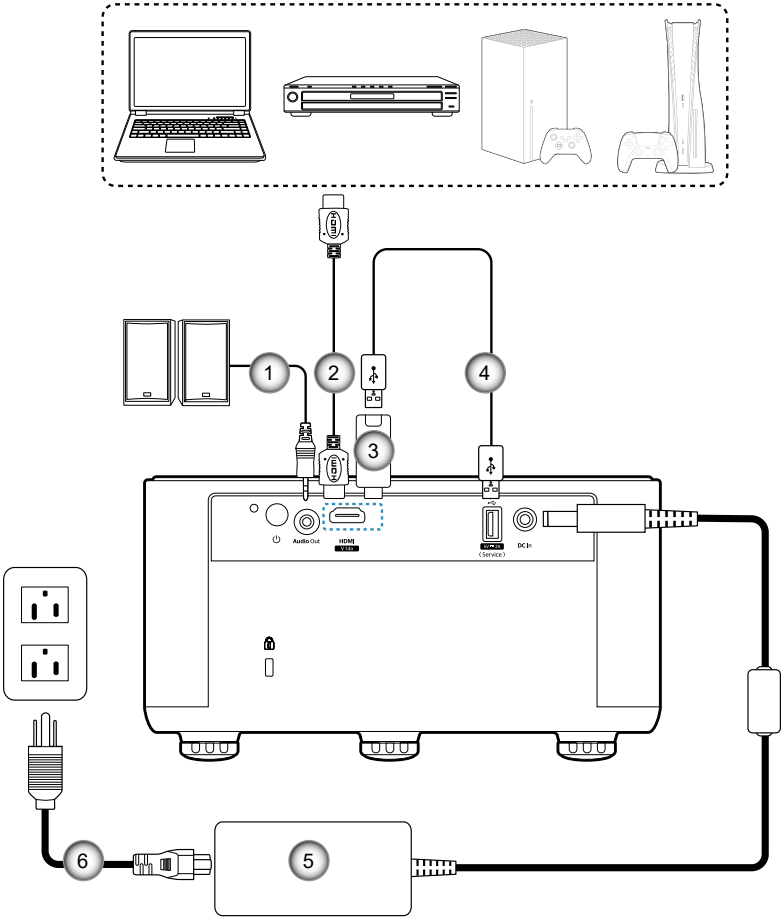
- Allow at least 30 cm clearance around the exhaust vent.



- 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 undergo a certified thermal evaluation to ensure that the projector does not recycle exhaust air, as this may cause the device to shut down even if the enclosure temperature remains within the acceptable operation temperature range.

SETUP AND INSTALLATION

Connecting sources to the projector



No	Item	No	Item
1.	Audio Out cable	4.	USB power cable
2.	HDMI cable	5.	Power adapter
3.	HDMI dongle	6.	Power cable

- Note:**
- To ensure the best image quality and avoid connection errors, we recommend the use of High Speed or Premium Certified HDMI cables up to 5 meters.

