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## **Trademark Recognition**

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

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

## **Important Safety Information**

***Important:***

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

## **Symbols Used**

Warning symbols are used on the unit and in this manual to alert you of hazardous situations.

The following styles are used in this manual to alert you to important information.

***Note:***

*Provides additional information on the topic at hand.*

***Important:***

*Provides additional information that should not be overlooked.*

***Caution:***

*Alerts you to situations that may damage the unit.*

***Warning:***

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

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

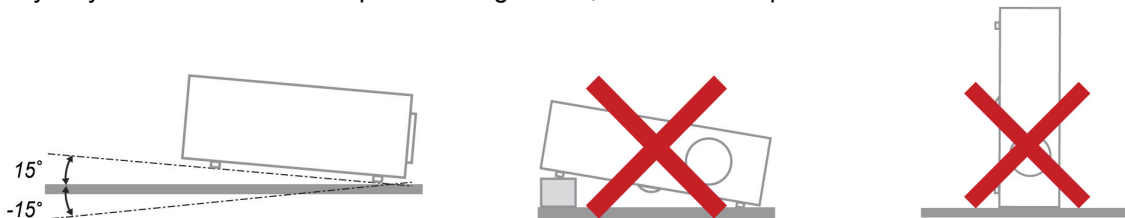
“Push the **Menu** button on the remote control to open the **Main** menu.”

## **General Safety Information**

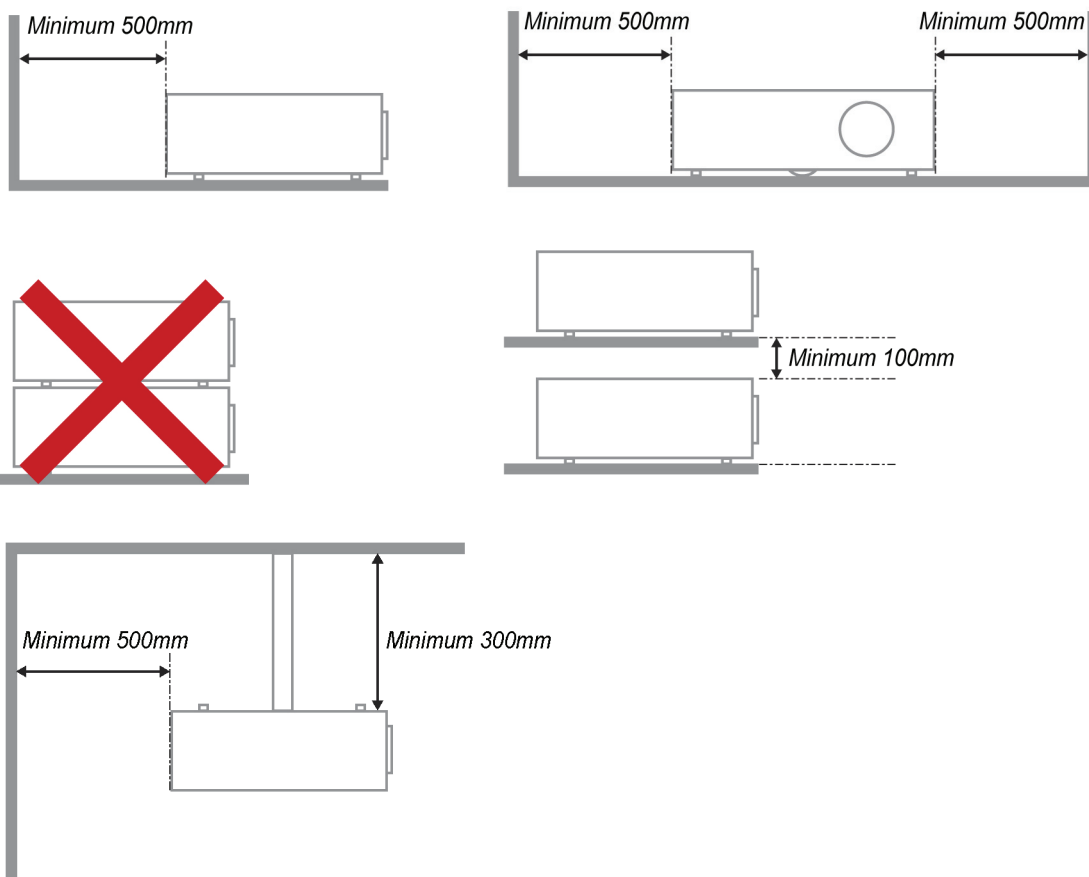
- Do not open the unit case. Aside from the projection lamp, there are no user-serviceable parts in the unit. For servicing, contact qualified service personnel.
- Follow all warnings and cautions in this manual and on the unit case.
- The projection lamp is extremely bright by design. To avoid damage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

### Projector Installation Notice

- Place the projector in a horizontal position  
The tilt angle of the projector should not exceed 15 degrees, nor should the projector be installed in any way other than the desktop and ceiling mount, otherwise lamp life could decrease dramatically.



- 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 5 – 35°C 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 5 – 35°C range.

### **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 36 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.

### **Cleaning the Projector**

- Unplug the power cord before cleaning. See *Cleaning the Projector* page 39.
- 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.*

### **Regulatory Warnings**

Before installing and using the projector, read the regulatory notices in the *Regulatory Compliance* on page 51.

### **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.

## 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 UXGA 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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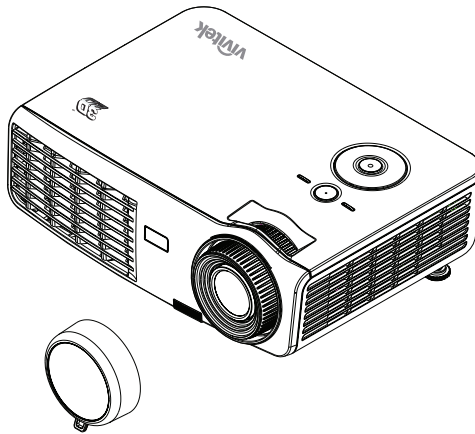
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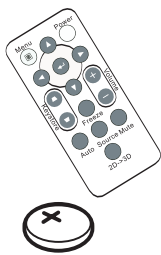
## **GETTING STARTED**

### **Packing Checklist**

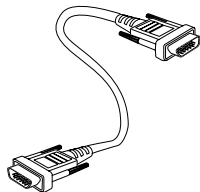
Carefully unpack the projector and check that the following items are included:



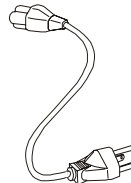
*D5 SERIES DLP PROJECTOR WITH LENS CAP*



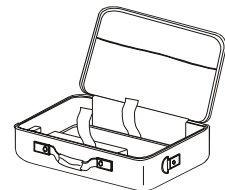
*REMOTE CONTROL  
(WITH ONE 3V CR2025  
BATTERY)*



*RGB CABLE*



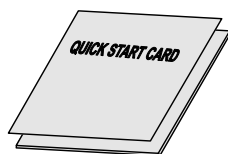
*POWER CORD*



*CARRYING CASE*



*CD-ROM  
(THIS USER'S MANUAL)*



*QUICK START CARD*



*WARRANTY CARD*

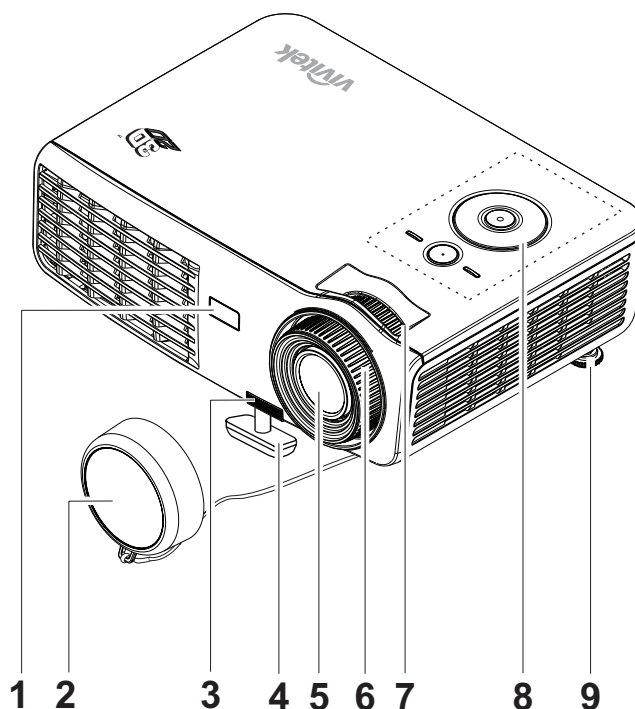
Contact your dealer immediately if any items are missing, appear damaged, or if the unit does not work. It is recommended that you keep the original packing material should you ever need to return the equipment for warranty service.

**Caution:**

*Avoid using the projector in dusty environments.*

## **Views of Projector Parts**

### *D5 Series Front-right View*

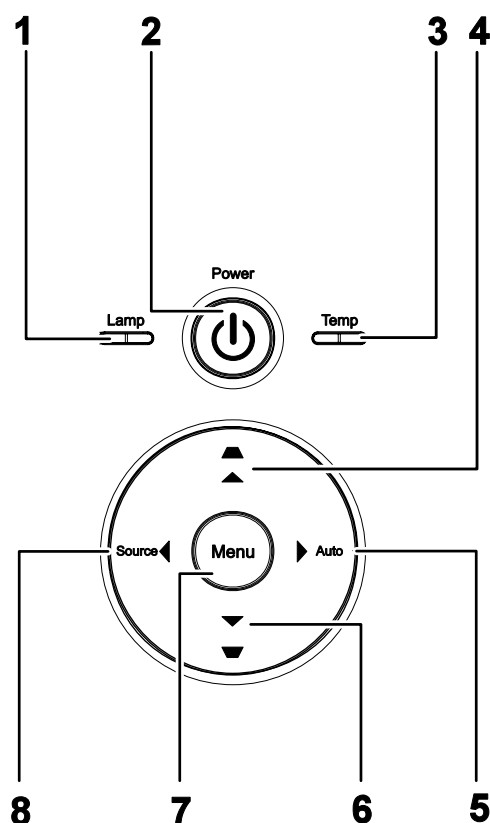


| ITEM | LABEL                  | DESCRIPTION                                            | SEE PAGE: |
|------|------------------------|--------------------------------------------------------|-----------|
| 1.   | IR receiver            | Receive IR signal from remote control                  | 6         |
| 2.   | Lens cap               | Protect lens when not in use                           |           |
| 3.   | Height-adjuster button | Push to release height adjuster                        | 15        |
| 4.   | Height adjuster        | Adjusts level of projector                             |           |
| 5.   | Lens                   | Projection Lens                                        |           |
| 6.   | Focus ring             | Focuses the projected image                            | 16        |
| 7.   | Zoom ring              | Enlarges the projected image                           |           |
| 8.   | Function keys          | See Top view—On-screen Display (OSD) buttons and LEDs. | 3         |
| 9.   | Height adjuster        | Adjusts level of projector                             | 15        |

***Important:***

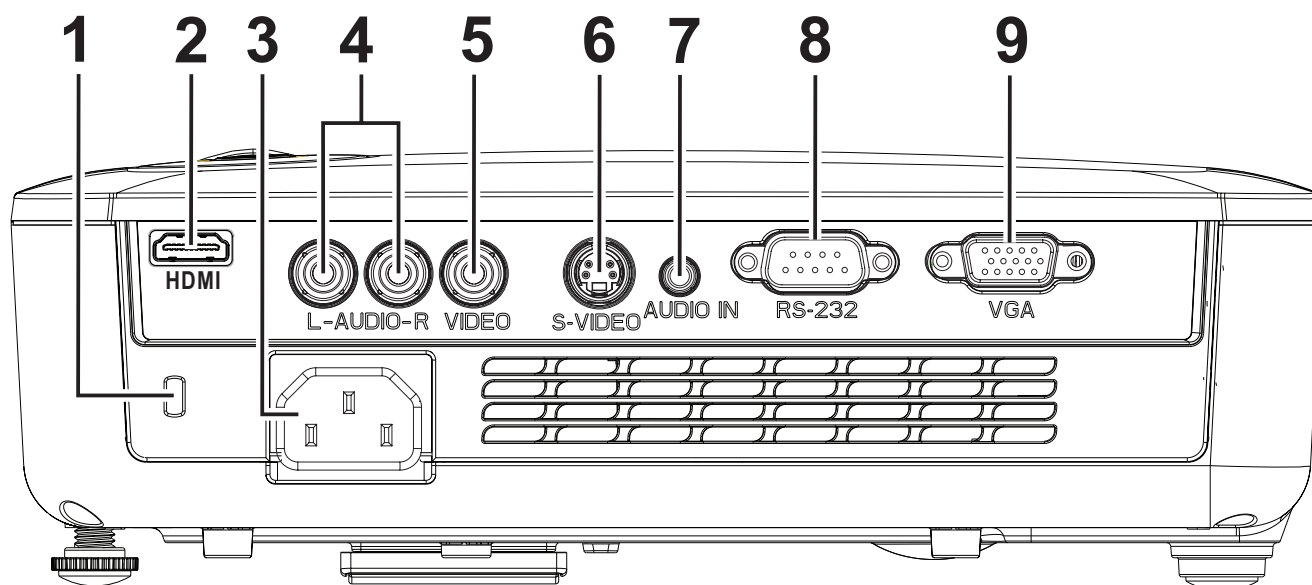
*Ventilation openings on the projector allow for good air circulation, which keeps the projector lamp cool. Do not obstruct any of the ventilation openings.*

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



| ITEM | LABEL                      | DESCRIPTION                                                                              |                         | SEE PAGE: |
|------|----------------------------|------------------------------------------------------------------------------------------|-------------------------|-----------|
| 1.   | LAMP LED                   | On                                                                                       | Lamp error              |           |
|      |                            | Off                                                                                      | Normal State            |           |
| 2.   | ⏻ (POWER)                  | Turns the projector On or Off                                                            |                         | 11        |
| 3.   | TEMP LED                   | On                                                                                       | System over temperature |           |
|      |                            | Off                                                                                      | Normal State            |           |
| 4.   | ▲ (Up cursor) / KEYSTONE   | Navigates and changes settings in the OSD Quick Menu – For Keystone                      |                         | 18        |
| 5.   | ► (Right cursor) / Auto    | Navigates and changes settings in the OSD Optimizes image size, position, and resolution |                         |           |
| 6.   | ▼ (Down cursor) / KEYSTONE | Navigates and changes settings in the OSD Quick Menu – For Keystone                      |                         |           |
| 7.   | MENU                       | Open and exits the OSD buttons                                                           |                         |           |
| 8.   | ◀ (Left cursor) / Source   | Navigates and changes settings in the OSD Detects the input device                       |                         |           |

