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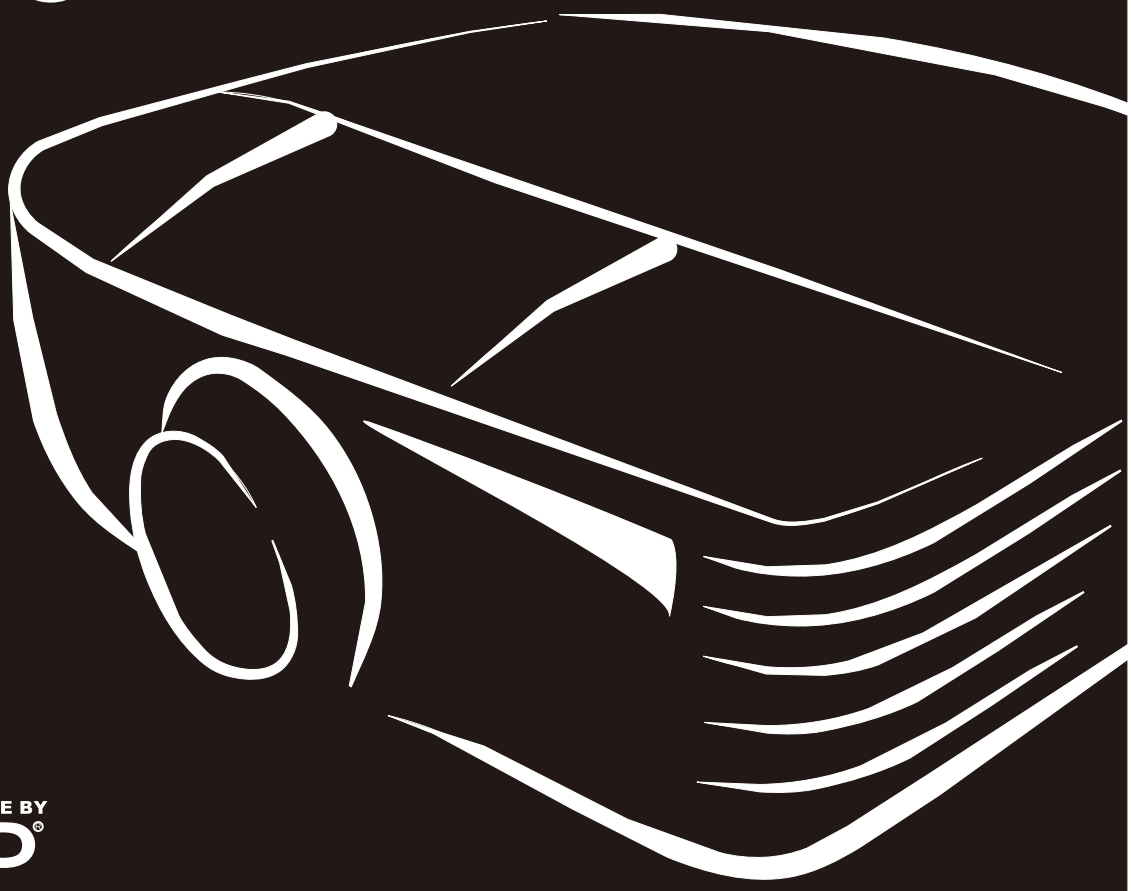
Vivid Color, Vivid Life

User's Manual

D5280U



PICTURE BY DLP®
TEXAS INSTRUMENTS

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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.*

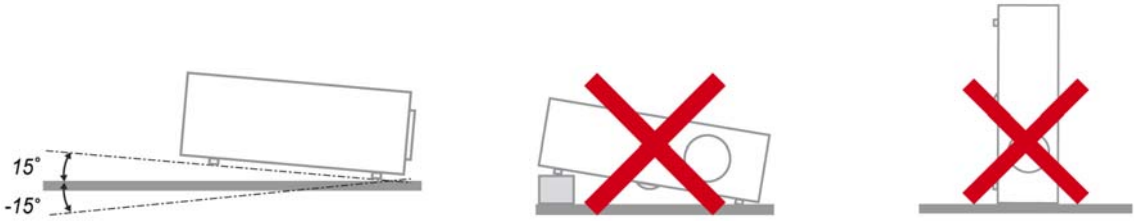
Throughout this manual, component parts and items in the OSD menus are denoted in bold font as in this example:
"Push the **Menu** button on the remote control to open the **Main** menu."

General Safety Information

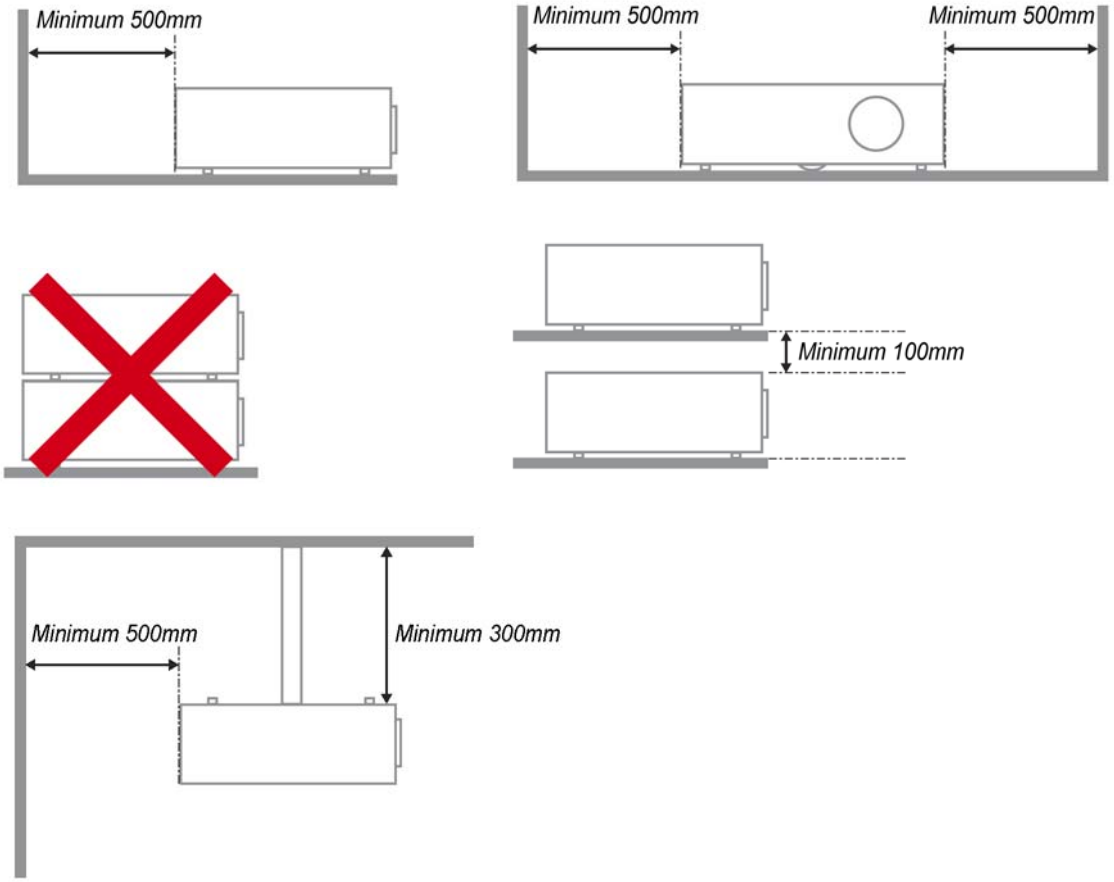
- Do not open the unit case. Aside from the projection lamp, there are no user-serviceable parts in the unit. For servicing, contact qualified service personnel.
- Follow all warnings and cautions in this manual and on the unit case.
- The projection lamp is extremely bright by design. To avoid damage 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 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 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 with the acceptable operation temperature 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 39 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 42.
- 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 54.

Important Recycle Instructions:

Hg 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. For lamp specific disposal information check 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 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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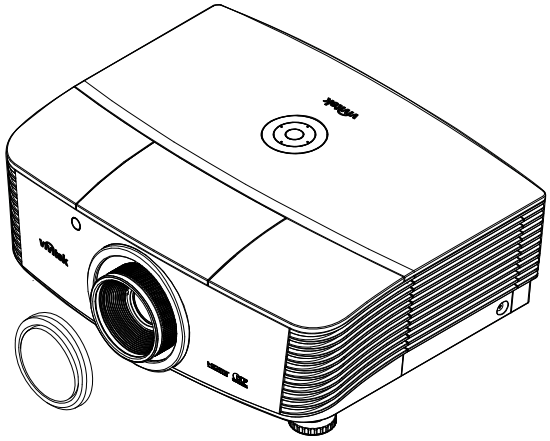
GETTING STARTED

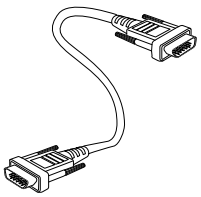
Packing Checklist

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

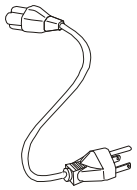


PROJECTOR WITH LENS CAP

REMOTE CONTROL
(BATTERIES NOT INCLUDED)



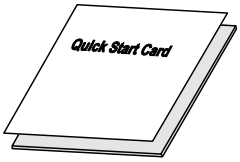
RGB CABLE



POWER CORD

CD-ROM
(THIS USER'S MANUAL)

WARRANTY CARD



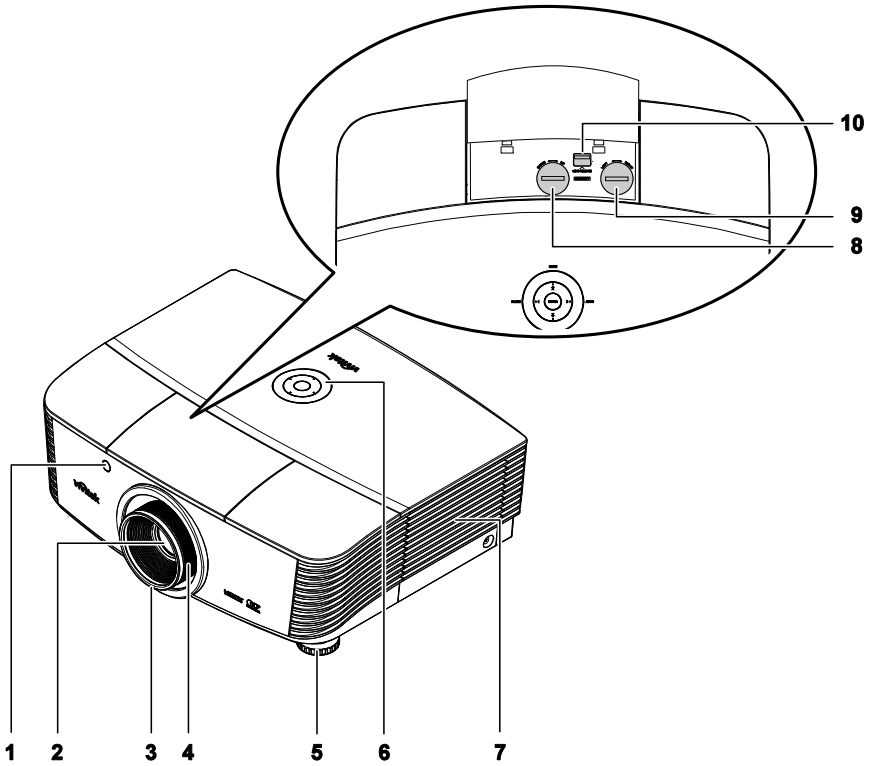
QUICK START CARD

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

Caution:
Avoid using the projector in dusty environments.

Views of Projector Parts

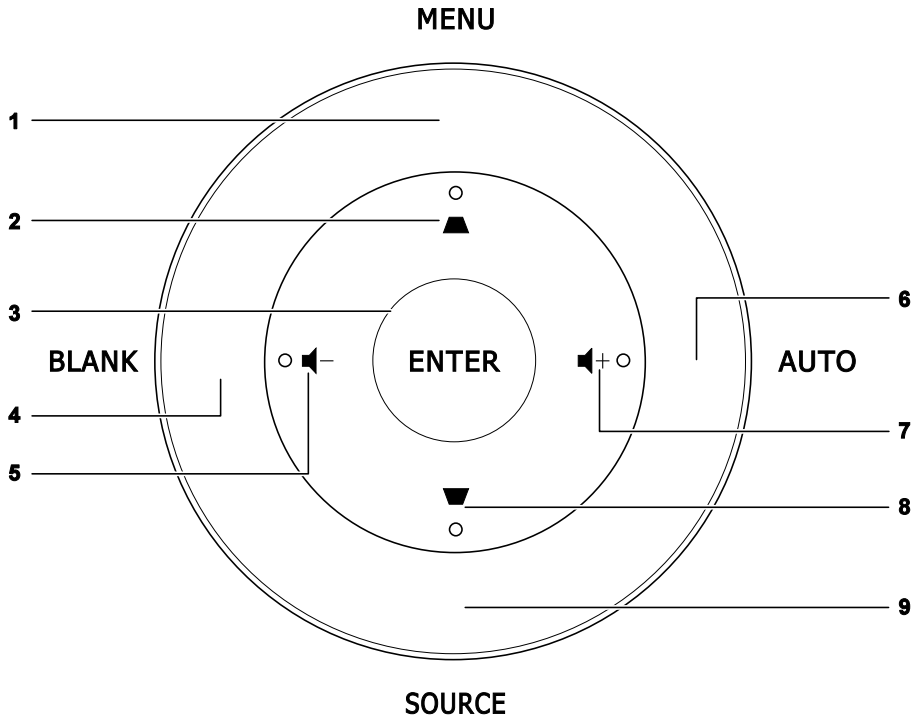
Front-right View



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	IR receiver	Receives IR signal from remote control	***7***
2.	Lens	Projection Lens	
3.	Focus ring	Focuses the projected image	***18***
4.	Zoom ring	Enlarges the projected image	
5.	Height adjuster	Adjusts level of projector	***15***
6.	Function keys	See Top view—On-screen Display (OSD) buttons and LEDs.	***3***
7.	Lamp cover	Removes cover to replace lamp or color wheel	***39***
8.	Vertical lens shift	Adjusts the image position vertically	***16***
9.	Horizontal lens shift	Adjusts the image position horizontally	***17***
10.	Lens release button	Press the release button before removing the lens	***11***

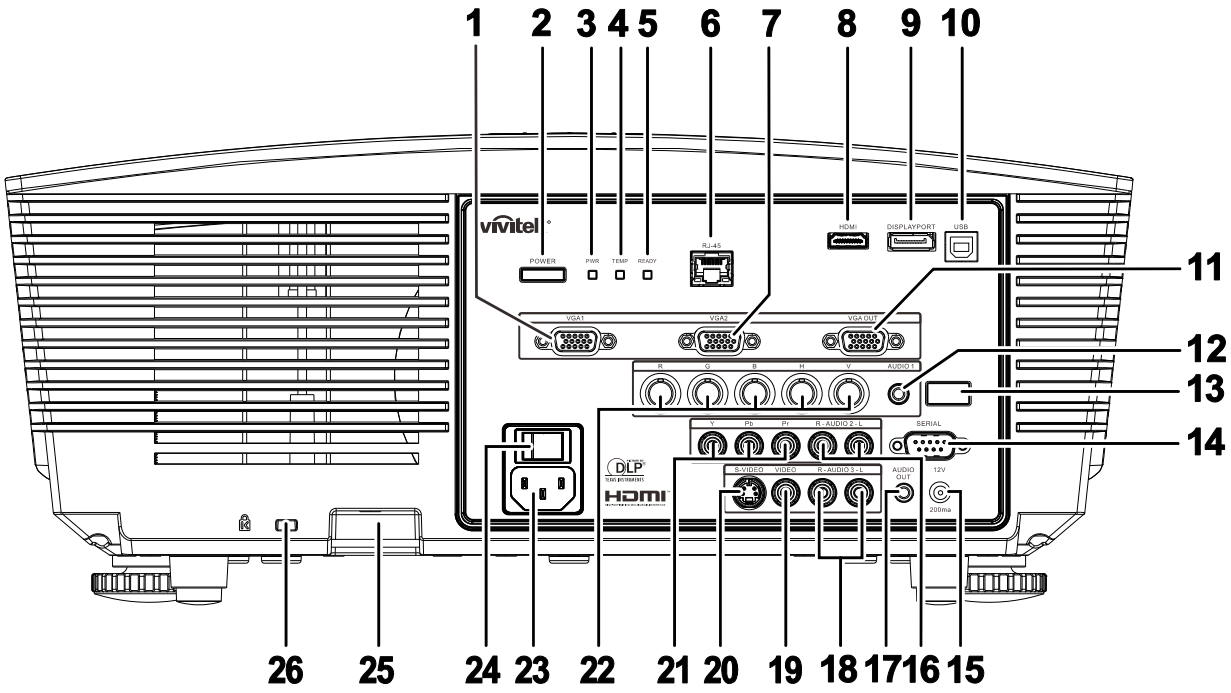
Important:
Ventilation openings on the projector allow for good air circulation, which keeps the projector lamp cool. Do not obstruct any of the ventilation openings.

