vivitek®

Vivid Color, Vivid Life

D7180 & H7080HD
user's manual

PICTURE BY

DLP®

TEXAS INSTRUMENTS

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HIGH-DEFINITION MULTIMEDIA INTERFACE

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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, and may lead to other *unpredictable damages.*

> ➢ 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.

Verify Installation Location

> ➢ To supply power, the 3-blade (with earthing lead) socket should be used to ensure proper grounding and equalized ground potential for all of the equipment in the Projector System.

> ➢ The power code provided with the Projector should be used. In case of any missing item, other qualified 3-blade (with earthing lead) power cord can be used as substitution; however, do not use 2-blade power cord.

> ➢ Verify if the voltage is stable, grounded properly and there is no electricity leakage.

> ➢ Measure total power consumption which should not higher the safety capacity and avoid safety issue and short circuit.

> ➢ Turn on Altitude Mode when located in high altitude areas

> ➢ The projector can only be installed upright or inverted.

> ➢ When installation the bracket, make sure the weight limit is not exceed and firmly secured.

> ➢ Avoid installing near air conditioner duct or subwoofer.

> ➢ Avoid installing at high temperature, insufficient cooling and heavy dust locations.

> ➢ Keep your product away from fluorescent lamps to avoid malfunction caused by IR interference

> ➢ The VGA IN connector should be connected to the VGA IN port. Note that it should be inserted tightly, with the screws on both sides securely fastened to ensure proper connection of the signal wire for achieving optimal display effect.

> ➢ The AUDIO IN connector should be connected to the AUDIO IN port and CANNOT be connected to AUDIO OUT or other ports like BNC, RCA; otherwise, it will lead to mute output and even DAMAGE the port.

> ➢ Install the projector above 200cm to avoid damage.

> ➢ The power cord and signal cable should be connected before power on the projector. During the projector starting and operating process, DO NOT insert or remove the signal cable or the power cord to avoid damaging the projector.

Cooling notes

Air outlet

➢ Make sure the air outlet is 50cm clear of any obstruction to ensure proper cooling.

➢ Air outlet location should not be in front of the lens of other projector to avoid causing illusions.

➢ Keep the outlet at least 100cm away from the inlets of other projectors

➢ The projector generates a massive amount of heat during use. The internal fan dissipates the heat of the projector when shutting down, and such process may continue for a certain period. After the project enters STANDBY MODE status, press the AC power button to turn off the projector and remove the power cord. DO NOT remove the power cord during the shutdown process, as it may cause damage to the projector. In the meantime, the delayed heat radiating will also affect the service life of the projector. The shutdown process may vary depending on the model used. Whatever the case may be, be sure to disconnect the power cord till after the projector enters the STANDBY status.

Air inlet

➢ Make sure there is no object blocking air input within 30 cm.

➢ Keep the inlet away from other heat sources

➢ Avoided heavy dust area

Power Safety

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

Replacing the Lamp

Replacing the lamp can be hazardous if done incorrectly. See *Replacing the Projection Lamp* on page 38 for clear and safe instructions for this procedure. Before replacing the lamp:

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

Caution:
In rare cases the lamp bulb may burn out during normal operation and cause glass dust or shards to be discharged outward from the rear exhaust vent.

Do not inhale or do not touch glass dust or shards. Doing so could result in injury.

Always keep your face away from the exhaust vent so that you do not suffer from the gas and broken shards of the lamp.

Cleaning the Projector

> ➢ Unplug the power cord before cleaning. See *Cleaning the Projector* page 40.
> ➢ 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 55.

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

- *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.