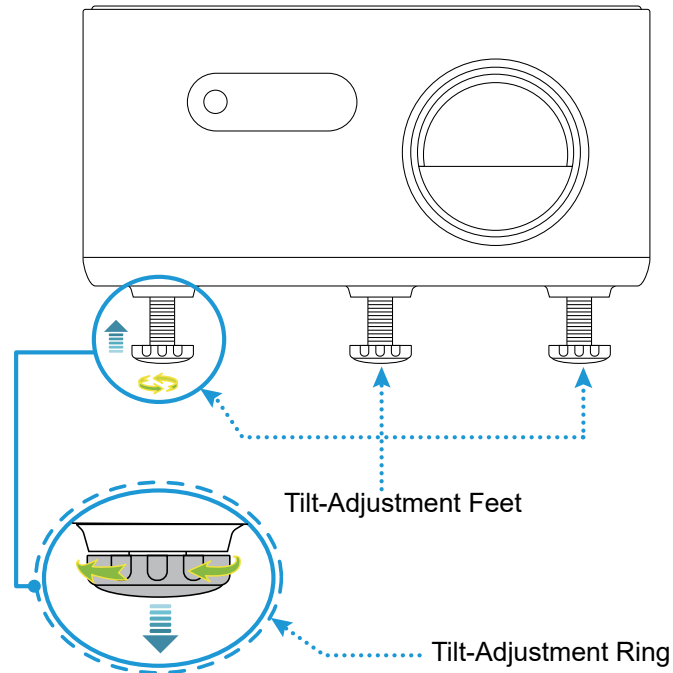
SETUP AND INSTALLATION

Adjusting the projector image

Image height

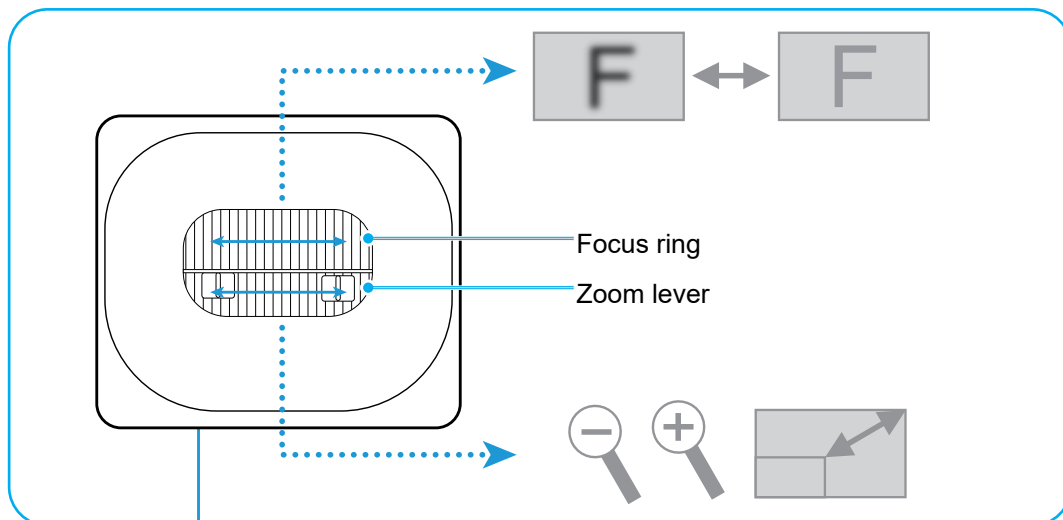
The projector is equipped with elevator feet for adjusting the image height.

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.

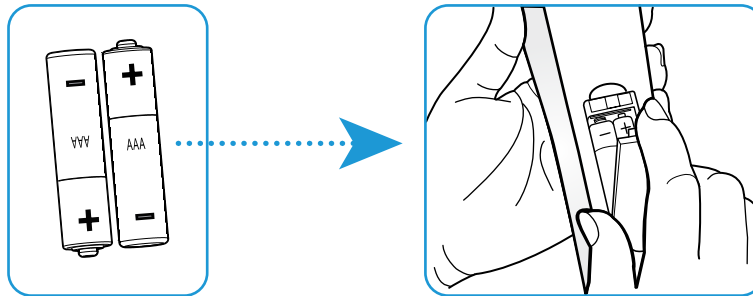


SETUP AND INSTALLATION

Remote setup

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.



CAUTION: To ensure safe operation, please observe the following precautions:

- Replacement of a battery with an incorrect type that can defeat a safeguard (AAA size battery type);
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion;
- Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas; and
- A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

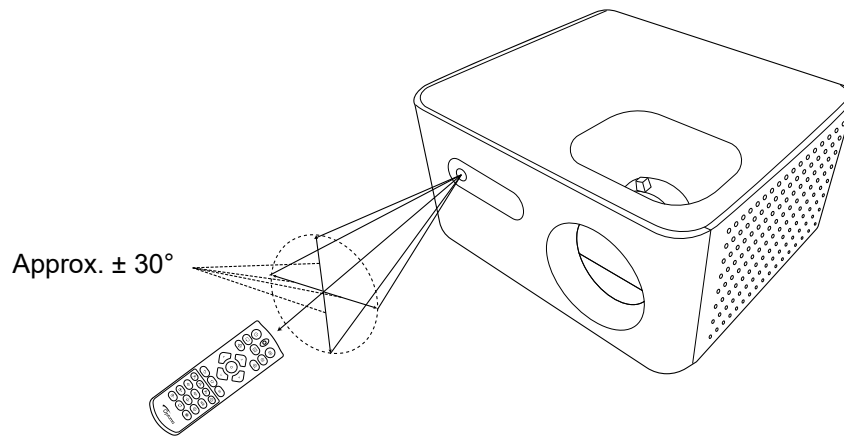
Note: *The inclusion of the battery and the battery type for the remote control may vary depending on the region.*