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



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	MENU	Opens and exits OSD menus	20
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.	🔈–	Quick Menu – For Volume -	20
6.	AUTO	Optimizes image size, position, and resolution	
7.	🔈+	Quick Menu – For Volume +	20
8.	▼	Navigates and changes settings in the OSD Quick Menu – For Keystone	
9.	SOURCE	Enter the Source menu	

Rear view



ITEM	LABEL	DESCRIPTION		SEE PAGE:
1.	VGA1 IN	Connect a RGB cable from a computer or a video enabled device		
2.	POWER	Turns the projector on or off (main power switch must be turned on first). Press to place the projector in standby mode.		*13*
3.	PWR LED	Red	Standby	*45*
		Green	In normal mode	
		Flashing	Error code (See as LED indicator table)	
4.	TEMP LED	Red	Over temperature	
5.	READY LED	Red	In normal mode	
		Flashing	Error code (See as LED indicator table)	
6.	RJ-45	Connect a LAN cable from Ethernet		
7.	VGA2 IN	Connect a RGB cable from a computer or a video enabled device		
8.	HDMI	Connect the HDMI cable from a HDMI device		
9.	DISPLAYPORT	Connect a DISPLAYPORT CABLE to a DISPLAYPORT source		
10.	USB	Connect the USB cable from a computer		
11.	VGA OUT	Connect the RGB cable to a display (Pass through by VGA1 only)		
12.	AUDIO IN	Connect an AUDIO cable from the input device		
13.	IR receiver	Receive IR signal from remote control		*7*
14.	SERIAL	Connects RS-232 serial port cable for remote control		

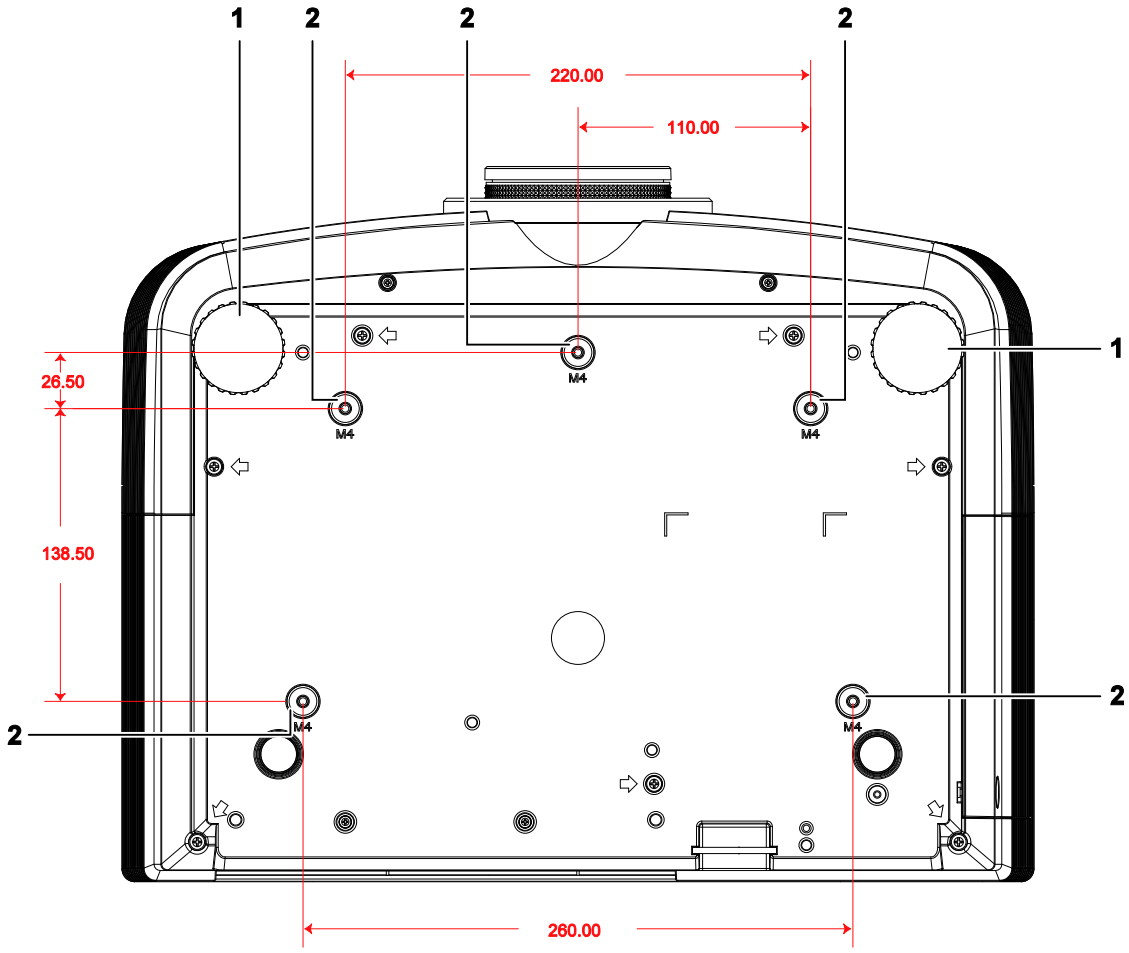
ITEM	LABEL	DESCRIPTION	SEE PAGE:
15.	12V	When connected to the screen through a commercially available cable, the screen deploys automatically on start up of the projector. The screen retracts when the projector is powered off (see notes below).	
16.	AUDIO IN L/R RCA (YPbPr)	Connect the audio cables from a audio device	
17.	AUDIO OUT	Connect an AUDIO cable for audio loop through	
18.	AUDIO IN L/R RCA (Video/ S-Video)	Connect the audio cables from a audio device	
19.	VIDEO	Connect the composite cable from a video device	
20.	S-VIDEO	Connect the S-video cable from a video device	
21.	YPbPr	Connect a component video enabled device	
22.	BNC	Connect a BNC cable from a computer	
23.	AC IN	Connects the power cable	***13***
24.	Power switch	Turns on/off the projector	
25.	Security chain lock	Helps protect the projector from unauthorized use	***43***
26.	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.

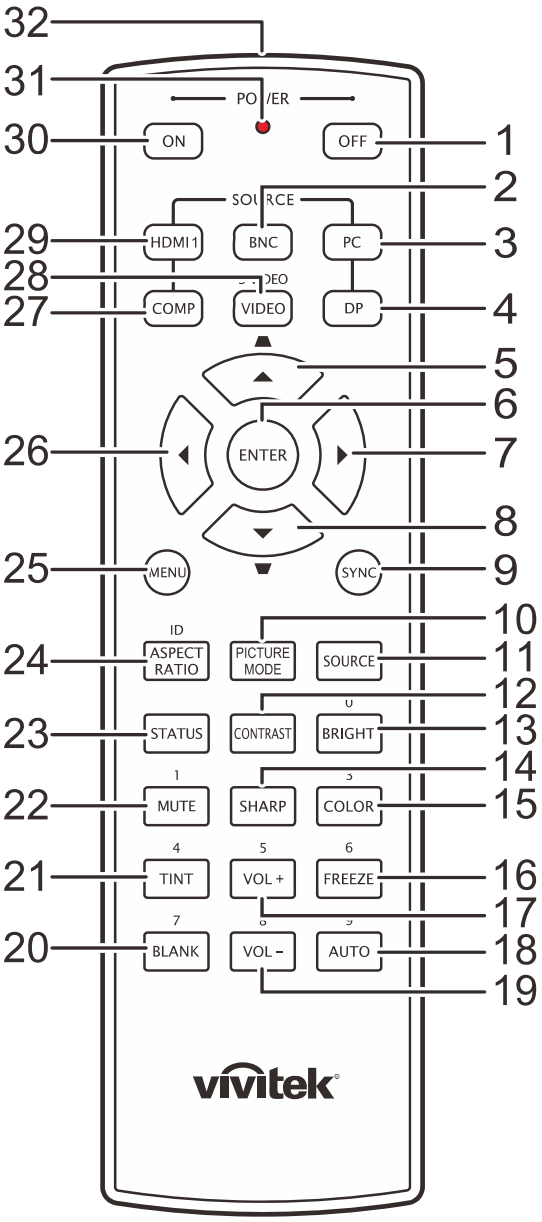
Bottom view



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Tilt adjustor	Rotate adjuster lever to adjust angle position.	***15***
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.*

ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Power OFF	Turns the projector off	***13***
2.	BNC	Displays the BNC source selection	
3.	PC	Displays the PC source selection	
4.	DP	Displays the Display Port source selection	
5.	Up cursor / Keystone+	Navigates and changes settings in the OSD Quick Menu – For Keystone	***20***
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.	SYNC	Automatically synchronize the projector to the input source	
10.	PICTURE MODE	Changes the Display Mode setting	
11.	SOURCE	Alternate input source	***20***
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	***20***
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 the OSD	***20***
26.	Left cursor	Navigates and changes settings in the OSD	***20***
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	

Remote Control Operating Range

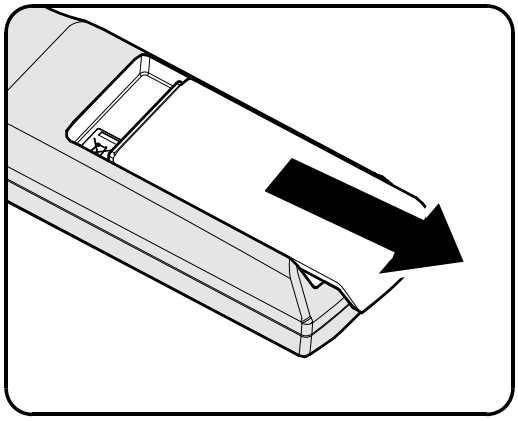
The remote control uses infrared transmission to control the projector. It is not necessary to point the remote directly at the projector. Provided you are not holding the remote perpendicular to the sides or the rear of the projector, the remote will function well within a radius of about 7 meters (23 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

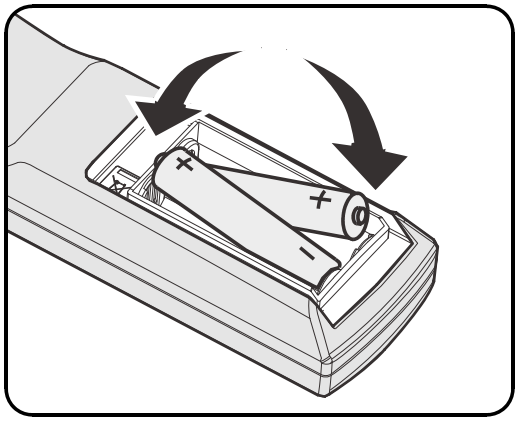
The projector can be operated using the remote control or the buttons on the top of the projector. All operations can be carried out with the remote control; however, the buttons on the projector are limited in use.

Inserting the Remote Control Batteries

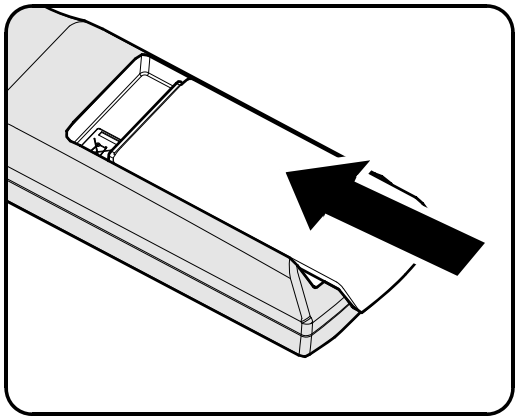
1. Remove the battery compartment cover by sliding the cover in the direction of the arrow.



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

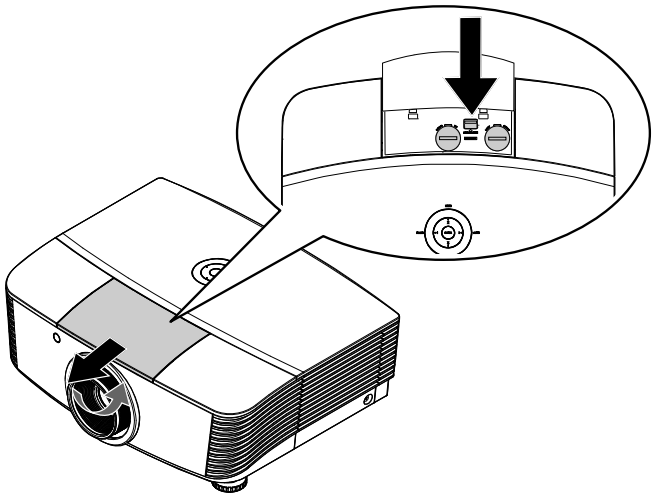
Caution:

- *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.