Rear view

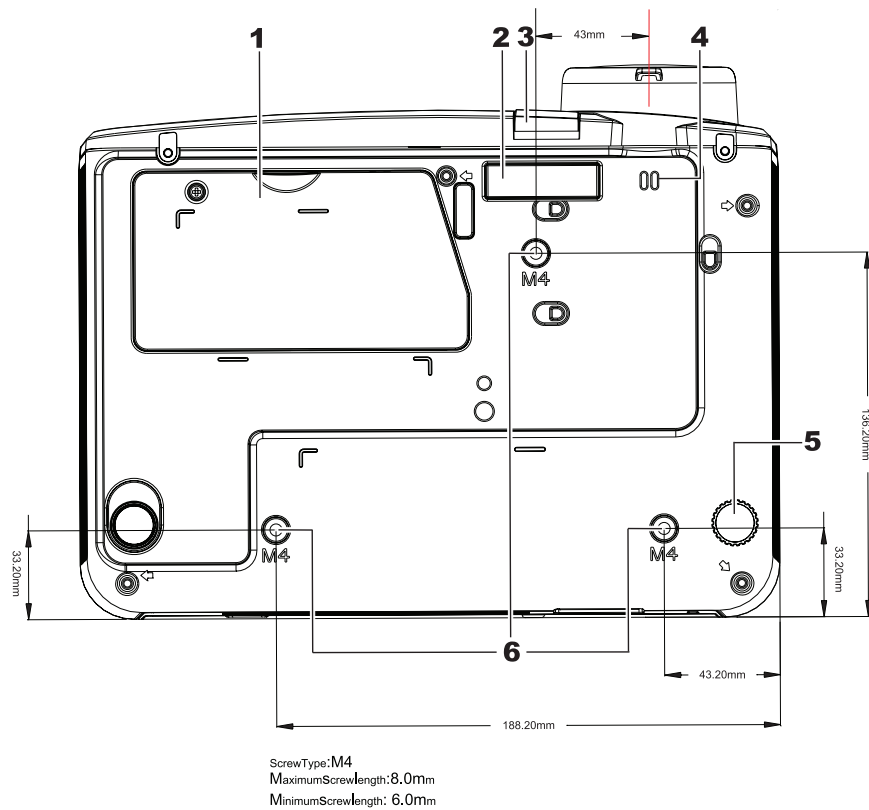


| ITEM | LABEL              | DESCRIPTION                                               | SEE PAGE: |
|------|--------------------|-----------------------------------------------------------|-----------|
| 1.   | Kensington Lock    | Secure to permanent object with a Kensington® Lock system | 40        |
| 2.   | HDMI               | Connect the HDMI™ CABLE from a HDMI™ device               | 10        |
| 3.   | AC IN              | Connect the POWER CABLE                                   | 11        |
| 4.   | AUDIO IN (L and R) | Connect the AUDIO CABLES from a audio device              | 10        |
| 5.   | VIDEO IN           | Connect the COMPOSITE CABLE from a video device           |           |
| 6.   | S-VIDEO IN         | Connect the S-VIDEO CABLE from a video device             |           |
| 7.   | AUDIO IN           | Connect an AUDIO CABLE from the input device              |           |
| 8.   | RS-232C            | Connect RS-232 serial port cable for remote control       |           |
| 9.   | VGA                | Connect the RGB CABLE from a computer and components      |           |

**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.*

Bottom view



| ITEM | LABEL                  | DESCRIPTION                                                                | SEE PAGE: |
|------|------------------------|----------------------------------------------------------------------------|-----------|
| 1.   | Lamp cover             | Remove when changing the lamp.                                             | 36        |
| 2.   | Height adjustor        | Adjuster drops down when adjuster button is pushed.                        | 15        |
| 3.   | Height adjustor button | Push to release adjustor.                                                  |           |
| 4.   | Lens cap hook          | To fasten the lens cap cover                                               |           |
| 5.   | Tilt adjustor          | Rotate adjuster lever to adjust angle position.                            | 15        |
| 6.   | Ceiling support holes  | Contact your dealer for information on mounting the projector on a ceiling |           |

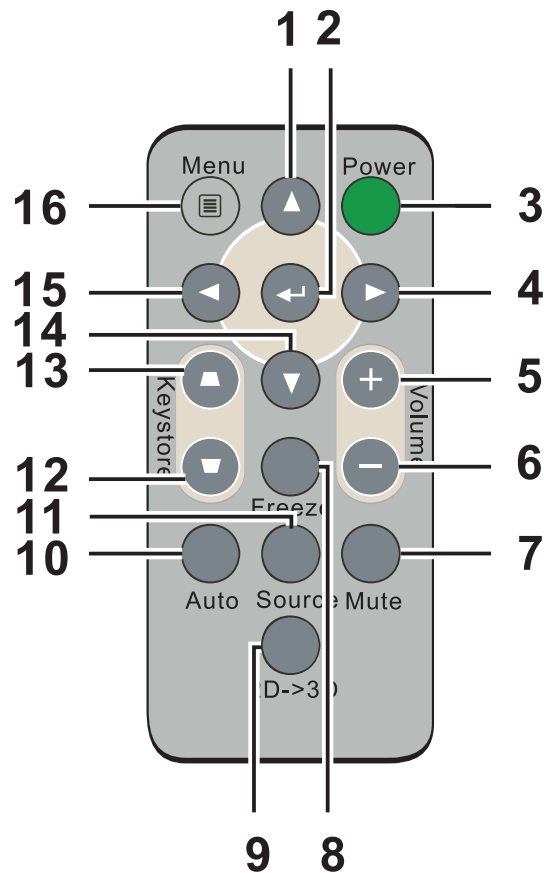
**Note:**

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.***

| ITEM | LABEL           | DESCRIPTION                                                        | SEE PAGE: |
|------|-----------------|--------------------------------------------------------------------|-----------|
| 1.   | Up cursor       | Navigates and changes settings in the OSD                          | <b>18</b> |
| 2.   | Enter           | Changes settings in the OSD                                        |           |
| 3.   | Power           | Turns the projector On or Off                                      | <b>11</b> |
| 4.   | Right cursor    | Navigates and changes settings in the OSD                          | <b>18</b> |
| 5.   | Volume +        | Increase volume                                                    | <b>17</b> |
| 6.   | Volume -        | Decrease volume                                                    |           |
| 7.   | Mute            | Mutes the built-in speaker                                         |           |
| 8.   | Freeze          | Freeze/unfreezes the on-screen picture                             |           |
| 9.   | 2D->3D          | Toggle 2D video to 3D video via HDMI                               |           |
| 10.  | Auto            | Auto adjustment for frequency, tracking, size, position (RGB only) |           |
| 11.  | Source          | Detects the input device                                           | <b>10</b> |
| 12.  | Keystone top    | Corrects image-trapezoid (wider top) effect                        | <b>16</b> |
| 13.  | Keystone bottom | Corrects image trapezoid (wider bottom) effect                     |           |
| 14.  | Down cursor     | Navigates and changes settings in the OSD                          | <b>18</b> |
| 15.  | Left cursor     | Navigates and changes settings in the OSD                          |           |
| 16.  | Menu            | Opens the OSD                                                      |           |

## **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.

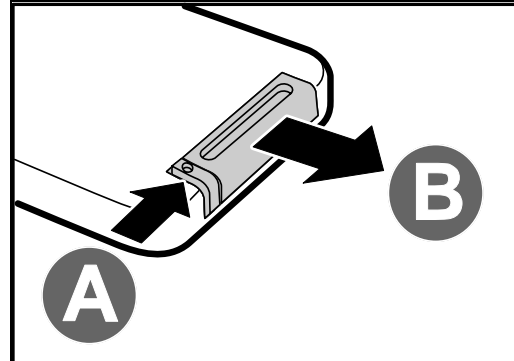
## **Projector and Remote Control Buttons**

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.

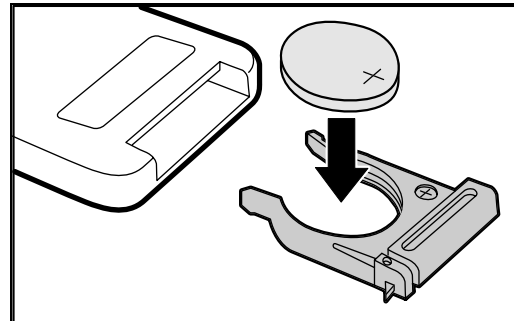
## **SETUP AND OPERATION**

### **Inserting the Remote Control Batteries**

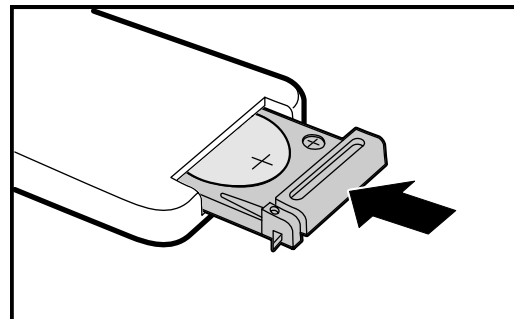
1. Remove the battery compartment cover by sliding the cover in the direction of the arrow (A). Pull out the cover (B).



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



3. Replace the cover.

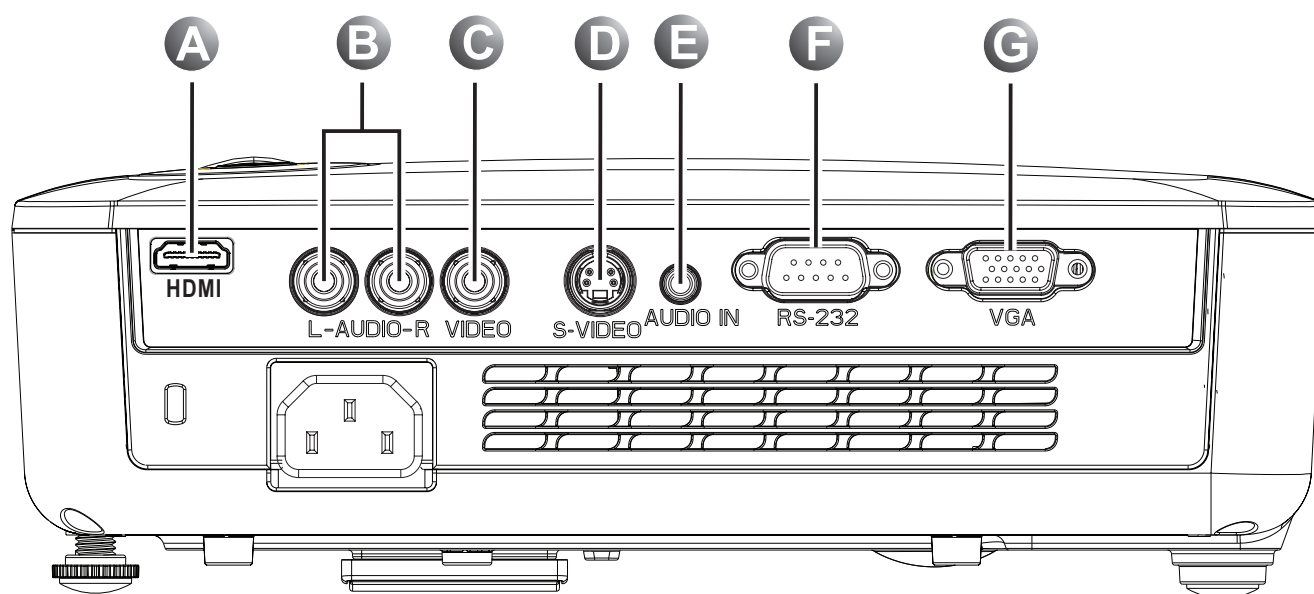


**Caution:**

1. Only use a 3V lithium battery (CR2025).
2. Dispose of used batteries according to local ordinance regulations.
3. Remove the battery when not using the projector for prolonged periods.

## Connecting Input Devices

A PC or notebook computer and video devices can be connected to the projector at the same time. Video devices include DVD, VCD, and VHS players, as well as movie camcorders and digital still cameras. Check the user manual of the connecting device to confirm it has the appropriate output connector.



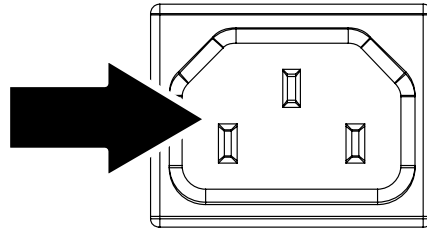
| ITEM     | LABEL              | DESCRIPTION                                          |
|----------|--------------------|------------------------------------------------------|
| <b>A</b> | HDMI               | Connect the HDMI™ CABLE from a HDMI™ device          |
| <b>B</b> | AUDIO IN (L and R) | Connect the AUDIO CABLES from a audio device         |
| <b>C</b> | VIDEO IN           | Connect the COMPOSITE CABLE from a video device      |
| <b>D</b> | S-VIDEO            | Connect the S-VIDEO CABLE from a video device        |
| <b>E</b> | AUDIO IN           | Connect an AUDIO CABLE from the input device         |
| <b>F</b> | RS-232C            | Connect the RS-232 serial cable for remote control   |
| <b>G</b> | VGA IN             | Connect the RGB CABLE from a computer and components |

**Warning:**

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

## Starting and Shutting down the Projector

1. Connect the power cord to the projector. Connect the other end to a wall outlet. The **POWER** LED on the projector light.



2. Turn on the connected devices.

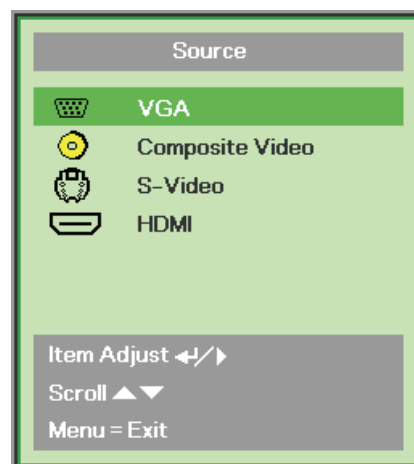
3. Ensure the LAMP LED not a flashing orange. Then press the **POWER** button to turn on the projector.

The projector splash screen displays and connected devices are detected.

See *Setting an Access Password (Security Lock)* on page 13 if security lock is enabled.



4. If more than one input device is connected, press the **SOURCE** button and use **▲▼** to scroll among devices. (Component is supported through the RGB to COMPONENT ADAPTER.)