SETUP AND INSTALLATION

Effective range

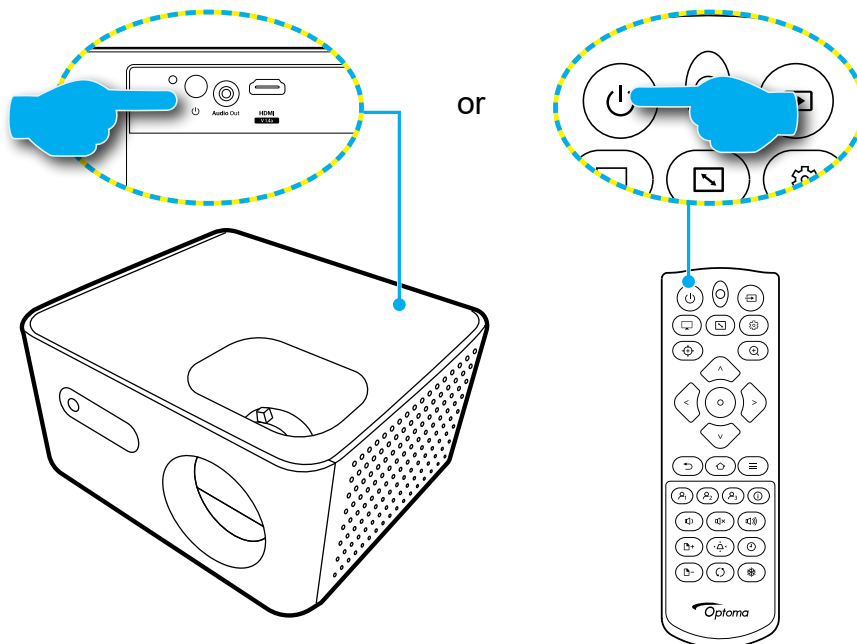
Infra-Red (IR) remote control sensor is located on the top and front sides of the projector. Ensure that the remote control is held at an angle 30 degrees perpendicular to the projector's IR remote control sensor to ensure correct functionality. The distance between the remote control and the sensor should not be longer than 8 meters (26 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 may 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 of one another, the remote control might become ineffective.




USING THE PROJECTOR

Powering on/off the projector




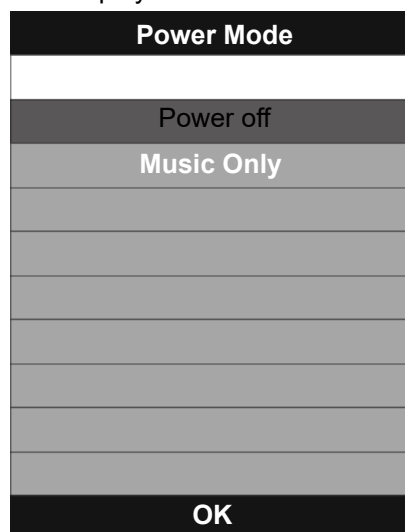
Powering on



1. Securely connect the power lead and signal/source cable. When connected, the Power LED will turn red.
2. Turn on the projector by pressing the  button on the back side of the projector or on the remote control.
3. A start up screen will be displayed and the Power LED turns 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 back side of the projector or on the remote control. The following message will be displayed.




2. Press the  button again to confirm, otherwise the message will disappear after 15 seconds. When you press the  button for the second time, the projector will shut down.

USING THE PROJECTOR




3. When the Power LED turns solid red, this indicates the projector has entered standby mode.
4. Disconnect the power lead from the electrical outlet and the projector.