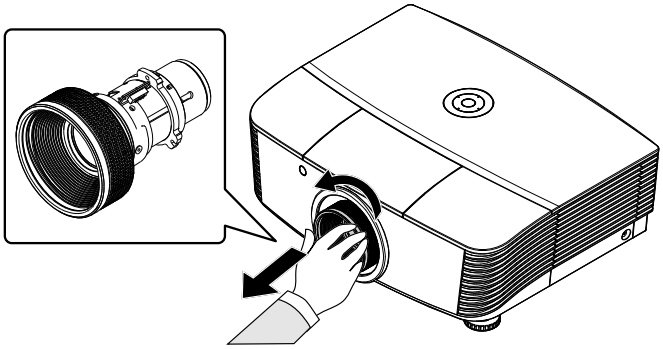
2. Push the LENSE RELEASE button to the unlock position.



3. Grasp the lens.

4. Rotate the lens counterclockwise. The existing lens will be disengaged.

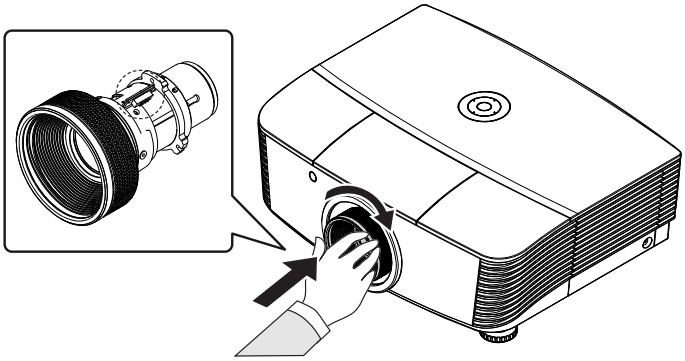
5. Pull out the existing lens slowly.



Installing the New Lens

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

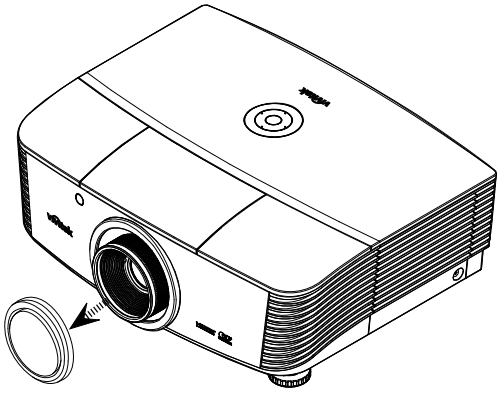
   Note:
   Pin of IRIS should be in the direction as shown in the picture.



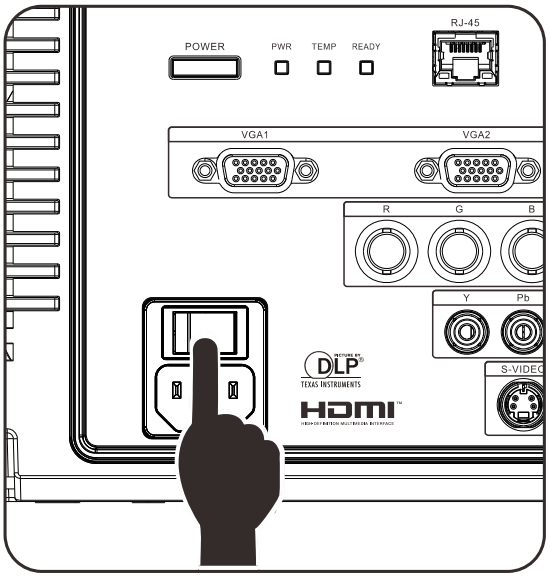
2. Rotate the lens clockwise until you feel it click into place.

Starting and Shutting down the Projector

1. Remove the lens cap.



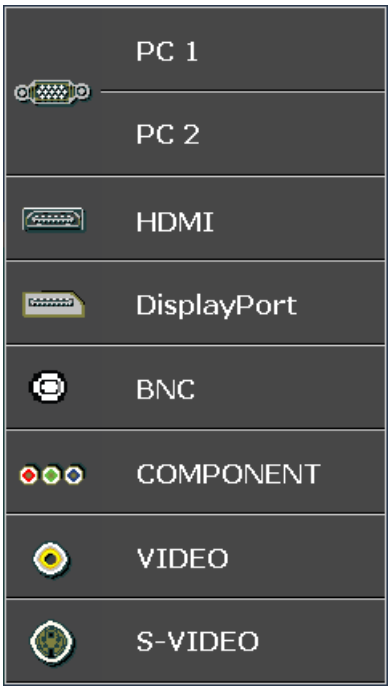
2. Securely connect the power cord and signal cable. When connected, the power led will turn red.



3. Turn on the lamp by pressing "POWER" button on the rear of the projector or "Power" on the remote control.

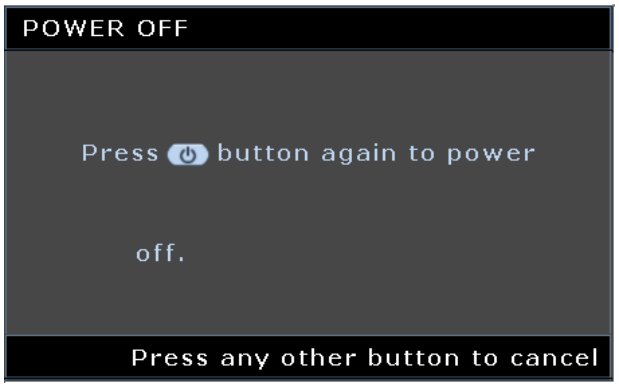
   The PWR LED will now flash green. The startup screen will display in approximately 30 seconds. The first time you use the projector, you can select your preferred language from quick menu after the startup screen display.

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.)



- PC 1 / 2: Analog RGB
  DVD input YCbCr/ YPbPr, or HDTV input YPbPr via D-sub connector
- HDMI: High-Definition Multimedia Interface compatible
- DisplayPort: Digital display interface
- BNC: Analog RGB
- COMPONENT: DVD input YCbCr/ YPbPr, or HDTV input YPbPr
- VIDEO: Tradition composite video
- S-Video: Super video (Y/C separated)

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.

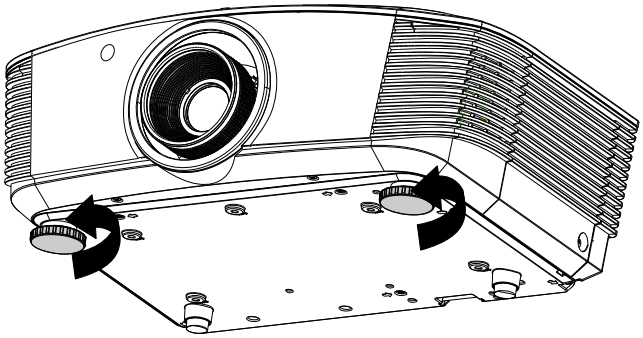
2. Do not unplug the power cord until the READY LED stops flashing–indicating the projector has cooled down.

Adjusting the Projector Level

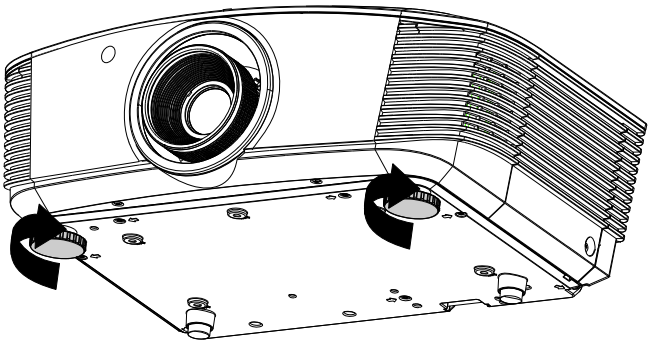
Take note of the following when setting up the projector:

- *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.*

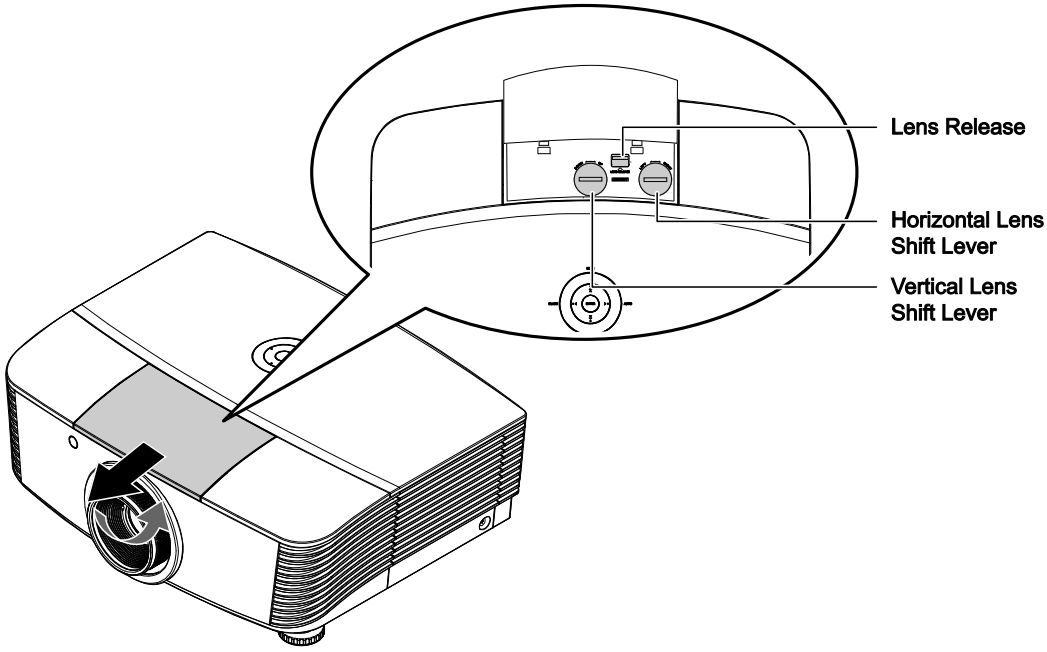
1. To raise the level of the projector, twist the adjusters counter clockwise.



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



Adjusting Projected Image Position Using Shift

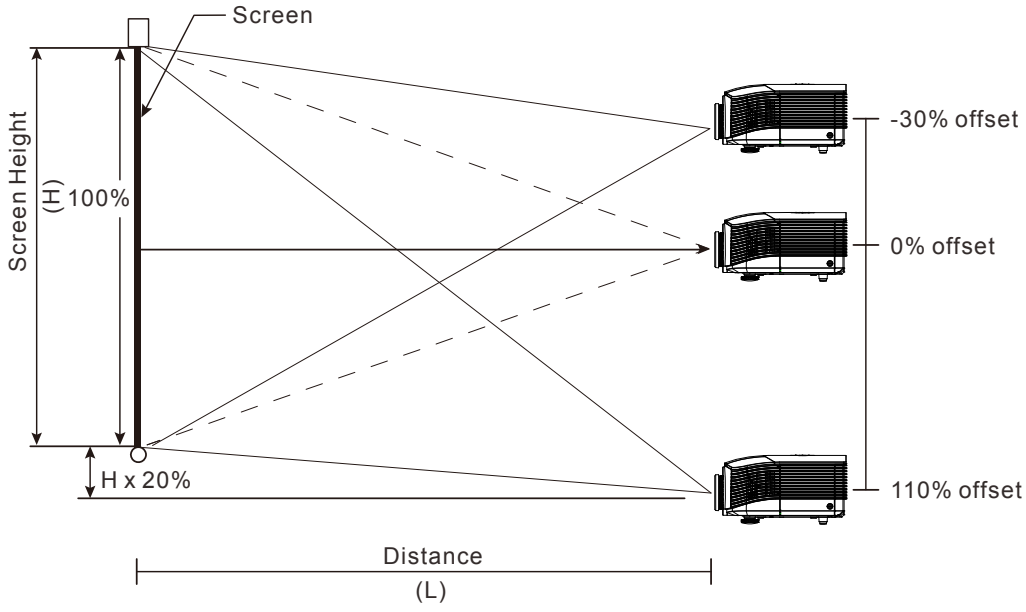


The Shift feature provides a lens shift function that can be used to adjust the position of the projected image either horizontally or vertically within the range detailed below.

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

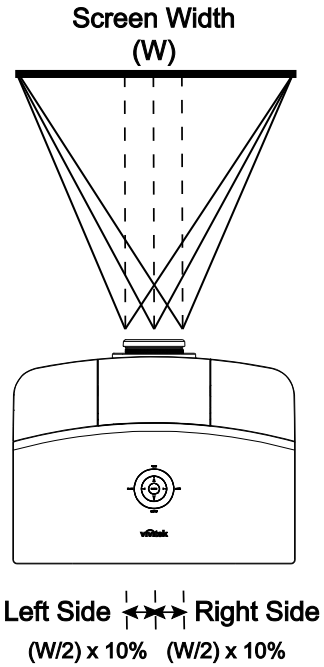
Adjusting the vertical image position

The vertical image height can be adjusted between 110% and -30% of half image height. 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.

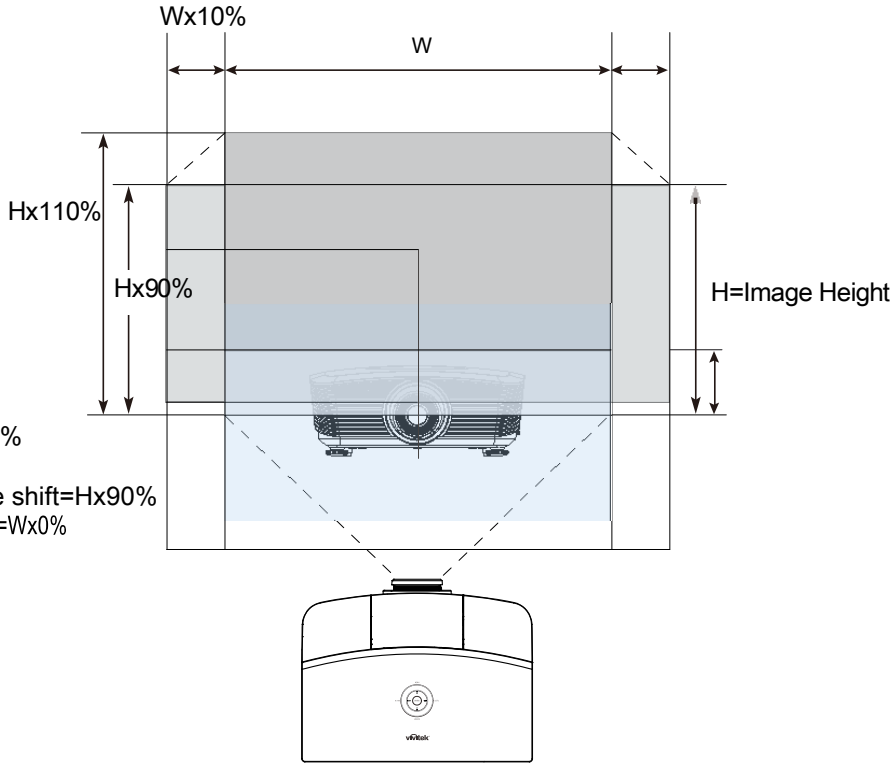


Adjusting the horizontal image position

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.



