

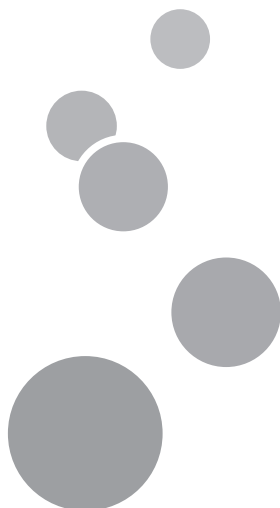
User's Manual

1. Introduction

2. Installation

3. User Controls

4. Appendices



Read this manual carefully before you use this machine and keep it handy for future reference. For safe and correct use, be sure to read the Precautions in this manual before using the machine.

Safety Information

This chapter describes safety information for this machine.

Information

Introduction

This manual contains detailed instructions and notes on the operation and use of this machine. For your safety and benefit, read this manual carefully before using the machine. Keep this manual in a handy place for quick reference.

Important

Contents of this manual are subject to change without prior notice.

In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

Some illustrations in this manual might be slightly different from the machine.

Caution

The manufacturer shall not be responsible for any damage or expense that might result from the use of parts other than genuine parts from the manufacturer with your office products.

Safety Information

When using this machine, the following safety precautions should always be followed.

Safety During Operation

In this manual, the following important symbols are used:



WARNING

Indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

Safety Precautions to Be Followed

This section explains safety precautions that should always be followed when using this machine.

Environments where the machine can be used

This section explains safety precautions about environments where the machine can be used.



WARNING

- Do not place vases, plant pots, cups, toiletries, medicines, small metal objects, or containers holding water or any other liquids, on or close to this machine. Fire or electric shock could result from spillage or if such objects or substances fall inside this machine.



WARNING

- Keep the product and attachments out of the reach of children. If the product is near children, it might fall over and cause an injury.

CAUTION

- Keep the machine away from humidity and dust. Otherwise a fire or an electric shock might occur.

CAUTION

- Do not place any objects on the machine. Doing so may cause the machine to topple over, possibly resulting in injury.

CAUTION

- Do not place the machine on an unstable or tilted surface. If it topples over, an injury might occur.

CAUTION

- Do not place the product or use it in an environment where it might get wet such as from snow, rain, or being near water. Doing so could result in fire or electric shock.

CAUTION

- Do not put your face or hand near the exhaust vents. Doing so could result in burns or an accident due to hot air coming from the exhaust vents.

CAUTION

- Do not use the product on soft material such as paper or cloth that might get sucked into the intake vents. Doing so may cause heat buildup inside the product, resulting in malfunction, burns, or fire.

CAUTION

- Do not place the power cord and connection cable in a way that might cause someone to trip and fall. The product might fall over and cause an injury.

CAUTION

- Do not place the product in a location where air flow is poor. Doing so may cause fire due to internal components becoming overheated.

CAUTION

- Do not place or store the product in a location where direct sunlight or heat generation might occur. The heat may deform or wear out the exterior parts or negatively affect internal parts. Doing so could result in fire.

CAUTION

- Do not place low heat resistant material near the exhaust vents. Hot air may come from the exhaust vents, resulting in damage to the product or an accident.

CAUTION

- Do not expose the product to salt air or corrosive gas. Also, do not place the product in a laboratory or other location where a chemical reaction might occur. Doing so may cause the product to malfunction.

CAUTION

- Do not obstruct the machine's vents. Doing so risks fire caused by overheated internal components.

Handling power cords and power cord plugs

This section explains safety precautions about handling power cords and power cord plugs.

WARNING

- Do not use any power sources other than those that match the specifications shown. Doing so could result in fire or electric shock.

WARNING

- Do not use any frequencies other than those that match the specifications shown. Doing so could result in fire or electric shock.

WARNING

- Do not damage, break, or modify the power cord. Also, do not place heavy objects on the power cord, or pull the cord or bend it severely. Doing so could result in fire or electric shock.

WARNING

- Touching the prongs of the power cable's plug with anything metallic constitutes a fire and electric shock hazard.

WARNING

- The supplied power cord is for use with this machine only. Do not use it with other appliances. Doing so could result in fire or electric shock.

WARNING

- It is dangerous to handle the power cord plug with wet hands. Doing so could result in electric shock.

WARNING

- Be sure to disconnect the plug from the wall outlet at least once a year.
 - There are burn marks on the plug.
 - The prongs on the plug are deformed.
- If any of the above conditions exist, do not use the plug and consult your dealer or service representative. Use of the plug could result in fire or electric shock.

WARNING

- Be sure to disconnect the power cord from the wall outlet at least once a year.
 - The power cord's inner wires are exposed, broken, etc.
 - The power cord's coating has a crack or dent.
 - When bending the power cord, the power turns off and on.
 - Part of the power cord becomes hot.
 - The power cord is damaged.
- If any of the above conditions exist, do not use the power cord and consult your dealer or service representative. Use of the power cord could result in fire or electric shock.

WARNING

- Do not use the connection cable if it is deformed, cracked, or damaged. Doing so could result in fire or electric shock. If the connection cable is deformed, cracked, or damaged, contact your service representative to request a replacement cable.

WARNING

- When using an extension cord or power strip, only connect equipment whose total power consumption is within the power rating for the extension cord or power strip. If the power rating is exceeded, it may cause heat buildup and result in fire.

WARNING

- Do not place the power cord and connection cable in front of the lens or exhaust vents when the product is turned on. Doing so may result in fire.

CAUTION

- Push the power plug all the way into the power outlet. Do not use a power outlet with a loose connection. Doing so may result in heat buildup. Plug the power cord in the correct direction into the base. If they are not plugged in correctly, it could result in smoke, fire, or electric shock.

CAUTION

- If this machine is not going to be used for several days or longer at a time, disconnect its power cord from the wall outlet.

CAUTION

- When disconnecting the power cord from the wall outlet, always pull the plug, not the cord. Pulling the cord can damage the power cord. Use of damaged power cords could result in fire or electric shock.

CAUTION

- Be sure to disconnect the plug from the wall outlet and clean the prongs and the area around the prongs at least once a year. Allowing dust to build up on the plug constitutes a fire hazard.

CAUTION

- When performing maintenance on the machine, always disconnect the power cord from the wall outlet.

Handling the main machine

This section explains safety precautions about handling the main machine.

WARNING

- If the machine emits smoke or odours, or if it behaves unusually, you must turn off its power immediately. After turning off the power, be sure to disconnect the power cord plug from the wall outlet. Then contact your service representative and report the problem. Do not use the machine. Doing so could result in fire or electric shock.

WARNING

- If metal objects, or water or other fluids fall inside this machine, you must turn off its power immediately. After turning off the power, be sure to disconnect the power cord plug from the wall outlet. Then contact your service representative and report the problem. Do not use the machine. Doing so could result in fire or electric shock.

WARNING

- Do not touch this machine if a lightning strike occurs in the immediate vicinity. Doing so could result in electric shock.

WARNING

- The following explains the warning messages on the plastic bag used in this product's packaging.
 - Keep the polythene materials (bags, etc.) supplied with this machine away from babies and small children at all times. Suffocation can result if polythene materials are brought into contact with the mouth or nose.

WARNING

- If the machine topples, or if a cover or other part gets broken, you must turn off its power immediately. After turning off the power, be sure to disconnect the power cord plug from the wall outlet. Then contact your service representative and report the problem. Do not use the machine. Doing so could result in fire or electric shock.

WARNING

- Contact your sales or service representative to clean or replace parts for a projector that is installed on a wall or ceiling.
 - Do not attempt to clean or replace parts for a projector that is installed in a high location on a wall or ceiling. Doing so may cause it to fall down, resulting in an injury.

WARNING

- If a projector is incorrectly installed on a wall or ceiling, it may fall down and cause an injury. Contact your sales or service representative if you want to install a projector on a wall or ceiling.
 - Use brackets that are strong enough to support the projector. The projector weighs about 18kg(40lb) (Projector weight without lens).
 - The projector must be installed in a location that is sturdy enough to support the full weight of the projector and brackets.

CAUTION

- The machine may be very hot after it is turned off, especially the vents and the lower part of the unit where the laser is located. Avoid touching these areas. Doing so may result in burns.

CAUTION

- Do not place the product on other equipment or vice versa. Doing so may cause heat buildup inside the product or cause the other equipment to malfunction.

CAUTION

- Do not increase the volume unless you are listening while increasing the volume. Also, lower the volume before turning off the power, because a loud sound may be emitted when the power is turned on and cause hearing damage.

Handling the machine's interior

This section explains safety precautions about handling the machine's interior.

WARNING

- Do not remove any covers or screws that are not mentioned in this manual. There are high voltage components inside the product that may cause electric shock. Contact your service representative if any of the product's internal components require maintenance, adjustment, or repair.
- Do not disassemble or modify the product. Doing so may cause injury or malfunction.

CAUTION

- If the machine's interior is not cleaned regularly, dust will accumulate. Fire and breakdown can result from heavy accumulation of dust inside this machine. Contact your sales or service representative for details about and charges for cleaning the machine's interior.

About the batteries

Explains things that you should follow in regard to the batteries.

WARNING

- For safe operation, follow the warnings below regarding the batteries used in the remote control. If you use the batteries incorrectly, it may result in fire or injury due to batteries leaking or exploding.
 - Do not use batteries other than the ones specified.
 - Do not mix and use batteries that are different types or that are new and old.
 - Correctly insert batteries according to the polarity (+/-).
 - Do not charge non-rechargeable batteries.
 - Do not heat or throw the batteries into fire or water.
 - Do not connect the positive and negative terminals on a battery with a wire.
 - Remove the batteries from the remote control that are past their suggested use period or that are depleted.
 - Remove the batteries when they will not be used for extended periods.
 - Keep the batteries out of the reach of children. Children may swallow or choke on the batteries. If this happens, contact a doctor immediately.

WARNING

- What to do if a battery has leaked
 - If leakage from a battery adheres to your skin, rinse it with water immediately, and then contact a doctor.
 - Wipe off the leakage with tissue paper while being careful not to touch it.
 - Soak the tissue paper that you used in water, and then throw it away as burnable trash.

About the Laser light source

Explains things that you should follow in regard to the laser light source.

WARNING

- Do not look into the lens or vent when the product is on. The bright light may damage your eyes. Be especially careful in an environment with children.

CAUTION

- This projector has built-in laser module. Possibly hazardous optical radiation emitted from this product. Do not stare into the beam. May be harmful to the eyes.

CAUTION

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION

- Do not block the projection light when it is on. If you do so, the part that is blocking the projection light may get quite hot and deform, deteriorate or cause a burn or fire. The reflected light may make the lens hot and cause a product failure. To temporarily suspend projection, select the mute function. To suspend longer, turn off the product.