- VGA: Analog RGB  
Component: DVD input YCbCr / YPbPr, or HDTV input YPbPr
- Composite Video: Traditional composite video
- S-Video: Super video (Y/C separated)
- HDMI: HDMI

- 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 LAMP LED stops flashing—indicating the projector has cooled down.*

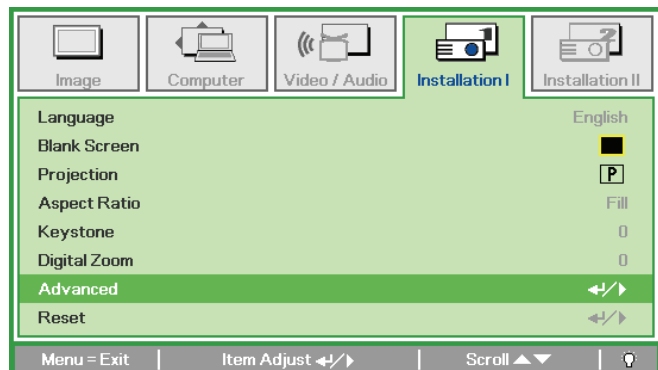
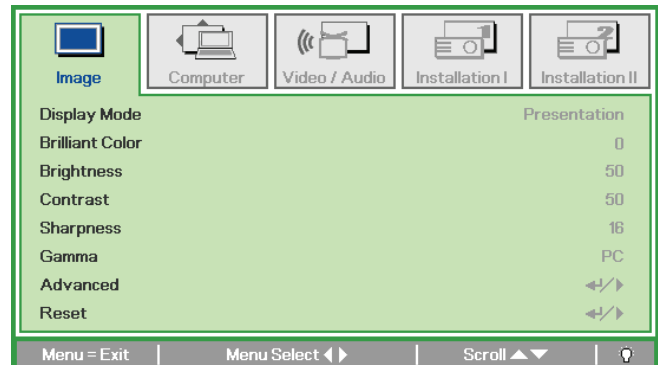
## Setting an Access Password (Security Lock)

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 18 and *Setting the OSD Language* on page 19 for help on using OSD menus.)

**Important:**

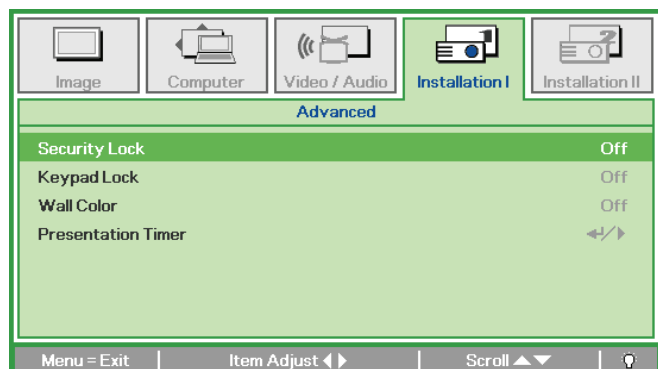
*Keep the password in a safe place. Without the password, you will not be able to use the projector. If you lose the password, contact your reseller for information on clearing the password.*

1. Press the **MENU** button to open the OSD menu.
2. Press the cursor ◀▶ button to move to the **Installation I** menu, press the cursor ▲▼ button to select **Advanced**.



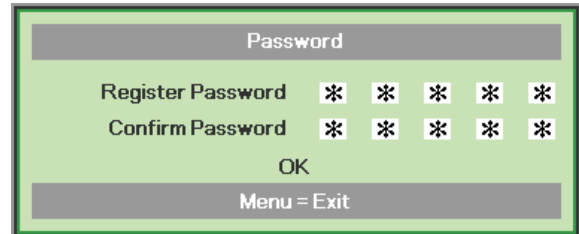
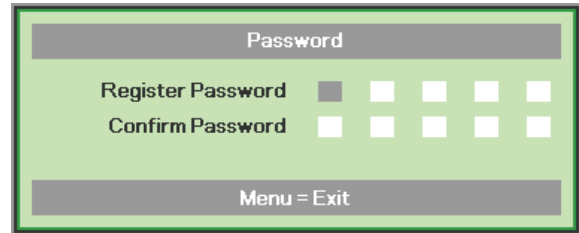
3. Press the cursor ▲▼ button to select **Security Lock**.
4. Press the cursor ◀▶ button to enable or disable security lock function.

A password dialog box automatically appears.

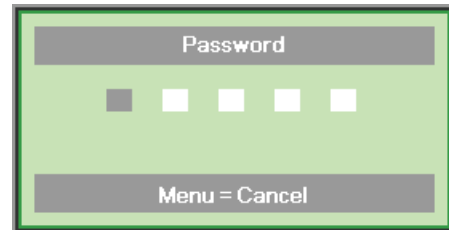


5. You can use the cursor buttons ▲▼◀▶ either on keypad or IR remote control for password entry. You can use any combination including the same arrow five times, but not less than five.

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



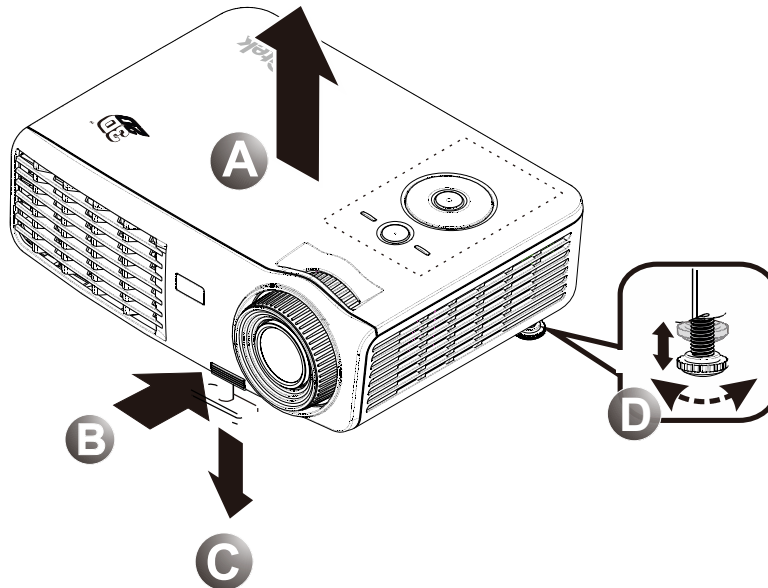
6. The password confirm menu appears when user presses the power-on key in case the **Security Lock** is enabled. Enter the password in the order you set it at step 5. In case you forget the password, please contact the service center. Service center will validate the owner and help reset the password.



## 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.*
- *Ensure the cables are in a safe location. You could trip over them.*

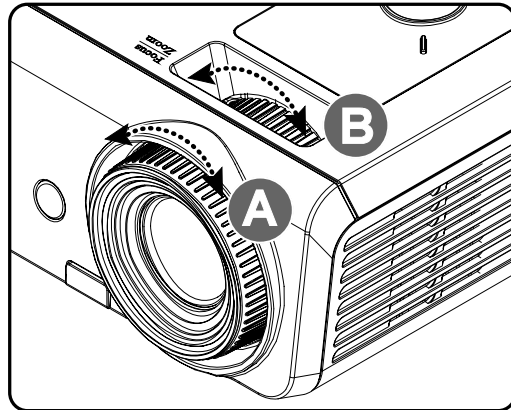


1. To raise the level of the projector, lift the projector [A] and press the height-adjuster button [B].  
  
The height adjuster drops down [C].
2. To lower the level of the projector, press the height-adjuster button and push down on the top of the projector.
3. To adjust the angle of the picture, turn the tilt-adjuster [D] right or left until the desired angle has been achieved.

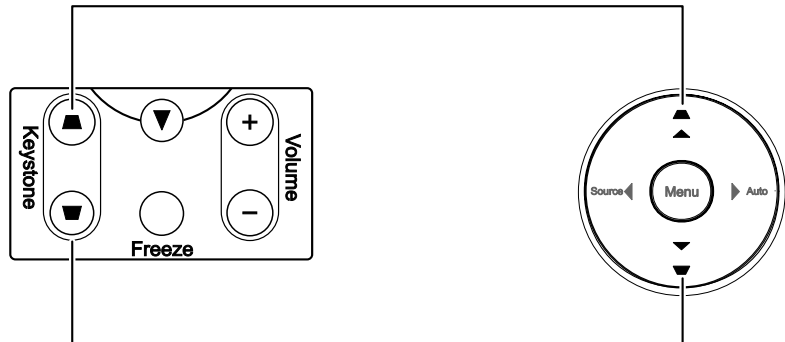
## Adjusting the Zoom, Focus and Keystone

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

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



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



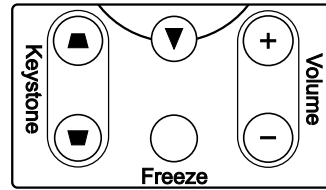
Remote control and OSD panel

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*

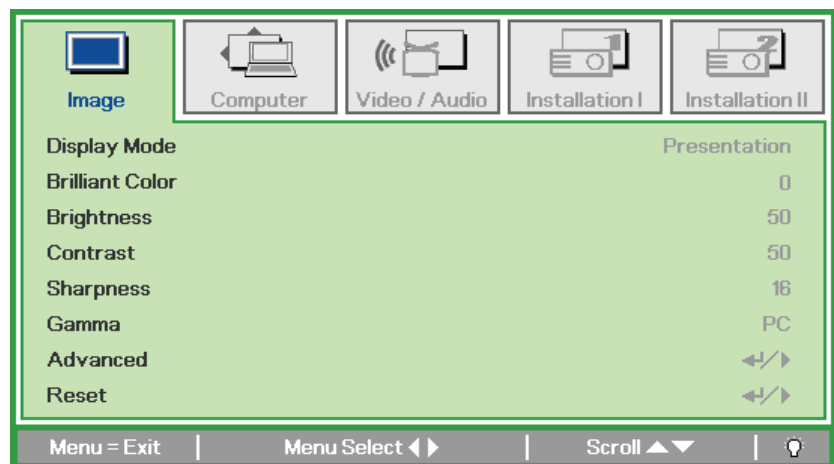
### OSD Menu Controls

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.

1. To enter the OSD, press the **MENU** button.
2. There are five 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.



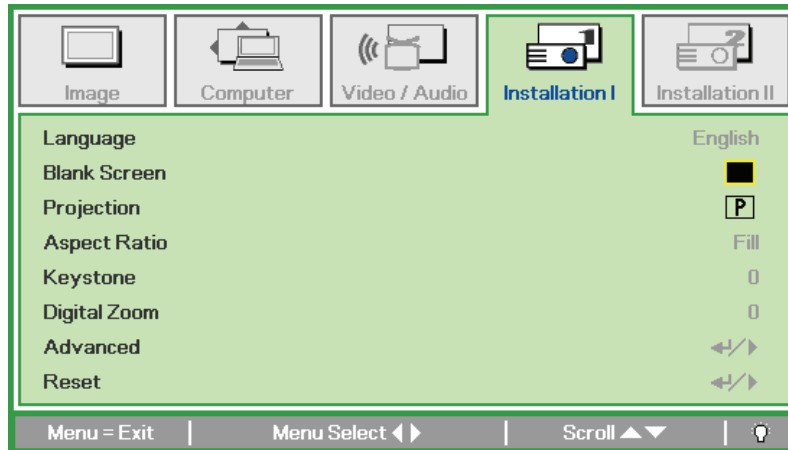
**Note:**

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.

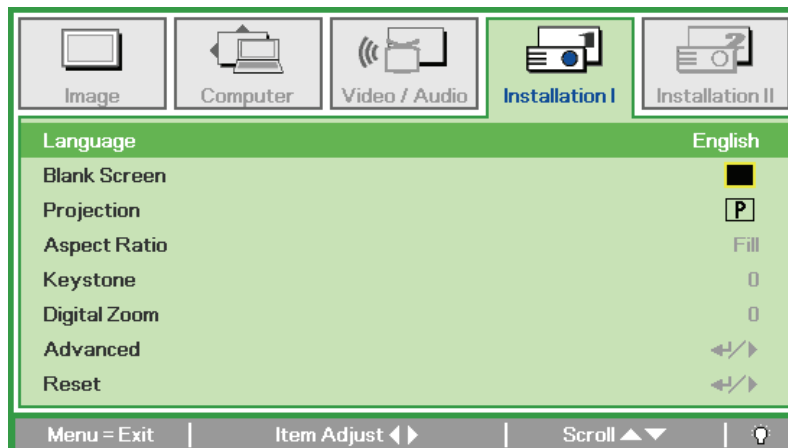
## Setting the OSD Language

Set the OSD language to your preference before continuing.

1. Press the **MENU** button. Press the cursor ◀▶ button to navigate to Installation I.



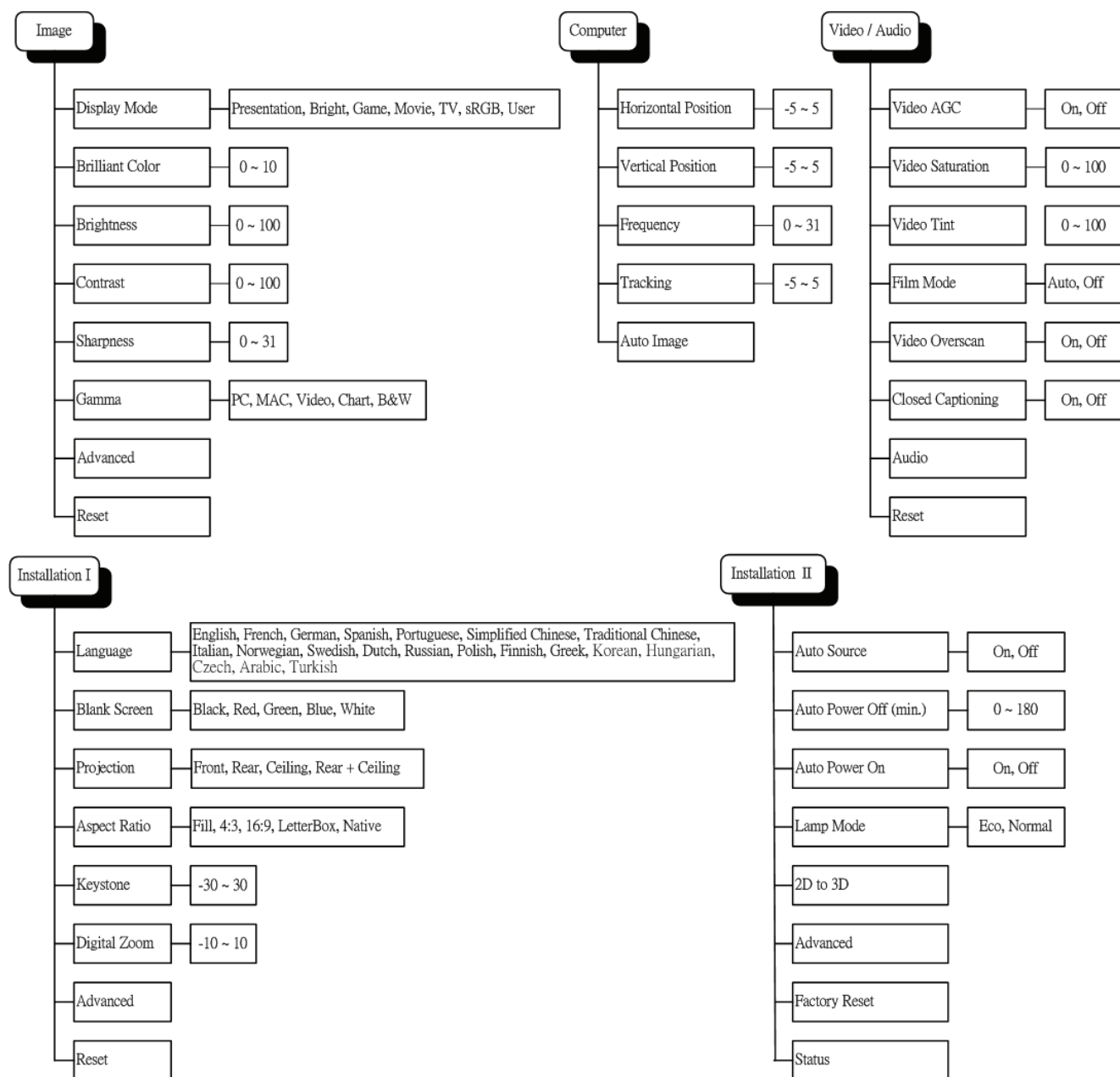
2. Press the cursor ▲▼ button until **Language** is highlighted.