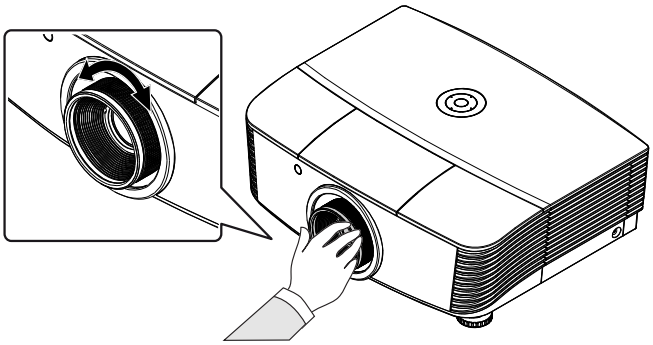
Shift Range Diagram



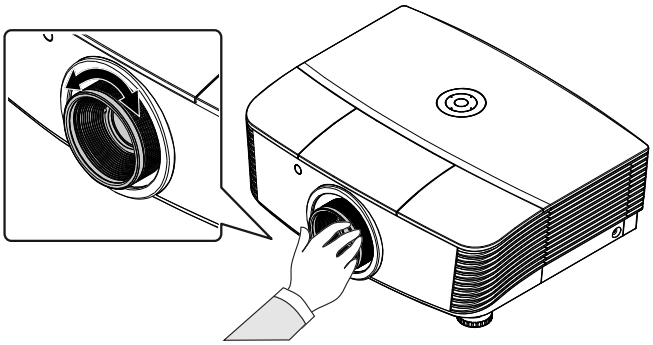
Max H image shift=Hx110%
Max W image shift=Wx10%
When Wx10%, Max image shift=Hx90%
When Hx110%, Max image shift=Wx0%

Adjusting the Zoom, Focus and Keystone

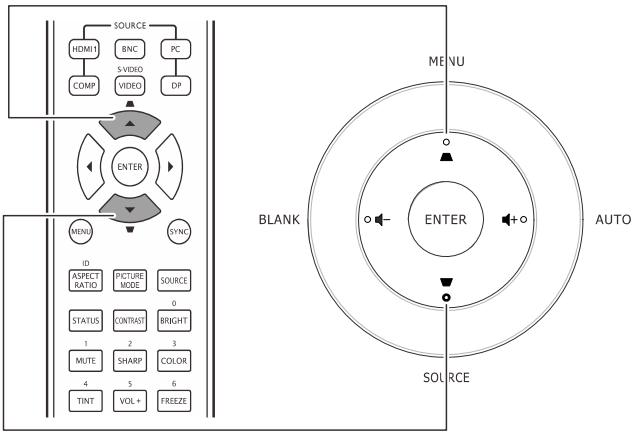
1. Use the **Image-zoom** control (on the projector only) to resize the projected image and screen size.



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.

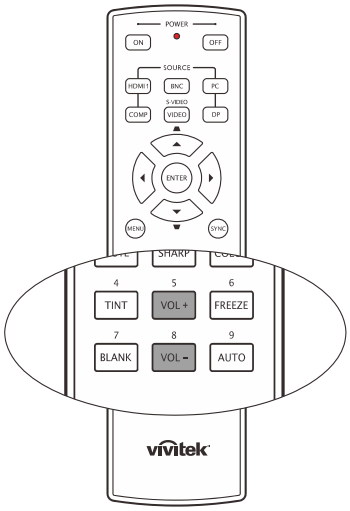


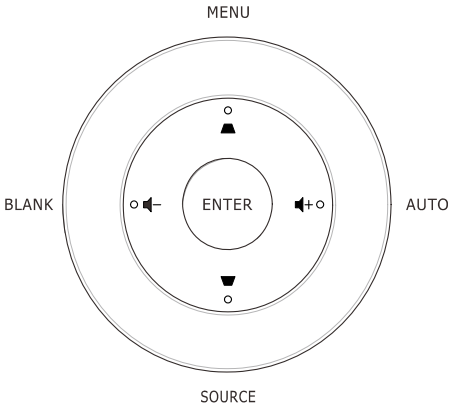
Remote control and OSD panel

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).

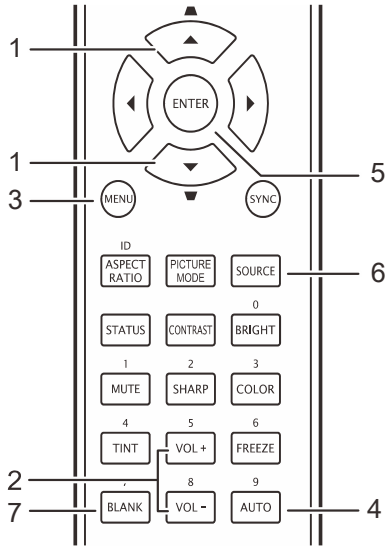
ON-SCREEN DISPLAY (OSD) MENU SETTINGS

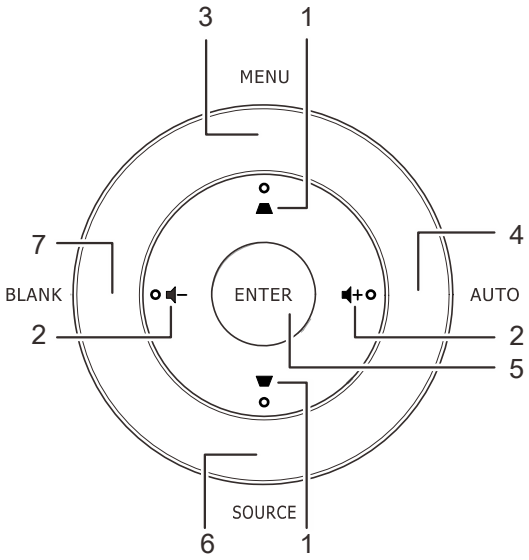
OSD Menu Controls

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

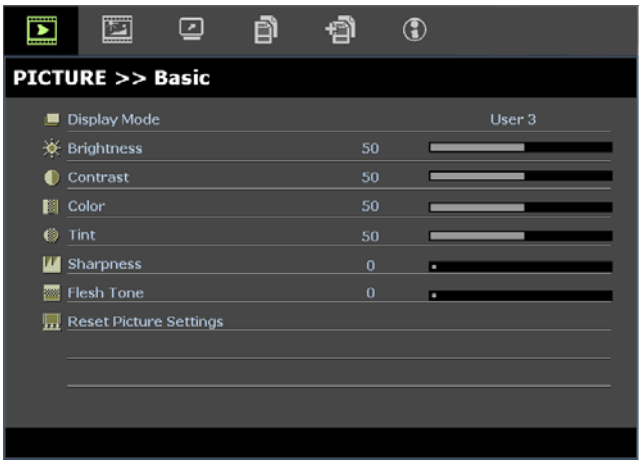
Navigating the OSD

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 six menus. Press the cursor ◄► button to move through the menus.
3. Press the cursor ▲▼ button to move up and don in a menu.
4. Press ◄► to change values for settings.
5. Press **MENU** to close the OSD or leave a submenu.

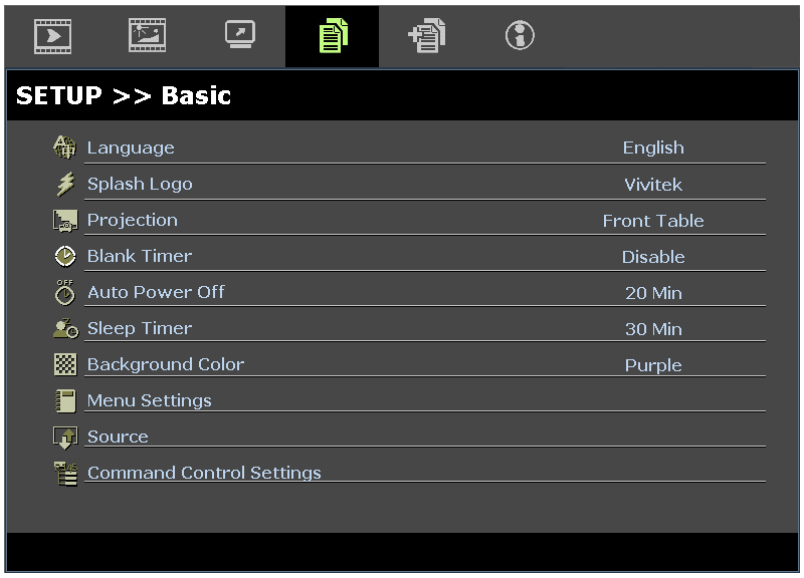


Note:
Depending on the video source, not all items in the OSD are available. For example, the ***Horizontal/Vertical Position*** *items in the* ***Computer*** *menu can only be modified when connected to a PC. Items that are not available cannot be accessed and are grayed out.*

Setting the OSD Language

Set the OSD language to your preference before continuing.

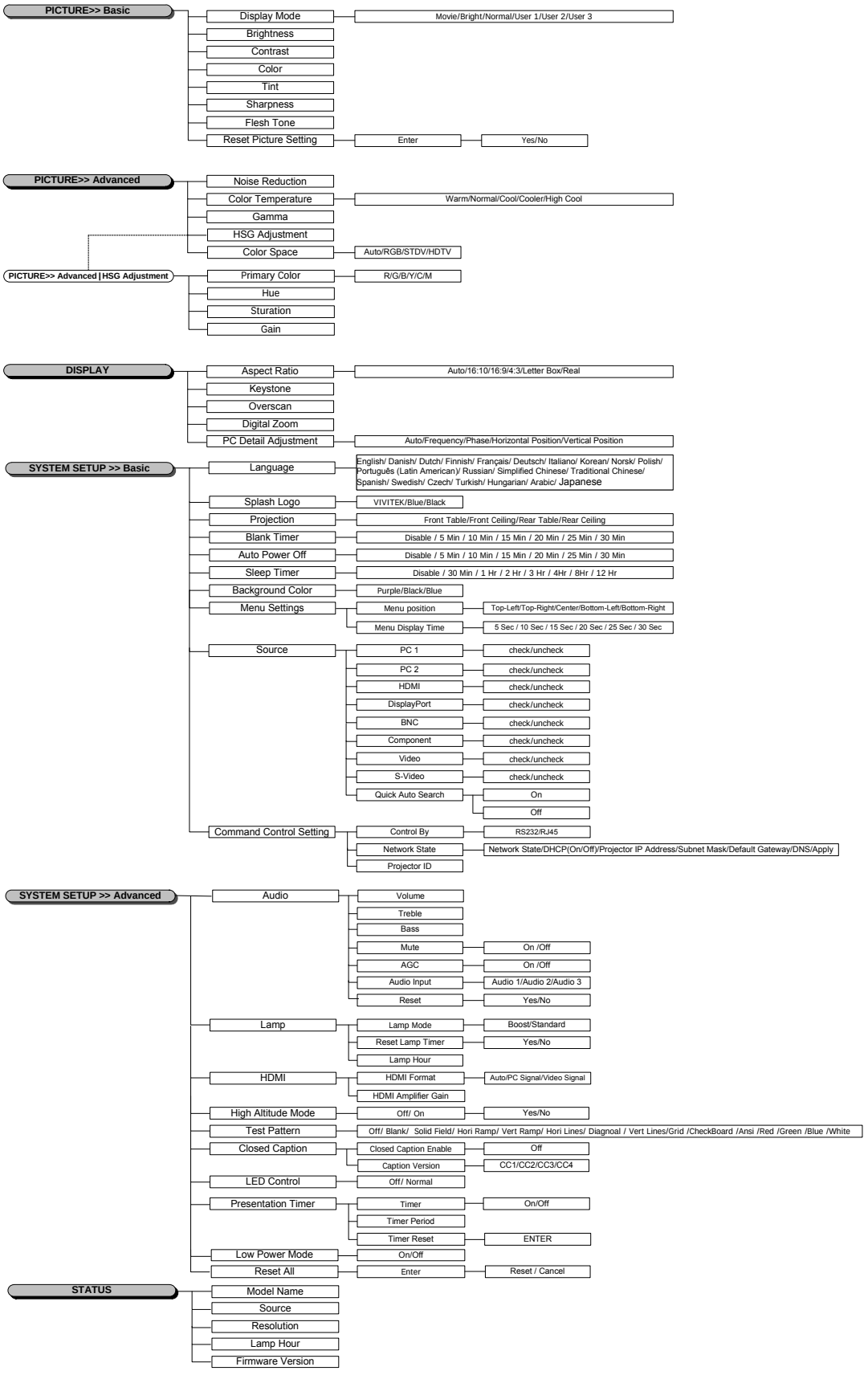
1. Press the **MENU** button. Press the cursor ◄► button to navigate to **SETUP>>Basic**.



2. Press the cursor ▲▼ button until **Language** is highlighted.
3. Press the cursor ◄► button until the language you want is selected.
4. Press the **MENU** button to close the OSD.

OSD Menu Overview

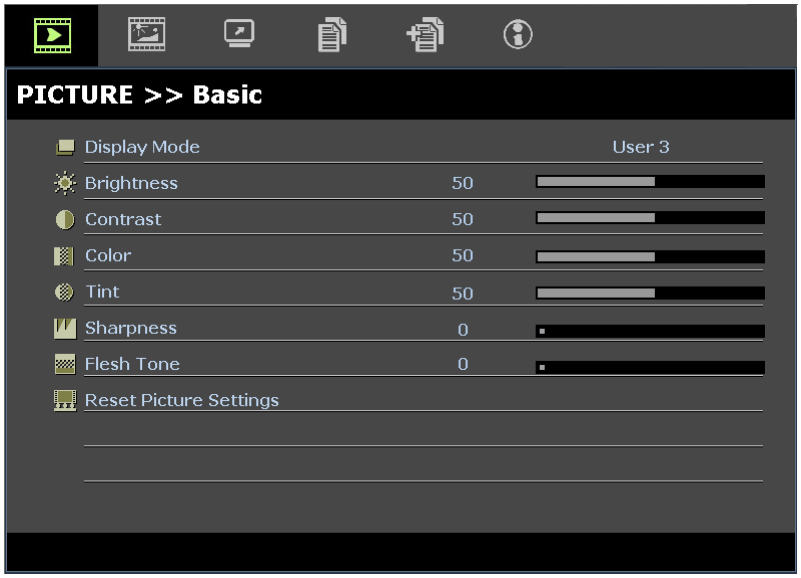
Use the following illustration to quickly find a setting or determine the range for a setting.



PICTURE>>Basic Menu

Press the **MENU** button to open the **OSD** menu. Press the cursor ◄► button to move to the **PICTURE>>Basic** menu. Press the cursor ▲▼ button to move up and down in the **PICTURE>>Basic** menu. Press ◄► to change values for settings.