Moving

This section explains safety precautions about moving the machine.

CAUTION

- Unplug the power cord from the wall outlet before you move the machine. While moving the machine, take care that the power cord is not damaged under the machine. Failing to take these precautions could result in fire or electric shock.

Other Information

Copyrights to Images

When projecting images using the projector, be careful not to infringe the copyright of protected materials.

The following are examples that may infringe the copyright of protected materials.

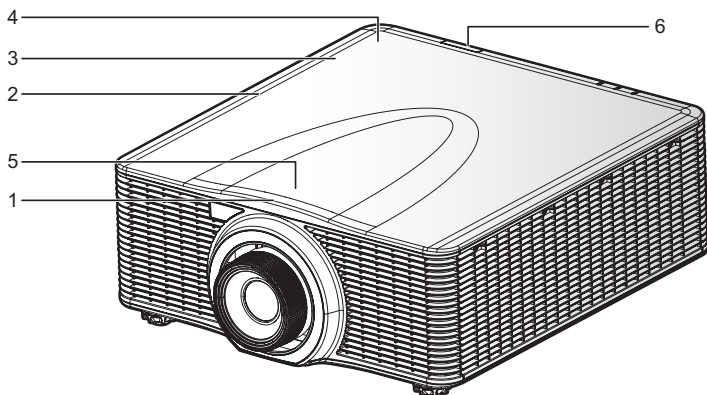
- Broadcasting images or movies for commercial purposes
- Modifying images or movies using functions such as freeze, magnify, or zoom to broadcast images for commercial purposes or public viewing
- Varying the aspect ratio of images or movies using a function that changes the screen size to broadcast images for commercial purposes or public viewing

Safety Labels of This Machine

Positions of WARNING and CAUTION labels

This machine has labels for WARNING and CAUTION at the positions shown below. For safety, please follow the instructions and handle the machine as indicated.

Main unit



1



Do not look into the lens when the product is on. The bright light may damage your eyes.

Do not place anything in front of the lens. The object may become very hot and cause a fire or burn. To blank the image temporarily, turn on the mute function.

2



Do not put your face or hand near the exhaust vents. Doing so could result in burns or an accident due to hot air coming from the exhaust vents.

3

- Apparaten skall anslutas till jordat uttag.
- Apparatet må tilkoples jordet stikkontakt.
- Laite on liitettävä suojaa koskettimilla varustettuun pistorasiaan.
- Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.



4



WARNING VORSICHT
AVERTISSEMENT AVVERTIMENTO
ADVERTENCIA AVISO 警告

- Do not remove any screws. Do not block or cover the vents.
- Entfernen Sie keine Schrauben. Die Luftauslässe nicht blockieren oder abdecken.
- Ne retirer aucune vis. Ne pas obstruer ou couvrir les aérations.
- Non rimuovere viti. Non coprire le prese d'aria.
- No retire ningún tornillo. No bloquee ni tape las salidas de ventilación.
- Não remova quaisquer parafusos. Não obstrua ou tape as saídas de ventilação.
- 不要拆除任何螺丝。不要堵塞或覆盖通风孔。
- ネシを取り外さないでください。通気孔をふさがしないでください。

5 Notice: User in USA

LASER APERTURE
DO NOT LOOK INTO THE LENS
Laser aperture
Ne regardez pas dans l'objectif

6 Notice: Users in USA



Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.55, dated June 24, 2007

LASER RADIATION AVOID DIRECT EYE EXPOSURE
CLASS IIIb LASER PRODUCT
 Wavelength: 405nm
 Maximum Power: 500mW
 Maximum Output: 500mW
 EC 60825-1:2007
 Le rayonnement laser émis de cet appareil peut être dangereux.
 Classe IIIb produit laser
 Longueur d'onde: 405nm
 Puissance maximale: 500mW
 Sortie maximale: 500mW

6 Notice: Users in EU countries and Japan and China



CLASS 1 LASER PRODUCT- IEC/EN 60825-1:2014
RISK GROUP 2: Possibly hazardous optical radiation emitted from this product. Do not stare into the beam. May be harmful to the eyes.

APPAREIL À LASER DE CLASSE 1- IEC/EN 60825-1: 2014,
RISQUES DE GROUPE 2: LE PRODUIT PEUT ÉMETTRE DES RADIATIONS OPTIQUES DANGEREUSES.
NE PAS RÊSTER DANS LA TRAJECTOIRE DU FASCEAU; PEUT ÊTRE DANGEREUX POUR LES YEUX.

一类激光产品-IEC/EN 60825-1: 2014
 风险等级2: 本产品可能发射有害的光辐射
 勿直视光束: 可能对眼睛有害

クラス1レーザー製品-IEC/EN 60825-1:2014
 リスクグループ2: この製品から出力される光は使用状況によっては強力な光となり、
 目に悪影響を及ぼすおそれがありますので光線を直視しないでください。

Power Switch Symbols

The meanings of the symbols for the switches on this machine are as follows:

- : STANDBY

Laws and Regulations

User Information on Electrical and Electronic Equipment

If you wish to discard this product, please contact your local authorities, the shop where you bought this product, your local dealer or sales/service representatives.

Regulation & Safety Notices

This appendix lists the general notices of your Projector.

Notice: Users in the United States of America

FCC notice

MODEL NAME: RICOH PJ WUL6280/ RICOH PJ WXL6280

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 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 own expense.

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

Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this projector.

Notes to Users in the State of California

Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate.

WARNING: Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. ***Wash hands after handling.***

Declaration of Conformity for EU countries

- EMC Directive 2004/108/EC (including amendments)
- Low Voltage Directive 2006/95/EC

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Notice: Users in EU countries

CE Marking Traceability Information (For EU Countries Only)

Manufacturer:
Ricoh Co., Ltd.
3-6 Nakamagome 1-chome, Ohta-ku, Tokyo. 143-8555, Japan

Importer:
Ricoh Europe PLC
20 Triton Street, London. NW1 3BF, United Kingdom

User Information on Electrical and Electronic Equipment

Users in the countries where this symbol shown in this section has been specified in national law on collection and treatment of E-waste.

Our Products contain high quality components and are designed to facilitate recycling.

Our products or product packaging are marked with the symbol below.



This product contains substances which are harmful to humans and the environment.

Notice: Users in Turkey

EEE Yönetmeliğine Uygundur.

Bu sistem sarf malzemeleri ve yedek parçaları da dahil olmak üzere EEE Yönetmeliğine Uygundur.

All Other Users

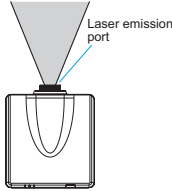
If you wish to discard this product, please contact your local authorities, the shop where you bought this product, your local dealer or sales/service representatives.

Laser Notice

- This Product is classified as Class 3R of IEC60825-1:2007 and also complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.50, dated June 24,2007. (For USA)
- IEC 60825-1:2014: CLASS 1 LASER PRODUCT - RISK GROUP 2. (For EU countries and Japan and China)

Laser source specification

3.5W laser diode x 38
Wavelength: 440-455nm
Pulse duration: 1.08ms



Notice: Users in the EU

Note for the Battery and/or Accumulator Symbol



In accordance with the Battery Directive 2006/66/EC Article 20 Information for end-users Annex II, the above symbol is printed on batteries and accumulators. This symbol means that in the European Union, used batteries and accumulators should be disposed of separately from your household waste. In the EU, there are separate collection systems for not only used electrical and electronic products but also batteries and accumulators. Please dispose of them correctly at your local community waste collection/recycling centre.

Notice: Users in Taiwan



廢電池請回收

請勿將電池當作一般垃圾丟棄。這個標誌表示電池不應視為一般垃圾丟棄。僅適用於台灣。

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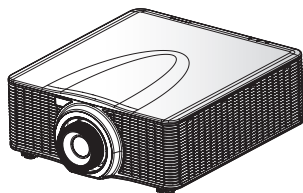
Introduction

Product Features

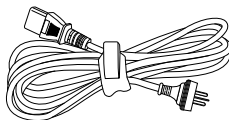
- WXGA: One panel 0.65"-WXGA projection system
- WUXGA: One panel 0.67"-WUXGA projection system
- 6,000 ANSI lumens platform for WXGA (typical) and WUXGA (typical)
- Power Zoom/Focus and full lens shift (1/2 screen, V +/- 100%, H +/- 30%)
- Support LAN network control and HDBaseT for video streaming
- Support PIP/PBP function
- Support 360 degrees & portrait mode projection. (With optional safety cover and portrait by input source)

Package Overview

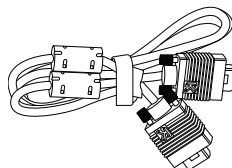
Unpack and inspect the box contents to ensure all parts listed below are in the box. If something is missing, please contact our customer service.



Projector with lens cover



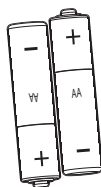
Power Cord



VGA Cable



Remote Control



AAA(R03) Batteries x 2
(For remote control)

Documentation:

- User's Manual (CD)
- Read This First (Paper)



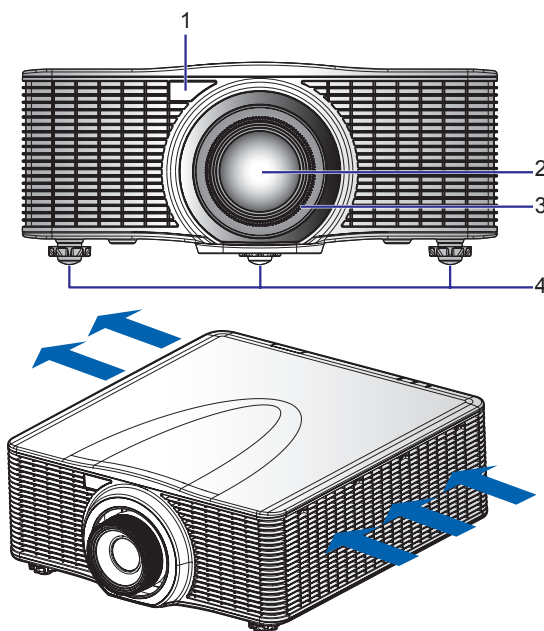
- Due to different applications in each Country, some regions may have different accessories.

Product Overview

The product specified in this document is a high brightness, high-resolution video/graphics 1-chip laser based projector. The projector is available in WXGA and WUXGA resolutions. The projector utilizes Digital Light Processing (DLP®) technology from Texas Instruments. It is primarily designed for fixed installation markets.