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

Playing music

1. Press the  button on the back of the projector or on the remote control. The following message will be displayed.



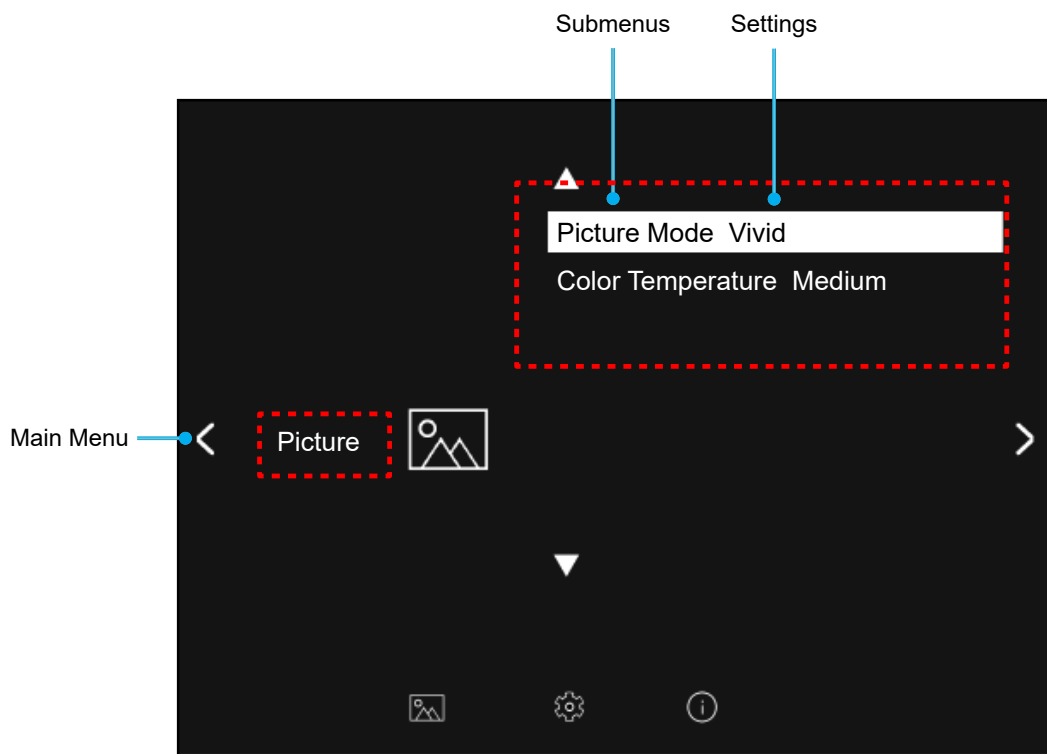
2. Press  to select Music Only and then press . The projector will stop displaying images and continue playing music, similar to an MP3 player.
3. To resume image projection, press the  button again.

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 **≡** on the remote control.
2. When OSD is displayed, press **< / >** to select a main menu.
3. Press **^ / v** to select a desired sub menu and then press **○** to view further settings. Adjust the settings by using **^ / v / < / >**.
4. To save and exit, press **≡** or **↶**. The OSD menu will close and the projector will automatically save the new settings.



USING THE PROJECTOR

OSD menu

Note: The OSD menu tree items and features are subject to models and region. Optoma reserves the right to add or remove items to improve product performance without notice.

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3
Picture	Picture Mode	Bright	Brightness 0-50-100
			Contrast 0-50-100
			Color 0-50-100
			Sharpness 0-50-100
		Vivid	Brightness 0-50-100
			Contrast 0-50-100
			Color 0-50-100
			Sharpness 0-50-100
		Cinema	Brightness 0-50-100
			Contrast 0-50-100
			Color 0-50-100
			Sharpness 0-50-100
		Game	Brightness 0-50-100
			Contrast 0-50-100
			Color 0-50-100
			Sharpness 0-50-100
	Color Temperature	Medium	
		Warm	
		Cool	
Option	Projection Orientation	Front Table	
		Front Ceiling	
		Rear Table	
		Rear Ceiling	
	Sound Mode	Standard	
		Music	
		Movie	
	Aspect Ratio	Auto	
		4:3	
		16:9	
	Keystone Setting	Auto V Keystone	On
			Off
		V Keystone	-25 - 0 - 25
		H Keystone	-25 - 0 - 25
	Color Space	Auto	
		0 ~ 255	
		16 ~ 235	
	ECO Mode	On	
		Off	
	High Altitude Mode	On	
		Off	

USING THE PROJECTOR

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3
System	Language	English	
		Deutsch	
		Français	
		Italiano	
		Español	
		Polski	
		Português	
		Türkçe	
		Čeština	
		繁體中文	
	AC Power On	Off	
		On	
	HDMI Power On	Off	
		On	
	Auto Power Off (min.)	Off	OSD warning message: Adjusting power-related functions may increase energy consumption.
		15	
		30	
		60	
		120	
	Information	Device Name: xxxx	
		Detected Resolution: xxxxxx	
		Picture Mode: xxxxxx	
		Power Mode: xxxxx	
		Firmware Version: xxxx	
	Firmware Upgrade (USB)	Are you sure?	
	Factory Reset	Reset	
		Cancel	

USING THE PROJECTOR

1. Main menu: Picture

Picture Mode

There are several predefined display modes that you can choose from to suit your viewing preference. Each mode has been fine-tuned by our expert colour team to ensure superior colour performance for wide range of content.

