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PROJECTOR OWNER'S MANUAL

EIKI

EK-800U

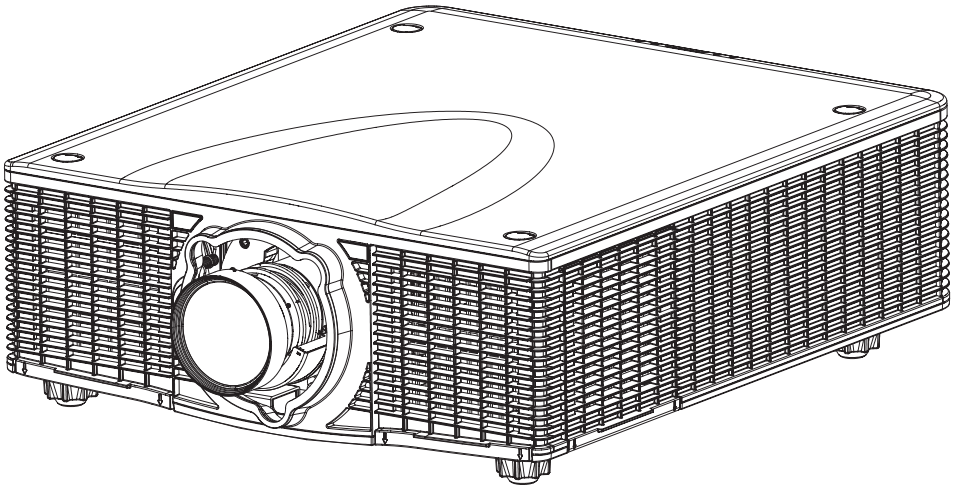
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EIKI

Owner's Manual



Multimedia Projector

Model EK-800U

(Projection lens is optional)

Features and Design

This Multimedia Projector is designed with the most advanced technology for portability, durability, and ease of use. This projector utilizes a high luminance and Eco friendly system, a palette of 1.07 billion colors, and digital light processing (DLP) technology.

Compact Design

This projector is designed compact in size and weight. It is easy to carry and installed anywhere you wish to use.

Simple Computer System Setting

The projector has the Multi-scan system to conform to almost all computer output signals quickly. Up to WUXGA resolution can be accepted.

Useful Functions for Presentations

The digital zoom function allows you to focus on the crucial information during a presentation.

Lamp Control

Brightness of the projection lamp can be manually selected (Constant Power, Constant Luminance, or Eco Mode).

Logo Function

The Logo function allows you to specify the screen background (“Logo”, “Blue”, “Black”, or “White” screen) when no signal is available.

Multilanguage Menu Display

Operation menu is available in 14 languages; English, French, Spanish, German, Italian, Russian, Simplified Chinese, Traditional Chinese, Japanese, Korean, Portuguese, Indonesian, Dutch and Arabic.

Helpful Maintenan ce Functions

Lamp and filter maintenance functions provide for better and proper maintenance of the projector.

Security Function

The Security function helps you to ensure security of the projector.

LAN Network Function

This projector is loaded with the Wired LAN network function. You can operate and manage the projector via network.

For details, refer to page 42 and pages 46-53.

Auto Setup Function

This function enables auto input search and auto signal adjustment simply by pressing the Auto button on the keypad or remote control.

Power Management

The Power management function reduces power consumption and maintains the lamp life.

Note:

The screen menu and pictures in the manual may slightly differ from the real product.
The manual is subject to change without prior notice.

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Trademark Recognition

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

Important Safety Information

> ***Important:***
> *It is strongly recommended that you read this section carefully before using the projector. These safety and usage instructions will ensure that you enjoy many years of safe use of the projector. Keep this manual for future reference.*

Symbols Used

Warning symbols are used on the unit and in this manual to alert you of hazardous situations. The following styles are used in this manual to alert you to important information.

> ***Note:***
> *Provides additional information on the topic at hand.*

> ***Important:***
> *Provides additional information that should not be overlooked.*

> ***Caution:***
> *Alerts you to situations that may damage the unit.*

> ***Warning:***
> *Alerts you to situations that may damage the unit, create a hazardous environment, or cause personal injury.*

Throughout this manual, component parts and items in the OSD menus are denoted in bold font as in this example:

“Push the **Menu** button on the remote control to open the **Main** menu.”

General Safety Information

- Do not open the unit case. Aside from the projection lamp, there are no user-serviceable parts in the unit. For servicing, contact qualified service personnel.
- Follow all warnings and cautions in this manual and on the unit case.
- The projection lamp is extremely bright by design. To avoid damage to eyes, do not look into the lens when the lamp is on.
- Do not place the unit on an unstable surface, cart, or stand.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- Do not place heavy objects such as books or bags on the unit.

Safety Instructions

- Please read this manual completely before installing and operating the projector.
- The projector provides many convenient features and functions. Proper operation may enable you to fully utilize the features and keep it in good condition. Otherwise, it will not only shorten the service life of the unit, but also may cause malfunction, a fire, or other accidents.
- If your projector cannot work properly, please read this manual again, check the operating methods and cable connection, and try the solutions in the part of Troubleshooting. If the problem still exists, contact the dealer or the service center.
- The lamp of the projector is a wearing part. The luminance may decrease after a period of operation and be weaker than that of a new lamp. This is normal. Please strictly follow the steps in turning on the unit and turning off the unit to turn on/off the projector, and the requirements in maintaining and cleaning the projector to service and clean the projector regularly. Or the high temperature residual heat may not radiate, greatly shortening the service life of the projector and lamp, or even damaging them within a short period.

Caution:

ELECTRIC SHOCK DO NOT OPEN

Caution:

To reduce the risk of electric shock, do not remove cover (or back), no user serviceable parts inside except lamp replacement. refer servicing to qualified service personnel.

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the user's manual with this unit.

FOR EU USERS

The symbol mark and recycling systems described below apply to EU countries and do not apply to countries in other areas of the world.

Your product is designed and manufactured with high quality materials and components which can be recycled and/or reused.

The symbol mark means that electrical and electronic equipment, batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste.

Note:

If a chemical symbol is printed beneath the symbol mark, this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration. This will be indicated as follows: Hg: mercury, Cd: cadmium, Pb: lead In the European Union there are separate collection systems for used electrical and electronic equipment, batteries and accumulators.

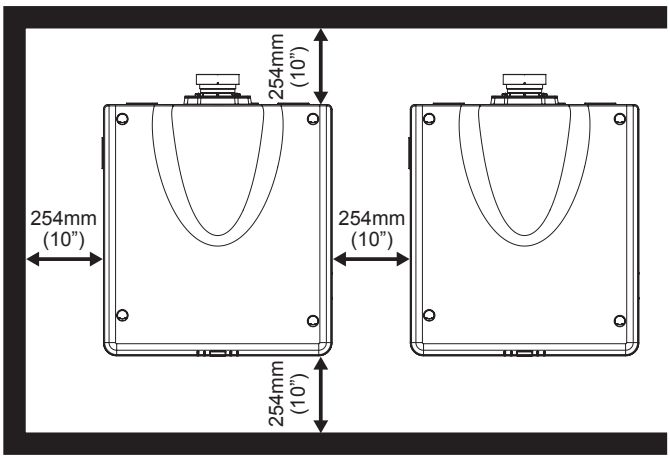
Please, dispose of them correctly at your local community waste collection/recycling centre. Please help us to conserve the environment we live in!

Safety Precautions

Caution:

- *The projector must be grounded.*
- *Do not expose the projector to raindrops or high humidity to avoid a fire or electric shock.*

- This projector produces intense light from the projection lens. Avoid staring directly into the lens, otherwise eye damage could be caused. Be especially careful that children do not stare directly into the beam.
- Place the projector in a proper position. Otherwise it may result in fire hazard.
- Leave an appropriate space from the top, sides, and back of the shell in order to ventilate and cool down the projector. The figures below indicate the minimum distance to be left. It must be satisfied if the projector is placed in sealed environment like a cabinet.



- Do not cover the vent of the projector. Poor radiation may shorten the service life or even cause dangers.
- Remove the AC power plug if the projector is not to be used for a long time.

Caution:

- *Do not set the projector in greasy, wet, or smoky conditions such as in a kitchen, to prevent a malfunction or accident. If the projector comes in contact with oil or chemicals, it may become deteriorated.*
- *Read and keep this manual for future reference.*
- *The mains plug/appliance coupler is used as disconnect device, the disconnect device shall remain readily operable.*

Safety Guide

- All the safety and operating instructions should be read before the product is operated.
- Read all of the instructions given here and retain them for later use. Unplug this projector from AC power supply before cleaning. Do not use liquid or aerosol cleaners.
- Use a damp cloth for cleaning.
- Follow all warnings and instructions marked on the projector.
- For added protection to the projector during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage due to lightning and power line surges.
- Do not expose this unit to rain or use near water... for example, in a wet basement, near a swimming pool, etc...
- Do not use attachments not recommended by the manufacturer as they may cause hazards.
- Do not place this projector on an unstable cart, stand, or table. The projector may fall, causing serious injury to a child or an adult, and serious damage to the projector.



- Use only with a cart or stand recommended by the manufacturer, or sold with the projector. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturers.
- An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation, to ensure reliable operation of the equipment and to protect it from overheating.
- The openings should never be covered with cloth or other materials, and the bottom opening should not be blocked by placing the projector on a bed, sofa, rug, or other similar surface. This projector should never be placed near or over a radiator or heat register.
- This projector should not be placed in a build-in installation such as a book case unless proper ventilation is provided.
- Never push objects of any kind into this projector through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the projector.
- Do not install the projector near the ventilation duct of air-conditioning equipment.
- This projector should be operated only from the type of power source indicated on the marking label.
- If you are not sure of the type of power supplied, consult your authorized dealer or local power company.
- Do not overload wall outlets and extension cords as this can result in fire or electric shock. Do not allow anything to rest on the power cord. Do not locate this projector where the cord may be damaged by persons walking on it.
- Do not attempt to service this projector yourself as opening or removing the covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- Unplug this projector from wall outlet and refer servicing to qualified service personnel under the following conditions:
  - When the power cord or plug is damaged or frayed.
  - If liquid has been spilled into the projector.
  - If the projector has been exposed to rain or water.
  - If the projector does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the projector to normal operation.
  - If the projector has been dropped or the cabinet has been damaged.

➢ When the projector exhibits a distinct change in performance - this indicates a need for service.

- When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or injury to persons.
- Upon completion of any service or repairs to this projector, ask the service technician to perform routine safety checks to determine that the projector is in safe operating condition.

Information for users in the European Union

This is a device to project images onto a screen, etc., and is not intended for use as indoor lighting in a domestic environment. Directive 2009/125/EC.

Note for customers in the US

Hg *Lamp(s) inside this product contain mercury and must be recycled or disposed of according to local state or federal laws.*

Lamp(s) inside this product contain mercury and must be recycled or disposed of according to local state or federal laws.

Air circulation

Vents in the cabinet are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered.

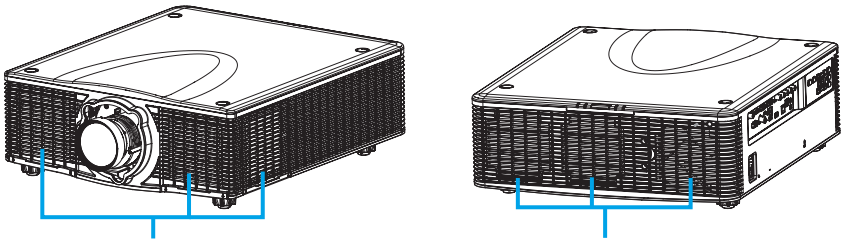
Caution:

- *Hot air is exhausted from the exhaust vent. When using or installing the projector, the following precautions should be taken.*
- *Do not put any flammable objects, or spray can near the projector. Hot air is exhausted from the air vents.*
- *Keep the exhaust vent at least 1m away from any objects.*
- *Do not touch a peripheral part of the exhaust vent, especially screws and metallic part. This area will become hot while the projector is being used.*
- *Do not put anything on the projector. Objects put on the cabinet will not only get damaged but also may cause fire hazard by heat.*
- *Cooling fans are provided to cool down the projector.*
- *The fan's running speed is changed according to the temperature inside the projector.*

Caution:

Contains mercury

- *For more information on safe handling procedures, the measures to be taken in case of accidental breakage and safe disposal options visit: ec.gc.ca/mercure-mercury/.*
- *Dispose of or recycle in accordance with applicable laws.*



Moving the projector

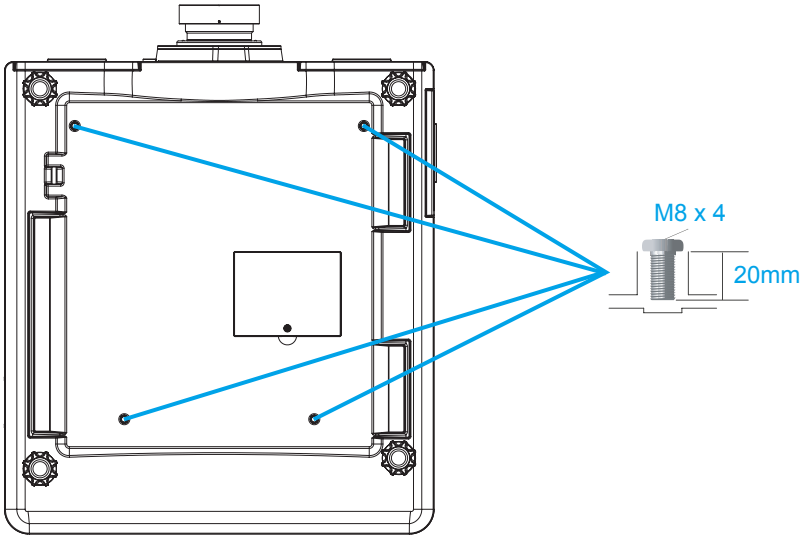
When moving the projector, take care of the lens and retract the adjustable foot to prevent damage to the lens and cabinet.

Installing the projector properly

- Please set the projector on nearly-level.
- Be sure to install the projector properly. Improper installation may reduce the lamp lifetime and even cause a fire hazard.

Caution in ceiling installation the projector

- *Only qualified personal is authorized for ceiling installation.*
- *We are not responsible for the hurt and damage caused by ceiling brakect that purchased from unauthorized dealer even in warranty period.*
- *Remove the ceiling bracket immediately while not use.*
- *While installing, torque screwdriver is suggested, don't use electric or impact-type screwdriver.*
- *Please read the manual of bracket for details.*
- *The bracket is subject to change without notice.*



Caution in moving or transporting the projector

- *Do not drop or bump the projector, otherwise damages or malfunctions may result.*
- *When carrying the projector, use a suitable carrying case.*
- *Do not transport the projector by courier or any other transport service in an unsuitable transport case. This may cause damage to the projector. For information about transporting the projector by courier or any other transport service, consult your dealer.*
- *Do not put the projector in a case before it is cooled enough.*

Compliance

FCC Caution

Note: This equipment has been tested and found to comply with the limits for a Class A 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 equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user 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 equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Use of shielded cable is required to comply with class A limits in Subpart B of Part 15 of FCC Rules.

Do not make any changes or modifications to the equipment unless otherwise specified in the instructions. If such changes or modifications should be made, you could be required to stop operation of the equipment.

Model Number : EK-800U

Trade Name : EIKI

Responsible party : EIKI International, Inc.

Address : 30251 Esperanza Rancho Santa Margarita CA 92688-2132

Telephone No. : 800-242-3454 (949-457-0200)

AC Power Cord Requirement

The AC Power Cord supplied with this projector meets the requirement for use in the country you purchased it.

AC Power Cord for the United States and Canada:

AC Power Cord used in the United States and Canada is listed by the Underwriters Laboratories (UL) and certified by the Canadian Standard Association (CSA).

AC Power Cord has a grounding-type AC line plug. This is a safety feature to be sure that the plug will fit into the power outlet. Do not try to defeat this safety feature. Should you be unable to insert the plug into the outlet, contact your electrician.

> ***Warning:***
> *A plug with bared flexible cord is hazardous if engaged in a live socket outlet.*

The Wires in this mains lead are coloured in accordance with the following code:

- Green-and-yellow ..... Earth
- Blue ..... Neutral
- Brown ..... Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

- The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol or coloured green or green-and-yellow.
- The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
- The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Warning:

This apparatus must be earthed.

Note:

The socket-outlet should be installed near the equipment and easily accessible.

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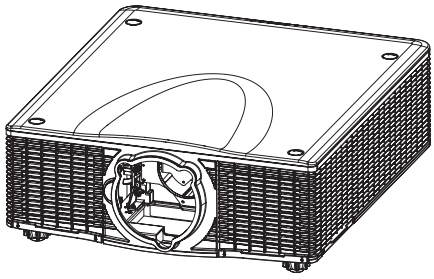
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Packing Checklist

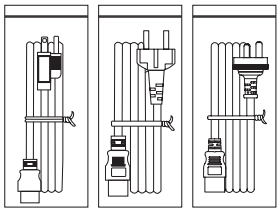
Carefully unpack the projector and check that the following items are included:



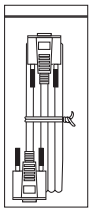
DLP PROJECTOR



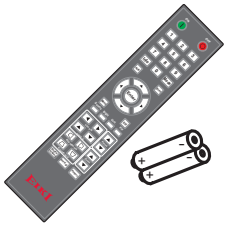
CD-ROM
(THIS OWNER'S MANUAL)



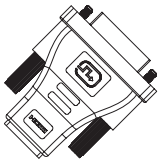
POWER CORD
US Type*1 / Euro Type*1 /
China Type*1 for China



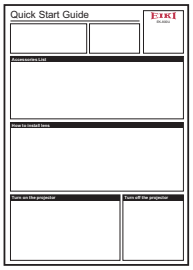
VGA CABLE



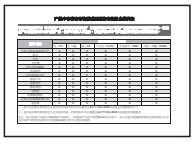
REMOTE CONTROL
(WITH TWO AAA
BATTERIES)



DVI-HDMI ADAPTER



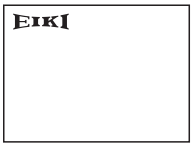
QUICK START GUIDE



RoHS CARD
for China



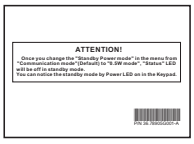
QC PASS CARD
for China



WARRANTY CARD
for China



WARRANTY CARD
for USA



CAUTION CARD

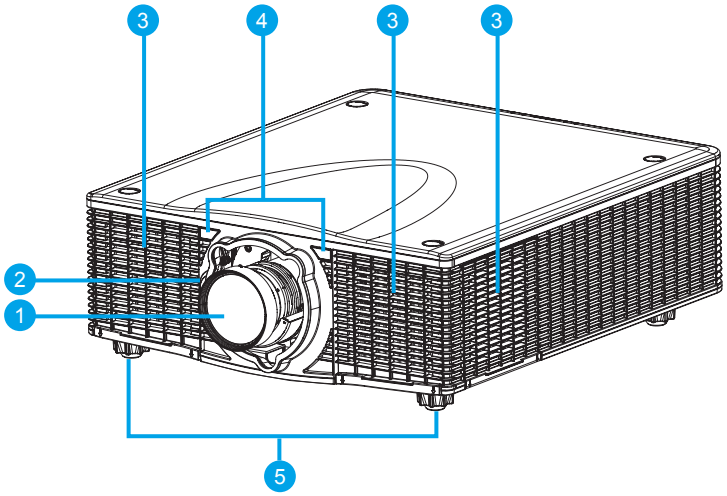
Contact your dealer immediately if any items are missing, appear damaged, or if the unit does not work. It is recommend that you keep the original packing material should you ever need to return the equipment for warranty service.

Note:

- *Avoid using the projector in dusty environments.*

Views of Projector Parts

Front-right View

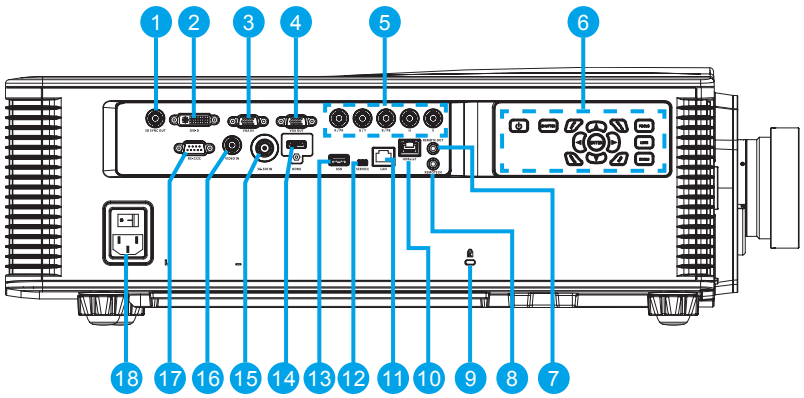


Item	Label	Description	See page
1	Projection Lens	Allows automated lens control and adjustment: vertical and horizontal offsets, zoom and focus.	-
2	Lens Release Button	Press to release the lens.	-
3	Cooling Air Vents (Intake)	Keep these vents unobstructed to prevent the projector from overheating.	-
4	Front IR Sensor	Receives signals from the IR remote. Keep the signal path to the sensor unobstructed for uninterrupted communication with the projector.	6
5	Adjustable Feet	Raise or lower the feet to level the projector.	12

Important:

Ventilation openings on the projector allow for good air circulation, which keeps the projector lamp cool. Do not obstruct any of the ventilation openings.