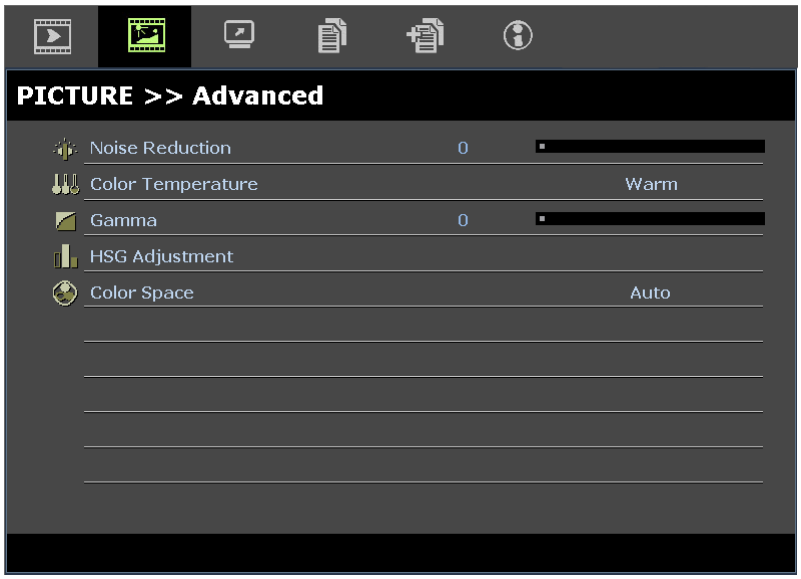
Note:
*Customizing the settings in **PICTURE>>Basic** menu is only available in User 1/ 2/ 3 mode.*



ITEM	DESCRIPTION
Display Mode	Press the cursor ◄► buttons to set the Display Mode. (Range: Movie/ Bright/ Normal/ User 1/ User 2/ User 3)
Brightness	Press the cursor ◄► buttons to adjust the display brightness.
Contrast	Press the cursor ◄► buttons to adjust the display contrast.
Color	Press the cursor ◄► buttons to adjust the video saturation. **Notes:** This function is only available when Component, Video or S-Video input source is selected.
Tint	Press the cursor ◄► buttons to adjust the video tint/hue. **Notes:** This function is only available when Component, Video or S-Video with NTSC system input source is selected.
Sharpness	Press the cursor ◄► buttons to adjust the display sharpness. **Notes:** This function is only available when Component, Video or S-Video input source is selected.
Flesh Tone	Press the cursor ◄► buttons to adjust the display flesh tone. **Notes:** This function is only available when Component, Video or S-Video input source is selected.
Reset Picture Settings	Press the **ENTER** button to reset all settings to default values.

PICTURE>>Advanced Menu

Press the **MENU** button to open the **OSD** menu. Press the cursor ◄► button to move to the **PICTURE>>Advanced** menu. Press the cursor ▲▼ button to move up and down in the **PICTURE>>Advanced** menu. Press ◄► to change values for settings.



ITEM	DESCRIPTION
Noise Reduction	Press the cursor ◄► button to adjust the Noise Reduction.
Color Temperature	Press the cursor ◄► button to set the Color Temperature. **Notes:** This function is only available in User 1/ 2/ 3 mode.
Gamma	Press the cursor ◄► button to adjust the gamma correction of the display.
HSG Adjustment	Press the **ENTER** button to enter the **HSG Adjustment** sub menu. See *HSG Adjustment* on page 25.
Color Space	Press the cursor ◄► button to set the Color Space. (Range: **Auto**/ RGB/ SDTV/ HDTV) **Notes:** This function is only available when HDMI input source is selected.

HSG Adjustment

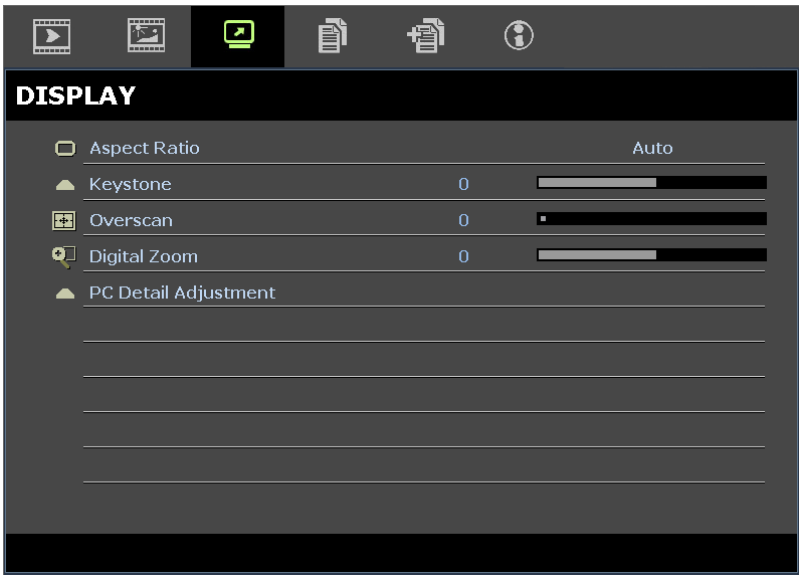
Press the **ENTER** button to enter the **HSG Adjustment** sub menu.

ITEM	DESCRIPTION
Primary Color	Press the ◄► buttons to set the Primary Color. **Notes:** There are six sets (**R**/ G/ B/ C/ M/ Y) of colors to be customized.
Hue	Press the ◄► buttons to adjust the Hue.
Saturation	Press the ◄► buttons to adjust the Saturation.
Gain	Press the ◄► buttons to adjust the Gain.

Note:
*This function is only available when **User1,User2,User3** display mode is selected.*

DISPLAY Menu

Press the **MENU** button to open the **OSD** menu. Press the cursor ◄► button to move to the **DISPLAY** menu. Press the cursor ▲▼ button to move up and down in the **DISPLAY** menu. Press ◄► to change values for settings.



ITEM	DESCRIPTION
Aspect Ratio	Press the cursor ◄► button to set the Aspect Ratio. (Range: **Auto/** 16:10/ 16:9/ 4:3/ Letter Box/ Real)
Keystone	Press the cursor ◄► button to adjust the Keystone. **Notes:** This function is available when the **Auto keystone** function is turned off.
Overscan	Press the cursor ◄► button to adjust the Overscan.
Digital Zoom	Press the cursor ◄► button to adjust the Digital Zoom.
PC Detail Adjustment	Press the **ENTER** button to enter the **PC Detail Adjustment** sub menu. See *PC Detail Adjustment* on page 27.

PC Detail Adjustment

Press the **ENTER** button to enter the **PC Detail Adjustment** sub menu.

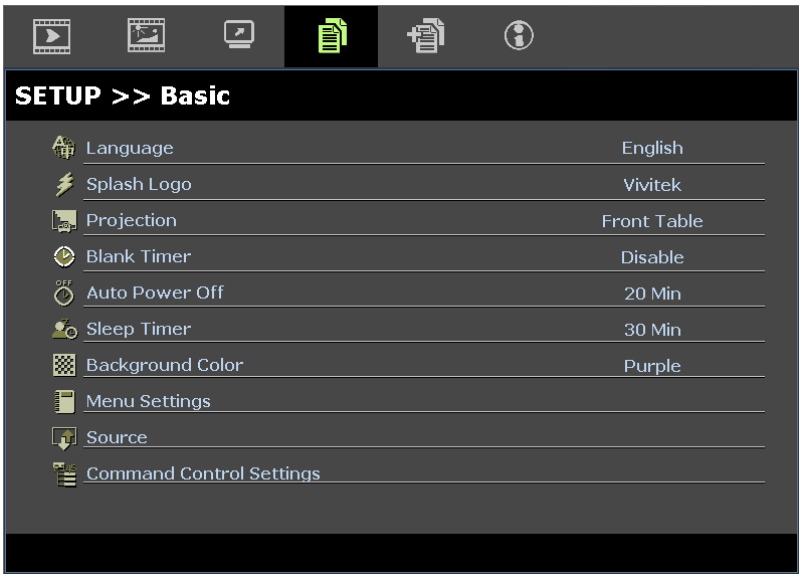
Note:
*Customizing the settings in **PC Detail Adjustment** menu is only available when PC input source (analog RGB) is selected.*

ITEM	DESCRIPTION
Auto	Press the **ENTER/AUTO** button on the control panel or the **ENTER/AUTO** button on the remote control to automatically adjust frequency, phase, and position.
Frequency	Press the ◄► buttons to adjust the A/D sampling number.
Phase	Press the ◄► buttons to adjust the A/D sampling clock.
Horizontal Position	Press the ◄► buttons to adjust the display position right or left.
Vertical Position	Press the ◄► buttons to adjust the display position up or down.

Note:
Some signals may take time to display or may not be displayed correctly.
If the Auto Adjust operation cannot optimize the PC signal, try to adjust FREQUENCY and PHASE manually.

SETUP>>Basic Menu

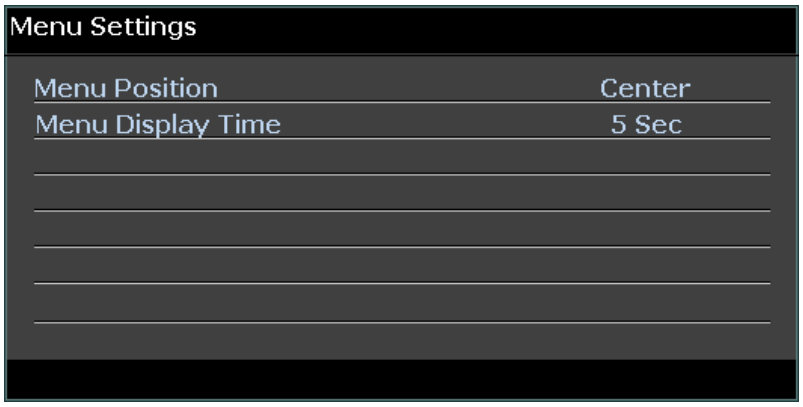
Press the **MENU** button to open the **OSD** menu. Press the cursor ◄► button to move to the **SETUP>>Basic** menu. Press the cursor ▲▼ button to move up and down in the **SETUP>>Basic** menu. Press ◄► to change values for settings.



ITEM	DESCRIPTION
Language	Press the cursor ◄► buttons to select a different localization menu. (Range: English/ Danish/ Dutch/ Finnish/ Français/ Deutsch/ Italiano/ Korean/ Norsk/ Polish/ Português (Latin American)/ Russian/ Simplified Chinese/ Traditional Chinese/ Spanish/ Swedish/ Czech/ Turkish/ Hungarian/ Arabic/ Japanese)
Splash Logo	Press the cursor ◄► buttons to select a different startup screen. (Range: **Vivitek**/ Blue/ Black)
Projection	Press the cursor ◄► buttons to choose from four projection methods: **Front Table**/ Front Ceiling/ Rear Table/ Rear Ceiling.
Blank Timer	Press the cursor ◄► buttons to set the Blank Screen timer. The projected image is automatically restored after the set time. (Range: **Disable**/ 5 min/ 10 min/ 15 min/ 20 min/ 25 min/ 30 min)
Auto Power Off	Press the cursor ◄► buttons to set the Auto Power Off timer. The projector automatically turns off if no input source is detected after the preset period of time. (Range: **Disable**/ 5 min/ 10 min/ 15 min/ 20 min/ 25 min/ 30 min)
Sleep Timer	Press the cursor ◄► buttons to set Sleep timer. The projector automatically turns off after the preset period of time. (Range: **Disable**/ 30 min/ 1hr/ 2hr/ 3hr/ 4hr/ 8hr/ 12hr)
Background Color	Press the cursor ◄► buttons to select the background color when no input source is detected. (Range: Purple/ Black/ Blue)
Menu Settings	Press the **ENTER** button to enter the **Menu Settings** sub menu. See *Menu Settings* on page 29.
Source	Press the **ENTER** button to enter the **Source** sub menu. See *Source* on page29.
Command Control Settings	Press the **ENTER** button to enter the **Command Control Settings** sub menu. See Command Control Settings on page 30.

Menu Settings

Press the **ENTER** button to enter the **Menu Settings** sub menu.



ITEM	DESCRIPTION
Menu Position	Press the ◄► buttons to select from five OSD locations: Top-Left/ Top-Right/ **Center**/ Bottom-Left/ Bottom-Right.
Menu Display Time	Press the ◄► buttons to set the Menu Display timer before the OSD times out. (Range: 5sec/ 10sec/ **15sec**/ 20sec/ 25sec/ 30sec)

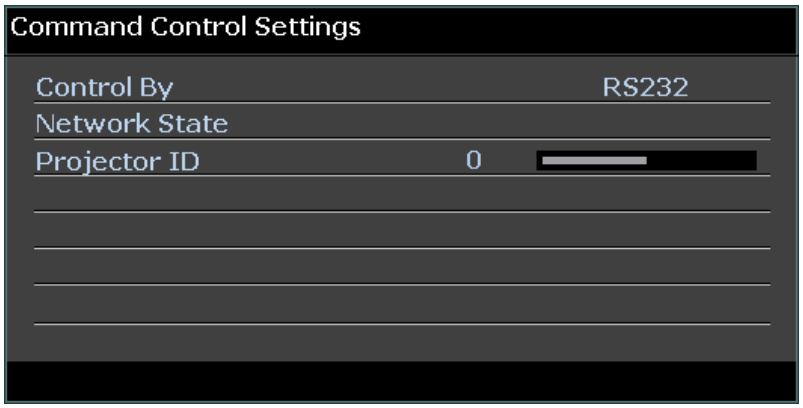
Source

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

ITEM	DESCRIPTION
PC 1	Press the ◄► buttons to enable or disable the PC source.
PC 2	
HDMI	Press the ◄► buttons to enable or disable the HDMI source.
DisplayPort	Connect a DisplayPort cable to a DisplayPort source
BNC	Press the ◄► buttons to enable or disable the BNC source
Component	Press the ◄► buttons to enable or disable the Component source.
S-Video	Press the ◄► buttons to enable or disable the S-Video source.
Video	Press the ◄► buttons to enable or disable the Video source.
Quick Auto Search	Press the ◄► buttons to enable or disable Quick Auto Search for available input source. **Notes:** When the desired source is selected, the Quick Auto Search function will be turn off.

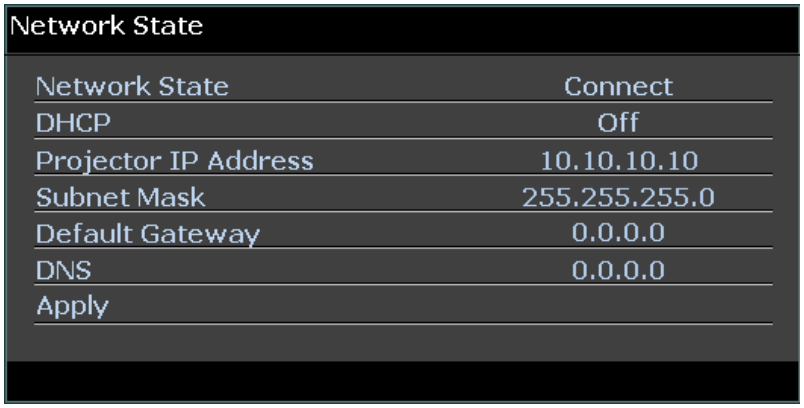
Command Control Settings

Press the **ENTER** button to enter the **Command Control Settings** sub menu.



ITEM	DESCRIPTION
Control By	Press the ◄► buttons to select projector remote command control. (Range: **RS232**/ RJ45)
Network State	Press the **ENTER** button to enter the **Network State** sub menu. See *Network State* on page 30.
Projector ID	Press the cursor ◄► button to set Projector ID number for projector control by RS232 command.

