

**vivitek**<sup>®</sup>  
Vivid Color, Vivid Life

**D5380U**  
**D5010**  
**D5110W**  
**D5190HD**  
**Series**

**User Manual**

用戶手冊

用戶手冊

**Manual del usuario**

**Manuel de l'utilisateur**

**Benutzerhandbuch**

사용자 설명서

Руководство пользователя

**Gebruikershandleiding**

Instrukcja obsługi

Uživatelská příručka

Εγχειρίδιο χρήσης

Kullanım Kılavuzu

**Manuale d'uso**

**Handbok**

Brugervejledning

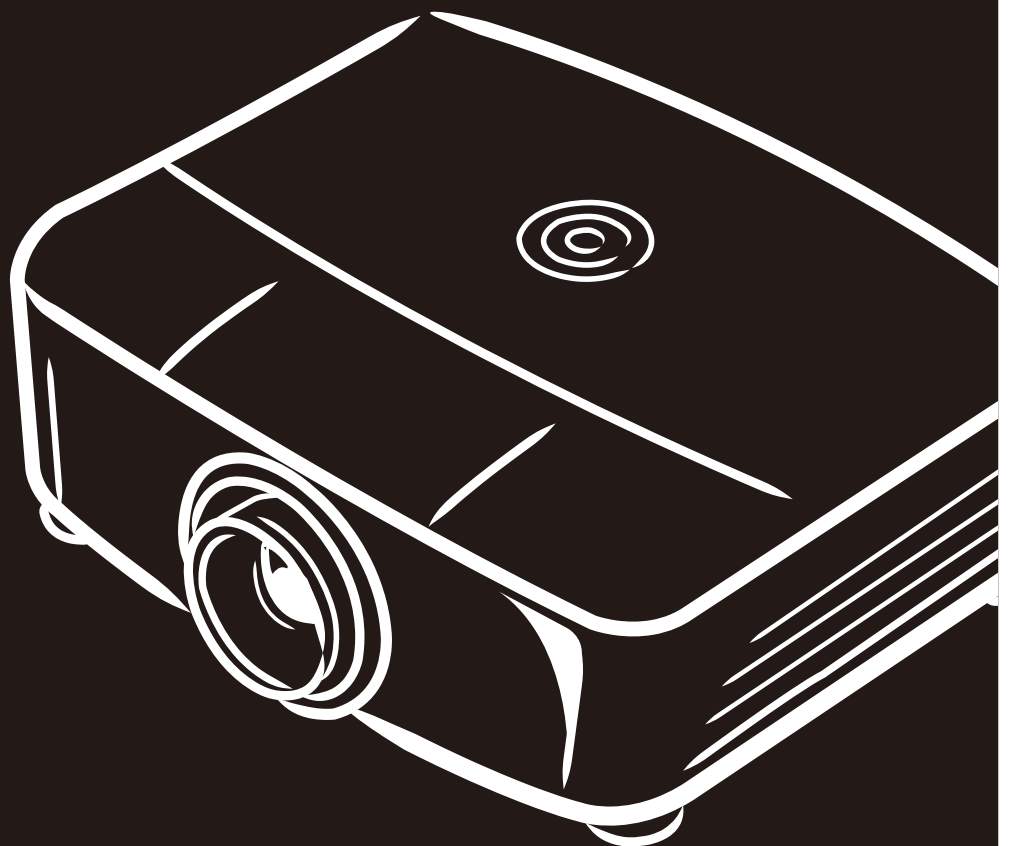
Brukerveiledning

**Kyttöhje**

Felhasználói kézikönyv

مدخست سمل لیلد

Manual do Usuário



PICTURE BY  
**DLP**<sup>®</sup>  
TEXAS INSTRUMENTS

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## *DLP Projector—User's Manual*

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### **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:

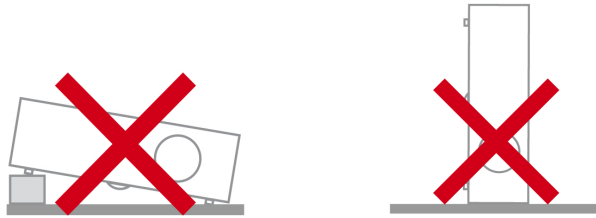
“Push the **Menu** button on the remote control to open the **Main** menu.”

### **General Safety Information**

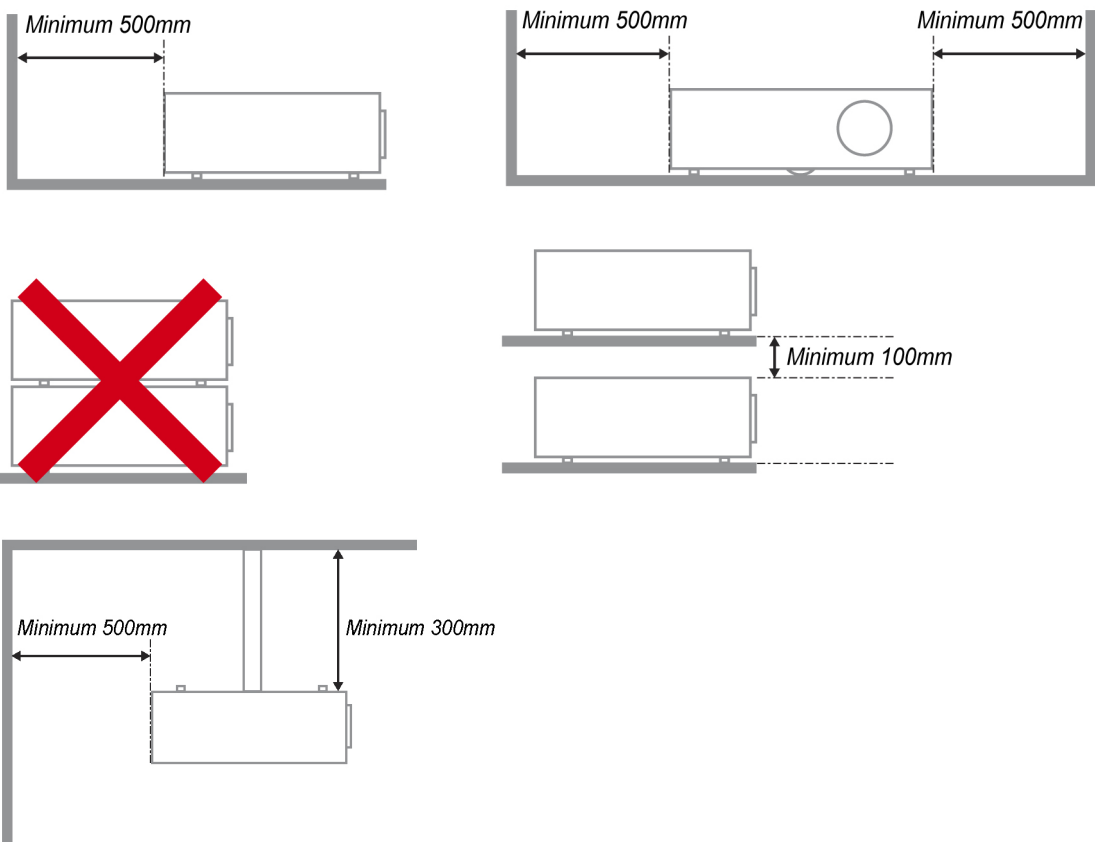
- Do not open the unit case. Aside from the projection lamp, there are no user-serviceable parts in the unit. For servicing, contact qualified service personnel.
- Follow all warnings and cautions in this manual and on the unit case.
- The projection lamp is extremely bright by design. To avoid damage 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.

## Projector Installation Notice

- Place the projector in a horizontal position  
The tilt angle of the projector please see *Tilt Up/Down caution* on page 52.



- Allow at least 50 cm clearance around the exhaust vent.



- Ensure that the intake vents do not recycle hot air from the exhaust vent.
- When operating the projector in an enclosed space, ensure that the surrounding air temperature within the enclosure does not exceed operation temperature while the projector is running, and the air intake and exhaust vents are unobstructed.
- All enclosures should pass a certified thermal evaluation to ensure that the projector does not recycle exhaust air, as this may cause the device to shutdown even if the enclosure temperature is within the acceptable operation temperature range.

## ***DLP Projector—User's Manual***

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### **Verify Installation Location**

- To supply power, the 3-blade (with earthing lead) socket should be used to ensure proper grounding and equalized ground potential for all of the equipment in the Projector System.
- The power code provided with the Projector should be used. In case of any missing item, other qualified 3-blade (with earthing lead) power cord can be used as substitution; however, do not use 2-blade power cord.
- Verify if the voltage is stable, grounded properly and there is no electricity leakage.
- Measure total power consumption which should not higher the safety capacity and avoid safety issue and short circuit.
- Turn on Altitude Mode when located in high altitude areas
- When installation the bracket, make sure the weight limit is not exceed and firmly secured.
- Avoid installing near air conditioner duct or subwoofer.
- Avoid installing at high temperature, insufficient cooling and heavy dust locations.
- Keep your product away from fluorescent lamps to avoid malfunction caused by IR interference
- The VGA IN connector should be connected to the VGA IN port. Note that it should be inserted tightly, with the screws on both sides securely fastened to ensure proper connection of the signal wire for achieving optimal display effect.
- The AUDIO IN connector should be connected to the AUDIO IN port and CANNOT be connected to AUDIO OUT or other ports like BNC, RCA; otherwise, it will lead to mute output and even DAMAGE the port.
- Install the projector above 200cm to avoid damage.
- The power cord and signal cable should be connected before power on the projector. During the projector starting and operating process, DO NOT insert or remove the signal cable or the power cord to avoid damaging the projector.

### **Cooling notes**

#### **Air outlet**

- Make sure the air outlet is 50cm clear of any obstruction to ensure proper cooling.
- Air outlet location should not be in front of the lens of other projector to avoid causing illusions.
- Keep the outlet at least 100cm away from the inlets of other projectors
- The projector generates a massive amount of heat during use. The internal fan dissipates the heat of the projector when shutting down, and such process may continue for a certain period. After the project enters STANDBY MODE status, press the AC power button to turn off the projector and remove the power cord. DO NOT remove the power cord during the shutdown process, as it may cause damage to the projector. In the meantime, the delayed heat radiating will also affect the service life of the projector. The shutdown process may vary depending on the model used. Whatever the case may be, be sure to disconnect the power cord till after the projector enters the STANDBY status.

#### **Air inlet**

- Make sure there is no object blocking air input within 30 cm.
- Keep the inlet away from other heat sources
- Avoided heavy dust area

## Power Safety

- Only use the supplied power cord.
- Do not place anything on the power cord. Place the power cord where it will not be in the way of foot traffic.
- Remove the batteries from the remote control when storing or not in use for a prolonged period.

## Replacing the Lamp

Replacing the lamp can be hazardous if done incorrectly. See *Replacing the Projection Lamp* on page 54 for clear and safe instructions for this procedure. Before replacing the lamp:

- Unplug the power cord.
- Allow the lamp to cool for about one hour.

### **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.*

## Cleaning the Projector

- Unplug the power cord before cleaning. See *Cleaning the Projector* on page 60.
- Allow the lamp to cool for about one hour.

## Regulatory Warnings

Before installing and using the projector, read the regulatory notices in the *Regulatory Compliance* on page 80.

## Important Recycle Instructions:



Lamp(s) inside this product contain mercury. This product may contain other electronic waste that can be hazardous if not disposed of properly. Recycle or dispose in accordance with local, state, or federal Laws. For more information, contact the Electronic Industries Alliance at [WWW.EIAE.ORG](http://WWW.EIAE.ORG). For lamp specific disposal information check [WWW.LAMPRECYCLE.ORG](http://WWW.LAMPRECYCLE.ORG).

## Symbol Explanations



DISPOSAL: Do not use household or municipal waste collection services for disposal of electrical and electronic equipment. EU countries require the use of separate recycling collection services.

## *DLP Projector—User's Manual*

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### **Main Features**

- *Lightweight unit, easy to pack away and transport.*
- *Compatible with all major video standards including NTSC, PAL, and SECAM.*
- *A high brightness rating allows for presentations in daylight or in lit rooms.*
- *Supports resolutions up to WUXGA at 16.7 million colors to deliver crisp, clear images.*
- *Flexible setup allows for front, rear projections.*
- *Line-of-vision projections remain square, with advanced keystone correction for angled projections.*
- *Input source automatically detected.*

### **About this Manual**

This manual is intended for end users and describes how to install and operate the DLP projector. Wherever possible, relevant information—such as an illustration and its description—has been kept on one page. This printer-friendly format is both for your convenience and to help save paper, thereby protecting the environment. It is suggested that you only print sections that are relevant to your needs.

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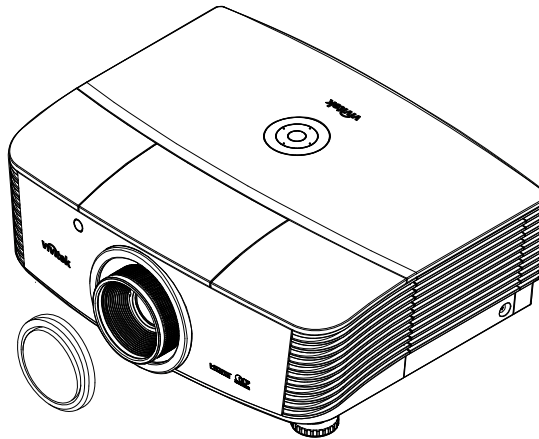
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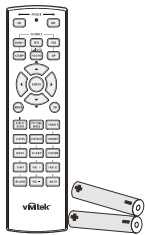
## GETTING STARTED

### Packing Checklist

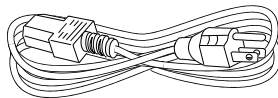
Carefully unpack the projector and check that the following items are included:



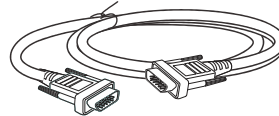
PROJECTOR WITH LENS CAP



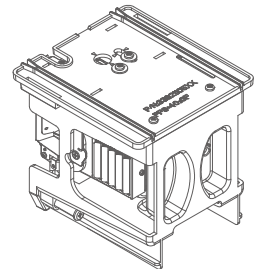
REMOTE CONTROL  
(WITH TWO AA BATTERIES)



POWER CORD



VGA CABLE (1.8M)



TILT LAMP MODULE  
(OPTIONAL)



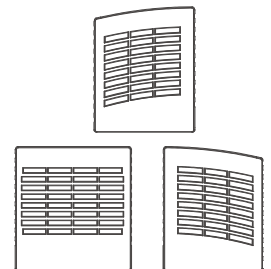
CD-ROM  
(THIS USER'S MANUAL)



WARRANTY CARD



QUICK START CARD



DUST FILTER  
(OPTIONAL)

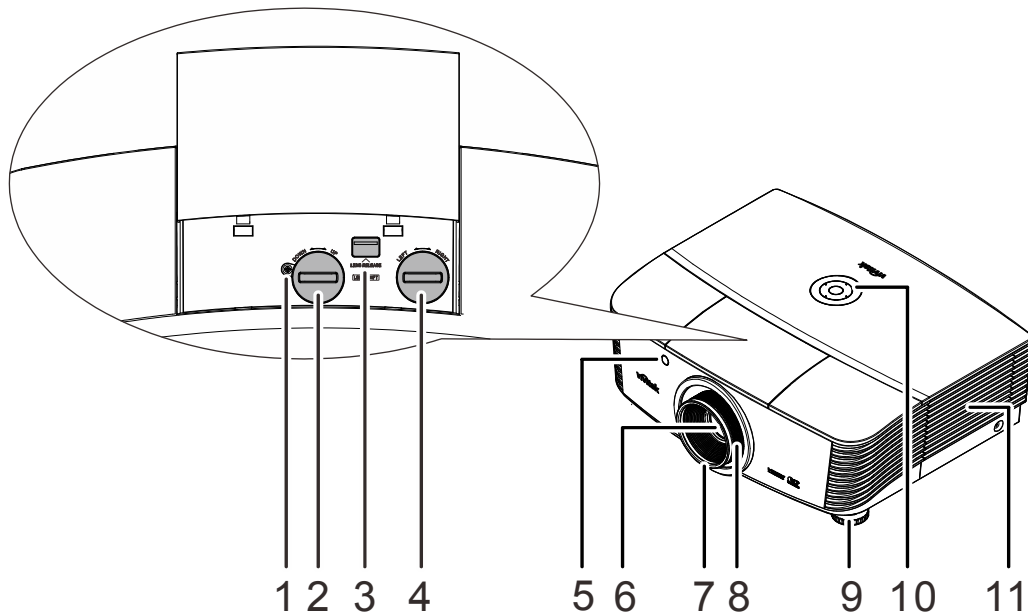
Contact your dealer immediately if any items are missing, appear damaged, or if the unit does not work. It is recommended that you keep the original packing material should you ever need to return the equipment for warranty service.

**Caution:**  
Avoid using the projector in dusty environments.

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### Views of Projector Parts

#### Front-right View



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Screw	For ensure the lens position	
2.	Vertical lens shift	Adjusts the image position vertically	<b>18</b>
3.	Lens release button	Press the release button before removing the lens	<b>11</b>
4.	Horizontal lens shift	Adjusts the image position horizontally	<b>20</b>
5.	IR receiver	Receives IR signal from remote control	<b>7</b>
6.	Lens	Projection Lens	
7.	Focus ring	Focuses the projected image	<b>22</b>
8.	Zoom ring	Enlarges the projected image	
9.	Height adjuster	Adjusts level of projector	<b>17</b>
10.	Function keys	See Top view—On-screen Display (OSD) buttons and LEDs.	<b>3</b>
11.	Lamp cover	Removes cover to replace lamp module	<b>52</b>

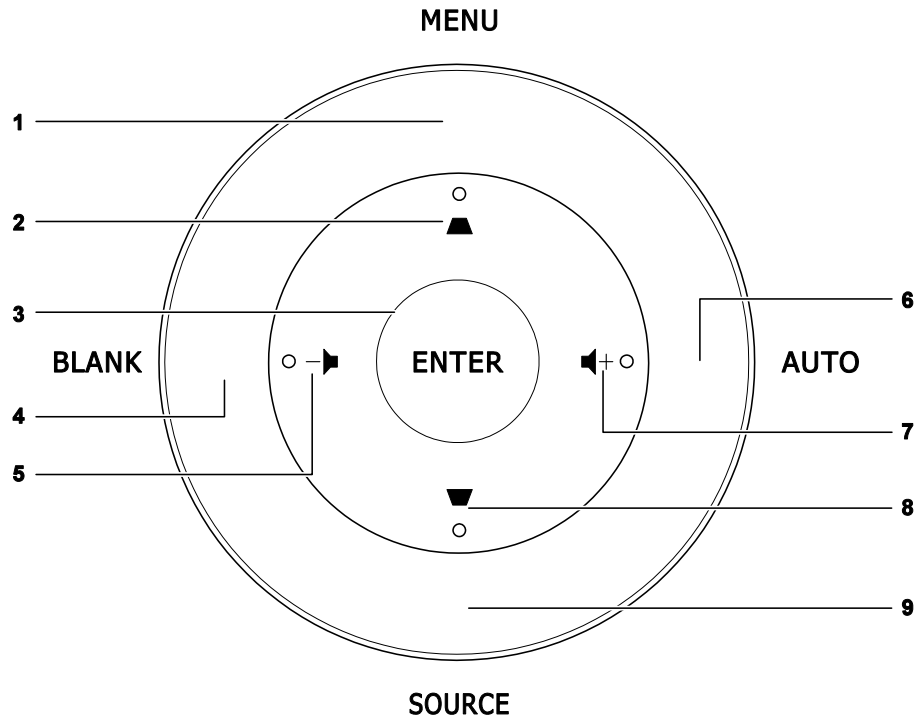
**Important:**

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

**Note:**

Suggest to loosen the screw before lens shift adjustment and tighten up after finished adjustment.

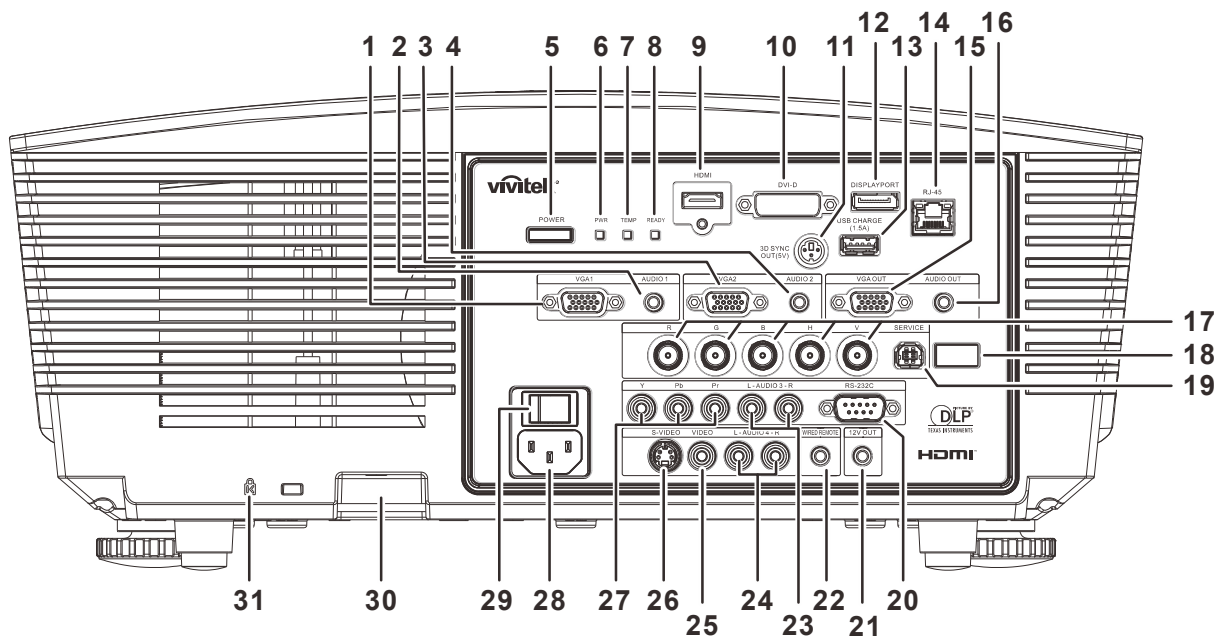
Top view—On-screen Display (OSD) buttons and LEDs



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	MENU	Opens and exits OSD menus	24
2.	▲	Navigates and changes settings in the OSD Quick Menu – For Keystone	
3.	ENTER	Enter or confirm highlighted OSD menu item	
4.	BLANK	Displays a blank screen and mutes audio	
5.	◀	Navigates and changes settings in the OSD Quick Menu – For Volume -	24
6.	AUTO	Optimizes image size, position, and resolution	
7.	▶	Navigates and changes settings in the OSD Quick Menu – For Volume +	24
8.	▼	Navigates and changes settings in the OSD Quick Menu – For Keystone	
9.	SOURCE	Enter the Source menu	

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### Rear view



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	VGA1	Connect a RGB cable from a computer or a video enabled device.	
2.	AUDIO IN 1	Connect the AUDIO cable from an input device.	
3.	VGA2	Connect a RGB cable from a computer or a video enabled device.	
4.	AUDIO IN 2	Connect the AUDIO cable from an input device. <b>Note:</b> Share with DVI & BNC audio input.	
5.	POWER	Turns the projector on or off (main power switch must be turned on first). Press to place the projector in standby mode.	13
6.	PWR LED	Red	Standby, Over Temperature
		Blue	Lamp Lit , System stable
		Flashing	Power on, Cooling, Error code (See as LED indicator table)
7.	TEMP LED	Red	Over temperature
		Flashing	Error code (See as LED indicator table)
8.	READY LED	Red	Lamp Lit , System stable, Lamp Fail
		Flashing	Error code (See as LED indicator table)
9.	HDMI	Connect the HDMI cable from a HDMI device.	
10.	DVI-D	Connect the DVI cable from a computer.	
11.	3D SYNC OUT (5V)	Connect 3D IR glasses receiver unit.	
12.	DISPLAYPORT	Connect a DISPLAYPORT cable to a DISPLAYPORT source.	
13.	USB CHARGE (1.5A)	For USB charge.	
14.	RJ-45	Connect a LAN cable from Ethernet.	

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ITEM	LABEL	DESCRIPTION	SEE PAGE:
15.	VGA OUT	Connect the RGB cable to a display. (Pass through by VGA1 only)	
16.	AUDIO OUT	Connect an AUDIO cable for audio loop through.	
17.	BNC	Connect a BNC cable from a computer.	
18.	IR receiver	Receive IR signal from remote control.	7
19.	SERVICE	For service use.	
20.	RS-232	Connects RS-232 serial port cable for remote control.	
21.	12V	When connected to the screen through a commercially available cable, the screen deploys automatically on start up of the projector. The screen retracts when the projector is powered off (see notes below).	
22.	WIRED REMOTE	Wire remote control connector (connect with wire remote connector of the Remote Control set).	
23.	AUDIO IN 3 L/R RCA (YPbPr)	Connect the audio cables from a audio device.	
24.	AUDIO IN 4 L/R RCA (Video/ S-Video)	Connect the audio cables from a audio device.	
25.	VIDEO	Connect the composite cable from a video device.	
26.	S-VIDEO	Connect the S-video cable from a video device.	
27.	YPbPr	Connect a component video enabled device.	
28.	AC IN	Connects the power cable.	13
29.	Power switch	Turns on/off the projector.	
30.	Security chain lock	Helps protect the projector from unauthorized use.	61
31.	Kensington Lock	Secures to permanent object with a Kensington® Lock system.	

