



SPRINGTREE
MEDIA GROUP



The MU9

8000 Lumen Long Throw DLP Laser
Projector - User Manual

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SAFETY

	The lightning flash with arrow head within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EEC.

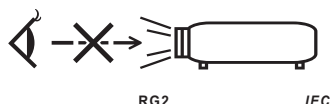


Warning

- *This product must not be used in residential areas.*
- *This product may cause interference if used in residential areas.*

Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.

Important Safety Instructions



- *Do not stare into the beam, RG2.*
As with any bright source, do not stare into the direct beam, RG2 IEC 62471-5:2015.
- *Do not block any ventilation openings. To ensure reliable operations of the projector and to protect it from overheating, 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 surface. 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 emit 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 (41°F ~ 104°F)
 - (ii) Relative humidity is 10% ~ 85%
 - In areas susceptible to excessive dust and dirt.
 - Near any appliance generating a strong magnetic field.
 - In direct sunlight.
- *Do not use the unit if it has been physically damaged or abused. Physical damage/abuse would be (but not limited to):*
 - Unit has been dropped.
 - Power supply cord or plug has been damaged.
 - Liquid has been spilled onto the projector.
 - Projector has been exposed to rain or moisture.

- Something has fallen on 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 up the object and it could 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 the After-sales Service before you send the unit for repair.*
- *See projector enclosure for safety-related markings.*
- *The unit should only be repaired by authorized service personnel.*
- *Only use attachments/accessories specified by the manufacturer.*
- *Do not look straight into the projector lens during operation. The bright light may harm your eyes.*
- *When switching the projector off, please ensure that the cooling cycle has been completed before disconnecting power. Allow 90 seconds for the projector to cool down.*
- *Turn off and unplug the power plug from the AC outlet before cleaning the product.*
- *Use a soft dry cloth with mild detergent to clean the projector housing. Do not use abrasive cleaners, waxes or solvents to clean the unit.*
- *Disconnect the power plug from the AC outlet if the product will not be 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 use laser or other products with strong focusing (light) performance to direct the projector to prevent the image processing chip or other parts from being damaged.*

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 the lens and wipe the lens gently. Do not touch the lens with your fingers.*
- *Do not use alkaline/acid detergents or volatile solvents such as alcohol for cleaning the lens. If the lens is damaged due to the cleaning process, it will not be 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.*
- *Do not clean the lens if the projector is warming up as this may cause the lens' surface film to peel off.*
- *Do not wipe or tap the lens with a hard object.*

SAFETY

Hazard distance of hard light

This product is classified as a Class 1 laser product - Risk Group 2 under IEC 60825-1:2014 and complies with 21 CFR 1040.10 and 1040.11, with the exception of Risk Group 2 LIP as defined in IEC 62471-5:Ed 1.0. For more information, see Laser Notice No. 57, dated May 8, 2019.

In accordance with IEC 60825-1:2014 and IEC 62471-5:2015, this projector may be a Risk Group 3 (RG3), Class 1 laser product when using an A13 lens (throw ratio greater than 2.92) and a Risk Group 2 (RG2), Class 1 laser product when using other lenses (throw ratios less than 2.92). According to the classification and requirements for Laser Illuminated Projectors (LIPs), a variance approval is made for RG3 LIP based on 21 CFR 1010.4 (Laser Notice No. 57).

Projection Lens	Throw ratio	Classification and requirements for Laser Illuminated Projectors (LIP)	
• A01	• 0.95-1.22	• Hd (hazard distance): none	• IEC 60825-1: 2014, EN 60825-1: 2014+A11:2021 CLASS 1 LASER PRODUCT • CLASS 1 LASER PRODUCT - RISK GROUP 2.
• A02	• 1.22-1.52		
• A03	• 1.52-2.92		
• A06	• 1.22-1.52		
• A15	• 0.75-0.95		

Projection Lens	Throw ratio	Classification and requirements for Laser Illuminated Projectors (LIP)	
• A13	• 2.9-5.5	• Hd (hazard distance): 2.55 m	• IEC 62471-5: 2015 • IEC 60825-1: 2014 • CLASS 1 LASER PRODUCT - RISK GROUP 3.

Laser Radiation Safety Information

- Complies with IEC 60825-1:2014: Class 1 laser product.



IEC 60825-1:2014.

- This projector has built-in Class 4 laser module. Disassembly or modification is very dangerous and should never be attempted.
- Any operation or adjustment not specifically instructed by the user's guide creates the risk of hazardous laser radiation exposure.
- Do not open or disassemble the projector as this may cause damage by the exposure of laser radiation.
- Do not stare into beam when the projector is on. The bright light may result in permanent eye damage.
- When turning on the projector, make sure that no one within projection range is looking at the lens.
- Without following the control, adjustment or operation procedure may cause damage by exposure to laser radiation.
- Adequate instructions for assembly, operations and maintenance, including clear warnings concerning precautions to avoid possible exposure to laser and collateral radiation in excess of the accessible emission limits in Class 2.
- This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Interference-Causing Equipment Regulations.
- Cet appareil numérique de la class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.
- We recommend that you install this projector out of the reach of children

Product safety label

Beam-related safety label

Label image



Label description

This projector has built-in Class 4 laser module. Never attempt to disassemble or modify the laser module.

Product Name:DLP Projector

MU9

Input: AC 100-240V~, 50/60Hz, 6.5A



S2Z0323U0070 Month:2024.1

Made in China



IEC 60825-1:2014,
Complies with IEC 62471-5:2015 Risk Group



Warning:
This is an A-class product, which may cause radio interference in living environments.
In this case, users may need to take practical measures to address their interference.

Product Name:DLP Projector

MU10

Input: AC 100-240V~, 50/60Hz, 6.5A



S2Z0316U0188 Month:2024.1

Made in China



IEC 60825-1:2014,
Complies with IEC 62471-5:2015 Risk Group



Warning:
This is an A-class product, which may cause radio interference in living environments.
In this case, users may need to take practical measures to address their interference.

Product Name:DLP Projector

M7

Input: AC 100-240V~, 50/60Hz, 3.8A



S2Z0349U0025 Month:2024.1

Made in China



IEC 60825-1:2014,
Complies with IEC 62471-5:2015 Risk Group



Warning:
This is an A-class product, which may cause radio interference in living environments.
In this case, users may need to take practical measures to address their interference.

Product Name:DLP Projector

M8

Input: AC 100-240V~, 50/60Hz, 5.0A



S2ACU4140002 Month:2024.1

Made in China



IEC 60825-1:2014,
Complies with IEC 62471-5:2015 Risk Group



Warning:
This is an A-class product, which may cause radio interference in living environments.
In this case, users may need to take practical measures to address their interference.



This projector may become a Risk Group 3 product when an interchangeable lens with a throw ratio greater than 2.92:1 is installed. For a list of lenses and the hazard distance, see the manual. This combination of projector and lens is intended for professional use only and is not suitable for general consumers. Not suitable for home use. Direct exposure to the beam is strictly prohibited. Do not touch the beam directly, otherwise it may cause damage to your retina.

SAFETY

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) lightheadedness; (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 or not 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.*

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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 Brilliant Color™ is a trademark of Texas Instruments.

HDBaseT™ and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance.

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

Declaration of Conformity for EU countries

- *EMC Directive 2014/30/EC (including amendments)*
- *Low Voltage Directive 2014/35/EC*
- *RED 2014/53/EU (if product has RF function)*

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT



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.

Ground the power cord. This device is intended for use with the power cord grounded. Failure to ground the power cord may cause electric shock. Be sure to connect the power cord directly to a wall outlet and ground it properly. Do not use a 2-core plug converter adapter.

Precaution: This equipment is equipped with a three-pin grounding-type power plug. Do not remove the grounding pin on the power plug. This plug will only fit a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician. Do not defeat the purpose of the grounding plug.



Warning: Do not remove the grounding pin on the power plug. This apparatus is equipped with a three prong grounding type mains plug. This plug will only fit a grounding -type mains socket. This is a safety feature. If you are unable to insert the plug into the mains socket, contact an electrician. Do not defeat the purpose of the grounding plug.

Statement: This is a Class A product that may cause radio interference in the living environment, in which case the user may be required to take practical action against the interference.

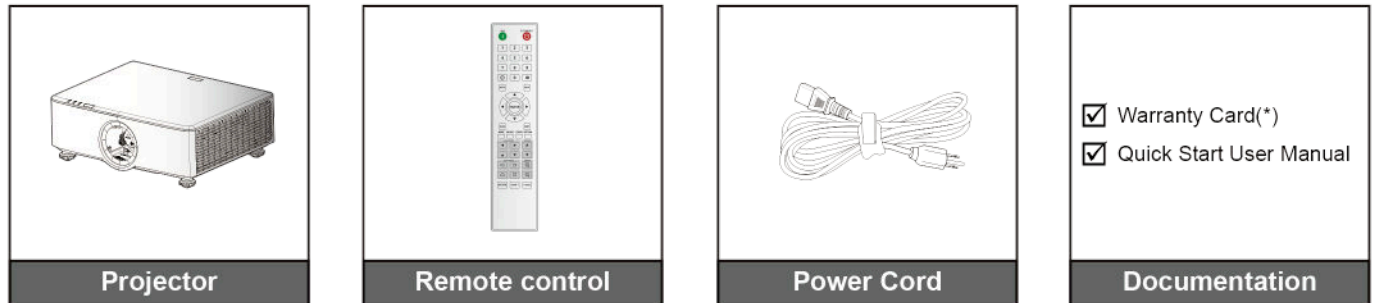
Statement: Running this device may cause radio interference in your residential environment.

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, specifications 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.



Optional accessories

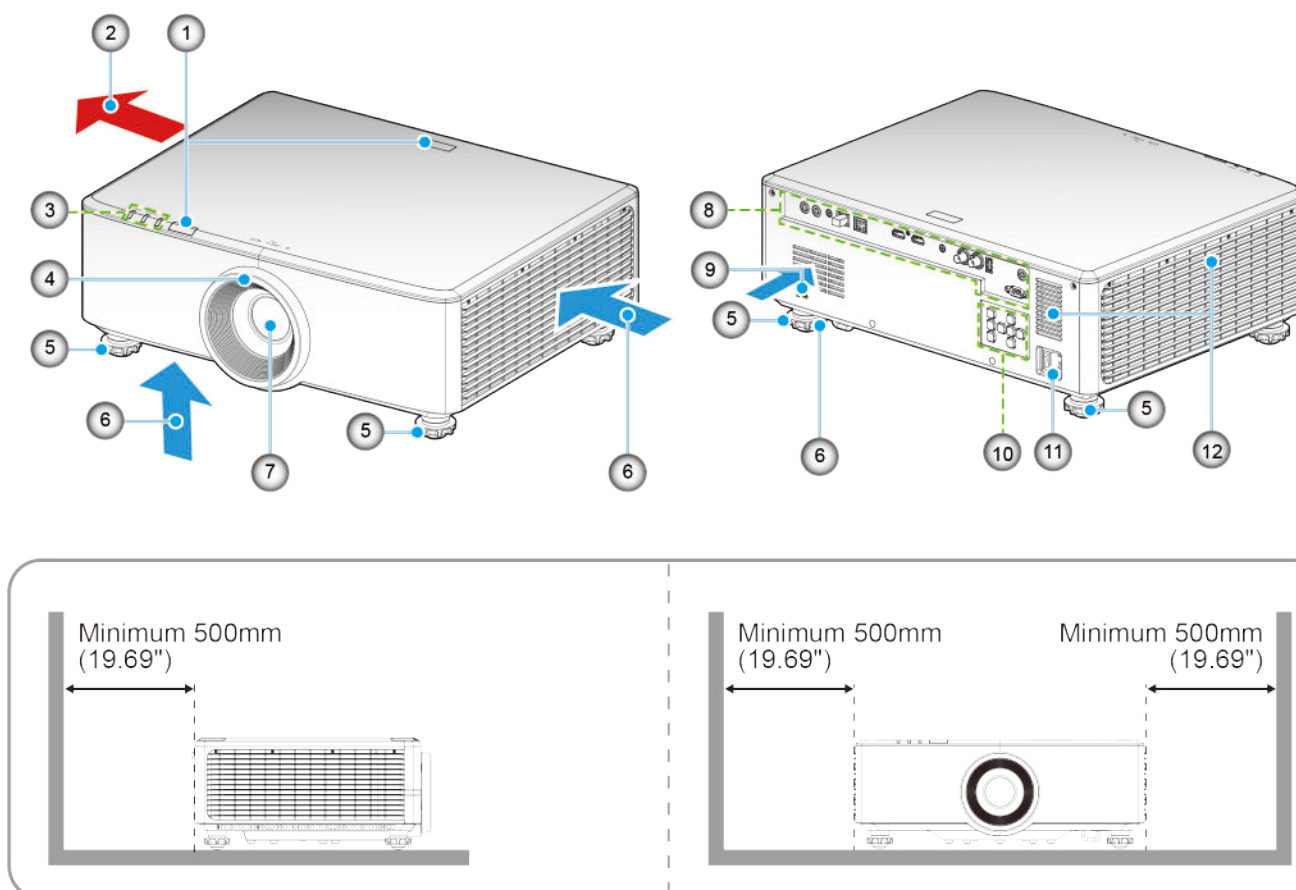


Note:

- Actual accessories vary by model, specification and geographic location.
- Using the improper model of battery pack may invalidate safety protection (e.g., for some types of lithium battery packs);
- Throwing the battery pack into fire or a heating oven or mechanically squeezing or cutting the battery pack may cause an explosion;
- Placing the battery pack in an extremely high temperature environment may result in an explosion or leakage of combustible liquids or gases; and
- Subjecting the battery pack to extremely low air pressure may result in explosion or leakage of combustible liquids or gases.
- Do not swallow batteries: chemical burn hazard or text;
- Keep children away from new and used batteries.
- If the battery compartment is not securely closed, stop using the product and keep it away from children.
- If you think the battery may have been swallowed or placed inside any part of the body, seek medical attention immediately.

Standard Accessories

Product Overview



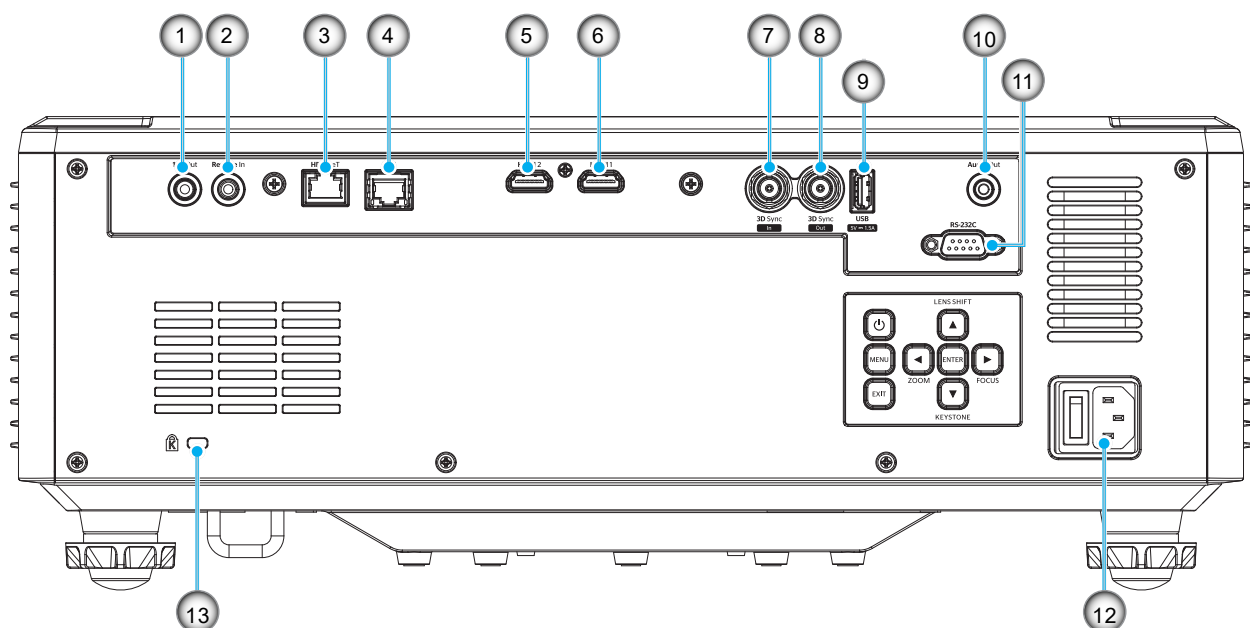
Note:

- Do not block projector intake and exhaust vents.
- When operating the projector in an enclosed space, allow at least 500mm (19.69") clearance around the intake and exhaust vents.
- Differences may exist between different models.