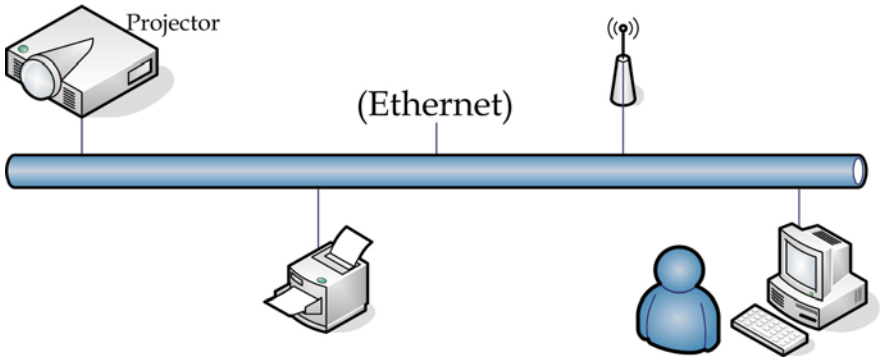
Network State



ITEM	DESCRIPTION
Network State	Displays the network connection status.
DHCP	Press ◄► to turn DHCP On or Off. **Note:** If you select DHCP Off, complete the IP Address, Subnet Mask, Gateway, and DNS fields.
Projector IP Address	Enter a valid IP address if DHCP is turned off.
Subnet Mask	Enter a valid Subnet Mask if DHCP is turned off.
Default Gateway	Displays the default Gateway address on the network.
DNS	Enter a valid DNS name if DHCP is turned off.
Apply	Press ↵ (Enter) / ► to confirm settings.

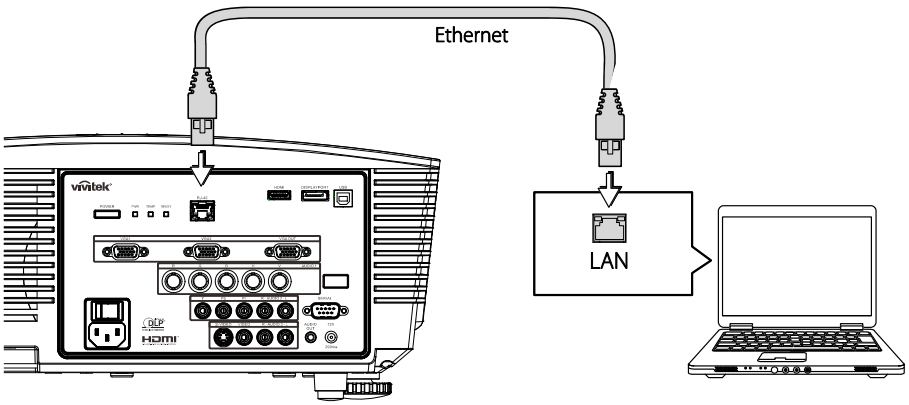
For simplicity and ease of operation, the projector provides diverse networking and remote management features.

The LAN/RJ45 function of the projector through a network, such as remotely manage: Power On/Off, Brightness and Contrast settings. Also, projector status information, such as: Video-Source, Sound-Mute, etc.



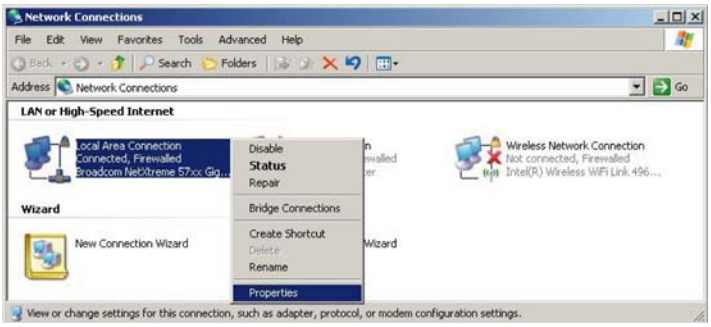
LAN_RJ45

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



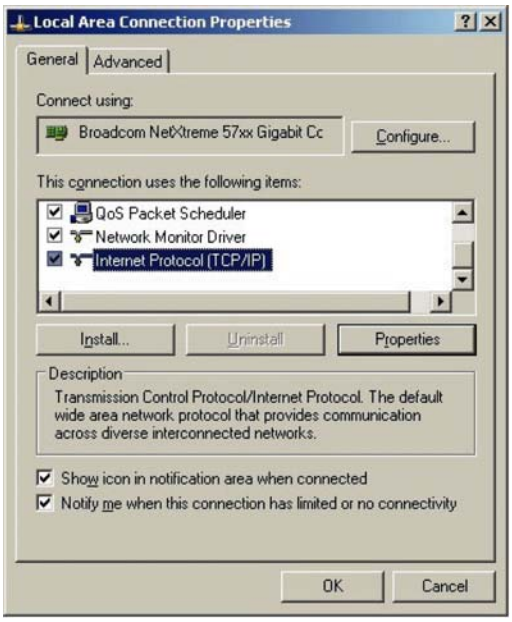
2. On the PC (Laptop), select **Start** → **Control Panel** → **Network Connections**.

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

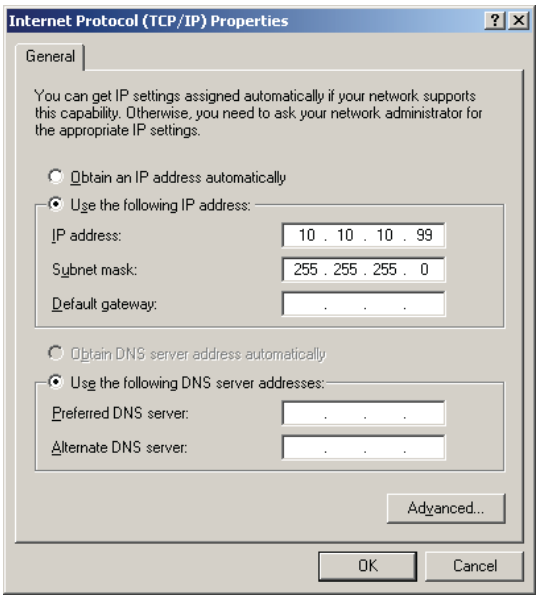


4. In the **Properties** window, select the **General** tab, and select **Internet Protocol (TCP/IP)**.

5. Click **Properties**.

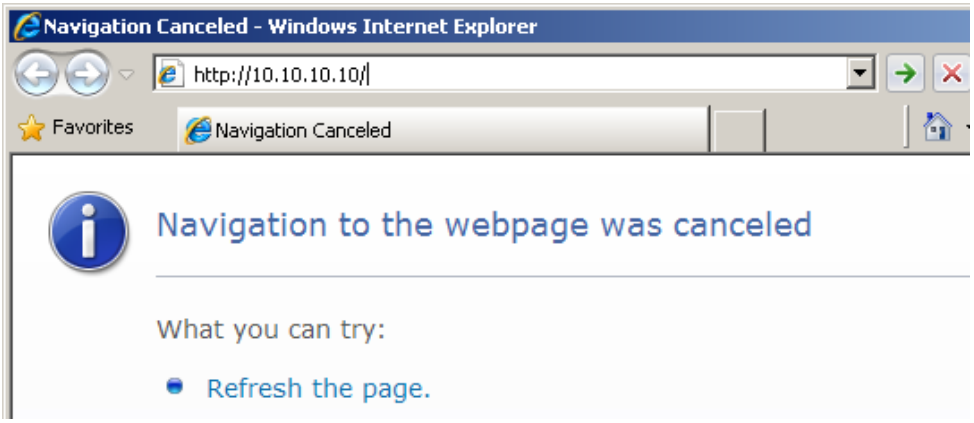


6. Click **Use the following IP address** and fill in the IP address and Subnet mask, then click **OK**.



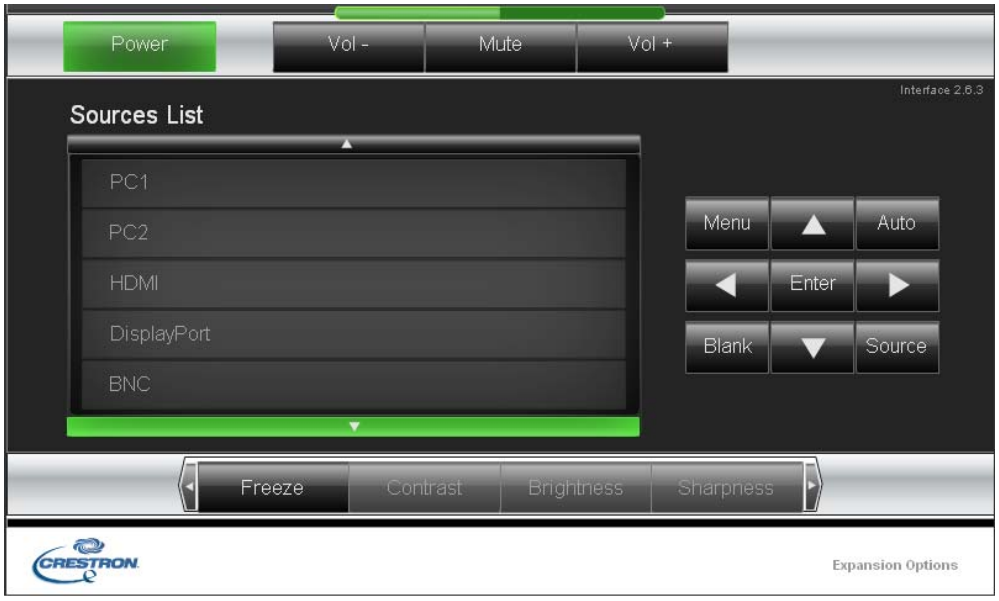
7. Press the Menu button on the projector.
8. Select **SETUP>>Basic Menu →Command Control Settings→Network State**.
9. After getting into **Network**, input the following:
   - DHCP: Off
   - IP Address: 10.10.10.10
   - Subnet Mask: 255.255.255.0
   - Gateway: 0.0.0.0
   - DNS Server: 0.0.0.0
10. Press ↵ (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) / ►.

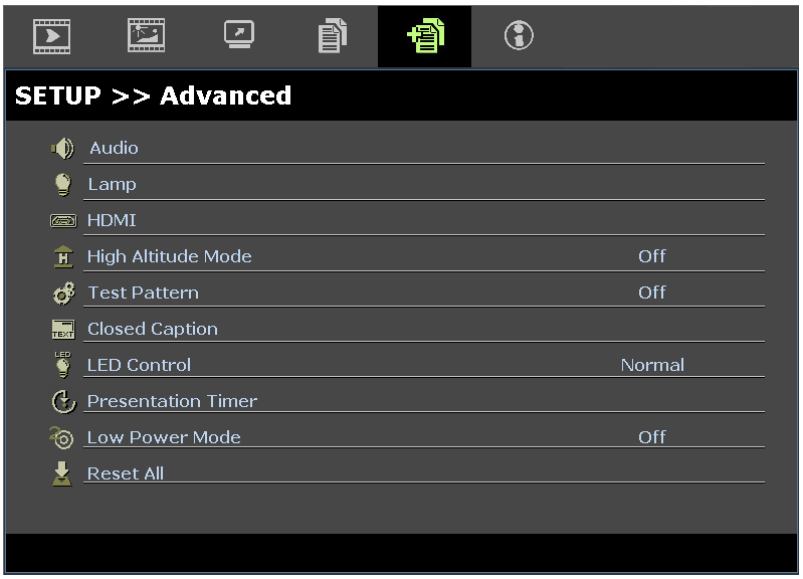
    The projector is setup for remote management. The LAN/RJ45 function displays as follows.



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

SETUP>>Advanced Menu

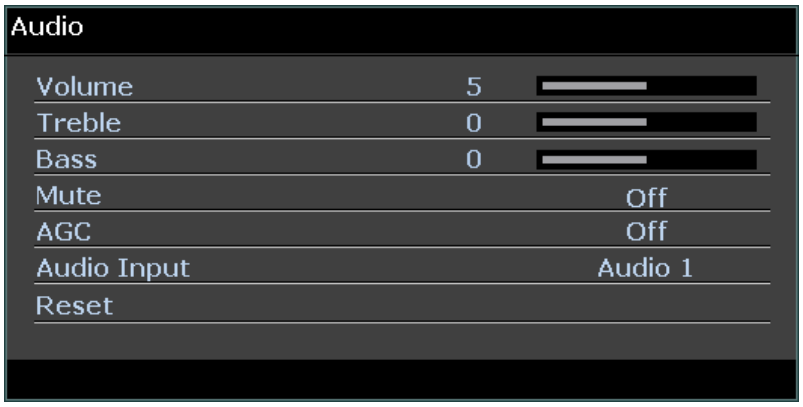
Press the **MENU** button to open the **OSD** menu. Press the cursor ◄► button to move to the **SETUP>>Advanced** menu. Press the cursor ▲▼ button to move up and down in the **SETUP>>Advanced** menu.



ITEM	DESCRIPTION
Audio	Press the **ENTER** button to enter the **Audio** sub menu. See Audio on page 35.
Lamp	Press the **ENTER** button to enter the **Lamp** sub menu. See *Lamp* on page 35.
HDMI	Press the **ENTER** button to enter the **HDMI** sub menu. See *HDMI* on page 36.
High Altitude Mode	Press the cursor ◄► buttons to turn on or off High Altitude Mode. Recommended to turn on when the altitude of the environment is higher than 1500m (4921ft).
Test Pattern	Press the cursor ◄► buttons to select test pattern.
Closed Caption	Press the **ENTER** button to enter the **Closed Caption** sub menu. See *Closed Caption* on page 36.
LED Control	Press the cursor ◄► buttons to select the LED control. Select **Normal** for normal LED display and Off to disable LED display.
Presentation Timer	Press ↵ (Enter) / ► to the Presentation Timer menu. See *Presentation Timer* on page 37.
Low Power Mode	Press the cursor ◄► buttons to set Low Power Mode on or off. **Note:** When Low Power Mode set to off, VGA OUT terminal can output signal during projector in Standby mode. Low Power mode will be gray out, when command control is setting to RJ45.
Reset All	Press the **ENTER** button to enter reset all settings to default values.

Audio

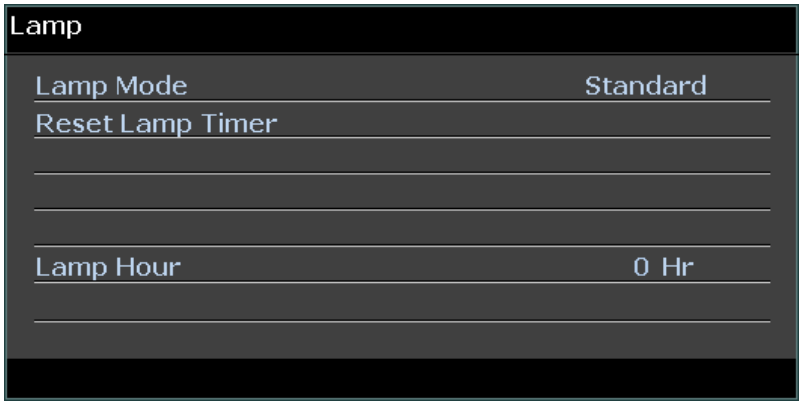
Press the **ENTER** button to enter the **Audio** sub menu.