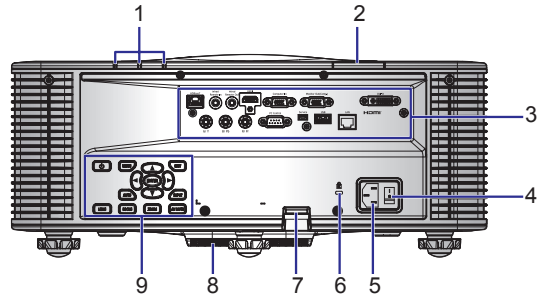
Projector Components

Front View



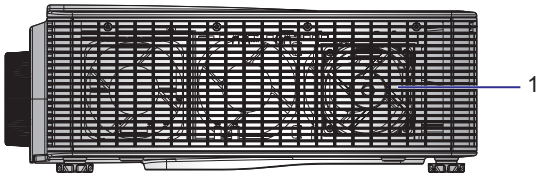
Ind.	Part Name	Description
1	Front IR Receiver	Receives signals from the IR remote. Keep the signal path to the sensor unobstructed for uninterrupted communication with the projector.
2	Projection Lens	Allows automated lens control and adjustment: vertical and horizontal offsets, zoom and focus.
3	Lens Ring	Protects the lens motors and mechanism. Remove in order to insert or remove the lens.
4	Adjustable Feet	Raise or lower the feet to level the projector.

Rear View

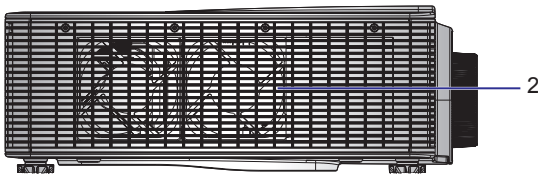


Ind.	Part Name	Description
1	LED Status Indicators	Displays the status of the projector.
2	Top IR Sensor	Receives signals from the IR remote. Keep the signal path unobstructed for uninterrupted communication with the projector.
3	Connector panel	Connects the projector to external devices.
4	Power Switch	Switch the power button to turn on the power source.
5	Power Connector	Connect to the supplied power adapter.
6	Kensington Lock	Use to secure the projector to countertops, tables, etc.
7	Security bar	Use to secure the projector.
8	Inlet Vent	Keep these vents unobstructed to prevent the projector from overheating.
9	Keypad Panel	Controls the projector.

Left View



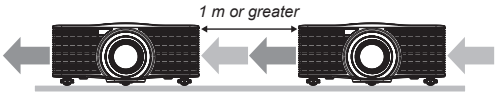
Right View



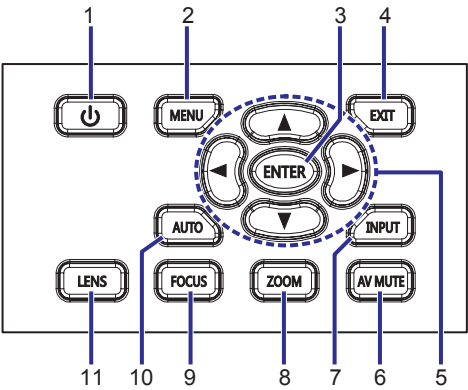
Ind.	Part Name	Description
1	Inlet Vent	Keep these vents unobstructed to prevent the projector from overheating.
2	Outlet Vent	Keep these vents unobstructed to prevent the projector from overheating.

Things to note when installing projectors

- Leave 1 m or over space between the projectors when projectors are installed side by side, so that intake and exhaust vents of the projectors are not obstructed. In addition, leave a space of at least 30 cm between the intake/exhaust vent and the wall. When the air intake and discharge outlet are obstructed, the temperature inside the projector will rise and this may result in a malfunction.

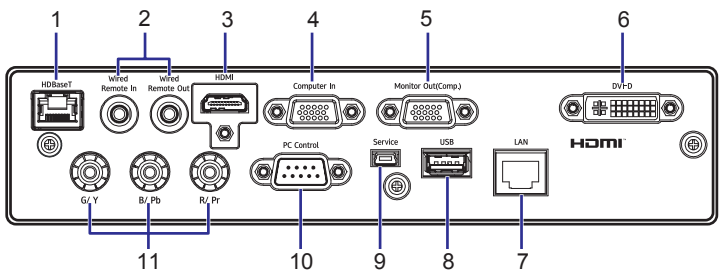


Built-in Keypad



Ind.	Part Name	Description
1	Power	Turn the projector on or off.
2	Menu	Display menus.
3	Enter	Confirm a selection.
4	Exit	Return to previous level or exit menus if at top level.
5	Arrow Keys	<ul style="list-style-type: none"> Adjust a setting UP or DOWN. Navigate within a menu.
6	AV Mute	Display or blank the video image.
7	Input	Select an input for the main or PIP/PBP image.
8	Zoom	Adjust zoom.
9	Focus	Adjust focus.
10	Auto	Automatically optimize image.
11	Lens	Adjust the lens vertical or horizontal offset setting.

Input/Output (I/O) Panel



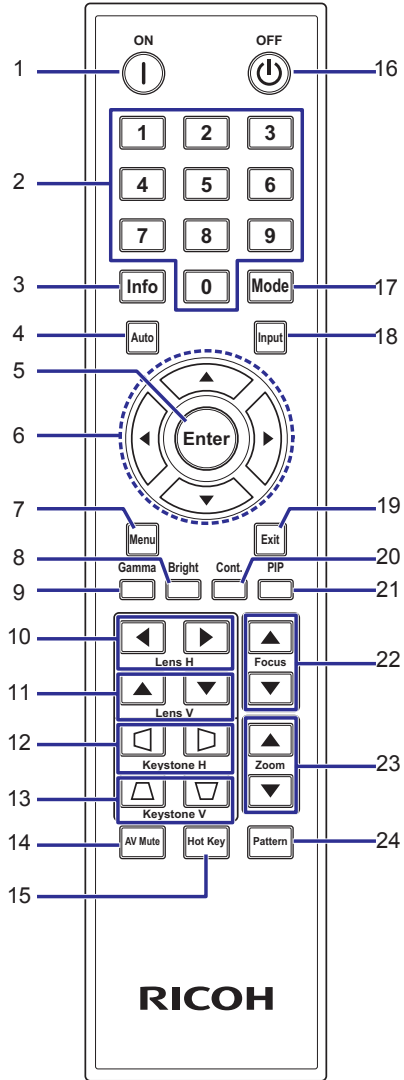
Ind.	Connector Name	Ind.	Connector Name
1	HDBaseT	7	LAN
2	Remote In/Out	8	USB
3	HDMI	9	Service
4	Computer IN	10	PC Control
5	Monitor Out	11	Component IN
6	DVI-D		

LED Status Indicators

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

LED Type	LED Status	Projector State
Light LED	Off	Laser diode is off
	Solid Orange	Laser diode time has expired
	Solid Green	Laser diode is on and operating correctly
	Flashing Red	When projector has lost over 60% initial luminance
Status LED	Off	AC power is off (without AC plug in)
	Off	AC has been applied, projector is in standby mode NOTE: Status LED cannot be flashing red, as this is reserved for an error condition. Status LED is off but keypad LED will indicate Standby Mode.
	Solid Green	Projector is powered up and operating normally
	Flashing Green	Projector communications
	Flashing Orange	Projector is in cool down mode or startup mode
	Flashing (alternating) Green/Orange	Projector is in flash update state
	Solid Red	Over-temperature
	Flashing Red	Fan failure
AV Mute	Solid Green	Light is on - image is displayed
	Solid Orange	Light is on - image is blank

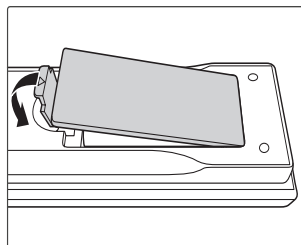
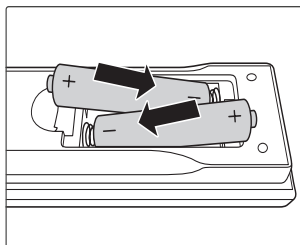
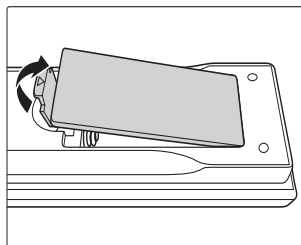
Remote Control



Ind.	Part Name	Description
1	Power on	Turn projector ON.
2	Number Keys	Enter a number, such as a value for an IP address, etc.
3	Info	Display source image information.
4	Auto	Automatically optimize image.
5	Enter	<ul style="list-style-type: none"> Select a highlighted menu item. Change or accept a value.
6	Arrow Keys	<ul style="list-style-type: none"> Adjust a setting UP or DOWN. Navigate within a menu.
7	Menu	Display menus.
8	Bright	Adjust amount of light in the image.
9	Gamma	Adjust mid-range levels.
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	Keystone V	Adjust the vertical keystone.
14	AV Mute	Display or blank the video image.
15	Hot Key	Select your preset keys quickly.
16	OFF	Turn projector OFF.
17	Mode	Select the preset display mode.
18	Input	Select an input for the main or PIP/PBP image.
19	Exit	Return to previous level or exit menus if at top level.
20	Cont.	Adjust difference between dark and light.
21	PIP	Turn PIP/PBP ON/OFF.
22	Focus	Adjust focus to improve image clarity as desired.
23	Zoom	Adjust zoom to achieve a desired image size.
24	Pattern	Display a test pattern.

Remote Control Battery Installation

- 1 Remove the battery compartment cover as shown in the illustration.
- 2 Install new batteries (AAA/R03). Ensure that you have the batteries' polarity (+/-) aligned correctly.
- 3 Replace the cover. Do not mix different types of batteries or new and old batteries.



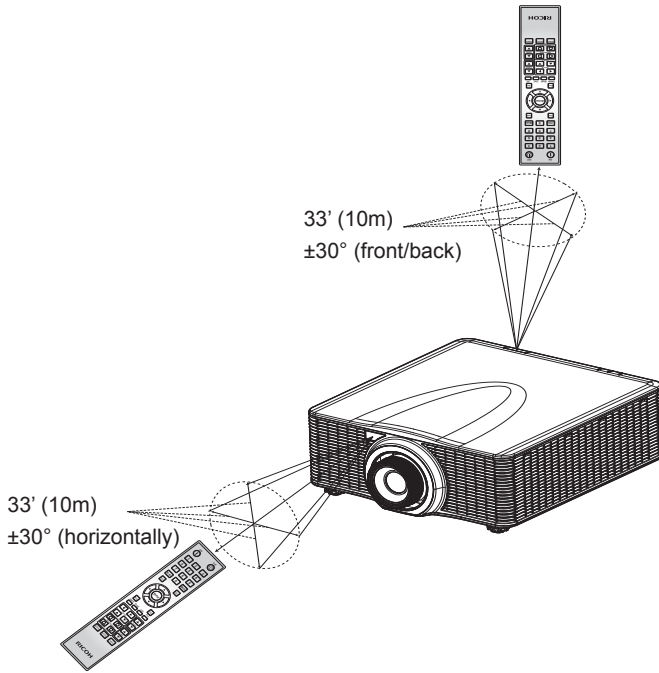
To ensure safe operation, please observe the following precautions :

- Use AAA/R03 type battery.
- Avoid contact with water or liquid.
- Do not expose the remote control to moisture or heat.
- Do not drop the remote control.
- If the battery has leaked in the remote control, carefully wipe the case clean and install new battery.
- Risk of an explosion if battery is replaced by an incorrect type.
- Dispose of used battery according to the instructions.
- Remove batteries from remote control when not using for extended periods.
- The remote control may fail to operate if the infrared remote sensor is exposed to bright sunlight or fluorescent lighting.