Left View



Item	Label	Description	See page
1	3D Sync OUT	Connect the 3D IR glasses transmitter (Note: For Specific 3D IR glasses only)	-
2	DVI-D	Connect to DVI source.	-
3	VGA IN	Connect the VGA cable from a computer or component device.	-
4	VGA OUT	Connect the VGA cable to a display.	-
5	Component/ RGBHV IN	Connect to RGB or YPbPr/YCbCr output signal with BNC type input terminal.	-
6	Built-in Keypad	Control the projector.	4
7	Remote OUT	Connect to a second projector when the system uses multiple projectors.	-
8	Remote IN	Connect to the remote control wired terminal for serial control projector.	-
9	Kensington Lock	Use to secure the projector to countertops, tables, etc.	63
10	HDBaseT	Connect a RJ45 Cat5/Cat6 Ethernet cable to input uncompressed high-definition video control signals.	-
11	LAN	Connect a LAN cable from Ethernet.	-
12	Service	Service only.	-
13	USB	Connect the WIFI dongle.	-
14	HDMI	Connect the HDMI cable from a HDMI device.	-
15	3G-SDI IN	Connect the coaxial cable with BNC connector from a 3G-SDI device.	-
16	Video IN	Connect the COMPOSITE cable from a video device.	-
17	RS-232C	Connect RS-232 serial port cable for remote control.	-
18	AC Input	Connect to the supplied power adapter.	11

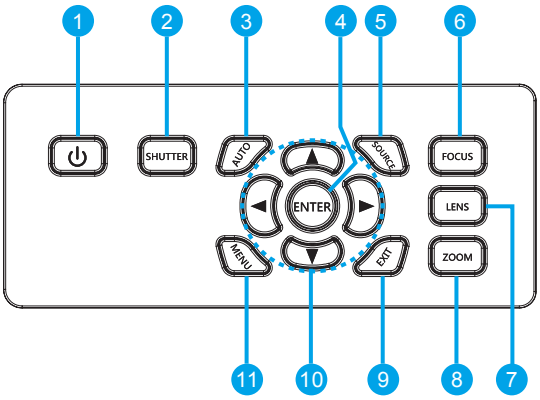
Note:

- *To use this feature, you must plug in the connector before turn on/off the projector.*
- *Do not use this jack for anything other than intended use.*

Warning:

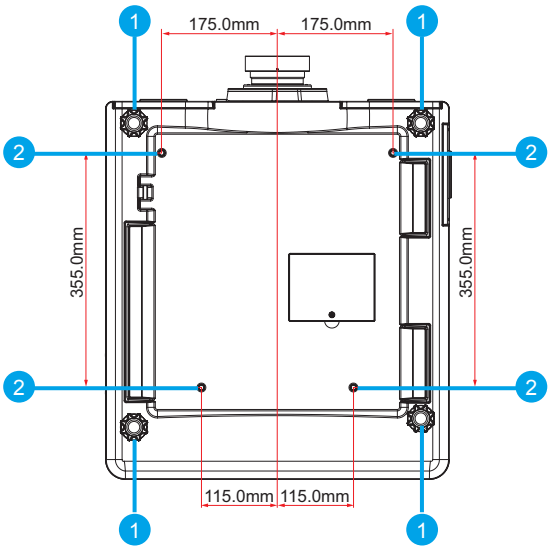
As a safety precaution, disconnect all power to the projector and connecting devices before making connections.

Built-in Keypad



Item	Label	Description	See page
1	Power	Turn the projector on or off.	11
2	Shutter	Display or blank the video image.	-
3	Auto	Automatically optimize image.	-
4	Enter	• Select a highlighted menu item. • Change or accept a value.	20
5	Source	Select an input for the main or PIP/PBP image.	-
6	Focus	Adjust focus.	13
7	Lens	Adjust the lens vertical or horizontal offset setting.	-
8	Zoom	Adjust zoom.	13
9	Exit	Return to previous level or exit menus if at top level.	20
10	Arrow keys	• Adjust a setting UP or DOWN. • Navigate within a menu.	20
11	Menu	Display menus.	20

Bottom View

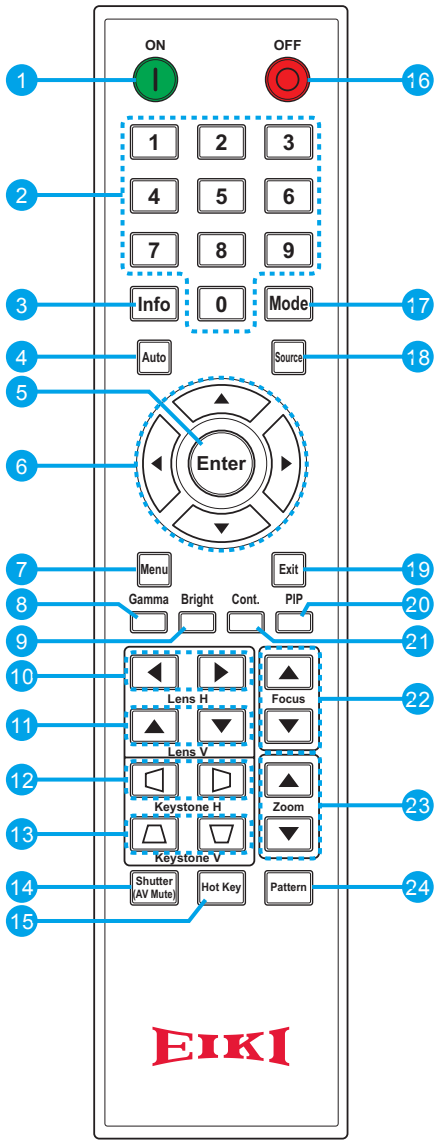


Item	Label	Description	See page
1	Adjustable Feet	Raise or lower the feet to level the projector.	12
2	Ceiling support holes	Contact your dealer for information on mounting the projector on a ceiling.	-

Note:

- *When installing, ensure that you use only UL Listed ceiling mounts.*
- *For ceiling installations, use approved mounting hardware and M8 screws with a maximum screw depth of 20 mm (0.78 inch).*
- *The construction of the ceiling mount must be of a suitable shape and strength. The ceiling mount load capacity must exceed the weight of the installed equipment, and as an additional precaution be capable of withstanding three times the weight of the equipment (not less than 71.4 kg) over a period of 60 seconds.*

Remote Control Parts



Important:

1. *Avoid using the projector with bright fluorescent lighting turned on. Certain high-frequency fluorescent lights can disrupt remote control operation.*
2. *Be sure nothing obstructs the path between the remote control and the projector. If the path between the remote control and the projector is obstructed, you can bounce the signal off certain reflective surfaces such as projector screens.*
3. *The buttons and keys on the projector have the same functions as the corresponding buttons on the remote control. This owner's manual describes the functions based on the remote control.*

Note:

Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

Item	Label	Description	See page
1	Power on	Turn projector ON.	11
2	Number Keys	Enter a number (such as PIN code) or source hotkey. Source Hotkey Key: 1: VGA 2: R/PR, G/Y, B/PB, H, V 3: HDMI 4: DVI-D 5: 3D-SDI 6: HDBaseT 7: Video 8: LAN	-
3	Info	Display source image information.	-
4	Auto	Automatically optimize image.	-
5	Enter	• Select a highlighted menu item. • Change or accept a value.	20
6	Arrow Keys	• Adjust a setting UP or DOWN. • Navigate within a menu.	20
7	Menu	Display menus.	20
8	Gamma	Adjust mid-range levels.	-
9	Bright	Adjust amount of light in the image.	-
10	Lens H	Adjust the position of the image horizontally.	-
11	Lens V	Adjust the position of the image vertically.	-
12	Keystone H	Adjust the horizontal keystone.	13
13	Keystone V	Adjust the vertical keystone.	13
14	Shutter (AV Mute)	Display or blank the video image.	-
15	Hot Key	Select your preset keys quickly.	-
16	OFF	Turn projector OFF.	11
17	Mode	Select the preset display mode.	-
18	Source	Select an input for the main or PIP/PBP image.	-
19	Exit	Return to previous level or exit menus if at top level.	20
20	PIP	Turn PIP/PBP ON/OFF.	-
21	Cont.	Adjust difference between dark and light.	-
22	Focus	Adjust focus to improve image clarity as desired.	13
23	Zoom	Adjust zoom to achieve a desired image size.	13
24	Pattern	Display a test pattern.	-

Caution:

Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

Remote Control Operating Range

The remote control uses infrared transmission to control the projector. It is not necessary to point the remote directly at the projector. Provided you are not holding the remote perpendicular to the sides or the rear of the projector, the remote will function well within a radius of about 7 meters (23 feet) and 15 degrees above or below the projector level. If the projector does not respond to the remote control, move a little closer.

Projector and Remote Control Buttons

The projector can be operated using the remote control or the buttons on the top of the projector. All operations can be carried out with the remote control; however, the buttons on the projector are limited in use.

Remote Control Code

The ten different remote control codes (Code 0 -Code 9) are assigned to this projector. Switching the remote control codes prevents interference from other remote controls when several projectors or video equipment next to each other are being operated at the same time. Change the remote control code for the projector first before changing that for the remote control. See "Projector Address" in the Communications Menu on page 40.

To change the code for the Remote Control:

Press and hold the Mode button and a number button (0-9) on the remote control for more than three seconds to switch among the codes.

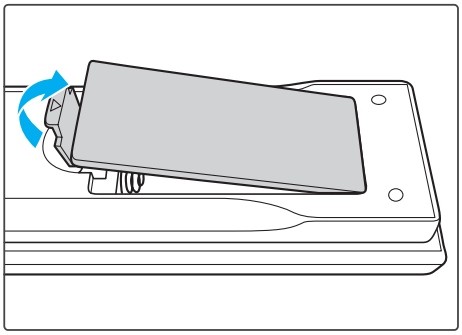
Default setting : 0

To change the Projector Address for the projector:

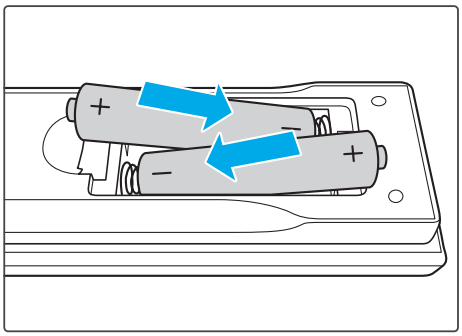
Select a Projector Address in this Setting Menu. (SETUP -> Communications -> Projector Address)

Inserting the Remote Control Batteries

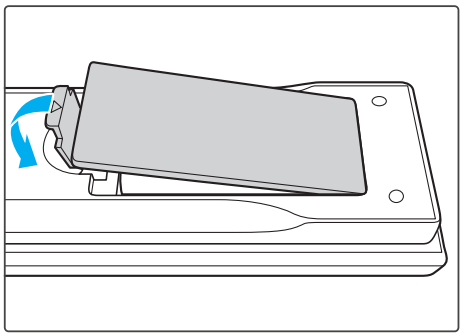
1. Remove the battery compartment cover as shown in the illustration.



2. Insert the batteries with correct polarity (+/-) as shown inside the battery compartment.



3. Replace the cover.



Caution:

- *Only use AAA batteries (Alkaline batteries are recommended).*
- *Dispose of used batteries according to local ordinance regulations.*
- *Remove the batteries when not using the projector for prolonged periods.*

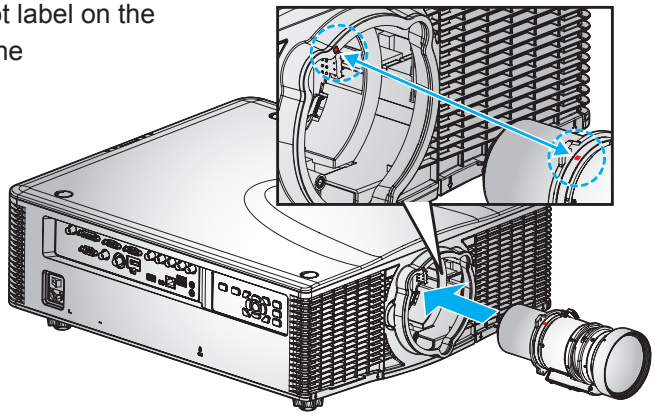
Installing the Projection Lens

Before setting up the projector, install the projection lens on the projector.

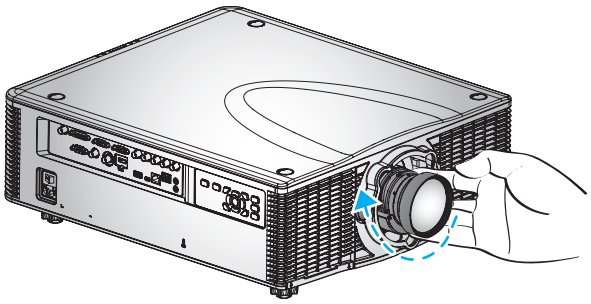
> ***Important:***
> - *Before installation, check where the projector is used and prepare a suitable lens.*
> - *For details, contact the sales dealer where you purchased the projector.*

1. Turn the projector off. Allow the projector to cool down into standby mode.

2. Align the red dot label on the lens with the red dot label on the lens mount. Then install the lens assembly into the lens mount.



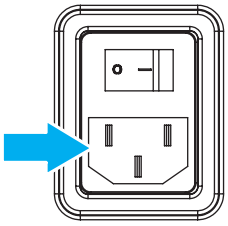
3. Rotate the lens clockwise to lock the lens in place.



Starting and Shutting down the Projector

Turn the Projector On

1. Connect the power cord to the projector. Then connect the other end to a wall outlet. The Power button on the built in keypad is illuminated.



> ***Important:***
> *Make sure that the Power switch is in the ON position.*

2. Turn on the connected devices.

3. Turn on the projector by pressing "⏻" on the remote control or press "⏻" on the built-in keypad. The Status LED is Green with a long blink.
The projector splash screen displays and connected devices are detected.



4. If more than one input device is connected, press the **Source** key on the remote control to select an input source (VGA, BNC, HDMI, HDBaseT, or Component).

5. The projector detects the source you selected and displays the image.

Turn the Projector Off

1. Press "⏻" on the built-in keypad or press "⏻" on the remote control to turn off the projector. A warning message will appear on the displayed image.

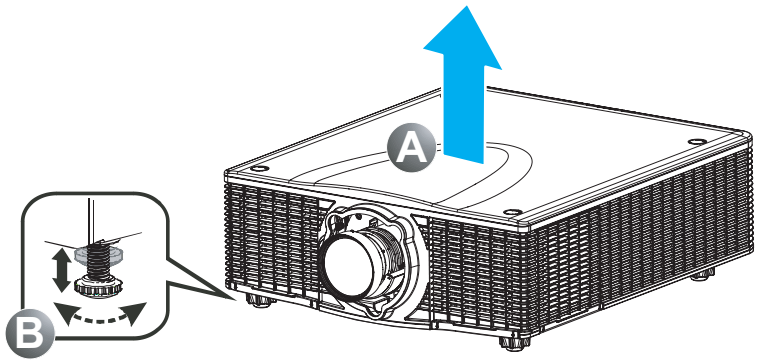
2. Press "⏻" on the built-in keypad or press "⏻" on the remote control again to confirm your selection. If you do not press "⏻" or "⏻" again, the warning message will disappear after 3 seconds.

> ***Caution:***
> • *Do not unplug the power cord until all of fans are stop–indicating the projector has cooled down.*

Adjusting the Projector Level

Take note of the following when setting up the projector:

- The projector table or stand should be level and sturdy.
- Position the projector so that it is perpendicular to the screen.
- Ensure the cables are in a safe location. You could trip over them.

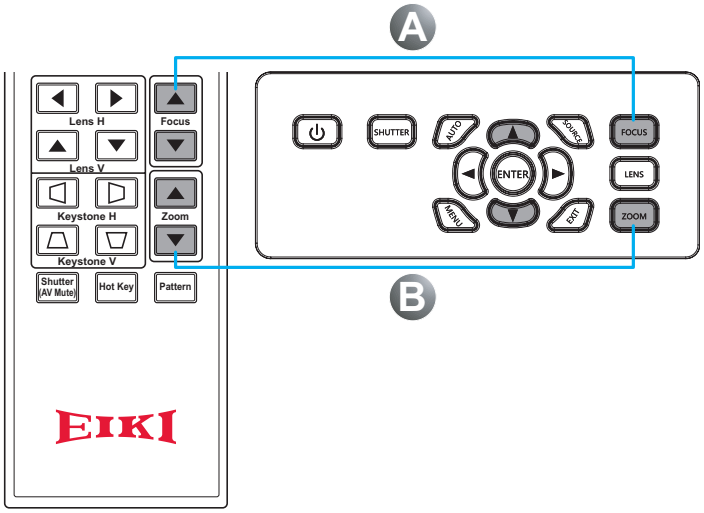


1. To raise the level of the projector, lift the projector A.
2. Locate the adjustable foot you wish to modify on the underside of the projector.
3. Rotate the adjustable foot clockwise to raise the projector or counter-clockwise to lower it. Repeat with the remaining feet as necessary B.

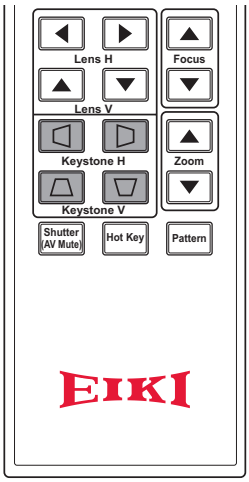
Adjusting the Zoom, Focus, and Keystone

1. Use the **Zoom** button to resize the projected image and screen size B.

2. Use the **Focus** button to sharpen the projected image A.



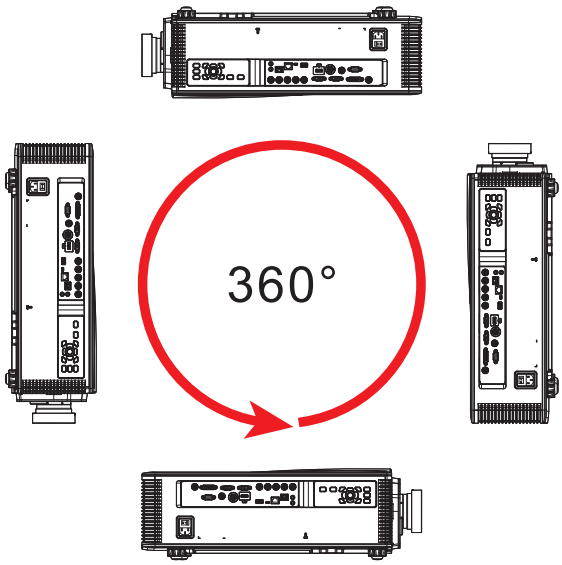
3. Use the **Keystone H** buttons (on the remote control) to adjust the keystone horizontally and make a squarer image. Use the **Keystone V** buttons (on the remote control) to adjust keystone vertically and make a squarer image.



Adjust 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:

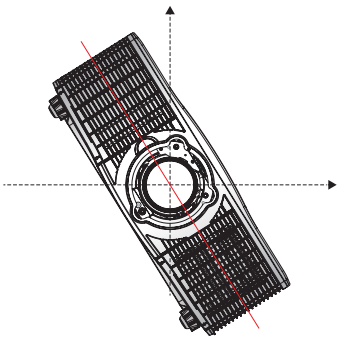
- Position the projector on a flat surface at a right angle to the screen. The projector (with the standard lens) must be at least 3 feet (0.9m) from the projection screen.
- Position the projector to the desired distance from the screen. The distance from the lens of the projector to the screen, the zoom setting, and the video format determine the size of the projected image.
- For the fixed short lens, the image exits at a default angle. However, the lens shift feature makes the image offset variable.
- 360° free orientation operation:



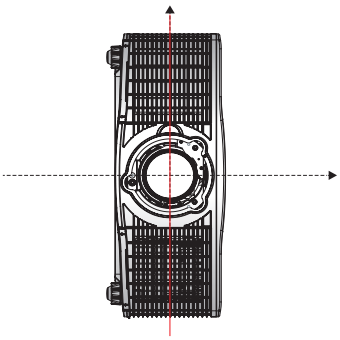
Portrait Mode

- The projector is in portrait mode when the viewing angle is from 70° to 110° as illustrated below.

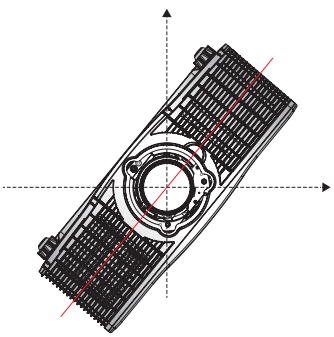
Portrait mode 70~90°



Portrait mode 90°



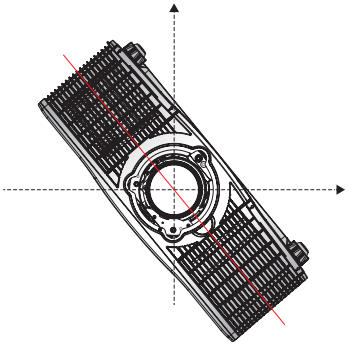
Portrait mode 90~110°



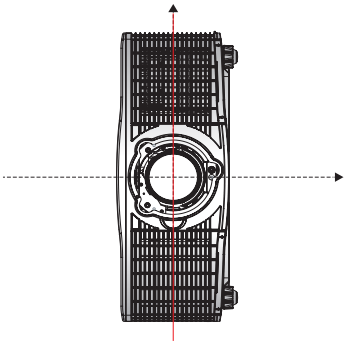
Non-Portrait Mode

- The projector is in non-portrait mode when the viewing angle is 250° to 290° as illustrated below.
- The "green and red" (amber) status LED on projector lights on.