- **Bright**
This mode is suitable for environments where extra-high brightness is required, such as using the projector in well-lit rooms.
- **Vivid**
Selecting this mode balances colour saturation and brightness for a brighter display. Choose this mode for setups with ambient lighting, or where brighter images/presentations are necessary.
- **Cinema**
Provides the best balance of detail and colors for watching movies.
- **Game**
Optimises your projector for maximum contrast and vivid colours allowing you to see shadow detail when playing video games.

Color Temperature

Selects a color temperature from Medium, Warm, and Cool.

2. Main menu: Option

Projection Orientation

Selects a preferred projection position between Front Table, Front Ceiling, Rear Table, and Rear Ceiling.

Sound Mode

Selects a preferred sound mode between Standard, Music, and Movie.

Aspect Ratio

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

- **Auto**
Automatically selects the appropriate display format.
- **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.

USING THE PROJECTOR

Keystone Setting

- **Auto V Keystone**
Automatically corrects the vertical sides of the distorted image.
- **V Keystone**
Adjust image distortion vertically and make a squarer image. Vertical keystone is used to correct a keystone image shape in which the top and bottom are unequal in length. This is intended for use with vertically on-axis applications.
- **H Keystone**
Adjust image distortion horizontally and make a squarer image. Horizontal keystone is used to correct a keystone image shape in which the left and right borders of the image are unequal in length. This is intended for use with horizontally on-axis applications.

Color Space

Selects an appropriate color matrix type from the following: Auto, RGB (0-255), and RGB (16-235).

Eco Mode

Sets to save power dissipation further < 0.5W.

High Altitude Mode

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

3. Main menu: System

Language

Sets the language for the OSD menus.

Auto Power On

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

HDMI Power On

Choose “On” to activate Signal Power mode. The projector will automatically power on when a signal is detected, without pressing the ⏻ (Power) button on the projector or remote control.

Note:

- *This function is supported with an HDMI source.*

USING THE PROJECTOR

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 finishes.

Information

View the projector information as listed below:

- Device Name
- Detected Resolution
- Picture Mode
- Power Mode
- Firmware Version

Firmware Upgrade (USB)

Perform the following steps to update the firmware.

1. Download the latest version from Optoma website and copy the file "OPTO_SPARROW_USB" to a USB flash drive. It is recommended using a USB flash driver in FAT32 format.
2. Power on the projector and plug the USB flash drive into the USB Type A port on the projector.
3. Go to the System > Firmware Upgrade (USB) menu and press the Enter button (**O**) to display the confirmation page.
4. Select Yes and the update process will begin.
5. Wait until the update process finishes.

Factory Default

Resets all the OSD menus to their factory defaults.