Remote Control Operating Range

Point the remote control toward the projector (Remote Receiver) when pressing any button.

Maximum operating range for the remote control is about 33' (10m) and $\pm 30^\circ$ (horizontally) in front of the projector.

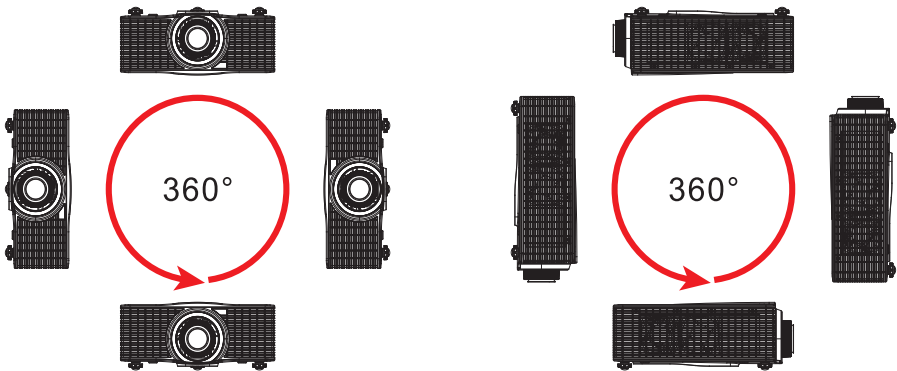


Installation

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 degree free orientation operation

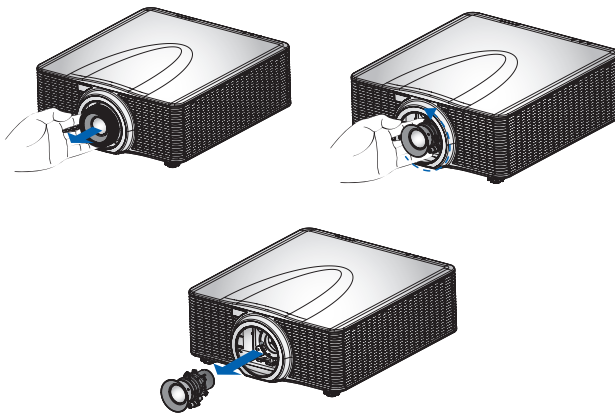


Removing and Installing the Lens

When handling the projector after lens installation, make sure the front lens cap is placed on the lens to protect the lens surface from potential damage. When carrying or moving the projector, do not handle by the lens. This may damage the lens, the chassis or other mechanical parts within the projector.

Installation Steps:

1. **Center the lens:** 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. Center the lens while the projector is switched on by pressing the lens horizontal or vertical button and then pressing Enter.
2. **Turn Off the projector:** Turn the projector OFF.
3. **Wait for projector to cool down:** Allow the projector to cool down into standby mode before replacing the lens. Remove power cord after the projector has cooled down and prior to replacing the lens.
4. **Remove the lens:** Remove the lens ring cover. Rotate the lens counter-clockwise by a quarter to release the lock. Remove the lens through the front of the projector.



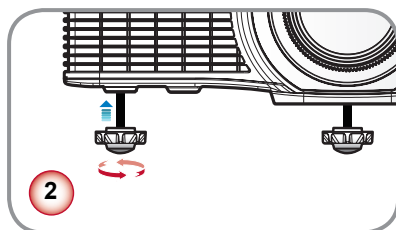
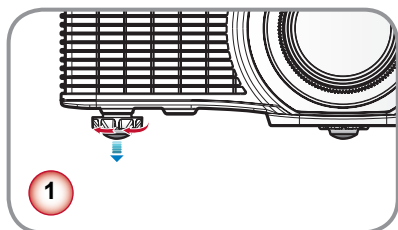
5. **Install the new lens:** Fully insert the lens assembly straight into the lens mount without turning. Rotate the lens cap clockwise to lock the lens in place.

Adjusting the Projected Image

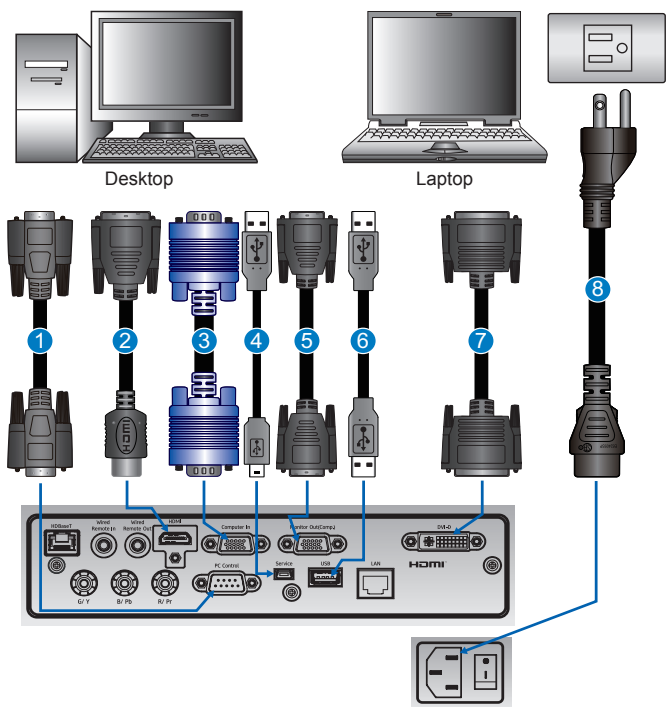
Adjusting the Projector's Height

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

1. Locate the adjustable foot you wish to modify on the underside of the projector.
2. Rotate the adjustable ring clockwise to raise the projector or counter clockwise to lower it. Repeat with the remaining feet as needed.



Connect to Computer



Ind.	Connector Name	Ind.	Connector Name
1	RS232 Cable	5	VGA out Cable
2	HDMI Cable	6	USB Type A Cable
3	VGA in Cable	7	DVI Cable
4	Mini USB Cable	8	Power Cord

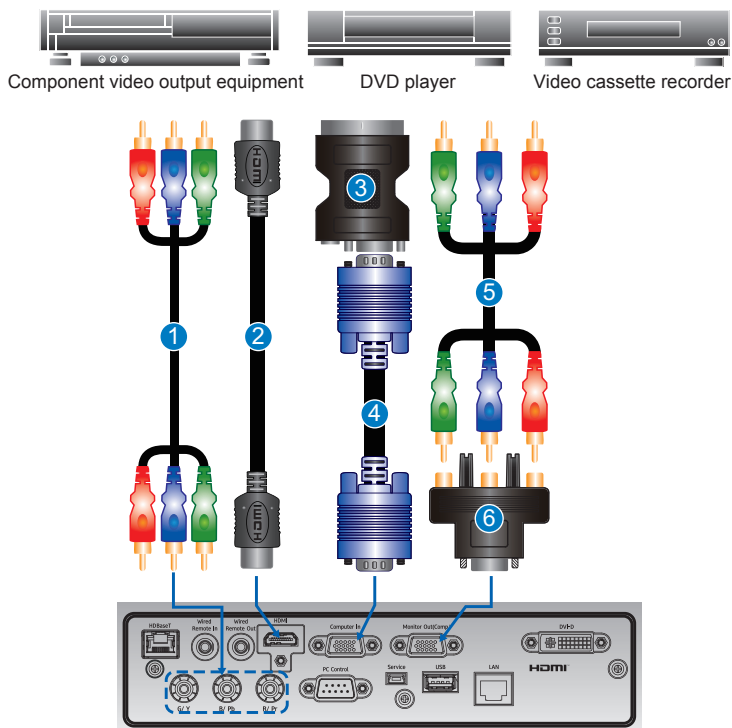
NOTE:

- ❖ The diagram shows the cables/connectors that may be used to connect to various devices.
- ❖ Due to the difference in applications for each country, the accessories required in some regions may be different from those shown.
- ❖ This diagram is for illustrative purposes only, and does NOT indicate that these accessories are supplied with the projector.

Note for HDBaseT connection:

- ❖ Connect the cable directly to the HDBaseT transmitter without going through a hub or router.
- ❖ This projector is not guaranteed to work with all HDBaseT transmitter sold commercially.

Connect to Video Equipment



Ind.	Connector Name	Ind.	Connector Name
1	Component (YPbPr) Cable	4	VGA in Cable
2	HDMI Cable	5	3 RCA Component Cable
3	VGA to RGB SCART	6	15-pin to 3 RCA Component/HDTV Adapter

NOTE:

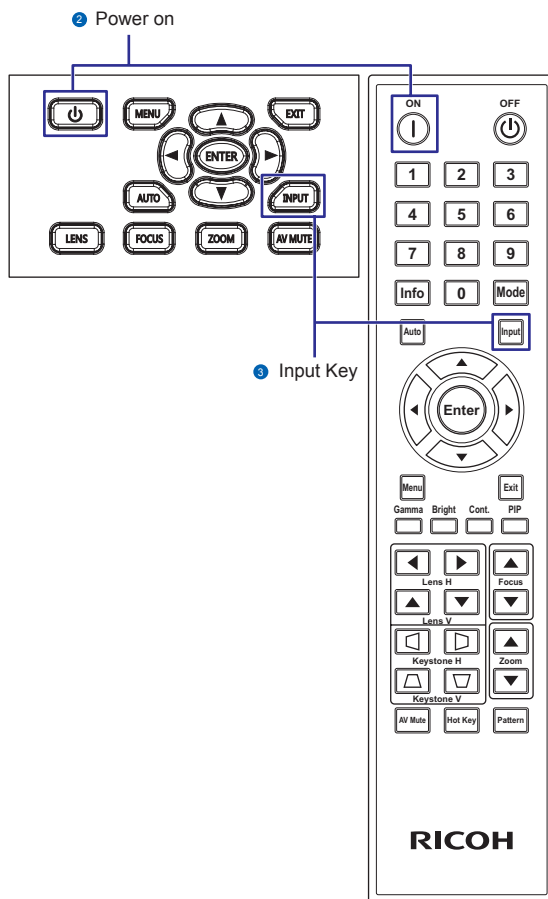
- ❖ The diagram shows the cables/connectors that may be used to connect to various devices.
- ❖ Due to the difference in applications for each country, the accessories required in some regions may be different from those shown.
- ❖ This diagram is for illustrative purposes only, and does NOT indicate that these accessories are supplied with the projector.
- ❖ (G/Y B/Pb R/Pr) terminal support component signal and RGB signal with sync on green only.
RGB signal from VGA connector (R/G/B/HD/VD) is not supported.