Table of Contents

GETTING STARTED

Packing Checklist

Carefully unpack the projector and check that the following items are included:
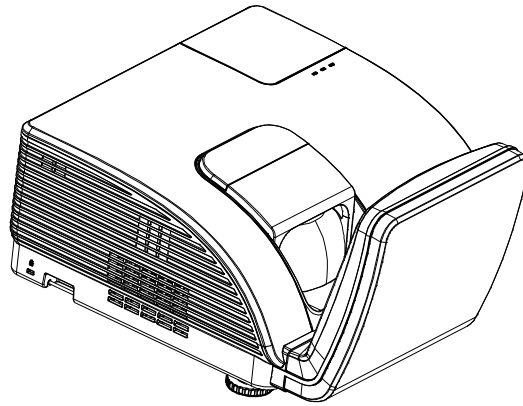
DLP PROJECTOR
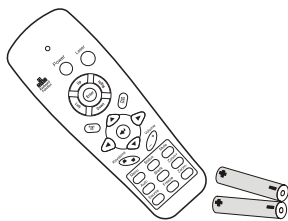
REMOTE CONTROL
(WITH TWO AAA BATTERIES)
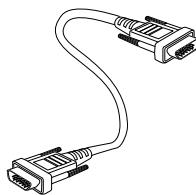
VGA CABLE
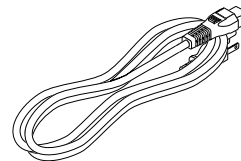
POWER CORD

CD-ROM
(THIS USER'S MANUAL)

QUICK START GUIDE

WARRANTY 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
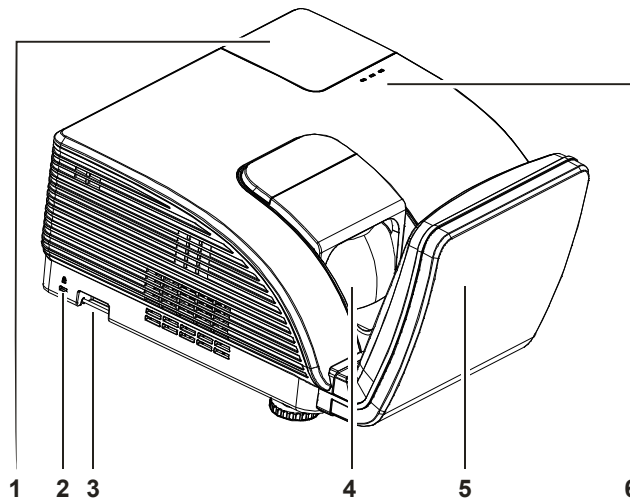
ITEM	LABEL	DESCRIPTION			SEE PAGE:
1.	Lamp cover	Removes cover to replace lamp			
2.	Kensington lock	Secure to permanent object with a Kensington® Lock system			*42*
3.	Security bar	For security and authorized usage			*42*
4.	Lens	Projection Lens			
5.	Aspheric mirror	Reflects images			
6.	WARNING LED	Red	Over Temperature		*46*
	LAMP LED	Flashing	Error code		
	POWER LED	Flashing	Error code		

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.

Rear view
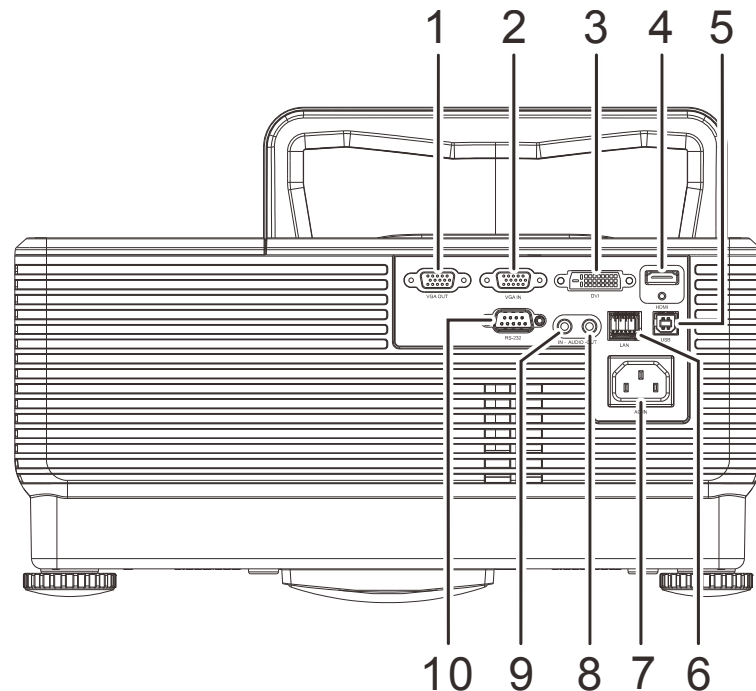
Item	Label	Description	See page:
1.	VGA OUT	Connect the RGB cable to a display (Loop Thru only for VGA IN)	
2.	VGA IN	Connect the RGB cable from a computer and components.	
3.	DVI	Connect the DVI cable from a device.	
4.	HDMI	Connect the HDMI cable from a HDMI device	
5.	USB	Connect the USB cable from a computer	
6.	RJ – 45	Connect a LAN cable from Ethernet	
7.	AC IN	Connect the POWER cable	*9*
8.	AUDIO OUT	Connect an audio cable to the audio device	
9.	AUDIO IN	Connect an audio cable from the audio device	
10.	RS-232	Connect RS-232 serial port cable for remote control	