No.	Items	No.	Items
1.	IR Receiver	7.	Projection Lens
2.	Ventilation (Outlet)	8.	Input / Output
3.	LED Indicators	9.	Kensington™ Lock Port
4.	Decorative Ring	10.	Keyboard
5.	Tilt-Adjustment Feet	11.	Power Socket / Power Switch
6.	Ventilation (Inlet)	12.	Speakers

Introduction

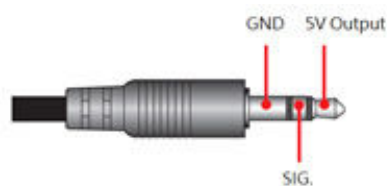
Connection



1.	12V Out Connector	12V Trigger Cable	Electric screen, curtain, etc.
2.	Remote In Connector	Wired Remote Control Cable or IR Receiver Cable (3.5mm TRS type ²)	RCU
3.	HDBaseT Connector	RJ-45 Cable	Media Player
4.	RJ-45 Connector	RJ-45 Cable	Local or corporate networks
5.	HDMI 2 Connector (HDMI v2.0 4K)	HDMI Cable	Computer, Games, Media Player
6.	HDMI 1 Connector (HDMI v2.0 4K)	HDMI Cable	Computer, Games, Media Player
7.	3D Sync In Connector	3D Sync Cable	PC
8.	3D Sync Out Connector	3D Sync Cable	3D Emitter
9.	USB Interface (Power 5V 1.5A) (*) ³	USB (A to A) Cable	USB Flash Drive
10.	Audio Out Connector	Audio Out Cable	Sound box
11.	RS232 Connector	RS232 Cable	PC
12.	Power Socket / Power Switch	Power Cord	Projector
13.	Kensington™ Lock Port	Immobilizer Cable	Projector

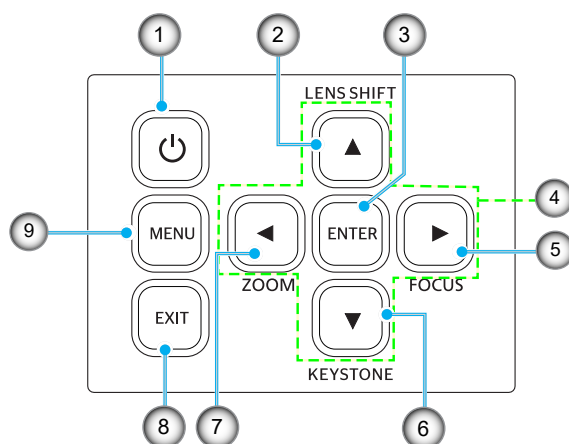
Note:

- These are just a few connection examples. Each port may have more options available.
- 3.5mm TRS Model



- *Not recommended for charging cell phone.*
- *Differences may exist between models.*

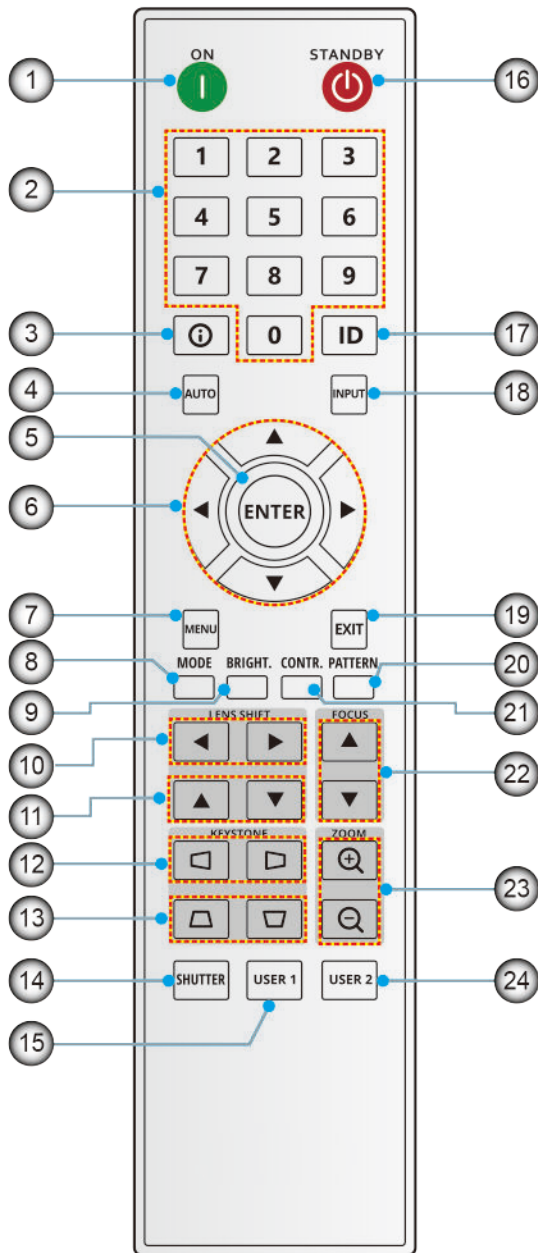
Keyboard



1.	Power key	Turn on or off the projector
2.	Lens Shift	Adjust Lense V./H. Position
3.	OK	Confirm Setup
4.	Four Directional Select Keys	Navigation key
5.	Focus	Adjust the focus of the image
6.	Keystone	Adjust the keystone correction
7.	Zoom	Adjust the size of the image.
8.	Return	Return to previous level or exit menus if at top level.
9.	Menu	Display the main menu on the screen or return to the previous level Exit menus if at top level.

Introduction

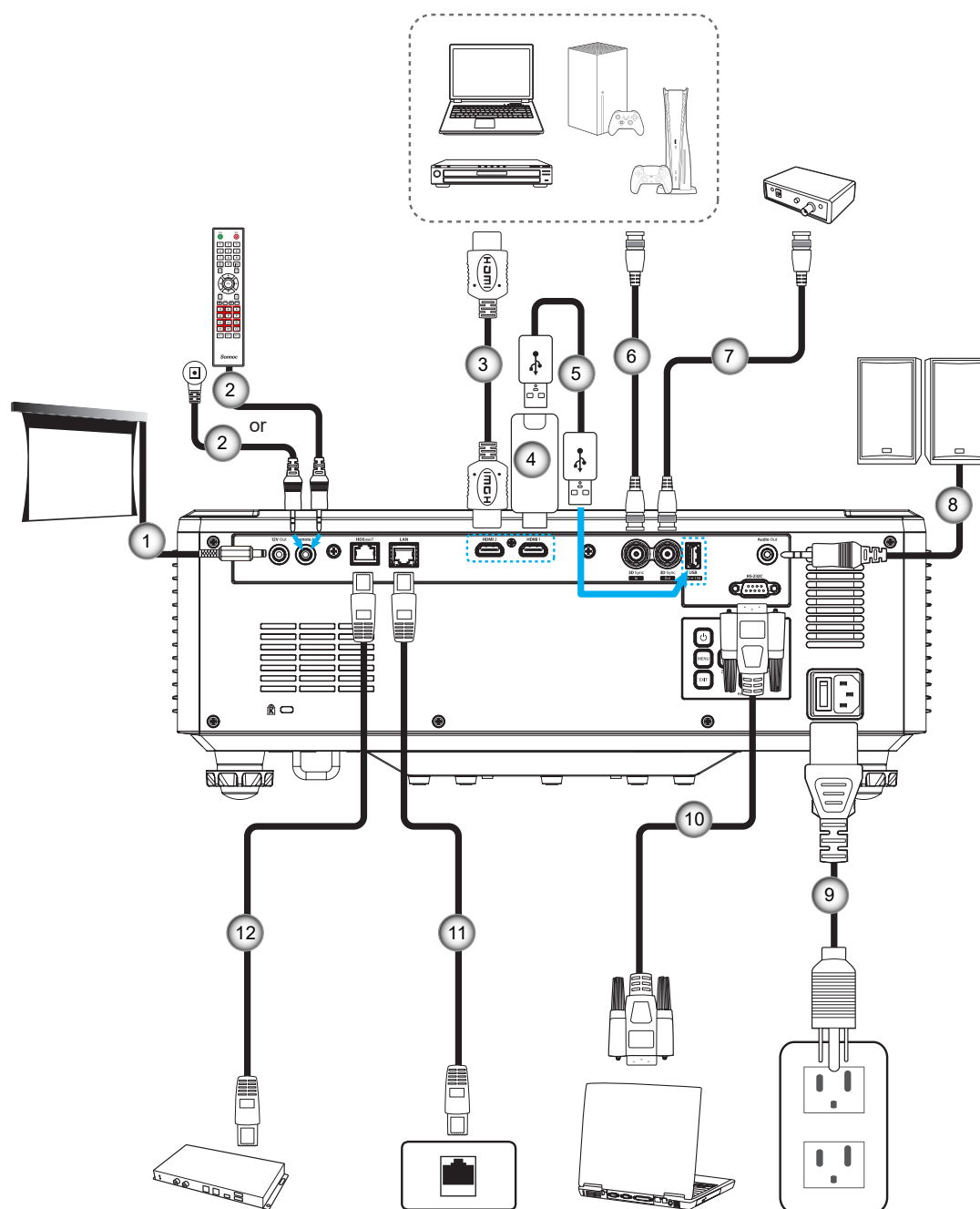
Remote control



No.	Button	Function
1.	Power On	Turn on the projector power.
2.	Number Keys	Enter a number (0-9)
3.	Info	Display information on the input source image.
4.	Auto	Automatically synchronize the projector with the input source.
5.	OK	Confirm the selection
6.	Arrow Keys	Browse the menu with arrow keys or select the corresponding settings
7.	Menu	Display the main menu on the screen
8.	Mode	Press the button to select the preset picture mode.
9.	Bright (brightness)	Adjust the brightness of the image
10.	Lens Shift (Horizontal)	Adjust the position of the image horizontally.
11.	Lens Shift (Vertical)	Adjust the position of the image vertically.
12.	Keystone (Horizontal)	Adjust the horizontal keystone distortion image.
13.	Keystone (Vertical)	Adjust the vertical keystone distortion image.
14.	Shutter	Temporarily close/open the screen (AV Mute)
15.	User 1	Press this button to assign a customized function. For more information, refer to the user's guide.
16.	Standby	Turn on/off the projector power.
17.	ID	Set the projector address.
18.	Input	Manually select input source
19.	Exit	Return to the previous menu.
20.	Pattern	Display the test pattern
21.	Contrast	Set the contrast of the image
22.	Focus	Adjust the focus of the image
23.	Zoom	Adjust the size of the image.
24.	User 2	Press this button to assign a customized function. For more information, refer to the user's guide.

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

Connect Input Source to Projector



1.	12V DC Jack
2.	Wired Remote Control Cable or IR Receiver Cable (3.5mm TRS type)
3.	HDMI Cable
4.	HDMI Dongle

5.	USB (A to A) Cable
6.	3D Sync In Cable
7.	3D Sync Out Cable
8.	Audio Out Cable

9.	Power Cord
10.	RS232 Cable
11.	RJ-45 Cable
12.	RJ-45 Cable

Note: Differences may exist between models.

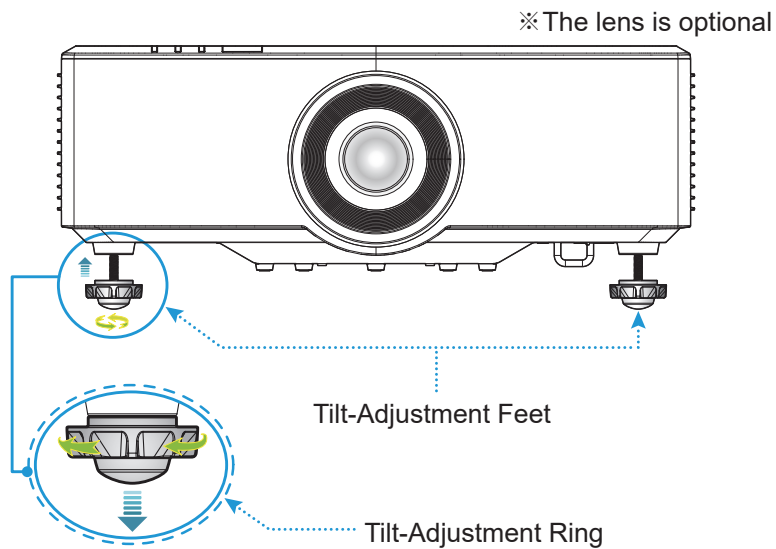
SETUP AND INSTALLATION

Adjusting the projected image

Adjusting the Projector's Height

The projector is equipped with adjustable 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 counter-clockwise to raise or lower the projector.

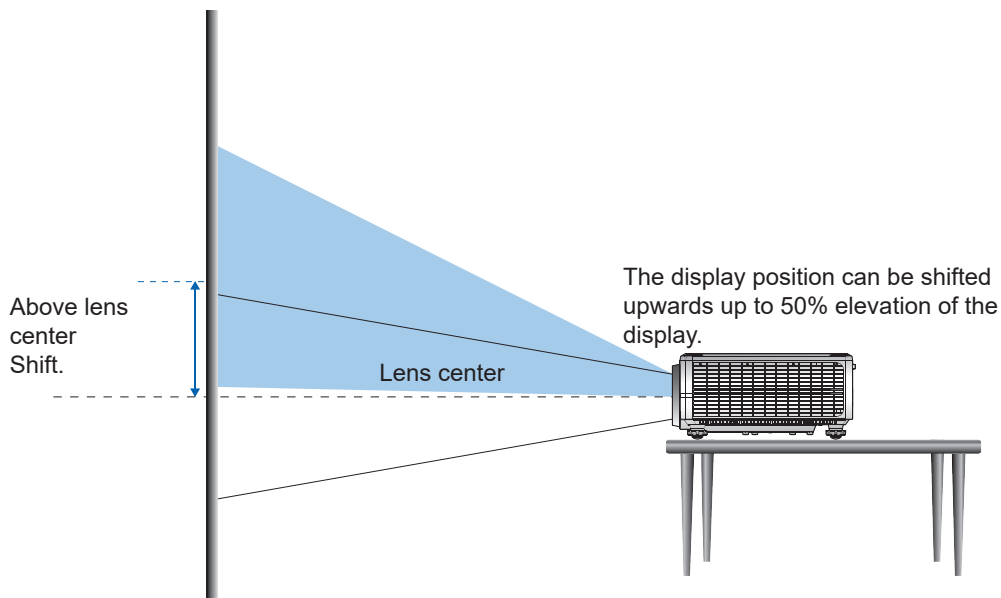


Adjusting the projected image shift

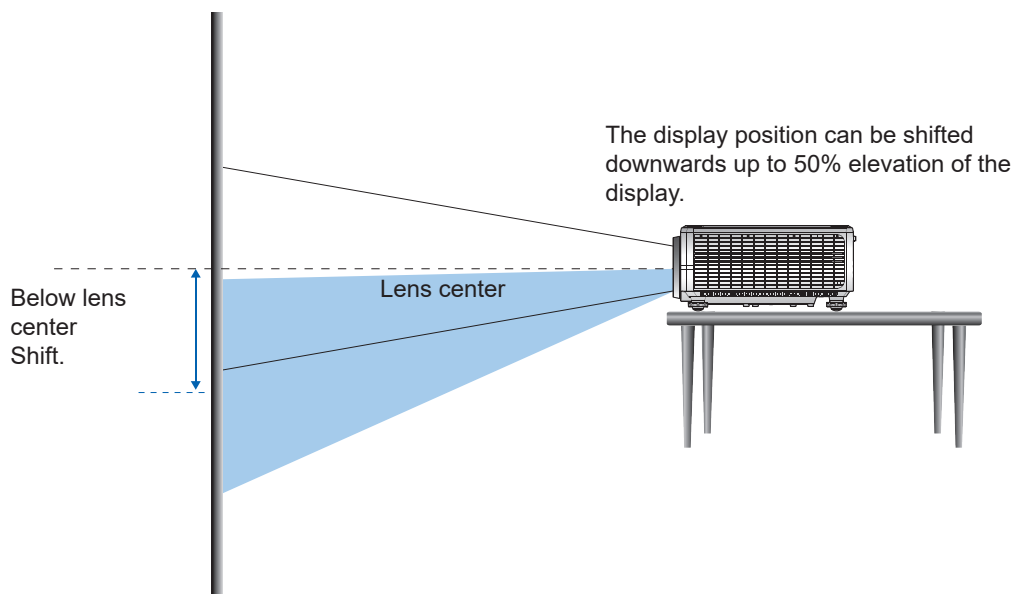
The projection lens can be moved up, down, right, and left with the motor-driven lens shift function. This function makes the image positioning easy on the screen. Lens shift is generally expressed as a percentage of the image height or width, see the illustration below.