Turn the Projector On







1. Ensure that the power cord and signal cable are securely connected. The Power button on the built in keypad is illuminated.
2. Turn on the projector by pressing “**I**” on the remote control or press “**⏻**” on the built-in keypad. The Status LED is Orange with a long blink. ²
3. Turn on the source. Press the **Input** key on the remote control to select an input source (VGA, HDMI, or Component). ³
4. The projector detects the source you selected and displays the image.

NOTE:

- ❖ The first time the projector is used, the preferred language may be selected from the main menu after the startup screen is displayed.



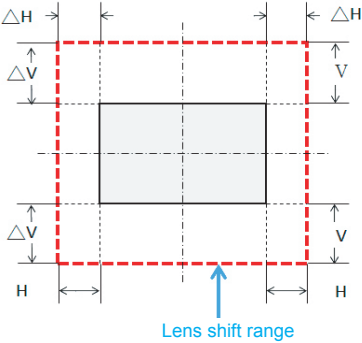
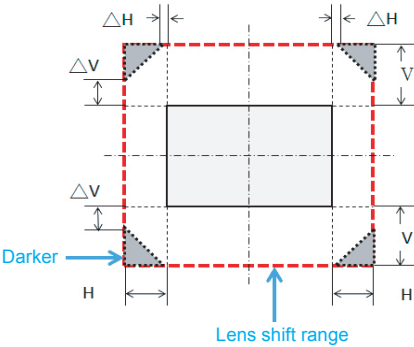
Turn the Projector Off

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 10 seconds.

Projection Lens

A3 is the standard lens for WXGA and WUXGA.

Projection Lens	A1	A2	A3	A4	A5	
Focal Length (f)	11.11-14.06	14.03-17.95	18.07-22.59	22.56-42.87	42.60-80.90	
F number	2.30-2.53	2.30-2.57	2.00-2.32	2.30-3.39	2.30-2.74	
Focus spec (MTF)	67 lp/mm	67 lp/mm	47 lp/mm	67 lp/mm	67 lp/mm	
Zoom Range(Ratio)	1.26X	1.28X	1.25X	1.9X	1.9X	
Zoom & Focus Adjustment	Motorized					
Throw Ratio (WXGA)	0.79-1.00	1.00-1.28	1.28-1.61	1.60-3.07	3.04-5.78	
Throw Distance(WXGA)	0.83-6.45m	1.08-8.27m	1.38-10.40m	1.72-19.84m	3.27-37.35m	
Throw Ratio (WUXGA)	0.75-0.95	0.95-1.22	1.22-1.53	1.52-2.92	2.90-5.50	
Throw Distance(WUXGA)	0.81-6.13m	1.02-7.88m	1.31-9.89m	1.64-18.87m	3.12-35.54m	
Projection Image Size	50~300"					
Motorized Lens Shift (Lens shift range based on 1/2 screen width and height)		Horizontal: +/-30% Vertical: +/-100%				
		Projection Lens: A2, A4, A5				
		Platform	H	V	ΔH	ΔV
		0.65" WXGA	30%	100%	30%	100%
		0.67"WUXGA	30%	100%	30%	100%
		Projection Lens: A3				
		Platform	H	V	ΔH	ΔV
		0.65" WXGA	30%	100%	15%	70%
		0.67"WUXGA	30%	100%	5%	50%
		Projection Lens: A1				
Platform	H	V	ΔH	ΔV		
0.65" WXGA	30%	100%	14%	70%		
0.67"WUXGA	30%	100%	2%	50%		

Projection Lens	A1	A2	A3	A4	A5
<p>Motorized Lens Shift (Lens shift range based on 1/2 screen width and height)</p>	<p>A2/A4/A5 lens shift range:</p>  <p>A1/A3 lens shift range:</p>  <p>Lens shift accuracy: 0.5 pixel per step.</p> <p>When the lens is shifted beyond the described range of operation, the screen edges may become darker or the images may become out of focus.</p>				

Adjusting the Projecting Image's Position

To determine where to position 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.

Platform			WUXGA (16:10)									
DMD			0.67"									
Projection Lens			Replacement Lens Type A1		Replacement Lens Type A2		Replacement Lens Type A3		Replacement Lens Type A4		Replacement Lens Type A5	
			Short Throw		Wide Zoom		Standard		Long Zoom		Ultra-Long Zoom	
Throw Ratio			0.75-0.95		0.95-1.22		1.22-1.53		1.53-2.92		2.90-5.50	
Zoom Ratio			1.26X		1.28X		1.25X		1.9X		1.9X	
Throw Distance			0.81-6.14m		1.03~7.88m		1.32~9.88m		1.65~18.86m		3.13~35.53m	
Projection screen size			Projection distance (m)									
Throw Ratio			0.75	0.95	0.95	1.22	1.22	1.53	1.53	2.92	2.9	5.5
Diagonal (inch)	Height (m)	Width (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)
50	0.67	1.08	0.81	1.03	1.03	1.32	1.32	1.65	1.65	3.15	3.13	5.94
60	0.81	1.29	0.97	1.23	1.23	1.57	1.57	1.97	1.97	3.77	3.74	7.10
70	0.94	1.51	1.13	1.43	1.43	1.84	1.84	2.31	2.31	4.41	4.38	8.31
80	1.08	1.72	1.29	1.63	1.63	2.10	2.10	2.63	2.63	5.02	4.99	9.46
90	1.21	1.94	1.46	1.84	1.84	2.37	2.37	2.97	2.97	5.66	5.63	10.67
100	1.35	2.15	1.61	2.04	2.04	2.62	2.62	3.29	3.29	6.28	6.24	11.83
110	1.48	2.37	1.78	2.25	2.25	2.89	2.89	3.63	3.63	6.92	6.87	13.04
120	1.62	2.58	1.94	2.45	2.45	3.15	3.15	3.95	3.95	7.53	7.48	14.19
130	1.75	2.8	2.10	2.66	2.66	3.42	3.42	4.28	4.28	8.18	8.12	15.40
140	1.88	3.02	2.27	2.87	2.87	3.68	3.68	4.62	4.62	8.82	8.76	16.61
150	2.02	3.23	2.42	3.07	3.07	3.94	3.94	4.94	4.94	9.43	9.37	17.77
160	2.15	3.45	2.59	3.28	3.28	4.21	4.21	5.28	5.28	10.07	10.01	18.98
170	2.29	3.66	2.75	3.48	3.48	4.47	4.47	5.60	5.60	10.69	10.61	20.13
180	2.42	3.88	2.91	3.69	3.69	4.73	4.73	5.94	5.94	11.33	11.25	21.34
190	2.56	4.09	3.07	3.89	3.89	4.99	4.99	6.26	6.26	11.94	11.86	22.50
200	2.69	4.31	3.23	4.09	4.09	5.26	5.26	6.59	6.59	12.59	12.50	23.71
250	3.37	5.38	4.04	5.11	5.11	6.56	6.56	8.23	8.23	15.71	15.60	29.59
300	4.04	6.46	4.85	6.14	6.14	7.88	7.88	9.88	9.88	18.86	18.73	35.53

Platform			WXGA (16:10)									
DMD			0.65"									
Projection Lens			Replacement Lens Type A1		Replacement Lens Type A2		Replacement Lens Type A3		Replacement Lens Type A4		Replacement Lens Type A5	
			Short Throw		Wide Zoom		Standard		Long Zoom		Ultra-Long Zoom	
Throw Ratio			0.79-1		1.00-1.28		1.28-1.61		1.60-3.07		3.04-5.78	
Zoom Ratio			1.26X		1.28X		1.25X		1.9X		1.9X	
Throw Distance			0.85-6.46m		1.08~8.27m		1.38~10.40m		1.73~19.83m		3.28~37.34m	
Projection screen size			Projection distance (m)									
Throw Ratio			0.79	1	1	1.28	1.28	1.61	1.6	3.07	3.04	5.78
Diagonal (inch)	Height (m)	Width (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)
50	0.67	1.08	0.85	1.08	1.08	1.38	1.38	1.74	1.73	3.32	3.28	6.24
60	0.81	1.29	1.02	1.29	1.29	1.65	1.65	2.08	2.06	3.96	3.92	7.46
70	0.94	1.51	1.19	1.51	1.51	1.93	1.93	2.43	2.42	4.64	4.59	8.73
80	1.08	1.72	1.36	1.72	1.72	2.20	2.20	2.77	2.75	5.28	5.23	9.94
90	1.21	1.94	1.53	1.94	1.94	2.48	2.48	3.12	3.10	5.96	5.90	11.21
100	1.35	2.15	1.70	2.15	2.15	2.75	2.75	3.46	3.44	6.60	6.54	12.43
110	1.48	2.37	1.87	2.37	2.37	3.03	3.03	3.82	3.79	7.28	7.20	13.70
120	1.62	2.58	2.04	2.58	2.58	3.30	3.30	4.15	4.13	7.92	7.84	14.91
130	1.75	2.8	2.21	2.8	2.8	3.58	3.58	4.51	4.48	8.60	8.51	16.18
140	1.88	3.02	2.39	3.02	3.02	3.87	3.87	4.86	4.83	9.27	9.18	17.46
150	2.02	3.23	2.55	3.23	3.23	4.13	4.13	5.20	5.17	9.92	9.82	18.67
160	2.15	3.45	2.73	3.45	3.45	4.42	4.42	5.55	5.52	10.59	10.49	19.94
170	2.29	3.66	2.89	3.66	3.66	4.68	4.68	5.89	5.86	11.24	11.13	21.15
180	2.42	3.88	3.07	3.88	3.88	4.97	4.97	6.25	6.21	11.91	11.80	22.43
190	2.56	4.09	3.23	4.09	4.09	5.24	5.24	6.58	6.54	12.56	12.43	23.64
200	2.69	4.31	3.40	4.31	4.31	5.52	5.52	6.94	6.90	13.23	13.10	24.91
250	3.37	5.38	4.25	5.38	5.38	6.89	6.89	8.66	8.61	16.52	16.36	31.10
300	4.04	6.46	5.10	6.46	6.46	8.27	8.27	10.40	10.34	19.83	19.64	37.34

User Controls

OPERATION

The projector has multilingual On-Screen Display (OSD) menus that allow you to make image adjustments and change a variety of settings.