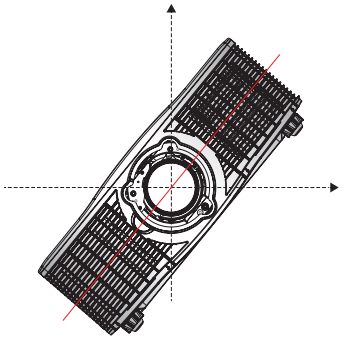
250~270°



270°



270~290°



Caution:

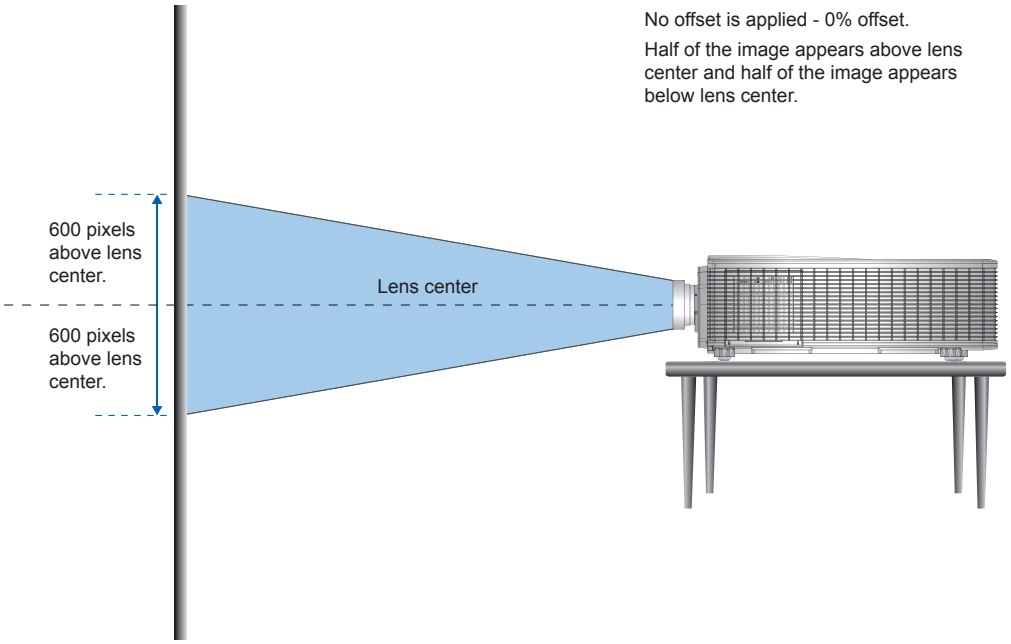
- *The projector should not be operated in Non-Portrait Mode.*

Using the Lens Shift Adjustment

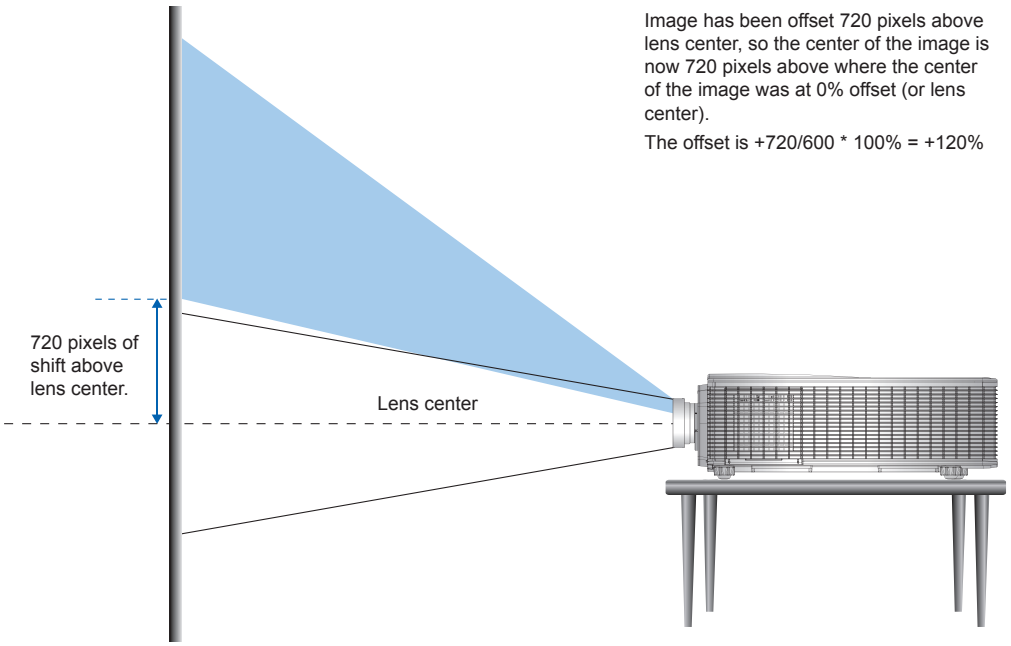
The projection lens can be moved up, down, right, and left with the motor-driven lens shift function. This function makes the positioning of images easy on the screen. Lens shift is generally expressed as a percentance of the image height or width, see below illustration.

Vertical / Horizontal Lens Shift

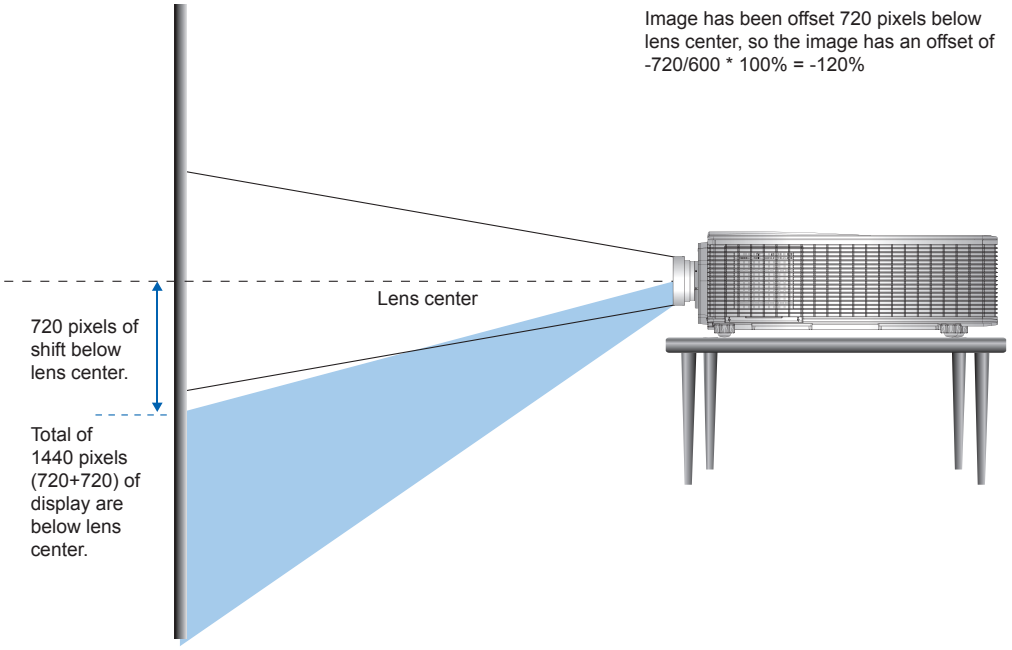
Vertical Image Offset: 0% Offset (WUXGA)



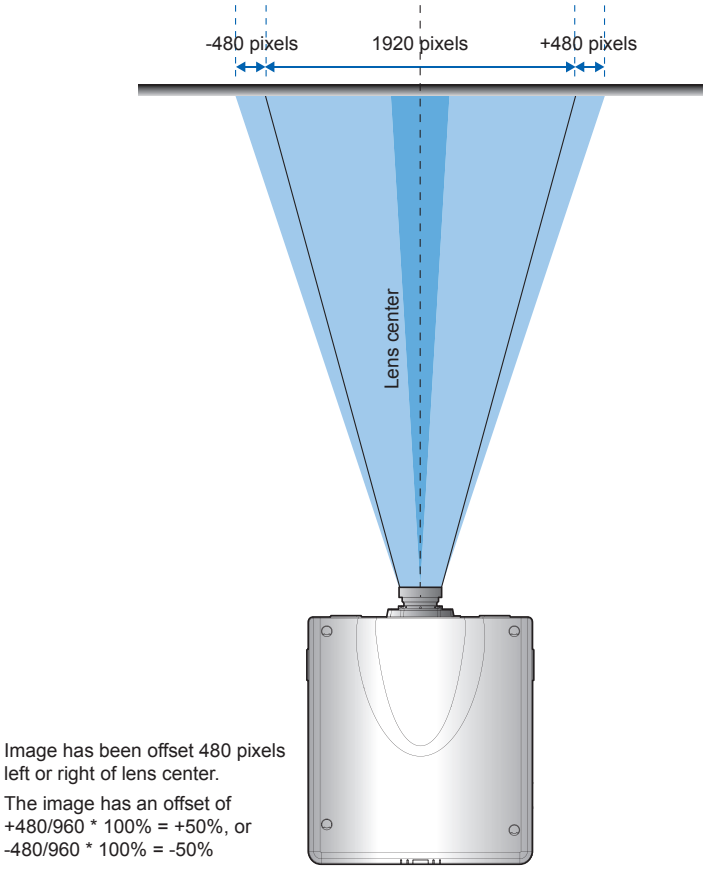
Vertical Image Offset: 120% Offset (WUXGA)



Vertical Image Offset: -120% Offset (WUXGA)



Horizontal Image Offset: +/-50% Offset (WUXGA)



Optional Lenses and Projection Size

Projection Lens

The complete projection lens series as below table.

Item	Lens Type					
Lens Model Name	AH-B22010	AH-B22020	AH-B22030	AH-B21010	AH-B24010	AH-B23010
F number	2~2.3	2~2.3	2.2~2.5	2~2.24	2.2~2.75	2.2~2.6
Throw Ratio	0.84 ~ 1.02	1.02 ~ 1.36	1.2 ~ 1.5	1.5 ~ 2.0	2.0 ~ 4.0	4.0 ~ 7.2
Zoom Ratio	1.2X	1.33X	1.25X	1.33X	2X	1.8X
Focal Length (mm)	21.5(W) / 28.7(T)	21.5(W) / 28.7(T)	25.5(W) / 31.8(T)	31.8(W) / 42.1(T)	42.4(W) / 84.5(T)	84.1(W) / 149.8(T)
Lens shift	Limit Range	Limit Range	Full Range	Full Range	Full Range	Full Range
Brightness (%)	85%	90%	95%	100%	90%	90%
NOTE	The above throw ratio is for screen size 100", the tolerance is +/- 3%. Lens brightness ratio tolerance is +/-5%. ≤1.0m to infinity mechanism travel. 50"~ 500" mechanism travel range. (BFL could cover ME tolerance +/-0.15 mm) 80"~ 250" full optical performance range.					

Projection Size v.s Throw Distance

Projection Size			Lens Model Name											
			AH-B22010		AH-B22020		AH-B22030		AH-B21010		AH-B24010		AH-B23010	
Diagonal (inch)	Width (m)	Height (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)
50	1.08	0.67	0.9	1.1	1.1	1.5	1.3	1.6	1.6	2.2	2.2	4.3	4.3	7.8
100	2.15	1.35	1.8	2.2	2.2	2.9	2.6	3.2	3.2	4.3	4.3	8.6	8.6	15.5
120	2.59	1.62	2.2	2.6	2.6	3.5	3.1	3.9	3.9	5.2	5.2	10.3	10.3	18.6
150	3.23	2.02	2.7	3.3	3.3	4.4	3.9	4.8	4.8	6.5	6.5	12.9	12.9	23.3
180	3.88	2.42	3.3	4.0	4.0	5.3	4.7	5.8	5.8	7.8	7.8	15.5	15.5	27.9
200	4.31	2.69	3.6	4.4	4.4	5.9	5.2	6.5	6.5	8.6	8.6	17.2	17.2	31.0
250	5.39	3.37	4.5	5.5	5.5	7.3	6.5	8.1	8.1	10.8	10.8	21.5	21.5	38.8
300	6.46	4.04	5.4	6.6	6.6	8.8	7.8	9.7	9.7	12.9	12.9	25.9	25.9	46.5
350	7.54	4.71	6.3	7.7	7.7	10.3	9.1	11.3	11.3	15.1	15.1	30.2	30.2	54.3
400	8.62	5.39	7.2	8.8	8.8	11.7	10.3	12.9	12.9	17.2	17.2	34.5	34.5	62.1
500	10.77	6.73	9.1	11.0	11.0	14.7	12.9	16.2	16.2	21.5	21.5	43.1	43.1	77.6

Other Optional Parts

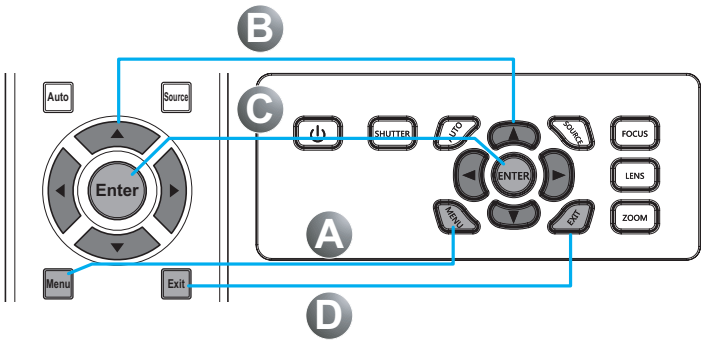
Part Number	Item
AH-B34010	Optional Color Wheel
AH-B34020	WiFi Dongle
AH-B34030	Wired Remote Cable
AH-B32010	Filter (1 piece)
AH-B32020	Filter (3 piece)

OSD Menu Controls

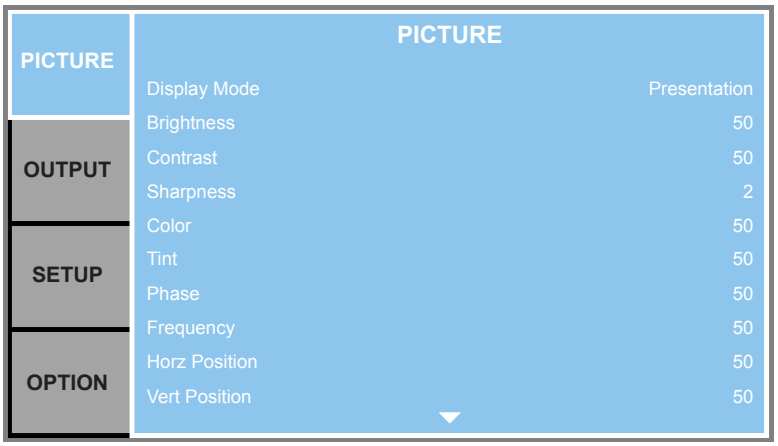
The projector has an OSD that lets you make image adjustments and change various settings.

Navigating the OSD

You can use the remote control cursor buttons or the projector keypad to navigate and make changes to the OSD.



1. To enter the OSD, press the **Menu** button (A).
2. Use the arrow keys (▲▼◀▶) to navigate within the menu and adjust a setting up or down (B).
3. Press the **Enter** button to enter the submenu or confirm the selection/ setting (C).
4. Press the **Exit** button to return to the previous menu or exit menus if at top level (D).

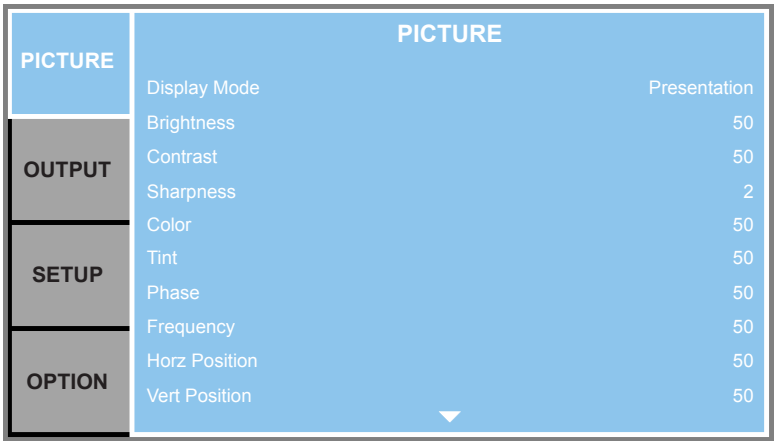


> ***Caution:***
> *Depending on the video source, not all items in the OSD are available. Items that are not available cannot be accessed and are grayed out.*

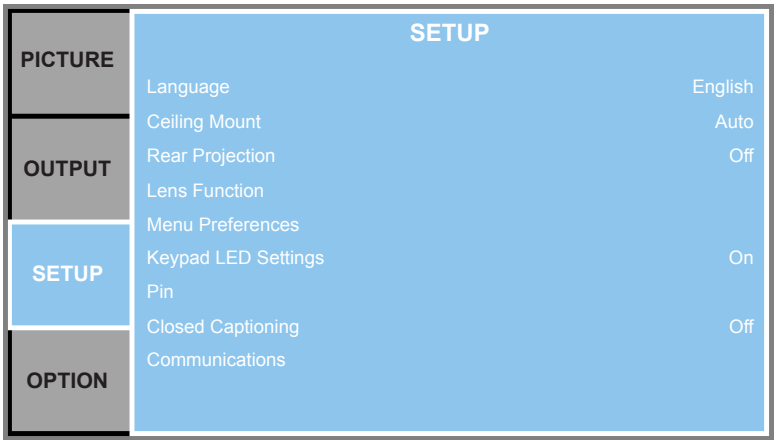
Setting the OSD Language

Set the OSD language to your preference before continuing.

1. Press the **Menu** button.



2. Use the arrow keys (▲▼) to select **SETUP** and press the **Enter** button to enter the **SETUP** menu.



3. Use the arrow keys (▲▼) to select **Language** and press the **Enter** button to enter its submenu.

4. Use the arrow keys (▲▼◀▶) to select the desired language and press the **Enter** button to enter its confirm.

5. Press the **Exit** button several times to exit the menu.



OSD Menu Overview

Use the following illustration to quickly find a setting or determine the range for a setting.

Main Menu	Sub Menu / Settings				Default
PICTURE	Display Mode	Presentation			By source set
		Video			
		Bright			
		DICOM SIM			
		2D High Speed			
		3D			
		User			
		Save to User			
	Brightness	0 ~ 100			50
	Contrast	0 ~ 100			50
	Sharpness	0 ~ 4			2
	Color	0 ~ 100			50
	Tint	0 ~ 100			50
	Phase	0 ~ 100			50
	Frequency	0 ~ 100			50
	Horz Position	0 ~ 100			50
	Vert Position	0 ~ 100			50
	Auto Image				
	3D Display	3D Enable	Auto		Auto
			Frame Packing		
			Side by Side		
			Top and Bottom		
			Frame Sequential		
			Off		
		3D Invert	Off		Off
			On		
		DLP Link	Off		On
			On		
	Color Matching	Enable	On/Off		Off
		Auto Test Pattern	On/Off		On
		Red Part of Red	0 - 1000		1000
		Green Part of Red	0 - 1000		0
		Blue Part of Red	0 - 1000		0
		Green Part of Green	0 - 1000		1000
		Red Part of Green	0 - 1000		0
		Blue Part of Green	0 - 1000		0
		Blue Part of Blue	0 - 1000		1000
		Red Part of Blue	0 - 1000		0
		Green Part of Blue	0 - 1000		0
		Red Part of White	0 - 1000		1000
		Green Part of White	0 - 1000		1000

Main Menu	Sub Menu / Settings				Default
PICTURE	Color Matching	Blue Part of White	0 - 1000		1000
		Reset to Default	Yes/No		
	Advanced	BrilliantColor™	Normal Look		Bright Look
			Bright Look		
		White Peaking	0 - 100		By source set
		Gamma	VIdeo		By source set
			Film		
			Bright		
			CRT		
			DICOM		
		Color Temperature	Warmest		By source set
			Warm		
			Cool		
			Bright		
		Color Space	RGB		Auto
			REC709		
			REC601		
			RGB Video		
			Auto		
		Color Settings	Red Gain	0 ~ 100	50
			Green Gain	0 ~ 100	50
			Blue Gain	0 ~ 100	50
			Red Offset	0 ~ 100	50
			Green Offset	0 ~ 100	50
			Blue Offset	0 ~ 100	50
			Reset RGB Gain/ Offset		
		Color Enhancement	0 ~ 2		0
		Color Wheel Speed	2X		2X
			3X		
		DynamicBlack™	Off		Off
			On		
		Noise Reduction	0 ~ 100		0
		Flesh Tone Correction	0 ~ 100		0
		Video Black Level	Off		Off
			On		
		Film Mode	Off		Off
			On		
OUTPUT	Aspect Ratio	Auto			Auto
		4:3			
		16:10			
		Native			
		3D Mode			

Main Menu	Sub Menu / Settings				Default
OUTPUT	Overscan	Off			By source set
		Zoom			
		Crop			
	H Digital Zoom	50% ~ 400%			100
	V Digital Zoom	50% ~ 400%			100
	H Digital Shift	0 ~ 100			50
	V Digital Shift	0 ~ 100			50
	Image Warping	PC Mode	Off		Off
			On		
		H Keystone	0 ~ 40		20
		V Keystone	0 ~ 40		20
		H Pincushion	0 ~ 100		50
		V Pincushion	0 ~ 100		50
	PIP/PBP	PIP/PBP Enable	Off		Off
			On		
		Main Source	VGA		VGA
			BNC		
			HDMI		
			DVI-D		
			3G-SDI		
			HDBaseT		
			CVBS		
			Network Display		
		Sub Source	VGA		
			BNC		
			HDMI		
			DVI-D		
			3G-SDI		
			HDBaseT		
			CVBS		
			Network Display		
		Swap			
		Size	Small		Large
			Medium		
			Large		
		Layout	PBP, Main Left		PBP, Main Left
			PBP, Main Top		
			PBP, Main Right		
			PBP, Main Bottom		
			PIP-Bottom Right		
			PIP-Bottom Left		
			PIP-Top Left		
			PIP-Top Right		