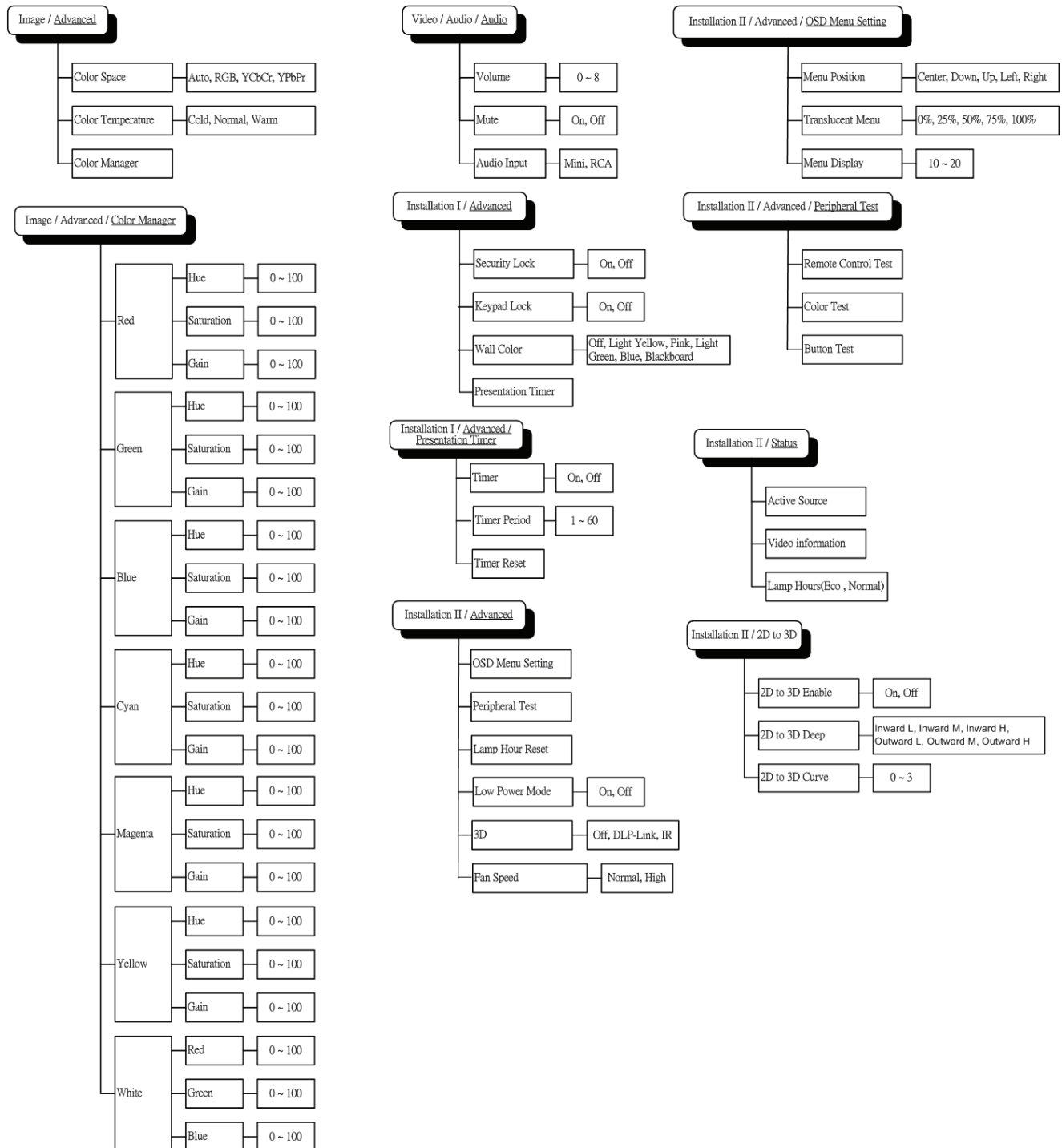
3. Press the cursor ◀▶ button until the language you want is highlighted.
4. Press the **MENU** button twice to close the OSD.

## OSD Menu Overview

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

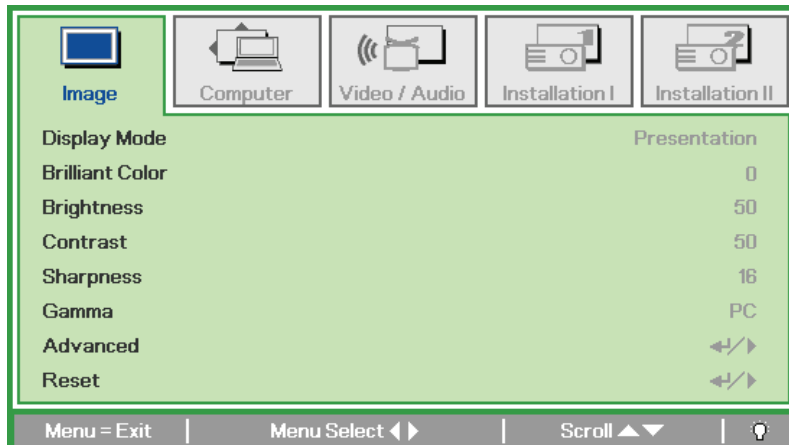


## OSD Sub-Menu Overview



## Image Menu

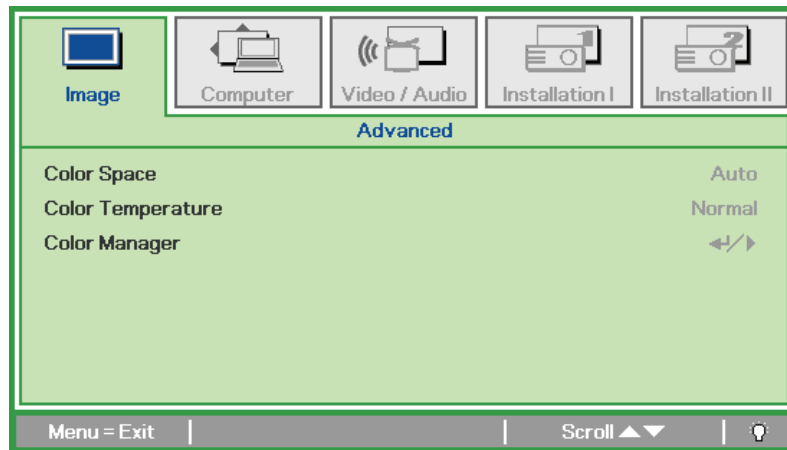
Press the **MENU** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Image Menu**. Press the cursor ▲▼ button to move up and down in the **Image** menu. Press ◀▶ to change values for settings.



| ITEM            | DESCRIPTION                                                                             |
|-----------------|-----------------------------------------------------------------------------------------|
| Display Mode    | Press the cursor ◀▶ button to set the Display Mode.                                     |
| Brilliant Color | Press the cursor ◀▶ button to adjust the Brilliant Color value.                         |
| Brightness      | Press the cursor ◀▶ button to adjust the display brightness.                            |
| Contrast        | Press the cursor ◀▶ button to adjust the display contrast.                              |
| Sharpness       | Press the cursor ◀▶ button to adjust the display sharpness level.                       |
| Gamma           | Press the cursor ◀▶ button to adjust the gamma correction of the display.               |
| Advanced        | Press ◀ (Enter) / ▶ to enter the Advanced menu. See <i>Advanced Feature</i> on page 23. |
| Reset           | Press ◀ (Enter) / ▶ to reset all settings to default values.                            |

### Advanced Feature

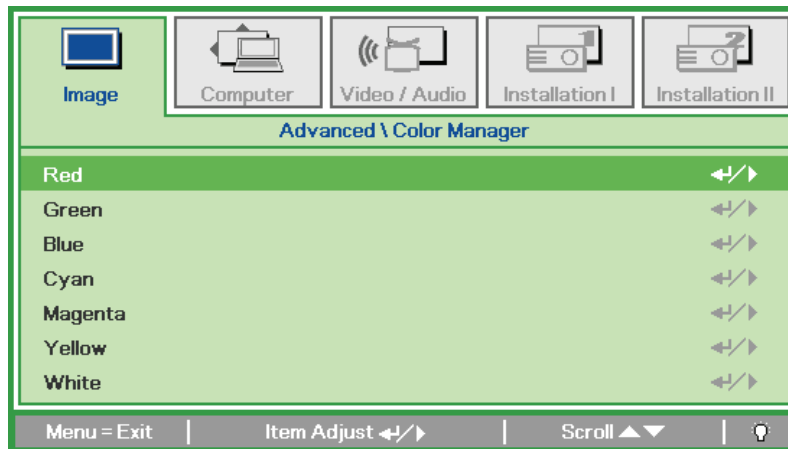
Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Image** menu. Press ▼▲ to move to the **Advanced** menu and then press **Enter** or ▶. Press ▼▲ to move up and down in the **Advanced** menu.



| ITEM              | DESCRIPTION                                                                                                     |
|-------------------|-----------------------------------------------------------------------------------------------------------------|
| Color Space       | Press the cursor ◀▶ button to adjust the color space.                                                           |
| Color Temperature | Press the cursor ◀▶ button to adjust the color temperature.                                                     |
| Color Manager     | Press ◀ (Enter) / ▶ to enter the color manager menu. See page 24 for more information on <i>Color Manager</i> . |

## Color Manager

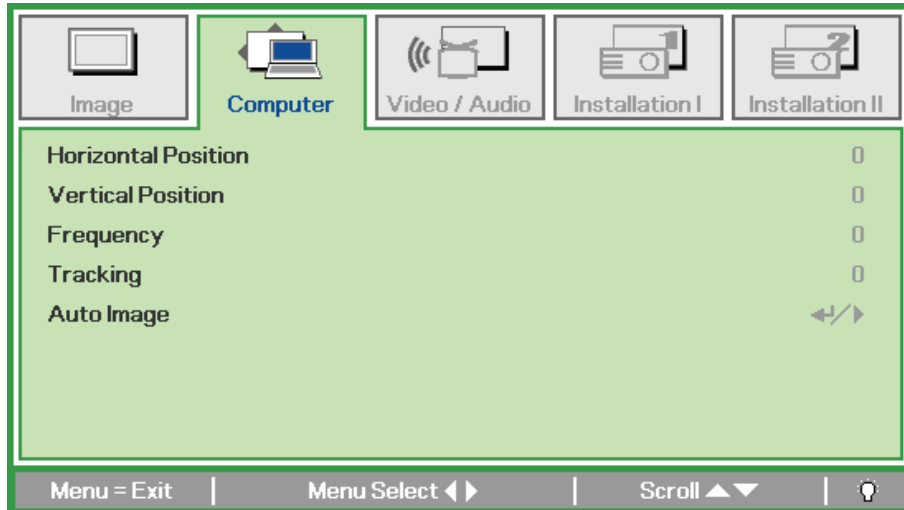
Press ◀ (Enter) / ▶ to enter the **Color Manager** sub menu.



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

## Computer Menu

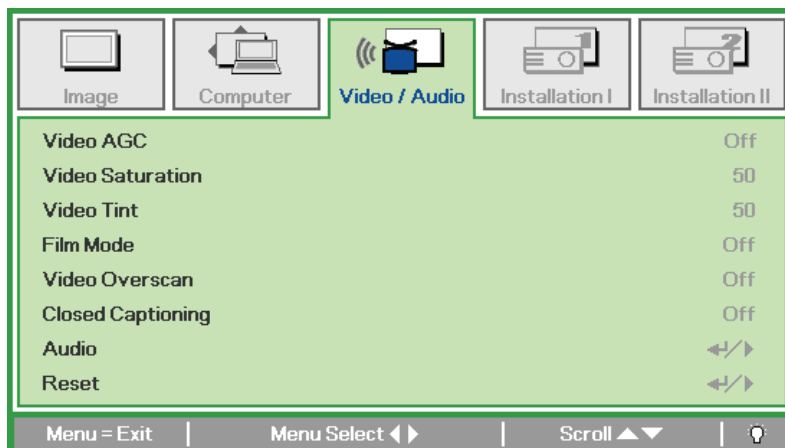
Press the **MENU** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Computer** menu. Press the cursor ▲▼ button to move up and down in the computer menu. Press ◀▶ to change values for settings.



| ITEM                | DESCRIPTION                                                                             |
|---------------------|-----------------------------------------------------------------------------------------|
| Horizontal Position | Press the cursor ◀▶ button to adjust the display position to left or right.             |
| Vertical Position   | Press the cursor ◀▶ button to adjust the display position to up or down.                |
| Frequency           | Press the cursor ◀▶ button to adjust the A/D sampling clock.                            |
| Tracking            | Press the cursor ◀▶ button to adjust the A/D sampling dot.                              |
| Auto Image          | Press ◀ (Enter) / ▶ to automatically adjustment for phase, tracking, size and position. |