- Most of the projector controls are accessed from within the projector menu system. There are several groups of related functions, with each group selectable from the Main menu as shown below. Press the MENU button on the remote control or on the built-in keypad on the rear of the projector to display the main menu.
- Use the arrow keys to navigate within the menu and adjust a setting up or down.
- Press ENTER to select a highlighted menu item or use it to change or accept a value.
- Select the next item that you want to adjust in the menu and adjust it as described above.
- Press EXIT to return to the previous menu or exit menus if at top level.

PICTURE	
PICTURE	Display Mode Presentation
	Brightness 50
OUTPUT	Contrast 50
	Sharpness 2
SETUP	Color 50
	Tint 50
	Phase 50
	Frequency 50
OPTION	Horz Position 50
	Vert Position 50

NOTE:

- ❖ If the text is gray color, user is unable to enter the menu when the projector does not detect any input source.
- ❖ If the text is white color, user is able to select the menu when the projector does not detect any input source.

OSD Tree

Level 1	Level 2	Level 3	Level 4	Level 5	Default
PICTURE	Display Mode	Presentation			By source set
		Video			
		Bright			
		DICOM SIM			
		Blending			
		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	On/Off		
		3D Invert			
	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
		Blue Part of White	0 - 1000		1000
		Reset to Default	Yes/No		
	Advanced	White Peaking	0 - 100		By source set
		Gamma	Video		By source set
			Film		
			Bright		
			CRT		
			DICOM		
			Gamma 2.2		
		Color Temperature	Warmest		By source set
			Warm		
			Cool		
			Bright		

Level 1	Level 2	Level 3	Level 4	Level 5	Default
PICTURE	Advanced	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
		Film Mode	Off		
			On		
		Extreme Black	Off		On
			On		
OUTPUT	Aspect Ratio	Auto			Auto
		4:3			
		16:10			
		Native			
	Overscan	Off			By source set
		On			
	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	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
			HDMI		
			Component		
			HDBaseT Port		
			DVI-D		
		Sub Source	VGA		
			HDMI		
			Component		
			HDBaseT Port		
			DVI-D		
		Swap			
		Size	Small		Large
			Medium		
			Large		

Level 1	Level 2	Level 3	Level 4	Level 5	Default
OUTPUT	PIP/PBP	Layout	PBP, Main Left		
			PBP, Main Top		
			PBP, Main Right		
			PBP, Main Bottom		
			PIP-Bottom Right		
			PIP-Bottom Left		
			PIP-Top Left		
			PIP-Top Right		
SETUP	Language	English			English
		French			
		Spanish			
		German			
		Italian			
		Russian			
		Chinese Simplified			
		Japanese			
		Korean			
	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		
			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			
	Communications	LAN	DHCP		by set
			IP Address		by set
			Subnet Mask		by set
			Default Gateway		by set
			MAC Address		
			Apply		by set

Level 1	Level 2	Level 3	Level 4	Level 5	Default
SETUP	Communications	Network	Projector Name		by set
			Restart Network		
			Network Factory Reset		
		Serial Port Baud Rate	9600		19200
			14400		
			19200		
			38400		
			57600		
			115200		
		Serial Port Path	RS232		RS232
			HDBaseT Port		
		Projector Address	0 - 99		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			

Level 1	Level 2	Level 3	Level 4	Level 5	Default
OPTION	Power Settings	Standby Power Mode	0.5W mode		0.5W 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
		Total Projector Hours			
	Light Sensor	Light Sensor Calibration			
		Calibrated?	(Display Yes/No)		
	Information	Native Resolution			
		Firmware			
		Main Source			
		- Resolution			
		- Signal Format			
		- Pixel Clock			
		- Horz Refresh			
		- Vert Refresh			
		Sub Source			
		- Resolution			
		- Signal Format			
		- Pixel Clock			
		- Horz Refresh			
		- Vert Refresh			
		Light Source Mode			
		Total Projector Hours			

Level 1	Level 2	Level 3	Level 4	Level 5	Default
OPTION	Information	Standby Power Mode			
		IP Address			
		DHCP			
		System Temperature			
	Factory Reset	Yes/No (Dialog box)			
	Service				

Picture Menu

PICTURE	
PICTURE	Display Mode Presentation
	Brightness 50
OUTPUT	Contrast 50
	Sharpness 2
SETUP	Color 50
	Tint 50
	Phase 50
OPTION	Frequency 50
	Horz Position 50
	Vert Position 50

PICTURE (1/2)

PICTURE	
PICTURE	Auto Image
	Color Matching
OUTPUT	Advanced
SETUP	
OPTION	

PICTURE (2/2)

Display Mode

Optimize the projector for displaying images under certain conditions, such as Presentation, Video, Bright, DICOM SIM, Blending, 2D high speed, 3D, and user-definable preset. It will affect Gamma, Sharpness, White Peaking, Overscan, Brightness, Contrast, Color, Tint, Red Gain, Green Gain, Blue Gain, Red Offset, Green Offset and Blue Offset.

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

Select the 3D relating settings.

- 3D Enable:
 - Off: Disable 3D function.
 - On: Enable 3D function, Supports frame sequential 3D at 120Hz.
- 3D Invert: When 3D synchronous error, user can toggle the item to correct 3D synchronous.

NOTE:

- ❖ 3D supported format timings: 1280x720@120Hz, 1024x768@120Hz frame sequential.
- ❖ When input timing is 120 Hz frame sequential, the keystone and color temperature function will be disable temporary.

Color Matching

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).

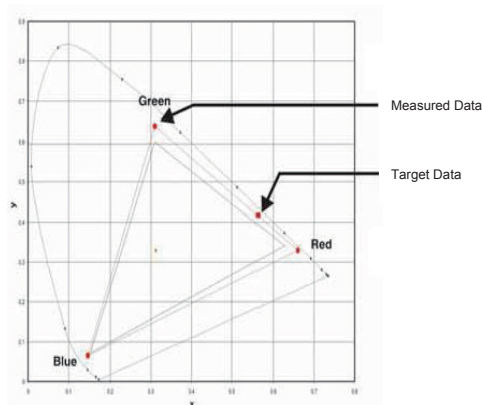
The x/y coordinates for each color define its location on the standard CIE chromaticity graph. Changing either or both of these numbers will change the hue of the color, and modify the range of possible colors. For example, changing the x/y coordinates for red may move the color closer to orange or closer 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.

If the Auto Test Pattern is enabled, the projector will automatically project a solid color screen when user selects the desired color in Color Matching setting.

For example:

- When “Red Part of Red” is highlighted, the projector is automatically projected the red screen.
- When “Red Part of White” is highlighted, the projector is automatically projected the white screen.
- 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

- White Peaking: (Video source only) Increase the brightness of whites that are near 100%.
- Gamma: Select the appropriate gamma from Video, Film, Bright, CRT, DICOM, and Gamma 2.2.
- 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: Apply the Color enhancement process.

Film Mode

- Control film mode detection and determine whether the original source of the input video was film or video.
 - Off: Films are not detected.
 - On: Films are detected automatically.

NOTE:

❖ *This function is available for interlaced video signals.*

Extreme Black:

- Contrast can be increased by a dark content.
 - Off: Disable Extreme Black.
 - On: The projector will automatically improvement contrast.

Output Menu

PICTURE	OUTPUT	
	Aspect Ratio	Auto
OUTPUT	Overscan	Off
	H Digital Zoom	100
	V Digital Zoom	100
	H Digital Shift	50
SETUP	V Digital Shift	50
	Image Warping	
OPTION	PIP/PBP	

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.

- Auto: Display with the detected size.
- 4:3: Retain 4:3 aspect ratio.
- 16:10: Retain 16:10 aspect ratio.
- Native: Display in its native resolution.

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

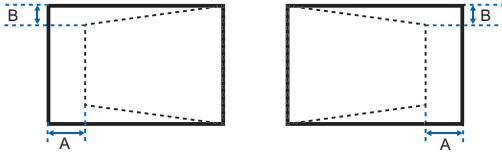
Move the display area horizontally if its size has been changed by the Digital Zoom setting.

V Digital Shift

Move the display area vertically if its size has been changed by the Digital Zoom setting.

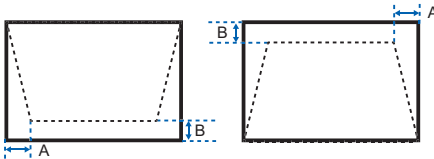
Image Warping

- 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.



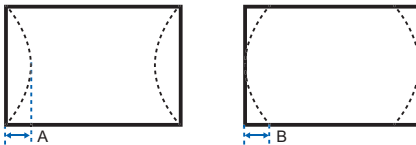
Ind.	WXGA	WUXGA
A	12.3%	7.1%
B	7.7%	5.2%

- 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.



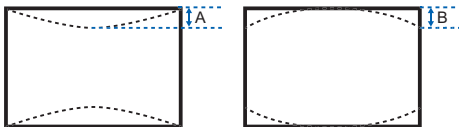
Ind.	WXGA	WUXGA
A	5.4%	3.3%
B	10%	5.4%

- H Pincushion: Adjust the pincushion horizontally and make a more square image.



Ind.	WXGA	WUXGA
A	16.0%	8.0%
B	16.0%	7.9%

- V Pincushion: Adjust the pincushion vertically and make a more square image.



Ind.	WXGA	WUXGA
A	14.7%	11.4%
B	14.7%	11.4%

PIP/PBP

- 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.

NOTE:

- ❖ PIP/PBP layout and size table as described below.
- ❖ P : indicates primary source region (lighter color).
- ❖ * : Both source regions are the same size. Main and sub picture are the same size when the PBP size is large.

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

Setup Menu

SETUP	
PICTURE	Language English
OUTPUT	Ceiling Mount Auto
	Rear Projection Off
	Lens Function
SETUP	Menu Preferences
	Keypad LED Settings On
	Pin
	Communications
OPTION	

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

- 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.
 - No: Lens shift can be used by user.
 - Yes: Lens shift will be locked.

Menu Preferences

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

Keypad LED Settings

- Off: Turn off the backlight of the keypad.
- On: Turn on the backlight of the keypad.

Pin

- 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: This item allows you to change the PIN.