Note:
If your video equipment has various input sources, it is recommended to connect in priority of HDMI/DVI, component (thru VGA), for better picture quality.

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

Bottom view
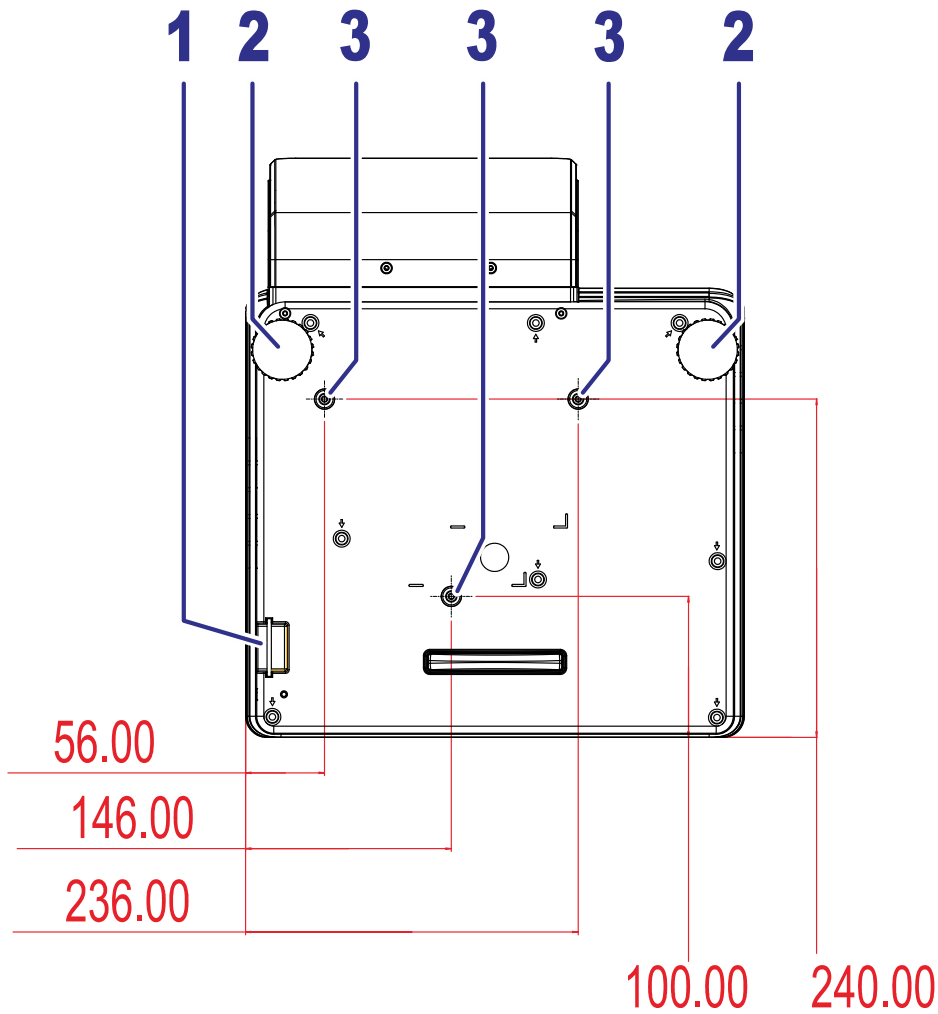
ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Security bar	Helps protect the projector from unauthorized use	*42*
2.	Tilt adjustors	Rotate adjusters lever to adjust angle position	
3.	Ceiling support holes	Contact your dealer for information on mounting the projector on a ceiling	