Main Menu	Sub Menu / Settings				Default
SETUP	Language	English			English
		French			
		Spanish			
		German			
		Italian			
		Russian			
		Chinese Simpified			
		Chinese Traditional			
		Japanese			
		Korean			
		Portuguese			
		Indonesian			
		Dutch			
		Arabic			
	Ceiling Mount	Off			Auto
		On			
		Auto			
	Rear Projection	Off			Off
		On			
	Lens Function	Focus			
		Zoom			
		Lens Shift			
		Lens Calibration	Yes/No (Dialog box)		
		Lens Lock	No		No
			Yes		
	Menu Preferences	Menu Transparency	0 ~ 9		0
		Show Messages	Off		On
			On		
	Keypad LED Settings	Off			On
		On			
	Pin	Pin Protect	Off		Off PIN default : 12345
			On		
		Change PIN			
	Closed Captioning	Off			Off
		CC1			
		CC2			
	Communications	LAN	DHCP		Off
					On
			IP Address		192.168.000.100
			Subnet Mask		255.255.255.000
			Default Gateway		192.168.000.100
			MAC Address		XX:XX:XX:XX:XX:XX
			Apply		Off
					On

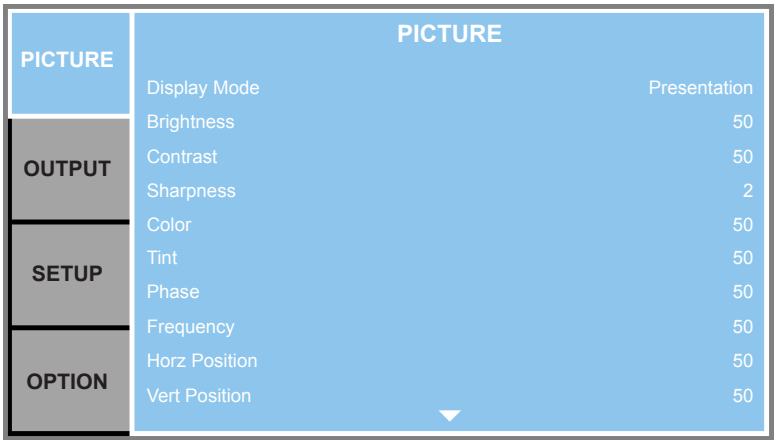
Main Menu	Sub Menu / Settings				Default
SETUP	Communications	WLAN	Enable		Off
					On
			Start IP		192.168.001.100
			End IP		192.168.001.120
			Subnet Mask		255.255.255.000
			Default Gateway		192.168.001.100
			MAC Address		XX:XX:XX:XX:XX:XX
			SSID		SSID@XXXXX
		Network	Projector Name		SSID@XXXXX
			Restart Network		Off
					On
			Network Factory Reset		Off
					On
		Serial Port Baud Rate	9600		19200
			14400		
			19200		
			38400		
			57600		
			115200		
		Serial Port Echo	Off		Off
			On		
		Serial Port Path	RS232		RS232
			HDBaseT		
		Projector Address	0 - 9		0
OPTION	Auto Source	Off			On
		On			
	High Altitude	Off			Off
		On			
	Test Pattern	Off			Off
		Grid			
		Red			
		Green			
		Blue			
		Yellow			
		Magenta			
		Cyan			
		White			
		Black			
	Background Color	Logo			Logo
		Blue			
		Black			
		White			
	Hot-Key settings	Blank Screen			Blank Screen
		Aspect Ratio			
		Freeze Screen			
		Overscan			
		Closed Captions			

Main Menu	Sub Menu / Settings				Default
OPTION	Power Settings	Standby Power Mode	0.5W mode		Communication mode
			Communication mode		
		Direct Power On	Off		Off
			On		
		Auto Power Off	No		20 Mins
			5 Mins		
			10 Mins		
			15 Mins		
			20 Mins		
			25 Mins		
			30 Mins		
		Sleep Timer	No		No
			2 Hours		
			4 Hours		
			6 Hours		
	Light Source Settings	Light Source Mode	Constant Power		Constant Power
			Constant Luminance		
			Eco Mode		
		Constant Power Settings	0 - 10		10
		Constant Luminance Settings	0 - 10		7
		Current Light Source	Lamp 1		Both
			Lamp 2		
			Both		
		Auto Switch	On Failure Only		On Failure Only
			At Power-Up		
			After X Hours		
		Auto Switch Time (Hours)	5 - 3000		100
		Light Source Info	Lamp 1 Hours		
			Lamp 2 Hours		
			Total Projector Hours		
		Reset Light Source Hours	1/2/Both (Dialog box)		
	Light Sensor	Light Sensor Calibration			
		Calibrated?	(Display Yes/No)		
	Information	Model Name			
		Serial Number			
		Native Resolution			
		Firmware			
		Main Source			
		- Resolution			
		- Signal Format			
		- Pixel Clock			
		- Horz Refresh			
		- Vert Refresh			

Main Menu	Sub Menu / Settings				Default
OPTION	Information	Sub Source			
		- Resolution			
		- Signal Format			
		- Pixel Clock			
		- Horz Refresh			
		- Vert Refresh			
		Light Source Mode			
		Current Light Source			
		Lamp 1 Hours			
		Lamp 2 Hours			
		Standby Power Mode			
		IP Address			
		DHCP			
		System Temperature			
	Factory Reset	Yes/No (Dialog box)			
	Service				

Picture Menu

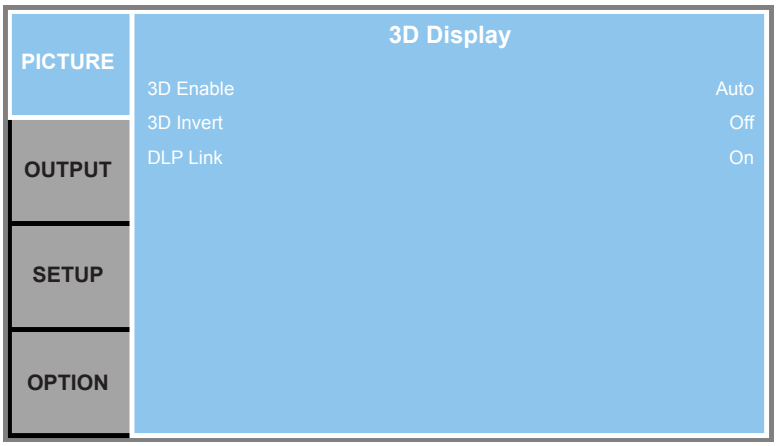
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **PICTURE** and press the **Enter** button to enter the **PICTURE** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
Display Mode	Optimize the projector for displaying images under certain conditions, such as Presentation, Video, Bright, DICOM SIM, 2D High Speed, 3D, and user-definable preset.
Brightness	Adjust the intensity of the image.
Contrast	Adjust the degree of difference between the lightest and darkest parts of the picture and change the amount of black and white in the image.
Sharpness	Select the edge clarity of the image.
Color	Adjust a video image from black and white to fully saturated color. The color setting applies to video sources only.
Tint	Adjust the red-green color balance in the image of video images. The tint setting applies to video sources only.
Phase	Analog signals only. Adjust pixel phase when the image still shows shimmer or noise after pixel tracking is optimized. Pixel phase can adjust the phase of the pixel-sampling clock relative to the incoming signal.
Frequency	Analog signals only. Steady flickering or several soft vertical stripes or bands across the entire image indicates poor frequency. Proper frequency ensures that the image quality is consistent across the screen, the aspect ratio is maintained, and that the pixel phase can be optimized.
Horz Position	Move the image right or left within the area of available pixels.
Vert Position	Move the image up or down within the area of available pixels.
Auto Image	Force the projector to reacquire and lock to the input signal. This is useful when signal quality is marginal.
3D Display	Configure the 3D display settings. See "3D Display Menu" on page 30.
Color Matching	Configure the color matching settings. See "Color Matching Menu" on page 31.
Advanced	Configure the advanced image settings. See "Advanced Menu" on page 33.

3D Display Menu

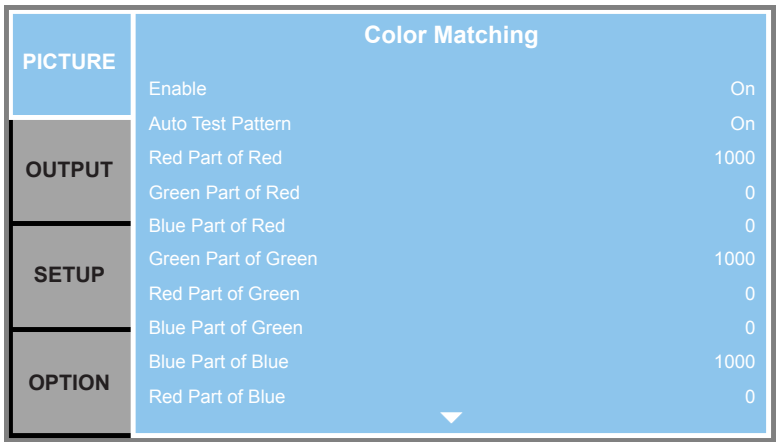
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **PICTURE** and press the **Enter** button to enter the **PICTURE** menu. Press the arrow keys (▲▼) to select **3D Display** and press the **Enter** button to enter the **3D Display** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
3D Enable	Set 3D format. Supports Mandatory 3D formats and frame sequential 3D@120Hz.
3D Invert	Invert 3D sync signal for the application of using single projector.
DLP Link	Select 3D Sync source. • On: 3D Sync type is DLP Link. • Off: 3D Sync source is from the **3D Sync OUT** port.

Color Matching Menu

Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **PICTURE** and press the **Enter** button to enter the **PICTURE** menu. Press the arrow keys (▲▼) to select **Color Matching** and press the **Enter** button to enter the **Color Matching** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



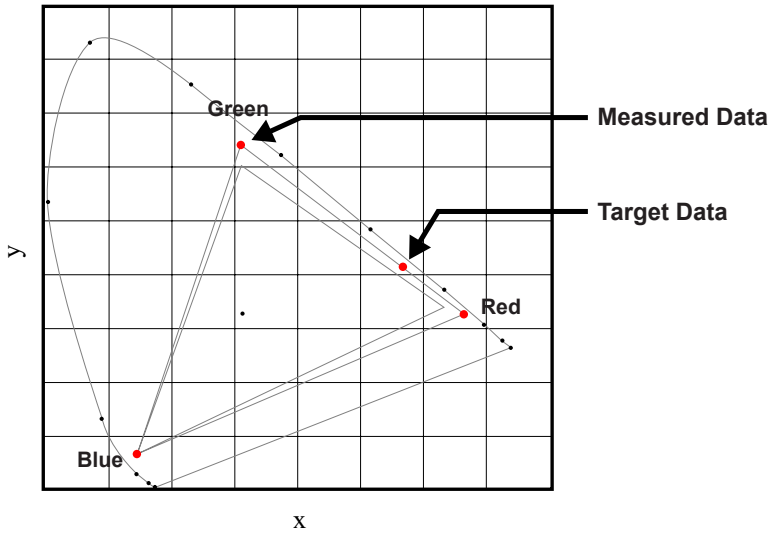
You may require a unique color gamut (range) for a single projector or application, or you may need to precisely match colors across multiple adjacent displays. Use Color Matching by Meter Adjustment or by Manual Adjustment to define the precise hue of each primary color component (red, green, blue and white).

The x/y coordinates for each color define its location on the standard CIE chromaticity graph. Changing either or both of these numbers will change the hue of the color, and modify the range of possible colors. For example, changing the x/y coordinates for red may move the color closer to orange or closer to violet, which will in turn affect all displayed colors having a red component. Adjust the slide bars or enter new specific coordinates as desired to define or change the color gamuts needed for your environment and applications.

Enable the selected method (Meter or Manual Adjustment)- this will automatically disable the other method. For both methods, if Auto Test Pattern is enabled, the solid colored test pattern will be displayed according to the menu item on which you are positioned.

- **Meter Adjustment**

1. Using a color meter, enter the current x and y co-ordinates of Red, Green, Blue and White for the projector image into the Measured Data menu. This is the reference point for the projector. The default values in the menu are based on the average for all projectors.
2. After measuring the values for all the projectors to be matched, calculate the target values.
3. Enter the target values for x, y and gain for each color into the Target Data menu.



- **Manual Adjustment**

1. Adjust color slide bars and judge image color by eye or meter. A user-defined color "adjustment" can be applied.
2. Use this submenu if you do not have specific color coordinates in mind and will judge color performance by eye or meter. As for Meter Adjustment, each color control actually defines new x/y coordinates for that color and changes its hue. The main colors (red part of red, green part of green and blue part of blue) adjust the intensity of that color component, while the modifying colors (e.g. green part of red and blue part of red) modify the x and y value and change the hue of that color. At the same time the main colors also are used to control the color of the white point.

Advanced Menu

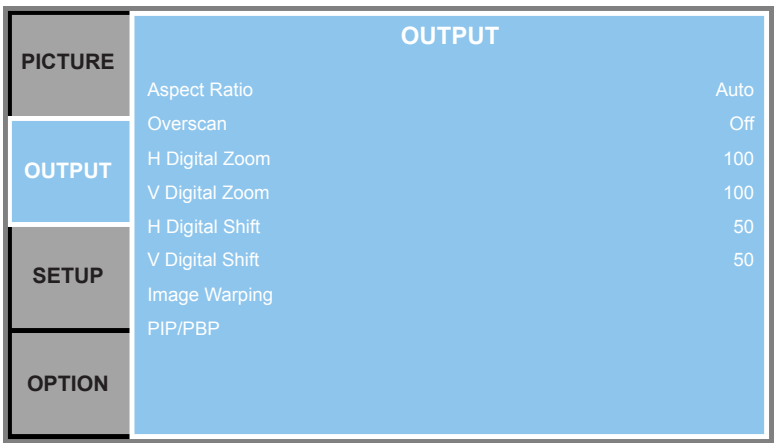
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **PICTURE** and press the **Enter** button to enter the **PICTURE** menu. Press the arrow keys (▲▼) to select **Advanced** and press the **Enter** button to enter the **Advanced** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
BrilliantColor™	Produce an expanded on-screen color spectrum that delivers enhanced color saturation for bright, true-to-life images
White Peaking	(Video source only) Increase the brightness of whites that are near 100%.
Gamma	Select the appropriate gamma from Video, Film, Bright, CRT, and DICOM.
Color Temperature	Change the intensity of the colors. Select a listed relative warmth value.
Color Space	Select a color space that has been specifically tuned for the input signal. Use only for analog signals and certain digital sources.
Color Settings	Adjust the gain of the red, green, or blue channel of the image. It will affect the black and white. Adjust the offset of the red, green, or blue channel of the image. It will affect the black and white. Reset RGB gain/offset to return the factory default settings for color adjustments.
Color Enhancement	The Color Enhancement control can improve the picture quality of pictures with a high saturation of color.
Color Wheel Speed	Higher speed will reduce the appearance of color artifacts seen by some people.
DynamicBlack™	Enable or disable the dynamic black function. Enable this function raises the contrast ratio dynamically.
Noise Reduction	The motion Adaptive Noise Reduction reduces the amount of visible noise interlaced signals.
Flesh Tone Correction	Control the amount of flesh tone correction applied to the image.
Video Black Level	Analyze the current input image and calculate an offset value which is then added to the analog to digital converter black level value. This ensures optimum black level for each analog source.
Film Mode	Control film mode detection and determine whether the original source of the input video was film or video.

Output Menu

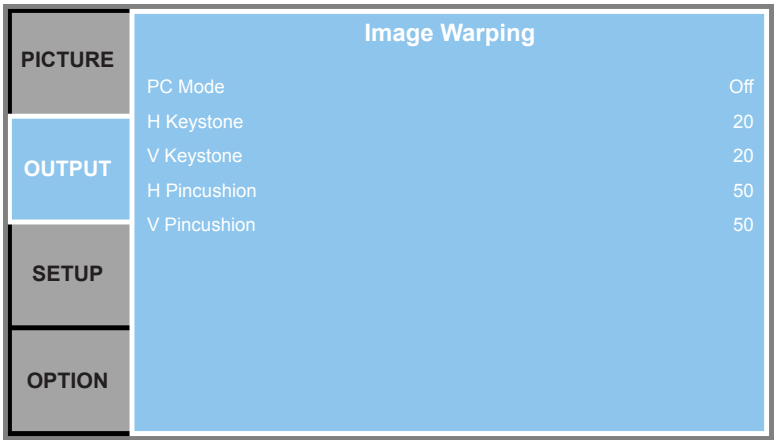
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **OUTPUT** and press the **Enter** button to enter the **OUTPUT** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.

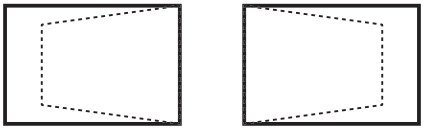
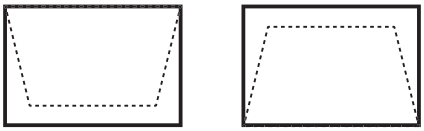
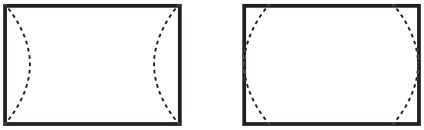
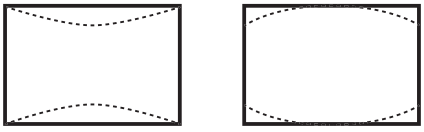


Item	Description
Aspect Ratio	Display an image with the detected size, or resize the image by maximizing either the height, width or both, or resize to the maximum size possible while keeping the original aspect ratio.
Overscan	Remove noise around the image. Overscan Zoom enlarges image 3% from original size. Overscan Crop cuts 3% of active pixels in four edges of original image.
H Digital Zoom	Change the size of projector's display area horizontally. If the display area has been resized by this setting, it can be moved by changing the H Digital Shift and V Digital Shift settings.
V Digital Zoom	Change the size of projector's display area vertically. If the display area has been resized by this setting, it can be moved by changing the H Digital Shift and V Digital Shift settings.
H Digital Shift	Move the display area horizontally if its size has been changed by the Digital Zoom setting.
V Digital Shift	Move the display area vertically if its size has been changed by the Digital Zoom setting.
Image Warping	Configure the image warping settings. See "Image Warping Menu" on page 35.
PIP/PBP	Configure the PIP/PBP settings. See "PIP/PBP Menu" on page 36.

Image Warping Menu

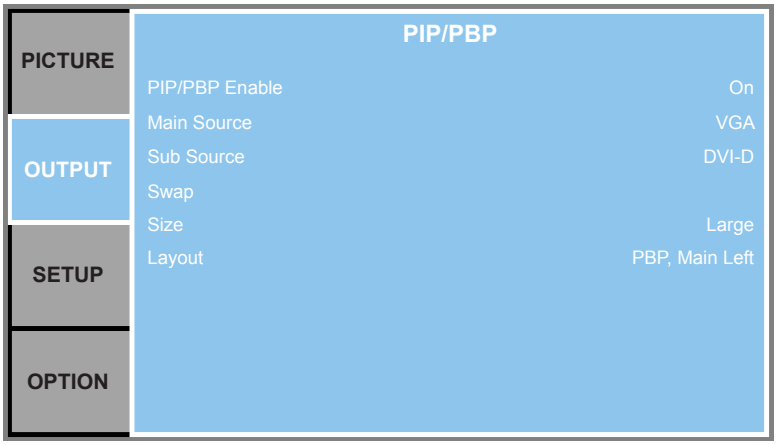
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **OUTPUT** and press the **Enter** button to enter the **OUTPUT** menu. Press the arrow keys (▲▼) to select **3D Display** and press the **Enter** button to enter the **3D Display** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
PC Mode	Enable PC software to control geometry.
H Keystone	Adjust the keystone horizontally and make a squarer image. Horizontal keystone is used to correct a keystoned 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. 
V Keystone	Adjust the keystone vertically and make a squarer image. Vertical keystone is used to correct a keystoned image shape in which the top and bottom are slanted to one of the sides. This is intended when for use with vertically on-axis applications. 
H Pincushion	Adjust the pincushion horizontally and make a more square image. 
V Pincushion	Adjust the pincushion vertically and make a more square image. 

PIP/PBP Menu

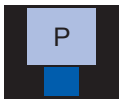
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **OUTPUT** and press the **Enter** button to enter the **OUTPUT** menu. Press the arrow keys (▲▼) to select **PIP/PBP** and press the **Enter** button to enter the **PIP/PBP** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
PIP/PBP Enable	Toggle between displaying two sources at once (Main and PIP/PBP images) or one source only.
Main Source	From the list of active inputs, select one to be used as the main image.
Sub Source	From the list of active inputs, select one to be used as the PIP/PBP.
Swap	Change the main image to PIP/PBP, and the PIP/PBP to main image. Swapping is available only when PIP/PBP is enabled.
Size	Select the PIP/PBP size. Available options: Small, Medium, or Large.
Layout	Set the location of the PIP/PBP image on the screen.

PIP/PBP layout and size table as described below.