**Note:**

- To use this feature, you must plug in the connector before turn on/off the projector.
- Screen controllers are supplied and supported by screen manufacturers.
- Do not use this jack for anything other than intended use.

**Note:**

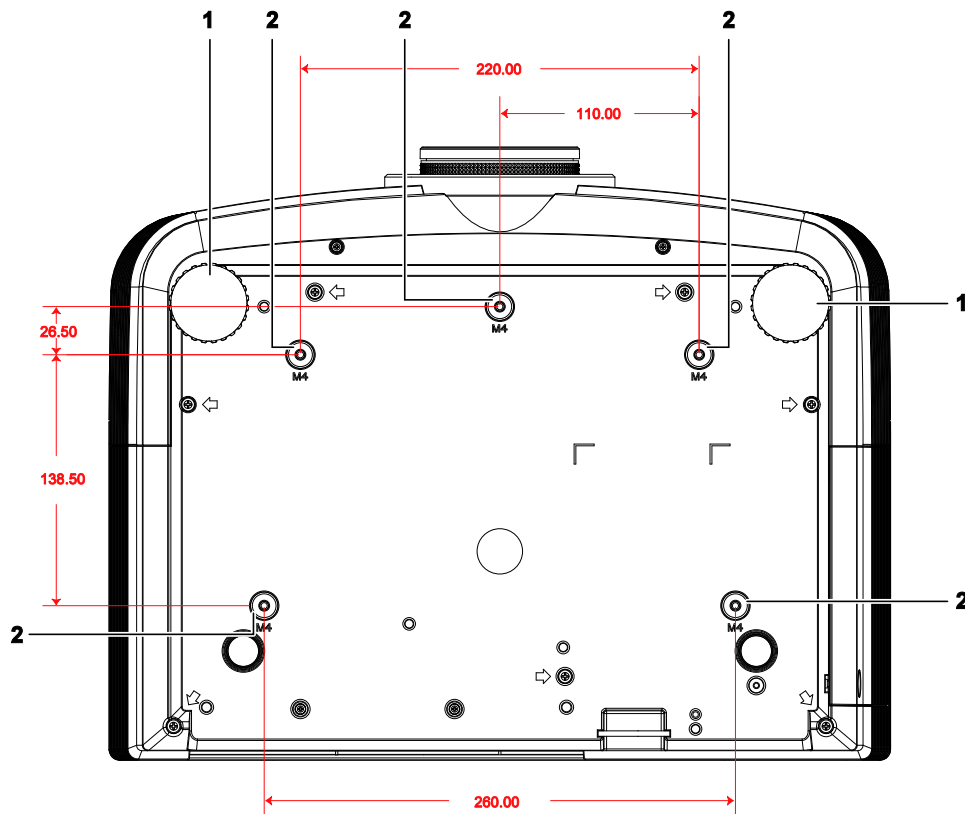
If your video equipment has both S-VIDEO and RCA jacks (composite video) connect to the S-VIDEO connector. S-VIDEO provides a better quality signal.

**Warning:**

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

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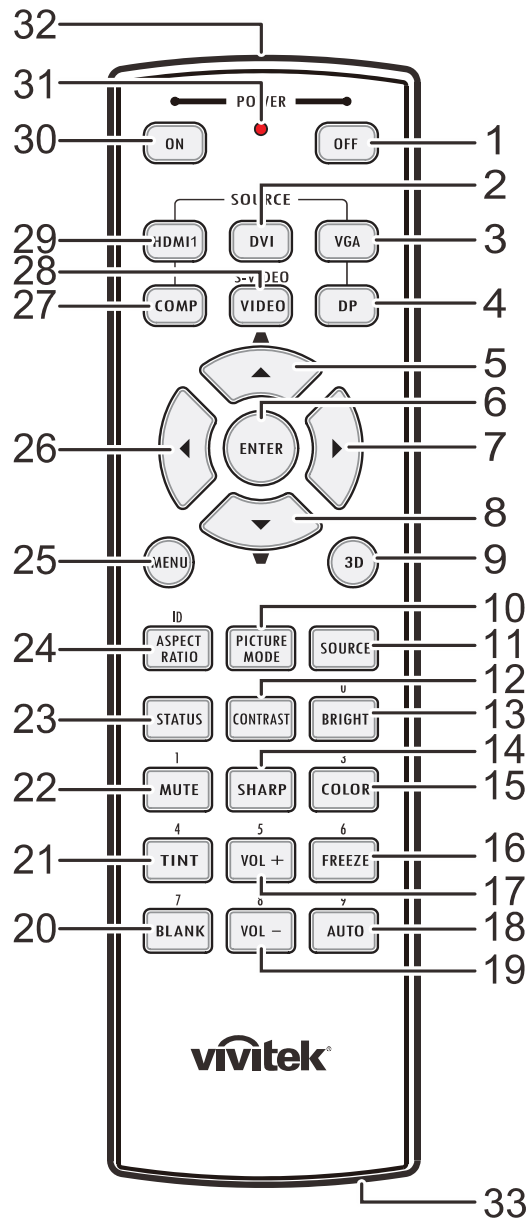
Bottom view



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Tilt adjustor	Rotate adjuster lever to adjust angle position.	<b>17</b>
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 M4 screws with a maximum screw depth of 6 mm (0.23 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 5.15 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 user's manual describes the functions based on the remote control.



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ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Power OFF	Turns the projector off	13
2.	DVI	Displays the DVI source selection	
3.	VGA	Displays the VGA source selection	
4.	DP	Displays the DisplayPort source selection	
5.	Up cursor / Keystone+	Navigates and changes settings in the OSD Quick Menu – For Keystone	24
6.	ENTER	Enters and confirms settings in the OSD	
7.	Right cursor	Navigates and changes settings in the OSD	
8.	Down cursor / Keystone-	Navigates and changes settings in the OSD Quick Menu – For Keystone	
9.	3D	Activate 3D video (not available in D5180HD series)	
10.	PICTURE MODE	Changes the Display Mode setting	
11.	SOURCE	Alternate input source	24
12.	CONTRAST	Displays the contrast settings bar	
13.	BRIGHT	Displays the brightness setting bar	
14.	SHARP	Displays the sharpness setting bar	
15.	COLOR	Displays the color setting bar	
16.	FREEZE	Freezes/unfreezes the on-screen picture	
17.	VOL +	Adjusts volume	24
18.	AUTO	Auto adjustment for frequency, phase, and position	
19.	VOL -	Adjusts volume	
20.	BLANK	Makes the screen blank	
21.	TINT	Displays the tint setting bar	
22.	MUTE	Mutes the built-in speaker	
23.	STATUS	Opens the OSD Status menu (the menu only opens when an input device is detected)	
24.	ASPECT RATIO	Displays the ASPECT RATIO selections	
25.	MENU	Opens or closed the OSD	24
26.	Left cursor	Navigates and changes settings in the OSD	24
27.	COMP	Displays the Component source selection	
28.	VIDEO	Displays the VIDEO source selection	
29.	HDMI 1	Displays the HDMI 1 source selection	
30.	Power ON	Turns the projector on	13
31.	Status LED	Lights when the remote control is used	
32.	IR transmitter	Transmits signals to projector	
33.	Wired remote connector	Wired remote function used	

## **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.

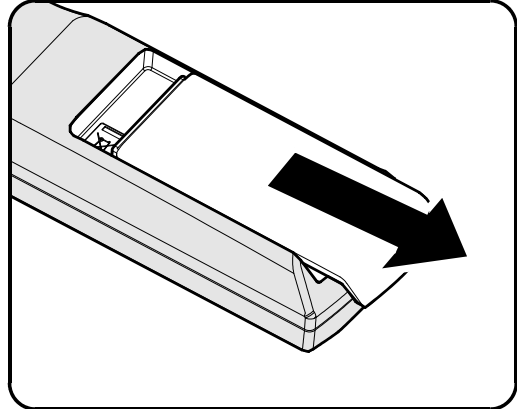
## **Projector and Remote Control Buttons**

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.

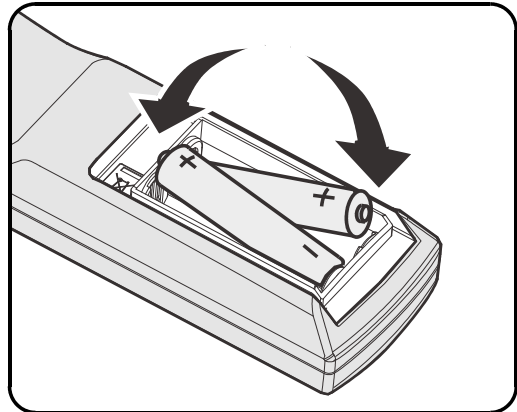
## SETUP AND OPERATION

### Inserting the Remote Control Batteries

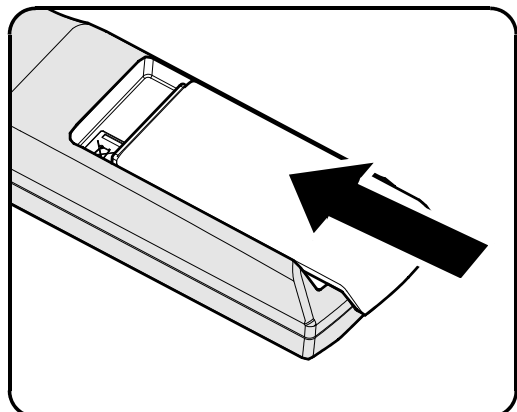
1. Remove the battery compartment cover by sliding the cover in the direction of the arrow.



2. Insert the battery with the positive side facing up.



3. Replace the cover.



**Caution:**

1. Only use AA batteries (Alkaline batteries are recommended).
2. Dispose of used batteries according to local ordinance regulations.
3. Remove the batteries when not using the projector for prolonged periods.

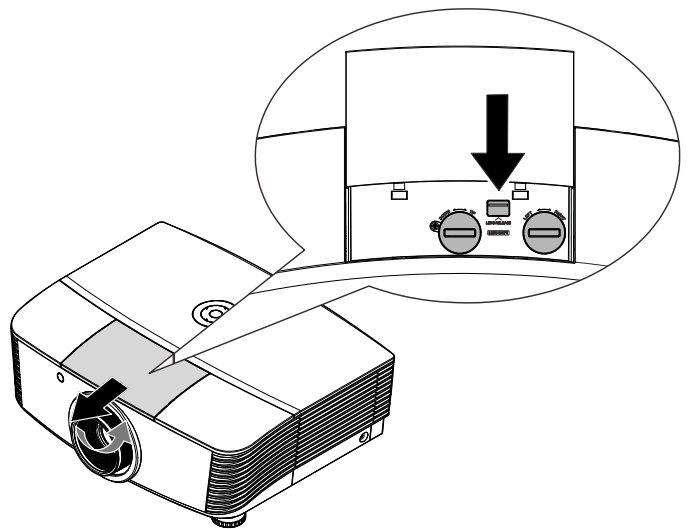
## Installing or Removing the Optional Lens

### **Caution:**

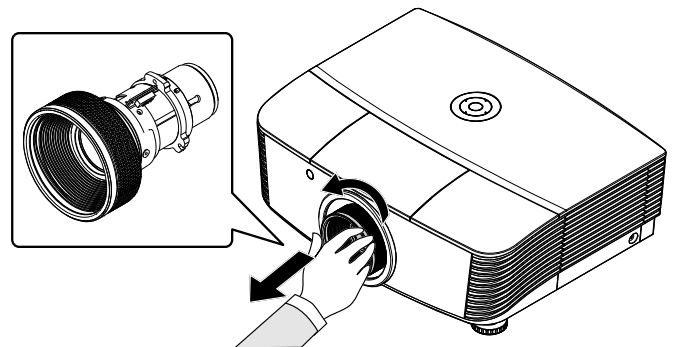
- Do not shake or place excessive pressure on the projector or the lens components as the projector and lens components contain precision parts.
- Before removing or installing the lens, be sure to turn off the projector, wait until the cooling fans stop, and turn off the main power switch.
- Do not touch the lens surface when removing or installing the lens.
- Keep fingerprints, dust or oil off the lens surface.
- Do not scratch the lens surface.
- Work on a level surface with a soft cloth under it to avoid scratching.
- If you remove and store the lens, attach the lens cap to the projector to keep off dust and dirt.

### Removing the Existing Lens From the Projector

- 1.** Pull and release the top cover to open as shown.
- 2.** Push the LENSE RELEASE button to the unlock position.



- 3.** Grasp the lens.
- 4.** Rotate the lens counterclockwise. The existing lens will be disengaged.
- 5.** Pull out the existing lens slowly.



## *DLP Projector—User's Manual*

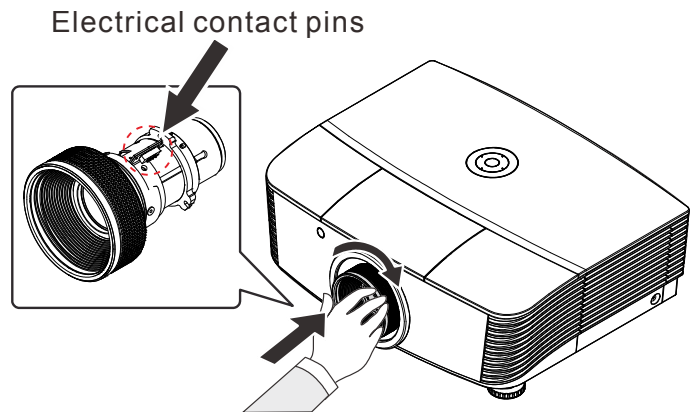
---

### Installing the New Lens

1. Align the notches and correctly position the electrical contact pad as shown in the picture.

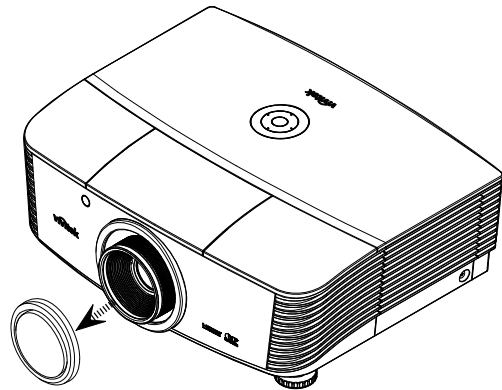
**Note:**  
*Pin of Electrical contact pins should be in the direction as shown in the picture.*

2. Rotate the lens clockwise until you feel it click into place.

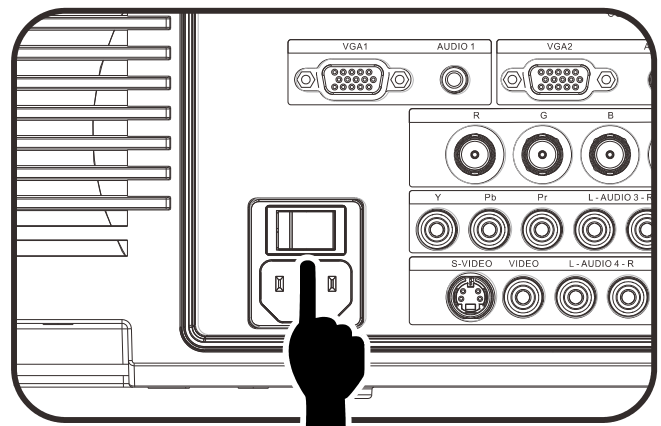


## Starting and Shutting down the Projector

1. Remove the lens cap.



2. Securely connect the power cord and signal cable. When connected, the power led will turn red.

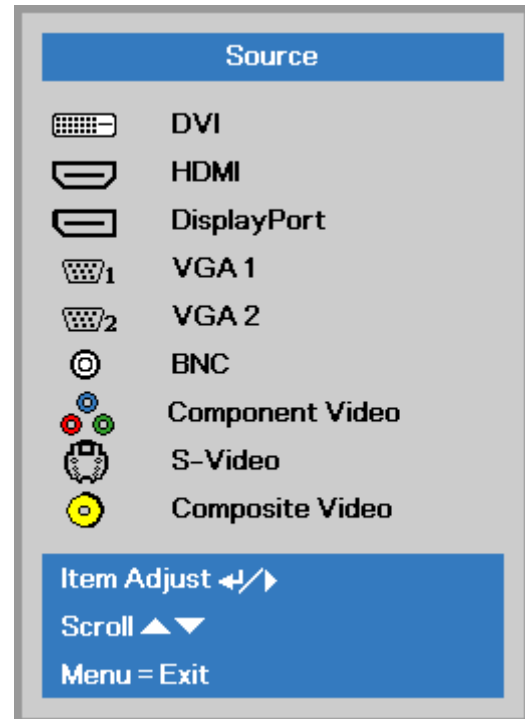


3. Turn on the lamp by pressing "POWER" button on the rear of the projector or "ON" on the remote control.  
The PWR LED will now flash red.  
The startup screen will display in approximately 30 seconds. The first time you use the projector, you can select your preferred language from quick menu after the startup screen display.



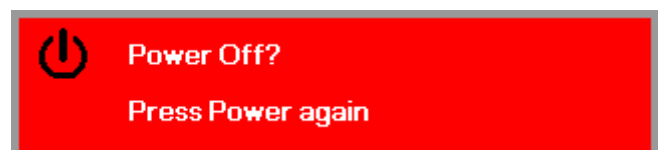
## DLP Projector—User's Manual

4. If more than one input device is connected, press the **SOURCE** button and use ▲▼ to scroll among devices.



- DVI: Digital Visual Interface
- HDMI: High-Definition Multimedia Interface compatible
- DisplayPort: Digital display interface
- VGA 1 / 2: Analog RGB 1 / 2
- BNC: Analog RGB (BNC connector)
- Component Video: DVD input YCbCr / YPbPr , or HDTV input YPbPr
- S-Video: Super video (Y/C separated)
- Composite Video: Traditional composite video

5. When the “Power Off? /Press **Power** again” message appears, press the **POWER** button. The projector turns off.



**Caution:**

1. Be sure to remove the lens cap before starting projector.
2. Do not unplug the power cord until the READY LED stops flashing—indicating the projector has cooled down.

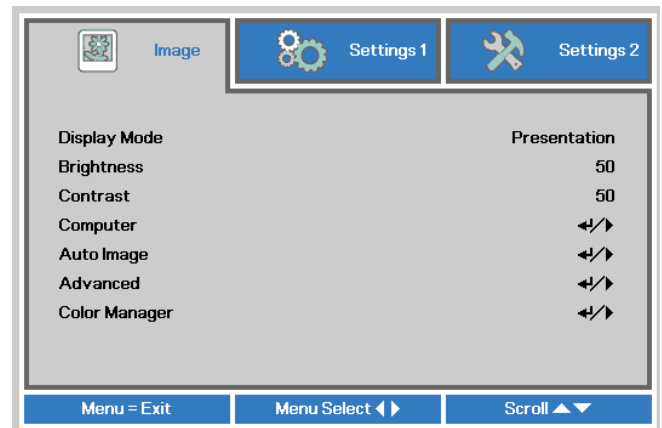
## Setting an Access Password (Security Lock)

You can use the four (arrow) buttons to set a password and prevent unauthorized use of the projector. When enabled, the password must be entered after you power on the projector. (See *Navigating the OSD* on page 24 and *Setting the OSD Language* on page 25 for help on using OSD menus.)

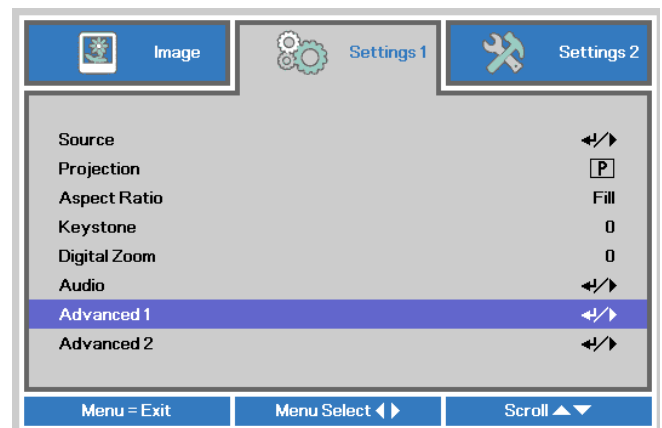
**Important:**

*Keep the password in a safe place. Without the password, you will not be able to use the projector. If you lose the password, contact your reseller for information on clearing the password.*

1. Press the **MENU** button to open the OSD menu.



2. Press the cursor ◀▶ button to move to the **Settings 1** menu, press the cursor ▲▼ button to select **Advanced 1**.



3. Press ◀ (Enter) / ▶ to enter the **Advanced 1** sub menu. Press the cursor ▲▼ button to select **Security Lock**.



4. Press the cursor ◀▶ button to enter and enable or disable security lock function.

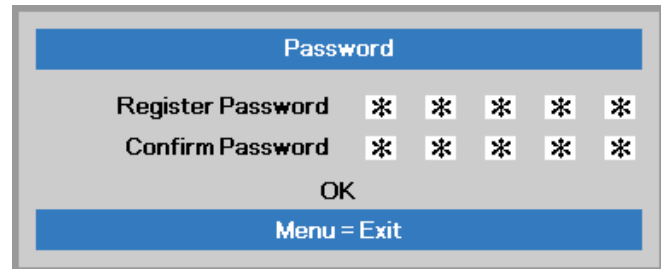
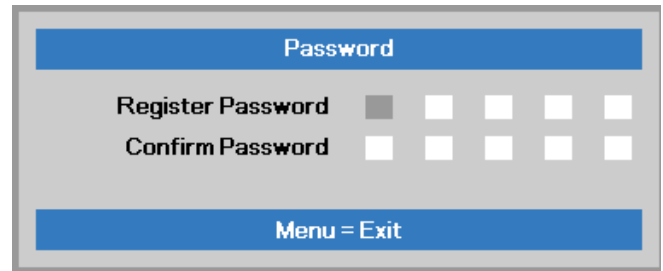
A password dialog box automatically appears.



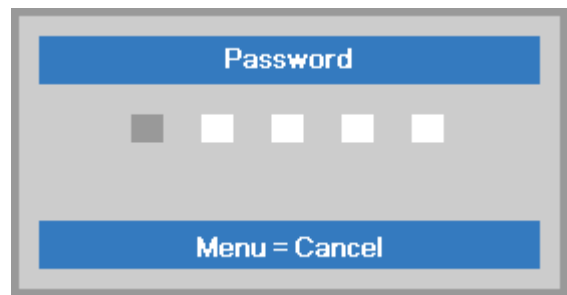
## DLP Projector—User's Manual

5. You can use the cursor buttons ▲▼◀▶ either on keypad or IR remote control for password entry. You can use any combination including the same arrow five times, but not less than five.

Press the cursor buttons in any order to set the password. Push the **MENU** button to exit the dialog box.



6. The password confirm menu appears when user presses the power-on key in case the **Security Lock** is enabled. Enter the password in the order you set it at step 5. In case you forget the password, please contact the service center. The service center will validate the owner and help reset the password.

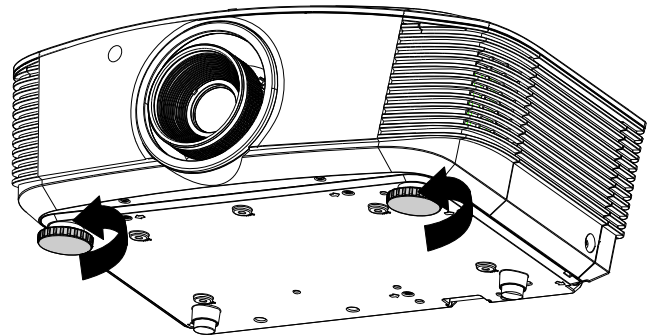


## Adjusting the Projector Level

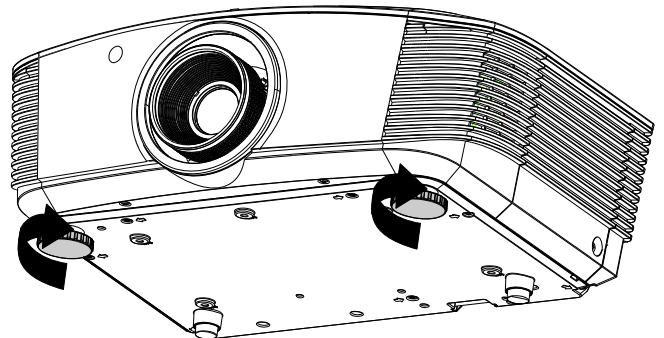
Take note of the following when setting up the projector:

- *The projector table or stand should be level and sturdy.*
- *Position the projector so that it is perpendicular to the screen.*
- *Remove the Back Foot Holder on the rear adjuster foot before adjusting the projection angle.*
- *Ensure the cables are in a safe location. You could trip over them.*

- 1.** To raise the level of the projector, twist the adjusters counter clockwise.