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 12 mm (0.47 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
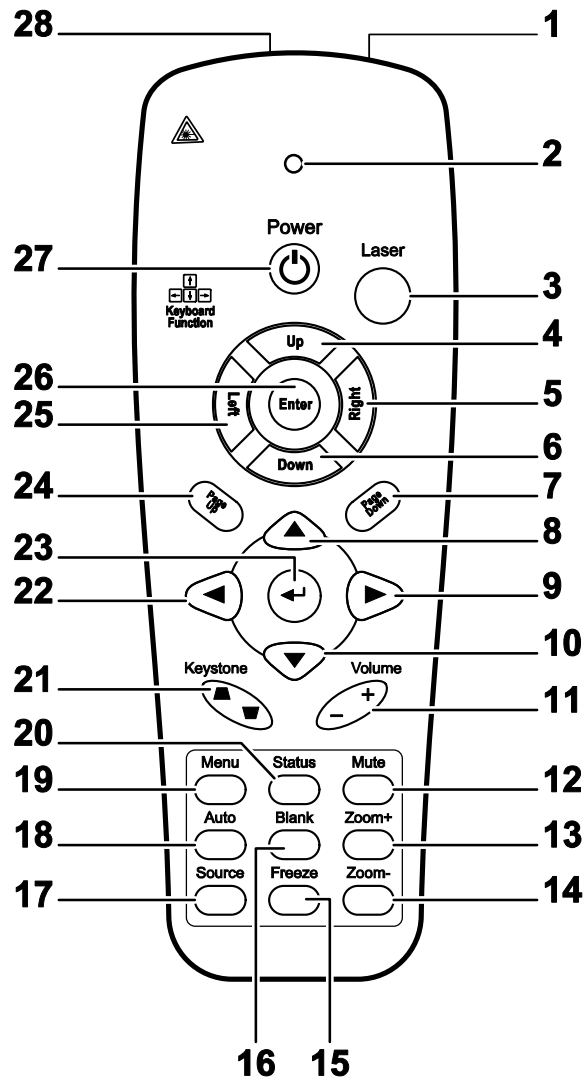
Important:

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.	IR transmitter	Transmits signals to projector	
2.	Status LED	Lights when the remote control is used	
3.	Laser	Press to operate the on-screen pointer	
4.	Up	Up arrow when connected through USB to a PC	
5.	Right	Right arrow when connected through USB to a PC	
6.	Down	Down arrow when connected through USB to a PC	
7.	Page Down	Page down when connected through USB to a PC	
8.	Up cursor		
9.	Right cursor	Navigates and changes settings in the OSD	*12*
10.	Down cursor		
11.	Volume +/-	Adjusts volume	*11*
12.	Mute	Mutes the built-in speaker	
13.	Zoom+	Zoom in	
14.	Zoom-	Zoom out	
15.	Freeze	Freeze/unfreezes the on-screen picture	
16.	Blank	Makes the screen blank	
17.	Source	Detects the input device	
18.	Auto	Auto adjustment for phase, tracking, size, position	
19.	Menu	Opens the OSD	*12*
20.	Status	Opens the OSD Status menu (the menu only opens when an input device is detected)	
21.	Keystone top/bottom	Corrects image-trapezoid (wider top/bottom) effect	*11*
22.	Left cursor	Navigates and changes settings in the OSD	
23.	Enter	Changes settings in the OSD	
24.	Page Up	Page up when connected through USB to a PC	*12*
25.	Left	Left arrow when connected through USB to a PC	
26.	Enter	Enter key when connected through USB to a PC	
27.	Power	Turns the projector on or off	*9*
28.	Laser	Use as on-screen pointer. **DO NOT POINT IN EYES**.	