Vertical / Horizontal Lens Shift

When the lens is shifted to top:

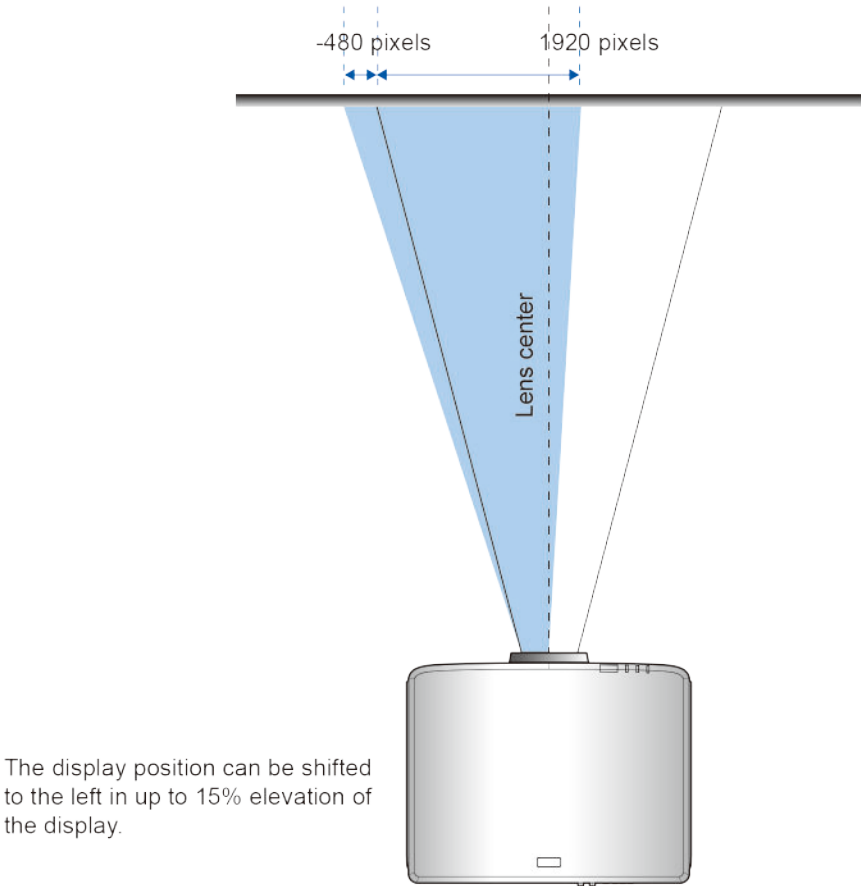


When the lens is shifted to bottom:

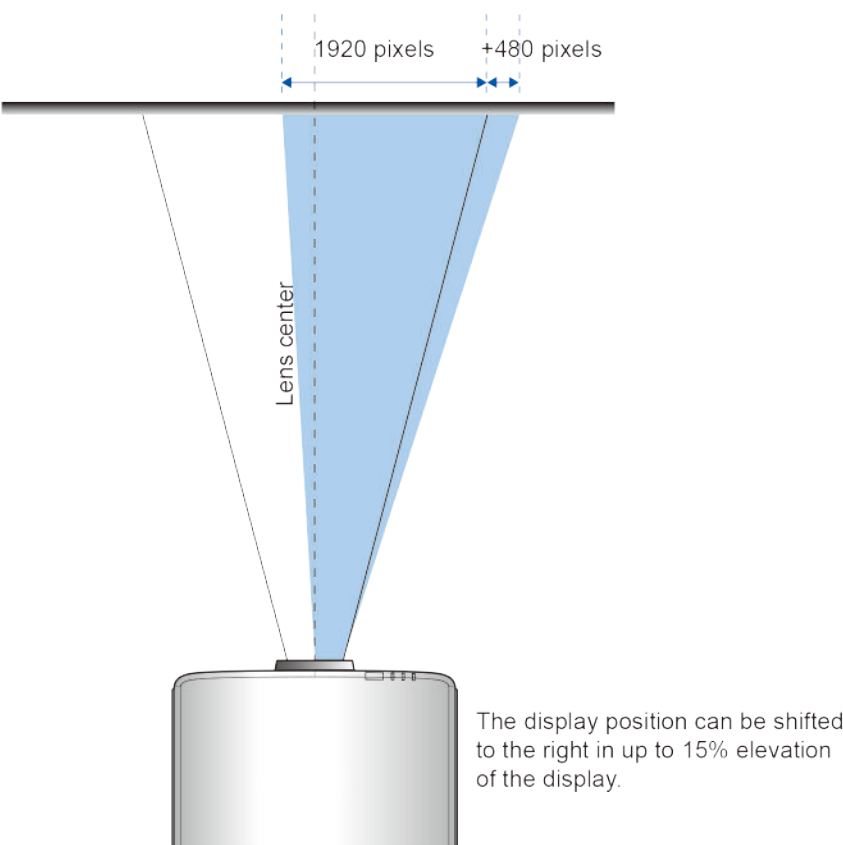


SETUP AND INSTALLATION

When the lens is shifted to the leftmost:

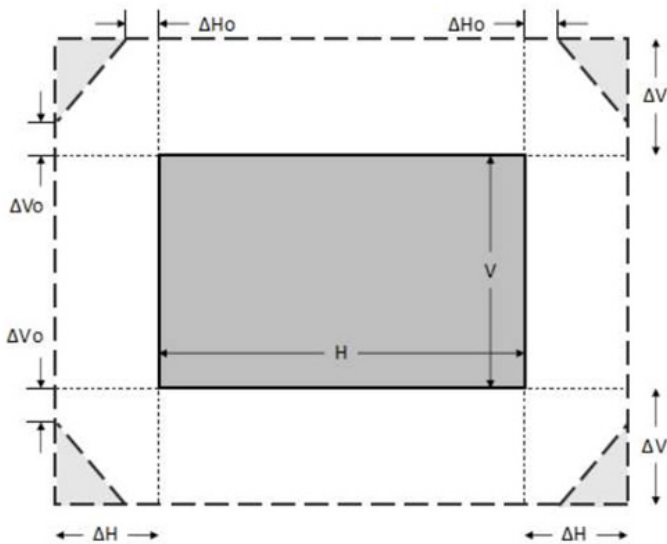


When the lens is shifted to the rightmost:



Lens Shift Range

Lens	H	V	ΔH	ΔV
A06	15%	50%	10%	40%
A02	25%	55%	0%	20%
A01、A03、A13	15%	50%	15%	50%
A15	15%	50%	1%	25%



Note:

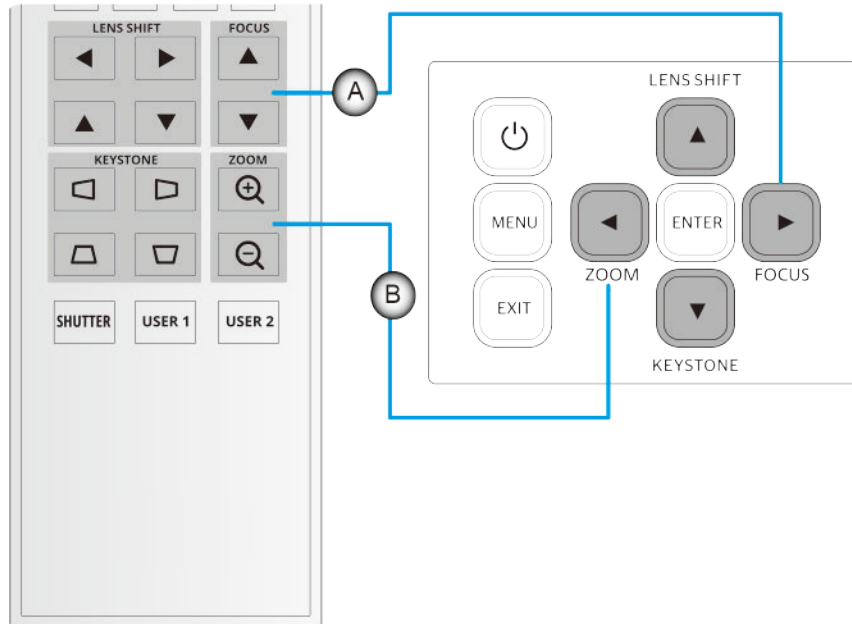
- a) ΔH : The lens shift range in horizontal direction when the lens is at the center.
- b) ΔV : The lens shift range in vertical direction when the lens is at the center.
- c) ΔHo : The lens shift range without vignetting in horizontal direction when the lens is at the top center or the bottom center.
- d) ΔVo : The lens shift range without vignetting in vertical direction when the lens is at the middle right or the middle left.

SETUP AND INSTALLATION

Adjust the zoom and focus of the projector

Use the remote control or projector keypad to adjust the zoom and focus of the projected image.

- To adjust the image focus, press **the focus** and ▲▼ button until the image is clearly visible. (A)
- To resize an image, press the **Zoom** and ╕Ⓢ button on the remote control or ◀▶ on the keyboard to achieve the desired image size. (B)

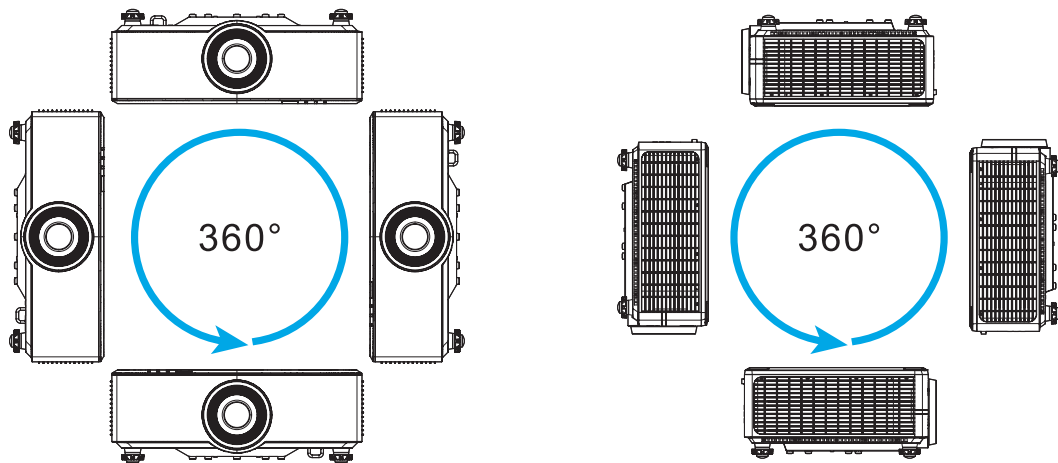


Adjusting the Projector Position

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

Follow these general guidelines:

- *Position the projector on a flat surface at a right angle to the screen. The projector (with the standard lens) must be at least 50 inches (1.27m) from the projection screen.*
- *Position the projector to the desired distance from the screen. The distance from the lens of the projector to the screen, the zoom setting, and the video format determine the size of the projected image.*
- *Lens throw ratio: 1.22 ~ 1.52 360 degrees free orientation operation.*



- *When installing multiple projectors, keep at least 1000mm (39.4") space between the adjacent projectors.*
- *For ceiling/wall mount installations, make sure to leave 15 mm (0.6") between the ceiling mount and the projector's bottom intake vents.*

SETUP AND INSTALLATION

Adjustment of visual axis

Perform the visual axis adjustment only when the overall focus of the projected image is not equally sharp. The visual axis adjustment helps to equalize the tilt of the lens holder so that the unfocused portion of the image becomes sharp. It tilts the lens holder so that the lens plane is parallel to the DMD plane.

Note: This visual axis adjustment process may cause other areas of the image to be out of focus. This is normal.

Tools required

For A01/A02/A03/A06 lenses, the following tools are required for visual axis adjustment:

- Allen wrench, hex 4mm

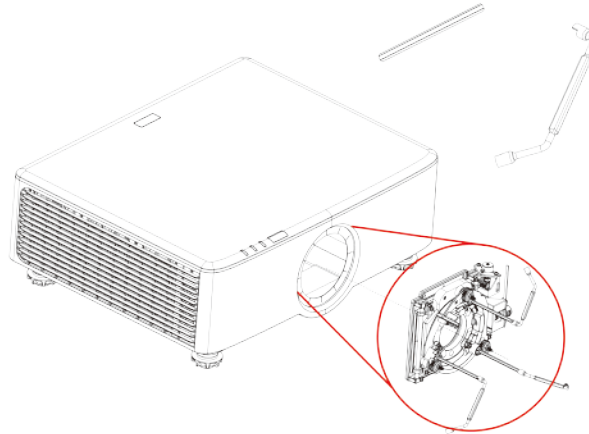
Set up the projector's startup mode

1. Select the test pattern of OSD. Switch to full screen mode.
2. Prepare the test area. Check that the throw ratio of the installed lens meets the requirements of the installation area (projection distance and screen size).
3. Check that the lens is properly installed.

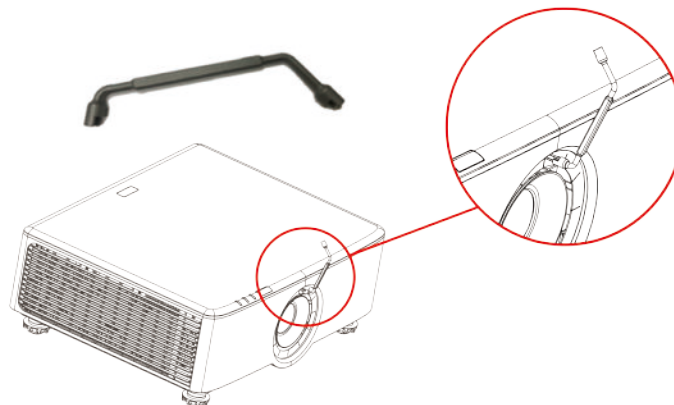
Perform adjustment of visual axis

For A01/A03/A06/ A13/ A15 lenses

Adjust the three visual axis screws clockwise or counterclockwise with an Allen wrench screwdriver.



1. Adjust the three visual axis screws with a visual axis tool.

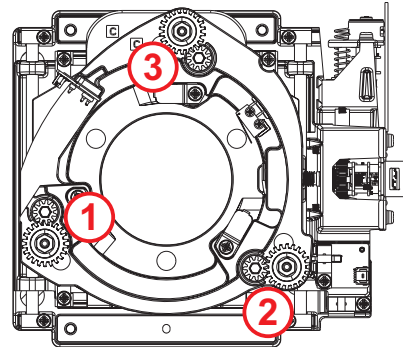
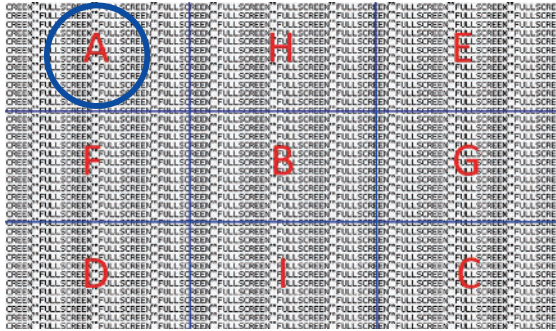


2. Zoom the lens to the maximum with the remote control before adjustment.
3. Adjust the focus control to find the best sharpness of the projected image.
4. Area A/C visual axis adjustment.
If Area C is in focus on the screen, check the focal plane of Area A.
 - If the sharp position is exactly on the screen, no adjustment is necessary.
 - If the sharp position is not on the screen (near the projector), turn the screw ①

Setup and installation

counter-clockwise. Then turn the screws ② and ③ half of a turn of ① clockwise. Then repeat the process until both A and C are sharp. For example, turn ① one turn counter-clockwise, then turn ② and ③ half a turn clockwise.