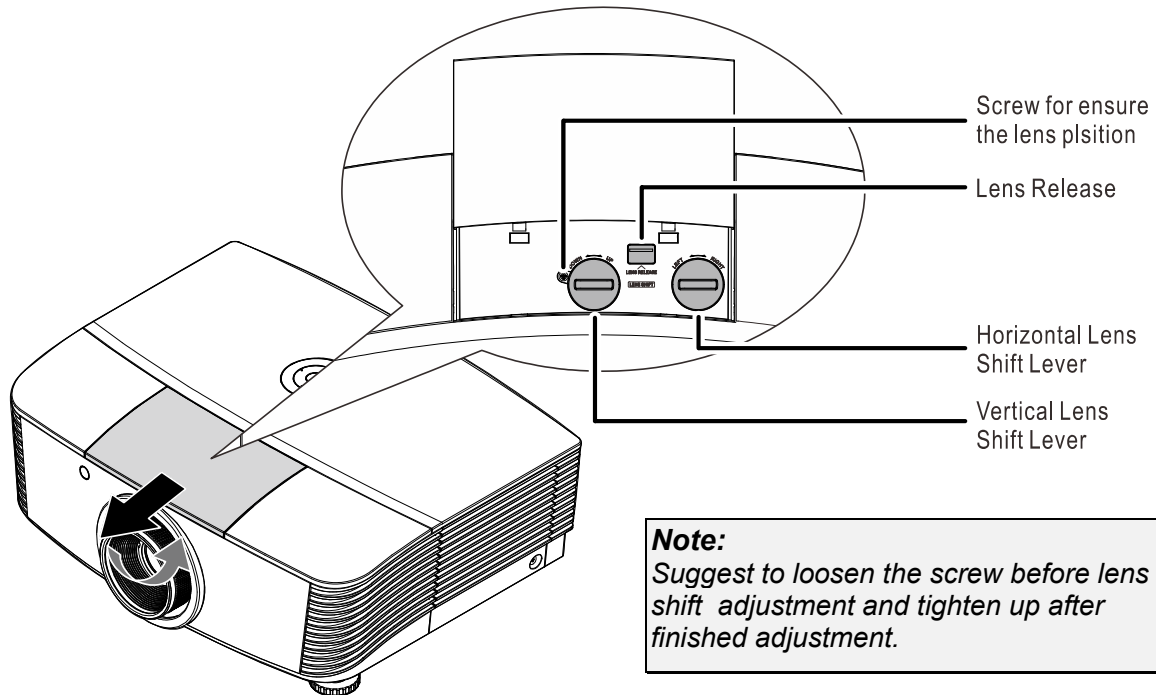


- 2.** To lower the level of the projector, lift the projector and twist the adjusters clockwise.



## DLP Projector—User's Manual

### Adjusting Projected Image Position Using Shift



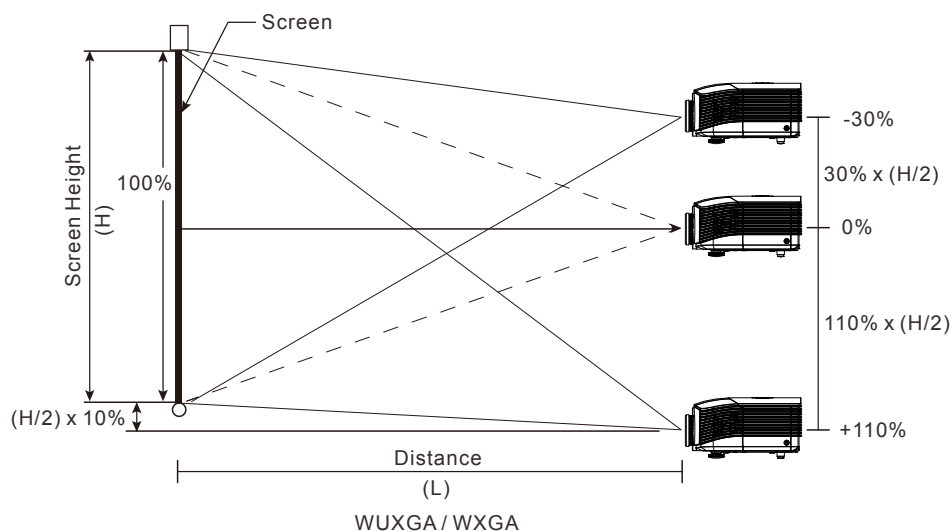
The Shift feature provides a lens shift function that can be used to adjust the position of the projected image either horizontally or vertically within the range detailed below.

Shift is a unique system that provides lens shift while maintaining a much higher ANSI contrast ratio than traditional lens shift systems.

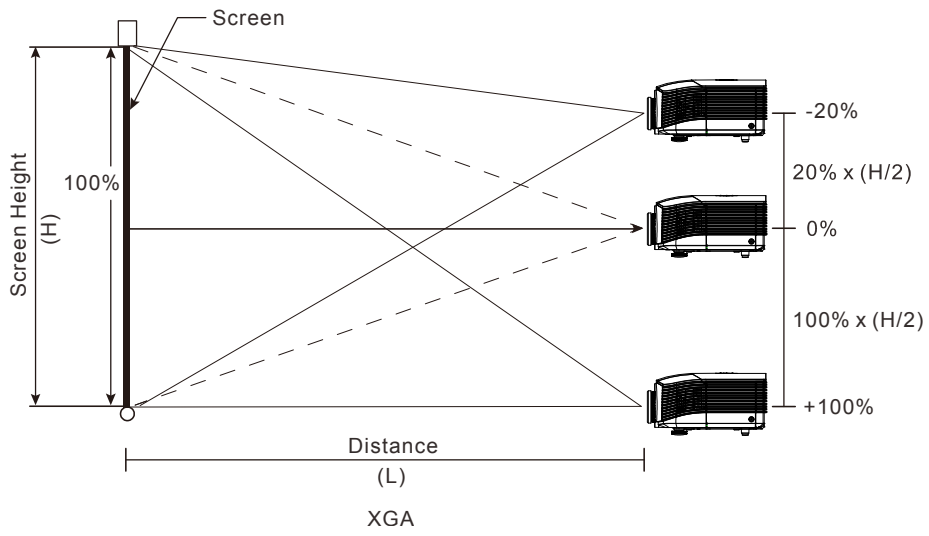
#### Adjusting the vertical image position

The vertical image height can be adjusted between 110% and -30% (WUXGA, WXGA), 100% and -20% (XGA), 120% and -40% (1080P) of offset position. Note that the maximum vertical image height adjustment can be limited by the horizontal image position. For example it is not possible to achieve the maximum vertical image position height detailed above if the horizontal image position is at maximum. Please consult the Shift Range diagram below for further clarification.

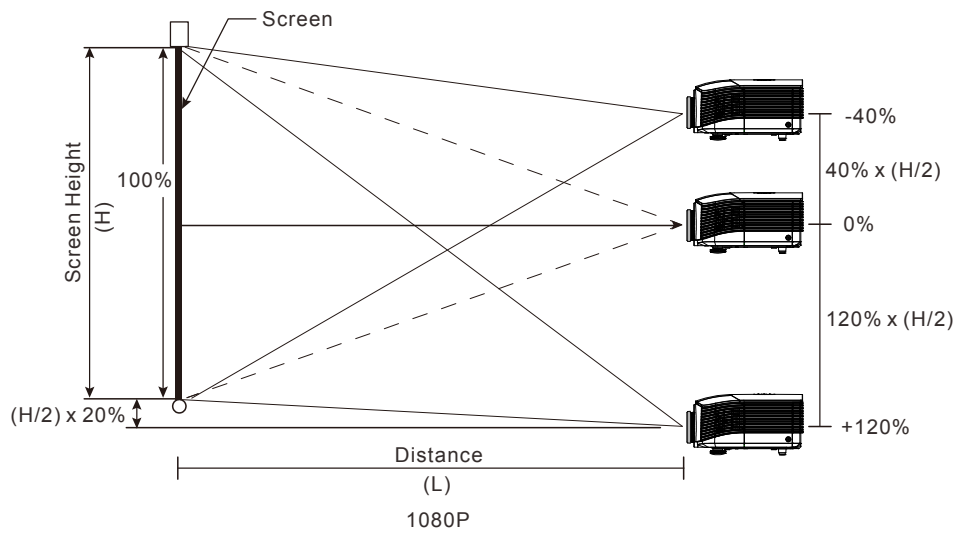
#### *WUXGA and WXGA*



**XGA**



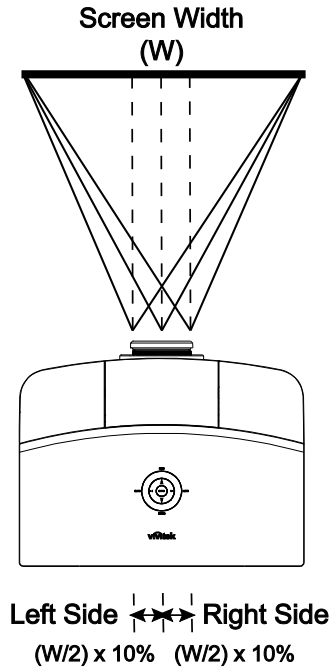
**1080P**



***DLP Projector—User’s Manual***

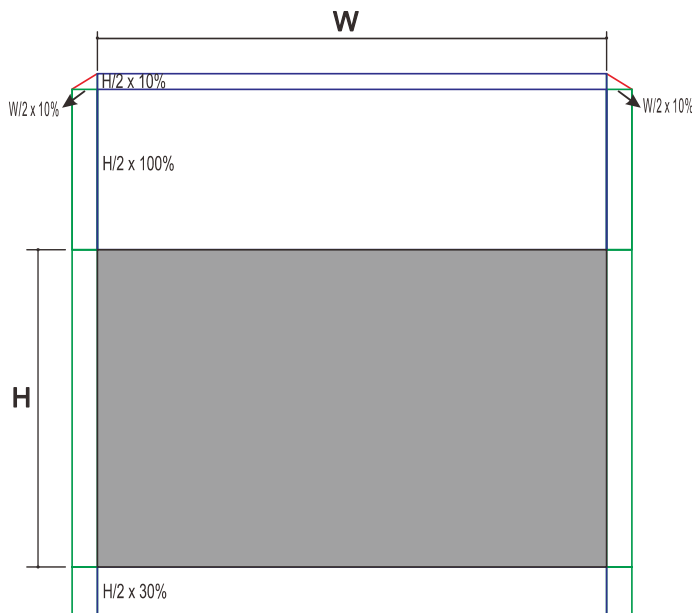
**Adjusting the horizontal image position**

With the lens in the center position the horizontal image position can be adjusted to the left or right by up to a maximum of 10% of the half image width. Note that the maximum horizontal image height adjustment can be limited by the vertical image position. For example it is not possible to achieve the maximum horizontal image position if the vertical image position is at maximum. Please consult the Shift Range diagram below for further clarification.



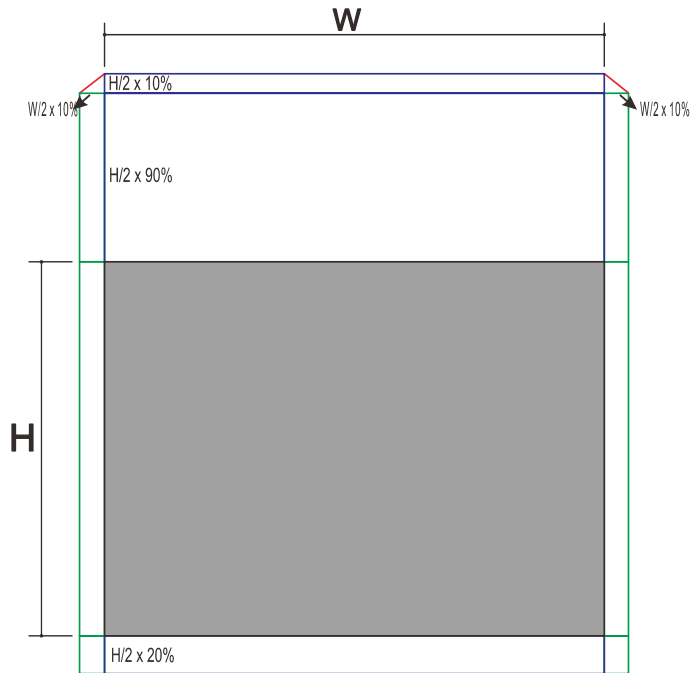
**Shift Range Diagram**

*WUXGA and WXGA*



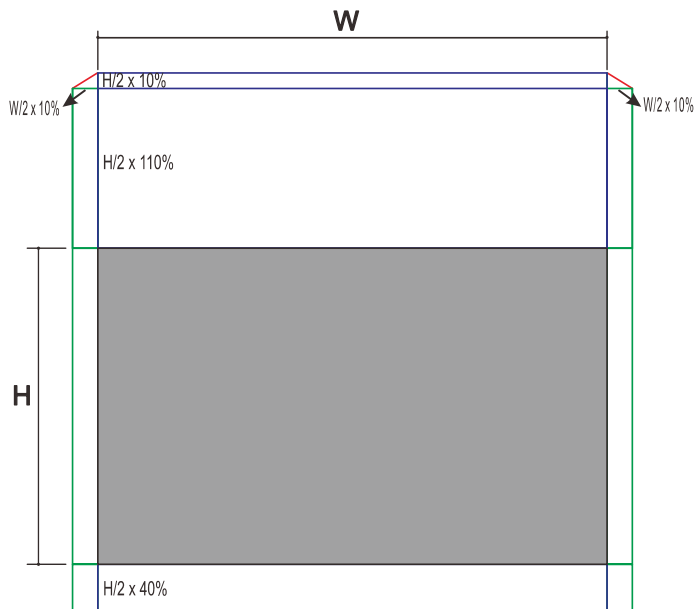
The max H up shift =  $H/2 \times 110\%$   
 The max H down shift =  $H/2 \times 30\%$   
 The max W shift =  $W/2 \times 10\%$   
 When max W shift is  $W/2 \times 10\%$   
     max H shift =  $H/2 \times 100\%$   
 When max H shift is  $H/2 \times 110\%$   
     max W shift =  $H \times 0\%$

**XGA**



The max H up shift =  $H/2 \times 100\%$   
The max H down shift =  $H/2 \times 20\%$   
The max W shift =  $W/2 \times 10\%$   
When max W shift is  $W/2 \times 10\%$   
max H shift =  $H/2 \times 90\%$   
When max H shift is  $H/2 \times 100\%$   
max W shift =  $H \times 0\%$

**1080P**

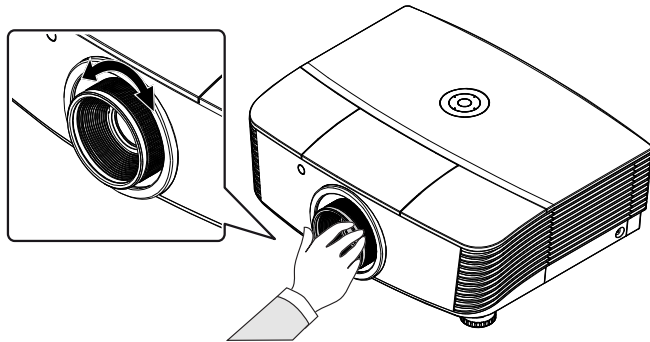


The max H up shift =  $H/2 \times 120\%$   
The max H down shift =  $H/2 \times 20\%$   
The max W shift =  $W/2 \times 10\%$   
When max W shift is  $W/2 \times 10\%$   
max H shift =  $H/2 \times 110\%$   
When max H shift is  $H/2 \times 120\%$   
max W shift =  $H \times 0\%$

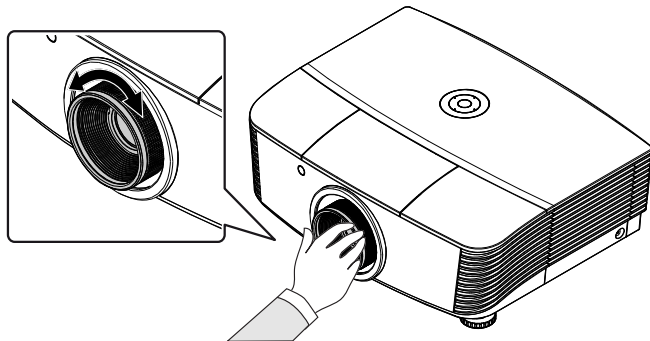
## DLP Projector—User's Manual

### Adjusting the Zoom, Focus and Keystone

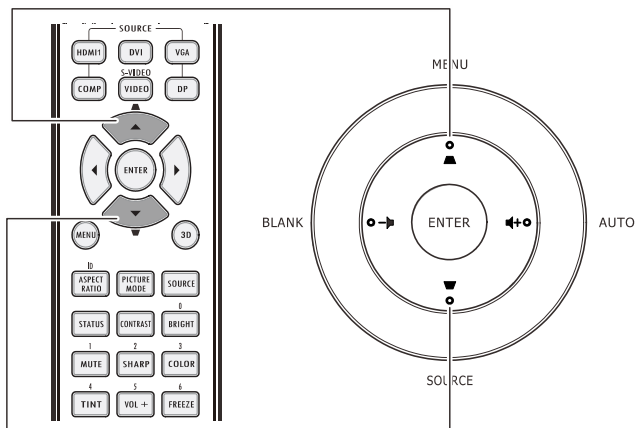
1. Use the **Image-zoom** control (on the projector only) to resize the projected image and screen size.



2. Use the **Image-focus** control (on the projector only) to sharpen the projected image.



3. Use the **KEYSTONE** buttons (on the projector or the remote control) to correct image-trapezoid (wider top or bottom) effect.



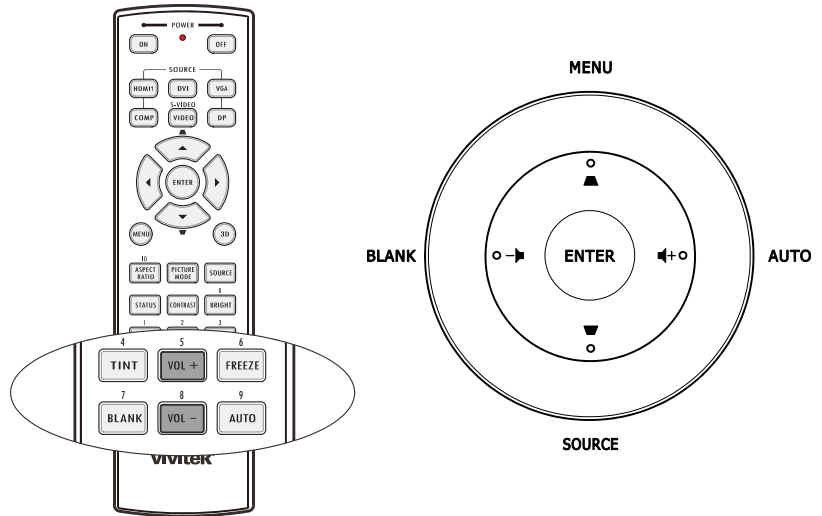
Remote control and OSD panel

4. The keystone control appears on the display.



## Adjusting the Volume

1. Press the **Volume +/-** buttons on the remote control.  
The volume control appears on the display.



2. Press the **Left or Right Cursor** buttons on the keypad to adjust **Volume +/-**.



3. Press the **MUTE** button to turn off the volume (This feature is available only on the remote).





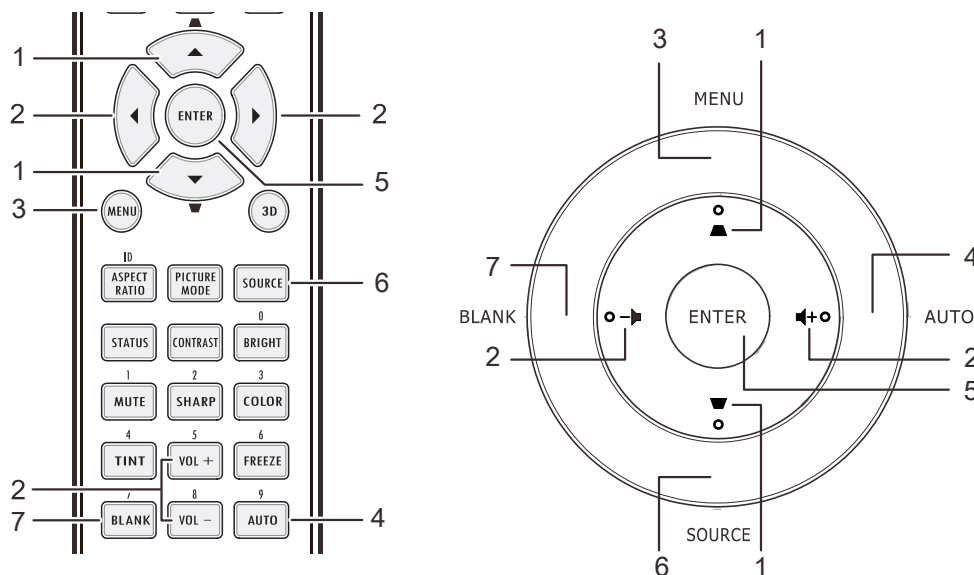
## ON-SCREEN DISPLAY (OSD) MENU SETTINGS

### OSD Menu Controls

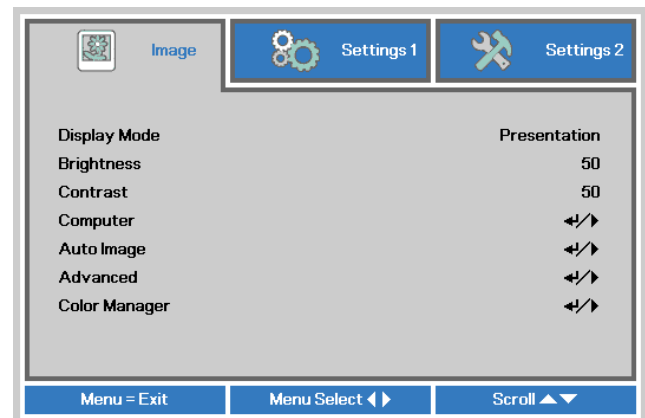
The projector has an OSD that lets you make image adjustments and change various settings.

#### Navigating the OSD

You can use the remote control cursor buttons or the buttons on the top of the projector to navigate and make changes to the OSD. The following illustration shows the corresponding buttons on the projector.



1. To enter the OSD, press the **MENU** button.
2. There are three menus. Press the cursor ◀▶ button to move through the menus.
3. Press the cursor ▲▼ button to move up and down in a menu.
4. Press ◀▶ to change values for settings.
5. Press **MENU** to close the OSD or leave a submenu.



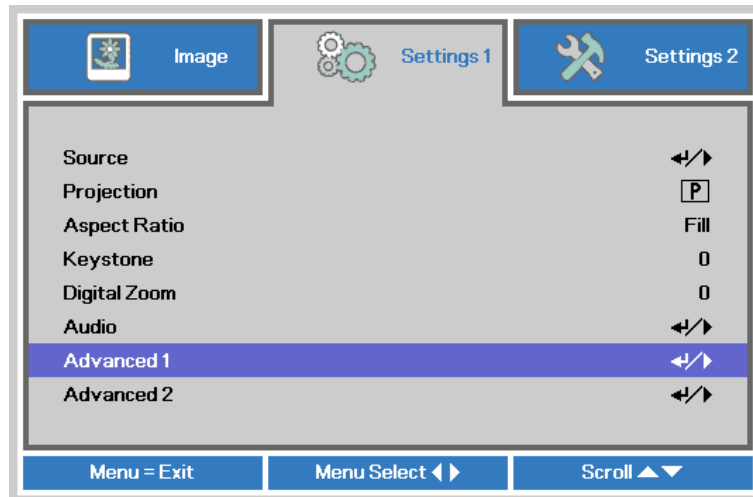
**Note:**

Depending on the video source, not all items in the OSD are available. For example, the **Horizontal/Vertical Position** items in the **Computer** menu can only be modified when connected to a PC. Items that are not available cannot be accessed and are grayed out.

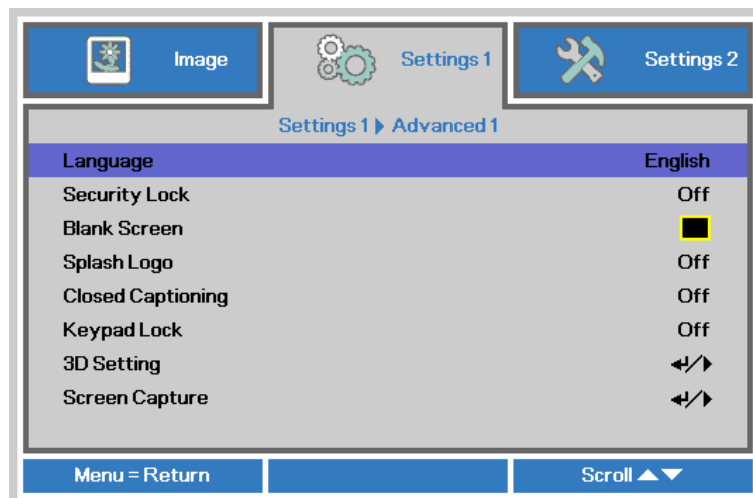
## Setting the OSD Language

Set the OSD language to your preference before continuing.