ITEM	DESCRIPTION
Volume	Press the ◄► buttons to adjust the audio Volume.
Treble	Press the ◄► buttons to adjust the audio Treble.
Bass	Press the ◄► buttons to adjust the audio Bass.
Mute	Press the ◄► buttons to turn on or off the speaker.
AGC	Press the ◄► buttons to turn on or off the AGC setting.
Audio Input	Press the ◄► buttons to select audio input source.
Reset	Press the **ENTER** button to reset all settings to default values.

Lamp

Press the **ENTER** button to enter the **Lamp** sub menu.



ITEM	DESCRIPTION
Lamp Mode	Press the ◄► buttons to adjust lamp brightness.
Reset Lamp Timer	Press the **ENTER** button to reset the Lamp Hour after the lamp is replaced.
Lamp Hour	Displays the number of hours the lamp has been in use.

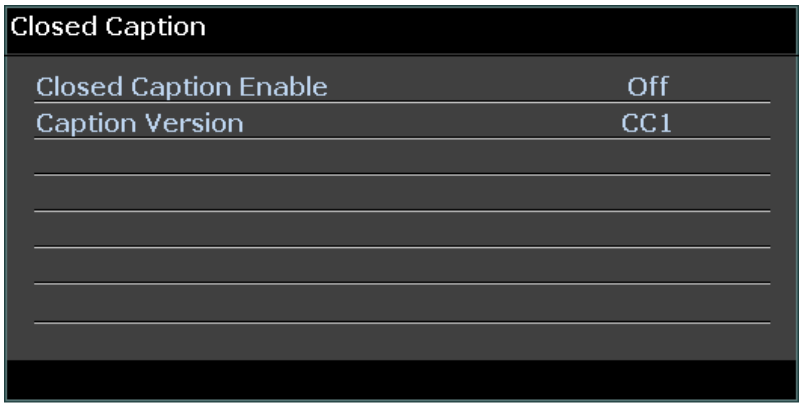
HDMI

Press the **ENTER** button to enter the **HDMI** sub menu.

ITEM	DESCRIPTION
HDMI Format	Press the ◄► buttons to select from three HDMI display formats: Auto/ PC signal/ Video signal.
HDMI Amplifier Gain	Press the ◄► buttons to adjust HDMI Amplifier Gain.

Closed Caption

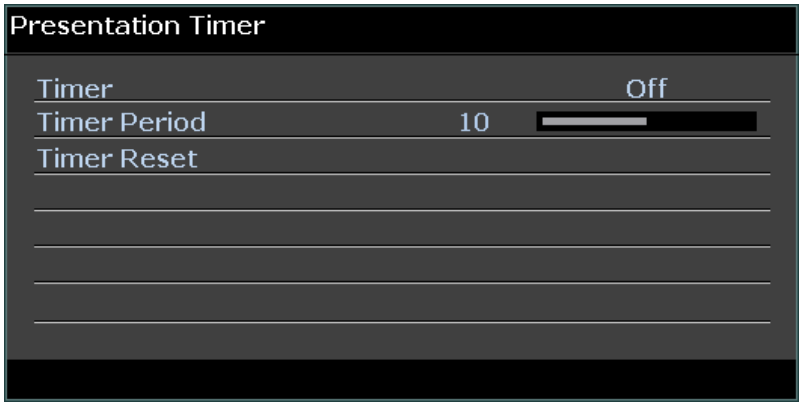
Press the **ENTER** button to enter the **Closed Caption** sub menu.



ITEM	DESCRIPTION
Closed Caption Enable	Press the ◄► buttons to turn on or off Closed Caption.
Caption Version	Press the ◄► buttons to select the Caption Version.

Presentation Timer

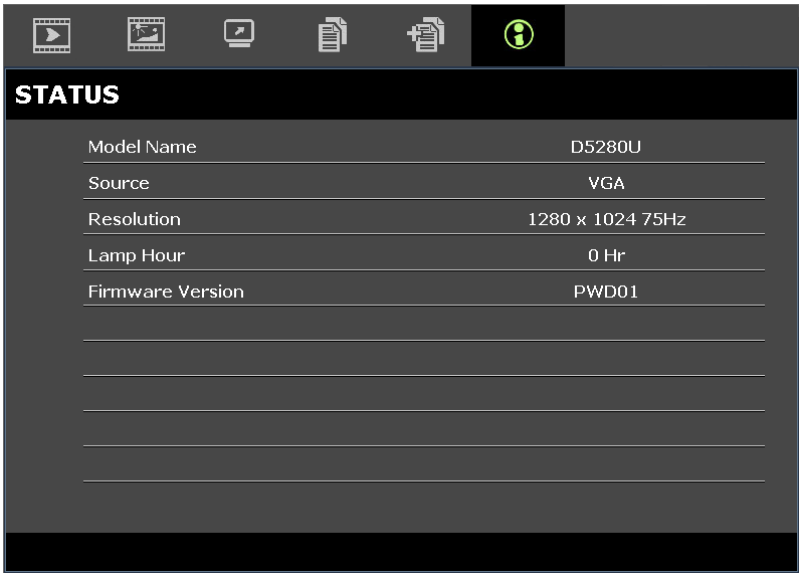
The Presentation Timer function can indicate the presentation time on the screen to help you achieve better time management when giving presentations.



ITEM	DESCRIPTION
Timer	Press the cursor ◄► button to enable or disable presentation timer.
Timer Period	Press the cursor ◄► button to select timer period (1 ~ 60 minutes)
Timer Reset	Press ↵ (Enter) / ► to reset the timer settings.

STATUS Menu

Press the **MENU** button to open the **OSD** menu. Press the cursor ◄► button to move to the **STATUS Menu**.



ITEM	DESCRIPTION
Model Name	Displays the model name.
Source	Displays the activated input source.
Resolution	Displays the native resolution of input source.
Lamp Hour	Displays the number of hours the lamp has been in use.
Firmware Version	Displays the firmware version of the projector.

Note:
Status displayed in this menu is for viewing only and cannot be edited.

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.

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.

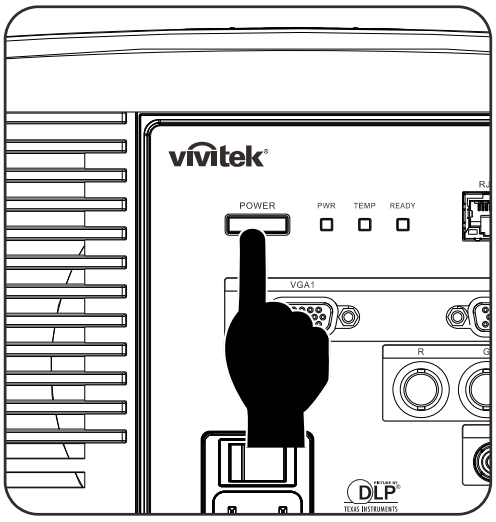
Open windows and doors for ventilation.

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.

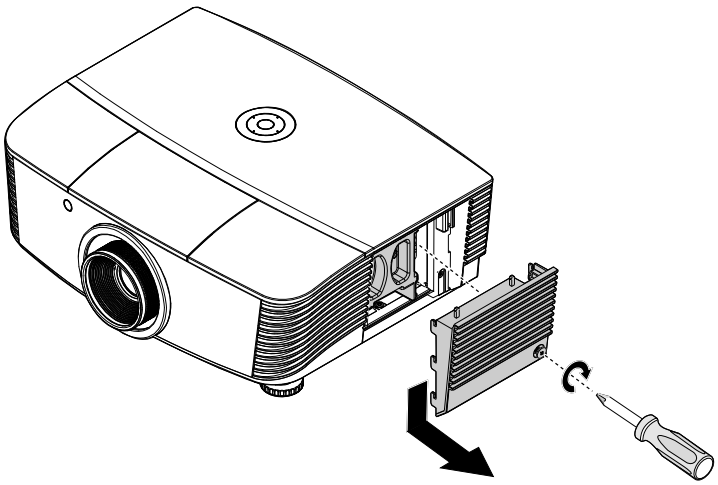
2. Allow the projector to cool down at least 30 minutes.

3. Disconnect the power cord.

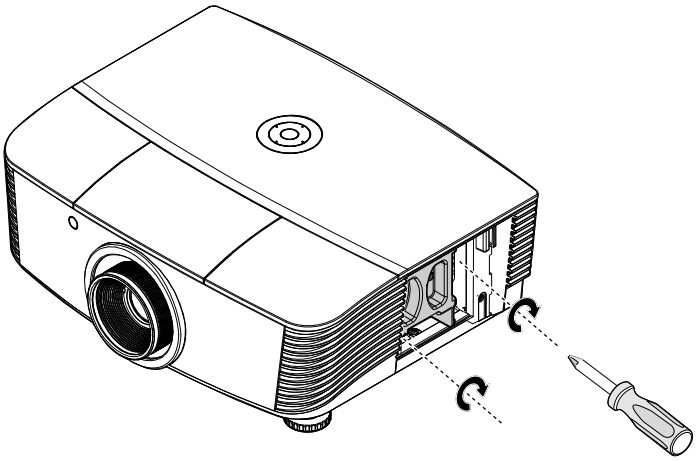


4. Unlock the lamp cover.

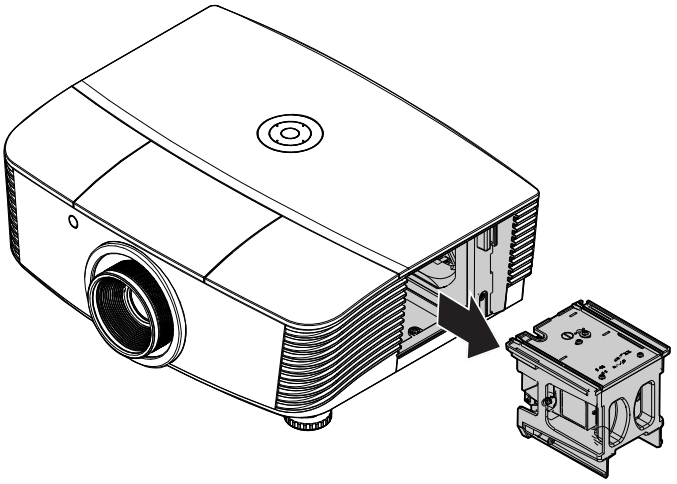
5. Pull up and remove the cover.



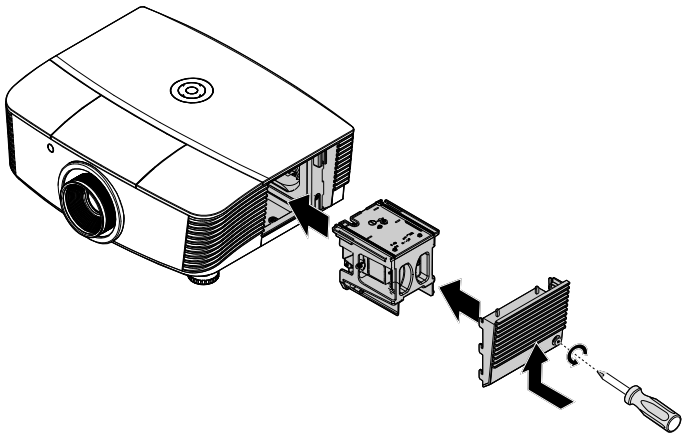
6. Use a screwdriver to remove the screws from the lamp module.



7. Pull out the lamp module.



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.

9. Turn on the projector and reset the lamp after the lamp module is replaced.

Lamp Reset:
Press **Menu** → Select **SYSTEM SETUP : Advanced** → Select **Lamp** → Select **Reset Lamp Timer** → Press the ◄► buttons to adjust the settings.

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.

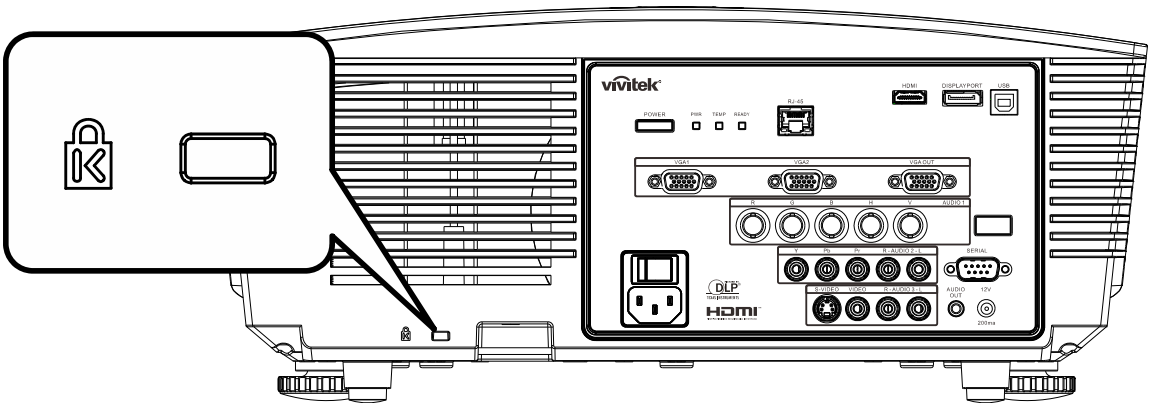
1. Wipe off dust with a clean dampened cloth.
2. Moisten the cloth with warm water and mild detergent (such as used to wash dishes), and then wipe the case.
3. Rinse all detergent from the cloth and wipe the projector again.

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.



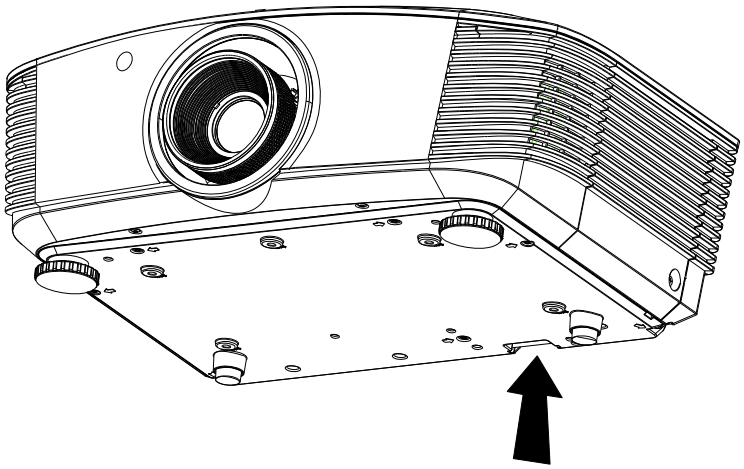
Note:
Contact your vendor for details on purchasing a suitable Kensington security cable.

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.