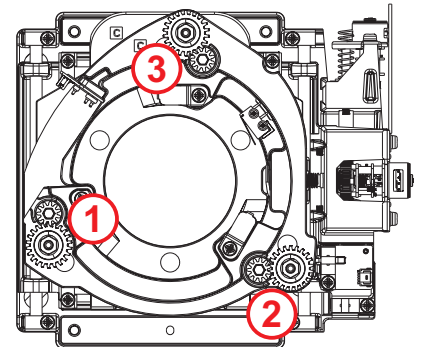
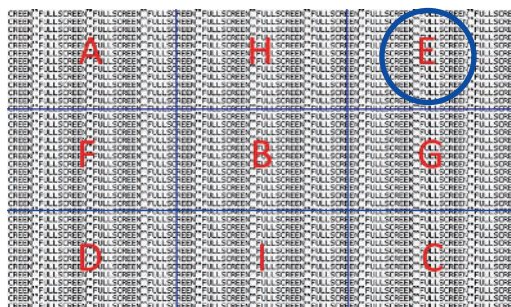
- If the sharp position is outside the screen (away from the projector), turn the screw ① clockwise, then turn the screws ② and ③ half a turn of ① counter-clockwise. Then repeat the process until both A and C are sharp.



5. Area D/E Optical Axis Adjustment.

If Area D is in focus on the screen, check the focal plane of Area E.

- If the sharp position is exactly on the screen, no adjustment is necessary.
- If the sharp position is not on the screen (near the projector), turn the screw ② counterclockwise. Then turn the screws ① and ③ half of a turn of ② clockwise. Then repeat the process until both D and E are sharp. For example, turn ② one turn counterclockwise, then turn ① and ③ half of a turn clockwise.
- If the sharp position is outside the screen (away from the projector), turn the screw ② clockwise, then turn the screws ① and ③ half of a turn of ② counter-clockwise. Then repeat the process until both D and E are sharp.

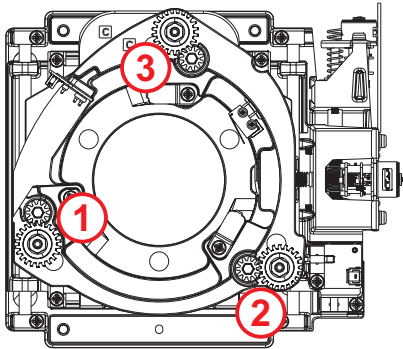
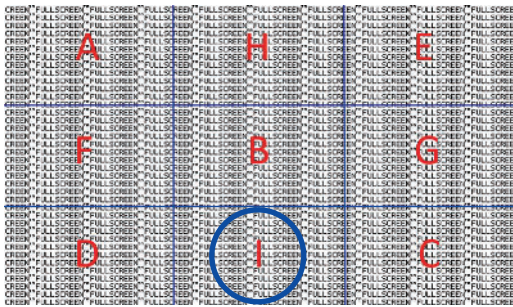


6. Areas H/I visual axis adjustment.

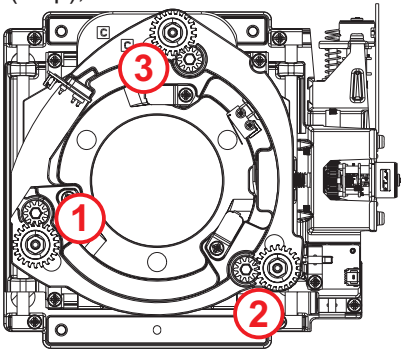
If Area H is in focus on the screen, check the focal plane of Area I.

- If the sharp position is exactly on the screen, no adjustment is necessary.
- If the sharp position is not on the screen (near the projector), turn the screw ③ counterclockwise. Then turn the screws ① and ② half of a turn of ③ clockwise. Then repeat the process until both H and I are sharp. For example, turn ③ one turn counter-clockwise, then turn ① and ② half of a turn clockwise.
- If the sharp position is outside the screen (away from the projector), turn the screw ③ clockwise, then turn the screws ① and ② half of a turn of ③ counter-clockwise. Then repeat the process until both H and I are sharp.

SETUP AND INSTALLATION



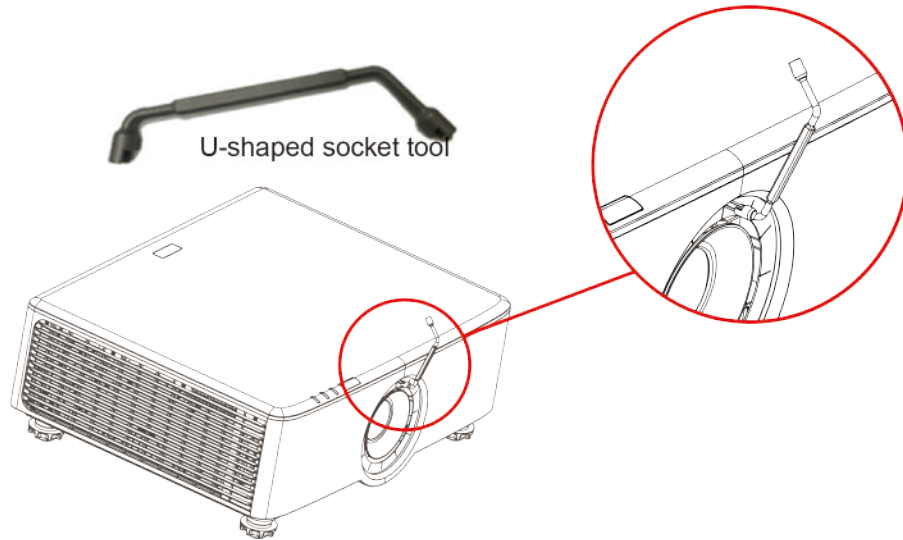
7. After performing the above optical axis adjustment, the projected image from Area A to Area I is still not in sharp focus on the screen. Please remove the projector lens, then turn the visual axis screws 1 and 3 counterclockwise to the end (stop), then 2 turns clockwise to the designed value position.



8. Repeat steps 2 to 6 for adjustment.

Adjustment of visual axis

If the image is still not sharp after focusing, the visual axis adjustment is necessary. The visual axis adjustment tilts the lens holder so that the lens plane and the DMD plane are parallel, thus bringing the image into full focus on the screen.



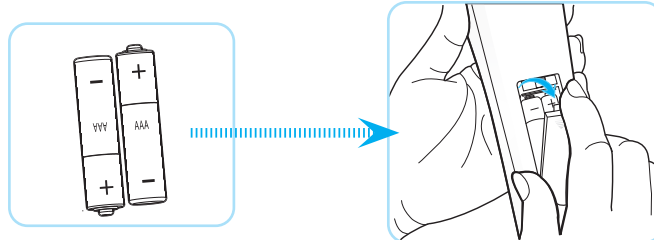
SETUP AND INSTALLATION

Remote Setup

Installing/Replacing Remote Control 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 into the battery compartment as illustrated.
3. Replace the back cover on the remote control.



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

Caution

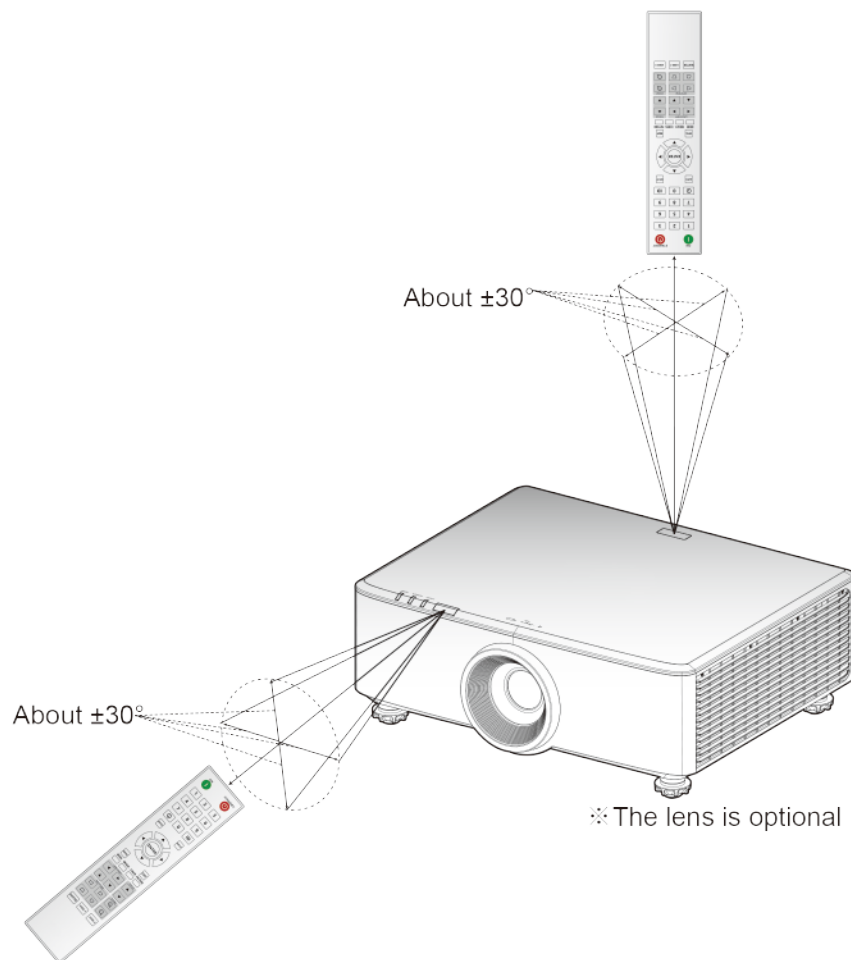
Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.

- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they are depleted. Chemicals that leak from batteries that come into 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.

Remote Control Effective Range

Infra-Red (IR) remote control sensor is located on the top and front sides 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 (19.7 feet) when holding in an angle $\pm 30^\circ$ and not longer than 8 meters (26.2 feet) when aiming the sensor at 0° .

- *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 projector and IR transmitter of the remote control are not being shined by sunlight or fluorescent lamps directly.*
- *Please keep the remote controller away from fluorescent lamps for over 2 m or the remote controller might become malfunction.*
- *If the remote control is close to Inverter-Type fluorescent lamps, it might become ineffective from time to time.*
- *If the remote control and the projector are within a very short distance, the remote control might become ineffective.*
- *When you aim at the screen, the effective distance is less than 5 m from the remote control to the screen and reflecting the IR beams back to the projector. However, the effective range might change according to screens.*

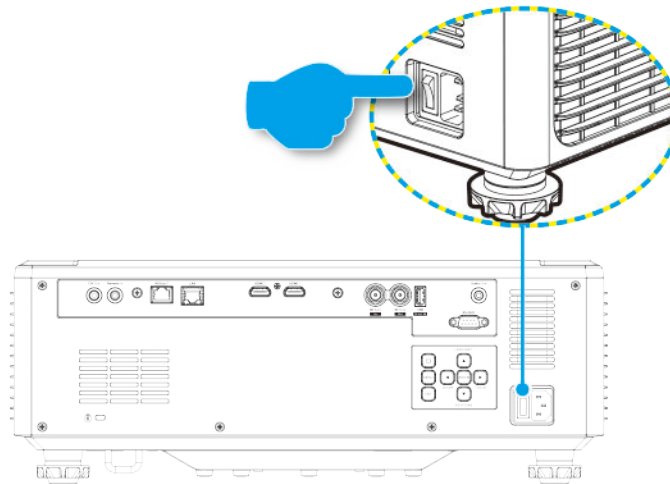


SETUP AND INSTALLATION

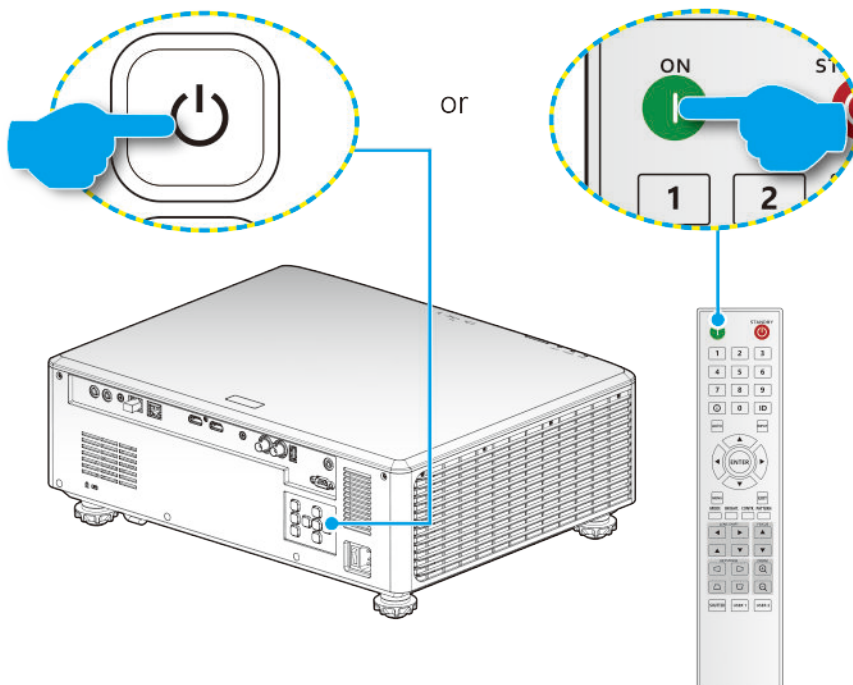
Turn on/off the projector

Powering On

1. Securely connect the power lead and signal/source cable. When connected, the power LED will turn red.
2. Set the power switch to the “I” (On) position and wait until the “⏻” button on the projector keypad is solid red.



3. Turn on the projector by pressing the “⏻” button on the projector keypad or remote control. During startup the power LED is flashing green and during normal operation, the power LED is solid green.



Power off

1. Turn off the projector by pressing the “” button on the projector keypad or the  button 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.
3. During the cooling cycle, the power LED flashes green. When the power 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 on the projector or the remote control again to turn on the projector.
4. Disconnect the power cord from the electrical outlet and the projector.