ADDITIONAL INFORMATION

Compatible resolutions

Input signal for HDMI PC timings

Resolution	Mode	Refresh Rate (Hz)	H-Frequency (kHz)	Clock (MHz)
640 x 480	VGA_60	59.939	31.468	25.175
	VGA_72	72.808	37.860	31.500
	VGA_75	75.000	37.500	31.500
800 x 600	SVGA_56	56.250	35.156	36.000
	SVGA_60	60.315	37.878	40.000
	SVGA_72	72.186	48.076	50.000
	SVGA_75	75.000	46.875	49.500
848 x 480	848 x 480_60	60.000	60.000	33.750
1024 x 768	XGA_60	60.004	48.363	65.000
	XGA_70	70.069	56.476	75.000
	XGA_75	75.028	60.022	78.750
1152 x 864	SXGA_70	70.000	63.000	96.768
	SXGA_75	75.000	67.500	108.000
1280 x 1024	SXGA_60	60.020	63.981	108.000
	SXGA_72	71.990	77.893	134.600
	SXGA_75	75.024	79.976	135.000
1280 x 960	QuadVGA_60	60.000	60.000	108.000
1280 x 960	QuadVGA_75	75.000	75.000	126.000
1400 x 1050	SXGA+_60	59.978	65.316	121.750
1600 x 1200	UXGA_60	60.000	75.000	162.000
1280 x 768	WXGA_60	59.870	47.776	79.500
	WXGA_75	74.892	60.288	102.250
1280 x 720	WXGA_60	60.000	45.000	74.250
1280 x 800	WXGA_60	59.810	49.702	83.500
1440 x 900	WXGA+_60	59.887	55.934	106.500
1920 x 1200	WXGA+_60	59.950	74.038	154.000
1680 x 1050	1680 x 1050_60	59.954	65.290	146.250
1366 x 768	1366 x 768_60	59.789	47.712	85.500
1920 x 1080	1920 x 1080_RB	59.933	66.586	138.500
1920 x 1200	1920 x 1200-RB	59.950	74.038	154.000

ADDITIONAL INFORMATION

Input signal for HDMI video timings

Resolution	Mode	Refresh Rate (Hz)	H-Frequency (kHz)	Clock (MHz)
Video (HDMI)	480i	60	15.73	27.000
	480p	59.939	31.48	27
	576i	50	15.63	27.000
	576p	50	31.25	27.000
	720p_60	60	45.00	74.25
	720p_50	50	37.50	74.25
	1080i_60	60	33.75	74.25
	1080i_50	50	28.13	74.25
	1080p	60	67.5	148.5
	1080p	50	56.26	148.5
	1080p	24	27.00	74.25
	1080p	23.98	26.97	74.175
	2160/24P	24	54	297
	2160/25P	25	56.25	297
	2160/30P	30	67.5	297

ADDITIONAL INFORMATION

Image size and projection distance

Screen Size				Projection Distance in mm			Wide Verticle Offset (Hd)
Diagonal (inch)	Diagonal (mm)	Height (mm)	Width (mm)	Min distance (w/ max zoom)	Average	Max distance (w/ min zoom)	
60	1524	747	1328	1992	2092	2192	37
70	1778	872	1550	2324	2441	2557	44
80	2032	996	1771	2657	2789	2922	50
90	2286	1121	1992	2989	3138	3287	56
100	2540	1245	2214	3321	3487	3653	62
110	2794	1370	2435	3653	3835	4018	68
120	3048	1494	2657	3985	4184	4383	75
130	3302	1619	2878	4317	4533	4749	81
140	3556	1743	3099	4649	4881	5114	87
150	3810	1868	3321	4981	5230	5479	93