1. Press the **MENU** button. Press the cursor ◀▶ button to navigate to **Settings 1**. Press the cursor ▲▼ button to move to the **Advanced 1** menu.



2. Press ◀ (Enter) / ▶ to enter the **Advanced 1** sub menu. Press the cursor ▲▼ button until **Language** is highlighted.

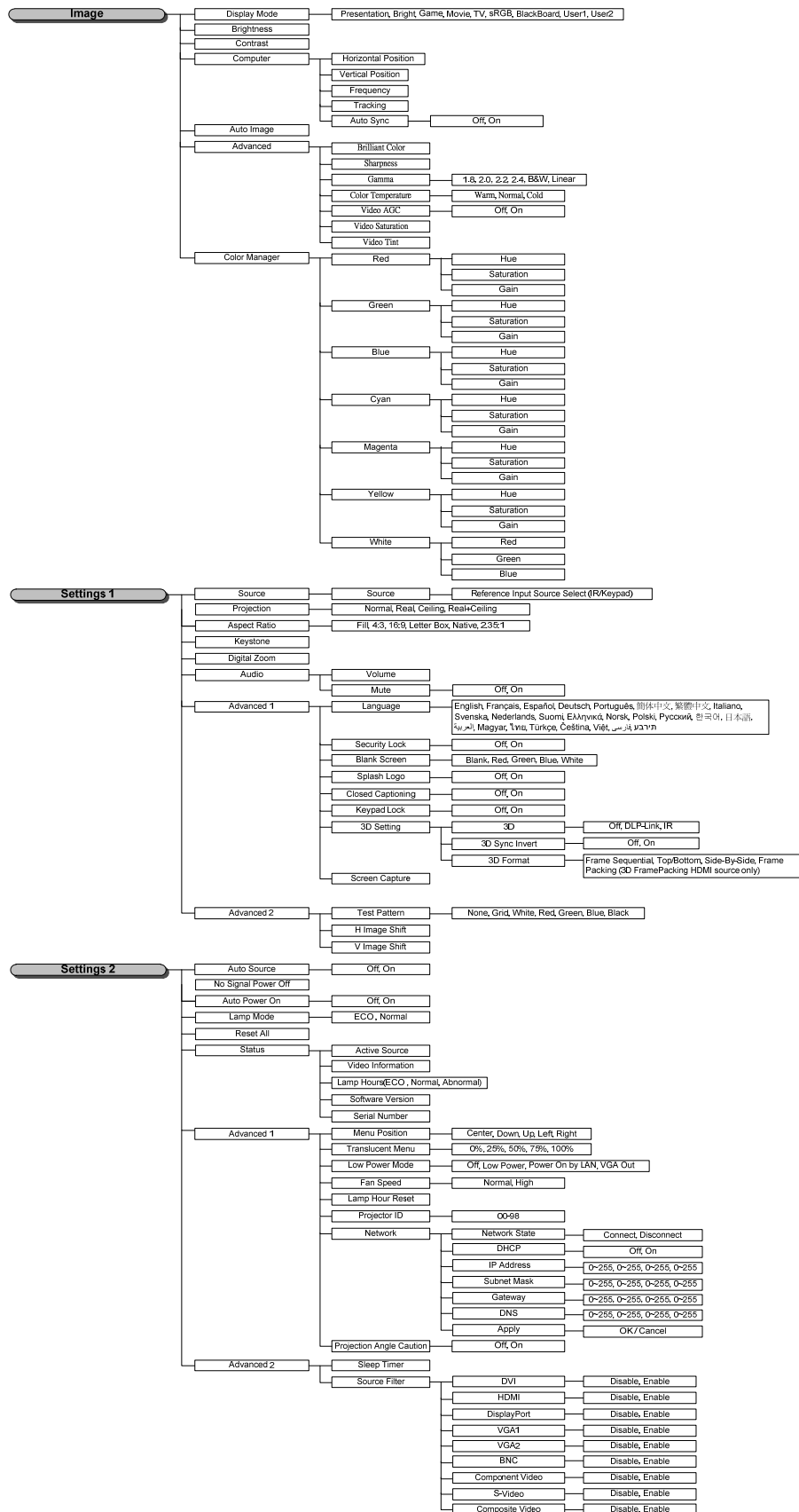


3. Press the cursor button until the language you want is highlighted.
4. Press the **MENU** button four times to close the OSD.

## DLP Projector—User’s Manual

### OSD Menu Overview

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

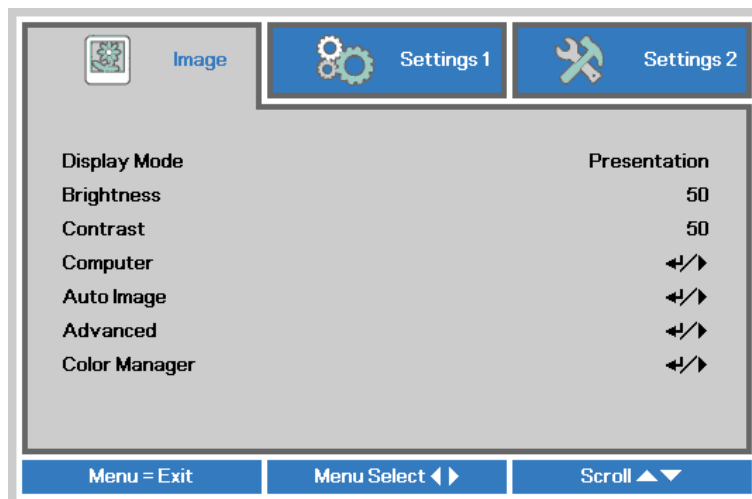


## Image Menu

**Attention !**

All of display mode parameters when changed will be saved to user mode.

Press the **MENU** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Image Menu**. Press the cursor ▲▼ button to move up and down in the **Image** menu. Press ◀▶ to enter and change values for settings.

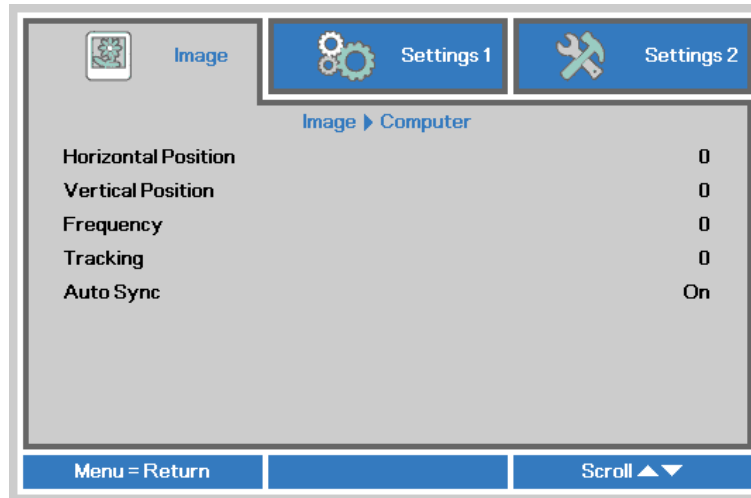


ITEM	DESCRIPTION
Display Mode	Press the cursor ◀▶ button to enter and set the Display Mode.
Brightness	Press the cursor ◀▶ button to enter and adjust the display brightness.
Contrast	Press the cursor ◀▶ button to enter and adjust the display contrast.
Computer	Press ◀ (Enter) / ▶ to enter the Computer menu. See <i>Computer Menu</i> on page 28.
Auto Image	Press ◀ (Enter) / ▶ to automatically adjustment for phase, tracking, size and position.
Advanced	Press ◀ (Enter) / ▶ to enter the Advanced menu. See <i>Advanced Feature</i> on page 29.
Color Manager	Press ◀ (Enter) / ▶ to enter the color manager menu. See page 30 for more information on <i>Color Manager</i> .

## *DLP Projector—User’s Manual*

### Computer Menu

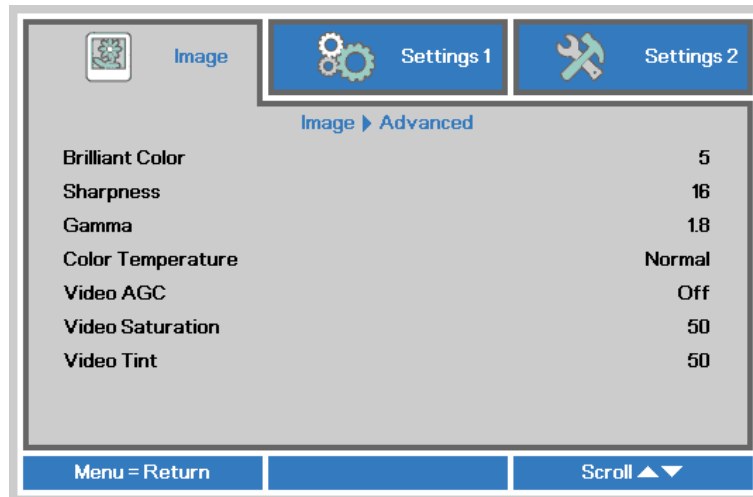
Press the **MENU** button to open the **OSD** menu. Press ◀▶ to move to the **Image** menu. Press ▲▼ to move to the **Computer** menu and then press **Enter** or ▶. Press ▲▼ to move up and down in the **Computer** menu.



ITEM	DESCRIPTION
Horizontal Position	Press the cursor ◀▶ button to enter and adjust the display position to left or right.
Vertical Position	Press the cursor ◀▶ button to enter and adjust the display position to up or down.
Frequency	Press the cursor ◀▶ button to enter and adjust the A/D sampling clock.
Tracking	Press the cursor ◀▶ button to enter and adjust the A/D sampling dot.
Auto Sync	Press the cursor ◀▶ button to enter and enable or disable the autolock control for RGB source.

## Advanced Feature

Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Image** menu. Press ▼▲ to move to the **Advanced** menu and then press **Enter** or ▶. Press ▼▲ to move up and down in the **Advanced** menu.

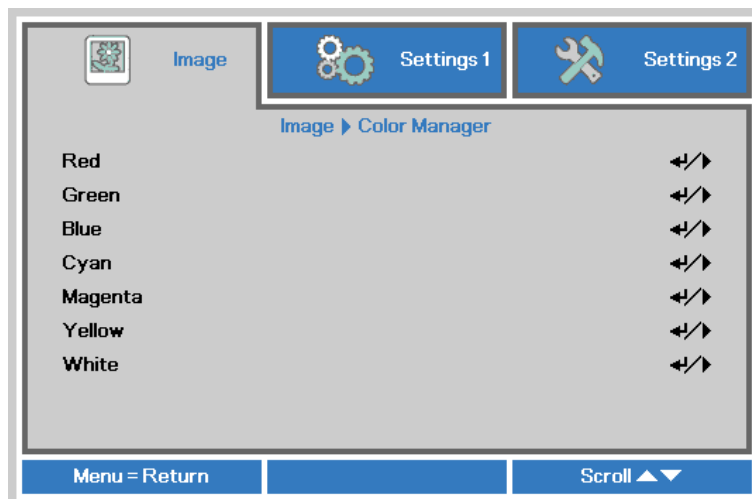


ITEM	DESCRIPTION
Brilliant Color	Press the cursor ◀▶ button to enter and adjust the Brilliant Color value.
Sharpness	Press the cursor ◀▶ button to enter and adjust the display sharpness.
Gamma	Press the cursor ◀▶ button to enter and adjust the gamma correction of the display.
Color Temperature	Press the cursor ◀▶ button to enter and adjust the color temperature.
Video AGC	Press the cursor ◀▶ button to enter and enable or disable the Automatic Gain Control for video source.
Video Saturation	Press the cursor ◀▶ button to enter and adjust the video saturation.
Video Tint	Press the cursor ◀▶ button to enter and adjust the video tint/hue.

## DLP Projector—User’s Manual

### Color Manager

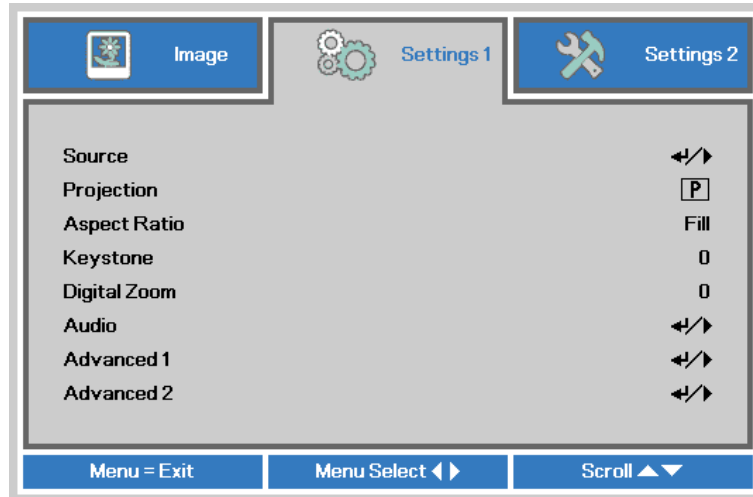
Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Image** menu. Press ▼▲ to move to the **Color Manager** menu and then press **Enter** or ▶. Press ▼▲ to move up and down in the **Color Manager** menu.



ITEM	DESCRIPTION
Red	Select to enter the Red Color Manager. Press the ◀▶ buttons to adjust the Hue, Saturation, and Gain.
Green	Select to enter the Green Color Manager. Press the ◀▶ buttons to adjust the Hue, Saturation, and Gain.
Blue	Select to enter the Blue Color Manager. Press the ◀▶ buttons to adjust the Hue, Saturation, and Gain.
Cyan	Select to enter the Cyan Color Manager. Press the ◀▶ buttons to adjust the Hue, Saturation, and Gain.
Magenta	Select to enter the Magenta Color Manager. Press the ◀▶ buttons to adjust the Hue, Saturation, and Gain.
Yellow	Select to enter the Yellow Color Manager. Press the ◀▶ buttons to adjust the Hue, Saturation, and Gain.
White	Select to enter the White Color Manager. Press the ◀▶ buttons to adjust the Red, Green, and Blue.

## Settings 1 Menu

Press the **MENU** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Settings 1** menu. Press the cursor ▲▼ button to move up and down in the **Settings 1** menu. Press ◀▶ to enter and change values for settings.



ITEM	DESCRIPTION
Source	Press ◀ (Enter) / ▶ to enter the Source menu. Reference input Source select (IR / Keypad).
Projection	Press the cursor ◀▶ button to enter and choose from four projection methods:
Aspect Ratio	Press the cursor ◀▶ button to enter and adjust the video aspect ratio.
Keystone	Press the cursor ◀▶ button to enter and adjust the display keystone.
Digital Zoom	Press the cursor ◀▶ button to enter and adjust the Digital Zoom menu.
Audio	Press ◀ (Enter) / ▶ to enter the Audio menu. See <i>Audio</i> on page 32.
Advanced 1	Press ◀ (Enter) / ▶ to enter the Advanced 1 menu. See <i>Advanced 1 Feature</i> on page 33.
Advanced 2	Press ◀ (Enter) / ▶ to enter the Advanced 2 menu. See <i>Advanced 2 Feature</i> on page 35.

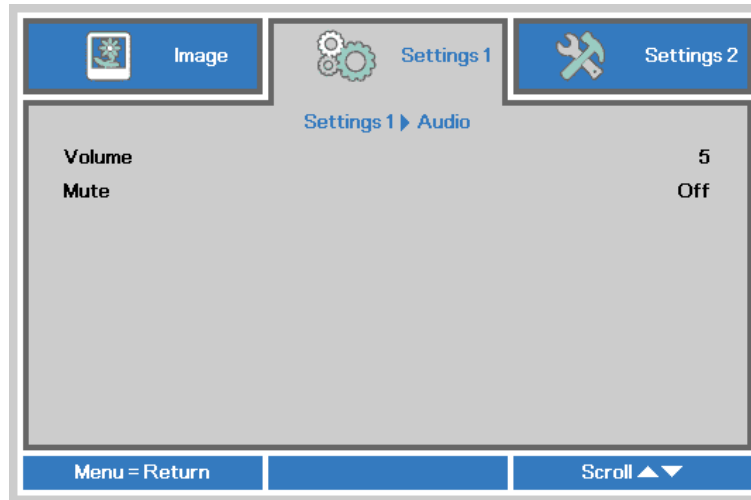


## *DLP Projector—User's Manual*

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### Audio

Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Settings 1** menu. Press ▼▲ to move to the **Audio** menu and then press **Enter** or ▶. Press ▼▲ to move up and down in the **Audio** menu.



ITEM	DESCRIPTION
Volume	Press the cursor ◀▶ button to enter and adjust the audio volume.
Mute	Press the cursor ◀▶ button to enter and turn on or off the speaker.

## Advanced 1 Feature

Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Settings 1** menu. Press ▲▼ to move to the **Advanced 1** menu and then press **Enter** or ▶. Press ▲▼ to move up and down in the **Advanced 1** menu. Press ◀▶ to enter and change values for setting.



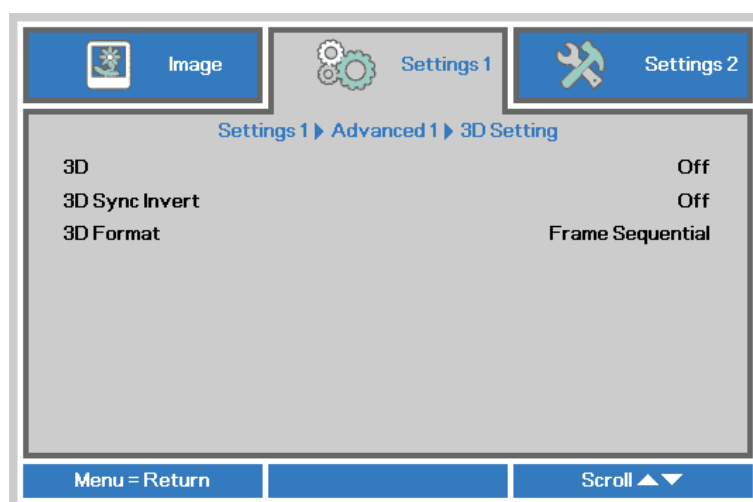
ITEM	DESCRIPTION
Language	Press the cursor ◀▶ button to enter and select a different localization Menu.
Security Lock	Press the cursor ◀▶ button to enter and enable or disable security lock function.
Blank Screen	Press the cursor ◀▶ button to enter and select different color to blank the screen.
Splash Logo	Press the cursor ◀▶ button to enter and select splash logo on or off.
Closed Captioning	Press the cursor ◀▶ button to enter and enable or disable Closed Captioning
Keypad Lock	Press the cursor ◀▶ button to enter and enable or disable keys can be work on keypad.
3D Setting	Press ◀ (Enter) / ▶ to enter the 3D menu. See page 34 for more information on <i>3D Setting</i> .
Screen Capture	Press ◀ (Enter) / ▶ to capture screen, and please wait saving picture. Picture will auto showing after next power on.

**Note:**

*To enjoy the 3D function, first enable the Play Movie in 3D setting found in your DVD device under the 3D Disc Menu.*

## DLP Projector—User's Manual

### 3D Setting



ITEM	DESCRIPTION
3D	Press the cursor ◀▶ button to enter and select different 3D mode.
3D Sync Invert	Press the cursor ◀▶ button to enter and enable or disable 3D Sync Invert.
3D Format	Press the cursor ◀▶ button to enter and enable or disable different 3D Format.

**Note:**

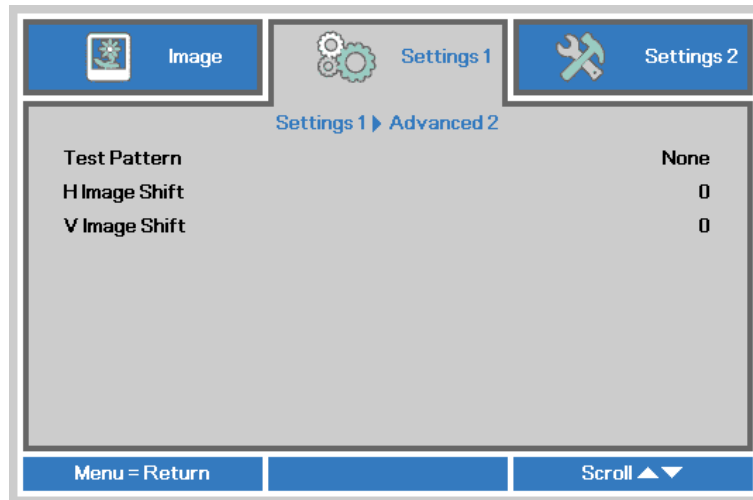
1. The 3D OSD menu item is gray if there is no appropriate 3D source. This is the default setting.
2. When the projector is connected to an appropriate 3D source, the 3D OSD menu item is enabled for selection.
3. Use 3D glasses to view a 3D image.
4. You need 3D content from a 3D DVD or 3D media file.
5. You need to enable the 3D source (some 3D DVD content may have a 3D on-off selection feature).
6. You need DLP link 3D or IR 3D shutter glasses. With IR 3D shutter glasses, you need to install a driver on your PC and connect a USB emitter.
7. The 3D mode of the OSD needs to match the type of glasses (DLP link or IR 3D).
8. Power on the glasses. Glasses normally have a power on -off switch. Each type of glasses has their own configuration instructions. Please follow the configuration instructions that come with your glasses to finish the setup process.

**Note:**

Since different types of glass (DLP link or IR shutter glass) have their own setting instructions, Please follow the guide to finish the setup process.

## Advanced 2 Feature

Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Settings 1** menu. Press ▲▼ to move to the **Advanced 2** menu and then press **Enter** or ▶. Press ▲▼ to move up and down in the **Advanced 2** menu. Press ◀▶ to enter and change values for setting.

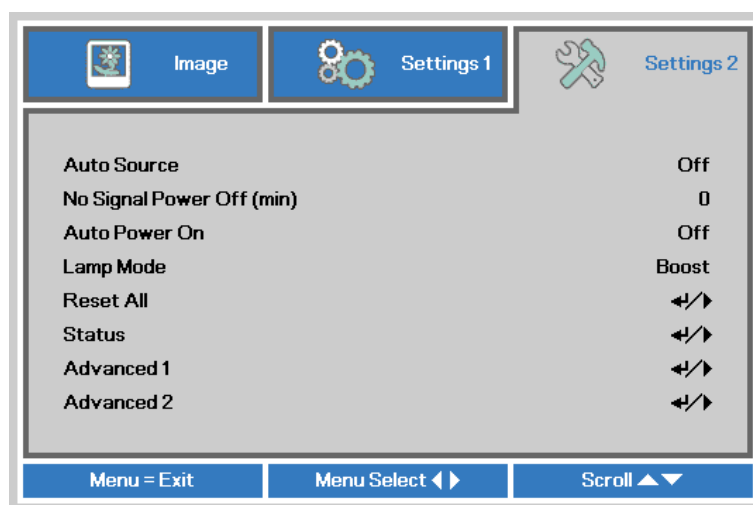


ITEM	DESCRIPTION
Test Pattern	Press the cursor ◀▶ button to enter and select internal test pattern.
H Image Shift	Press the cursor ◀▶ button to enter and select H Image Shift.
V Image Shift	Press the cursor ◀▶ button to enter and select V Image Shift.

## DLP Projector—User’s Manual

### Settings 2 Menu

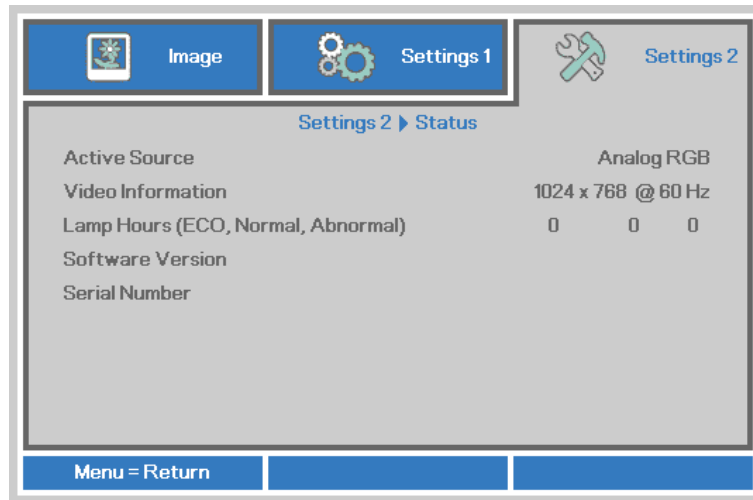
Press the **MENU** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Settings 2** menu. Press the cursor ▲▼ button to move up and down in the **Settings 2** menu.