Communications

- LAN:
 - 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.
- Network:
 - 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, 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 Port.
- 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

PICTURE	OPTION	
	Auto Source	On
	High Altitude	Off
	Test Pattern	Off
OUTPUT	Background Color	Logo
	Hot-Key settings	Blank Screen
SETUP	Power Settings	
	Light Source Settings	
OPTION	Light Sensor	
	Information	
	Factory Reset	

OPTION (1/2)

PICTURE	OPTION	
	Service	▲
OUTPUT		
SETUP		
OPTION		

OPTION (2/2)

Auto Source

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

High Altitude

When “On” is selected, the fans will spin faster. Set High Altitude mode to “On” when the projector is used over 5000ft (1500m) elevation.

Test Pattern

Choose the desired internal test pattern to display, or select Off to turn off a 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 ENTER. 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

- 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

- 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 laser diode power to the minimum setting.
- Constant Power Settings: Set the value of the laser diode power (in Watts).
- Constant Luminance Settings: Set the value for the Constant Luminance Settings to maintain constant brightness. The light sensor will monitor the light level and will apply more power as the laser brightness decays naturally over time. When the laser setting reaches maximum power of 405W, it will remain at this setting. Note that the light sensor needs to be calibrated for Constant Luminance mode to work properly.
- Total Projector Hours: Display current total hours the projector used.

Light Sensor

- Light Sensor Calibration: Calibrate the Light Sensor for use with the Constant Luminance 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.
- Constant Power Settings
 - Yes: Light Sensor has been calibrated.
 - No: Light Sensor has not been calibrated.

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

Service only.

Appendices

Troubleshooting

If you experience a problem with your projector, please refer to the following information. If a problem persists, please contact your local reseller or service center.

Image Problems

No image appears on-screen

- ▶ Ensure all the cables and power connections are correctly and securely connected as described in the “Installation” section.
- ▶ Ensure the pins of connectors are not crooked or broken.
- ▶ Make sure you have removed the lens cover and the projector is switched on.

Partial, scrolling or incorrectly displayed image

- ▶ Press "AUTO" on the control panel or the remote control.
- ▶ If you are using a PC:
 - For Windows Vista, Windows 7:
 1. Open the “My Computer” icon, the “Control Panel” folder, and then double click on the “Display” icon.
 2. Select the “Settings” tab.
 3. Verify that your display resolution setting is lower than or equal to WUXGA(1920 x 1200).
 4. Click on the “Advanced Properties”.

If the projector is still not projecting the whole image, you will also need to change the monitor display you are using. Refer to the following steps.

1. Verify the resolution setting is lower than or equal to WUXGA(1920 x 1200).
2. Select the “Change” button under the “Monitor” tab.
3. Click on “Show all devices”. Next, select “Standard monitor types” under the SP box; choose the resolution mode you need under the “Models” box.
4. Verify that the resolution setting of the monitor display is lower than or equal to WUXGA(1920 x 1200).

- ▶ If you are using a Notebook:
 - First, follow the steps above to adjust resolution of the computer.
 - Press the toggle output settings. example: [Fn]+[F4]

Notebook Brand	Function Keys
Acer	[Fn]+[F5]
Asus	[Fn]+[F8]
Dell	[Fn]+[F8]
Gateway	[Fn]+[F4]
IBM/Lenovo	[Fn]+[F7]
HP/Compaq	[Fn]+[F4]
NEC	[Fn]+[F3]
Toshiba	[Fn]+[F5]
Mac Apple	System Preference -> Display -> Arrangement -> Mirror display

- ▶ If you experience difficulty changing resolutions or your monitor freezes, restart all equipment including the projector.

? The screen of the Notebook or PowerBook computer is not displaying your presentation

Some Notebook PCs may deactivate their own screens when a second display device is in use. Each has a different way to be reactivated. Refer to your computer's documentation for detailed information.

? Image is unstable or flickering

- ▶ Adjust the "Phase" to correct it.
- ▶ Change the monitor color setting from your computer.

? Image has vertical flickering bar

- ▶ Use "Frequency" to make an adjustment.
- ▶ Check and reconfigure the display mode of your graphic card to make it compatible with the projector.

? Image is out of focus

- ▶ Make sure the lens cover is removed.
- ▶ Adjust the Focus function for the projector lens.
- ▶ Make sure the projection screen is between the required distance.

? The image is stretched when displaying 16:9 DVD title

- ▶ When you play anamorphic DVD or 16:9 DVD, the projector will show the best image when the projector display mode is set to Auto in the OSD.
- ▶ If you play 4:3 format DVD titles, please change the format to 4:3 in the projector OSD.
- ▶ If the image is still stretched, you will also need to adjust the aspect ratio by referring to the following:
- ▶ Please setup the display format as 16:9 (wide) aspect ratio type on your DVD player.

? Image is too small or too large

- ▶ Move the projector closer to or further from the screen.
- ▶ Press "Menu" on the control panel. Go to "OUTPUT" --> "Aspect" and try the different settings.

? Image has slanted sides:

- ▶ If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.
- ▶ Press the "Keystone" button on the remote control, until the sides are vertical.

? Image is reversed

- ▶ Adjust the "SETUP" --> "Rear Projection" to correct it.

Projector Problems



The projector stops responding to all controls

- ▶ If possible, turn off the projector, then unplug the power cord and wait at least 60 seconds before reconnecting power.
- ▶ Check that “Keypad Lock” is not activated by trying to control the projector with the remote control.



If the remote control does not work

- ▶ Check if the operating angle of the remote control is within $\pm 30^\circ$ both horizontally and vertically on one of the IR receivers on the projector.
- ▶ Make sure there is no obstruction between the remote control and the projector. Move to within 12 m ($\pm 0^\circ$) of the projector.
- ▶ Make sure the batteries are inserted correctly.
- ▶ Replace batteries if they are exhausted.
- ▶ Ensure that you have set your remote to the correct IR code setting.




When making a direct connection from your computer to the projector

- ▶ If you have network connection problem from your computer to the projector, please refer to the computer setting as below or contact with web administrator.

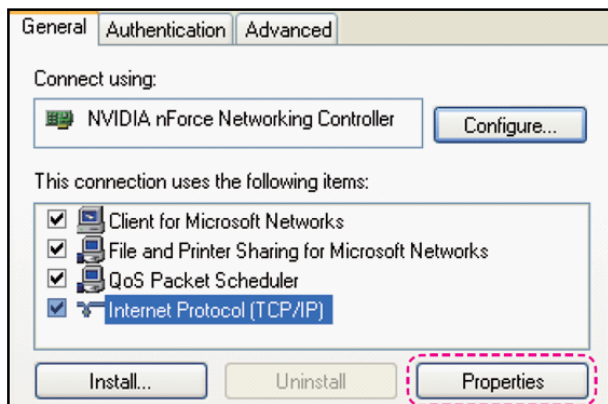
Step 1: Find an IP Address (192.168.0.100) from LAN function of projector.



Step 2: Select “Apply” and push the “Enter” button. Once the setting is saved, exit the OSD by pushing “Menu” button.

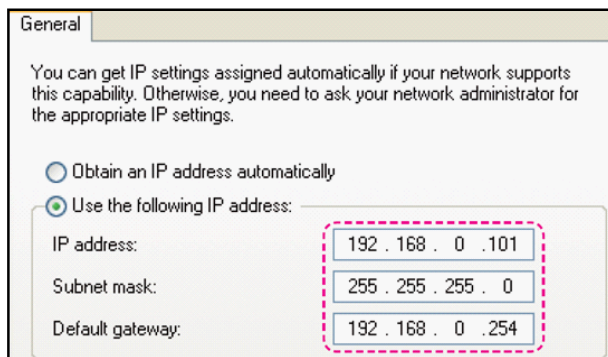
Step 3: To open Network Connections, click **Start**, click **Control Panel**, click **Network and Internet Connections**, and then click **Network Connections**. Click the connection you want to configure, and then, under **Network Tasks** , click **Change settings of this connection**.

Step 4: On the **General** tab, under **This connection use the following items**, click Internet Protocol(TCP/IP), and then click **“Properties”**.

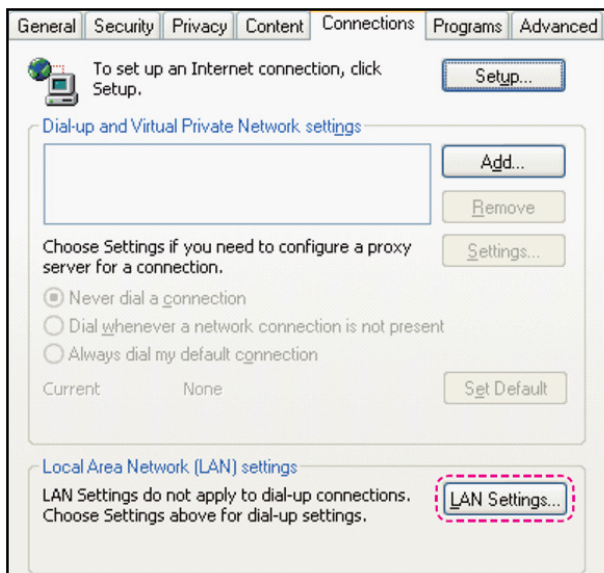


Step 5: Click **Use the following IP address**, and type in as below:

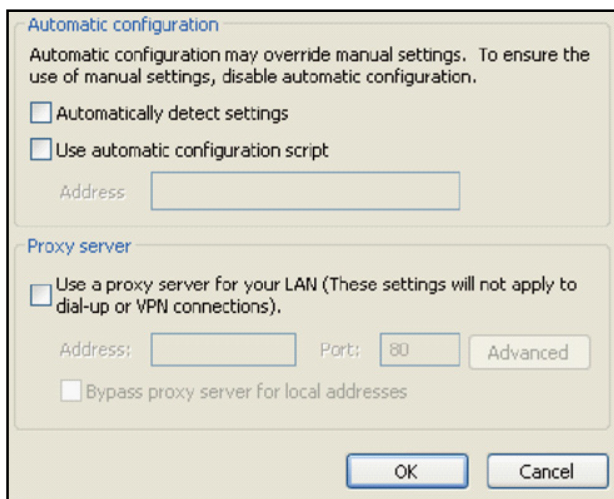
- 1) IP address: 192.168.0.101
- 2) Subnet mask: 255.255.255.0
- 3) Default gateway: 192.168.0.254



Step 6: To open Internet Options, click IE web browser, click Internet Options, click the **Connections** tab and click "**LAN Setting...**".



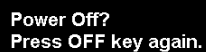
Step 7: All items in the **Local Area Network (LAN) Setting** window must be unchecked. Then click "OK" button twice.



Step 8: Connect a cat5 Ethernet cross-over cable between the projector and the computer.

On Screen Messages

- Power off confirm



Power Off?
Press OFF key again.