## Video/Audio Menu

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



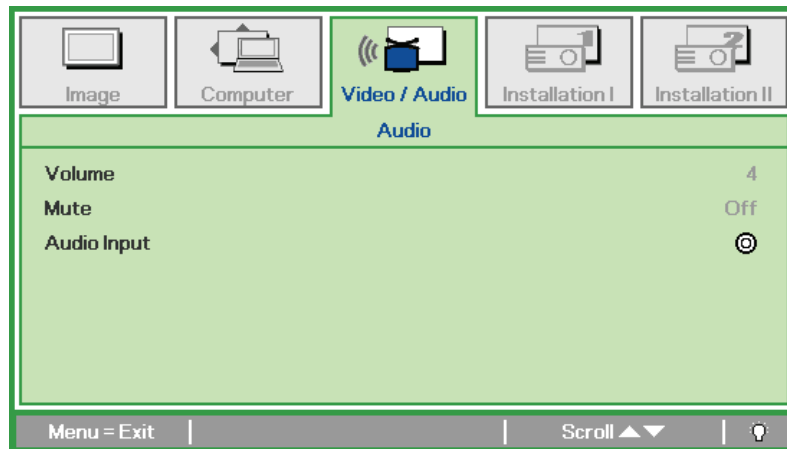
| ITEM              | DESCRIPTION                                                                            |
|-------------------|----------------------------------------------------------------------------------------|
| Video AGC         | Press the ◀▶ buttons to enable or disable the Automatic Gain Control for video source. |
| Video Saturation  | Press the ◀▶ buttons to adjust the video saturation.                                   |
| Video Tint        | Press the ◀▶ buttons to adjust the video tint/hue.                                     |
| Film Mode         | Press the ◀▶ buttons to select a different film mode.                                  |
| Video Overscan    | Press the ◀▶ buttons to enable or disable video over scan.                             |
| Closed Captioning | Press the ◀▶ buttons to enable or disable Closed Captioning                            |
| Audio             | Press ⏏ (Enter) / ▶ to enter the Audio menu. See <i>Audio</i> on page 27.              |
| Reset             | Press ⏏ (Enter) / ▶ to reset all settings to default values.                           |

**Note:**

*Video jaggling may occur when playing interlace video. To overcome this issue, open the Video / Audio menu and adjust the Film Mode feature.*

## Audio

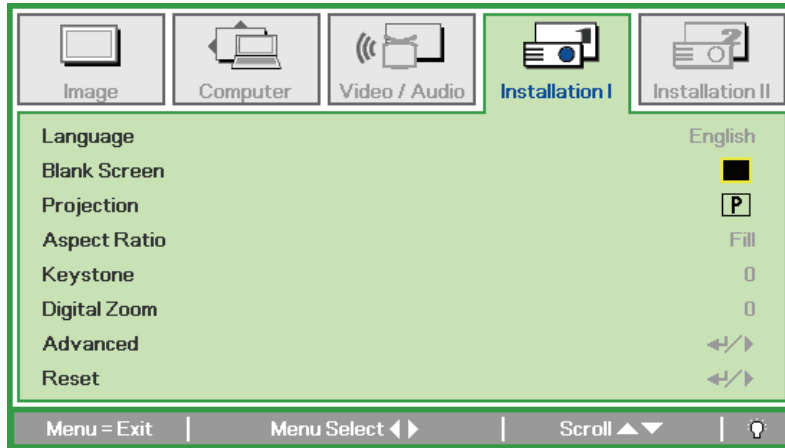
Press ◀ (Enter) / ▶ to enter the **Audio** sub menu.



| ITEM        | DESCRIPTION                                         |
|-------------|-----------------------------------------------------|
| Volume      | Press the ◀▶ buttons to adjust the audio volume.    |
| Mute        | Press the ◀▶ buttons to turn on or off the speaker. |
| Audio Input | Press the cursor ◀▶ button to select audio input.   |

## Installation I Menu

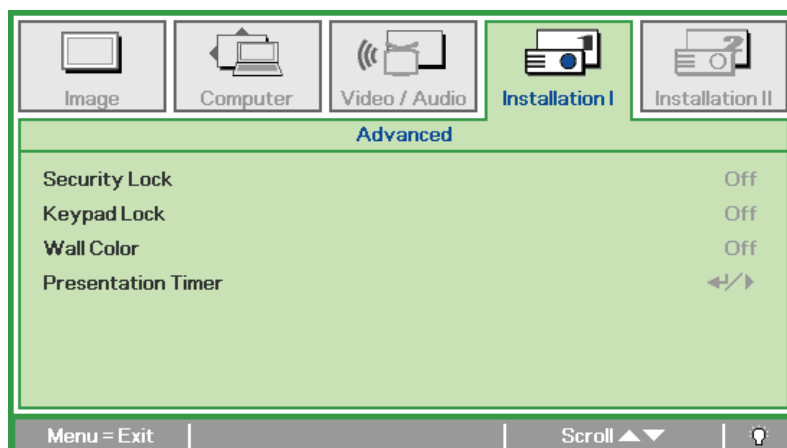
Press the **MENU** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Installation I** menu. Press the cursor ▲▼ button to move up and down in the **Installation I** menu. Press ◀▶ to change values for settings.



| ITEM         | DESCRIPTION                                                                                       |
|--------------|---------------------------------------------------------------------------------------------------|
| Language     | Press the cursor ◀▶ button to select a different localization Menu.                               |
| Blank Screen | Press the cursor ◀▶ button to select different color to blank the screen.                         |
| Projection   | Press the cursor ◀▶ button to choose from four projection methods:                                |
| Aspect Ratio | Press the cursor ◀▶ button to adjust the video aspect ratio.                                      |
| Keystone     | Press the cursor ◀▶ button to adjust the display keystone.                                        |
| Digital Zoom | Press the cursor ◀▶ button to adjust the Digital Zoom menu.                                       |
| Advanced     | Press ◀↵ (Enter) / ▶ to enter the Advanced menu. See <i>Advanced</i> on page 29.                  |
| Reset        | Press ◀↵ (Enter) / ▶ to reset all settings to default values (except Language and Security Lock). |

Advanced

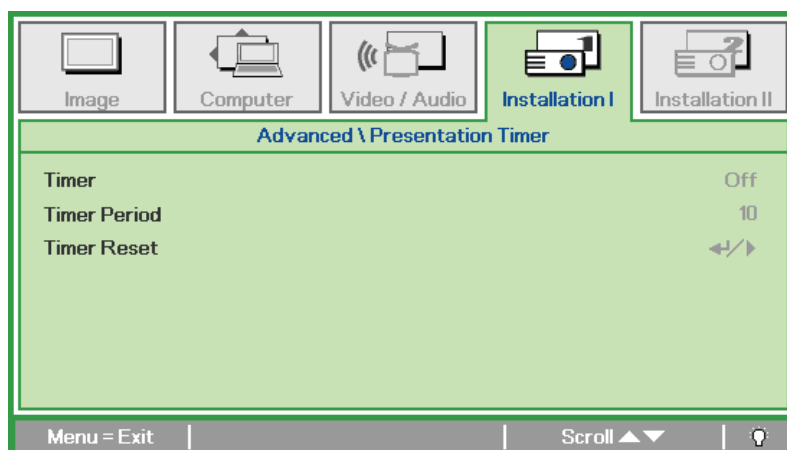
Press ◀ (Enter) / ▶ to enter the **Advanced** sub menu.



| ITEM               | DESCRIPTION                                                                                    |
|--------------------|------------------------------------------------------------------------------------------------|
| Security Lock      | Press the cursor ◀▶ button to enable or disable security lock function.                        |
| Keypad Lock        | Press the cursor ◀▶ button to enable or disable keypad lock function.                          |
| Wall Color         | Press the cursor ◀▶ button to select different wall color setting.                             |
| Presentation Timer | Press ◀ (Enter) / ▶ to enter the Presentation menu. See <i>Presentation Timerr</i> on page 29. |

Presentation Timer

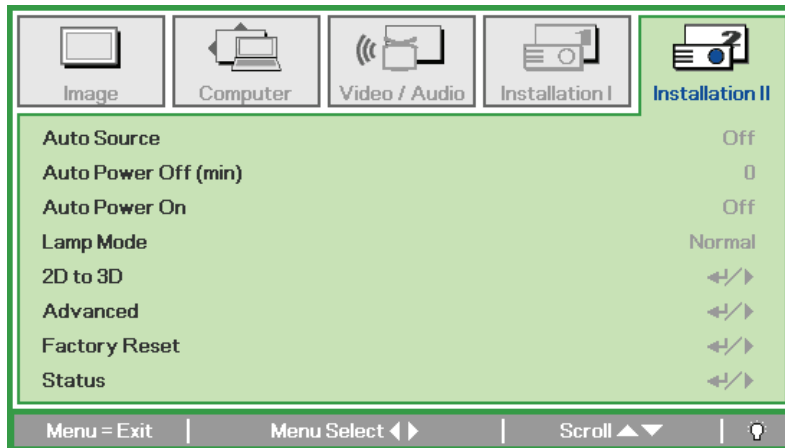
Press ◀ (Enter) / ▶ to enter the **Presentation Timer** sub menu.



| ITEM         | DESCRIPTION                                                                  |
|--------------|------------------------------------------------------------------------------|
| Timer        | Press the cursor ◀▶ button to enable or disable presentation timer function. |
| Timer Period | Press the cursor ◀▶ button to adjust the display timer period.               |
| Timer Reset  | Press ◀ (Enter) / ▶ to reset presentation timer counter.                     |

## Installation II Menu

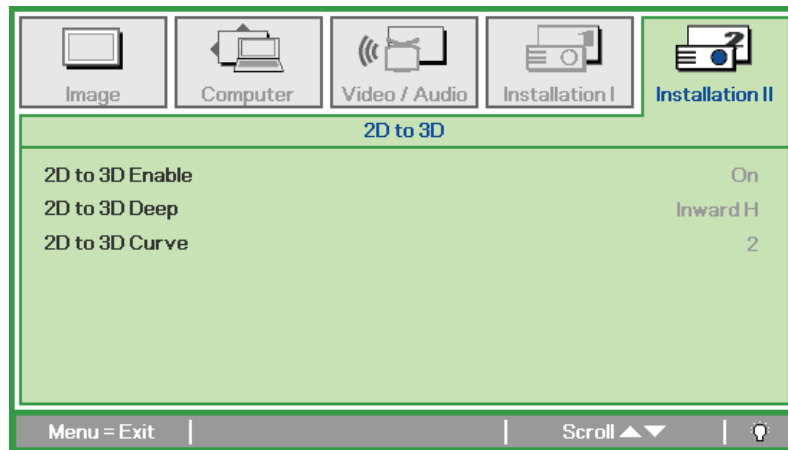
Press the **MENU** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Installation II** menu. Press the cursor ▲▼ button to move up and down in the Installation II menu.



| ITEM                  | DESCRIPTION                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------|
| Auto Source           | Press the cursor ◀▶ button to enable or disable automatic source detection.                                     |
| Auto Power Off (min.) | Press the cursor ◀▶ button to enable or disable automatic shutdown of lamp when no signal.                      |
| Auto Power On         | Press the cursor ◀▶ button to enable or disable automatic power On when AC power is supplied.                   |
| Lamp Mode             | Press the cursor ◀▶ button to select the lamp mode for higher brightness or lower brightness to save lamp life. |
| 2D to 3D              | Press ◀ (Enter) / ▶ to enter the 2D to 3D menu. See <i>2D to 3D</i> on page 31.                                 |
| Advanced              | Press ◀ (Enter) / ▶ to enter the Advanced menu. See <i>Advanced Feature</i> on page 32.                         |
| Factory Reset         | Press ◀ (Enter) / ▶ to reset all items to factory preset values.                                                |
| Status                | Press ◀ (Enter) / ▶ to enter the Status menu. See page 35 for more information on <i>Status</i> .               |

## 2D to 3D

Press the **Menu** button to open the **OSD** menu. Press ◀▶ to move to the **Installation II** menu. Press ▲▼ to move to the **2D to 3D** menu and then press **Enter** or ▶. Press ▲▼ to move up and down in the **2D to 3D** menu. Press ◀▶ to change values for setting.



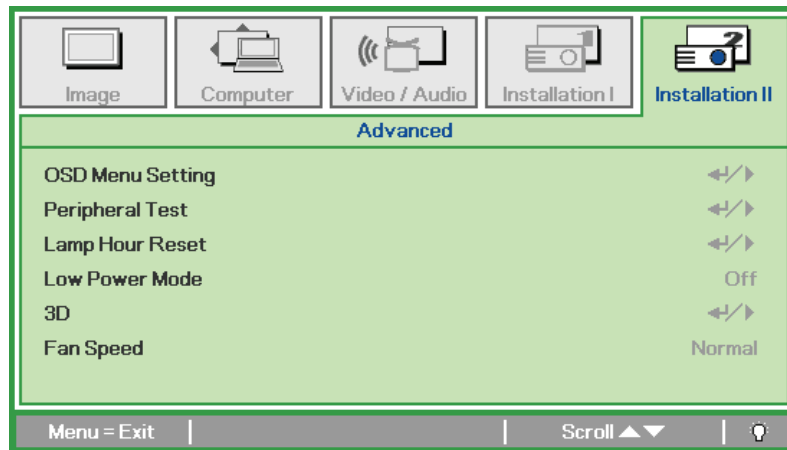
| ITEM            | DESCRIPTION                                                   |
|-----------------|---------------------------------------------------------------|
| 2D to 3D Enable | Press ◀▶ to disable or enable different 2D to 3D Enable mode. |
| 2D to 3D Deep   | Press ◀▶ to disable or enable different 2D to 3D Deep mode.   |
| 2D to 3D Curve  | Press ◀▶ to disable or enable different 2D to 3D Curve mode.  |

**Note:**

- . Available only for HDMI source with 2D content (signals)
- . For use with **DLP 3D glasses**.
- . Maximum resolution of 720P.