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

Error Code Messages	Power LED		Ready LED	Temp LED
	Green	Red	Red	Red
Lamp Ready	ON	–	ON	–
Start	–	ON	–	–
Cooling	ON	–	flashing	–
Over Temperature	–	OFF	–	ON
Thermal Break Sensor error	–	7 blinks	–	–
Lamp Error	5 blinks	–	–	–
Burner Fan error	6 blinks	–	1 blinks	–
System Fan error	6 blinks	–	2 blinks	–
Power and Ballast Fan error	6 blinks	–	3 blinks	–
Case Open	–	7 blinks	–	–
DMD error	8 blinks	–	–	–
Color wheel error	9 blinks	–	–	–

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 READY LEDs are still blinking or the Over Temp LED is lit, 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 **SYSTEM SETUP : Basic > Projection** 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.

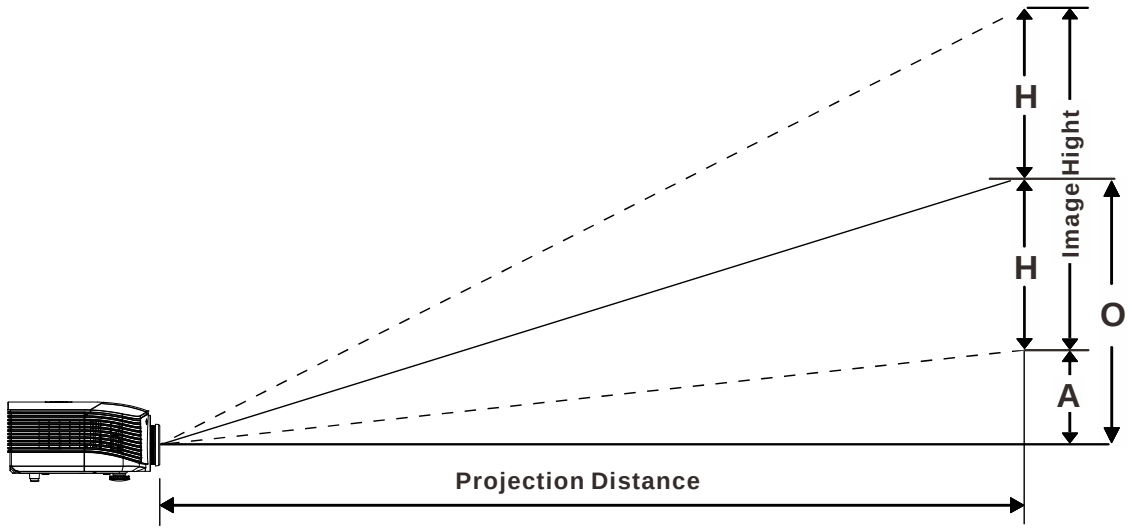
For more detail information check http://www.hdmi.org/learningcenter/faq.aspx#49

SPECIFICATIONS

Specifications

Display type	0.67" WUXGA DC3
Resolution	WUXGA 1920x1200 Native
Projection distance	1.5 meters ~ 7 meters
Projection screen size	36.1 to 210 inches
Projection lens	Manual Focus/Manual Zoom
Zoom ratio	1.25
Vertical keystone correction	±15° for ±40 steps
Projection methods	Front, Rear, Desktop/Ceiling (Rear, Front)
Data compatibility	VGA, SVGA, XGA, SXGA, SXGA+, UXGA, WUXGA, 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	15.31 – 91.4kHz
V-Sync	43 – 87 Hz
Safety certification	FCC-B, cUL, UL, CE, C-tick, CCC, KC, CB, PCT, PSB, ICES-003, NOM, SASO
Operation temperature	5° ~ 35°C
Dimensions	431.11mm (W) x 344.16mm (D) x 161.51mm (H)
AC Input	AC Universal 100 – 240, Typical @ 110VAC (100 – 240)/+-10%
Power consumption	Typical 420W (Normal) / Typical 360W (Eco)
Stand By	<0.5 watts
Lamp	330W (Normal) / 280W (Eco)
Audio speaker	3W x 2
Input Terminals	VGA x 2
	DisplayPort 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
Output Terminals	VGA x 1
	PC audio jack x 1
	PC audio out x 1
Control Terminals	RS-232C
	RJ45
	Screen trigger: DC Jack x 1 (DC12V 200mA output function)
	USB (Service only)
Security	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	336	673	1346	2020
O (mm)	296	592	740	1481	370	740	1481	2222
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	2020	336	1010	2020	3029
O (mm)	296	740	1481	2222	370	1111	2222	3332
A (mm)	27	67	135	202	34	101	202	303

Short throw projection lesn: 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 × 100%
O=A+H
H=(1/2) × (image height)

Timing Mode Table

SIGNAL	RESOLUTION	H-SYNC (KHZ)	V-SYNC (HZ)	COMPOSITE / S-VIDEO	VGA 1/2 (ANALOG)	BNC	HDMI (DIGITAL)	DP (DIGITAL)
NTSC	—	15.734	60.0	O	—	O	—	—
PAL/SECAM	—	15.625	50.0	O	—	O	—	—
VESA	720 x 400	37.9	85.0	—	O	O	O	O
	640 x 480	31.5	60.0	—	O	O	O	O
	640 x 480	37.9	72.8	—	O	O	O	O
	640 x 480	37.5	75.0	—	O	O	O	O
	640 x 480	43.3	85.0	—	O	O	O	O
	800 x 600	35.2	56.3	—	O	O	O	O
	800 x 600	37.9	60.3	—	O	O	O	O
	800 x 600	46.9	75.0	—	O	O	O	O
	800 x 600	48.1	72.2	—	O	O	O	O
	800 x 600	53.7	85.1	—	O	O	O	O
	1024 x 768	48.4	60.0	—	O	O	O	O
	1024 x 768	56.5	70.1	—	O	O	O	O
	1024 x 768	60.0	75.0	—	O	O	O	O
	1024 x 768	68.7	85.0	—	O	O	O	O
	1280 x 800	49.7	59.8	—	O	O	O	O
	1280 x 800	62.8	74.9	—	O	O	O	O
	1280 x 800	71.6	84.8	—	O	O	O	O
	1280 x 1024	64.0	60.0	—	O	O	O	O
	1280 x 1024	80.0	75.0	—	O	O	O	O
	1280 x 1024	91.1	85.0	—	O	O	O	O
	1400 x 1050	65.3	60.0	—	O	O	O	O
	1440 x 900	55.9	60.0	—	O	O	O	O
	1600 x1200	75.0	60	—	O	O	O	O
	1920 x1080	67.2	60	—	O	O	O	O
	1920 x1200[RB]	74.0	60	—	O	O	O	O
Apple Macintosh	640 x 480	35.0	66.7	—	O	O	O	O
	832 x 624	49.7	74.5	—	O	O	O	O
	1024 x 768	60.2	74.9	—	O	O	O	O
	1152 x 870	68.7	75.1	—	O	O	O	O
SDTV	480i	15.734	60.0	—	O	—	O	O
	576i	15.625	50.0	—	O	—	O	O
EDTV	576p	31.3	50.0	—	O	—	O	O
	480p	31.5	60.0	—	O	—	O	O

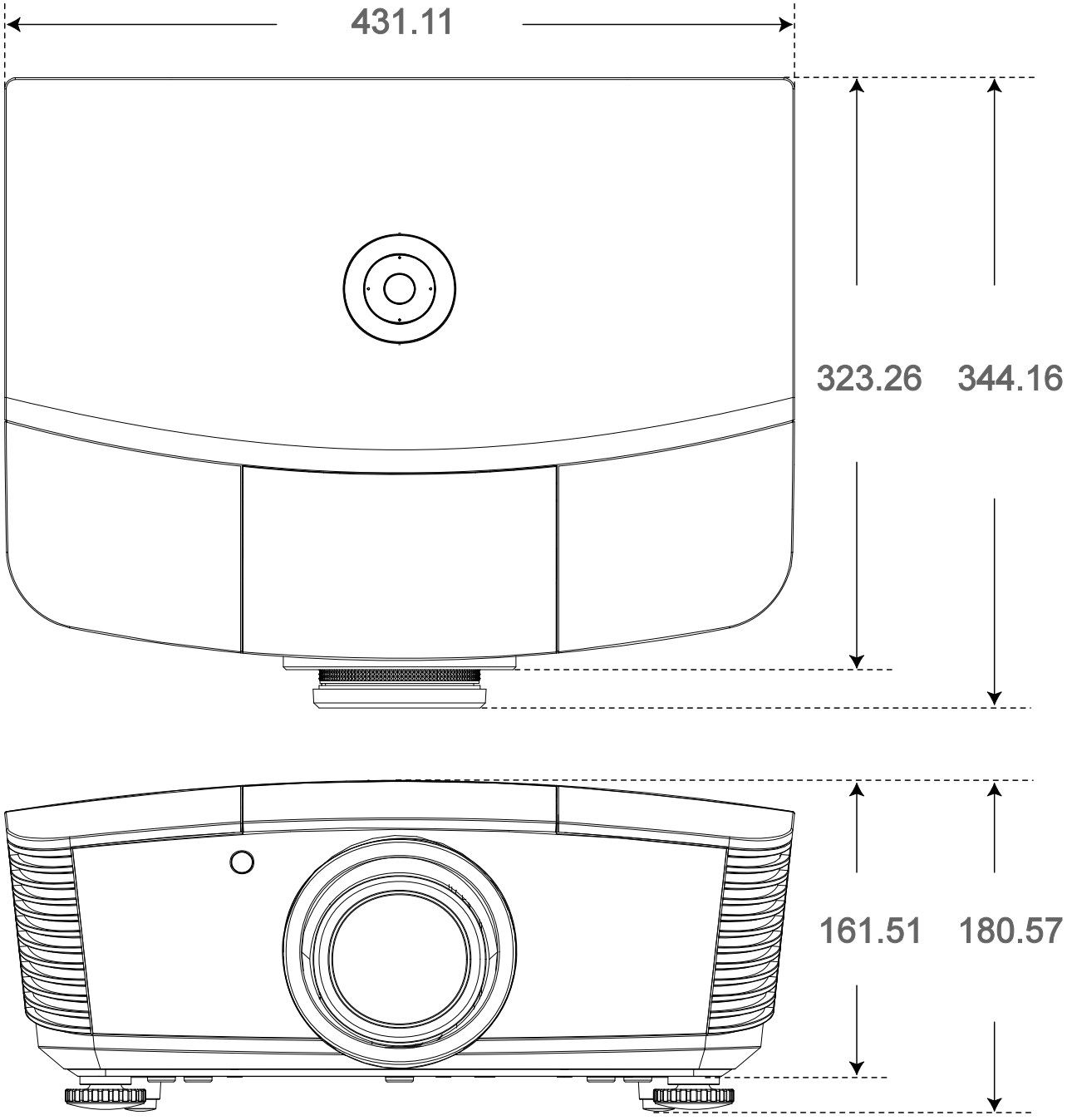
SIGNAL	RESOLUTION	H-SYNC (KHZ)	V-SYNC (HZ)	COMPOSITE / S-VIDEO	VGA 1/2 (ANALOG)	BNC	HDMI (DIGITAL)	DP (DIGITAL)
HDTV	720p	37.5	50.0	—	O	—	O	O
	720p	45.0	60.0	—	O	—	O	O
	1080i	33.8	60.0	—	O	—	O	O
	1080i	28.1	50.0	—	O	—	O	O
	1080p	27	24.0	—	O	—	O	O
	1080p	28.13	25.0	—	O	—	O	O
	1080p	33.75	30.0	—	O	—	O	O
	1080p	67.5	60.0	—	O	—	O	O
	1080p	56.3	50.0	—	O	—	O	O

O: Frequency supported

—: Frequency not supported

(*) VGA support EDTV/SDTV/HDTV component with an adapter.

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, ICES-003, NOM, and C-tick.

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
VXXS0005n	56h Xh Xh 53h 30h 30h 30h 35h nh 0Dh	Set Air filter timer	n=0~999999	P/F
VXXG0005	56h Xh Xh 47h 30h 30h 30h 35h 0Dh	Get Air filter timer	n=0~999999	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
VXXG0009	56h Xh Xh 47h 30h 30h 30h 39h 0Dh	Get Alter EMail		Pn/F
VXXS0009n	56h Xh Xh 53h 30h 30h 30h 39h nh 0Dh	Set Alter Email	n=xxxxxx@xxxx.xxx.xx	P/F

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	0~15	Pn/F
VXXS0105n	56h Xh Xh 53h 30h 31h 30h 35h nh 0Dh	Set Sharpness	0~15	P/F
VXXG0106	56h Xh Xh 47h 30h 31h 30h 36h 0Dh	Get Color Temperature	0:Warm 1:Normal 2:Cool 3:Cooler 4:High Cool	Pn/F
VXXS0106n	56h Xh Xh 53h 30h 31h 30h 36h nh 0Dh	Set Color Temperature	0:Warm 1:Normal 2:Cool 3:Cooler 4:High Cool	P/F
VXXG0107	56h Xh Xh 47h 30h 31h 30h 37h 0Dh	Get Gamma	0:1.6 1:1.8 2:2.0 3:2.2t 4:2.4 5:2.6 6:1.0	Pn/F
VXXS0107n	56h Xh Xh 53h 30h 31h 30h 37h nh 0Dh	Set Gamma	0:1.6 1:1.8 2:2.0 3:2.2t 4:2.4 5:2.6 6:1.0	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 YPbPr		P/F
VXXS0209	56h Xh Xh 53h 30h 32h 30h 39h 0Dh	Select HDMI 2		P/F
VXXS0210	56h Xh Xh 53h 30h 32h 31h 30h 0Dh	Select HDMI 3		P/F

Command Group 02				
ASCII	HEX	Function	Description	Return Value
VXXS0211	56h Xh Xh 53h 30h 32h 31h 31h 0Dh	Select DP		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 7:BNC 8:YPbPr 9:HDMI 2 10:HDMI 3 11:DP	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:Auto 6:16:10	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:Auto 6:16:10	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=-15~15	Pn/F
VXXS0306n	56h Xh Xh 53h 30h 33h 30h 36h nh 0Dh	Treble	n=-15~15	P/F
VXXG0307	56h Xh Xh 47h 30h 33h 30h 37h 0Dh	Bass	n=-15~15	Pn/F
VXXS0307n	56h Xh Xh 53h 30h 33h 30h 37h nh 0Dh	Bass	n=-15~15	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
VXXS0308n	56h Xh Xh 53h 30h 33h 30h 38h nh 0Dh	Projection Mode	0:Front 1:Rear 2:Ceiling 3:Rear+Ceiling	P/F

Command Group 03				
ASCII	HEX	Function	Description	Return Value
VXXG0309	56h Xh Xh 47h 30h 33h 30h 39h 0Dh	Set vertical key-stone value	n=-40~+40	Pn/F
VXXS0309n	56h Xh Xh 53h 30h 33h 30h 39h nh 0Dh	Set vertical key-stone value	n=-40~+40	P/F
VXXG0310	56h Xh Xh 47h 30h 33h 31h 30h 0Dh	Set horizontal key-stone value	n=-20~+20	Pn/F
VXXS0310n	56h Xh Xh 53h 30h 33h 31h 30h nh 0Dh	Set horizontal key-stone 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 horizon-tal lens shift	n=-20~+20	Pn/F
VXXS0314n	56h Xh Xh 53h 30h 33h 31h 34h nh 0Dh	Adjust the horizon-tal lens shift	n=-20~+20	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