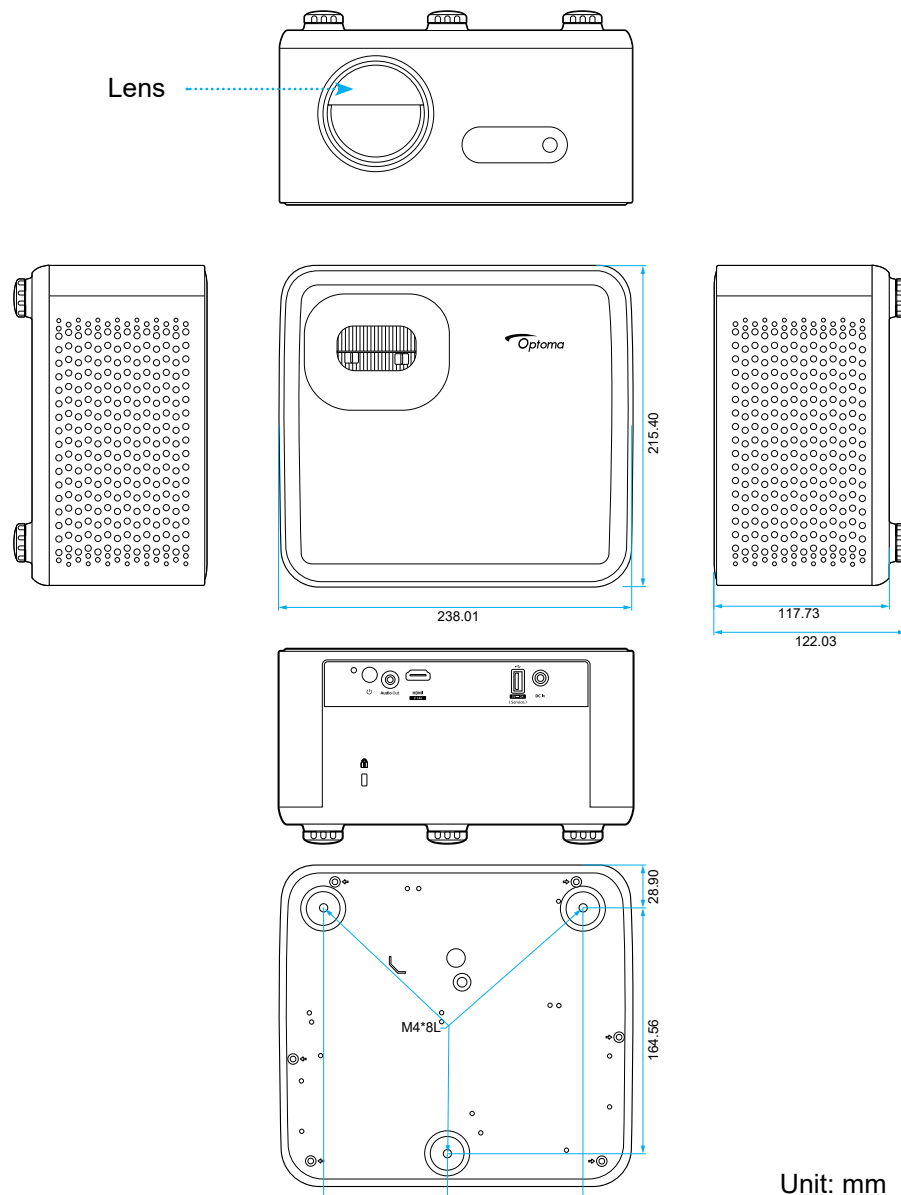
Note:

- *Zoom Ratio: 1.1x ± 2%*

ADDITIONAL INFORMATION

Projector dimensions and ceiling mount installation

1. To prevent damage to your projector, please use the Optoma ceiling mount kit.
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*10mm
 - Minimum screw length: 10mm



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

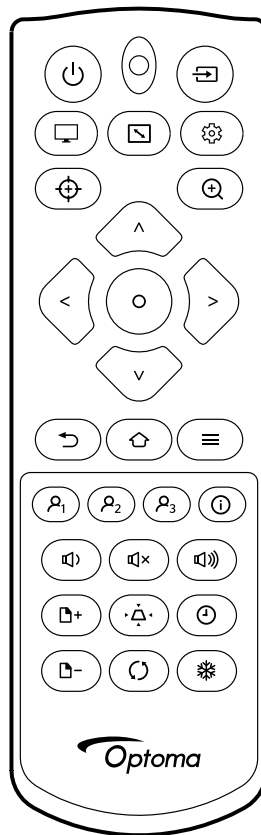


Warning:

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

ADDITIONAL INFORMATION

IR remote control codes



Button		Repeat Format (F1:Not-Repeat F2: Repeat)	Custom Code		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
Power On/Off		F1	32	CD	2	FD	Turns on/off the projector.
Source		F1	32	CD	C3	3C	Shows the Input Source menu.
Mode		F1	32	CD	5	FA	Shows the Picture Mode menu.
Aspect Ratio		F1	32	CD	64	9B	Shows the Aspect Ratio menu
Settings/ Setup Menu		F1	32	CD	A8	57	Enters the Device Setup main menu.
Focus		F1	32	CD	26	D9	Shows the Focus bar menu.
Zoom		F1	32	CD	08	F7	Shows the Zoom bar menu.
Up	^	F2	32	CD	11	EE	Selects items or makes adjustments to your selection.
Left	<	F2	32	CD	10	EF	
Right	>	F2	32	CD	12	ED	
Down	v	F2	32	CD	14	EB	