### Advanced Feature

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

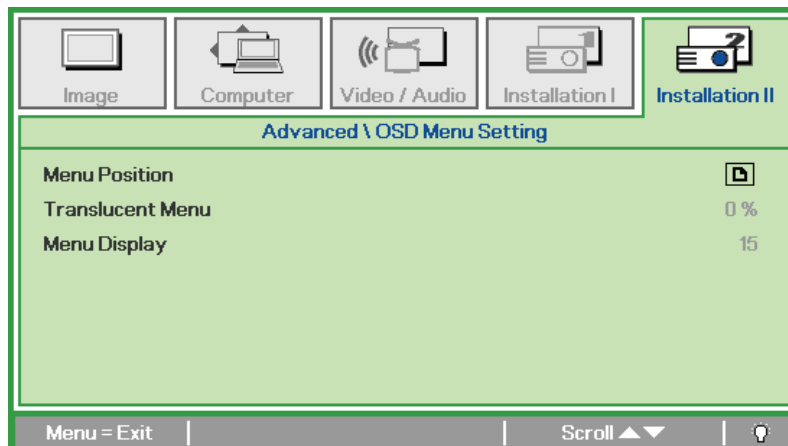


| ITEM             | DESCRIPTION                                                                                                                                                                             |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OSD Menu Setting | Press Enter / ▶ to enter the OSD setting menu. See page 33 for more information on <i>OSD Menu Setting</i> .                                                                            |
| Peripheral Test  | Press Enter/ ▶ to enter the Peripheral Test menu. See page 33 for more information on <i>Peripheral Test</i> .                                                                          |
| Lamp Hour Reset  | After replacing the lamp, this item should be reset. See page 34 for more information on <i>Lamp Hour Reset</i> .                                                                       |
| Low Power Mode   | Press ◀▶ to turn Low Power Mode on or off.                                                                                                                                              |
| 3D               | Press ◀ (Enter) / ▶ to enter the 3D menu. See <i>3D</i> on page 31.                                                                                                                     |
| Fan Speed        | Press the cursor ◀▶ button to toggle between Normal and High fan speeds.<br><b>Note:</b> We recommend selecting high speed in high temperatures, high humidity, or high altitude areas. |

**Note:**

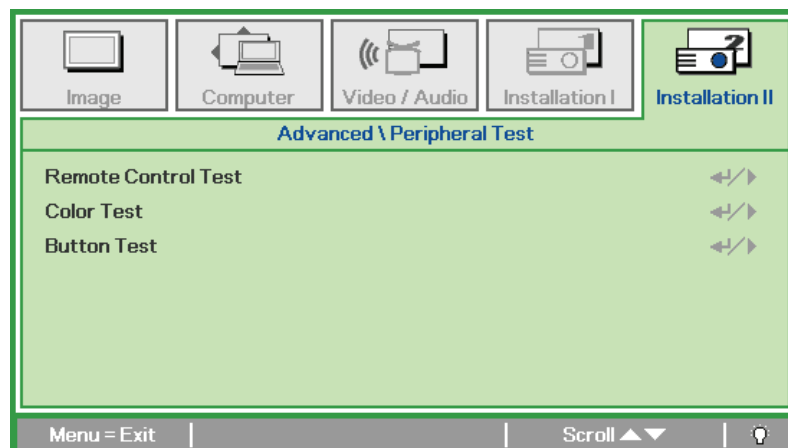
To enjoy the 3D function, first enable the Play Movie in 3D setting found in your DVD device under the 3D Disc Menu.

### OSD Menu Setting



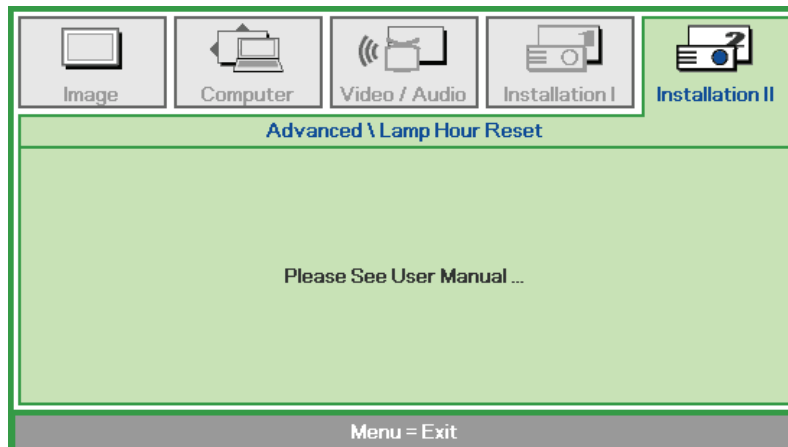
| ITEM             | DESCRIPTION                                                 |
|------------------|-------------------------------------------------------------|
| Menu Position    | Press ◀▶ button to select different OSD location.           |
| Translucent Menu | Press ◀▶ button to select OSD background translucent level. |
| Menu Display     | Press ◀▶ button to select OSD timeout delay.                |

### Peripheral Test



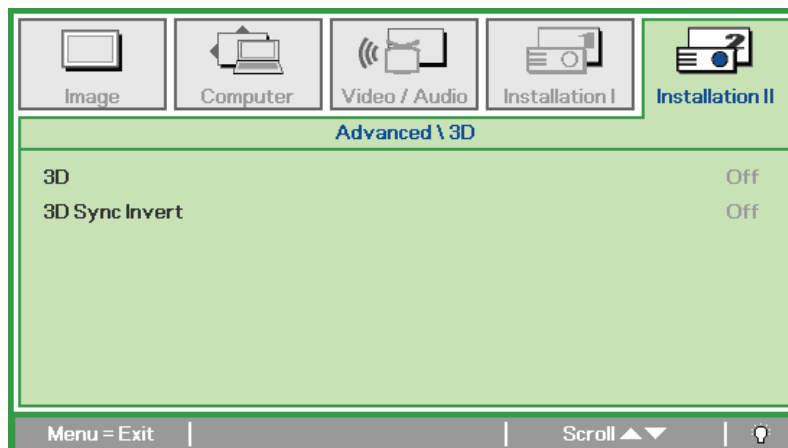
| ITEM                | DESCRIPTION                                                          |
|---------------------|----------------------------------------------------------------------|
| Remote Control Test | Press ◀ (Enter) / ▶ to test the IR remote controller for diagnostic. |
| Color Test          | Press ◀ (Enter) / ▶ to select different colors on screen.            |
| Button Test         | Press ◀ (Enter) / ▶ to test the button on keypad.                    |

### Lamp Hour Reset



Please refer to *Resetting the Lamp* on page 38 to reset the lamp hour counter.

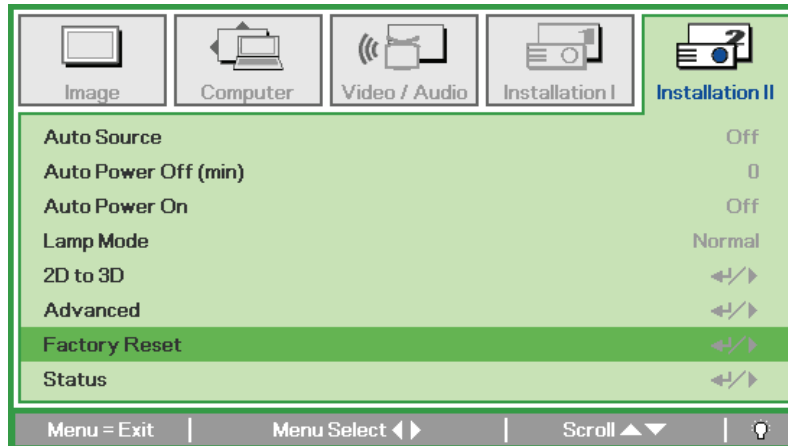
### 3D



| ITEM           | DESCRIPTION                                |
|----------------|--------------------------------------------|
| 3D             | Press ◀▶ to select Off, DLP-Link or IR.    |
| 3D Sync Invert | Press ◀▶ to turn 3D Sync Invert On or Off. |

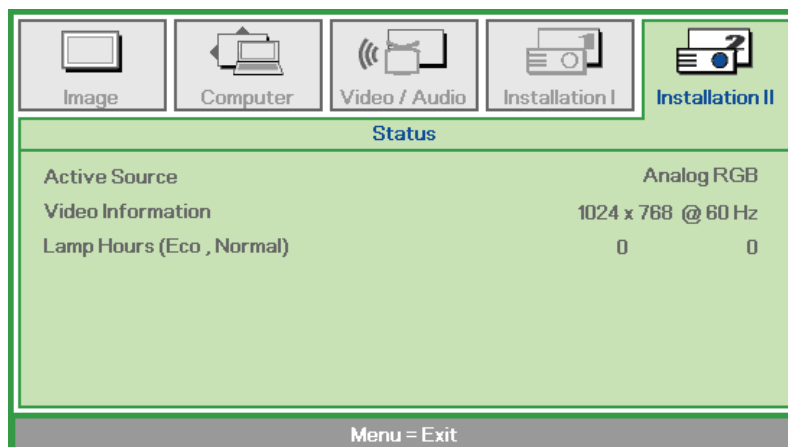
### Factory Reset

Press the cursor ▲▼ button to move up and down in the **Installation II** menu. Select the **Factory Reset** sub menu and press ◀ (Enter) / ▶ to reset all the menu items to the factory default values (except Language and Security Lock).



### Status

Press the cursor ▲▼ button to move up and down in the **Installation II** menu. Select the **Installation II** sub menu and press ◀ (Enter) / ▶ to enter the **Status** sub menu.



| 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 and Normal counters are separated.           |

## **MAINTENANCE AND SECURITY**

### **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.*



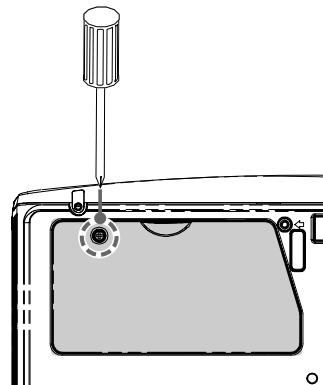
**IF A LAMP EXPLODES**

*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.*

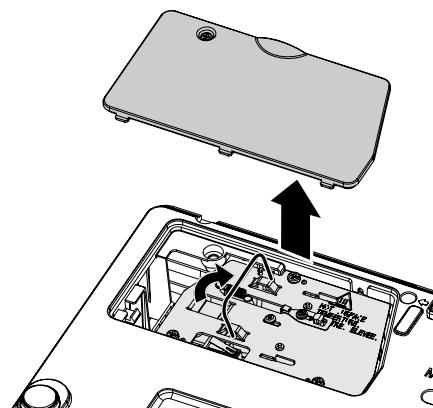
*Open windows and doors for ventilation.*

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

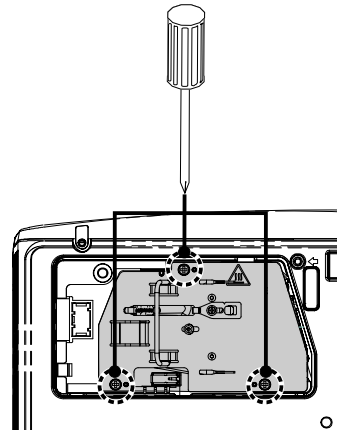
- 1.** Loosen the captive screw on the lamp compartment cover.



- 2.** Remove the lamp compartment cover.



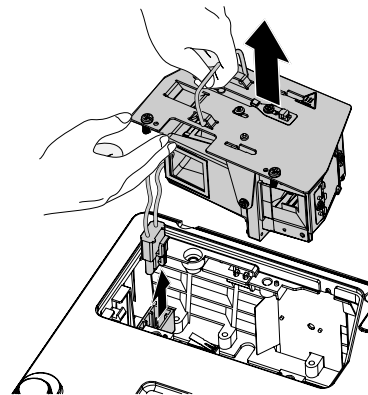
3. Remove the three screws from the lamp module.



4. Lift the module handle up.

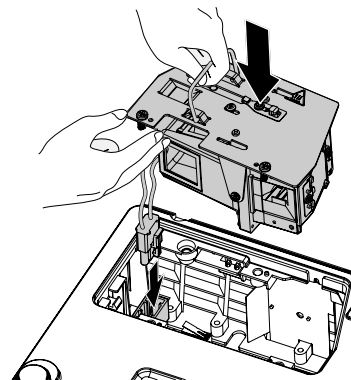
5. Disconnect the lamp connector.

6. Pull firmly on the module handle to remove the lamp module.



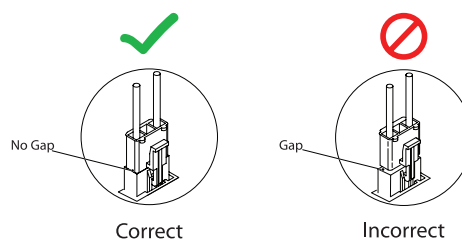
7. Reverse steps 1 to 6 to install the new lamp module. While installing, align the lamp module with the connector and ensure it is level to avoid damage.

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



**Warning:**

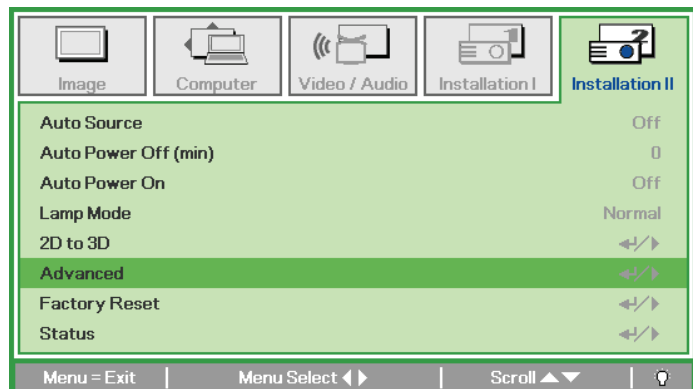
Lamp Connector must be installed flush with the connector base as shown in the image below. A gap between the Lamp Connector and the connector base will cause damage to the projector. The following images illustrate correct and incorrect Lamp Connector installations.



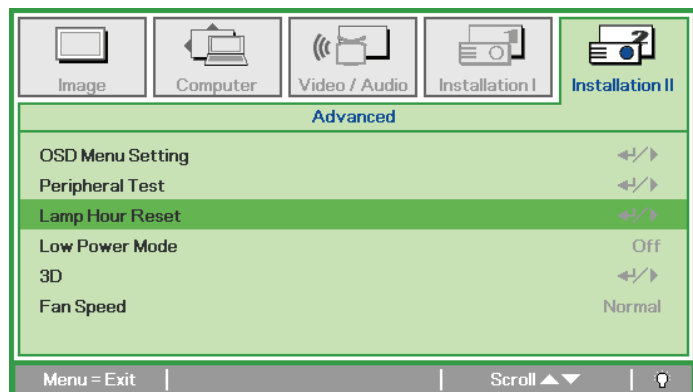
### Resetting the Lamp

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 **Installation II** menu. Press the cursor ▼▲ button to move down to **Advanced**.



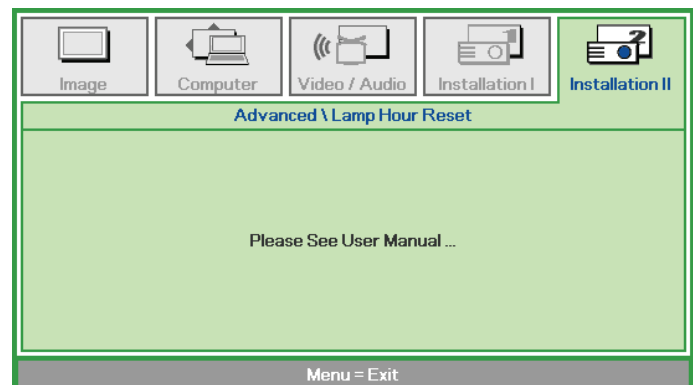
3. Press the cursor ▼▲ button to move down to **Lamp Hour Reset**.



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 Installation II.