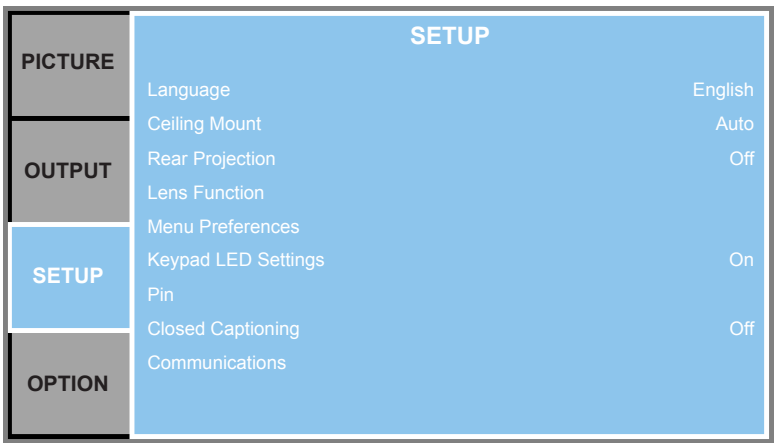
- P : indicates primary source region (lighter color).
- * : Both source regions are the same size.

PIP/PBP Layout	PIP/PBP Size		
	Small	Medium	Large
PBP, Main Left			
PBP, Main Top			
PBP, Main Right			

PIP/PBP Layout	PIP/PBP Size		
	Small	Medium	Large
PBP, Main Bottom			
PIP-Bottom Right			
PIP-Bottom Left			
PIP-Top Left			
PIP-Top Right			

Setup Menu

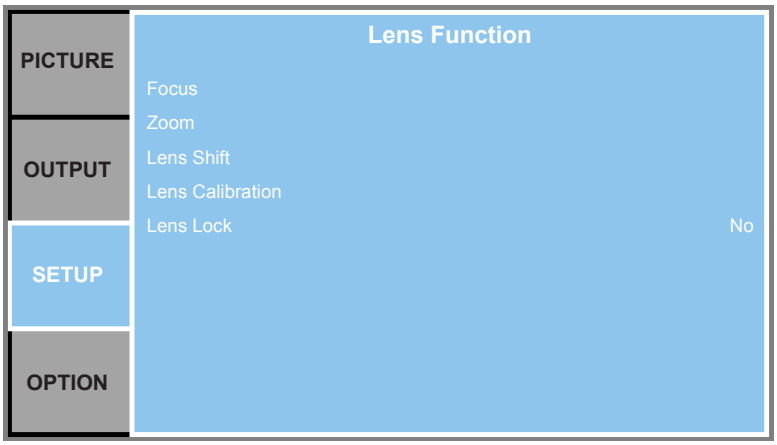
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **SETUP** and press the **Enter** button to enter the **SETUP** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
Language	This item allows you to select an available language for the OSD display.
Ceiling Mount	Turn the image upside down for ceiling-mounted projection.
Rear Projection	Reverse the image so you can project from behind a translucent screen.
Lens Function	Configure the lens function settings. See "Lens Function Menu" on page 39.
Menu Preferences	Configure the menu preferences settings. See "Menu Preferences Menu" on page 39.
Keypad LED Settings	Turn the backlight of keypad on/off.
Pin	Configure the pin settings. See "Pin Menu" on page 41.
Closed Captioning	The closed captioning broadcasting multiplexes caption signals (character information) in the video signal to allow the displaying of characters on the screen.
Communications	Configure the communications settings. See "Communications Menu" on page 42.

Lens Function Menu

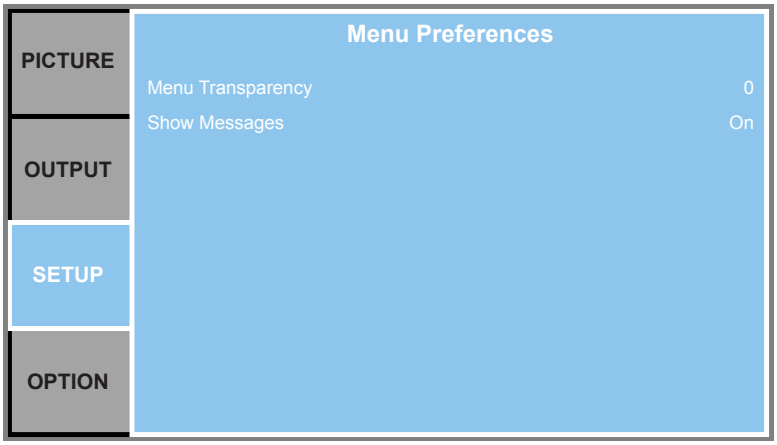
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **SETUP** and press the **Enter** button to enter the **SETUP** menu. Press the arrow keys (▲▼) to select **Lens Function** and press the **Enter** button to enter the **Lens Function** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
Focus	Adjust focus function on the projected image.
Zoom	Adjust zoom function on the projected image.
Lens Shift	Shift the projected image.
Lens Calibration	Perform calibration and return lens to the center position.
Lens Lock	Select this function to prevent all lens motors from moving. • Yes: Lens shift will be locked. • No: Lens shift can be used by user.

Menu Preferences Menu

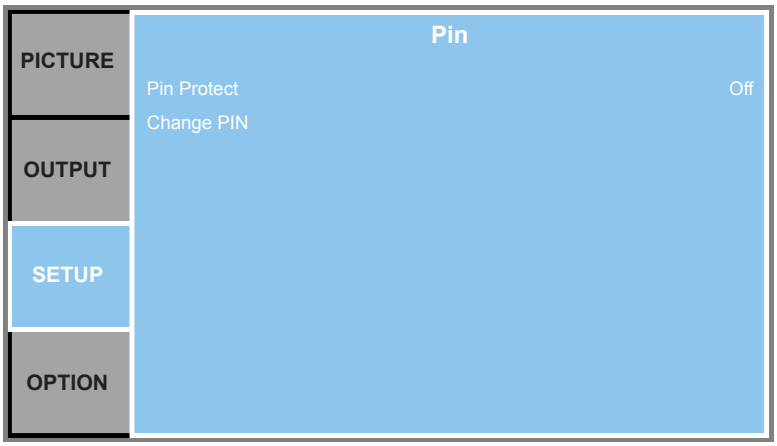
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **SETUP** and press the **Enter** button to enter the **SETUP** menu. Press the arrow keys (▲▼) to select **Menu Preferences** and press the **Enter** button to enter the **Menu Preferences** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
Menu Transparency	Change OSD menu background to be transparent.
Show Messages	Display status messages on the screen.

Pin Menu

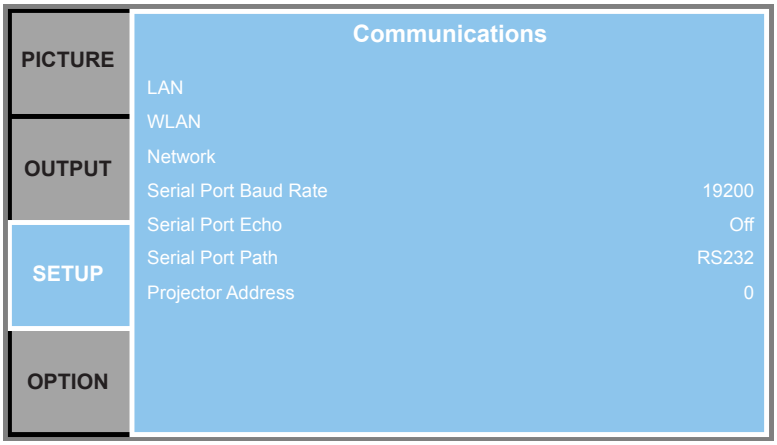
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **SETUP** and press the **Enter** button to enter the **SETUP** menu. Press the arrow keys (▲▼) to select **Pin** and press the **Enter** button to enter the **Pin** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
PIN Protect	The PIN (personal identification number) feature allows you to password protect your projector. Once you enable the PIN feature, you must enter the PIN before you can project an image. (PIN Default : 12345)
Change PIN	Change the PIN.

Communications Menu

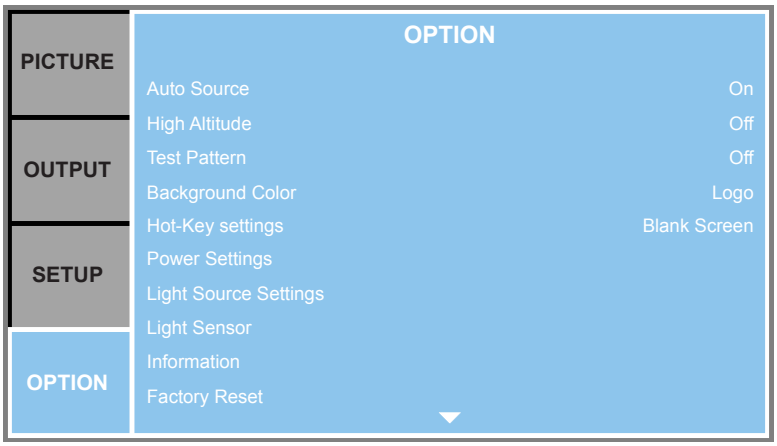
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **SETUP** and press the **Enter** button to enter the **SETUP** menu. Press the arrow keys (▲▼) to select **Communications** and press the **Enter** button to enter the **Communications** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
LAN	Configure the local area network (LAN) settings. • DHCP: Turn the DHCP ON/OFF. • IP Address: Assign Network IP Address. • Subnet Mask: Assign Network Subnet Mask. • Default Gateway: Assign Network Default Gateway. • MAC Address: Display the network MAC Address value. • Apply: Apply Network settings.
WLAN	Configure the wireless local area network (WLAN) settings. • Enable: Enable/Disable WLAN. • Start IP: Start of IP Address. • End IP: End of IP Address. • Subnet Mask: Assign Network Subnet Mask. • Default Gateway: Assign Network Default Gateway. • MAC Address: Display network MAC Address value. • SSID: Assign Network Service Set Identifier.
Network	Configure the general network settings. • Projector Name: Display the projector hostname for Network. • Restart Network: Restart the network. • Network Factory Reset: Perform factory reset on the network settings. The Projector Name, LAN IP, WLAN IP, and SNMP settings will be reset.
Serial Port Baud Rate	Select the serial port and baud rate.
Serial Port Path	Select the serial port path from either RS232 or HDBaseT.
Projector Address	Set the projector address. The projector will respond to IR remotes set either at the same address as the projector or to IR remotes set to address 0.

Option Menu

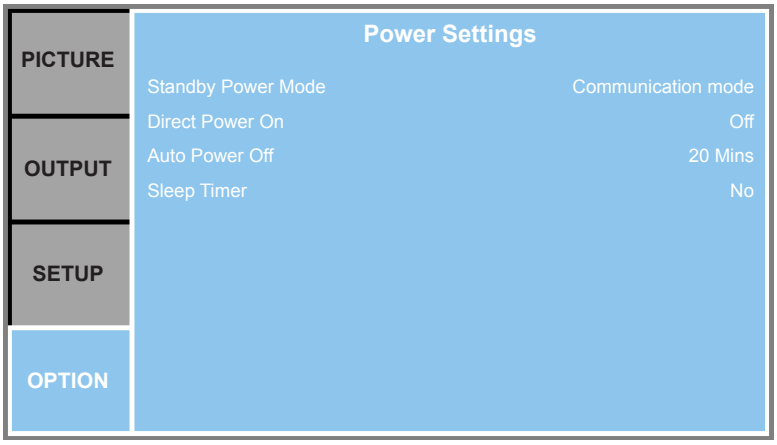
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **OPTION** and press the **Enter** button to enter the **OPTION** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
Auto Source	Select "On" to allow the projector to search for other signals if the current input signal is lost. When the setting is disabled, the projector will only search current input connection.
High Altitude	Set high altitude mode On/Off. When On, the fan will operate at high speed to ensure sufficient air flow for high altitudes.
Test Pattern	Choose the desired internal test pattern to display. Press the **Pattern** button to display next test pattern.
Background Color	Use this feature to display a "Logo", "Blue", "Black" or "White" screen when no signal is available.
Hot-Key settings	Assign a different function to the hot-key on the remote control by highlighting the function in the list and pressing the **Enter** button. Choose a function that does not already have a dedicated button, and assign the hot-key to that function, allowing you to quickly and easily use the chosen function.
Power Settings	Configure the power settings. See "Power Settings Menu" on page 44.
Light Source Settings	Configure the light source settings. See "Light Source Settings Menu" on page 45.
Light Sensor	Calibrate the Light Sensor for use with the Constant Luminance lamp mode, which allows the projector to be set for constant brightness. If the Light Sensor has not been calibrated, Constant Luminance mode will be disabled. Light Sensor calibration should be repeated when new lamps are installed.
Information	Display the projector information for source, resolution, and software version on the screen.
Factory Reset	Restore all settings to their default value. It will not reset network.
Service	For service only.

Power Settings Menu

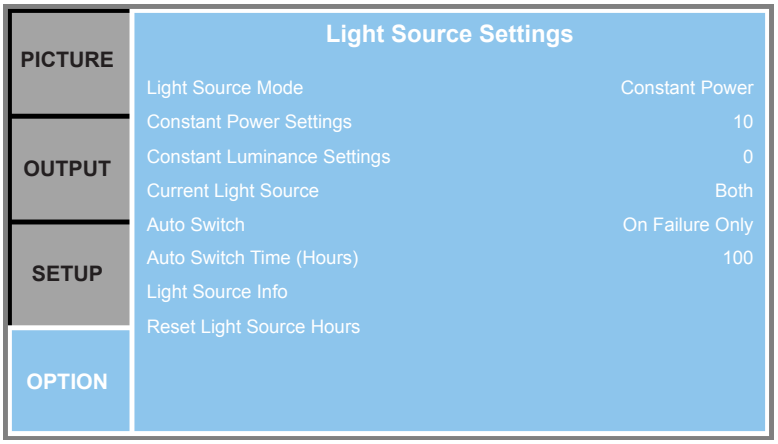
Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **OPTION** and press the **Enter** button to enter the **OPTION** menu. Press the arrow keys (▲▼) to select **Power Settings** and press the **Enter** button to enter the **Power Settings** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
Standby Power Mode	Set the standby power mode. • 0.5W mode: The projector is in standby mode when connected to AC power. (<0.5W) • Communication mode: The projector could be controlled via the LAN terminal during power standby.
Direct Power On	The projector automatically turns on when electrical power is connected.
Auto Power Off	Automatically turns the projector off after no signals are detected for a preset number of minutes. If an active signal is received before the projector powers down, the image will be displayed.
Sleep Timer	This item allows the projector to automatically power off after it has been on for a specified amount of time.

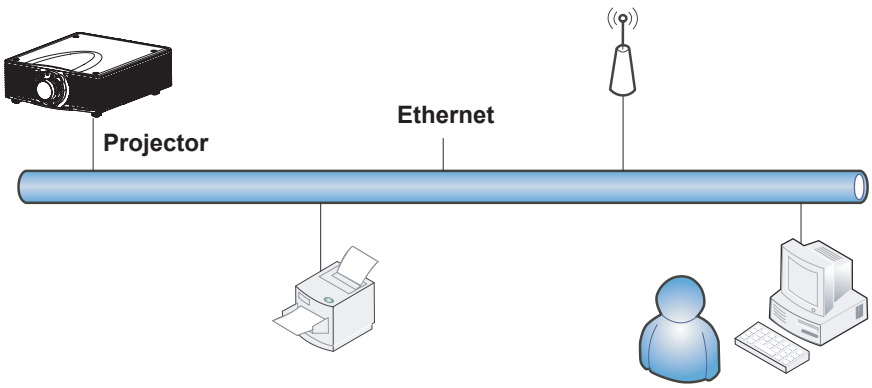
Light Source Settings Menu

Press the **Menu** button to open the OSD menu. Press the arrow keys (▲▼) to select **OPTION** and press the **Enter** button to enter the **OPTION** menu. Press the arrow keys (▲▼) to select **Light Source Settings** and press the **Enter** button to enter the **Light Source Settings** menu. Press the arrow keys (▲▼) to select the menu option and press the **Enter** button to enter its submenu. Press the arrow keys (▲▼◀▶) to select or adjust the desired settings and press the **Enter** button to confirm.



Item	Description
Light Source Mode	Select **Constant Power**, **Constant Luminance**, or **Eco Mode**. When in **Eco Mode**, the projector will adjust to the lowest fan speed and switch the light source power to the minimum setting.
Constant Power Settings	Set the value of the light source power (in Watts).
Constant Luminance Settings	Set the value for the **Constant Luminance** to maintain constant brightness. The light sensor will monitor the light level and will apply more power as the light source brightness decays naturally over time. When the light source setting reaches maximum power, it will remain at this setting. Note that the light sensor needs to be calibrated for **Constant Luminance** mode to work properly.
Current Light Source	Select which lamp(s) is in use.
Auto Switch	Control when the projector switches lamps. Options include: on failure only, at power-up, or after a set number of hours.
Auto Switch Time (Hours)	Set the number of hours for Lamp Auto Switch. For example: **1** Lamp conditions: lamp 1 = 50 hours, lamp 2 = 60 hours. **2** Set the current lamp to lamp 1 - the lamp with the lower lamp hour usage. **3** Set the Lamp Auto Switch to After (N) hours and the Lamp Auto Switch Time to 100 hours. **4** When lamp 1 reaches 150 hours, projector will auto switch to lamp 2. **5** When lamp 2 reaches 160 hours, projector will auto switch to lamp 1.
Light Source Info	Display current lamp(s) settings (read-only).
Reset Light Source Hours	Reset the lamp used hours counter to zero. Do this after changing the lamp.

Control Your Projector Using Web Browser



Wired LAN Terminal functionalities

Remote control and monitoring of a projector from a PC (or Laptop) via wired LAN is also possible.

Compatibility with Crestron control boxes enables not only collective projector management on a network but also management from a control panel on a PC (or Laptop) browser screen.

- Crestron is a registered trademark of Crestron Electronics, Inc. of the United States.

Supported External Devices

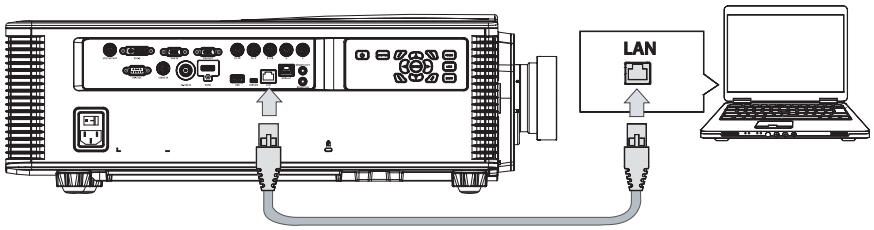
This projector is supported by the specified commands of the Crestron Electronics controller and related software (ex, RoomView®).

http://www.crestron.com/

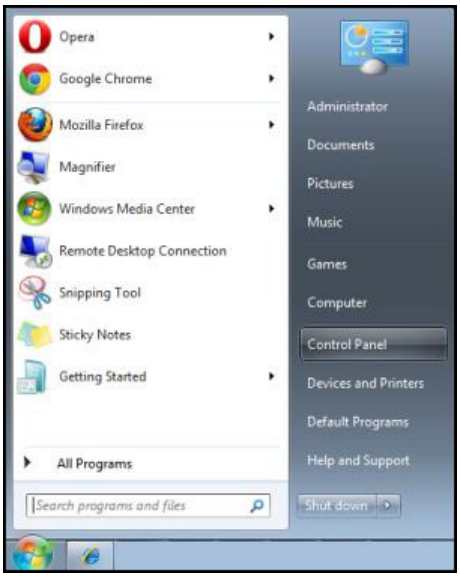
For more detail of information about the diverse types of external devices which can be connected to the Ethernet port and remote/control the projector, as well as the related control commands supporting for each external device, kindly please get contact with the Support-Service team directly.