Note:

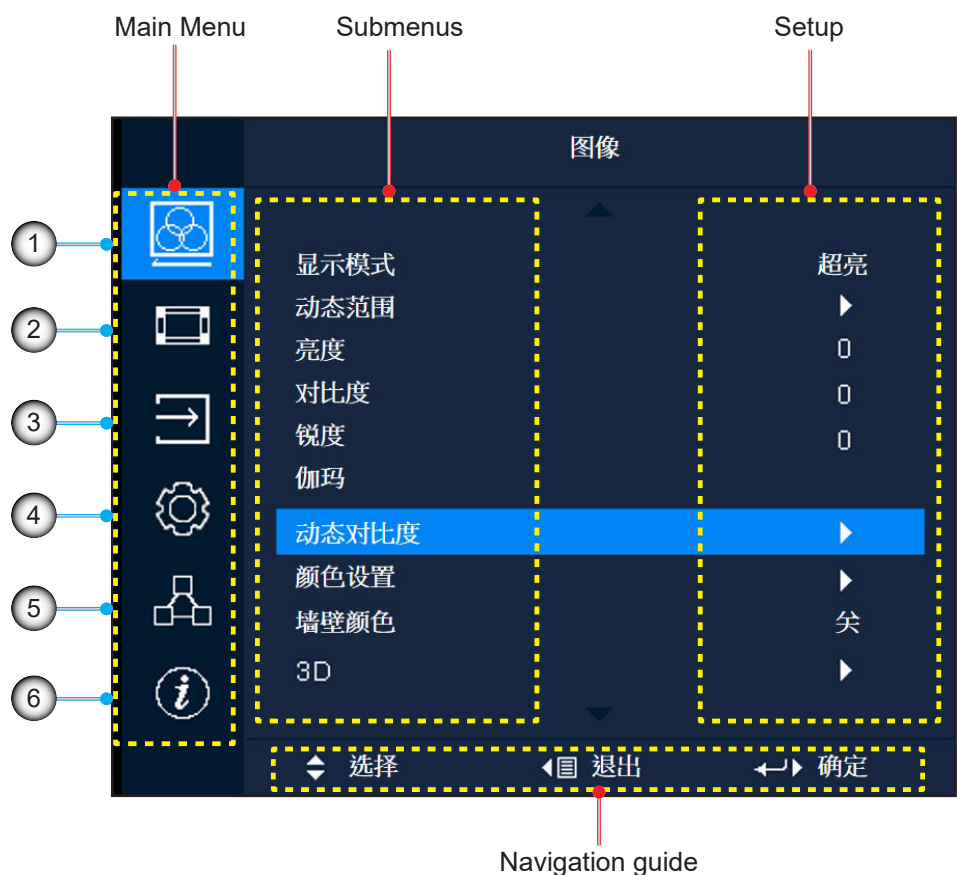
- *It is not recommended that the projector is turned on immediately, right after a power off procedure.*
- *By default, the projector turns off automatically after 20 minutes of inactivity. You can modify the idle time length in “Auto Power off (min.)” menu in “System Settings → Power”. If you want the projector to enter standby mode instead, disable auto power off and set the sleep time interval in “System Settings → Power → Sleep Timer (min.)”.*

USING THE PROJECTOR

Menu navigation and features

The projector has multilingual on-screen display (OSD) menus that allow you to make image adjustments and change a variety of settings.

1. To open the OSD menu, press the Menu key on the remote control or projector keypad.
2. To select a main menu or submenu, use the ▲▼ button to highlight it. Then, press the **Enter** button to enter the sub menu.
3. After pressing the **Menu** key, if originally there is no menu on the screen, a menu will be displayed; if there is already a menu displayed, it will jump to the previous menu level (until the entire menu is closed).
4. Press the **Return** button to exit the OSD menu.
5. Setting methods to adjust the function value or selection an option.
 - To adjust the slide bar values, highlight the function and use the ◀▶ button to change value.
 - To check or uncheck a checkbox, highlight the function and press **Enter**.
 - To enter a number or symbol, highlight the number or symbol, and then use the ▲▼ button to select it. You can also use the number keys on the remote control or keypad.
 - To select a feature option, use the ▲▼◀▶ button to select. If no **Enter** icon shows at the navigation bar, the highlighted option is automatically applied. If there is an **Enter** icon at the navigation bar, press **Enter** to confirm your selection.



No.	Items	No.	Items
1.	Image Settings	4.	Setup
2.	Display Settings	5.	Communication
3.	Input Settings	6.	Info

OSD menu tree

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Image	Display Mode					China red
						Standard [default]
						Highlight
						Cinema
						HDR
						sRGB
						DICOM SIM.
						Blending
						3D
						2D High Speed
						User
	Dynamic Range	HDR				Off
						Auto [default]
		HDR Picture Mode				Bright
						Standard [default]
						Film
						Detail
	Brightness					-50 ~ 50 [default: 0]
	Contrast					-50 ~ 50 [default: 0]
	Sharpness					1 ~ 15 [default: 8]
	Gamma					Film
						Graphics
						Standard (2.2)
						Vivid [Default]
						Video
						Enhanced
						Blackboard
						DICOM SIM.
						1.8
						2.0
						2.4
						2.6
	Dynamic Contrast	Dynamic Black				Off [default]
						On
		Extreme Black				Off [default]
						On
	Color Settings	Color				-50 ~ 50 [default: 0]
						-50 ~ 50 [default: 0]
		Tint				Warm
						Standard [default]
						Cold
		White Enhancement				0~10 [default: 10]

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Image	Color Settings	Color Space				Auto [default]
						RGB (0-255)
						RGB (16-235)
						REC709
						REC601
		Color Matching	Red	Hue		-50 ~ 50 [default: 0]
				Saturation		-50 ~ 50 [default: 0]
				Luminance		-50 ~ 50 [default: 0]
				Reset		
				Exit		
			Green	Hue		-50 ~ 50 [default: 0]
				Saturation		-50 ~ 50 [default: 0]
				Luminance		-50 ~ 50 [default: 0]
				Reset		
				Exit		
			Blue	Hue		-50 ~ 50 [default: 0]
				Saturation		-50 ~ 50 [default: 0]
				Luminance		-50 ~ 50 [default: 0]
				Reset		
				Exit		
			Cyan	Hue		-50 ~ 50 [default: 0]
				Saturation		-50 ~ 50 [default: 0]
				Luminance		-50 ~ 50 [default: 0]
				Reset		
				Exit		
			Yellow	Hue		-50 ~ 50 [default: 0]
				Saturation		-50 ~ 50 [default: 0]
				Luminance		-50 ~ 50 [default: 0]
				Reset		
				Exit		
			Magenta	Hue		-50 ~ 50 [default: 0]
				Saturation		-50 ~ 50 [default: 0]
				Luminance		-50 ~ 50 [default: 0]
				Reset		
				Exit		
			White	Red		-50 ~ 50 [default: 0]
				Green		-50 ~ 50 [default: 0]
				Blue		-50 ~ 50 [default: 0]
				Reset		
				Exit		

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Image	Wall Color					Off [default]
						Blackboard
						Light Yellow
						Light Green
						Light Blue
						Pink
						Gray
	3D Setup	3D Mode				Off
						Active 3D [default]
		3D Format				Auto [default]
						Frame Packing
						Side by Side
						Top and Bottom
						Frame Sequential
		3D Tech				DLP-Link
						3D Sync [default]
		3D-2D				3D [default]
						L
						R
		3D Sync Out				To Emitter [default]
						To Next Projector
		3D Invert				Off [default]
						On
	3D Setup	Reset				Yes
						Cancel [default]
	Reset					Yes
						Cancel [default]

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Display	Aspect Ratio					Auto [default]
						4:3
						16:9
						16:10
						16:6
						2.35:1
						LBX
						Native
	Digital Zoom	Zoom				-5 ~ 25 [default: 0]
		Reset				Yes
						Cancel [default]
	Image Shift	H. Position				0~100 [默认: 50]
		V. Position				0~100 [默认: 50]
		Reset				Yes
						Cancel [default]
	Geometric Correction	Basic Warp	Keystone	Horizontal		-30 ~ 30 [default: 0]
				Vertical		-30 ~ 30 [default: 0]
		4-Corner		Top Left		
				Top Right		
				Bottom Left		
				Bottom Right		
		Reset				Yes
						Cancel [default]
	Edge Mask					0~10 [默认: 0]
	Freeze Screen					Unfreeze [default]
						Freeze
Display	Test Pattern					Off [default]
						Green Grid
						Magenta Grid
						White Grid
						White
						Black
						Red
						Green
						Blue
						Yellow
						Magenta
						Cyan
						ANSI Contrast 4x4
						Color bar
						Full screen
	Reset					Yes
						Cancel [default]

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Input Settings	Auto Source					Off
						On [default]
	Input Source					HDMI 1 [default]
						HDMI 2
						HDBaseT
	Latency Adjustment					Normal [default]
						2D Ultra
	HDMI	HDMI 1 EDID				1.4
						2.0 [default]
		HDMI 2 EDID				1.4
						2.0 [default]
	Reset					Yes
						Cancel [default]
Setup	Language					English
						Deutsch
						Français
						Italiano
						Español
						Português
						Polski
						Nederlands
						Norsk
						繁體中文
						簡體中文 [Default]
						日本語
						한국어
						Русский
						Magyar
						ไทย
Setup	Projection	Ceiling				Auto [default]
						On
						Off
		Rear Projection				Off [default]
						On

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values	
Setup	Lens Settings	Focus				[Focus for adjust]	
		Zoom				[Zoom for adjust]	
		Lens Shift				[Pattern for adjust]	
		Lens Shift Memory	Save Memory			Memory 1 ~ Memory 5	
			Apply Memory			Memory 1 ~ Memory 5	
			Clear Memory			Yes	
						Cancel [default]	
		Lens Calibration				Yes	
						Cancel [default]	
		Lens Lock				Lock	
						Unlock [default]	
		Reset				Yes	
						Cancel [default]	
	Power Settings	Power Mode (Standby)					Eco.
							Active
							Communication [default]
		Signal Power On					Off [default]
							On
		Auto Power Off				0, 2 ~ 180 m [default: 20m]	
		Sleep Timer				0 ~ 16h [default: 0h]	
		12V Trigger					Off [default]
							On
		Direct Power On				Off [default]	
						On	
		Reset				Yes	
						Cancel [default]	
	Light Source Settings	Light Source Mode					Normal [default]
							Eco Mode
							Custom Power
		Custom Brightness	Brightness Level			30% ~ 100% [default: 100%]	
			Constant Brightness				Off [default]
							On
	Shutter	Startup					Shutter Off [default]
							Shutter On
	Audio	Mute					Off [default]
							On
		Volume				0 ~ 10 [default: 5]	
	Rental	Security					Off [default]
							On
		Security Timer	Month			0 ~ 35 [default: 0]	
			Day			0 ~ 29 [default: 0]	
			Hour			0 ~ 23 [default: 0]	
		Change Password					

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Setup	On Screen Display	Menu Location				Top Left
						Top Right
						Center [default]
						Bottom Left
						Bottom Right
		Menu Timer				Off
						5s
						10秒
						15s [default]
						30秒
						60秒
		Information Hide				Off [default]
						On
		Background				Blue
						Black
						White
						Logo [default]
	Logo Setup	Change Logo				Default Logo [default]
						User Logo
	High Altitude					Off [default]
						On
	Reset	Reset OSD				Yes
						Cancel [default]
		Reset to Default				Yes
						Cancel [default]
		Reset Selective	Image			Yes
						Cancel [default]
			Picture			Yes
						Cancel [default]
			Input			Yes
						Cancel [default]
			Communication			Yes
						Cancel [default]
			Setup			Yes
						Cancel [default]

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values	
Communication	Remote Setup	Remote Code				0 ~ 99 [default: 0]	
		Quick Switch Code				Off [default]	
						1 ~ 9	
		IR Function	Front			Off	
						On [default]	
			Top			Off	
						On [default]	
			HDBaseT			Off [default]	
						On	
		HDBaseT Control	RS232			Off [default]	
						On	
		User 1					Freeze Screen [default]
							Blank Screen
							Aspect Ratio
							Information Hide
							Network Setup
							Color Matching
							Reset Selective
							Quick Switch Code
							Audio Mute
							Audio Volume
							Highlight
		User 2					Freeze Screen
							Blank Screen
							Aspect Ratio [Default]
							Information Hide
							Network Setup
							Color Matching
							Reset Selective
							Quick Switch Code
							Audio Mute
							Audio Volume
							Highlight
	Network Setup	LAN Interface					RJ-45 [default]
							HDBaseT
		MAC Address				[read only]	
		Network Status					[read only] Connected
							[read only] Disconnected
		DHCP					Off [default]
							On
		IP Address				[Default:: 192.168.0.100]	
		Subnet Mask				[Default: 255.255.255.0]	
		Gateway				[Default: 192.168.0.51]	
		DNS				[Default: 0.0.0.0]	
		Network Reset				Yes	

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Communication	Control	PJ Link				Off
						On [default]
		AMX				Off
						On [default]
		Telnet				Off
						On [default]
		HTTP				Off
						On [default]
		Reset				Yes
						Cancel [default]
	Reset				Yes	
					Cancel [default]	
Info	Device	Model Name				
		Serial Number				
		Projection Hours				
	System Status	Standby Mode				
		Light Source Mode				
		Light Source Hours				
		Total Hours				
		Normal				
		Eco Mode				
		Custom Power				
	System Status	Temperature				
	Communication	Remote Code				
		Network				
		LAN Interface				
		MAC Address				
		Network Status				
		DHCP				
		IP Address				
		Subnet Mask				
		Gateway				
		DNS				
		Control				
		PJ Link				
		AMX				
		Telnet				
HTTP						

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Info	Signal	Input Signal				
		Resolution				
		Signal Format				
		Pixel Clock				
		Horz Refresh				
		Vert Refresh				
		Color Space				
		Display Mode				
	Firmware Version	Main Version				
		M-MCU Version				
		A-MCU Version				
		LAN Version				
		HDBaseT version				

Note: Differences may exist between different models.

Image menu

Learn how to configure image settings.

Submenus

- Display Mode
- Dynamic Range
- Brightness
- Contrast
- Sharpness
- Gamma
- Dynamic Contrast
- Color Settings
- Wall Color
- 3D Setup

Display Mode

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

China red

This mode is suitable for showing in front of public in connection to the PC.

Standard

Maximum brightness from PC input.

Highlight

Best for the installations requiring high color temperature images.

Cinema

Provides the best colors for watching movies.

HDR

Decodes and displays High Dynamic Range (HDR) content for the deepest blacks, brightest whites, and vivid cinematic color using REC.2020 color gamut. This mode will be automatically enabled if HDR is set to Auto (and HDR Content is sent to projector – 4K UHD Blu-ray, 1080p/4K UHD HDR Games, 4K UHD Streaming Video). While HDR mode is active, other display modes (Cinema, Demo, etc.) cannot be selected as HDR delivers color that is highly accurate, exceeding the color performance of the other display modes.

sRGB

Standardized accurate color.

DICOM SIM.

This mode can project a monochrome medical image such as an X ray radiography, MRI, etc.

Blending

When using multiple projectors, this mode can eliminate the visible banding and create a single bright, high resolution image across the screen.

3D

To experience 3D effects, you need to wear 3D glasses. Make sure the 3D player is installed.

2D High Speed

Displays the status of 2D High Speed mode.

USING THE PROJECTOR

User

Memorize user's settings.

Note:

- When 3D mode is selected, the China red, Standard, Cinema, HDR, sRGB, DICOM SIM., Blending, and 2D High Speed mode will be unavailable.
- When 2D High Speed mode is selected, the China red, Standard, Cinema, HDR, sRGB, DICOM SIM., Blending, and 3D mode will be unavailable.
- When Blending mode is selected, the HDR, 3D, and 2D High Speed will be unavailable.

Dynamic Range

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

Note: Only HDMI supports the Dynamic Range function.

HDR (High Dynamic Range)

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

HDR Picture Mode

- Bright: Choose this mode for brighter more saturated colors.
- Standard: Choose this mode for natural looking colors with a balance of warm and cool tones.
- Cinema: Choose this mode for improved detail and image sharpness.
- Details: Select this mode to provide more detail for the dark scenario.

Brightness

Adjust the brightness of the image.

Contrast

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

Sharpness

Adjust the sharpness of the image.

Gamma

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

Film

For home theater.

Graphics

For PC / Photo source.

Standard (2.2)

For standardized setting.

Vivid

Best for playing games. In this mode, color saturation and brightness are well-balanced.

Video

For video or TV source.

Enhanced

For enhanced setting.

Blackboard

Best for projecting on to a blackboard.

DICOM SIM.

Best for projecting monochrome medical images, such as X-ray diagram.

1.8 / 2.0 / 2.4 / 2.6

For specific PC / Photo source.

Note: *When Blending mode is selected, only gamma Standard2.2 is supported.*

Dynamic Contrast

Set up the Dynamic Contrast to maximize the contrast for dark content.

- **Dynamic Black:** Enable this function to automatically adjust the contrast ratio for video sources. It improves the black level in dark scenes by reducing the light output.
- **Extreme Black:** Enable this function to automatically increase the contrast ratio by turning off the laser light when black image is detected.