## **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.

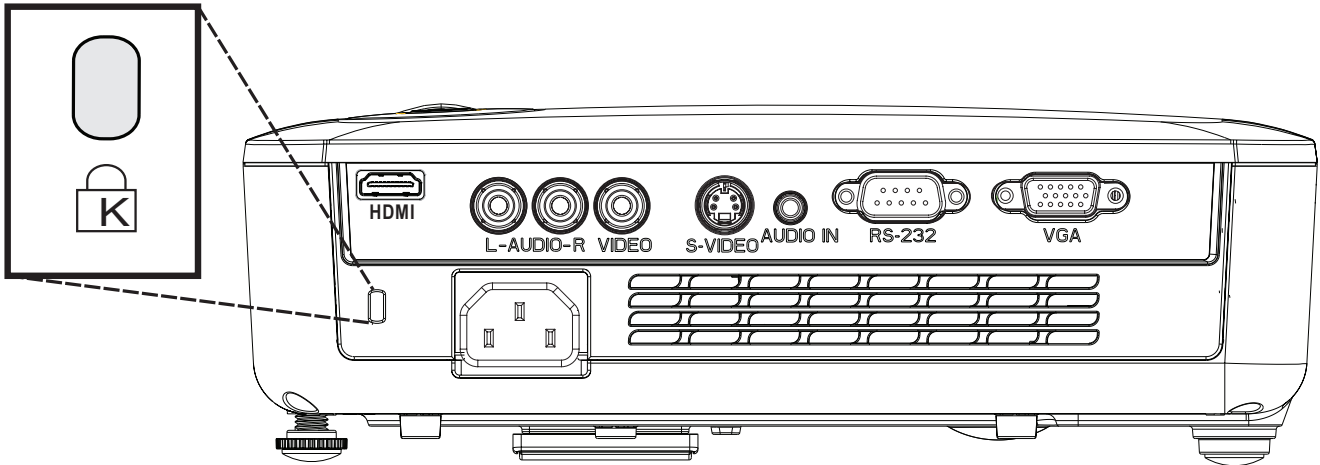
1. Wipe off dust with a clean dampened cloth.
2. Moisten the cloth with warm water and mild detergent (such as used to wash dishes), and then wipe the case.
3. Rinse all detergent from the cloth and wipe the projector again.

**Caution:**

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

## Using the 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>.

## **TROUBLESHOOTING**

### **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**

| <b>ERROR CODE MESSAGES</b> | <b>POWER LED BLINK</b> | <b>OVER TEMP LED</b> | <b>LAMP LED BLINK</b> |
|----------------------------|------------------------|----------------------|-----------------------|
| Over temperature           | 0                      | ON                   | 0                     |
| Thermal break status error | 4                      | 0                    | 0                     |
| Lamp error                 | 0                      | 0                    | On                    |
| Fan1 error                 | 6                      | 0                    | 1                     |
| Fan2 error                 | 6                      | 0                    | 2                     |
| Fan3 error                 | 6                      | 0                    | 3                     |
| Lamp door open             | 7                      | 0                    | 0                     |
| DMD error                  | 8                      | 0                    | 0                     |
| Color wheel error          | 9                      | 0                    | 0                     |

In the event of an error, please disconnect the AC power cord and wait for one (1) minute before re-starting the projector. If the Power or Lamp LEDs are still blinking or the Over Temp LED is lit, 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 or projector.
3. Ensure the projector-to-screen distance is within the 10-meter (33-feet) specified range.
4. Check that the projector lens is clean.

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

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

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

Check the **Projection** setting on the **Installation I** menu of the OSD.

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

1. Set the **Frequency** and **Tracking** settings on the **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** 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 green.
4. If you have replaced the lamp recently, try resetting the lamp connections.
5. Replace the lamp module.
6. Put the old lamp back in the projector and have the projector serviced.

### ***Problem: The lamp goes off***

1. Power surges can cause the lamp to turn off. Re-plug power cord. When the 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 batteries.
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.

## **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>

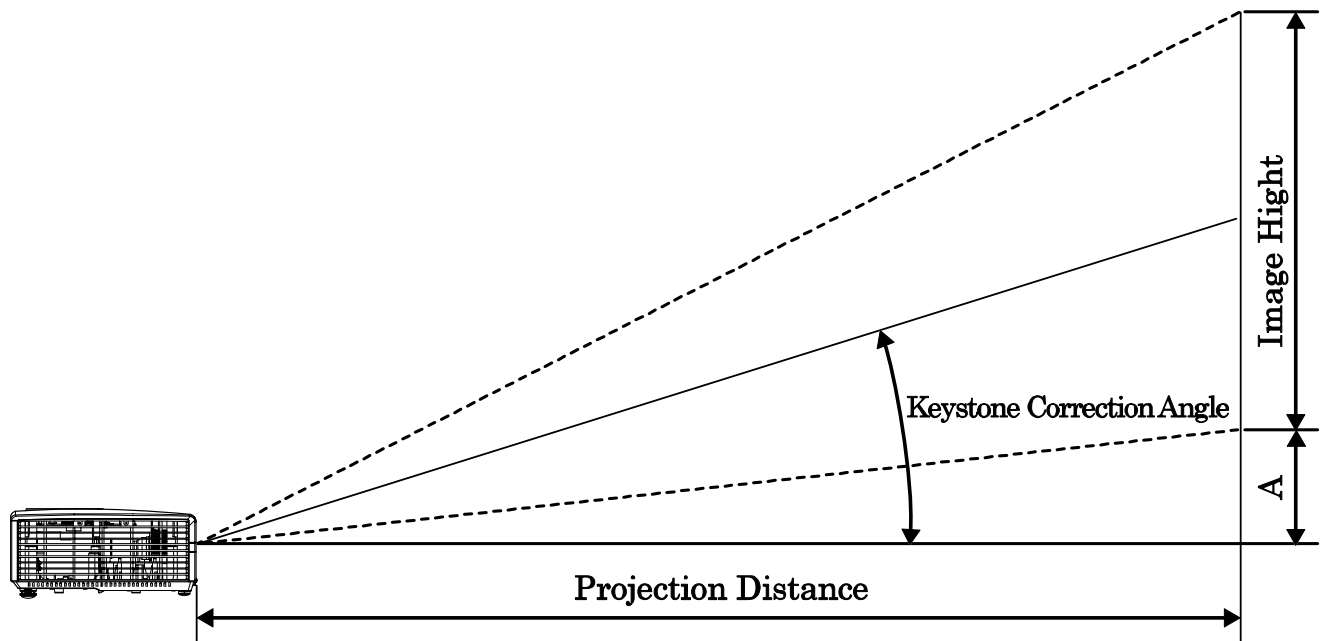
## SPECIFICATIONS

## Specifications

| Model                        | D512-3D                                                          | D536-3D                                       | D538W-3D          |
|------------------------------|------------------------------------------------------------------|-----------------------------------------------|-------------------|
| Display type                 | TI DMD SVGA 0.55”                                                | TI DMD XGA 0.55”                              | TI DMD WXGA 0.65” |
| Resolution                   | 800x600 Native                                                   | 1024x768 Native                               | 1280x800 Native   |
| Projection distance          | 1 - 10 m                                                         |                                               | 1.27 - 10 m       |
| Projection screen size       | 40” ~ 300”                                                       |                                               |                   |
| Projection lens              | Manual Focus/Zoom                                                |                                               |                   |
| Zoom ratio                   | 1.1                                                              |                                               | 1.15              |
| Throw ratio                  | 1.93 ~ 2.16                                                      |                                               | 1.52 ~ 1.76       |
| Vertical keystone correction | +/- 30 steps                                                     |                                               |                   |
| Projection methods           | Front, Rear, Desktop/Ceiling (Rear, Front)                       |                                               |                   |
| Data compatibility           | VGA, SVGA, XGA, SXGA, SXGA+, UXGA, Mac                           |                                               |                   |
| SDTV/EDTV/ HDTV              | 480i, 480p, 720p, 1080i, 1080p                                   |                                               |                   |
| Video compatibility          | NTSC/NTSC 4.43, PAL (B/G/H/I/M/N/60), SECAM                      |                                               |                   |
| H-Sync                       | 15, 30 – 90 kHz                                                  |                                               |                   |
| V-Sync                       | 43 – 85, 120 Hz                                                  |                                               |                   |
| Safety certification         | FCC-B, cUL, UL, CE, C-tick, CCC, KC, CB, PCT, PSB, ICES-003, NOM |                                               |                   |
| Operation temperature        | 5° ~ 35°C                                                        |                                               |                   |
| Dimensions (WxHxD)           | 261.3 mm x 190.7 mm x 78 mm (10.33” x 7.8” x 3”)                 |                                               |                   |
| AC Input                     | AC Universal 100 - 240, Typical @ 110VAC (100-240)/+/-10%        |                                               |                   |
| Power consumption            | Typical 230W (Normal) /<br>Typical 205W (Eco)                    | Typical 300W (Normal) /<br>Typical 230W (Eco) |                   |
| Stand By                     | <1 watts                                                         |                                               |                   |
| Lamp                         | 180W (Normal) /<br>160W (Eco)                                    | 240W (Normal) / 180W (Eco)                    |                   |
| Audio speaker                | 2W mono speaker                                                  |                                               |                   |
| Input Terminals              | VGA (15pin D-Sub) x 1                                            |                                               |                   |
|                              | S-Video x 1                                                      |                                               |                   |
|                              | Composite Video x 1                                              |                                               |                   |
|                              | HDMI™                                                            |                                               |                   |
|                              | RCA stereo x 1                                                   |                                               |                   |
|                              | Mini-jack stereo x 1                                             |                                               |                   |
| Control Terminals            | RS-232C                                                          |                                               |                   |
| Security                     | Kensington lock                                                  |                                               |                   |

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

## Projection Distance vs. Projection Size



*D5 Series Projection Distance and Size Table*

| D512-3D / D536-3D          |                         |                          |                                          |                                        |                    |
|----------------------------|-------------------------|--------------------------|------------------------------------------|----------------------------------------|--------------------|
| IMAGE DIAGONAL<br>( INCH ) | IMAGE WIDTH<br>( INCH ) | IMAGE HEIGHT<br>( INCH ) | PROJECTION<br>DISTANCE<br>( MM )<br>FROM | PROJECTION<br>DISTANCE<br>( MM )<br>TO | OFFSET-A<br>( MM ) |
| 40                         | 32                      | 24                       | 1570                                     | 1730                                   | 85                 |
| 60                         | 48                      | 36                       | 2350                                     | 2600                                   | 128                |
| 70                         | 56                      | 42                       | 2750                                     | 3030                                   | 149                |
| 72                         | 56.7                    | 43.2                     | 2820                                     | 3120                                   | 154                |
| 80                         | 64                      | 48                       | 3140                                     | 3460                                   | 171                |
| 84                         | 67.2                    | 50.4                     | 3290                                     | 3640                                   | 179                |
| 90                         | 72                      | 54                       | 3530                                     | 3900                                   | 192                |
| 96                         | 76.8                    | 57.6                     | 3760                                     | 4160                                   | 205                |
| 100                        | 80                      | 60                       | 3920                                     | 4330                                   | 213                |
| 120                        | 96                      | 72                       | 4710                                     | 5190                                   | 256                |
| 135                        | 108                     | 81                       | 5290                                     | 5840                                   | 288                |
| 150                        | 120                     | 90                       | 5880                                     | 6490                                   | 320                |
| 200                        | 160                     | 120                      | 7840                                     | 8660                                   | 427                |

| D538W-3D                   |                         |                         |                                                 |                                               |                    |
|----------------------------|-------------------------|-------------------------|-------------------------------------------------|-----------------------------------------------|--------------------|
| IMAGE DIAGONAL<br>( INCH ) | IMAGE WIDTH<br>( INCH ) | IMAGE HIGHT<br>( INCH ) | PROJECTION<br>DISTANCE<br>( MM )<br><u>FROM</u> | PROJECTION<br>DISTANCE<br>( MM )<br><u>TO</u> | OFFSET-A<br>( MM ) |
| 40                         | 34                      | 21                      | 1310                                            | 1520                                          | 62                 |
| 60                         | 51                      | 32                      | 1960                                            | 2270                                          | 93                 |
| 70                         | 59                      | 37                      | 2290                                            | 2650                                          | 108                |
| 72                         | 61                      | 38                      | 2360                                            | 2730                                          | 111                |
| 80                         | 68                      | 42                      | 2620                                            | 3030                                          | 124                |
| 84                         | 71                      | 45                      | 2750                                            | 3180                                          | 130                |
| 90                         | 76                      | 48                      | 2950                                            | 3410                                          | 139                |
| 96                         | 81                      | 51                      | 3140                                            | 3640                                          | 149                |
| 100                        | 85                      | 53                      | 3270                                            | 3790                                          | 155                |
| 120                        | 102                     | 64                      | 3930                                            | 4550                                          | 186                |
| 135                        | 114                     | 72                      | 4420                                            | 5120                                          | 209                |
| 150                        | 127                     | 79                      | 4910                                            | 5690                                          | 232                |
| 200                        | 170                     | 106                     | 6550                                            | 7580                                          | 310                |