ITEM	DESCRIPTION
Auto Source	Press the cursor ◀▶ button to enter and enable or disable automatic source detection.
No Singal Power Off (min.)	Press the cursor ◀▶ button to enter and enable or disable automatic shutdown of lamp when no signal.
Auto Power On	Press the cursor ◀▶ button to enter and enable or disable automatic power On when AC power is supplied.
Lamp Mode	Press the cursor ◀▶ button to enter and select the lamp mode for higher brightness or lower brightness to save lamp life.
Reset All	Press ◀ (Enter) / ▶ to reset all settings to default values.
Status	Press ◀ (Enter) / ▶ to enter the Status menu. See page 37 for more information on <i>Status</i> .
Advanced 1	Press ◀ (Enter) / ▶ to enter the Advanced 1 menu. See <i>Advanced 1 Feature</i> on page 38.
Advanced 2	Press ◀ (Enter) / ▶ to enter the Advanced 2 menu. See <i>Advanced 2 Feature</i> on page 50.

## Status

Press the cursor ▲▼ button to move up and down in the **Settings 2** menu. Select the **Status** menu and press **Enter** or ► to enter.



ITEM	DESCRIPTION
Active Source	Display the activated source.
Video Information	Displays resolution/video information for RGB source and color standard for Video source.
Lamp Hours	Lamp hour used information is displayed. (ECO, Normal, Abnormal )
Software Version	Showing system software version.
Serial Number	Showing serial number of this projector.

## DLP Projector—User’s Manual

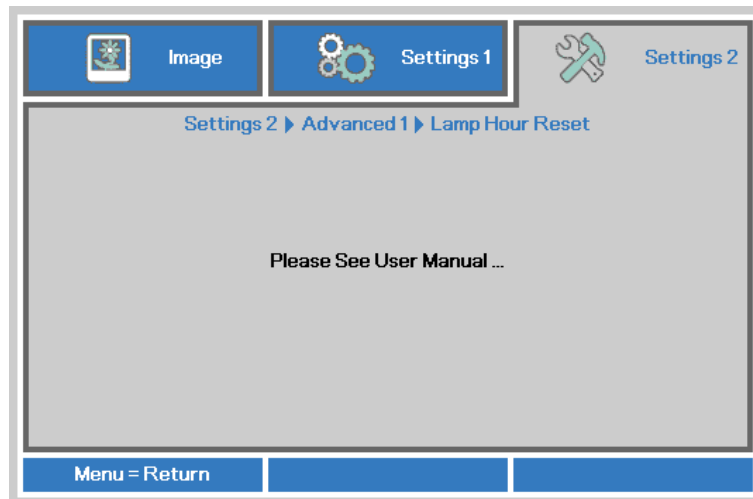
### Advanced 1 Feature

Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Settings 2** menu. Press ▲▼ to move to the **Advanced 1** menu and then press **Enter** or ▶. Press ▲▼ to move up and down in the **Advanced 1** menu. Press ◀▶ to enter and change values for setting.



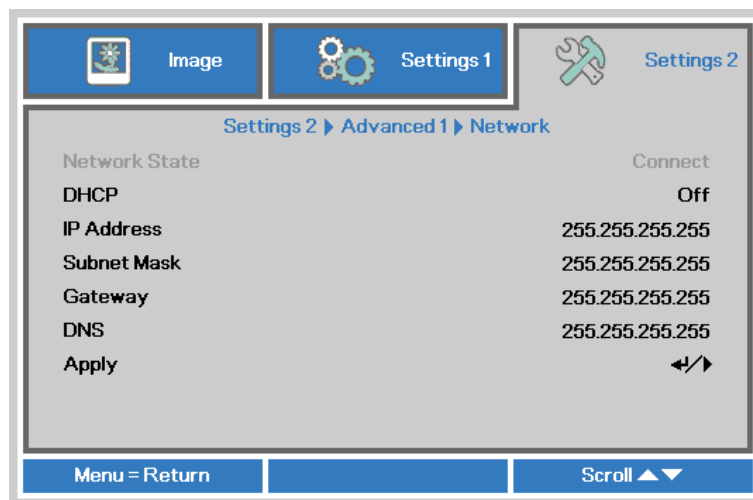
ITEM	DESCRIPTION
Menu Position	Press the cursor ◀▶ button to enter and select different OSD location.
Translucent Menu	Press the cursor ◀▶ button to enter and select OSD background translucent level.
Low Power Mode	Press the cursor ◀▶ button to enter and turn Low Power Mode on or off.
Fan Speed	Press the cursor ◀▶ button to enter and toggle between Normal and High fan speeds. <b>Note:</b> We recommend selecting high speed in high temperatures, high humidity, or high altitude (higher than 1500m/4921ft) areas.
Lamp Hour Reset	After replacing the lamp, this item should be reset. See page 39 for more information on <i>Lamp Hour Reset</i> .
Projector ID	Press the cursor ◀▶ button to enter and adjust a two digit projector ID from 00 through 98.
Network	Press ◀ (Enter) / ▶ to enter the Network menu. See page 39 for more information on <i>Network</i> .
Projection Angle Caution	Press the cursor ◀▶ button to enter and turn Projection Angle Caution on or off.

### Lamp Hour Reset



Please refer to *Resetting the Lamp* on page 57 to reset the lamp hour counter.

### Network



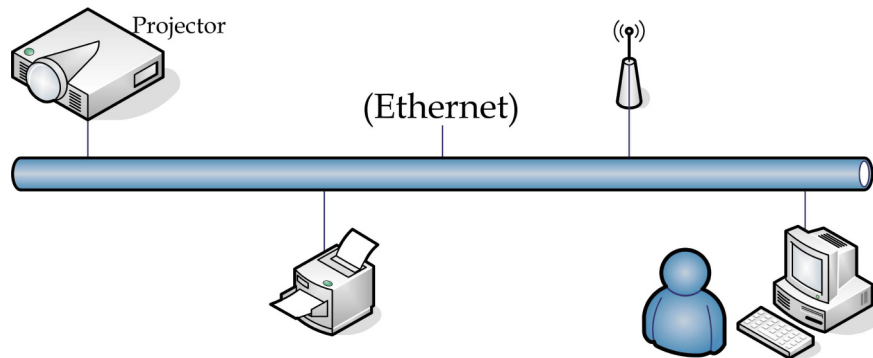
ITEM	DESCRIPTION
Network State	Displays the network connection status.
DHCP	Press the cursor ◀▶ button to turn DHCP On or Off. <b>Note:</b> If you select DHCP Off, complete the IP Address, Subnet Mask, Gateway, and DNS fields.
IP Address	Enter a valid IP address if DHCP is turned off.
Subnet Mask	Enter a valid Subnet Mask if DHCP is turned off.
Gateway	Enter a valid Gateway address if DHCP is turned off.
DNS	Enter a valid DNS name if DHCP is turned off.
Apply	Press ◀ (Enter) / ▶ to confirm settings.



## *DLP Projector—User's Manual*

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### **LAN\_RJ45**



#### 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 / AMX (Device Discovery) / Extron 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.
- ★ Extron is a registered trademark of Extron Electronics, Inc. of the United States.
- ★ AMX is a registered trademark of AMX LLC of the United States.
- ★ PJLink applied for trademark and logo registration in Japan, the United States of America, and other countries by JBMIA.

#### 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/>

This projector is supported by AMX ( Device Discovery ).

<http://www.amx.com/>

This projector is compliant to support Extron device(s) for reference.

<http://www.extron.com/>

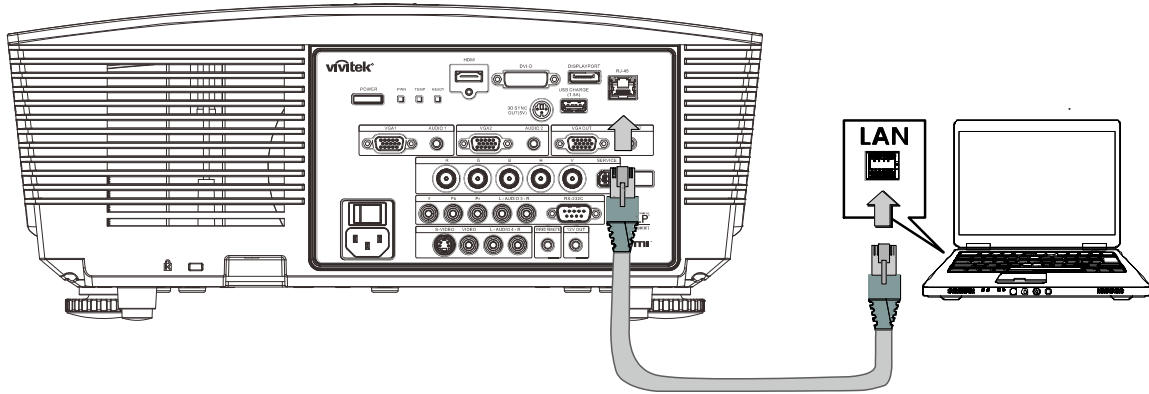
This projector supports all commands of PJLink Class1 (Version 1.00).

<http://pjlink.jbmia.or.jp/english/>

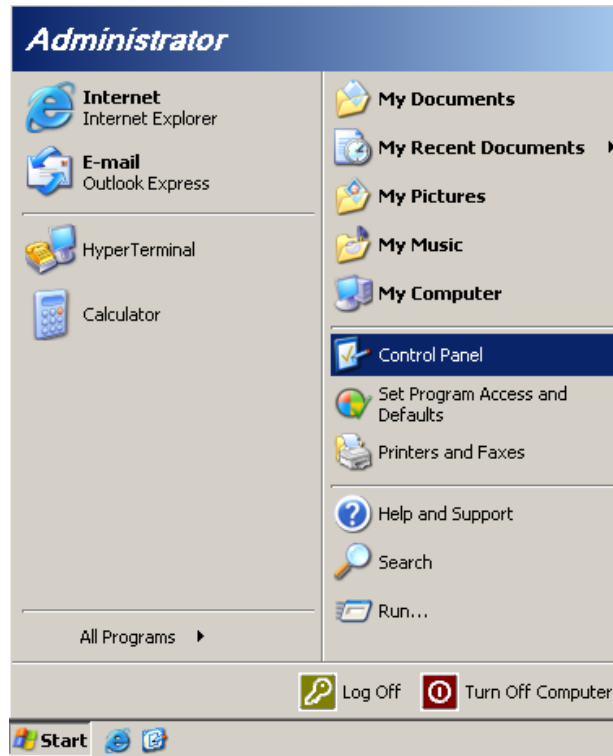
For more detail of information about the diverse types of external devices which can be connected to the LAN/RJ45 port and remote/control the projector, as well as the related control commands supporting for each external device, kindly please get contact with the Support-Service team directly.

## LAN RJ45

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



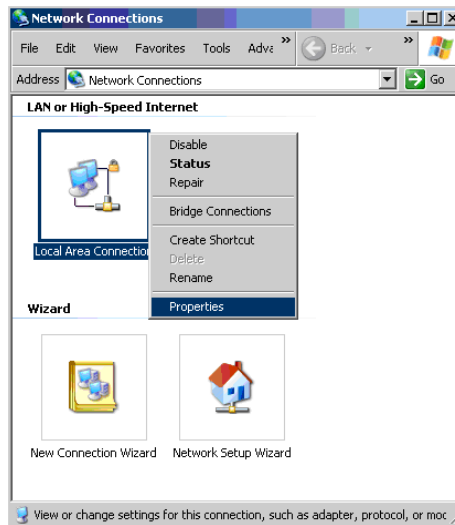
2. On the PC (Laptop), select **Start** → **Control Panel** → **Network Connections**.



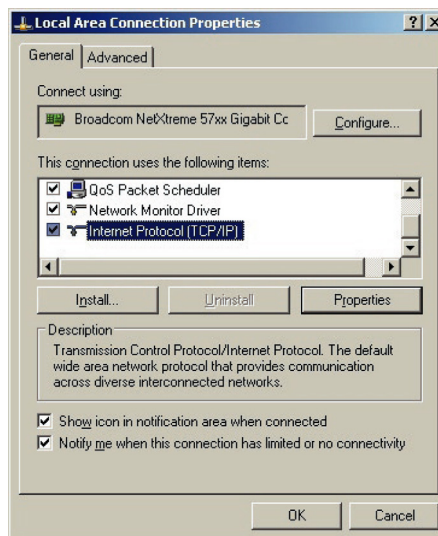
## DLP Projector—User's Manual

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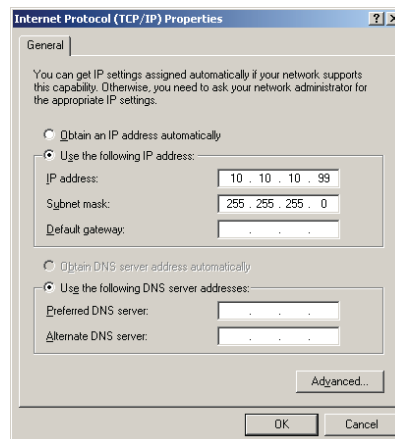
3. Right-click on **Local Area Connection**, and select **Properties**.



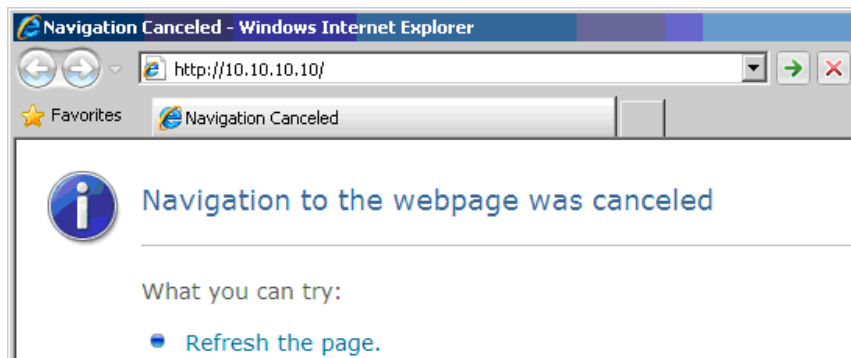
4. In the **Properties** window, select the **General** tab, and select **Internet Protocol (TCP/IP)**.
5. Click **Properties**.



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 **Settings2**→ **Advanced1** → **Network**
9. After getting into **Network**, input the following:
  - ▶ DHCP: Off
  - ▶ IP Address: 10.10.10.10
  - ▶ Subnet Mask: 255.255.255.0
  - ▶ Gateway: 0.0.0.0
  - ▶ DNS Server: 0.0.0.0
10. Press **↵** (Enter) / **▶** 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 **↵** (Enter) / **▶**.

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

Model Name	
<b>System</b>	
System Status	Power On
Display Source	No Source
Lamp Hours	2
Display Mode	Presentation
Error Status	No Error
<b>LAN Status</b>	
IP address	10.10.10.10
Subnet mask	255.255.0.0
Default gateway	0.0.0.0
DNS Server	0.0.0.0
MAC address	
<b>Version</b>	
LAN Version	
F/W Version	

## DLP Projector—User’s Manual



Expansion Options

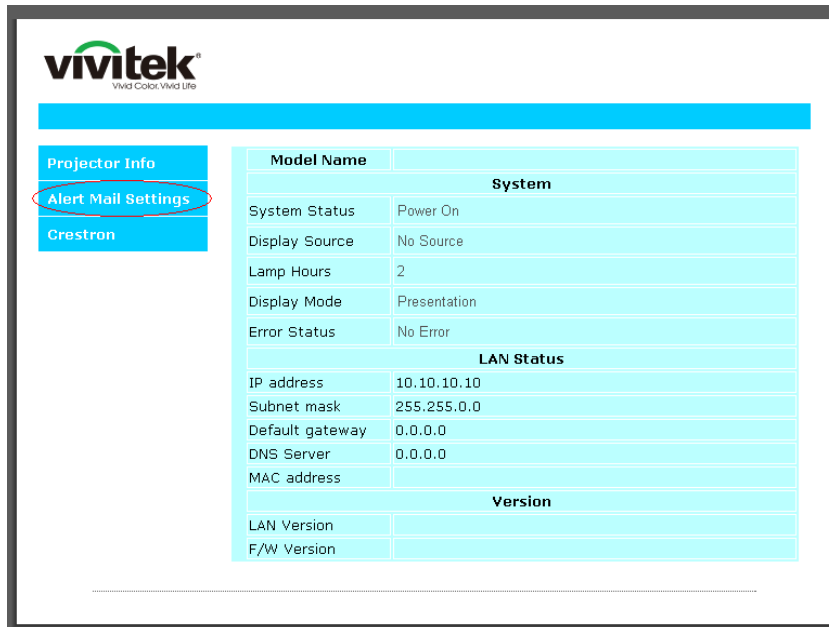
Crestron Control	Projector	User Password
IP Address <input type="text"/>	Projector Name <input type="text" value="PJ01"/>	<input type="checkbox"/> Usr Enabled
IP ID <input type="text"/>	Location <input type="text" value="RM01"/>	Password <input type="text"/>
Control Port <input type="text"/>	Assigned To <input type="text" value="Sir"/>	Confirmed <input type="text"/>
<input type="button" value="Control Set"/>	<input type="button" value="Set"/>	<input type="button" value="Usr Set"/>
	Network Config <input type="checkbox"/> DHCP Enabled	Admin Password
	IP Address <input type="text" value="10.10.10.10"/>	<input type="checkbox"/> Adm Enabled
	Subnet Mask <input type="text" value="255.255.255.0"/>	Password <input type="text"/>
	Default Gateway <input type="text" value="0.0.0.0"/>	Confirmed <input type="text"/>
	DNS Server <input type="text" value="0.0.0.0"/>	<input type="button" value="Adm Set"/>
	<input type="button" value="Net Set"/>	
	<input type="button" value="Tools Exit"/>	

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>.

## Preparing Email Alerts

1. Make sure that user can access the homepage of LAN RJ45 function by web browser (for example, Microsoft Internet Explorer v6.01/v8.0).
2. From the Homepage of LAN/RJ45, click **Alert Settings**.



The screenshot shows the Vivitek web interface. On the left, there is a navigation menu with three items: "Projector Info", "Alert Mail Settings" (which is circled in red), and "Crestron". The main content area displays a table of system and LAN status information.

Model Name	
<b>System</b>	
System Status	Power On
Display Source	No Source
Lamp Hours	2
Display Mode	Presentation
Error Status	No Error
<b>LAN Status</b>	
IP address	10.10.10.10
Subnet mask	255.255.0.0
Default gateway	0.0.0.0
DNS Server	0.0.0.0
MAC address	
<b>Version</b>	
LAN Version	
F/W Version	

3. By default, these input boxes in **Alert Settings** are blank.



The screenshot shows the "Send E-Mail" configuration page in the Vivitek web interface. The left navigation menu includes "Projector Info", "Alert Mail Settings", and "Crestron". The main content area has the title "Send E-Mail" and a sub-header "Send E-Mail". Below the title, there is a text box: "Enter the appropriate settings in the fields below: (Your SMTP server may not require a user name or password.)".

The configuration form includes the following fields and options:

- SMTP Server:** [Input field] **Port:** 25
- User Name:** [Input field]
- Password:** [Input field]
- From:** [Input field]
- To:** [Input field]
- CC:** [Input field]
- E-mail Alert Options:**
  - Fan lock :**  **Over\_Heat:**
  - Case Open:**  **Lamp Fail:**
  - Lamp Hours Over:**  **Filter Hours Over:**
  - Weekly Report:**

Buttons: "Mail Server Apply", "Mail Address Apply", "Alert Option Apply", and "Send Test Mail".

## DLP Projector—User's Manual

4. For Sending alert mail, input the following:
  - . The **SMTP** field is the mail server for sending out email (SMTP protocol). This is a required field.
  - . The **To** field is the recipient's email address (for example, the projector administrator). This is a required field.
  - . The **Cc** field sends a carbon copy of the alert to the specified email address. This is an optional field (for example, the projector administrator's assistant).
  - . The **From** field is the sender's email address (for example, the projector administrator). This is a required field.
  - . Select the alert conditions by checking the desired boxes.

**vivitek**  
Vivid Color. Vivid Life

**Send E-Mail**

Enter the appropriate settings in the fields below:  
(Your SMTP server may not require a user name or password.)

SMTP Server: mail.corp.com Port: 25

User Name: Sender.US

Password: .....

Mail Server Apply

From: send@mail.corp.com

To: rcvr1@mail.corp.com

CC: rcvr2@mail.corp.com

Mail Address Apply

E-mail Alert Options:

Fan lock :  Over\_Heat:

Case Open:  Lamp Fail:

Lamp Hours Over:  Filter Hours Over:

Weekly Report:

Alert Option Apply

Send Test Mail

**Note:** Fill in all fields as specified. User can click **Send Test Mail** to test what setting is correct. For successful sending an e-mail alert, you must select alert conditions and enter a correct e-mail address.

## **RS232 by Telnet Function**

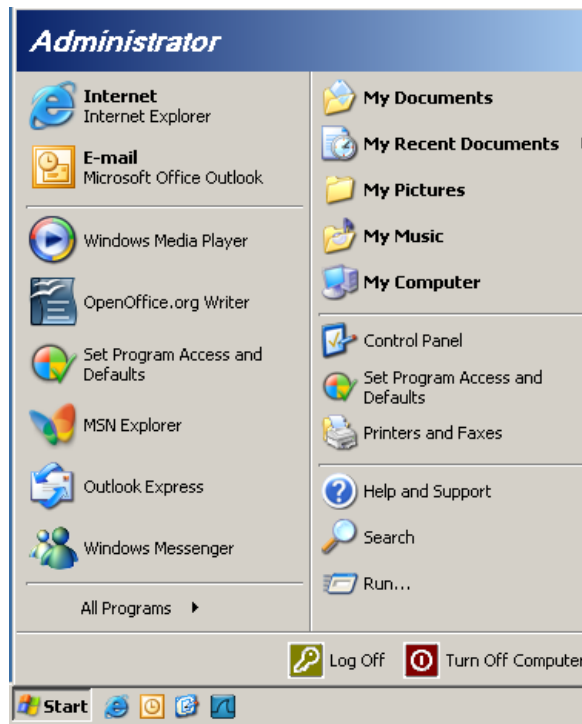
Besides projector connected to RS232 interface with “Hyper-Terminal” communication by dedicated RS232 command control, there is alternative RS232 command control way, so called “RS232 by TELNET” for LAN/RJ45 interface.

### Quick Start-Guide for “RS232 by TELNET”

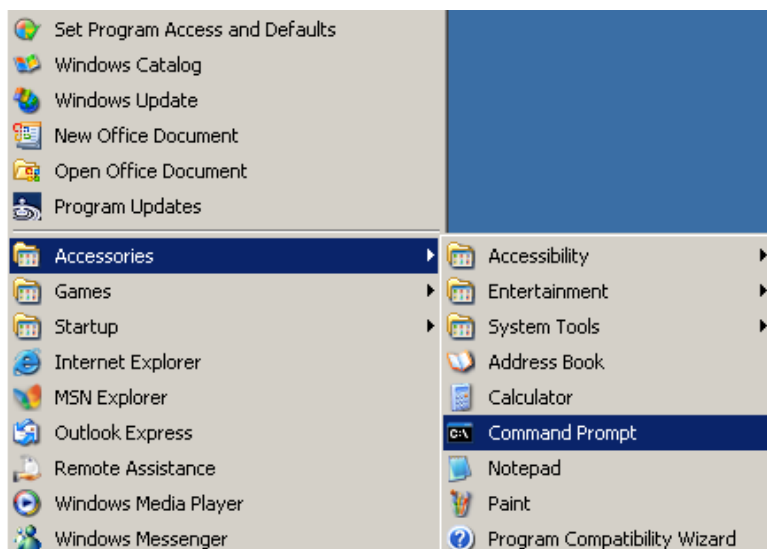
Check and get the IP-Address on OSD of the projector.

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





## DLP Projector—User’s Manual

Input the command format like the below:

**telnet ttt.xxx.yyy.zzz 23** (“Enter” key pressed)

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

If Telnet-Connection ready, and user can have RS232 command input, then “Enter” key pressed, the RS232 command will be workable.

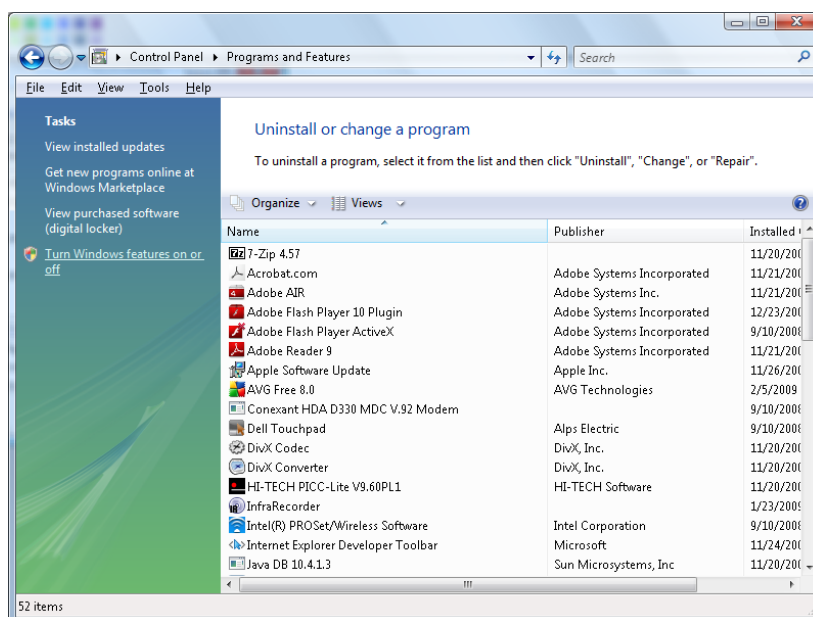
### How to have TELNET enabled in Windows VISTA / 7

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.