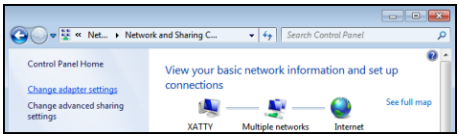
LAN_RJ45

1. Connect an RJ45 cable to Ethernet port on the projector and the PC (Laptop).

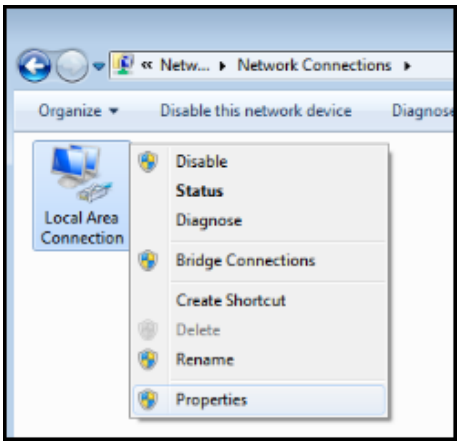


2. On the PC (Laptop), select **Start** → **Control Panel** → **Network and Internet**.



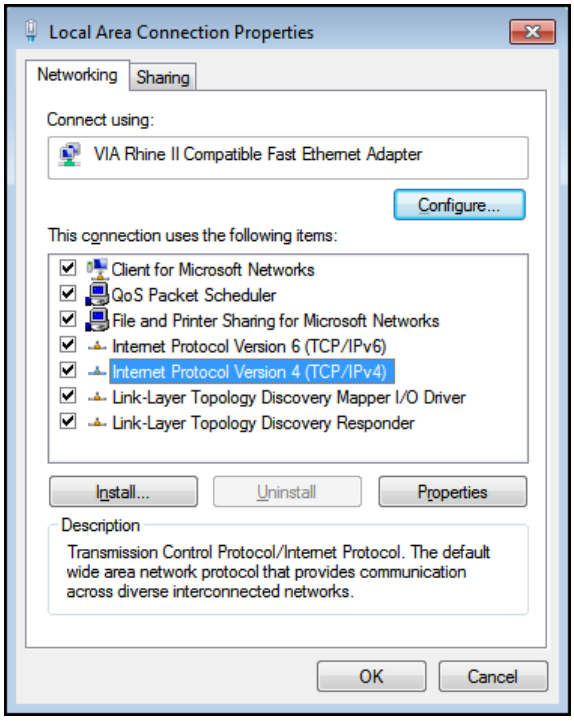


3. Right-click on **Local Area Connection**, and select **Properties**.

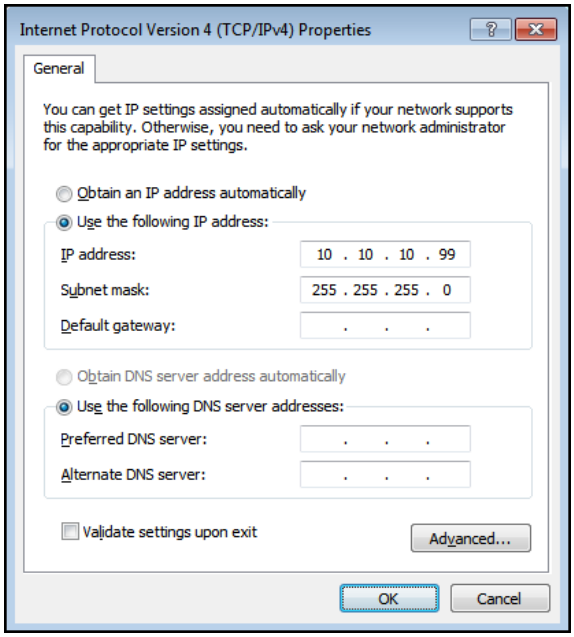


4. In the **Properties** window, select the **Networking** tab, and select **Internet Protocol (TCP/IP)**.

5. Click **Properties**.



6. Click **Use the following IP address** and fill in the IP address and Subnet mask, then click **OK**.



7. Press the **Menu** button on the projector.

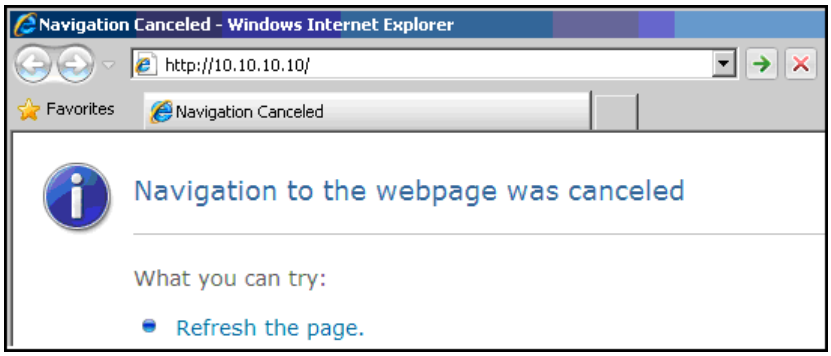
8. Select **SETUP** → **Communications** → **LAN**.

9. After getting into **LAN**, input the following:

- DHCP: Off
- IP Address: 10.10.10.10
- Subnet Mask: 255.255.255.0
- Default Gateway: 0.0.0.0

10. Press the **Enter** / ► button to confirm settings.

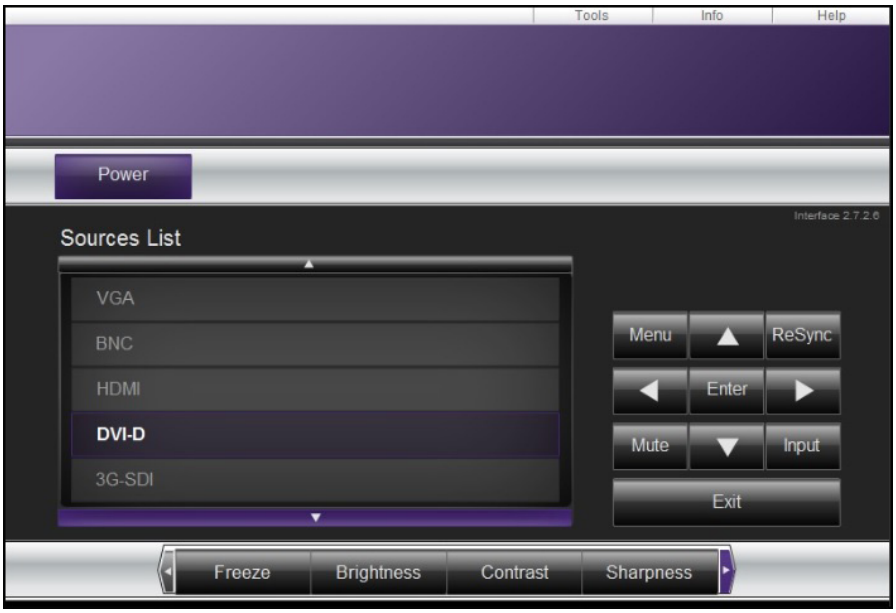
Open a web browser (for example, Microsoft Internet Explorer with Adobe Flash Player 9.0 or higher).

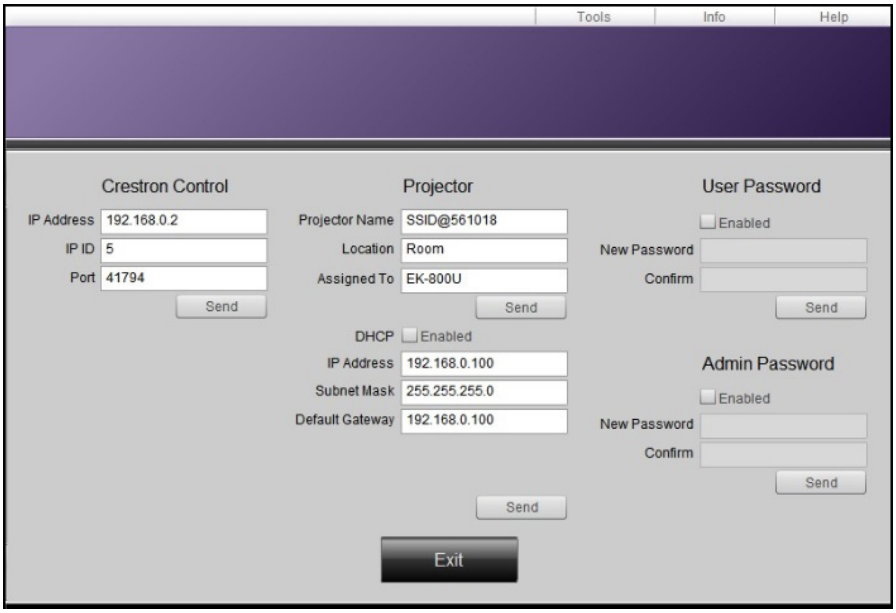


11. In the Address bar, input the IP address: 10.10.10.10.

12. Press the **Enter** / ► button.

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





Category	Item	Input-Length
Crestron Control	IP Address	15
	IP ID	3
	Port	5
Projector	Projector Name	10
	Location	10
	Assigned To	10
Network Configuration	DHCP (Enabled)	(N/A)
	IP Address	15
	Subnet Mask	15
	Default Gateway	15
	DNS Server	15
User Password	Enabled	(N/A)
	New Password	10
	Confirm	10
Admin Password	Enabled	(N/A)
	New Password	10
	Confirm	10

For more information, please visit http://www.crestron.com.

Warping & Blending function

The Warping & Blending application software and its manual can be downloaded from EIKI website.

Presenter function

The presenter application software and its manual can be downloaded from EIKI website.

URL: http://www.eiki.com

RS232 by Telnet Function

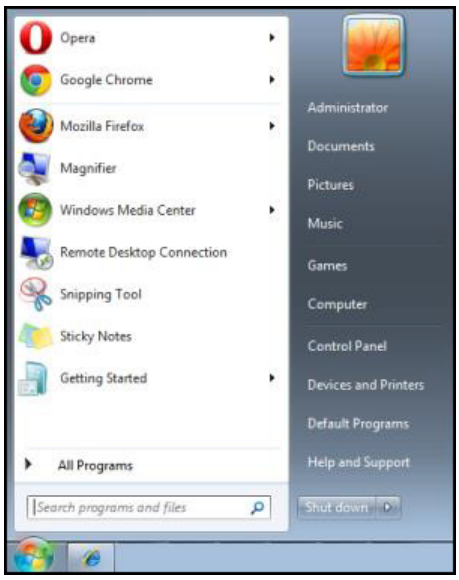
Besides projector connected to RS232 interface with "Hyper-Terminal" communication by dedicated RS232 command control, there is alternative RS232 command control way, so called "RS232 by TELNET" for LAN/RJ45 interface.

Quick Start-Guide for "RS232 by TELNET"

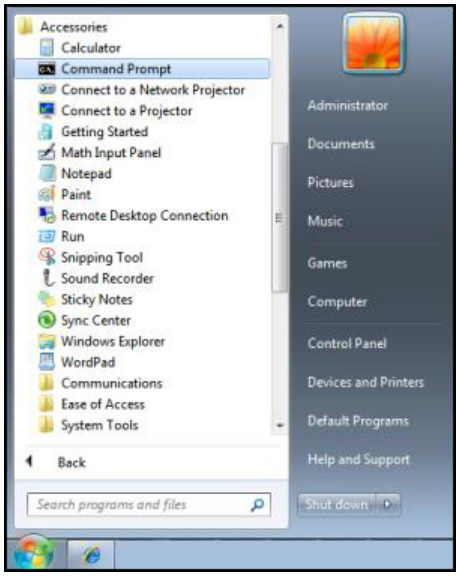
Check and get the IP-Address on OSD of the projector.

Make sure that laptop/PC can access the web-page of the projector.

Make sure that "Windows Firewall" setting to be disabled in case of "TELNET" function filtering out by laptop/PC.



Start → All Programs → Accessories → Command Prompt



Input the command format like the below:

telnet ttt.xxx.yyy.zzz 3023 (the **Enter** button is pressed)

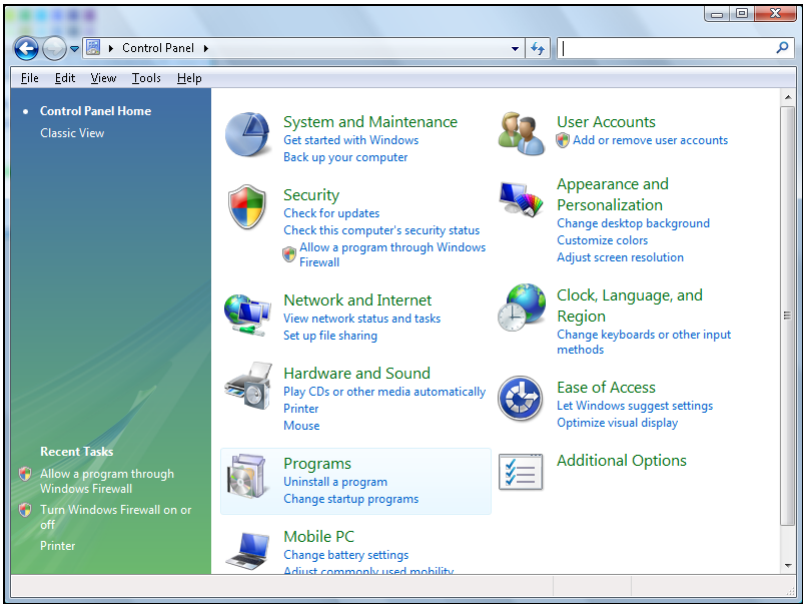
(**ttt.xxx.yyy.zzz**: IP-Address of the projector)

If Telnet-Connection ready, and user can have RS232 command input, then press the **Enter** button, the RS232 command will be workable.

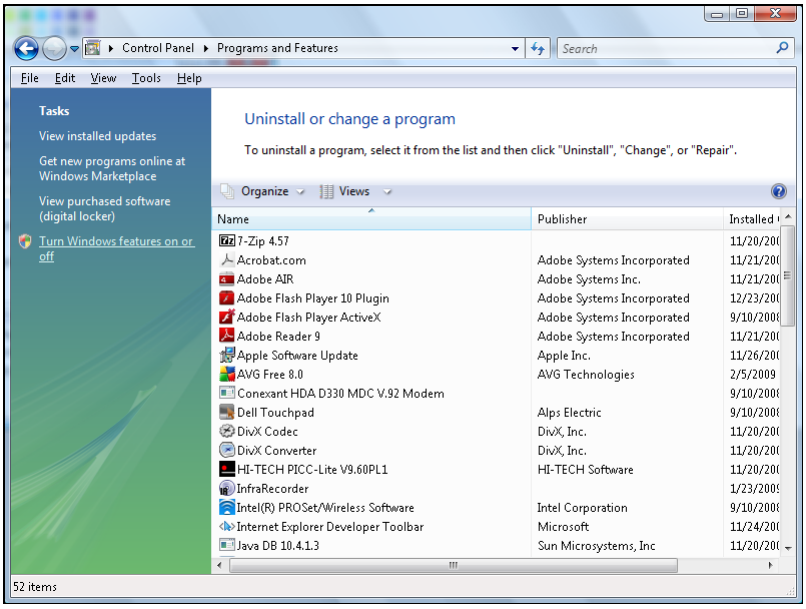
How to have TELNET enabled in Windows VISTA / 7

By default installation for Windows VISTA, "TELNET" function is not included. But end-user can have it by way of "Turn Windows features On or Off" to be enabled.

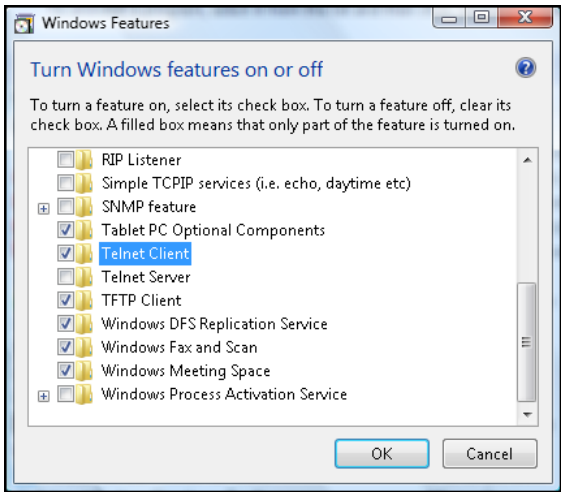
1. Open "Control Panel" in Windows VISTA.



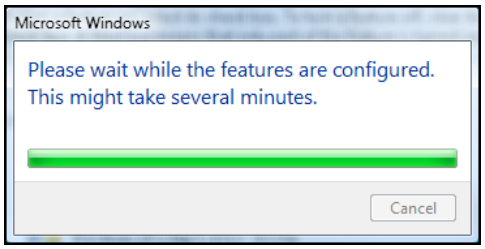
2. Open "Programs".



3. Select "Turn Windows features on or off" to open.



4. Have "Telnet Client" option checked, then click **OK**.



Specsheet for "RS232 by TELNET":

1. Telnet: TCP

2. Telnet port: 3023
(for more detail, kindly please get contact with the service agent or team)

3. Telnet utility: Windows "TELNET.exe" (console mode)

4. Disconnection for RS232-by-Telnet control normally: Close Windows Telnet utility directly after TELNET connection ready.

5. Limitation 1 for Telnet-Control: there is less than 50 bytes for successive network payload for Telnet-Control application.
Limitation 2 for Telnet-Control: there is less than 31 bytes for one complete RS232 command for Telnet-Control.
Limitation 3 for Telnet-Control: Minimum delay for next RS232 command must be more than 200 (ms).
(*, In Windows built-in "TELNET.exe" utility, pressing the **Enter** button will create a "Carriage-Return" and "New-Line" code.)

Replacing the Projection Lamp

The projection lamp should be replaced when it burns out. It should only be replaced with a certified replacement part, which you can order from your local dealer.

Important:

- *The projection lamp used in this product contains a small amount of mercury.*
- *Do not dispose this product with general household waste.*
- *Disposal of this product must be carried out in accordance with the regulations of your local authority.*

Warning:

Be sure to turn off and unplug the projector at least 30 minutes before replacing the lamp. Failure to do so could result in a severe burn.

Caution:

- *In rare cases the lamp bulb may burn out during normal operation and cause glass dust or shards to be discharged outward from the rear exhaust vent.*
- *Do not inhale or do not touch glass dust or shards. Doing so could result in injury.*
- *Always keep your face away from the exhaust vent so that you do not suffer from the gas and broken shards of the lamp.*
- *When removing the lamp from a ceiling-mounted projector, make sure that no one is under the projector. Glass fragments could fall if the lamp has been burned out.*

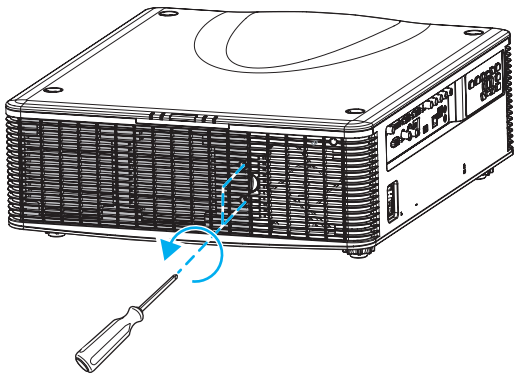
IF A LAMP EXPLODES

- *If a lamp explodes, the gas and broken shards may scatter inside the projector and they may come out of the exhaust vent. The gas contains toxic mercury.*
- *Open windows and doors for ventilation.*
- *If you inhale the gas or the shards of the broken lamp enter your eyes or mouth, consult the doctor immediately.*

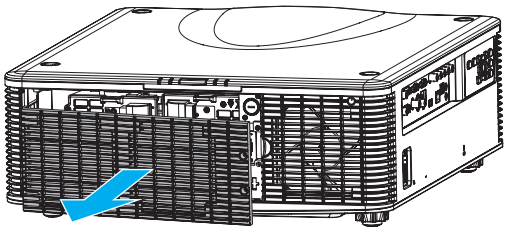
Perform the following to replace the lamp:

1. Turn the projector off. Allow the projector to cool down into standby mode.

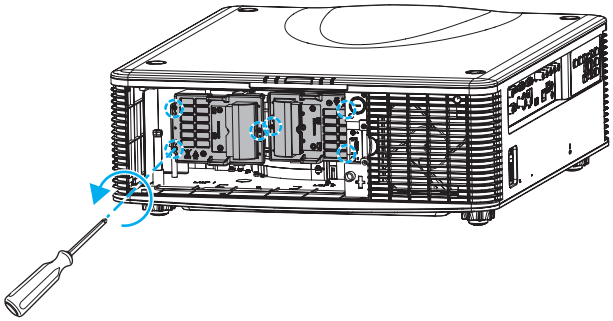
2. Remove the screws on the lamp door.



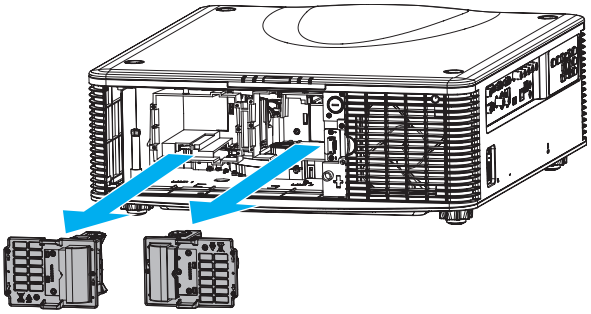
3. Remove the lamp door.



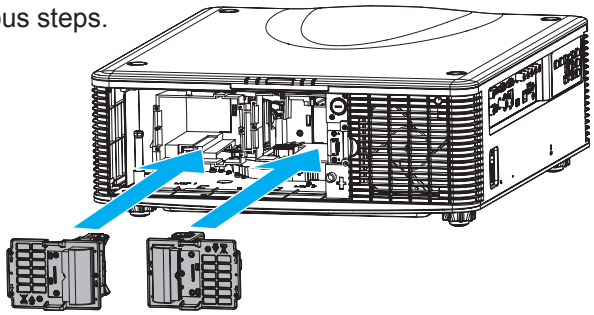
4. Remove the screws on the lamp module(s).



5. Carefully remove the lamp module(s).



6. Install the new lamp module(s) by reversing the previous steps.

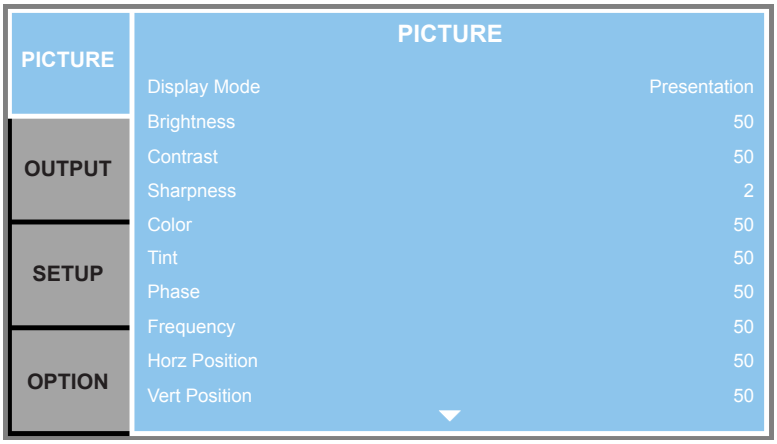


Resetting the Lamp

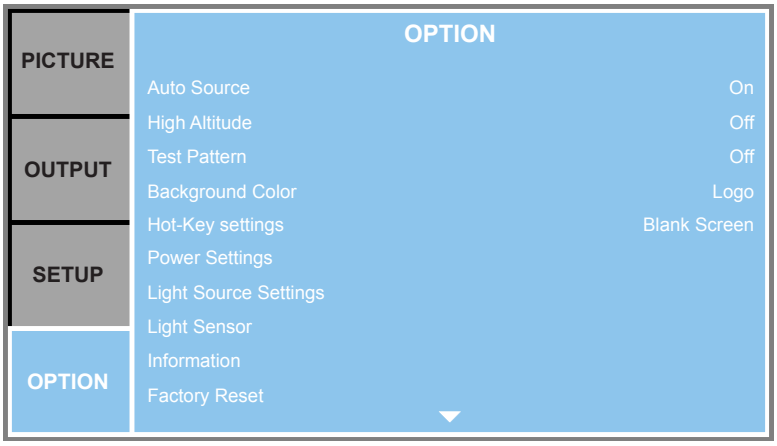
After replacing the lamp, you should reset the lamp hour counter to zero.