Note:

- *When Dynamic Black is turned on, the Extreme Black will be unavailable.*
- *When Extreme Black is turned on, the Dynamic Black will be unavailable.*

Color Settings

Configure the color settings of the projected image to improve the color performance.

Color

Adjust the saturation of the selected color. The value indicates the color shifts from or towards the white in the center of the chromaticity diagram.

Tint

Adjust the color balance of red and green in video images.

Color Temperature

Adjust the color temperature of the projected image. The available options are Warm, Standard and Cold

White Enhancement

Adjust the image color brightness while providing more vibrant colors, in increments from 0 to 10.

Color Space

Select a color space that has been specifically tuned for the input signal. The available options are Auto (default), RGB (0~255), RGB (16~235), REC709, and REC601.

USING THE PROJECTOR

Color Matching

Change the color of a projected image by adjusting each color component in the image. The adjustable color includes Red, Green, Blue, Cyan, Yellow and Magenta (R / G / B / C / Y / M).

- R / G / B / C / Y / M: Select a color for further adjustment.
 - Hue: Adjust the hue of the selected color. The value reflects the number of degrees of rotation around the chromaticity diagram from the original color. Increasing value indicates counterclockwise rotation and decreasing value, clockwise rotation.
 - Saturation: Adjust the saturation of the selected color. The value indicates the color shifts from or towards the white in the center of the chromaticity diagram.
 - Luminance: Adjust the luminance of the selected color. Increase the value to brighten the image (add white to a color) or decrease the value to darken the image (add black to a color).
 - Reset: Reset the function settings to factory default values.
 - Exit: Exit the menu.

Note: *When 3D, 2D High Speed, or Blending mode is selected, the Color Temperature and White Enhancement will be unavailable.*

Wall Color

Set the wall color of the projector to achieve best color performance for a specific wall. The available options are Off, Blackboard, Light Yellow, Light Green, Light Blue, Pink and Gray.

3D Setup

3D video file combines two slightly different images (frames) of the same scene representing the different views that the left and right eyes see. When these frames are displayed fast enough and viewed with 3D glasses synchronized with the left and right frames, the viewer's brain then assemble the separate images into a single 3D image. 3D Menu provides options to set up the 3D functions to correctly display 3D videos.

3D Mode

Enable or disable the 3D function.

3D Format

Select a proper 3D format for the 3D input signal. The available options are Auto, Frame Packing, Side by Side, Top and Bottom and Frame Sequential.

3D Tech

Select a proper 3D technology according to how the 3D sync signal is processed.

- DLP-Link: Select DLP-Link when the 3D sync signal is generated by the DLP Link technology built into the projector. DLP Link works only with the glasses that are compatible with DLP 3D technology and the 3D function is enabled.
- 3D Sync: Select 3D Sync when the 3D sync out signal is sent to an emitter or another projector through the 3D sync out port.

3D-2D

Transform the 3D content into 2D images.

- 3D: Play the 3D content normally.
- L: Play the left images of the 3D content.
- R: Play the right image of the 3D content.

3D Sync Out

Set up the transmission of the 3D sync output signal.

- To Emitter: Send the 3D sync signal to the emitter connected to the 3D sync out port.
- To Next Projector: Send the 3D sync signal to next projector when using multiple projectors.

3D Invert

When the 3D video does not appear correctly, use this function to invert the 3D left and right frames.

Reset

Reset the function settings to factory default values.

Note: *When 2D High Speed or Blending mode is selected, the 3D Tech, 3D-2D, 3D Sync Out and 3D Invert will be unavailable.*

Reset

Reset all the image settings to factory default values.

USING THE PROJECTOR

Display menu

Learn how to configure the settings to properly project images according to your installation circumstances.

Submenus

- Aspect Ratio
- Digital Zoom
- Image Shift
- Geometric Correction
- Edge Mask
- Freeze Screen
- Test Pattern

Aspect Ratio

Set the aspect ratio of the projected image. The available options are Auto (default), 4:3, 16:9, 16:10, 16:6, 2.35:1, LBX, or Native. Select Auto to display the detected image size.

- 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.
- 16:10 (for WUXGA model only): This format is for 16:10 input sources, like widescreen laptops.
- LBX: This format is for non-16x9, letterbox source and if you use external 16x9 lens to display 2.35:1 aspect ratio in full resolution.
- Native: This format displays the original image without any scaling.

Note:

- *Detailed information about LBX mode*
 - *Some Letter-Box Format DVDs are not enhanced for 16x9 TVs. In this situation, the image will not look right when displaying image in 16:9 mode. In this situation, please try to use the 4:3 mode to view the DVD. If the content is not 4:3, there will be black bars around the image in 16:9 display. For this type of content, you can use LBX mode to fill the image on the 16:9 display.*
 - *If you use an external anamorphic lens, this LBX mode also allows you to watch a 2.35:1 content (include Anamorphic DVD and HDTV film source) that supports anamorphic wide is enhanced for 16x9 Display in a wide 2.35:1 image. In this case, there are no black bars. Light source power and vertical resolution are fully utilized.*
- *When 3D or 2D High Speed mode is selected, the Aspect Ratio will be unavailable.*

WUXGA Scaling Table

Auto	- If source is 4:3, auto resize to 1600 x 1200. - If source is 16:9, auto resize to 1920 x 1080. - If source is 16:10 auto resize to 1920 x 1200.				
4x3	Scale to 1600 x 1200.				
16x9	Scale to 1920 x 1080.				
16x10	Scale to 1920 x 1200.				
LBX	Scale to 1920x1440, then get the central 1920x1200 image to display				
Native	- 1:1 mapping centered. - No scaling will be made; the image is displayed with the resolution based on input source.				

Digital Zoom

Digital adjust the size of the projected image.

Zoom

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

Reset

Reset digital zoom settings to factory default values.

Note: *When 3D or 2D High Speed mode is selected, the Digital Zoom will be unavailable.*

Image Shift

Adjust the projected image position.

H. Position

Use ◀ and ▶ buttons to adjust the position of the projected image horizontally.

V. Position

Use ▲ and ▼ buttons to adjust the position of the projected image vertically.

Reset

Reset image shift settings to factory default values.

Note: *When 3D or 2D High Speed mode is selected, the Image Shift will be unavailable.*

USING THE PROJECTOR

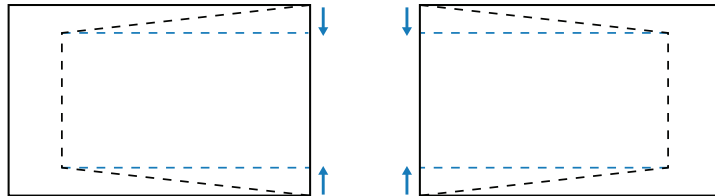
Geometric Correction

Configure the geometric settings to reshape the image for different projection surfaces.

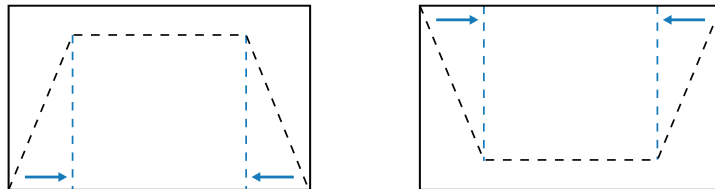
Basic Warp

Configure basic warp settings.

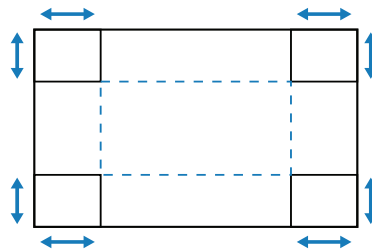
- **Keystone:** Keystone function is used to adjust the images in asymmetric rectangle shape.
 - **Horizontal:** Adjust the left and right side of the projected image to make it an even rectangle. It is used for the images with unequal left and right sides.



- **Vertical:** Adjust the top and bottom side of the projected image to make it an even rectangle. It is used for the images with unequal top and bottom sides.



- **4-Corner:** Reshape the image by moving the 4 corners of the image to have it fit a specific projection surface.



Reset

Reset geometric settings to factory default values.

Edge Mask

The Edge Mask function allows you to hide one or multiple edges of the projected image. You can use this function to remove the video encoding noise on the edges of the video images.

Note: When 3D or 2D High Speed, the Edge Mask will be unavailable.

Freeze Screen

Select to pause the display screen despite any change in the source device.

Test Pattern

Select a test pattern. The available options are Off, Green Grid, Magenta Grid, White Grid, White, Black, Red, Green, Blue, Yellow, Magenta, Cyan, ANSI Contrast 4x4, Color bar, and Full screen.

Reset

Reset all the display settings to factory default values.

Input menu

Learn how to configure the projector input settings.

Submenus

- Auto Source
- Input Source
- Latency Adjustment
- HDMI

Auto Source

When Auto Source is enabled, the projector automatically detects and selects the input signal. Once an input source is selected, press the Input button on the remote control or keypad to switch to other available sources. When the function is disabled, pressing Input will bring up the Active Input submenu.

Input Source

Select an input signal from the source list. The available input sources are HDMI1, HDMI2, and HDBaseT.

Latency Adjustment

Enable this feature to reduce response time.

HDMI

Set the projector's HDMI ports.

HDMI 1 EDID/HDMI 2 EDID

When receiving a HDMI signal, set the projector's EDID compatibility to display the signal correctly. Select 1.4 for the input devices with HDMI 1.4, or 2.0 for HDMI 2.0 devices.

Reset

Reset all the input settings to factory default values.

USING THE PROJECTOR

Setup menu

Learn how to configure the system settings for the projector.

Submenus

- Language
- Projection
- Lens Settings
- Power Settings
- Light Source Settings
- Shutter
- Audio
- Security
- On Screen Display
- Logo Setup
- High Altitude

Language

Select a language for the OSD menu. The available languages are English, German, French, Italian, Spanish, Portuguese, Polish, Dutch, Norwegian, Traditional Chinese, Simplified Chinese, Japanese, Korean, Russian, Hungarian, and Thai.

Projection

Change the image direction by selecting a proper projection mode.

Ceiling

Enable the function for ceiling mount installation.

Rear Projection

Check the function for rear projection.

Lens Settings

Configure the lens settings to adjust the image quality and position.

Focus

Use ▲ and ▼ buttons to adjust the focal length of the projected image.

Zoom

Use ⊕ and ⊖ buttons to adjust the size of the projected image.

Lens Shift

Use the ▲ ▼ ◀ ▶ button to adjust the lens position to move the projection area.

Lens Shift Memory

This projector can save up to five lens settings, which records the lens position, zoom and focus.

- Save Memory: Select a record from 1 to 5 to save the current lens settings.
- Apply Memory: Select a record from 1 to 5 to apply the lens settings.
- Clear Memory: Clear the saved lens records.

Note:

- *Process the lens calibration before setup lens shift memory.*
- *Performing a lens calibration will clear the saved lens records.*

Lens Calibration

Calibrate the lens position to return it to the center.

Lens Lock

Lock the lens to prevent the lens motors from moving, which disables all lens functions.

Note: When Lens Lock is turned on, the Focus, Zoom, Lens Shift, Lens Shift Memory and Lens Calibration will be unavailable.

Reset

Reset the lens settings to factory default values.

Power Settings

Configure the projector's power settings.

Power Mode (Standby)

Setup the projector's standby mode.

- Eco: Minimum power consumption (0.5 Watt) which does not allow network control.
- Active: Low power consumption (< 2 Watt) which allows the LAN module to enter sleep mode and supports to be woken by Wake on LAN (WoL). When the LAN module is woken by WoL, the projector is ready to receive commands over the network.
- Communication: More power consumption that allows controlling the projector over the network.

Signal Power On

Turn on this function to have the projector automatically turning on when connected to HDMI input sources. It only applies to the standby projector set to Communication mode.

Auto Power Off

Set an interval timer for the projector to automatically turn off if no signal is detected within the specified time period. Press ◀ and ▶ button to increase or decrease the time by 1 minute at a time.

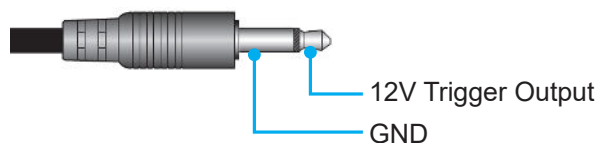
Sleep Timer

Set an interval timer for the projector to automatically turn off after operating for the specified amount of time.

12V Trigger

Use this function to enable or disable the trigger.

Note: 3.5mm TS type mini jack that outputs 12V 200mA (max.) for relay system control.



Reset

Reset the power settings to factory default values.

USING THE PROJECTOR

Light Source Settings

Set up the light source to control the projector brightness.

Light Source Mode

Select a light source mode depending on the installation requirements. The available options are Normal, Eco Mode, and Custom Power.

Custom Brightness

When the Light Source Mode is set to Custom Mode, set up the custom brightness level. Set up the Constant Brightness to maintain the image brightness at a specified level. A special algorithm is designed to compensate for the natural decay of brightness so that the image can be maintained at a fixed brightness level.

- Brightness Level: Adjust the brightness level from 30% to 100%.
- Constant Brightness: Enable to maintain the image brightness at the set brightness level. A special algorithm is designed to compensate for the natural decay of brightness so that the image can be maintained at a fixed brightness level.

Note: *When Dynamic Black or Extreme Black is turned on, only Normal of Light Source Mode is supported.*

Shutter

Set up the shutter behavior.

Startup

Select the shutter behavior when turning on the projector.

- Shutter Off: Projector projects images normally after being powered on.
- Shutter On: Projector automatically turns on shutter after being powered on.

Audio

Set up the projector audio.

Mute

Turn off or turn on the projector sound.

Volume

Adjust the projector audio volume level.

Security

Set up security verification to protect the projector.

Security

Select On to protect the projector with a password. If the user enters an incorrect password three times, a message will pop up warning that the projector will shut down in 10 seconds.

Security Timer

Specify the length of time that the projector can be used without the password. Once the timer counts to 0, the user must enter a password to use the projector. The timer restarts every time the projector is turned on.

Change Password

Change the projector password.

Note: *In the last minute before reaching a specified timer, including Auto Power Off, Sleep Timer and Security Timer, an on-screen message will pop up warning that the projector shuts down in 60 seconds. Press any button on the remote control or projector keypad to reset the timer and the projector remains on.*

On Screen Display

Set up the on screen display menus.

Menu Location

Select the menu location from Top Left, Top Right, Center, Bottom Left and Bottom Right.

Menu Timer

Set the length of time the menu displays on the screen.

Information Hide

Enable or disable the corner information messages, such as input source, IP address and so on.

Background

Set a background color to display when no input signal is detected. The available options are Blue, Black, White and Logo.

Logo Setup

Set up the logo for the startup screen.

Change Logo

Change the logo for the startup screen. Apart from the Default logo, user can select from Default, Neutral, User Logo and Captured Logo.

- Default: The projector default logo.
- User Logo: User-defined logo

Note: *The supported logo format is PNG and size is 1920 x 1200 pixels.*

High Altitude

Select On to increase the fan speed. To ensure the image quality and prevent damage to the projector, enable High Altitude mode in high temperature, high humidity or high altitude environment.

Reset

Reset the settings to factory default values.

- Reset OSD: Reset OSD settings to default values.
- Reset to Default: Reset all projector settings to default values.
- Reset Selective: Reset the settings of one of the main menus. User can choose from Image, Display, Input, Communication and Setup.

USING THE PROJECTOR

Communication menu

Communication menu is used to configure the settings that allow the projector to communicate with other projectors or control devices.

Submenus

- Remote Setup
- Network Setup
- Control

Remote Setup

Configure the settings of the Infra-Red (IR) remote control.

Remote Code

Please press and hold the remote control ID key. When all the key lights turn on the blue light, press the number key 00-99 to enter a number. When all key lights flash rapidly twice, it indicates that the remote control code has changed. At this time, release the remote control ID key.

Quick Switch Code

The IR receiving function of the projector can be temporarily deactivated by hot key(0~9) to avoid the IR interference between projectors. The remote ID needs to be set to All.

Note: When hotkey is on, the default function (Direct Source, Zoom/Focus, 3D) are inactive temporarily.