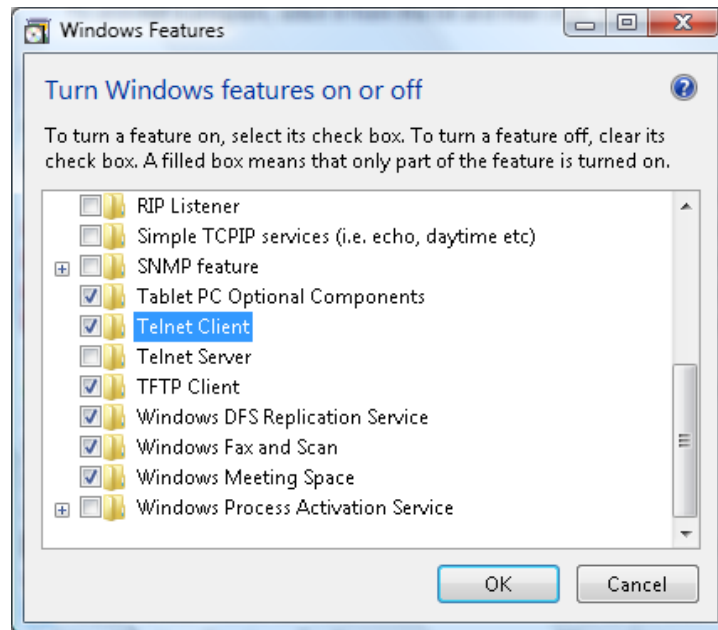
Open “Control Panel” in Windows VISTA



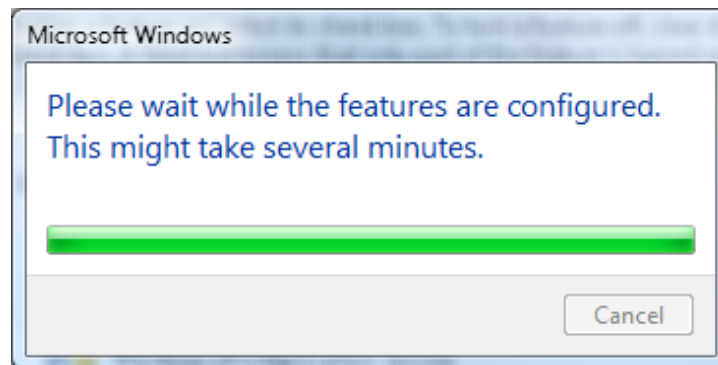
Open “Programs”



Select "Turn Windows features on or off" to open



Have "Telnet Client" option checked, then press "OK" button.



Specsheet for "RS232 by TELNET" :

1. Telnet: TCP
2. Telnet port: 23  
(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 26 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 XP built-in "TELNET.exe" utility, "Enter" key pressed will have "Carriage-Return" and "New-Line" code.)

## *DLP Projector—User’s Manual*

### Advanced 2 Feature

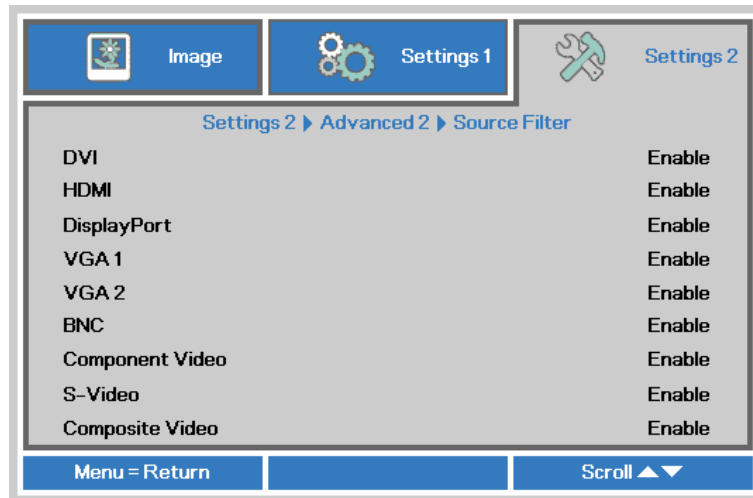
Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Settings 2** menu. Press ▲▼ to move to the **Advanced 2** menu and then press **Enter** or ▶. Press ▲▼ to move up and down in the **Advanced 2** menu. Press ◀▶ to enter and change values for setting.



ITEM	DESCRIPTION
Sleep Timer (min)	Press the cursor ◀▶ button to enter and set Sleep timer. The projector automatically turns off after the preset period of time.
Source Filter	Press ◀ (Enter) / ▶ to enter the Source Filter menu. See page 51 for more information on <i>Source Filter</i> .

*Source Filter*

Press the **ENTER** button to enter the **Source Filter** sub menu.

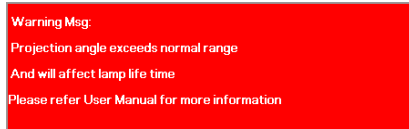


ITEM	DESCRIPTION
DVI	Press the ◀▶ buttons to enter and enable or disable the DVI source.
HDMI	Press the ◀▶ buttons to enter and enable or disable the HDMI source.
DisplayPort	Press the ◀▶ buttons to enter and enable or disable the DisplayPort source.
VGA1	Press the ◀▶ buttons to enter and enable or disable the VGA1 source.
VGA2	Press the ◀▶ buttons to enter and enable or disable the VGA2 source.
BNC	Press the ◀▶ buttons to enter and enable or disable the BNC source.
Component Video	Press the ◀▶ buttons to enter and enable or disable the Component Video source.
S-Video	Press the ◀▶ buttons to enter and enable or disable the S-Video source.
Composite Video	Press the ◀▶ buttons to enter and enable or disable the Composite Video source.

## MAINTENANCE AND SECURITY

### Tilt Up/Down caution

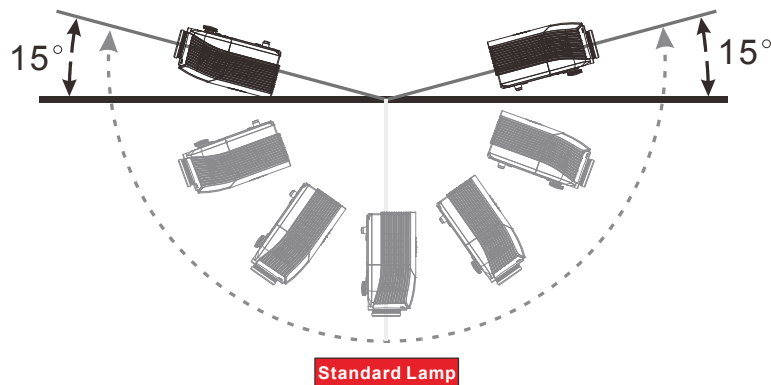
- When projector detect angle is over spec, popup caution message.



### The model with Standard lamp module

The model with Standard lamp module can be used projection angle as shown below.

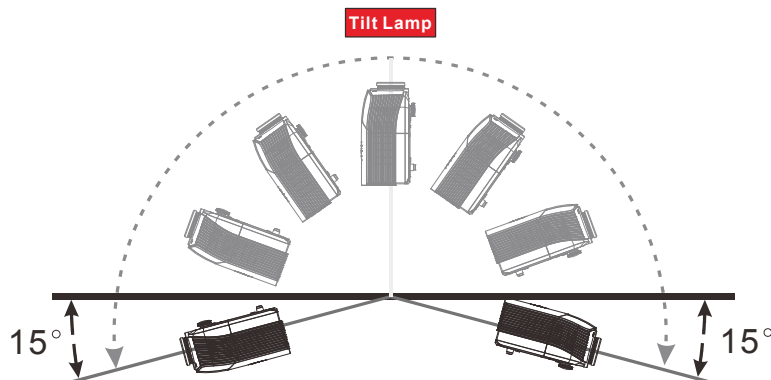
If Projector projection angle exceeds the drawing shown and don't use tilt lamp module. Showing caution message for 5sec and then disappear, projector remain on. (every time when projector on ; This function can be disable see Advanced 1 Feature on page 38 )



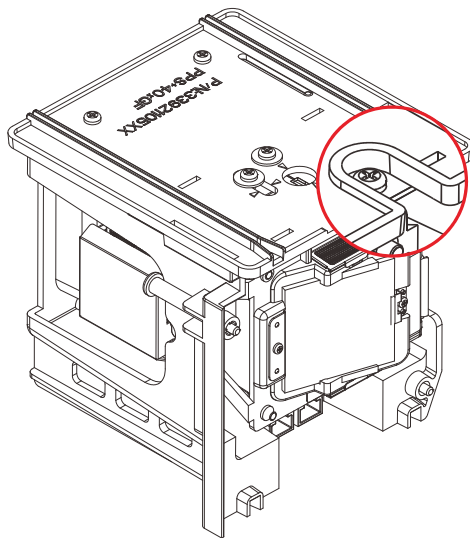
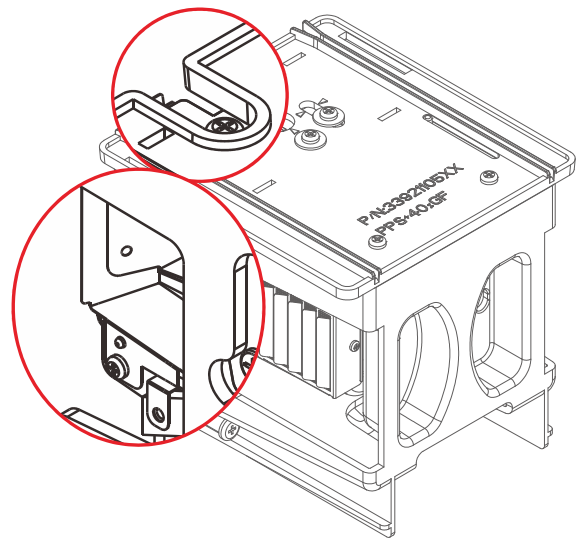
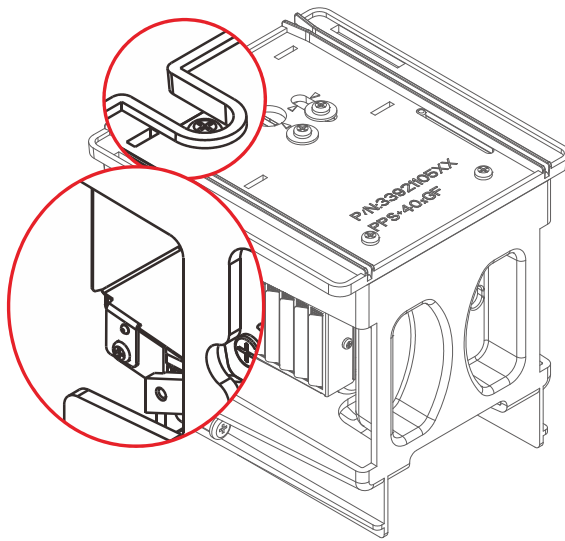
### The model with Tilt lamp module

The model with Tilt lamp module can be used projection angle as shown below.

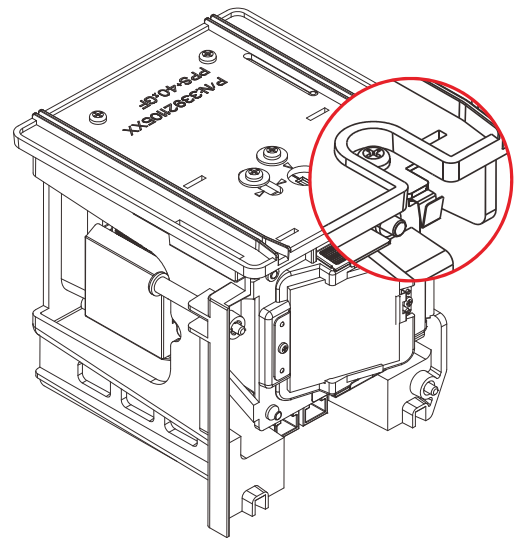
If Projector projection angle exceeds the drawing shown and don't use standard lamp module. Showing caution message for 5sec and then disappear, projector remain on. (every time when projector on ; This function can be disable see Advanced 1 Feature on page 38 )



**Warning:**  
Your operation might cause lamp defect and life decay. If used incorrect lamp module



Standard lamp module



Tilt lamp module  
( Optional )

**Note:**

*The standard lamp is to go with regular shipment for normal operation and the tilt lamp is an option lamp for abnormal operation*

## DLP Projector—User's Manual

### 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:**

- a. The projection lamp used in this product contains a small amount of mercury.
- b. Do not dispose this product with general household waste.
- c. 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.

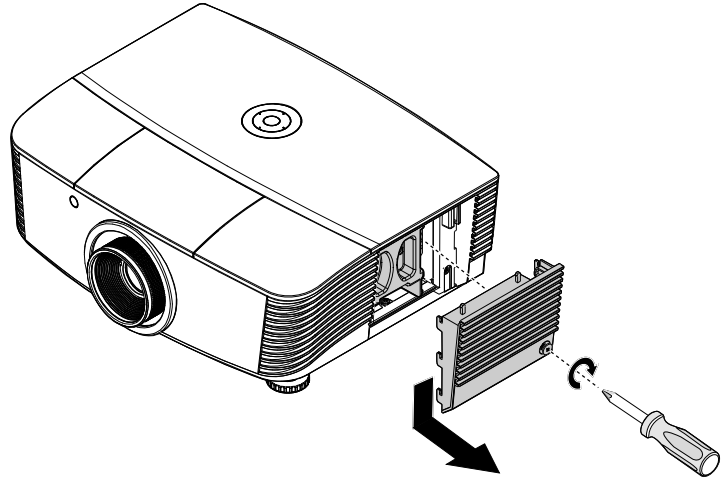
If you inhale the gas or the shards of the broken lamp enter your eyes or mouth, consult the doctor immediately.

1. Switch off the power to the projector by pressing the POWER button.
2. Allow the projector to cool down at least 30 minutes.
3. Disconnect the power cord.

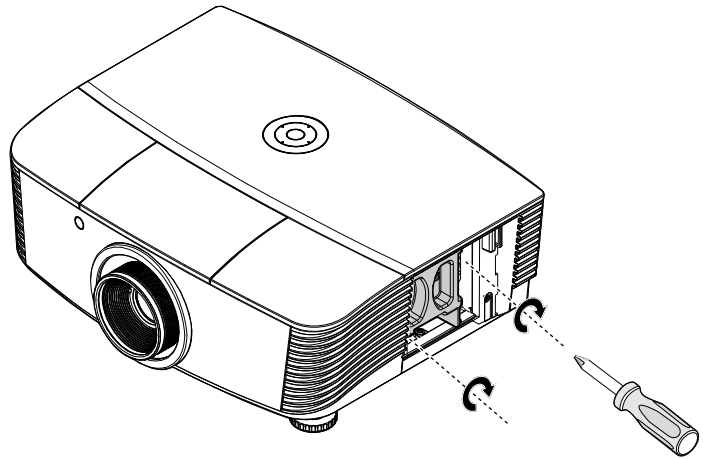


**4.** Unlock the lamp cover.

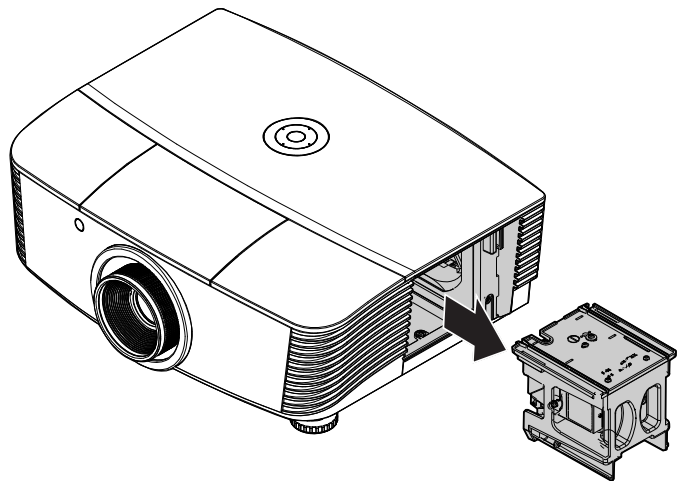
**5.** Pull up and remove the cover.



**6.** Use a screwdriver to remove the screws from the lamp module.



**7.** Pull out the lamp module.





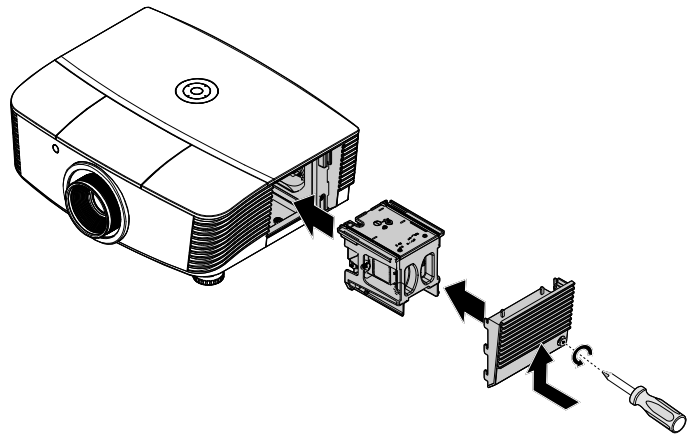
## *DLP Projector—User's Manual*

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- 8.** Reverse steps 1 to 7 to install the new lamp module.  
While installing, align the lamp module with the connector and ensure it is level to avoid damage.

**Note:**

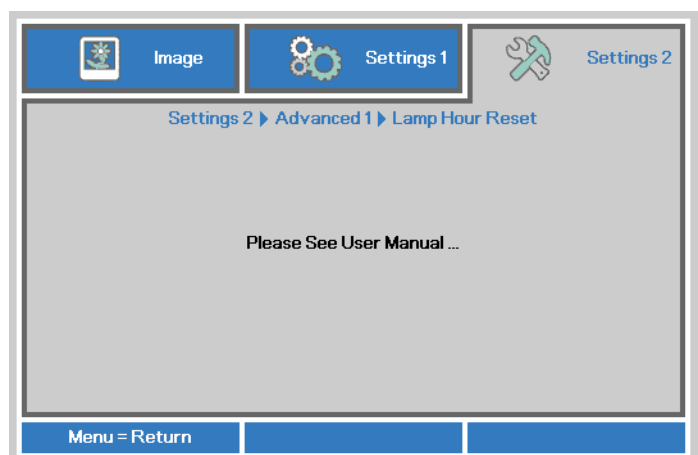
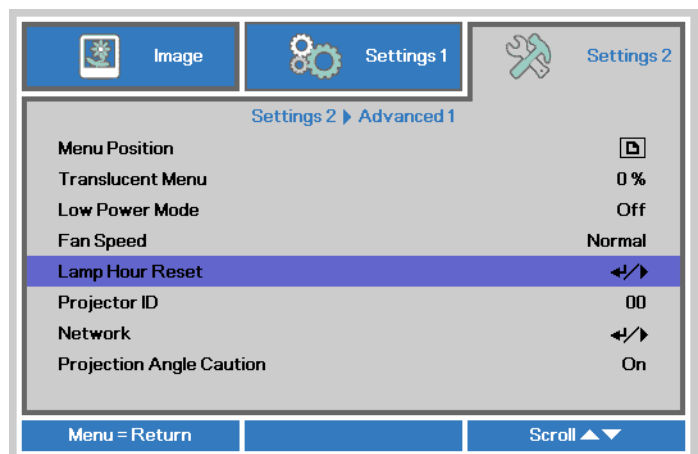
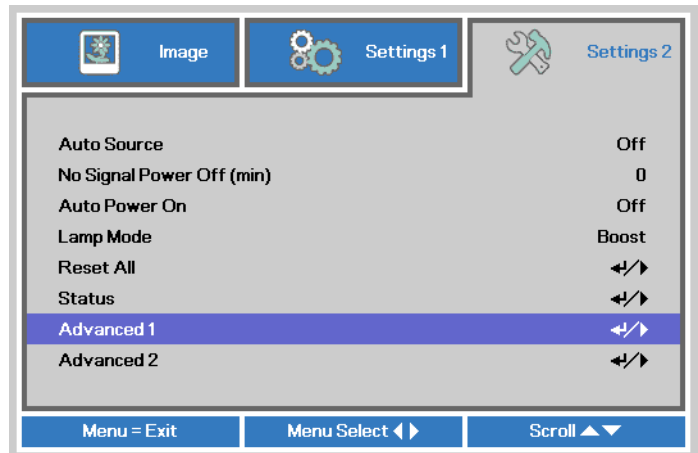
*The lamp module must sit securely in place and the lamp connector must be connected properly before tightening the screws.*



## Resetting the Lamp

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

1. Press the **MENU** button to open the OSD menu.
2. Press the cursor **◀▶** button to move to the **Settings 2** menu. Press the cursor button to move down to **Advanced 1** and press enter.
3. Press the cursor **▼▲** button to move down to **Lamp Hour Reset**.
4. Press the cursor **▶** or Enter button.  
  
A message screen appears.
5. Press **▼▲◀▶** buttons to reset the lamp hour.
6. Press the **MENU** button to get back to **Settings 2**.



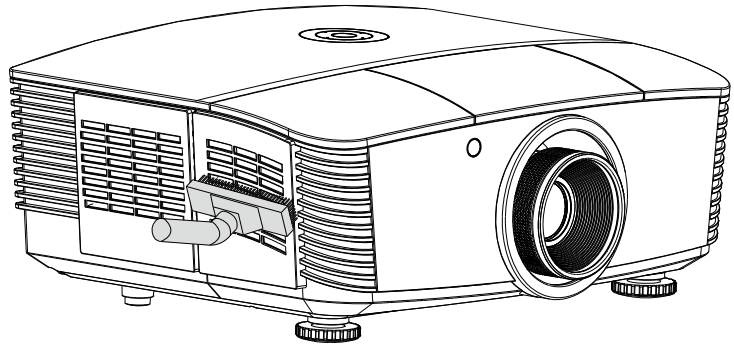
## *DLP Projector—User's Manual*

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### **Cleaning the filter (filter: optional parts)**

The air filter prevents dust from accumulating on the surface of the optical elements inside the projector. If the filter is dirty or clogged, your projector may overheat or degrading the projected image quality.

- 1.** Turn off the projector, and unplug the AC power cord from the AC outlet.
- 2.** Cleaning the filter with a vacuum cleaner.



**Caution:**

*Recommend avoiding dusty or smoky environments when you operate the projector, it may cause poor image quality.*

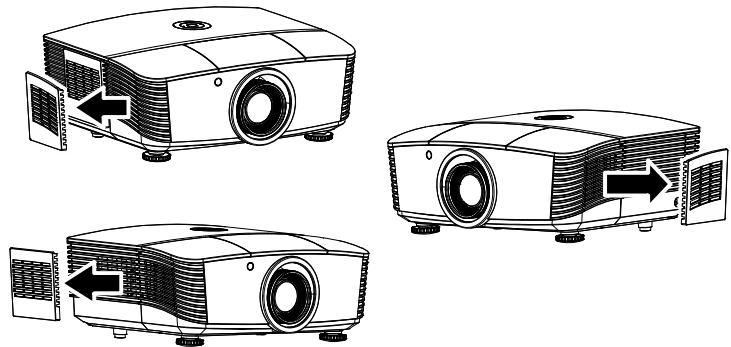
*If the filter is heavily clogged and unable to clean, replace a new filter.*

**Note:**

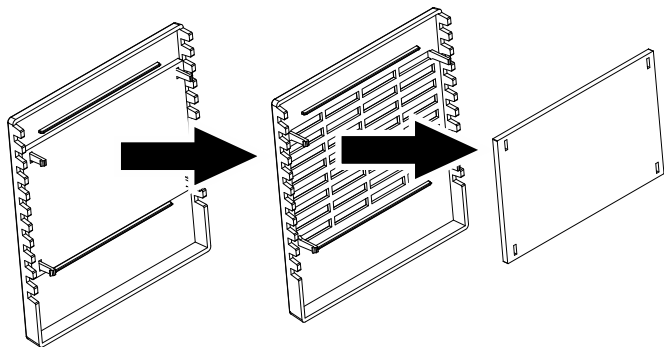
*Using a ladder is recommended to access the filter. Do not remove the projector from the wall mount.*

## Replacing the Filter

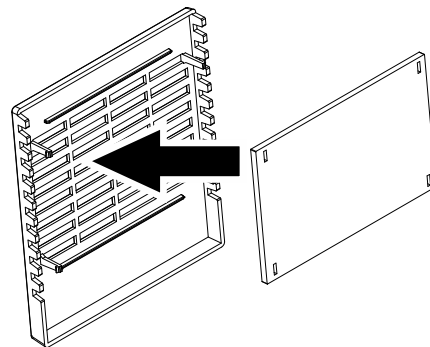
1. Turn off the projector, and unplug the AC power cord from the AC outlet.  
Clean up the dust on the projector and around the air vents.  
Pull out the filter cover and remove from the projector



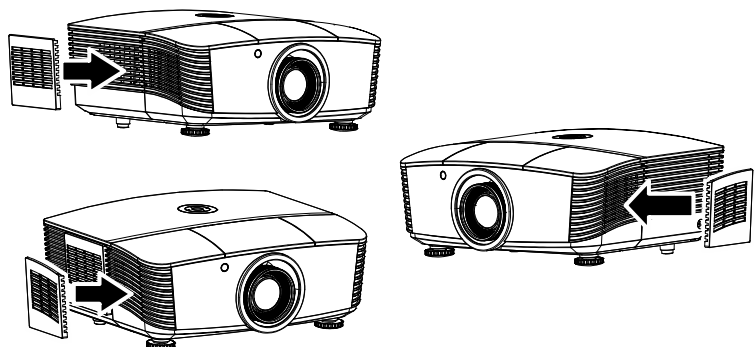
2. Lift the filter from the filter cover.