Perform the following to reset the lamp hour counter:

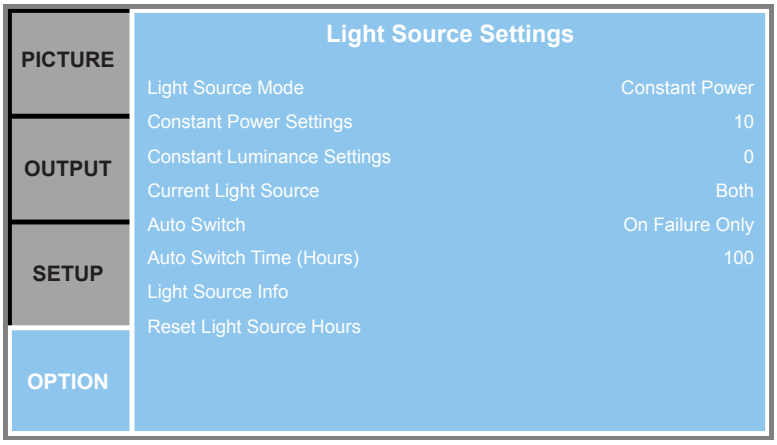
1. Press the **Menu** button.



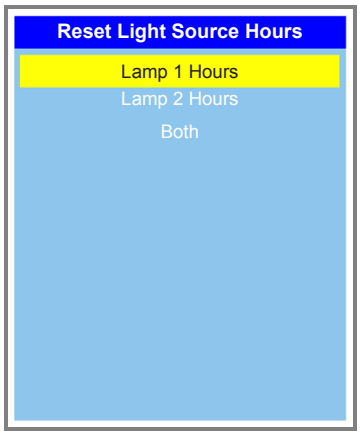
2. Use the arrow keys (▲▼) to select **OPTION** and press the **Enter** button to enter the **OPTION** menu.



3. Use the arrow keys (▲▼) to select **Light Source Settings** and press the **Enter** button to enter its submenu.



4. Use the arrow keys (▲▼) to select **Reset Light Source Hours** and press the **Enter** button to enter its submenu.



5. Use the arrow keys (▲▼) to select the desired option and press the **Enter** button to reset the lamp used hours counter to zero.

6. Press the **Exit** button several times to exit the menu.

Replacing the Projection Lens

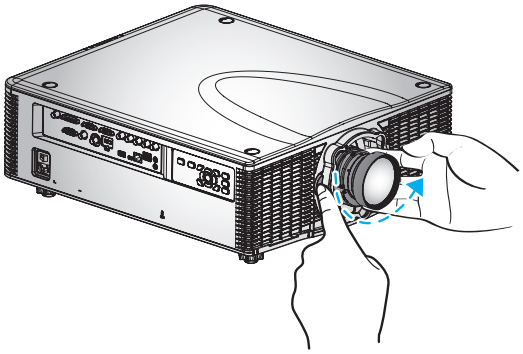
Perform the following to replace the projection lens:

1. Center the lens. Use the **Lens H** or **Lens V** button (on the remote control) to adjust the lens at its center position.

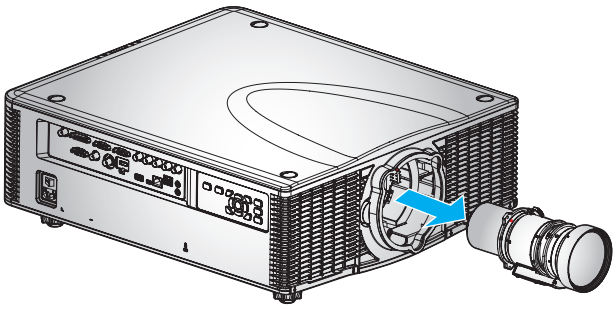
> ***Important:***
> - *Ensure that the lens is at or near its center position.*
> - *Attempting to remove the lens when at a large offset may cause damage to the lens assembly.*

2. Turn the projector off. Allow the projector to cool down into standby mode.

3. Press and hold the **Lens Release** button, and then rotate the lens counter-clockwise to release the lock.



4. Remove the lens out of the lens mount.



5. Install the new lens. See "Installing the Projection Lens" on page 10.

Replacing the Filter (Filter is optional.)

The interval of the filter replacement is affected by the dustiness. Check the filters periodically for better performance.

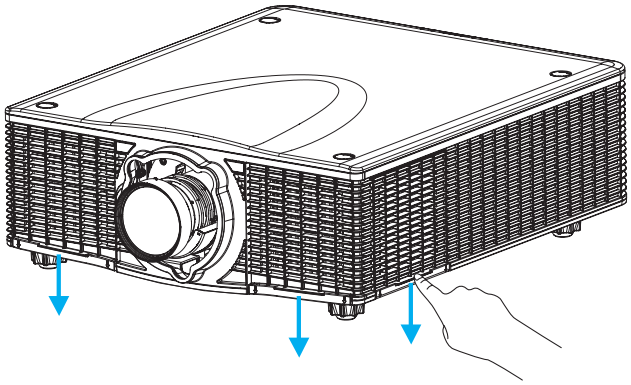
> ***Note:***
> *Dirty filter may reduce the air flowing into the projector and the temperature in the projector may rise as the result. This may activate the protection mechanism or damage the components.*

> ***Important:***
> *Check, clean, and replace the filter periodically.*

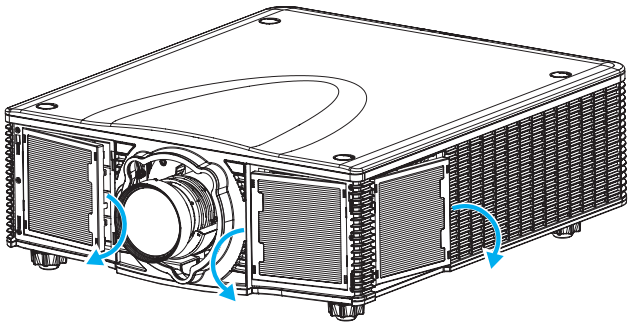
Perform the following to replace the filter:

1. Turn the projector off. Allow the projector to cool down into standby mode.

2. Push the filter cover downwards to remove it.



3. Remove the filter from its compartment as shown in the illustration.



4. Install the new filter by reversing the previous steps.

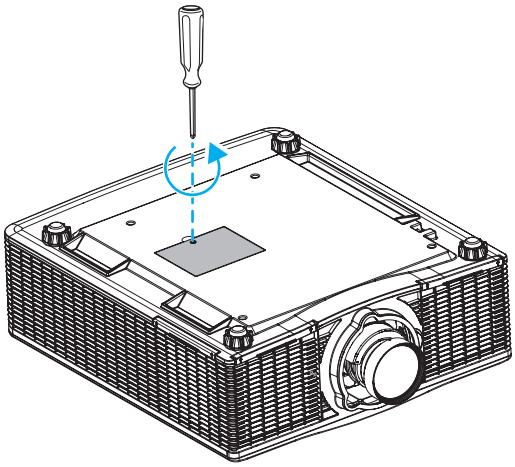
Replacing the Color Wheel

When the projected image appears black and white, this indicates your color wheel is broken or malfunctioning.

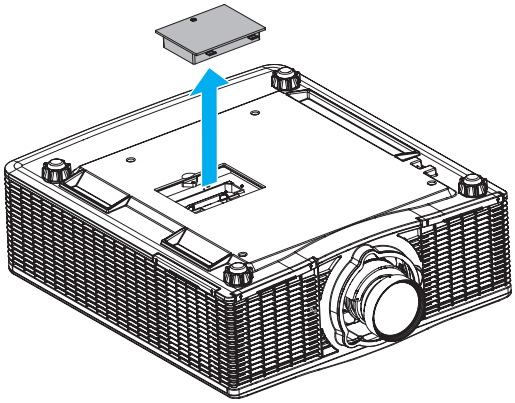
Perform the following to replace the color wheel:

1. Turn the projector off. Then flip the projector onto its back.

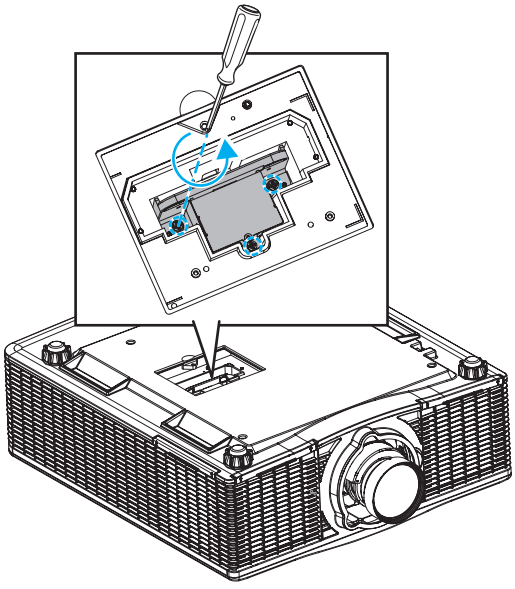
2. Loosen the screw on the color wheel cover.



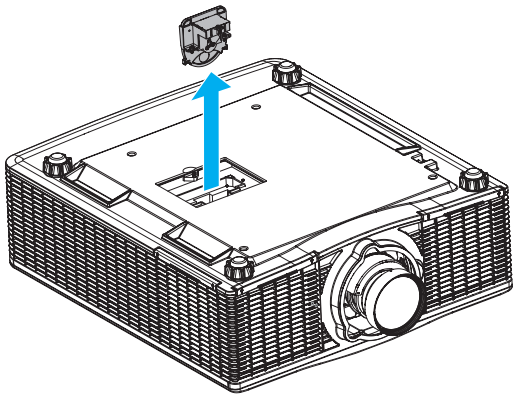
3. Remove the color wheel cover.



4. Loosen the four screws on the color wheel.



5. Remove the color wheel.



6. Install the new color wheel by reversing the previous steps.

Cleaning the Projector

Cleaning the projector to remove dust and grime will help ensure trouble-free operation.

> ***Warning:***
> - *Be sure to turn off and unplug the projector at least 30 minutes before cleaning. Failure to do so could result in a severe burn.*
> - *Use only a dampened cloth when cleaning. Do not allow water to enter the ventilation openings on the projector.*
> - *If a little water gets into the projector interior while cleaning, leave unplugged in a well-ventilated room for several hours before using.*
> - *If a lot of water gets into the projector interior when cleaning, have the projector serviced.*

Cleaning the Lens

You can purchase Optical lens cleaner from most camera stores. Refer to the following to clean the projector lens.

1. Apply a little Optical lens cleaner to a clean soft cloth. (Do not apply the cleaner directly to the lens.)
2. Lightly wipe the lens in a circular motion.

> ***Caution:***
> - *Do not use abrasive cleaners or solvents.*
> - *To prevent discoloration or fading, avoid getting cleaner on the projector case.*

Cleaning the Case

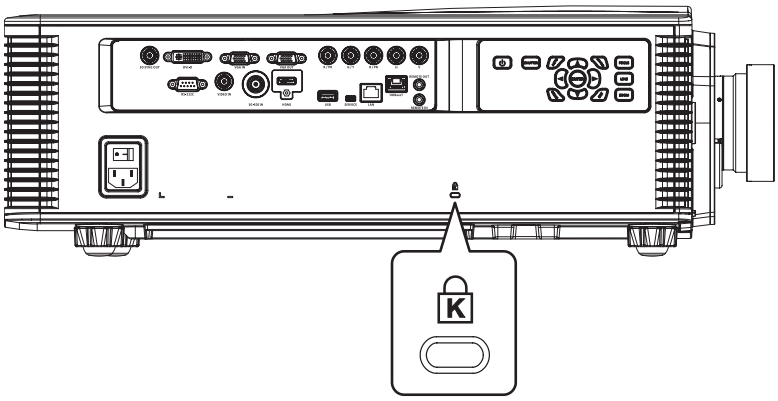
Refer to the following to clean the projector case.

1. Wipe off dust with a clean dampened cloth.
2. Moisten the cloth with warm water and mild detergent (such as used to wash dishes), and then wipe the case.
3. Rinse all detergent from the cloth and wipe the projector again.

> ***Caution:***
> *To prevent discoloration or fading of the case, do not use abrasive alcohol-based cleaners.*

Using the Kensington® Lock

If you are concerned about security, attach the projector to a permanent object with the Kensington slot and a security cable.



Note:

Contact your vendor for details on purchasing a suitable Kensington security cable.

The security lock corresponds to Kensington's MicroSaver Security System. If you have any comment, contact: Kensington, 2853 Campus Drive, San Mateo, CA 94403, U.S.A. Tel: 800-535-4242, http://www.Kensington.com.

Common Problems and Solutions

These guidelines provide tips to deal with problems you may encounter while using the projector. If the problem remains unsolved, contact your dealer for assistance.

Often after time spent troubleshooting, the problem is traced to something as simple as a loose connection. Check the following before proceeding to the problem-specific solutions.

- Use some other electrical device to confirm that the electrical outlet is working.
- Ensure the projector is turned on.
- Ensure all connections are securely attached.
- Ensure the attached device is turned on.
- Ensure a connected PC is not in suspending mode.
- Ensure a connected notebook computer is configured for an external display. (This is usually done by pressing an Fn-key combination on the notebook.)

Tips for Troubleshooting

- In each problem-specific section, try the steps in the order suggested. This may help you to solve the problem more quickly.
- Try to pin point the problem and thus avoid replacing non-defective parts. For example, if you replace batteries and the problem remains, put the original batteries back and go to the next step.
- Keep a record of the steps you take when troubleshooting: The information may be useful when calling for technical support or for passing on to service personnel.

LED Error Messages

The LED status indicators are located on the rear of the projector. Each LED is defined below.

- **Lamp 1 LED**

LED Status		Projector State
Green	Red	
Flashing	Flashing	Color wheel unexpectedly stopped.
Steady Light	Steady Light	Lamp1 time has expired and lamp should be replaced.
Steady Light	Off	Lamp1 is on and operating correctly.
Flashing	Off	Lamp1 is switching on.
Off	Flashing	Failed to strike lamp1 after 5 attempts (strike attempts will stop).
Off	Flashing	Lamp1 has unexpectedly shut down (system goes into cooling down state).

- **Lamp 2 LED**

LED Status		Projector State
Green	Red	
Steady Light	Steady Light	Lamp2 time has expired and lamp should be replaced.
Steady Light	Off	Lamp2 is on and operating correctly.
Flashing	Off	Lamp2 is switching on.
Off	Flashing	Failed to strike lamp2 after 5 attempts (strike attempts will stop).
Off	Flashing	Lamp2 has unexpectedly shut down (system goes into cooling down state).

- **Status LED**

LED Status		Projector State
Green	Red	
Steady Light	Off	Projector is powered up and operating normally.
Flashing	Flashing	Projector is in cooling down mode or startup mode.
Flashing	Steady Light	Projector is in flash update state.
Steady Light	Steady Light	Need to clean/change dust filter.
Off	Steady Light	Power standby in Communication mode
Off	Flashing	Fan failure

Note:

*If the system is over temperature, these Lamp1, Lamp2, and Status LEDs are **Flashing RED Light** at the same time.*

- **Shutter LED**

LED Status (Green)	Projector State
Off	Picture mute is off and Shutter is Off – image is displayed.
Flashing	Picture mute is on and Shutter is On – image is black.

Image Problems

Problem: No image appears on the screen

1. Verify the settings on your notebook or desktop PC.
2. Turn off all equipment and power on again in the correct order.

Problem: The image is blurred

1. Press the **Focus** button to adjust the focus on the projector.
2. Press the **Auto** button to automatically optimize image.
3. Ensure the projector-to-screen distance is within the specified range.
4. Check that the projector lens is clean.

Problem: The image is wider at the top or bottom (trapezoid effect)

1. Position the projector so it is as perpendicular to the screen as possible.
2. Press the **Keystone H** or **Keystone V** button on the remote control to correct the problem.

Problem: The image is reversed

Check the **Rear Projection** on the **Setup** menu of the OSD.

Problem: The image is streaked

1. Set the **Phase** and **Frequency** settings on the **Picture** menu of the OSD to the default settings.
2. Ensure the problem is not caused by a connected PC's video card, connect to another computer.

Problem: The image is flat with no contrast

Adjust the **Contrast** setting on the **Picture** menu of the OSD.

Problem: The color of the projected image does not match the source image

Adjust the **Color Temperature** and **Gamma** settings on the **Picture > Advanced** menu of the OSD.

Lamp Problems

Problem: There is no light from the projector

1. Check that the power cable is securely connected.
2. Ensure the power source is good by testing with another electrical device.
3. Restart the projector in the correct order and check that the Lamp Status LED is in green.
4. If you have replaced the lamp recently, try resetting the lamp connections.

5. Replace the lamp module.
6. Put the old lamp back in the projector and have the projector serviced.

Problem: The lamp goes off

1. Power surges can cause the lamp to turn off. Re-plug power cord. When the Lamp 1/Lamp2 LED is flashing red, press "⏻" on the built-in keypad or press "⏻" on the remote control to turn off the projector.
2. Replace the lamp module.
3. Put the old lamp back in the projector and have the projector serviced.

Remote Control Problems

Problem: The projector does not respond to the remote control

1. Direct the remote control towards remote sensor on the projector.
2. Ensure the path between remote and sensor is not obstructed.
3. Turn off any fluorescent lights in the room.
4. Make sure that the batteries are installed with the correct polarity.
5. Replace the batteries.
6. Turn off other Infrared-enabled devices in the vicinity.
7. Have the remote control serviced.

Having the Projector Serviced

If you are unable to solve the problem, you should have the projector serviced. Pack the projector in the original carton. Include a description of the problem and a checklist of the steps you took when trying to fix the problem. The information may be useful to service personnel. For servicing, return the projector to the place you purchased it.

HDMI Q & A

Q. What is the difference between a "Standard" HDMI cable and a "High-Speed" HDMI cable?

Recently, HDMI Licensing, LLC announced that cables would be tested as Standard or High- Speed cables.

- Standard (or "category 1") HDMI cables have been tested to perform at speeds of 75Mhz or up to 2.25Gbps, which is the equivalent of a 720p/1080i signal.
- High Speed (or "category 2") HDMI cables have been tested to perform at speeds of 340Mhz or up to 10.2Gbps, which is the highest bandwidth currently available over an HDMI cable and can successfully handle 1080p signals including those at increased color depths and/or increased refresh rates from the Source. High-Speed cables are also able to accommodate higher resolution displays, such as WQXGA cinema monitors (resolution of 2560 x 1600).

Q. How do I run HDMI cables longer than 10 meters?

There are many HDMI Adopters working on HDMI solutions that extend a cable's effective distance from the typical 10 meter range to much longer lengths. These companies manufacture a variety of solutions that include active cables (active electronics built into cables that boost and extend the cable's signal), repeaters, amplifiers as well as CAT5/6 and fiber solutions.

Q. How can I tell if a cable is an HDMI certified cable?

All HDMI products are required to be certified by the manufacturer as part of the HDMI Compliance Test Specification. However, there may be instances where cables bearing the HDMI logo are available but have not been properly tested. HDMI Licensing, LLC actively investigates these instances to ensure that the HDMI trademark is properly used in the market. We recommend that consumers buy their cables from a reputable source and a company that is trusted.

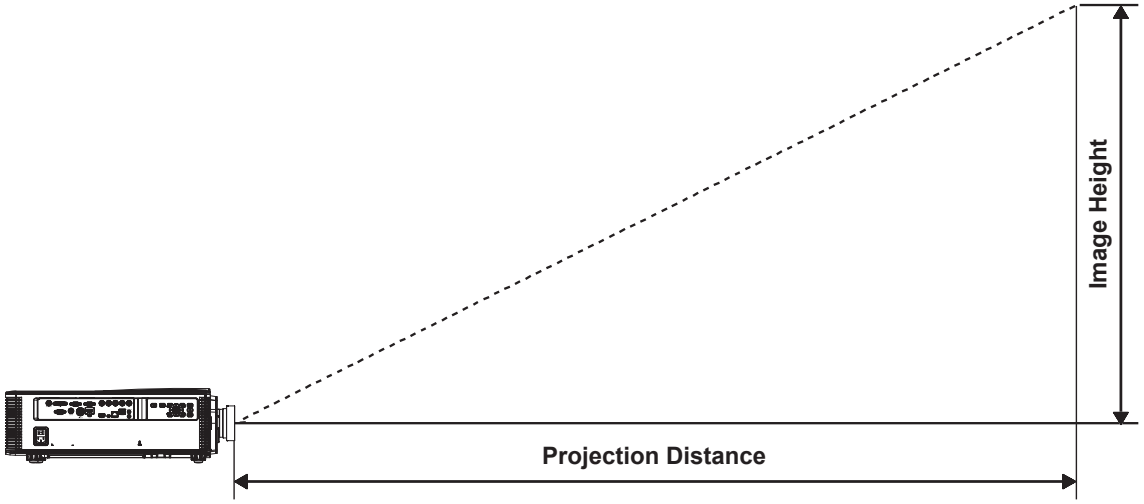
For more detail information check http://www.hdmi.org/learningcenter/faq.aspx#49.