IR Function

Set the remote receiver for the projector to control the communication between the projector and the IR remote.

- Front: Enable or disable the front remote receiver.
- Top: Enable or disable the top remote receiver.
- HDBaseT: Select On to set the HDBaseT terminal as the remote receiver.

HDBaseT Control

Control the projector using RS232 commands through HDBaseT connection.

User 1 / User 2

Assign a function to the User 1 and User 2 buttons on the remote control. It allows you to use the function easily without going through the OSD menus. The available functions are Freeze Screen [User 1 default], Blank Screen, Aspect Ratio [User 2 default], Information Hide, Network Setup, Color Matching, Reset Selective, Quick Switch Code, Audio Mute and Audio Volume.

Network setup

Configure the projector's network settings.

LAN Interface

To avoid a clash, specify the LAN interface to RJ-45 or HDBaseT.

MAC Address

Display the MAC address. (read only)

Network Status

Display the network connection status. (read only)

DHCP

Turn on DHCP to automatically acquire IP address, subnet mask, gateway and DNS.

IP Address

Assign the projector's IP address.

Subnet Mask

Assign the projector's subnet mask.

Gateway

Assign the projector's gateway.

DNS

Assign the projector's DNS.

Network Reset

Reset the network settings to default factory values.

Note: *When DHCP is turned on, the IP Address, Subnet Mask, Gateway, and DNS will be unavailable.*

Control

This projector can be controlled remotely by a computer or other external devices through wired network connection. It allows the user to control one or more projectors from a remote control center, such as powering the projector on or off and adjusting the image brightness or contrast.

Use the Control sub-menu to select a control device for the projector.

PJ Link

Control the projector with PJLink v1.0 commands (Port: 4352)

For more information, please visit <http://pjlink.jbmia.or.jp/english>.

AMX

Control the projector with AMX devices. (Port: 9131)

For more information, please visit <http://www.amx.com>.

Telnet

Control the projector using RS232 commands through Telnet connection. (Port: 23)

For more information, please visit page 59 "Using RS232 command by Telnet".

HTTP

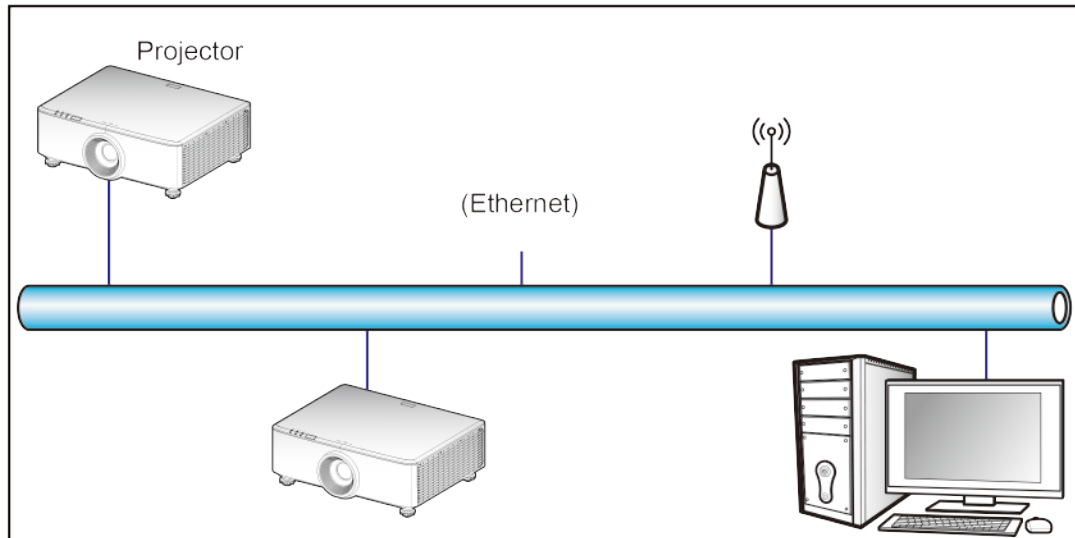
Control the projector with web browser. (Port: 80)

For more information, please visit page 57 "Use Web control panel".

Reset

Reset the control functions to default factory values.

USING THE PROJECTOR



Note:

- *AMX is a registered trademark of AMX LLC of the United States.*
- *PJLink applied for trademark and logo registration in Japan, the United States of America, and other countries by JBMIA.*
- *For more information about the various types of external devices which can be connected to the LAN / RJ45 port and remotely control the projector, as well as the supported commands for these external devices, please contact the Support-Service directly.*
- *Before using PJLink, Telnet and Web management, please make sure that you are connected to the LAN and set Password by Web browser.*

Reset

Reset all network settings to default factory values.

USING THE PROJECTOR

Use Web control panel

The web control panel allows the user to configure various projector settings using a web browser from any personal computer or mobile devices.

System Requirements

To use the web control panel, make sure your devices and software meet the minimum system requirements.

- RJ45 cable (CAT-5e) or wireless dongle
- PC, laptop, mobile phone, or tablet installed with a web browser
- Compatible web browsers:
 - Microsoft Edge 40 or higher version
 - Firefox 57 or higher version
 - Chrome 63 or higher version

Overview of the web control panel

Configure the projector settings using web browser.

The screenshot displays the 'Admin > System Status' page of the projector's web control panel. On the left is a sidebar menu with options: System Status, General Setup, Projector Control, Network Setup, Alert Setup, Reset to Default, and Reboot System. The main content area shows the 'System Status' information. It includes fields for Model Name, Projector Name, and Version. Below these, it lists Firmware Version (A01) and LAN Version (L07). A section titled 'LAN Status' contains a table with network details: IP Address (192.168.0.100), Subnet Mask (255.255.255.0), Default Gateway (192.168.0.254), and MAC Address (00:50:41:72:AB:CD). A 'Logout' button is located in the top right corner.

Admin > System Status	
System Status	
General Setup	
Projector Control	
Network Setup	
Alert Setup	
Reset to Default	
Reboot System	
Model Name	
Projector Name	
Version	
Firmware Version	A01
LAN Version	L07
LAN Status	
IP Address	192.168.0.100
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.254
MAC Address	00:50:41:72:AB:CD

Menu	Description
System Status	View the projector information and firmware version details. The projector information is read only.
General Setup	To configure the projector name, username and password.
Projector Control	To configure the projector control settings.
Network Setup	To configure the network settings.
Alert Setup	To configure the alert settings for projector.
Reset to Default	Reset all projector settings to default values.
Reboot System	Reboot the network device immediately.

USING THE PROJECTOR

Accessing the web control panel

When network is available, connect the projector and the computer to the same network. Use the projector address as the web URL to open the web control panel in a browser.

1. Check the projector address using the OSD menu.
 - On a wired network, select Communication > Network Setup > IP Address.

Note: Make sure that the DHCP is enabled.

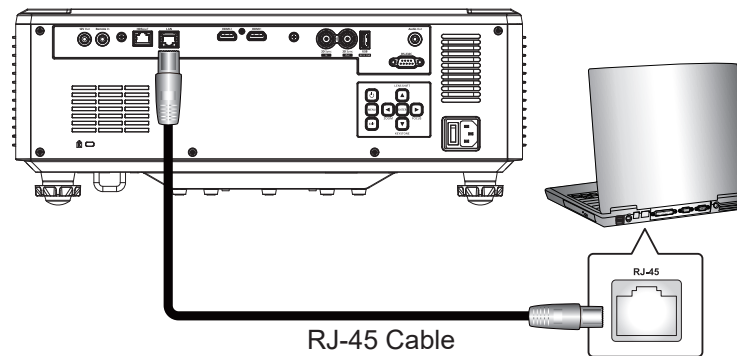
2. Open a web browser and type the projector address in the address bar.
3. The web page redirects to the web control panel.
4. In the Username field, type the username: admin (default).

Note: It is needed to change the username and password once you have logged in at the first time. It is also advised to use a strong password.

When network is not available, refer to page 58 "Directly connect the projector to a computer".

Directly connect the projector to a computer

When network is not available, connect the projector to the computer directly using a RJ-45 cable and configure the network settings manually.



1. Assign IP address to the projector
 - From the OSD menu, select Network Setup > DHCP.
 - Turn off DHCP, and manually set the projector's IP Address, Subnet Mask and Gateway.
 - Press Enter to confirm the settings.
2. Assign IP address to the computer
 - Set the Default Gateway and Subnet Mask of the computer to match the projector.
 - Set the IP address of the computer to match the first three numbers of the projector.
For example, if the projector IP address is 192.168.000.100, set the computer IP address to 192.168.000.xxx, where xxx is not 100.
3. Open a web browser and type the projector address in the address bar.
4. The web page redirects to the web control panel.

Using RS232 command by Telnet

This projector supports using RS232 commands through Telnet connection.

1. Set up a direct connection between the projector and computer. Refer to *Directly connect the projector to a computer* on page 58.
2. Disable the firewall on the computer.
3. Open the command dialogue on the computer. For Windows 7 operating system, select Start > All Programs > Accessories > Command Prompt.
4. Input the command "telnet ttt.xxx.yyy.zzz 23".
Replace "ttt.xxx.yyy.zzz" with the projector IP address.
5. Press Enter on the computer keyboard.

Specification for RS232 by Telnet

- Telnet: TCP
- Telnet port: 23 (contact service team for more details)
- Telnet utility: Windows "TELNET.exe" (console mode).
- Disconnection for RS232-by-Telnet control normally: Off
- Below are the limitations for using Windows Telnet utility directly after TELNET connection is ready:
 - There is less than 50 bytes for successive network payload for Telnet-Control application.
 - There is less than 26 bytes for one complete RS232 command for Telnet-Control.
 - Minimum delay for next RS232 command must be more than 1000 (ms). Information menu.

Information menu

View the projector information about its status and settings. The projector information is read only.

Submenus

- Device
- System Status
- Communication
- Signal
- Firmware Version

Note: Differences may exist between different models.

ADDITIONAL INFORMATION

Compatible Resolutions

Digital

640 x 480 @ 60Hz	640 x 480 @ 120Hz	640 x 480p @ 60Hz 4:3
640 x 480 @ 67Hz	800 x 600 @ 120Hz	720(1440) x 480i @ 60Hz 4:3
640 x 480 @ 72Hz	1024 x 768 @ 120Hz 4:3	720(1440) x 480i @ 60Hz 16:9
640 x 480 @ 75Hz	1280 x 720 @ 60Hz 16:9	720(1440) x 576i @ 50Hz 4:3
800 x 600 @ 56Hz	1280 x 720 @ 120Hz 16:9	720(1440) x 576i @ 50Hz 16:9
800 x 600 @ 60Hz	1280 x 800 @ 60Hz 16:10	720 x 480p @ 60Hz 4:3
800 x 600 @ 72Hz	1440 x 900 @ 60Hz 16:10	720 x 480p @ 60Hz 16:9
800 x 600 @ 75Hz	1600 x 1200 @ 60Hz 4:3	720 x 576p @ 50Hz 4:3
1024 x 768 @ 60Hz		720 x 576p @ 50Hz 16:9
1024 x 768 @ 70Hz		1280 x 720p @ 50Hz 16:9
1024 x 768 @ 75Hz		1280 x 720p @ 60Hz 16:9
1152 x 870 @ 75Hz		1440 x 480p @ 60Hz 16:9
1280 x 1024 @ 75Hz		1440 x 576p @ 50Hz 16:9
		1920 x 1080i @ 60Hz 16:9
		1920 x 1080i @ 50Hz 16:9
		1920 x 1080p @ 60Hz 16:9
		1920 x 1080p @ 50Hz 16:9
		1920 x 1080p @ 24Hz 16:9
		1920 x 1080p @ 30Hz 16:9
		1920 x 1080p @ 120Hz 16:9
		1920 x 1200 @ 60Hz
		1920 x 1200 @ 120Hz
		3840 x 2160 @ 60Hz
		3840 x 2160p @ 24Hz 16:9
		3840 x 2160p @ 25Hz 16:9
		3840 x 2160p @ 30Hz 16:9
		3840 x 2160p @ 50Hz 16:9
		3840 x 2160p @ 60Hz 16:9
		4096 x 2160p @ 24Hz 256:135
		4096 x 2160p @ 25Hz 256:135
		4096 x 2160p @ 30Hz 256:135
		4096 x 2160p @ 50Hz 256:135
		4096 x 2160p @ 60Hz 256:135

ADDITIONAL INFORMATION

640 x 480 @ 60Hz	640 x 480 @ 120Hz	640 x 480p @ 60Hz 4:3
640 x 480 @ 67Hz	800 x 600 @ 120Hz	720 x 480p @ 60Hz 4:3
640 x 480 @ 72Hz	1024 x 768 @ 120Hz 4:3	720 x 480p @ 60Hz 16:9
640 x 480 @ 75Hz	1280 x 720 @ 60Hz 16:9	720(1440) x 480i @ 60Hz 4:3
800 x 600 @ 56Hz	1280 x 720 @ 120Hz 16:9	720(1440) x 480i @ 60Hz 16:9
800 x 600 @ 60Hz	1280 x 800 @ 60Hz 16:10	720(1440) x 576i @ 50Hz 4:3
800 x 600 @ 72Hz	1440 x 900 @ 60Hz 16:10	720(1440) x 576i @ 50Hz 16:9
800 x 600 @ 75Hz	1600 x 1200 @ 60Hz 4:3	720 x 576p @ 50Hz 4:3
1024 x 768 @ 60Hz		720 x 576p @ 50Hz 16:9
1024 x 768 @ 70Hz		1280 x 720 @ 60Hz
1024 x 768 @ 75Hz		1280 x 720p @ 50Hz 16:9
1152 x 870 @ 75Hz		1280 x 720p @ 60Hz 16:9
1280 x 1024 @ 75Hz		1366 x 768 @ 60Hz
		1440 x 480p @ 60Hz 16:9
		1440 x 576p @ 50Hz 16:9
		1920 x 1080i @ 60Hz 16:9
		1920 x 1080i @ 50Hz 16:9
		1920 x 1080p @ 60Hz 16:9
		1920 x 1080p @ 50Hz 16:9
		1920 x 1080p @ 24Hz 16:9
		1920 x 1080p @ 25Hz 16:9
		1920 x 1080p @ 30Hz 16:9
		1920 x 1080 @ 60Hz
		1920 x 1080 @ 120Hz
		1920 x 1200 @ 60Hz

True 3D video compatibility

ADDITIONAL INFORMATION

Input resolution	HDMI 1.4a 3D Input	1280 x 720P @ 50Hz	Top and Bottom
		1280 x 720P @ 60Hz	Top and Bottom
		1280 x 720P @ 50Hz	Frame Packing
		1280 x 720P @ 60Hz	Frame Packing
		1920 x 1080P @ 24Hz	Top and Bottom
		1920 x 1080P @ 24Hz	Frame Packing
		1920 x 1080i @ 50Hz	Side by Side
		1920 x 1080i @ 60Hz	Side by Side
		1024 x 768 @ 120Hz	Frame Sequential
		1280 x 720 @ 120Hz	Frame Sequential

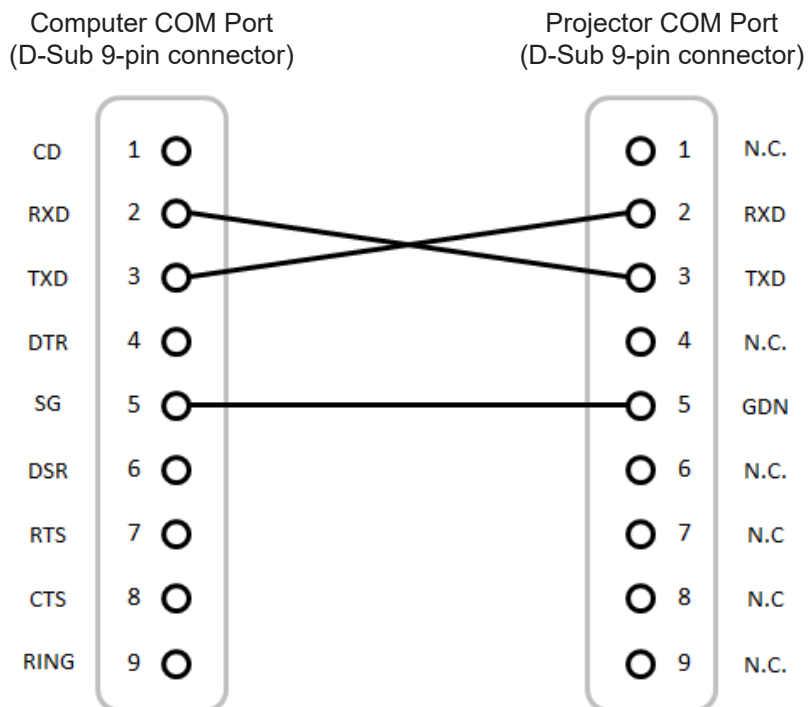
Note: If 3D input is 1080p@24Hz, the DMD should replay with integral multiple with 3D mode.