3. Replace a new filter module or replace filter into cover.



4. Replace the filter cover back to the projector by pushing gently in the direction shown.



**Warning:**

*Do not wash the filter with the water or other liquid matter*

**Important:**

*When the lamp is replaced, the filter should also be replaced, not cleaned.*

## *DLP Projector—User's Manual*

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### **Cleaning the Projector**

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

**Warning:**

- 1. 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.*
- 2. Use only a dampened cloth when cleaning. Do not allow water to enter the ventilation openings on the projector.*
- 3. If a little water gets into the projector interior while cleaning, leave unplugged in a well-ventilated room for several hours before using.*
- 4. If a lot of water gets into the projector interior when cleaning, have the projector serviced.*

### *Cleaning the Lens*

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

1. Apply a little optic 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:**

- 1. Do not use abrasive cleaners or solvents.*
- 2. 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.

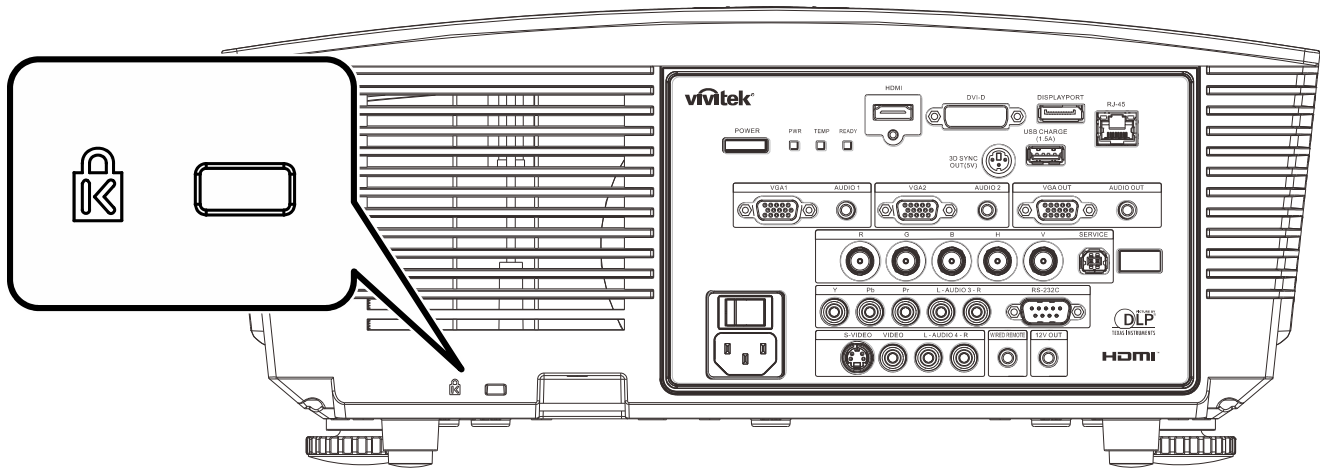
**Caution:**

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

## Using the Physical Lock

### 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:**

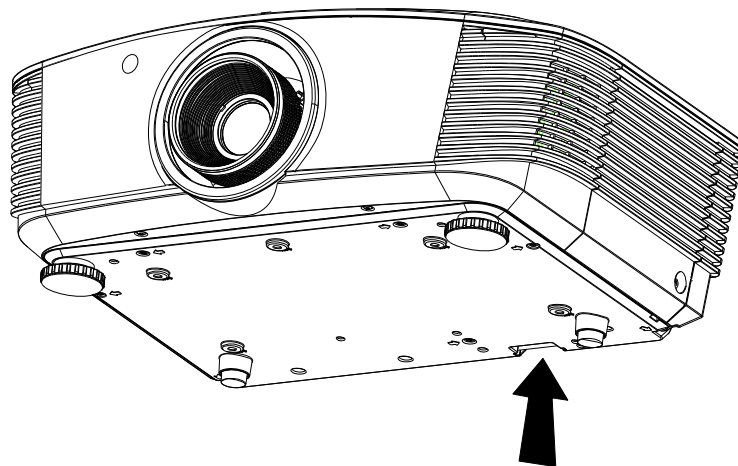
Contact your vendor for details on purchasing a suitable Kensington security cable.

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>.

### Using the Security Chain Lock

In addition to the password protection function and the Kensington lock, the Security Chain Opening helps protect the PROJECTOR from unauthorized use.

See the following picture.



## 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

ERROR CODE MESSAGES	POWER LED		TEMP LED	READY LED
	RED	BLUE	RED	RED
System Initial	Flash	—	OFF	OFF
Ready to Power on (Standby)	ON	—	OFF	OFF
System Power on	Flash	—	OFF	OFF
Lamp Lit , System stable		ON	OFF	ON
Cooling	Flash	—	OFF	OFF
Over Temperature	ON	—	ON	OFF
Thermal Break Sensor error	4 blinks	—	OFF	OFF
Lamp Fail	5 blinks	—	OFF	ON
Lamp Temperature shut down	5 blinks	—	OFF	1 blinks
Lamp Short circuit in output detected	5 blinks	—	OFF	2 blinks
Lamp End of lamp life detected	5 blinks	—	OFF	3 blinks
Lamp did not ignite	5 blinks	—	OFF	4 blinks
Lamp extinguished during normal operation	5 blinks	—	OFF	5 blinks
Lamp extinguished during run-up phase	5 blinks	—	OFF	6 blinks
Lamp voltage got error	5 blinks	—	OFF	7 blinks
Lamp ballast got error	5 blinks	—	OFF	8 blinks
Ballast watt value is out of range (Lamp Normal & Eco mode)	5 blinks	—	OFF	9 blinks
Lamp ballast Communication error	5 blinks	—	OFF	10 blinks
Lamp ballast power error	5 blinks	—	OFF	11 blinks
Fan-1 error	6 blinks	—	OFF	1 blinks
Fan-2 error	6 blinks	—	OFF	2 blinks
Fan-3 error	6 blinks	—	OFF	3 blinks
Fan-4 error	6 blinks	—	OFF	4 blinks
Fan-5 error	6 blinks	—	OFF	5 blinks
Case Open	7 blinks	—	OFF	OFF
DAD1000 error	8 blinks	—	OFF	OFF
Color wheel error	9 blinks	—	OFF	OFF

In the event of an error, please disconnect the AC power cord and wait for one (1) minute before restarting the projector. If the Power or Ready LEDs are still blinking or any other situation that isn't listed in the chart above, please contact your service center.

## 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 up again in the correct order.

### ***Problem: The image is blurred***

1. Adjust the **Focus** on the projector.
2. Press the **Auto** button on the remote control.
3. Ensure the projector-to-screen distance is within the specified range.
4. Check that the projector lens is clean.



## *DLP Projector—User's Manual*

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***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. Use the **Keystone** button on the remote control to correct the problem.

***Problem: The image is reversed***

Check the **Projection** setting on the **Settings 1** menu of the OSD.

***Problem: The image is streaked***

1. Set the **Frequency** and **Tracking** settings on the **Image->Computer** menu of the OSD to the default settings.
2. To 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 **Image** 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 **Image->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 Power LED is on.
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 Power LED is on, press the power button.
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. Check the battery polarity.
5. Replace the battery.
6. Turn off other Infrared-enabled devices in the vicinity.
7. Have the remote control serviced.

## Audio Problems

### ***Problem: There is no sound***

1. Adjust the volume on the remote control.
2. Adjust the volume of the audio source.
3. Check the audio cable connection.
4. Test the source audio output with other speakers.
5. Have the projector serviced.

### ***Problem: The sound is distorted***

1. Check the audio cable connection.
2. Test the source audio output with other speakers.
3. Have the projector 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.

## *DLP Projector—User’s Manual*

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### **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

### Specifications

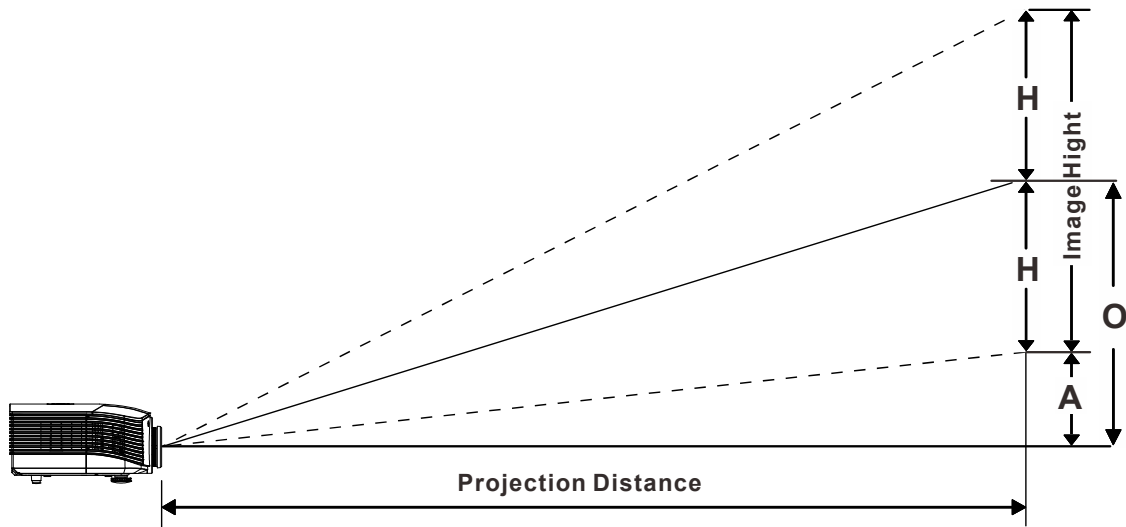
Model	D5010/D501ZAA/D501ZWAA	D5110W	D5380U
Display type	0.7" XGA DC3	0.65" WXGA DC2	0.67" WUXGA DC3 TypeA
Resolution	1024x768	1280x800	1920x1200
Projection distance	1.5 meters ~ 7 meters		
Projection screen size	37.3" ~ 215"	34.3" ~ 200"	36" ~ 210"
Projection lens	Manual Focus/Manual Zoom		
Throw ratio	1.6 ~ 2.0	1.62 ~ 2.03	1.54 ~ 1.93
Vertical keystone correction	±40°		
Projection methods	Front, Rear, Desktop/Ceiling (Rear, Front)		
Data compatibility	VGA, SVGA, XGA, SXGA, SXGA+, UXGA, WUXGA@60hz, Mac		
SDTV/EDTV/ HDTV	480i, 576i, 480p, 576p, 720p, 1080i, 1080p		
Video compatibility	NTSC (M, 3.58/4.43 MHz), PAL (B, D, G, H, I, M, N), SECAM (B, D, G, K, K1, L)		
H-Sync	15, 31-91.4kHz		
V-Sync	24~30Hz, 47 ~ 120Hz		
Safety certification	FCC-B, cUL, UL, CE, C-tick, CCC, KC, CB, PCT		
Operation temperature	5° ~ 35°C		
Dimensions	431.11mm (W) x 344.16mm (D) x 180.57mm (H)		
AC Input	AC Universal 100 – 240V		
Power consumption	Typical 480W (boost) , <0.5watts(Stand By)/ Typical 365W(standard) , <0.5watts(Stand By)		
Lamp	370W (Normal) / 280W (Eco)		
Audio speaker	3W x 2		
Input Terminals	VGA x 2		
	DisplayPort x 1		
	DVI-D x 1		
	S-Video x 1		
	5 BNC (RGBHV) x 1		
	Component x 1		
	Composite video x 1		
	HDMI x 1		
	RCA stereo x 2		
	Mini-jack stereo x 2		
Output Terminals	VGA x 1		
	PC audio out x 1		
Control Terminals	RS-232C		
	RJ45		
	Screen trigger: DC Jack x 1 (DC12V 200mA output function)		
	wire remote		
	USB (type B) only for service/mouse control		
Security	USB (type A) only for power supply; WHDI		
	3D sync		
	Kensington lock		

## DLP Projector—User's Manual

### Specifications

Model	D5005	D5290U	D5190HD
Display type	0.7" XGA DC3	0.67" WUXGA DC3 TypeA	0.65" 1080P DC2 TypeA
Resolution	1024x768	1920x1200	1920x1080
Projection distance	1.5 meters ~ 7 meters		
Projection screen size	37.3" ~ 215"	36" ~ 210"	35.1" ~ 205"
Projection lens	Manual Focus/Manual Zoom		
Throw ratio	1.6 ~ 2.0	1.54 ~ 1.93	
Vertical keystone correction	±40°		
Projection methods	Front, Rear, Desktop/Ceiling (Rear, Front)		
Data compatibility	VGA, SVGA, XGA, SXGA, SXGA+, UXGA, WUXGA@60hz, Mac		
SDTV/EDTV/ HDTV	480i, 576i, 480p, 576p, 720p, 1080i, 1080p		
Video compatibility	NTSC (M, 3.58/4.43 MHz), PAL (B, D, G, H, I, M, N), SECAM (B, D, G, K, K1, L)		
H-Sync	15, 31-91.4kHz		
V-Sync	24~30Hz, 47 ~ 120Hz		
Safety certification	FCC-B, cUL, UL, CE, C-tick, CCC, KC, CB, PCT		
Operation temperature	5° ~ 35°C		
Dimensions	431.11mm (W) x 344.16mm (D) x 180.57mm (H)		
AC Input	AC Universal 100 – 240V		
Power consumption	Typical 420W (boost) <0.5watts(Stand By)/ Typical 365W(standard) <0.5watts(Stand By)		
Lamp	330W (Normal) / 280W (Eco)		370W (Normal) / 280W (Eco)
Audio speaker	3W x 2		
Input Terminals	VGA x 2		
	DisplayPort x 1		
	DVI-D x 1		
	S-Video x 1		
	5 BNC (RGBHV) x 1		
	Component x 1		
	Composite video x 1		
	HDMI x 1		
	RCA stereo x 2		
	Mini-jack stereo x 2		
Output Terminals	VGA x 1		
	PC audio out x 1		
Control Terminals	RS-232C		
	RJ45		
	Screen trigger: DC Jack x 1 (DC12V 200mA output function)		
	wire remote		
	USB (type B) only for service/mouse control		
	USB (type A) only for power supply; WHDI		
Security	3D sync		
	Kensington lock		

## Projection Distance vs. Projection Size (WUXGA)



### Projection Distance and Size Table

*Standard projection lens: TR: 1.54 ~ 1.93; offset=110%*

	TELE				WIDE			
Distance (m)	1.66	3.33	4.16	8.31	1.66	3.32	6.63	9.95
Diagonal (")	40	80	100	200	50	100	200	300
Image Width (mm)	862	1723	2154	4308	1077	2154	4308	6462
Image Height (mm)	538	1077	1346	2692	673	1346	2692	4039
H (mm)	269	538	673	1346	337	673	1346	2019
O (mm)	296	592	740	1481	370	740	1481	2221
A (mm)	27	54	67	135	34	67	135	202

*Long throw projection lens: TR: 1.93 ~ 2.9; offset=110%*

	TELE				WIDE			
Distance (m)	2.5	6.25	12.49	18.74	2.08	6.24	12.47	18.71
Diagonal (")	40	100	200	300	50	150	300	450
Image Width (mm)	862	2154	4308	6462	1077	3231	6462	9693
Image Height (mm)	538	1346	2692	4039	673	2019	4039	6058
H (mm)	269	673	1346	2019	337	1010	2020	3029
O (mm)	296	740	1481	2221	370	1111	2222	3332
A (mm)	27	67	135	202	34	101	202	303

## *DLP Projector—User's Manual*

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*Short throw projection lens: TR: 0.77; offset=110%*

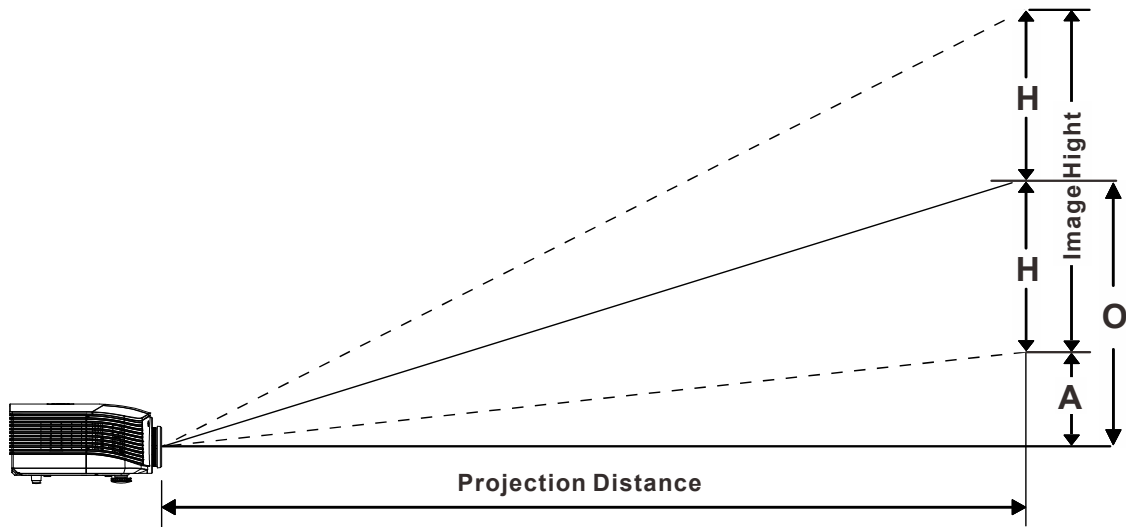
	Fix			
Distance (m)	0.66	1.33	1.66	2.49
Diagonal (")	40	80	100	150
Image Width (mm)	862	1723	2154	3231
Image Height (mm)	538	1077	1346	2019
H (mm)	269	538	673	1010
O (mm)	296	592	740	1111
A (mm)	27	54	67	101

offset % =  $O/H \times 100\%$

$O=A+H$

$H=(1/2) \times (\text{image height})$

## Projection Distance vs. Projection Size (WXGA)



### Projection Distance and Size Table

Standard projection lens: TR: 1.62 ~ 2.03; offset=110%

	TELE				WIDE			
Distance (m)	1.75	3.5	4.37	8.74	1.74	3.49	6.98	10.47
Diagonal (")	40	80	100	200	50	100	200	300
Image Width (mm)	862	1723	2154	4308	1077	2154	4308	6462
Image Height (mm)	538	1077	1346	2692	673	1346	2692	4039
H (mm)	269	538	673	1346	337	673	1346	2019
O (mm)	296	592	740	1481	370	740	1481	2221
A (mm)	27	54	67	135	34	67	135	202

Long throw projection lens: TR: 2.03 ~ 3.05; offset=110%

	TELE				WIDE			
Distance (m)	2.63	6.57	13.14	19.71	2.19	6.56	13.12	19.68
Diagonal (")	40	100	200	300	50	150	300	450
Image Width (mm)	862	2154	4308	6462	1077	3231	6462	9693
Image Height (mm)	538	1346	2692	4039	673	2019	4039	6058
H (mm)	269	673	1346	2019	337	1010	2019	3029
O (mm)	296	740	1481	2221	370	1111	2221	3332
A (mm)	27	67	135	202	34	101	202	303



## *DLP Projector—User's Manual*

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*Short throw projection lens: TR: 0.81; offset=110%*

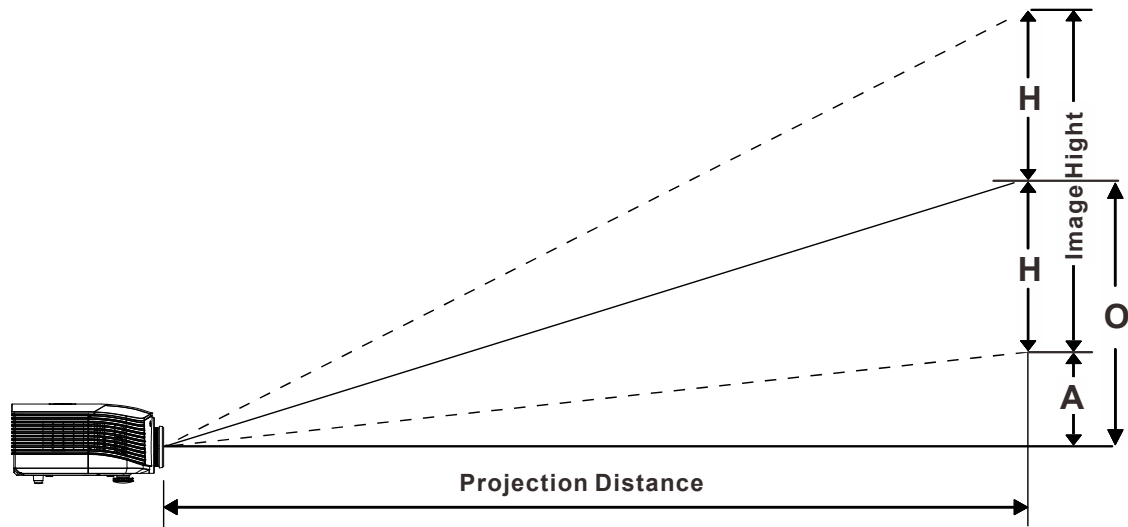
	Fix			
Distance (m)	0.7	1.4	1.74	2.62
Diagonal (")	40	80	100	150
Image Width (mm)	862	1723	2154	3231
Image Height (mm)	538	1077	1346	2019
H (mm)	269	538	673	1010
O (mm)	296	592	740	1111
A (mm)	27	54	67	101

offset % =  $O/H \times 100\%$

$O=A+H$

$H=(1/2) \times (\text{image height})$

## Projection Distance vs. Projection Size (XGA)



### Projection Distance and Size Table

Standard projection lens: TR: 1.6 ~ 2; offset=100%

	TELE				WIDE			
Distance (m)	1.63	3.25	4.06	8.13	1.63	3.25	6.50	9.75
Diagonal (")	40	80	100	200	50	100	200	300
Image Width (mm)	813	1626	2032	4064	1016	2032	4064	6096
Image Height (mm)	610	1219	1524	3048	762	1524	3048	4572
H (mm)	305	610	762	1524	381	762	1524	2286
O (mm)	305	610	762	1524	381	762	1524	2286
A (mm)	0	0	0	0	0	0	0	0

Long throw projection lens: TR: 2~ 3; offset=100%

	TELE				WIDE			
Distance (m)	2.44	6.10	12.19	18.29	2.03	6.10	12.19	18.29
Diagonal (")	40	100	200	300	50	150	300	450
Image Width (mm)	813	2032	4064	6096	1016	3048	6096	9144
Image Height (mm)	610	1524	3048	4572	762	2286	4572	6858
H (mm)	305	762	1524	2286	381	1143	2286	3429
O (mm)	305	762	1524	2286	381	1143	2286	3429
A (mm)	0	0	0	0	0	0	0	0

## *DLP Projector—User's Manual*

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*Short throw projection lens: TR: 0.8; offset=100%*