Specifications

ITEM	DESCRIPTION	
Display type	DMD, 0.96" WUXGA	
Resolution	WUXGA (1920 x 1200)	
Zoom/focus	Power Focus / Zoom	
Zoom ratio	Depend on Lens	
Keystone correction	Vertical: +/- 20 degrees, Horizontal: +/- 20 degrees	
Projection methods	Front, Rear, Desktop/Ceiling (Rear, Front)	
Data compatibility	VGA, SVGA, XGA, WXGA, SXGA, SXGA+, UXGA, WUXGA, Mac	
Video compatibility	1080 i/p, 720p, 576 i/p, 480 i/p	
H-Sync	15, 31~91.4KHz	
V-Sync	24~30Hz, 47~120Hz	
Safety Certification	UL/cUL, FCC, CE, CB, CCC, KC/KCC, EAC	
Operation temperature	0° ~ 40°C	
Dimensions (W x H x D)	520 x 194 x 591 mm	
AC Input	100 VAC – 240 VAC, with 15A fuse	
Power consumption	1150W (110V) / 1080W (220V)	
Lamp	1500 hrs typical @ 465W 2000 hrs typical @ 370W	
Input Terminals	HDBaseT: 3G HD-SDI: HDMI: DVI-D: R/G/B/H/V, Y/Pb/Pr: VGA: Video:	RJ45 jack x 1 BNC x 1 HDMI (version 1.4a) x 1 DVI x 1 BNC x 5 D-sub 15 pin x 1 BNC x 1
Output Terminals	VGA: 3D-Sync:	D-sub 15 pin x 1 BNC x 1
Control Terminals	LAN Control: Remote Control IN: Remote Control OUT: Serial port (RS232C): Wi-Fi: Service:	RJ45 jack x 1 Mini jack (3.5mm) x 1 Mini jack (3.5mm) x 1 D-Sub 9 pin (Cross) x 1 USB Type A x 1 Mini USB x 1
Security	Kensington lock	

Note:
For questions regarding product specifications, please contact your local distributor.

Projection Distance vs. Projection Size



Projection Distance and Size Table

Diagonal Length	Screen Size		Projection Lens											
			AH-B22010		AH-B22020		AH-B22030		AH-B21010		AH-B24010		AH-B23010	
	Width	Height	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele
(inch)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
50	1.08	0.67	0.9	1.1	1.1	1.5	1.3	1.6	1.6	2.2	2.2	4.3	4.3	7.8
60	1.29	0.81	1.1	1.3	1.3	1.8	1.6	1.9	1.9	2.6	2.6	5.2	5.2	9.3
70	1.51	0.94	1.3	1.5	1.5	2.1	1.8	2.3	2.3	3.0	3.0	6.0	6.0	10.9
80	1.72	1.08	1.4	1.8	1.8	2.3	2.1	2.6	2.6	3.4	3.4	6.9	6.9	12.4
90	1.94	1.21	1.6	2.0	2.0	2.6	2.3	2.9	2.9	3.9	3.9	7.8	7.8	14.0
100	2.15	1.35	1.8	2.2	2.2	2.9	2.6	3.2	3.2	4.3	4.3	8.6	8.6	15.5
110	2.37	1.48	2.0	2.4	2.4	3.2	2.8	3.6	3.6	4.7	4.7	9.5	9.5	17.1
120	2.59	1.62	2.2	2.6	2.6	3.5	3.1	3.9	3.9	5.2	5.2	10.3	10.3	18.6
130	2.80	1.75	2.4	2.9	2.9	3.8	3.4	4.2	4.2	5.6	5.6	11.2	11.2	20.2
140	3.02	1.89	2.5	3.1	3.1	4.1	3.6	4.5	4.5	6.0	6.0	12.1	12.1	21.7
150	3.23	2.02	2.7	3.3	3.3	4.4	3.9	4.8	4.8	6.5	6.5	12.9	12.9	23.3
160	3.45	2.15	2.9	3.5	3.5	4.7	4.1	5.2	5.2	6.9	6.9	13.8	13.8	24.8
170	3.66	2.29	3.1	3.7	3.7	5.0	4.4	5.5	5.5	7.3	7.3	14.7	14.7	26.4
180	3.88	2.42	3.3	4.0	4.0	5.3	4.7	5.8	5.8	7.8	7.8	15.5	15.5	27.9
190	4.09	2.56	3.4	4.2	4.2	5.6	4.9	6.1	6.1	8.2	8.2	16.4	16.4	29.5
200	4.31	2.69	3.6	4.4	4.4	5.9	5.2	6.5	6.5	8.6	8.6	17.2	17.2	31.0
210	4.53	2.83	3.8	4.6	4.6	6.2	5.4	6.8	6.8	9.1	9.1	18.1	18.1	32.6
220	4.74	2.96	4.0	4.8	4.8	6.4	5.7	7.1	7.1	9.5	9.5	19.0	19.0	34.1
230	4.96	3.10	4.2	5.1	5.1	6.7	5.9	7.4	7.4	9.9	9.9	19.8	19.8	35.7
240	5.17	3.23	4.3	5.3	5.3	7.0	6.2	7.8	7.8	10.3	10.3	20.7	20.7	37.2
250	5.39	3.37	4.5	5.5	5.5	7.3	6.5	8.1	8.1	10.8	10.8	21.5	21.5	38.8
260	5.60	3.50	4.7	5.7	5.7	7.6	6.7	8.4	8.4	11.2	11.2	22.4	22.4	40.3
270	5.82	3.64	4.9	5.9	5.9	7.9	7.0	8.7	8.7	11.6	11.6	23.3	23.3	41.9
280	6.03	3.77	5.1	6.2	6.2	8.2	7.2	9.1	9.1	12.1	12.1	24.1	24.1	43.4

Diagonal length	Screen Size		Projection Lens											
			AH-B22010		AH-B22020		AH-B22030		AH-B21010		AH-B24010		AH-B23010	
	Width	Height	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele
(inch)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
290	6.25	3.91	5.2	6.4	6.4	8.5	7.5	9.4	9.4	12.5	12.5	25.0	25.0	45.0
300	6.46	4.04	5.4	6.6	6.6	8.8	7.8	9.7	9.7	12.9	12.9	25.9	25.9	46.5
310	6.68	4.17	5.6	6.8	6.8	9.1	8.0	10.0	10.0	13.4	13.4	26.7	26.7	48.1
320	6.90	4.31	5.8	7.0	7.0	9.4	8.3	10.3	10.3	13.8	13.8	27.6	27.6	49.6
330	7.11	4.44	6.0	7.3	7.3	9.7	8.5	10.7	10.7	14.2	14.2	28.4	28.4	51.2
340	7.33	4.58	6.2	7.5	7.5	10.0	8.8	11.0	11.0	14.7	14.7	29.3	29.3	52.8
350	7.54	4.71	6.3	7.7	7.7	10.3	9.1	11.3	11.3	15.1	15.1	30.2	30.2	54.3
360	7.76	4.85	6.5	7.9	7.9	10.6	9.3	11.6	11.6	15.5	15.5	31.0	31.0	55.9
370	7.97	4.98	6.7	8.1	8.1	10.8	9.6	12.0	12.0	15.9	15.9	31.9	31.9	57.4
380	8.19	5.12	6.9	8.4	8.4	11.1	9.8	12.3	12.3	16.4	16.4	32.8	32.8	59.0
390	8.40	5.25	7.1	8.6	8.6	11.4	10.1	12.6	12.6	16.8	16.8	33.6	33.6	60.5
400	8.62	5.39	7.2	8.8	8.8	11.7	10.3	12.9	12.9	17.2	17.2	34.5	34.5	62.1
410	8.83	5.52	7.4	9.0	9.0	12.0	10.6	13.3	13.3	17.7	17.7	35.3	35.3	63.6
420	9.05	5.66	7.6	9.2	9.2	12.3	10.9	13.6	13.6	18.1	18.1	36.2	36.2	65.2
430	9.27	5.79	7.8	9.5	9.5	12.6	11.1	13.9	13.9	18.5	18.5	37.1	37.1	66.7
440	9.48	5.93	8.0	9.7	9.7	12.9	11.4	14.2	14.2	19.0	19.0	37.9	37.9	68.3
450	9.70	6.06	8.1	9.9	9.9	13.2	11.6	14.5	14.5	19.4	19.4	38.8	38.8	69.8
460	9.91	6.20	8.3	10.1	10.1	13.5	11.9	14.9	14.9	19.8	19.8	39.6	39.6	71.4
470	10.13	6.33	8.5	10.3	10.3	13.8	12.2	15.2	15.2	20.3	20.3	40.5	40.5	72.9
480	10.34	6.46	8.7	10.6	10.6	14.1	12.4	15.5	15.5	20.7	20.7	41.4	41.4	74.5
490	10.56	6.60	8.9	10.8	10.8	14.4	12.7	15.8	15.8	21.1	21.1	42.2	42.2	76.0
500	10.77	6.73	9.1	11.0	11.0	14.7	12.9	16.2	16.2	21.5	21.5	43.1	43.1	77.6
510	10.99	6.87	9.2	11.2	11.2	14.9	13.2	16.5	16.5	22.0	22.0	44.0	44.0	79.1
520	11.21	7.00	9.4	11.4	11.4	15.2	13.4	16.8	16.8	22.4	22.4	44.8	44.8	80.7
530	11.42	7.14	9.6	11.6	11.6	15.5	13.7	17.1	17.1	22.8	22.8	45.7	45.7	82.2
540	11.64	7.27	9.8	11.9	11.9	15.8	14.0	17.5	17.5	23.3	23.3	46.5	46.5	83.8
550	11.85	7.41	10.0	12.1	12.1	16.1	14.2	17.8	17.8	23.7	23.7	47.4	47.4	85.3

Note:

- *The values in the tables are approximate and may be slightly different from the actual measurements.*
- *In case of ceiling mount, it is necessary to match at the spot.*

Timing Mode Table

Signal Type	Resolution	Frame rate (Hz)	QD881	VGA	BNC	HDMI	DVI	3G-SDI	HDBaseT	CVBS
PC	640x480	60	DMT0660	V	V	V	V	—	V	—
	640x480	72	DMT0672	V	V	V	V	—	V	—
	640x480	75	DMT0675	V	V	V	V	—	V	—
	640x480	85	DMT0685	V	V	V	V	—	V	—
	640x480	66.6	APP0667	—	—	V	V	—	V	—
	720x400	70	IBM0770H	V	V	V	V	—	V	—
	800x600	60	DMT0860	V	V	V	V	—	V	—
	800x600	72	DMT0872	V	V	V	V	—	V	—
	800x600	75	DMT0875	V	V	V	V	—	V	—
	800x600	85	DMT0885	V	V	V	V	—	V	—
	800x600	120	CVR0812	V	—	V	V	—	V	—
	832x624	75	8362A75	V	V	V	V	—	V	—
	848x480	50	CVT0850H	—	—	V	V	—	V	—
	848x480	60	CVT0860H	—	—	V	V	—	V	—
	848x480	75	CVT0875H	—	—	V	V	—	V	—
	848x480	85	CVT0885H	—	—	V	V	—	V	—
	1024x768	60	DMT1060	V	V	V	V	—	V	—
	1024x768	75	DMT1075	V	V	V	V	—	V	—
	1024x768	85	DMT1085	V	V	V	V	—	V	—
	1024x768	120	CVR1012	V	—	V	V	—	V	—
	1152x720	50	CVT1150D	—	—	V	V	—	V	—
	1152x720	60	CVT1160D	—	—	V	V	—	V	—
	1152x720	75	CVT1175D	—	—	V	V	—	V	—
	1152x720	85	CVT1185D	—	—	V	V	—	V	—
	1152x864	60	CVT1160	V	V	V	V	—	V	—
	1152x864	70	DMT1170	V	V	V	V	—	V	—
	1152x864	75	DMT1175	V	V	V	V	—	V	—
	1152x864	85	DMT1185	V	V	V	V	—	V	—
	1152x870	75	APP1175	—	—	V	V	—	V	—
	1280x720	50	CVT1250H	—	—	V	V	—	V	—
	1280x720	60	CVT1260H	V	V	V	V	—	V	—
	1280x720	75	CVT1275H	V	V	V	V	—	V	—
	1280x720	85	CVT1285H	V	V	V	V	—	V	—
	1280x720	120		V	—	V	V	—	V	—
	1280x768	60	CVT1260E	V	V	V	V	—	V	—
	1280x768	75	CVT1275E	V	V	V	V	—	V	—
	1280x768	85	CVT1285E	V	V	V	V	—	V	—
	1280x800	50	CVT1250_	V	V	V	V	—	V	—
	1280x800	60	DMT1260D	V	V	V	V	—	V	—
	1280x800	75	CVT1275_	V	V	V	V	—	V	—

Signal Type	Resolution	Frame rate (Hz)	QD881	VGA	BNC	HDMI	DVI	3G-SDI	HDBaseT	CVBS
PC	1280x800	85	CVT1285_	V	V	V	V	—	V	—
	1280x960	50	CVT1250	—	—	V	V	—	V	—
	1280x960	60	CVT1260	V	V	V	V	—	V	—
	1280x960	75	CVT1275	V	V	V	V	—	V	—
	1280x960	85	CVT1285	V	V	V	V	—	V	—
	1280x1024	50	CVT1250G	—	—	V	V	—	V	—
	1280x1024	60	DMT1260G	V	V	V	V	—	V	—
	1280x1024	75	DMT1275G	V	V	V	V	—	V	—
	1280x1024	85	DMT1285G	V	V	V	V	—	V	—
	1360x768	50	CVT1350H	—	—	V	V	—	V	—
	1360x768	60	DMT1360H	—	—	V	V	—	V	—
	1360x768	75	CVT1375H	—	—	V	V	—	V	—
	1360x768	85	CVT1385H	—	—	V	V	—	V	—
	1366x768	60	DMR1360H	V	V	V	V	—	V	—
	1400x1050	50	CVT1450	—	—	V	V	—	V	—
	1400x1050	60	CVT1460	—	—	V	V	—	V	—
	1400x1050	75	CVT1475	V	V	V	V	—	V	—
	1440x900	60	CVT1460D	V	V	V	V	—	V	—
	1440x900	75	CVT1475D	—	—	V	V	—	V	—
	1600x900	60	DMR1660H	—	—	V	V	—	V	—
	1600x1200	60	DMT1660	V	V	V	V	—	V	—
	1680x1050	60	CVT1660D	V	V	V	V	—	V	—
	1920X1080	50	CVT1950H	—	—	V	V	—	V	—
	1920X1080	60	CVR1960H	V	V	V	V	—	V	—
	1920X1200RB	60	CVR1960D	V	V	V	V	—	V	—
	1920X1200RB	50	CVT1950D	V	V	V	V	—	V	—
NTSC	NTSC (M, 4.43)	60		—	—	—	—	—	—	V
PAL	PAL (B,G,H,I)	50		—	—	—	—	—	—	V
	PAL (N)	50		—	—	—	—	—	—	V
	PAL (M)	60		—	—	—	—	—	—	V
SECAM	SECAM (M)	50		—	—	—	—	—	—	V
SDTV	480i	60		V	V	V	V	—	V	—
	576i	50		V	V	V	V	—	V	—
EDTV	480p	60		V	V	V	V	—	V	—
	576p	50		V	V	V	V	—	V	—
HDTV	1080i	25		V	V	V	V	—	V	—
	1080i	29		V	V	V	V	—	V	—
	1080i	30		V	V	V	V	—	V	—
	720p	50		V	V	V	V	—	V	—
	720p	59		V	V	V	V	—	V	—
	720p	60		V	V	V	V	—	V	—

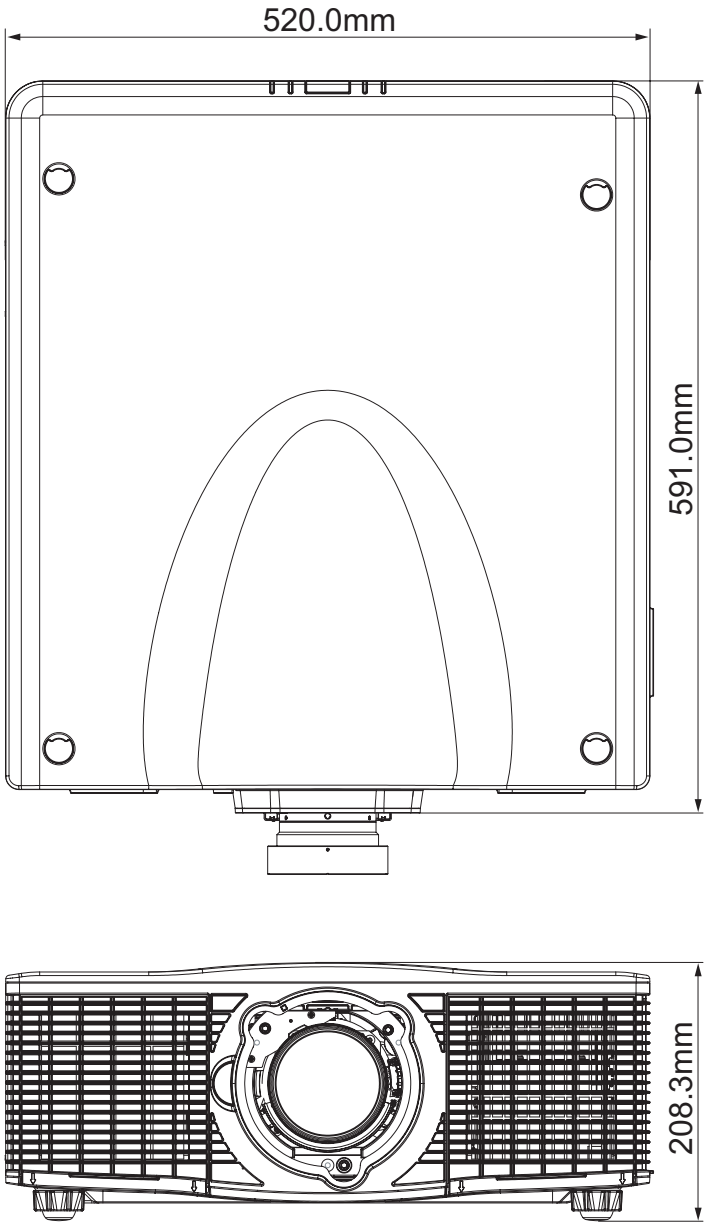
Signal Type	Resolution	Frame rate (Hz)	QD881	VGA	BNC	HDMI	DVI	3G-SDI	HDBaseT	CVBS
HDTV	1080p	23		V	V	V	V	—	V	—
	1080p	24		V	V	V	V	—	V	—
	1080p	25		V	V	V	V	—	V	—
	1080p	29		V	V	V	V	—	V	—
	1080p	30		V	V	V	V	—	V	—
	1080p	50		V	V	V	V	—	V	—
	1080p	59		V	V	V	V	—	V	—
	1080p	60		V	V	V	V	—	V	—
Mandatory 3D	Frame Packing 1080p	24		—	—	V	—	—	V	—
	Frame Packing 720p	50		—	—	V	—	—	V	—
	Frame Packing 720p	60		—	—	V	—	—	V	—
	Side by Side 1080i	50		—	—	V	—	—	V	—
	Side by Side 1080i	60		—	—	V	—	—	V	—
	Top and Bottom 720p	50		—	—	V	—	—	V	—
	Top and Bottom 720p	60		—	—	V	—	—	V	—
	Top and Bottom 1080p	24		—	—	V	—	—	V	—
Frame sequential 3D	800x600	120		—	—	V	—	—	V	—
	1024x768	120		—	—	V	—	—	V	—
	1280x720	120		—	—	V	—	—	V	—
SD-SDI	480i YcbCr422 10bit	59.94		—	—	—	—	V	—	—
	576i YcbCr422 10bit	50		—	—	—	—	V	—	—
HD-SDI	720p YcbCr422 10bit	50		—	—	—	—	V	—	—
		59.94		—	—	—	—	V	—	—
		60		—	—	—	—	V	—	—
	1080i YcbCr422 10bit	50		—	—	—	—	V	—	—
		59.94		—	—	—	—	V	—	—
		60		—	—	—	—	V	—	—
	1080p YcbCr422 10bit	23.98		—	—	—	—	V	—	—
		24		—	—	—	—	V	—	—
		25		—	—	—	—	V	—	—
		29.97		—	—	—	—	V	—	—
		30		—	—	—	—	V	—	—
	1080sF YcbCr422 10bit	25		—	—	—	—	V	—	—
		29.97		—	—	—	—	V	—	—
		30		—	—	—	—	V	—	—

Signal Type	Resolution	Frame rate (Hz)	QD881	VGA	BNC	HDMI	DVI	3G-SDI	HDBaseT	CVBS
3GA-SDI	1080p YcbCr422 10bit	50		—	—	—	—	V	—	—
		59.94		—	—	—	—	V	—	—
		60		—	—	—	—	V	—	—
3GB-SDI	1080p YcbCr422 10bit With 352M Payload ID	50		—	—	—	—	V	—	—
		59.94		—	—	—	—	V	—	—
		60		—	—	—	—	V	—	—

V : Frequency supported

— : Frequency not supported

Projector Dimensions



REGULATORY COMPLIANCE

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Changes or modifications not expressly approved by the parties responsible for compliance could void the user's authority to operate the equipment.

Canada

This class A digital apparatus complies with Canadian ICES-003.

Safety Certifications

UL/cUL, FCC, CE, CB, CCC, KC/KCC, EAC

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