RS232 Port Setting and Signals Connection

RS232 Port Setting

Items	
Communication Method	Asynchronous Communication
Baud Rate	115200
Data Bits	8 bits
Parity	None
Stop Bits	1
Flow Control	None

RS232 Signals Connection



Note: RS232 shell is grounded.

ADDITIONAL INFORMATION

Image Size and Projection Distance

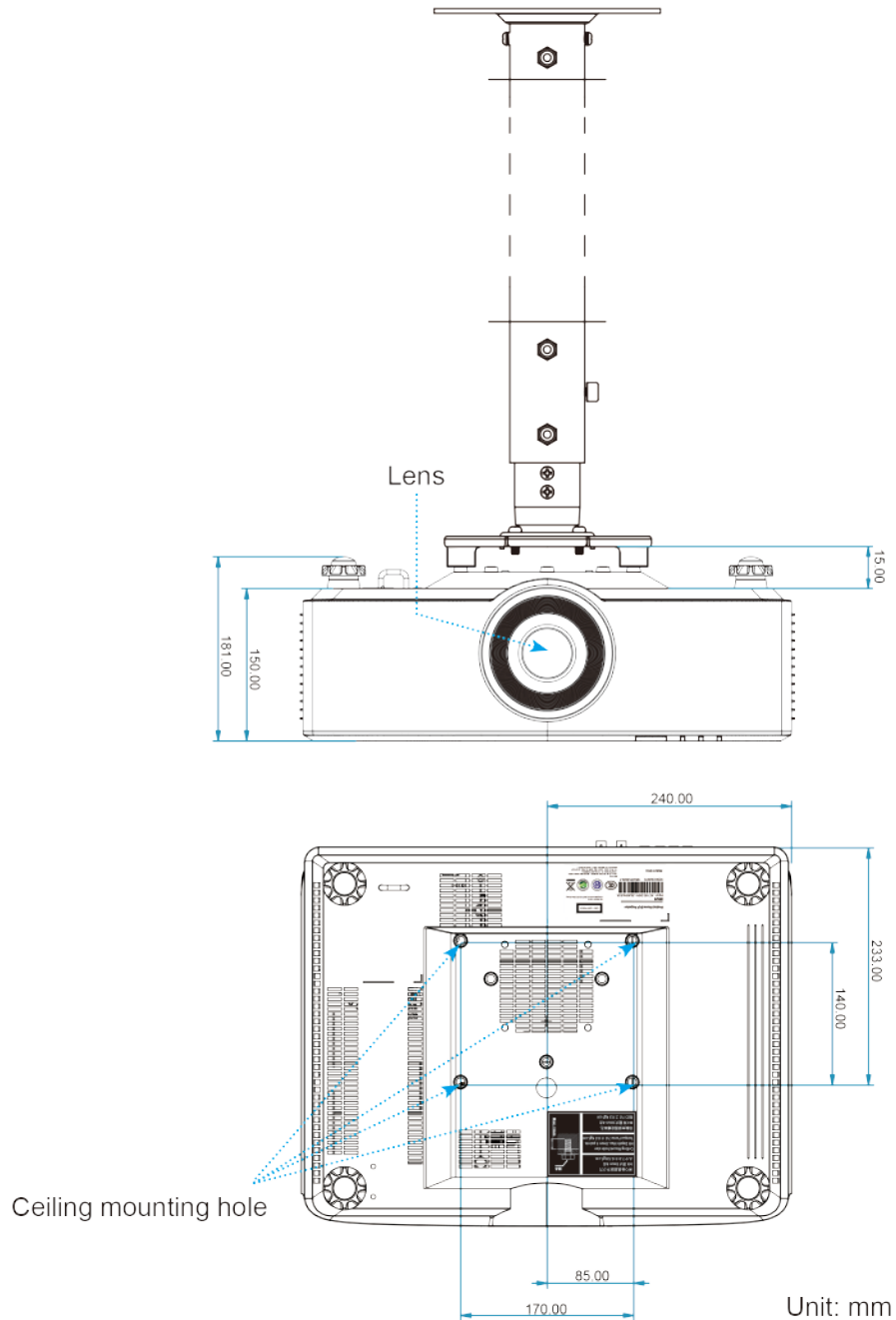
The size of projected images is 50 ~ 300 inches (1.27 ~ 7.62 m)

50	1.27	42.4	1.08	26.5	0.67	51.1	1.30	64.4	1.63
60	1.52	50.7	1.29	31.7	0.81	61.6	1.57	77.5	1.97
70	1.78	59.4	1.51	37.1	0.94	72.1	1.83	90.6	2.30
80	2.03	67.8	1.72	42.4	1.08	82.6	2.10	103.7	2.63
90	2.29	76.5	1.94	47.8	1.21	93.0	2.36	116.8	2.97
100	2.54	84.8	2.15	53.0	1.35	103.5	2.63	129.9	3.30
120	3.05	101.8	2.59	63.6	1.62	124.5	3.16	156.1	3.97
150	3.81	127.2	3.23	79.5	2.02	155.9	3.96	195.5	4.96
180	4.57	152.6	3.88	95.4	2.42	187.3	4.76	234.8	5.96
200	5.08	169.6	4.31	106.0	2.69	208.2	5.29	261.0	6.63
250	6.35	212.0	5.38	132.5	3.37	260.6	6.62	326.6	8.29
300	7.62	254.4	6.46	159.0	4.04	313.0	7.95	386.6	9.96

Ceiling Mount Installation

Please ensure the screws used to attach a mount to the projector meet the following specifications:

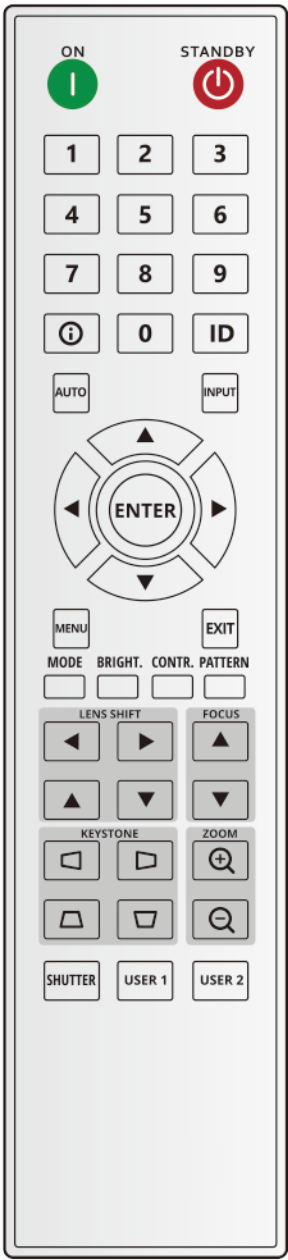
- Screw type: M4*4
- Minimum screw length: 8 mm
- Screw lock attached force: $7 \pm 0.5\text{kgf}$



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

ADDITIONAL INFORMATION

IR remote codes



Key Legend	Key Position	Repeat Format	Address		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
Power On (ON)	1	F1	A0	EB	12	ED	Press to turn on the projector.
Power Off (STANDBY)	2	F1	A0	EB	02	FD	Press to turn off the projector.
1	3	F1	A0	EB	31	CE	Use as numeric keypad number "1".
2	4	F1	A0	EB	32	CD	Use as numeric keypad number "2".
3	5	F1	A0	EB	33	CC	Use as numeric keypad number "3".

ADDITIONAL INFORMATION

Key Legend	Key Position	Repeat Format	Address		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
4	6	F1	A0	EB	34	CB	Use as numeric keypad number “4”.
5	7	F1	A0	EB	35	CA	Use as numeric keypad number “5”.
6	8	F1	A0	EB	36	C9	Use as numeric keypad number “6”.
7	9	F1	A0	EB	37	C8	Use as numeric keypad number “7”.
8	10	F1	A0	EB	38	C7	Use as numeric keypad number “8”.
9	11	F1	A0	EB	39	C6	Use as numeric keypad number “9”.
info ⓘ	12	F1	A0	EB	4C	B3	Press to display source image information.
0	13	F1	A0	EB	30	CF	Use as numeric keypad number “0”.
ID	14	F1	A0	EB	A7	58	Press to set remote ID. Refer to page 54 “Remote Setup”.
Auto	15	F1	A0	EB	15	EA	Press to automatically synchronize the projector to the input source.
Input	16	F1	A0	EB	14	EB	Press to select an input signal.
Up (▲)	17	F1	A0	EB	40	BF	Press this button to select items or make adjustments to our selection.
Left (◀)	18	F1	A0	EB	42	BD	Press this button to select items or make adjustments to our selection.
OK	19	F1	A0	EB	13	EC	Press to confirm your item selection.
Right (▶)	20	F1	A0	EB	43	BC	Press this button to select items or make adjustments to our selection.
Down (▼)	21	F1	A0	EB	41	BE	Press this button to select items or make adjustments to our selection.
Menu	22	F1	A0	EB	1B	E4	Press to display the on-screen display menus for projector.
Return	23	F1	A0	EB	1D	E2	Press to close the menu or exit menus if at top level.
Mode	24	F1	A0	EB	23	DC	Press to select the preset display mode.
Brightness	25	F1	A0	EB	0B	F4	Press to adjust amount of light in the image.
Contrast	26	F1	A0	EB	0C	F3	Press to adjust difference between dark and light.
Test Pattern	27	F1	A0	EB	1C	E3	Press to display a test pattern.
Lens Shift ◀	28	F1	A0	EB	0E	F1	Press to adjust the position of the image horizontally.
Lens Shift ▶	29	F1	A0	EB	0F	F0	
Focus ▲	30	F1	A0	EB	16	E9	Press to adjust focus to improve image clarity as desired.
Lens Shift ▲	31	F1	A0	EB	1E	E1	Press to adjust the position of the image vertically.
Lens Shift ▼	32	F1	A0	EB	1F	E0	Press to adjust the position of the image vertically.
Focus ▼	33	F1	A0	EB	17	E8	Press to adjust focus to improve image clarity as desired.
Keystone ◻	34	F1	A0	EB	2C	D3	Press to adjust the horizontal keystone.
Keystone ▤	35	F1	A0	EB	2D	D2	Press to adjust the horizontal keystone.
Zoom ╕	36	F1	A0	EB	18	E7	Press to adjust zoom to achieve a desired image size.
Keystone ▤	37	F1	A0	EB	2E	D1	Press to adjust the vertical keystone.
Keystone ◻	38	F1	A0	EB	2F	D0	Press to adjust the vertical keystone.
Zoom ╕	39	F1	A0	EB	19	E6	Press to adjust zoom to achieve a desired image size.
Shutter	40	F1	A0	EB	11	EE	Press to hide/unhide the screen picture.
User 1	41	F1	A0	EB	1A	E5	Press to assign user functions. Refer to page 54 “Remote Setup”.
User 2	42	F1	A0	EB	27	D8	Press to assign user functions. Refer to page 54 “Remote Setup”.

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 the screen*
- Ensure all the cables and power connections are correctly and securely connected as described in the Setup and Installation section.
 - Ensure the pins of connectors are not crooked or broken.
 - Ensure that the Shutter (AV Mute) feature is not turned on.
-  *Image is out of focus*
- Press the Focus ▲ or Focus ▼ button on the remote control or projector keypad to adjust the focus until the image is sharp and legible.
 - Make sure the projection screen is between the required distance from the projector. (Refer to Image Size and Projection Distance on page 64).
-  *The image is stretched when displaying 16:10 DVD title*
- When you play anamorphic DVD or 16:10 DVD, the projector will show the best image in 16:10 format on projector side.
 - If you play 4:3 format DVD title, please change the format as 4:3 in projector OSD.
 - Please setup the display format as 16:10 (wide) aspect ratio type on your DVD player.
-  *Image is too small or too large*
- Press the **Zoom+** or **Zoom-** button on the remote control or projector keypad to adjust the projected image size.
 - Move the projector closer to or further from the screen.
 - From the OSD menu, select **Display > Aspect Ratio** to change the aspect ratio.
-  *Image has slanted sides:*
- If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.
 - Press the Keystone    buttons on the remote control to adjust the screen shape.
-  *Image is reversed*
- From the OSD menu, select Setup > Projection > Rear Projection to reverse the image so you can project from behind a translucent screen.

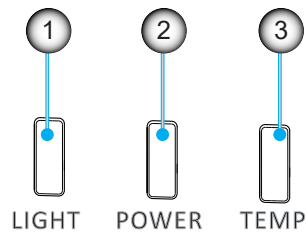
Other problems

-  *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 that the operating angle of the remote control is pointed within $\pm 30^\circ$ to the IR receivers on the projector.
 - Make sure there are not any obstructions between the remote control and the projector. Move to within 20 meters (65.6 feet) of the projector.
 - Make sure batteries are inserted correctly.
 - Replace batteries if they are exhausted.

LED Status Indicator and Lightning Messages



1.	Light Source LED
2.	Power LED
3.	Temp LED

Standby	None	Stay On	None	None
Power On	None	None	Stay On	None
Warning Up Start / Cooling Down Start	None	None	Flashing (0.5 sec off / 0.5 sec on)	None
AV Mute / Shutter	Flashing (1 sec off / 1 sec on)	None	Stay On	None
Error (LD Failure)	Stay On	Flashing (0.5 sec off / 0.5 sec on)	None	None
Error (Over Temp)	None	Flashing (0.5 sec off / 0.5 sec on)	None	Stay On
Error (Fan Lock)	None	Flashing (0.5 sec off / 0.5 sec on)	None	Flashing (0.5 sec off / 0.5 sec on)
Error (Color Wheel Breakdown)	Stay On	Flashing (0.5 sec off / 0.5 sec on)	None	None
DDP Upgrade Mode	Stay On	Stay On	Stay On	Stay On
MCU Upgrade Mode	Flash quickly	None	Stay On	Flash quickly

ADDITIONAL INFORMATION

Environmental conditions

Temperature

Operating: 5~40°C

Storage: -10~60°C

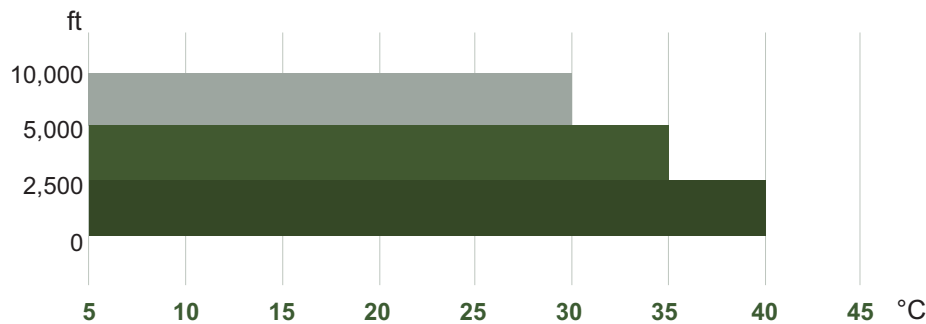
Height

Operating:

For 0~2500 ft, 5~40°C

For 2500~5000 ft, 5~35°C

For 5000~10000 ft, 5~30°C



Note: High altitude > 5000 ft

Humidity

Operating: 10~85%RH, non-condensing

Storage: 5~90%RH, non-condensing