**D5 Series Timing Mode Table**

| SIGNAL    | RESOLUTION  | H-SYNC<br>(KHz) | V-SYNC<br>(Hz) | COMPOSITE<br>/ S-VIDEO | COMPONENT | RGB | DVI/HDMI |
|-----------|-------------|-----------------|----------------|------------------------|-----------|-----|----------|
| NTSC      | —           | 15.734          | 60.0           | O                      | —         | —   | —        |
| PAL/SECAM | —           | 15.625          | 50.0           | O                      | —         | —   | —        |
| VESA      | 720 x 400   | 37.9            | 85.0           | —                      | —         | O   | O        |
|           | 640 x 480   | 31.5            | 60.0           | —                      | —         | O   | O        |
|           | 640 x 480   | 37.9            | 72.0           | —                      | —         | O   | O        |
|           | 640 x 480   | 37.5            | 75.0           | —                      | —         | O   | O        |
|           | 640 x 480   | 43.3            | 85.0           | —                      | —         | O   | O        |
|           | 800 x 600   | 35.2            | 56.0           | —                      | —         | O   | O        |
|           | 800 x 600   | 37.9            | 60.0           | —                      | —         | O   | O        |
|           | 800 x 600   | 48.1            | 72.0           | —                      | —         | O   | O        |
|           | 800 x 600   | 46.9            | 75.0           | —                      | —         | O   | O        |
|           | 800 x 600   | 53.7            | 85.0           | —                      | —         | O   | O        |
|           | 1024 x 768  | 48.4            | 60.0           | —                      | —         | O   | O        |
|           | 1024 x 768  | 56.5            | 70.0           | —                      | —         | O   | O        |
|           | 1024 x 768  | 60.0            | 75.0           | —                      | —         | O   | O        |
|           | 1024 x 768  | 68.7            | 85.0           | —                      | —         | O   | O        |
|           | 1280 x 800  | 49.7            | 59.8           | —                      | —         | O   | O        |
|           | 1280 x 800  | 62.8            | 74.9           | —                      | —         | O   | O        |
|           | 1280 x 800  | 71.6            | 84.8           | —                      | —         | O   | O        |
|           | 1280 x 1024 | 63.98           | 60.0           | —                      | —         | O   | O        |
|           | 1280 x 1024 | 79.98           | 75.0           | —                      | —         | O   | O        |
|           | 1280 x 1024 | 91.10           | 85.0           | —                      | —         | O   | O        |
|           | 1280 x 960  | 60.0            | 60.0           | —                      | —         | O   | O        |
|           | 1280 x 960  | 85.9            | 85.0           | —                      | —         | O   | O        |
|           | 1400 x 1050 | 65.3            | 60.0           | —                      | —         | O   | O        |
|           | 1440 x 900  | 70.6            | 75.0           | —                      | —         | O   | O        |
|           | 1440 x 900  | 55.6            | 60.0           | —                      | —         | O   | O        |

| SIGNAL    | RESOLUTION  | H-SYNC<br>(KHz) | V-SYNC<br>(Hz) | COMPOSITE<br>/ S-VIDEO | COMPONENT | RGB | DVI/HDMI |
|-----------|-------------|-----------------|----------------|------------------------|-----------|-----|----------|
|           | 1600 x 1200 | 75.0            | 60.0           | —                      | —         | O   | O        |
| Apple Mac | 640 x 480   | 35.0            | 66.68          | —                      | —         | O   | O        |
|           | 832 x 624   | 49.725          | 74.55          | —                      | —         | O   | O        |
|           | 1024 x 768  | 60.24           | 75.0           | —                      | —         | O   | O        |
|           | 1152 x 870  | 68.68           | 75.06          | —                      | —         | O   | O        |
| SDTV      | 480i        | 15.734          | 60.0           | —                      | O         | —   | O        |
|           | 576i        | 15.625          | 50.0           | —                      | O         | —   | O        |
| EDTV      | 480p        | 31.469          | 60.0           | —                      | O         | —   | O        |
|           | 576p        | 31.25           | 50.0           | —                      | O         | —   | O        |
| HDTV      | 720p        | 37.5            | 50.0           | —                      | O         | —   | O        |
|           | 720p        | 45.0            | 60.0           | —                      | O         | —   | O        |
|           | 1080i       | 33.8            | 60.0           | —                      | O         | —   | O        |
|           | 1080i       | 28.1            | 50.0           | —                      | O         | —   | O        |
|           | 1080p       | 67.5            | 60.0           | —                      | O         | —   | O        |
|           | 1080p       | 56.3            | 50.0           | —                      | O         | —   | O        |

O: Frequency supported

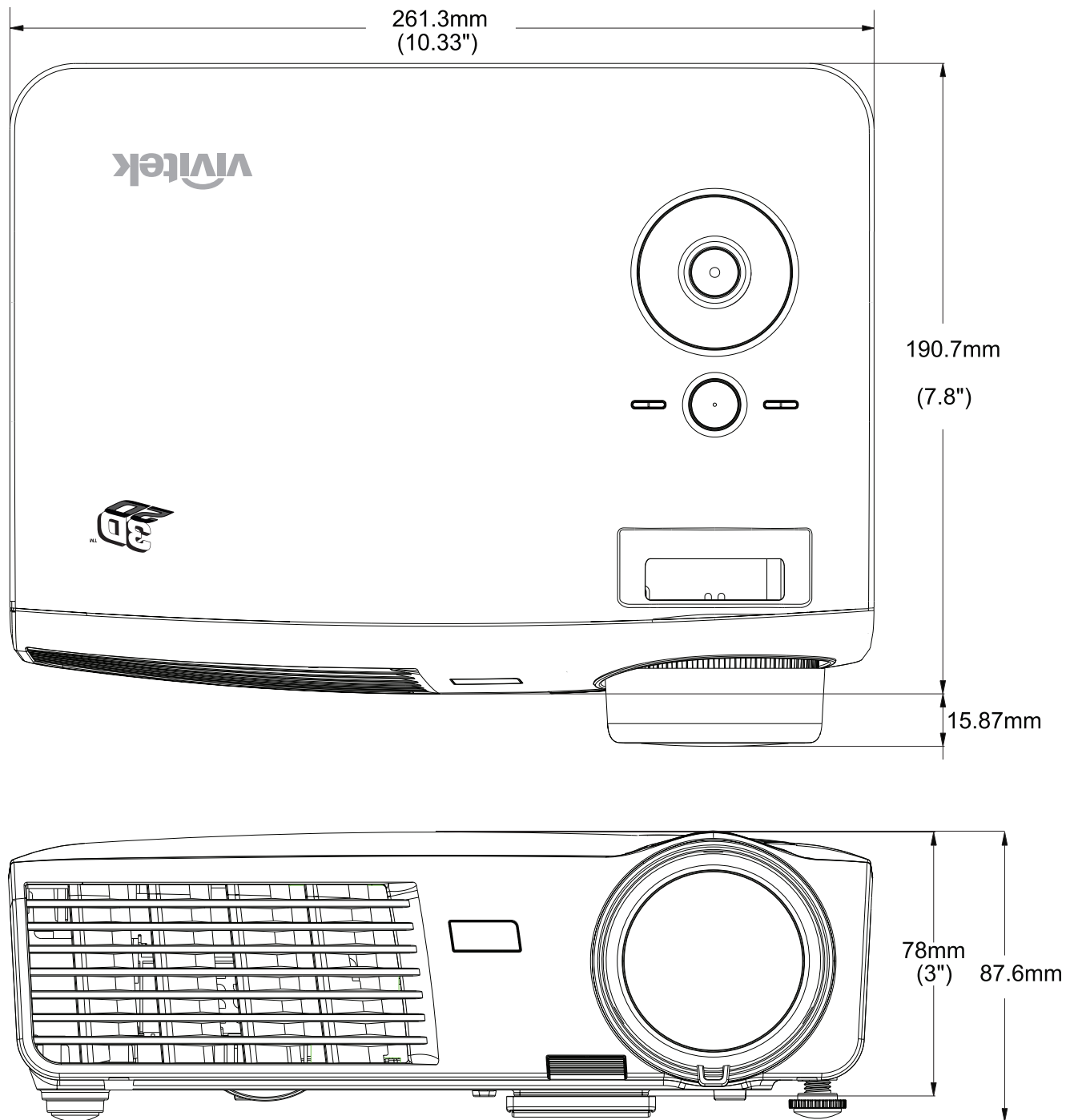
—: Frequency not supported

\*: Displayable level

**Caution:**

- 3D maximum input timing is only support to 720P.
- 2D to 3D maximum output timing is only support to 720P.

## **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, UL, cUL, CB, CE, CCC, KC, PCT, PSB, NOM, ICES-003, and C-tick.

## RS-232C Protocol

Note: Not all functions are available for all models due to different series.

## RS232 Setting

|               |             |
|---------------|-------------|
| Baud rate:    | <b>9600</b> |
| Parity check: | <b>None</b> |
| Data bit:     | <b>8</b>    |
| Stop bit:     | <b>1</b>    |
| Flow Control  | <b>None</b> |

Minimum delay for next command: **1ms**

## Control Command Structure

The command is structured by the Header code, command code, data code and end code. Most of the commands are structured except some for the compatibility issue with other projectors.

|              | Header code | Command code   | Data code   | End code   |
|--------------|-------------|----------------|-------------|------------|
| <b>HEX</b>   | <b>7Eh</b>  | <b>Command</b> | <b>Data</b> | <b>0Dh</b> |
| <b>ASCII</b> | <b>'~'</b>  | <b>Command</b> | <b>Data</b> | <b>CR</b>  |

## Control Sequence

The projector may send a return code after it received a command. If the command isn't received correctly, the projector will not send the return code

## Operation Command

The operation commands execute the basic operation setting of this projector.

| Operation                     | ASCII      | HEX             |
|-------------------------------|------------|-----------------|
| <b>Power On</b> ※             | ~ P N CR ※ | 7Eh 50h 4Eh 0Dh |
| <b>Power Off</b>              | ~ P F CR   | 7Eh 50h 46h 0Dh |
| <b>Auto Image</b>             | ~ A I CR   | 7Eh 41h 49h 0Dh |
| <b>Lamp Hour Reset</b>        | ~ R L CR   | 7Eh 52h 4Ch 0Dh |
| <b>Input Select RGB</b>       | ~ S R CR   | 7Eh 53h 52h 0Dh |
| <b>Input Select RGB2</b>      | ~ S G CR   | 7Eh 53h 47h 0Dh |
| <b>Input Select DVI</b>       | ~ S D CR   | 7Eh 53h 44h 0Dh |
| <b>Input Select Video</b>     | ~ S V CR   | 7Eh 53h 56h 0Dh |
| <b>Input Select S-Video</b>   | ~ S S CR   | 7Eh 53h 53h 0Dh |
| <b>Input Select Component</b> | ~ S Y CR   | 7Eh 53h 59h 0Dh |
| <b>Input Select HDMI</b>      | ~ S H CR   | 7Eh 53h 48h 0Dh |
| <b>Input Select Wireless</b>  | ~ S W CR   | 7Eh 53h 57h 0Dh |

※ Power On command will only word at system standby.

※ CR : Carriage Return.

## Remote Command

The remote commands simulate the code send from IR remote handset.

| Button's name | ASCII  | HEX             |
|---------------|--------|-----------------|
| UP arrow      | ~rU CR | 7Eh 72h 55h 0Dh |
| DOWN arrow    | ~rD CR | 7Eh 72h 44h 0Dh |
| LEFT arrow    | ~rL CR | 7Eh 72h 4Ch 0Dh |
| RIGHT arrow   | ~rR CR | 7Eh 72h 52h 0Dh |
| POWER         | ~rP CR | 7Eh 72h 50h 0Dh |
| EXIT          | ~rE CR | 7Eh 72h 45h 0Dh |
| INPUT         | ~rI CR | 7Eh 72h 49h 0Dh |
| AUTO          | ~rA CR | 7Eh 72h 41h 0Dh |
| KEYSTONE+     | ~rK CR | 7Eh 72h 4Bh 0Dh |
| KEYSTONE-     | ~rJ CR | 7Eh 72h 4Ah 0Dh |
| MENU          | ~rM CR | 7Eh 72h 4Dh 0Dh |
| STATUS        | ~rS CR | 7Eh 72h 53h 0Dh |
| MUTE          | ~rT CR | 7Eh 72h 54h 0Dh |
| ZOOM+         | ~rZ CR | 7Eh 72h 5Ah 0Dh |
| ZOOM-         | ~rY CR | 7Eh 72h 59h 0Dh |
| BLANK         | ~rB CR | 7Eh 72h 42h 0Dh |
| FREEZE        | ~rF CR | 7Eh 72h 46h 0Dh |
| VOLUME+       | ~rV CR | 7Eh 72h 56h 0Dh |
| VOLUME-       | ~rW CR | 7Eh 72h 57h 0Dh |
| Enter         | ~rN CR | 7Eh 72h 4Eh 0Dh |

## Set Value Command

| ITEM              | ASCII      | HEX                |
|-------------------|------------|--------------------|
| Brightness        | ~sB ? CR ※ | 7Eh 73h 42h ?h 0Dh |
| Contrast          | ~sC ? CR   | 7Eh 73h 43h ?h 0Dh |
| Color             | ~sR ? CR   | 7Eh 73h 52h ?h 0Dh |
| Tint              | ~sN ? CR   | 7Eh 73h 4Eh ?h 0Dh |
| Scaling           | ~sA ? CR   | 7Eh 73h 41h ?h 0Dh |
| Color Temperature | ~sT ? CR   | 7Eh 73h 54h ?h 0Dh |
| Projection Mode   | ~sJ ? CR   | 7Eh 73h 4Ah ?h 0Dh |

※ ? : ASCII Data

## Data Range

| ITEM              | Set Data Range                                    | Source                  |
|-------------------|---------------------------------------------------|-------------------------|
| Brightness        | 0 ~ 100                                           | ALL                     |
| Contrast          | 0 ~ 100                                           | ALL                     |
| Color             | 0 ~ 100                                           | Video/S-Video/Component |
| Tint              | 0 ~ 100                                           | Video/S-Video/Component |
| Scaling           | 0: Fill 1: 4:3 2: 16:9 3: Letter Box<br>4: Native | ALL                     |
| Color Temperature | 0: Cold 1: Normal 2: Warm                         | ALL                     |
| Projection Mode   | 0: Front 1: Rear 2: Rear+Ceiling<br>3: Ceiling    | ALL                     |

Attention: Data range may be different for different models

Example 1. Adjust Brightness value to 100

Send Command : ~sB100CR

Example 2. Adjust Color Temperature to Warm

Send Command : ~sT2CR

Query Command

| ITEM              | ASCII | HEX             |
|-------------------|-------|-----------------|
| Software Version  | ~qVCR | 7Eh 71h 56h 0Dh |
| Power State       | ~qPCR | 7Eh 71h 50h 0Dh |
| Input Select      | ~qSCR | 7Eh 71h 53h 0Dh |
| Lamp Hours        | ~qLCR | 7Eh 71h 4Ch 0Dh |
| Brightness        | ~qBCR | 7Eh 71h 42h 0Dh |
| Contrast          | ~qCCR | 7Eh 71h 43h 0Dh |
| Color (Video)     | ~qRCR | 7Eh 71h 52h 0Dh |
| Tint (Video)      | ~qNCR | 7Eh 71h 4Eh 0Dh |
| Scaling           | ~qACR | 7Eh 71h 41h 0Dh |
| Color Temperature | ~qTCR | 7Eh 71h 54h 0Dh |
| Projection Mode   | ~qJCR | 7Eh 71h 4Ah 0Dh |

Response message

| ITEM              | Response Message examples                             |  |
|-------------------|-------------------------------------------------------|--|
| Software Version  | .....                                                 |  |
| Power State       | On Off                                                |  |
| Input Select      | RGB RGB2 HDMI Video S-<br>Video Component DVD<br>HDTV |  |
| Lamp Hours        | 2000                                                  |  |
| Brightness        | 100                                                   |  |
| Contrast          | 100                                                   |  |
| Color (Video)     | 100                                                   |  |
| Tint (Video)      | 100                                                   |  |
| Scaling           | Fill 4:3 16:9 LetterBox Native                        |  |
| Color Temperature | Cold Normal Warm                                      |  |
| Projection Mode   | Front Rear+Ceiling Rear Ceiling                       |  |

**Example 1. Get Brightness value**

Send Command : ~qB<sup>CR</sup>

Response : 100

**Example 2. Get Color Temperature**

Send Command : ~qT<sup>CR</sup>

Response : Warm