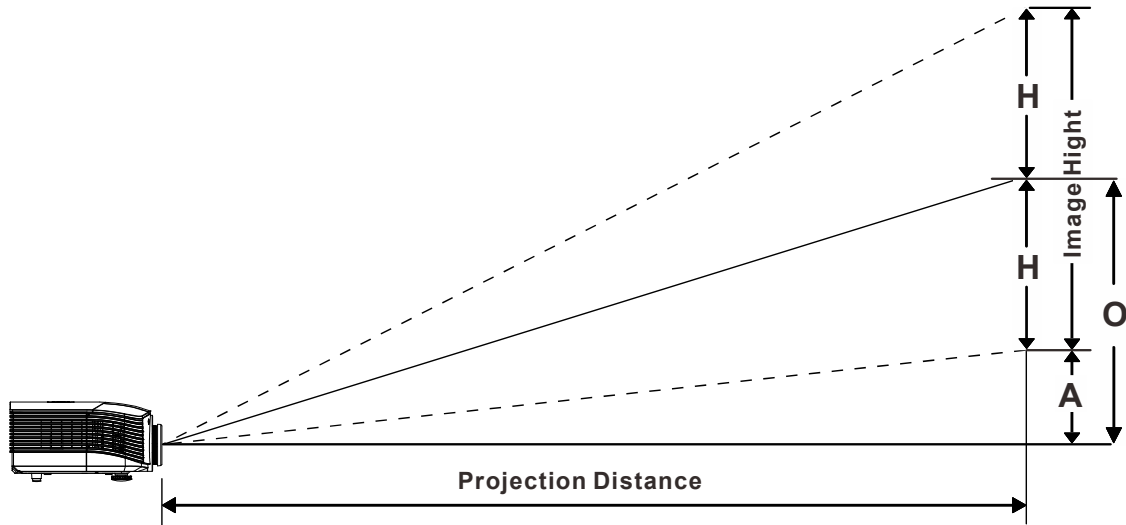
	Fix			
Distance (m)	0.65	1.3	1.63	2.44
Diagonal (")	40	80	100	150
Image Width (mm)	813	1626	2032	3048
Image Height (mm)	610	1219	1524	2286
H (mm)	305	610	762	1143
O (mm)	305	610	762	1143
A (mm)	0	0	0	0

offset % =  $O/H \times 100\%$

$O=A+H$

$H=(1/2) \times (\text{image height})$

## Projection Distance vs. Projection Size (1080P)



### Projection Distance and Size Table

*Standard projection lens: TR: 1.54 ~ 1.93; offset=120%*

	TELE				WIDE			
Distance (m)	1.71	3.42	4.27	8.55	1.70	3.41	6.82	10.23
Diagonal (")	40	80	100	200	50	100	200	300
Image Width (mm)	886	1771	2214	4428	1107	2214	4428	6641
Image Height (mm)	498	996	1245	2491	623	1245	2491	3736
H (mm)	249	498	623	1245	311	623	1245	1868
O (mm)	299	598	747	1494	374	747	1494	2241
A (mm)	50	100	125	249	62	125	249	374

*Long throw projection lens: TR: 1.93 ~ 2.9; offset=120%*

	TELE				WIDE			
Distance (m)	2.57	6.42	12.84	19.26	2.14	6.41	12.82	19.23
Diagonal (")	40	100	200	300	50	150	300	450
Image Width (mm)	886	2214	4428	6641	1107	3321	6641	9962
Image Height (mm)	498	1245	2491	3736	623	1868	3736	5604
H (mm)	249	623	1245	1868	311	934	1868	2802
O (mm)	299	747	1494	2241	374	1121	2241	3362
A (mm)	50	125	249	374	62	187	374	560

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Short throw projection lens: TR: 0.77; offset=120%

	TELE			
Distance (m)	0.68	1.36	1.70	2.56
Diagonal (")	40	80	100	150
Image Width (mm)	886	1771	2214	3321
Image Height (mm)	498	996	1245	1868
H (mm)	249	498	623	934
O (mm)	299	598	747	1121
A (mm)	50	100	125	187

offset % =  $O/H \times 100\%$

$O=A+H$

$H=(1/2) \times (\text{image height})$

## Timing Mode Table

Signal	Resolution	H-Sync (KHz)	V-Sync (Hz)	Composite S-Video	Component	RGB (Analog)	DP/DVI HDMI (Digital)
NTSC	—	15.7	60.0	○	—	—	—
PAL/SECAM	—	15.6	50.0	○	—	—	—
VESA	640 x 400	37.9	85.1	—	—	○	○
	720 x 400	31.5	70.1	—	—	○	○
	720 x 400	37.9	85.0	—	—	○	○
	640 x 480	31.5	60.0	—	—	○	○
	640 x 480	37.9	72.8	—	—	○	○
	640 x 480	37.5	75.0	—	—	○	○
	640 x 480	43.3	85.0	—	—	○	○
	800 x 600	35.2	56.3	—	—	○	○
	800 x 600	37.9	60.3	—	—	○	○
	800 x 600	46.9	75.0	—	—	○	○
	800 x 600	48.1	72.2	—	—	○	○
	800 x 600	53.7	85.1	—	—	○	○
	800 x 600	76.3	120.0	—	—	○	○
	1024 x 576	35.8	60.0	—	—	○	○
	1024 x 600	37.3	60.0	—	—	○	○
	1024 x 600	41.5	65.0	—	—	○	○
	1024 x 768	48.4	60.0	—	—	○	○
	1024 x 768	56.5	70.1	—	—	○	○
	1024 x 768	60.0	75.0	—	—	○	○
	1024 x 768	68.7	85.0	—	—	○	○
	1024 x 768	97.6	120.0	—	—	○	○
	1024 x 768	99.0	120.0	—	—	○	○
	1152 x 864	67.5	75.0	—	—	○	○
	1280 x 720	45.0	60.0	—	—	○	○
	1280 x 720	90.0	120.0	—	—	○	○
	1280 x 768	47.4	60.0	—	—	○	○
	1280 x 768	47.8	59.9	—	—	○	○
	1280 x 800	49.7	59.8	—	—	○	○
	1280 x 800	62.8	74.9	—	—	○	○
	1280 x 800	71.6	84.9	—	—	○	○
	1280 x 800	101.6	119.9	—	—	○	○
	1280 x 1024	64.0	60.0	—	—	○	○
	1280 x 1024	80.0	75.0	—	—	○	○
	1280 x 1024	91.1	85.0	—	—	○	○
	1280 x 960	60.0	60.0	—	—	○	○
	1280 x 960	85.9	85.0	—	—	○	○
	1360 x 768	47.7	60.0	—	—	○	○
	1400 x 1050	65.3	60.0	—	—	○	○
	1440 x 900	55.5	59.9	—	—	○	○
	1440 x 900	55.9	59.9	—	—	○	○
1440 x 900	70.6	75.0	—	—	○	○	
1600 x 1200	75.0	60.0	—	—	○	○	

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Signal	Resolution	H-Sync (KHz)	V-Sync (Hz)	Composite S-Video	Component	RGB (Analog)	DP/DVI HDMI (Digital)
	1680 x 1050	64.7	59.9	—	—	○	○
	1680 x 1050	65.3	60.0	—	—	○	○
	1920 x 1200	74.0	60.0	—	—	○	○
	1920 x 1080	67.5	60.0	—	—	○	○
Apple Macintosh	640 x 480	35.0	66.7	—	—	○	○
	832 x 624	49.7	74.5	—	—	○	○
	1024 x 768	60.2	74.9	—	—	○	○
	1152 x 870	68.7	75.1	—	—	○	○
SDTV	480i	15.7	60.0	—	○	—	○
	576i	15.6	50.0	—	○	—	○
EDTV	576p	31.3	50.0	—	○	—	○
	480p	31.5	60.0	—	○	—	○
HDTV	720p	37.5	50.0	—	○	—	○
	720p	45.0	60.0	—	○	—	○
	1080i	33.8	60.0	—	○	—	○
	1080i	28.1	50.0	—	○	—	○
	1080p	27.0	24.0	—	○	—	○
	1080p	28.0	25.0	—	○	—	○
	1080p	33.7	30.0	—	○	—	○
	1080p	56.3	50.0	—	○	—	○
	1080p	67.5	60.0	—	○	—	○

○: Frequency supported

—: Frequency not supported

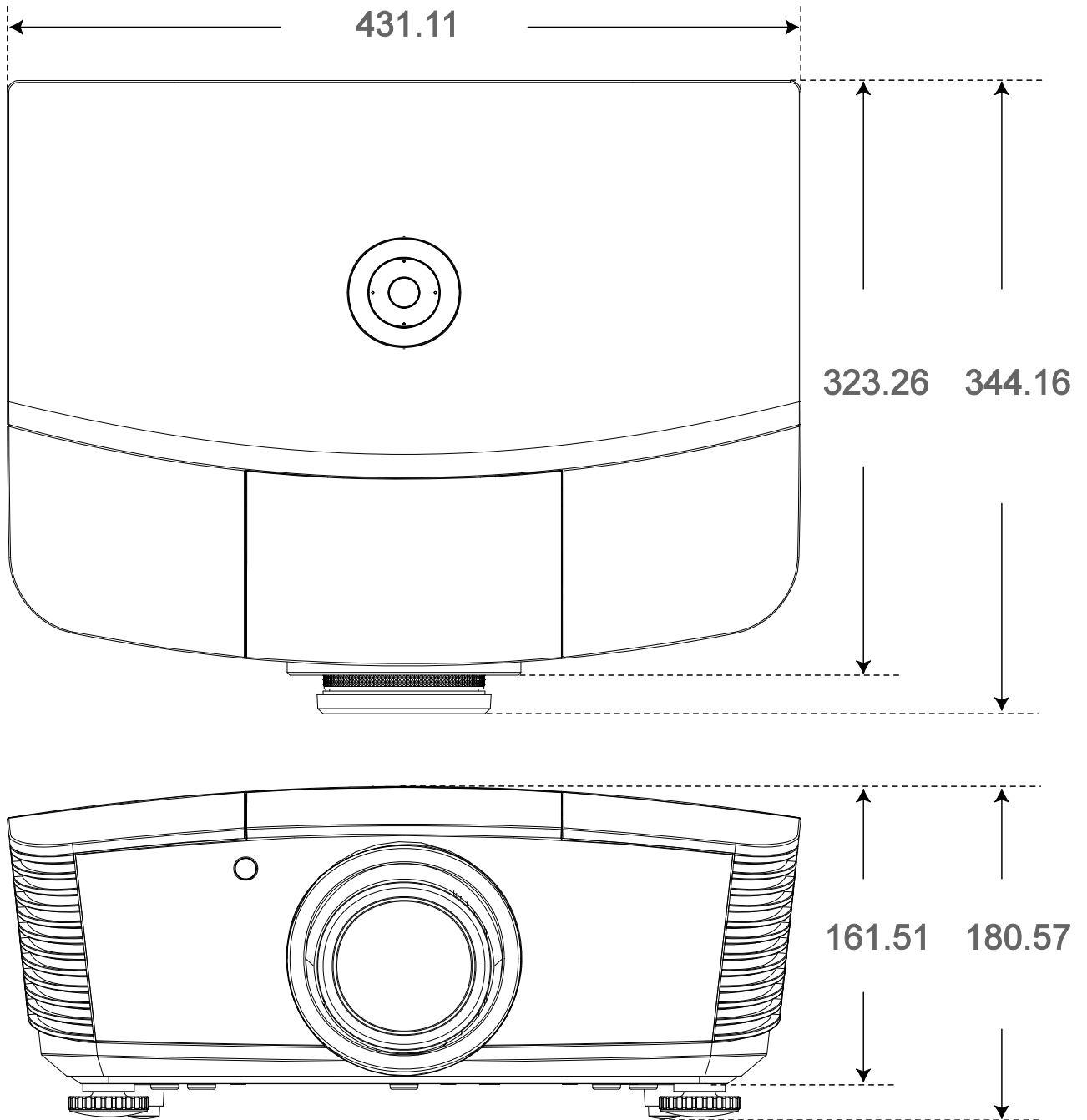
Resolution others than native resolution may be display with uneven size of text or line.

★ The color of  mean Displayable only. (4:3 only)

★ The color of  mean may have a little noise is acceptable, Because video mode sync don't auto adjustment.

★ HDTV timing main check tool is DVD player, VG828 is secondary.

## Projector Dimensions





## **REGULATORY COMPLIANCE**

### **FCC Warning**

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference 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 B digital apparatus complies with Canadian ICES-003.

### **Safety Certifications**

FCC-B, cUL, UL, CE, C-tick, CCC, KC, CB, PCT

## APPENDIX I

### RS-232C Protocol

#### RS232 Setting

Baud rate:	9600
Parity check:	None
Data bit:	8
Stop bit:	1
Flow Control	None

#### Control Command Structure

	Header code	Command code	Data code	End code
HEX		Command	Data	0Dh
ASCII	'V'	Command	Data	CR

#### Operation Command

**Note:**

*XX=00-98, projector's ID, XX=99 is for all projectors*

*Return Result P=Pass / F=Fail*

*n: 0:Disable/1: Enable/Vaule(0~9999)*

Command Group 00				
ASCII	HEX	Function	Description	Return Result
VXXS0001	56h Xh Xh 53h 30h 30h 30h 31h 0Dh	Power On		P/F
VXXS0002	56h Xh Xh 53h 30h 30h 30h 32h 0Dh	Power Off		P/F
VXXS0003	56h Xh Xh 53h 30h 30h 30h 33h 0Dh	Resync		P/F
VXXG0004	56h Xh Xh 47h 30h 30h 30h 34h 0Dh	Get Lamp Hours		Pn/F
VXXS0006	56h Xh Xh 53h 30h 30h 30h 36h 0Dh	System Reset		P/F
VXXG0007	56h Xh Xh 47h 30h 30h 30h 37h 0Dh	Get System Status	0:Reset 1:Standby 2:Operation 3:Cooling	Pn/F
VXXG0008	56h Xh Xh 47h 30h 30h 30h 38h 0Dh	Get F/W Version		Pn/F

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Command Group 01				
ASCII	HEX	Function	Description	Return Value
VXXG0101	56h Xh Xh 47h 30h 31h 30h 31h 0Dh	Get Brightness	n=0~100	Pn/F
VXXS0101n	56h Xh Xh 53h 30h 31h 30h 31h nh 0Dh	Set Brightness	n=0~100	P/F
VXXG0102	56h Xh Xh 47h 30h 31h 30h 32h 0Dh	Get Contrast	n=0~100	Pn/F
VXXS0102n	56h Xh Xh 53h 30h 31h 30h 32h nh 0Dh	Set Contrast	n=0~100	P/F
VXXG0103	56h Xh Xh 47h 30h 31h 30h 33h 0Dh	Get Color	n=0~100	Pn/F
VXXS0103n	56h Xh Xh 53h 30h 31h 30h 33h nh 0Dh	Set Color	n=0~100	P/F
VXXG0104	56h Xh Xh 47h 30h 31h 30h 34h 0Dh	Get Tint	n=0~100	Pn/F
VXXS0104n	56h Xh Xh 53h 30h 31h 30h 34h nh 0Dh	Set Tint	n=0~100	P/F
VXXG0105	56h Xh Xh 47h 30h 31h 30h 35h 0Dh	Get Sharpness	0~31	Pn/F
VXXS0105n	56h Xh Xh 53h 30h 31h 30h 35h nh 0Dh	Set Sharpness	0~31	P/F
VXXG0106	56h Xh Xh 47h 30h 31h 30h 36h 0Dh	Get Color Temperature	0:Warm 1:Normal 2:Cold	Pn/F
VXXS0106n	56h Xh Xh 53h 30h 31h 30h 36h nh 0Dh	Set Color Temperature	0:Warm 1:Normal 2:Cold	P/F
VXXG0107	56h Xh Xh 47h 30h 31h 30h 37h 0Dh	Get Gamma	0:1.8 1:2.0 2:2.2 3:2.4 4:B&W 5:Linear	Pn/F
VXXS0107n	56h Xh Xh 53h 30h 31h 30h 37h nh 0Dh	Set Gamma	0:1.8 1:2.0 2:2.2 3:2.4 4:B&W 5:Linear	P/F

Command Group 02				
ASCII	HEX	Function	Description	Return Value
VXXS0201	56h Xh Xh 53h 30h 32h 30h 31h 0Dh	Select RGB		P/F
VXXS0202	56h Xh Xh 53h 30h 32h 30h 32h 0Dh	Select RGB2		P/F
VXXS0203	56h Xh Xh 53h 30h 32h 30h 33h 0Dh	Select DVI		P/F
VXXS0204	56h Xh Xh 53h 30h 32h 30h 34h 0Dh	Select Video		P/F
VXXS0205	56h Xh Xh 53h 30h 32h 30h 35h 0Dh	Select S-Video		P/F
VXXS0206	56h Xh Xh 53h 30h 32h 30h 36h 0Dh	Select HDMI		P/F
VXXS0207	56h Xh Xh 53h 30h 32h 30h 37h 0Dh	Select BNC		P/F
VXXS0208	56h Xh Xh 53h 30h 32h 30h 38h 0Dh	Select Component		P/F

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Command Group 02				
ASCII	HEX	Function	Description	Return Value
VXXS0209	56h Xh Xh 53h 30h 32h 30h 39h 0Dh	Select HDMI 2 (MEDIA)		P/F
VXXS0210	56h Xh Xh 53h 30h 32h 31h 30h 0Dh	Select Display Port		P/F
VXXS0211	56h Xh Xh 53h 30h 32h 31h 31h 0Dh	Select Multi Media		P/F
VXXG0220	56h Xh Xh 47h 30h 32h 32h 30h 0Dh	Get Current Source	Return 1:RGB 2:RGB2 3:DVI 4:Video 5:S-Video 6:HDMI 1 7:BNC 8:Component 9:HDMI 2 10:Display Port 11:Multi Media.	Pn/F

Command Group 03				
ASCII	HEX	Function	Description	Return Value
VXXG0301	56h Xh Xh 47h 30h 33h 30h 31h 0Dh	Get Scaling	0:Fill 1:4:3 2:16:9 3:Letter Box 4:Native 5:2.35:1	Pn/F
VXXS0301n	56h Xh Xh 53h 30h 33h 30h 31h nh 0Dh	Set Scaling	0:Fill 1:4:3 2:16:9 3:Letter Box 4:Native 5:2.35:1	P/F
VXXG0302	56h Xh Xh 47h 30h 33h 30h 32h 0Dh	Blank		Pn/F
VXXS0302n	56h Xh Xh 53h 30h 33h 30h 32h nh 0Dh	Blank		P/F
VXXG0303	56h Xh Xh 47h 30h 33h 30h 33h 0Dh	Auto Keystone On		Pn/F
VXXS0303n	56h Xh Xh 53h 30h 33h 30h 33h nh 0Dh	Auto Keystone On		P/F
VXXG0304	56h Xh Xh 47h 30h 33h 30h 34h 0Dh	Freeze On		Pn/F
VXXS0304n	56h Xh Xh 53h 30h 33h 30h 34h nh 0Dh	Freeze On		P/F
VXXG0305	56h Xh Xh 47h 30h 33h 30h 35h 0Dh	Volume	n=0~10	Pn/F
VXXS0305n	56h Xh Xh 53h 30h 33h 30h 35h nh 0Dh	Volume	n=0~10	P/F
VXXG0306	56h Xh Xh 47h 30h 33h 30h 36h 0Dh	Treble	n=0~16	Pn/F
VXXS0306n	56h Xh Xh 53h 30h 33h 30h 36h nh 0Dh	Treble	n=0~16	P/F
VXXG0307	56h Xh Xh 47h 30h 33h 30h 37h 0Dh	Bass	n=0~16	Pn/F
VXXS0307n	56h Xh Xh 53h 30h 33h 30h 37h nh 0Dh	Bass	n=0~16	P/F
VXXG0308	56h Xh Xh 47h 30h 33h 30h 38h 0Dh	Projection Mode	0:Front 1:Rear 2:Ceiling 3:Rear+Ceiling	Pn/F

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Command Group 03				
ASCII	HEX	Function	Description	Return Value
VXXS0308n	56h Xh Xh 53h 30h 33h 30h 38h nh 0Dh	Projection Mode	0:Front 1:Rear 2:Ceiling 3:Rear+Ceiling	P/F
VXXG0309	56h Xh Xh 47h 30h 33h 30h 39h 0Dh	Set vertical keystone value	n=-40~+40	Pn/F
VXXS0309n	56h Xh Xh 53h 30h 33h 30h 39h nh 0Dh	Set vertical keystone value	n=-40~+40	P/F
VXXG0310	56h Xh Xh 47h 30h 33h 31h 30h 0Dh	Set horizontal keystone value	n=-20~+20	Pn/F
VXXS0310n	56h Xh Xh 53h 30h 33h 31h 30h nh 0Dh	Set horizontal keystone value	n=-20~+20	P/F
VXXG0311	56h Xh Xh 47h 30h 33h 31h 31h 0Dh	Adjust the zoom	n=-10~+10	Pn/F
VXXS0311n	56h Xh Xh 53h 30h 33h 31h 31h nh 0Dh	Adjust the zoom	n=-10~+10	P/F
VXXG0312	56h Xh Xh 47h 30h 33h 31h 32h 0Dh	Adjust the focus	n=-20~+20	Pn/F
VXXS0312n	56h Xh Xh 53h 30h 33h 31h 32h nh 0Dh	Adjust the focus	n=-20~+20	P/F
VXXG0313	56h Xh Xh 47h 30h 33h 31h 33h 0Dh	Adjust the vertical lens shift	n=-20~+20	Pn/F
VXXS0313n	56h Xh Xh 53h 30h 33h 31h 33h nh 0Dh	Adjust the vertical lens shift	n=-20~+20	P/F
VXXG0314	56h Xh Xh 47h 30h 33h 31h 34h 0Dh	Adjust the horizontal lens shift	n=-20~+20	Pn/F
VXXS0314n	56h Xh Xh 53h 30h 33h 31h 34h nh 0Dh	Adjust the horizontal lens shift	n=-20~+20	P/F
VXXG0315	56h Xh Xh 47h 30h 33h 31h 35h 0Dh	3D	0:Off 1:DLP-Link 2:IR	Pn/F
VXXS0315n	56h Xh Xh 53h 30h 33h 31h 35h nh 0Dh	3D	0:Off 1:DLP-Link 2:IR	P/F
VXXG0316	56h Xh Xh 47h 30h 33h 31h 36h 0Dh	3D Sync Invert	0:Off 1:On	Pn/F
VXXS0316n	56h Xh Xh 53h 30h 33h 31h 36h nh 0Dh	3D Sync Invert	0:Off 1:On	P/F
VXXG0317	56h Xh Xh 47h 30h 33h 31h 37h 0Dh	3D Format	0:Frame Sequential 1:Top/Bottom 2:Side-By-Side 3:Frame Packing	Pn/F
VXXS0317n	56h Xh Xh 53h 30h 33h 31h 37h nh 0Dh	3D Format	0:Frame Sequential 1:Top/Bottom 2:Side-By-Side 3:Frame Packing	P/F
VXXG0318	56h Xh Xh 47h 30h 33h 31h 38h 0Dh	Tilt Angle Warning	0:Off 1:On	Pn/F
VXXS0318	56h Xh Xh 53h 30h 33h 31h 38h nh 0Dh	Tilt Angle Warning	0:Off 1:On	P/F

Command Group 04 (Remote Control)				
ASCII	HEX	Function	Description	Return Value
VXXS0401	56h Xh Xh 53h 30h 34h 30h 31h 0Dh	UP arrow		P/F
VXXS0402	56h Xh Xh 53h 30h 34h 30h 32h 0Dh	DOWN arrow		P/F
VXXS0403	56h Xh Xh 53h 30h 34h 30h 33h 0Dh	LEFT arrow		P/F
VXXS0404	56h Xh Xh 53h 30h 34h 30h 34h 0Dh	RIGHT arrow		P/F
VXXS0405	56h Xh Xh 53h 30h 34h 30h 35h 0Dh	POWER		P/F
VXXS0406	56h Xh Xh 53h 30h 34h 30h 36h 0Dh	EXIT		P/F
VXXS0407	56h Xh Xh 53h 30h 34h 30h 37h 0Dh	INPUT		P/F
VXXS0408	56h Xh Xh 53h 30h 34h 30h 38h 0Dh	AUTO		P/F
VXXS0409	56h Xh Xh 53h 30h 34h 30h 39h 0Dh	KEYSTONE+		P/F
VXXS0410	56h Xh Xh 53h 30h 34h 31h 30h 0Dh	KEYSTONE-		P/F
VXXS0411	56h Xh Xh 53h 30h 34h 31h 31h 0Dh	MENU		P/F
VXXS0412	56h Xh Xh 53h 30h 34h 31h 32h 0Dh	STATUS		P/F
VXXS0413	56h Xh Xh 53h 30h 34h 31h 33h 0Dh	MUTE		P/F
VXXS0414	56h Xh Xh 53h 30h 34h 31h 34h 0Dh	ZOOM+		P/F
VXXS0415	56h Xh Xh 53h 30h 34h 31h 35h 0Dh	ZOOM-		P/F
VXXS0416	56h Xh Xh 53h 30h 34h 31h 36h 0Dh	BLANK		P/F
VXXS0417	56h Xh Xh 53h 30h 34h 31h 37h 0Dh	FREEZE		P/F
VXXS0418	56h Xh Xh 53h 30h 34h 31h 38h 0Dh	VOLUME+		P/F
VXXS0419	56h Xh Xh 53h 30h 34h 31h 39h 0Dh	VOLUME-		P/F
VXXS0420	56h Xh Xh 53h 30h 34h 32h 30h 0Dh	Enter		P/F