Compatibility Modes

Inputs

Signal Type	Resolution	Frequency H. (KHz)	Frame rate (HZ)	VGA	Component	HDMI	DVI	HDBaseT
PC	640x480	31.469	60	V		V	V	V
	640x480	37.861	72	V		V	V	V
	640x480	37.500	75	V		V	V	V
	640x480	43.269	85	V		V	V	V
	640x480	35.000	66.6			V	V	V
	720x400	31.469	70	V		V	V	V
	800x600	37.9	60	V		V	V	V
	800x600	48.1	72	V		V	V	V
	800x600	46.9	75	V		V	V	V
	800x600	53.7	85	V		V	V	V
	832x624		75	V		V	V	V
	848x480	24.621	50			V	V	V
	848x480	29.829	60			V	V	V
	848x480	37.683	75			V	V	V
	848x480	42.968	85			V	V	V
	1024x768	48.4	60	V		V	V	V
	1024x768	60.022	75	V		V	V	V
	1024x768	68.7	85	V		V	V	V
	1152x720	37.024	50			V	V	V
	1152x720	44.858	60			V	V	V
	1152x720	56.414	75			V	V	V
	1152x720	64.453	85			V	V	V
	1152x864	53.783	60	V		V	V	V
	1152x864	63.851	70	V		V	V	V
	1152x864	67.500	75	V		V	V	V
	1152x864	77.093	85	V		V	V	V
	1152x870	68.681	75			V	V	V
	1280x720	37.071	50			V	V	V
	1280x720	44.771	60	V		V	V	V
	1280x720	56.456	75	V		V	V	V
	1280x720	64.398	85	V		V	V	V
	1280x768	47.776	60	V		V	V	V
	1280x768	60.288	75	V		V	V	V
	1280x768	68.633	85	V		V	V	V
	1280x800	41.262	50	V		V	V	V
	1280x800	49.702	60	V		V	V	V
	1280x800	62.795	75	V		V	V	V
	1280x800	71.554	85	V		V	V	V
	1280x960	49.404	50			V	V	V
	1280x960	59.699	60	V		V	V	V
	1280x960	75.231	75	V		V	V	V
	1280x960	85.792	85	V		V	V	V
	1280x1024	52.678	50			V	V	V

Signal Type	Resolution	Frequency H. (KHz)	Frame rate (HZ)	VGA	Component	HDMI	DVI	HDBaseT
PC	1280x1024	64	60	V		V	V	V
	1280x1024	80	75	V		V	V	V
	1280x1024	91.1	85	V		V	V	V
	1360x768	39.564	50			V	V	V
	1360x768	47.719	60			V	V	V
	1360x768	60.287	75			V		V
	1360x768	68.667	85			V		V
	1366x768	48	60	V		V	V	V
	1400x1050	54.112	50			V	V	V
	1400x1050	65.316	60			V	V	V
	1400x1050	82.278	75	V		V	V	V
	1440x900	55.935	60	V		V	V	V
	1440x900	70.635	75			V	V	V
	1600x900	60	60			V	V	V
	1600x1200	75	60	V		V	V	V
	1680x1050	65.29	60	V		V	V	V
	1920X1080	74.17	50			V	V	V
	1920X1080	66.586	60	V		V	V	V
	1920X1200RB	74.038	60	V		V	V	V
	1920X1200RB	61.816	50	V		V	V	V
SDTV	480i	15.734	60	V	V	V	V	V
	576i	15.625	50	V	V	V	V	V
EDTV	480p	31.469	60	V	V	V	V	V
	576p	31.25	50	V	V	V	V	V
HDTV	1080i	28.125	25	V	V	V	V	V
	1080i	33.716	29	V	V	V	V	V
	1080i	33.75	30	V	V	V	V	V
	720p	37.5	50	V	V	V	V	V
	720p	44.955	59	V	V	V	V	V
	720p	45	60	V	V	V	V	V
	1080p	26.973	23	V	V	V	V	V
	1080p	27	24	V	V	V	V	V
	1080p	28.125	25	V	V	V	V	V
	1080p	33.716	29	V	V	V	V	V
	1080p	33.75	30	V	V	V	V	V
	1080p	56.25	50	V	V	V	V	V
	1080p	67.433	59	V	V	V	V	V
	1080p	67.5	60	V	V	V	V	V

NOTE:

❖ "RB" means "reduced blanking".

3D Timing Table(Image downsize to 720P)

Input Signal	Resolution	3D Format
XGA	1024 x 768 @120 Hz	Frame sequential
720p	1280 x 720 @120 Hz	Frame sequential

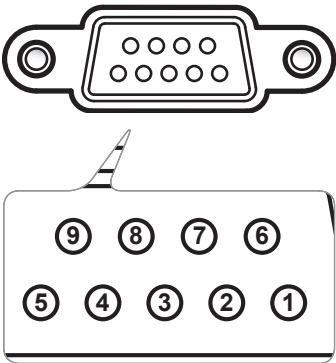
PIP/PBP Compatibility

PIP/PBP Matrix	HDMI	VGA	Component	HDBaseT	DVI-D
HDMI	-	-	-	-	V
VGA	-	-	-	-	V
Component	-	-	-	-	V
HDBaseT	-	-	-	-	V
DVI-D	V	V	V	V	-

V : PIP/PBP combinations are enabled

- : PIP/PBP combinations are disabled

RS232 Pin Assignments



Pin No.	PC Side	Projector Side (RS232 Terminal)
1	N/A	N/A
2	RXD	RXD
3	TXD	TXD
4	N/A	N/A
5	GND	GND
6	N/A	N/A
7	N/A	N/A
8	N/A	N/A
9	N/A	N/A

Setup Information

RS-232 protocol	
Baud Rate	9600 bps (default)
Data Length	8 bit
Parity Check	None
Stop Bit	1 bit
Flow Control	None



- RS232 shell is grounded.
- RS232 interface need use swap pin for RS232 communication.

Specifications

Technology	WXL6280/LW6000 series: "TI" 0.65" WXGA DMD WUL6280/LU6000 series: "TI" 0.67" WUXGA DMD
ASIC	DDP4421/DDP4422 + PW392C
Native Resolution	WXGA (1280x800) / WUXGA (1920x1200)
Support Resolution	Up to WUXGA@60Hz (Reduced Blanking) & UXGA@60Hz
Computer compatibility	IBM PC Compatible, support HDTV (1080i/p, 720p, 576i/p, 480i/p) include both PC and component inputs
Video compatibility	HDTV 720p (50/60Hz), 1080i/p (50/60Hz), 1080p (24/25/30/50/60Hz) SDTV 480i/p, 576i/p
Horizontal scan rate	15 KHz to 91.1 KHz
Vertical scan rate	24 Hz to 85 Hz
Keystone correction	V: +/- 20 degrees H: +/- 20 degrees OSD adjusting range will be +/-40 steps for H and V.
Weight	Net weight (w/o lens): 18 Kg
Dimensions (W x D x H)	484 (W) x 509 (D) x 185 (H) mm (without lens, w/o elevators) (19.06" (W) x 20.04" (D) x 7.28" (H))
Power supply	AC 100 – 240 V @ 50/60 Hz - 400W Laser Diode @ Normal operation - 240W Laser Diode @ ECO operation
Power consumption	<ul style="list-style-type: none"> • 560W+/-20%@ 110VAC in Normal brightness Mode • 340W+/-20%@ 110VAC in ECO brightness Mode • Standby mode (LAN off): < 0.5 W
Operating temperature	5 ~ 40 °C (>35°C, auto dim to 75% normal mode)
I/O connectors	<ul style="list-style-type: none"> • HDBaseT x 1 • HDMI x 1 • Computer In x 1 • Monitor Out x 1 • DVI-D x 1 • USB type A x1 • YPBPR x 1 • PC Control (D-sub 9 pin) x 1 • Wired in/out (3.5mm phone jack) x1 • LAN (RJ45) x 1 • Service x1

Standard package contents

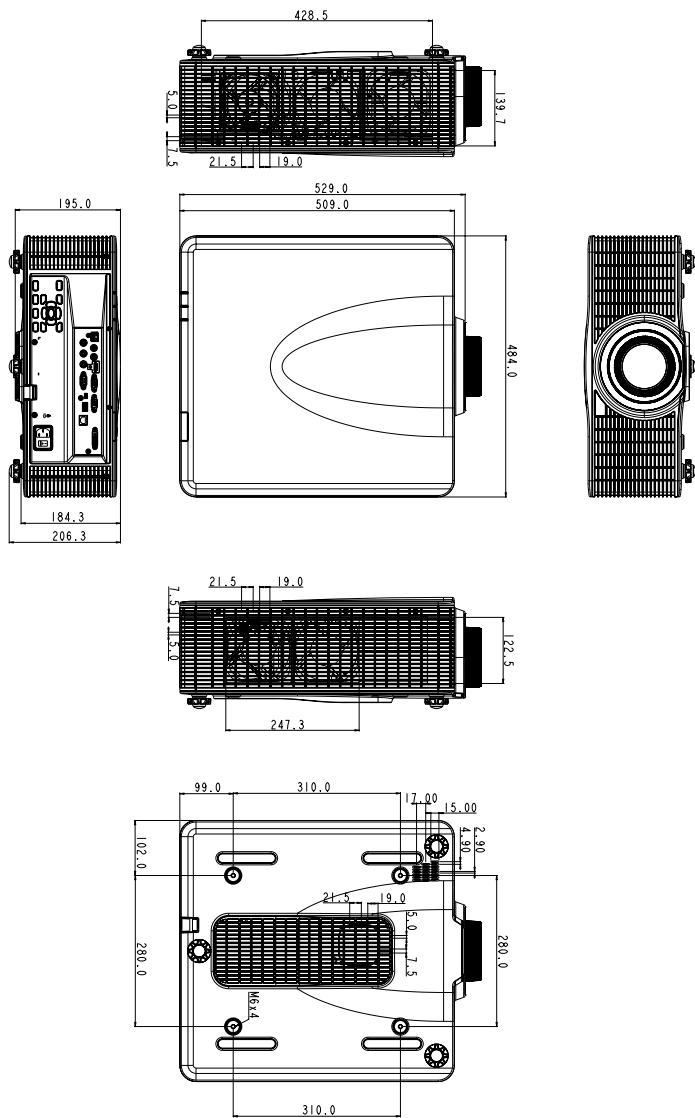
- AC power cord x 1
- VGA cable x 1
- Remote control (with batteries) x 1
- User's Manual CD x 1
- Lens mount cover x 1
- Read this first (Paper) x 1
- Warranty Card x 1



- *Design and specifications are subject to change without prior notice.*

Cabinet dimension

Unit: mm



Screw type: M6 x 4
Maximum screw length: 10mm

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