ADDITIONAL INFORMATION







Button		Repeat Format (F1:Not-Repeat F2: Repeat)	Custom Code		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
Enter	○	F1	32	CD	0F	F0	Confirms your item selection.
Return	↩	F1	32	CD	0D	F2	Returns to the previous menu.
Home	🏠	F1	32	CD	A0	5F	<ul style="list-style-type: none"> OSD on: Goes to the top level of its category. OSD off: No function.
Menu	≡	F1	32	CD	0E	F1	Turns on/off the onscreen display menus
User1	👤 ₁	F1	32	CD	36	C9	Recalls user defined settings.
User2	👤 ₂	F1	32	CD	65	9A	
User3	👤 ₃	F1	32	CD	66	99	
Information	ℹ	F1	32	CD	25	DA	Shows the information menu.
Vol-	🔊	F2	32	CD	8F	70	Decreases the projector volume.
Mute	🔊×	F1	32	CD	52	AD	Toggles the projector audio between on and off.
Vol+	🔊))	F2	32	CD	8C	73	Increases the projector volume.
Page Up	📄+	F2	32	CD	C1	3E	Goes to the previous or next OSD menu page.
Page Down	📄-	F2	32	CD	C2	3D	
Keystone Correction	⤵	F1	32	CD	7	F8	Shows the Geometric Correction menu.
Sleep Timer	⌚	F1	32	CD	63	9C	Shows the Sleep Timer menu.
Resync	↺	F1	32	CD	C4	3B	Resynchronizes the input source.
Freeze	❄	F1	32	CD	6	F9	Freezes the image.

ADDITIONAL INFORMATION

Troubleshooting

If you experience a problem with your projector, please refer to the following information. If the 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 "Connecting sources to the projector" on page 14.
 - Ensure that the pins of the 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 becomes sharp and clear. (Please see page 15).
 - Make sure the projection screen is between the required distance from the projector. (Please refer to page 28).
-  *The image is stretched when displaying a 16:9 DVD title*
- When you play an anamorphic DVD or a 16:9 DVD, the projector will display the best image in 16:9 format.
 - If you play a 4:3 format DVD title, please change the format as 4:3 in the projector's OSD.
 - Please set up the display format as 16:9 (wide) aspect ratio 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 15).
 - Move the projector closer to or farther from the screen.
 - Press "Menu" on the remote control, and go to "Option > 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*
- Select "Option > Projector Orientation" 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 $\pm 30^\circ$ to the IR receiver on the projector.
- Make sure there are not any obstructions between the remote control and the projector. Move to within 8 m (26 ft) of the projector.
- Make sure batteries are inserted correctly.
- Replace batteries if they are exhausted.

ADDITIONAL INFORMATION

Warning indicator

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

- Thermal error: The LED indicator lights red and flashes blue.
- Fan error: The LED indicator flashes red and lights blue.
- Light error: The LED indicator flashes blue.

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

LED indicator messages

Message	Power LED	
	(Red)	(Blue)
Standby state (Input power cord)	Steady light	
Power on		Steady light
Power off (Cooling)	Steady light	
Firmware download	Flashing	
Thermal error	Steady light	Flashing
Fan error	Flashing	Steady light
Light error		Flashing

ADDITIONAL INFORMATION

Specifications

Item		Description
Native Resolution		1080p
Lens	Throw ratio	1.50 to 1.65
	F-stop	2.0 to 2.05
	Focal length	15.843 to 17.445 mm
	Zoom range	1.1x ± 2%
Offset		105%, tolerance ± 3%
Image size		60" to 150"
Projection distance		1.99 m to 4.98 m
I/Os		<ul style="list-style-type: none">• HDMI 1.4a x 1• Audio Out 3.5 mm• USB Type-A x 1• DC Jack
Colour		1.07 Billion Colors
Scan rate		<ul style="list-style-type: none">• Horizontal scan rate: 15KHz to 102KHz• Vertical scan rate: 23Hz to 76Hz
Speaker		5W x 1
Power consumption		<ul style="list-style-type: none">• Standby mode: < 0.5W• Bright mode: 120W range 15% @110VAC (typ.); 118W range 15% @ 220VAC (typ.)• Eco mode: 69W range 15% @110VAC (typ.); 68W range 15% @220VAC (typ.)
Input current		DC 20V, 7.5A
Installation orientations		Front, Rear, Ceiling, Rear-top
Dimensions (W x D x H)		<ul style="list-style-type: none">• Without feet: 238 x 215 x 117.7 mm• With feet: 238 x 215 x 130 mm
Weight		2.3 kg
Environmental		Operating in 0~40°C, 90% humidity (max., non-condensing)

Note: All specifications are subject to change without notice.




ADDITIONAL INFORMATION

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