Remote Control Operating Range

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

Projector and Remote Control Buttons

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

SETUP AND OPERATION

Inserting the Remote Control Batteries

1. Remove the battery compartment cover by sliding the cover in the direction of the arrow.
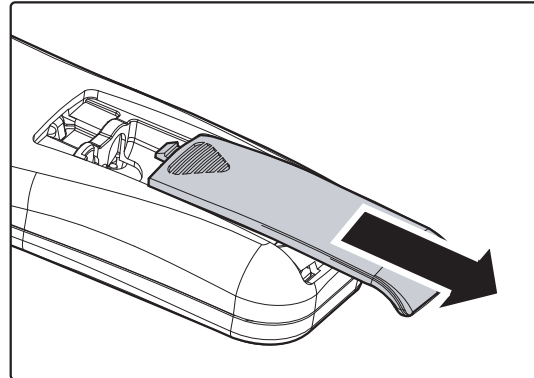
2. Insert the battery with the positive side facing up.
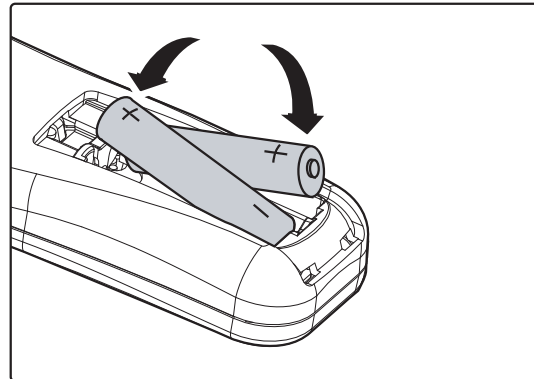
3. Replace the cover.
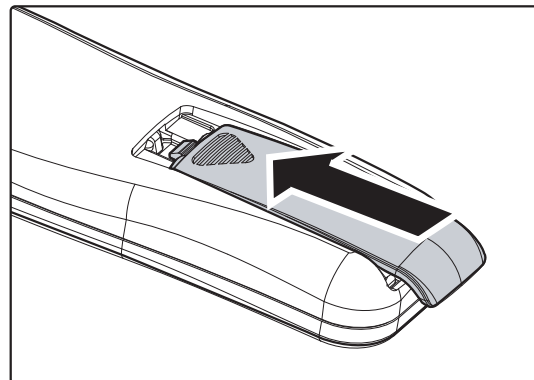
Caution:
1. Only use AAA batteries (Alkaline batteries are recommended).

2. Dispose of used batteries according to local ordinance regulations.

3. Remove the batteries when not using the projector for prolonged periods.

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 will be on.
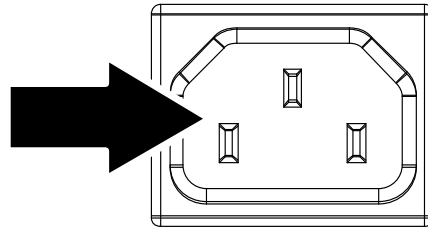
2. Turn on the connected devices.

3. Ensure the **POWER** LED displays a solid amber and not a flashing amber. Then press the ⏻ **POWER** button on the remote control to turn on the projector.

The projector splash screen displays and connected devices are detected.

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

(Component is supported through the RGB to COMPONENT ADAPTER.)

5. When the POWER OFF window appears, press the ⏻ **POWER** button on the remote control. The projector turns off.
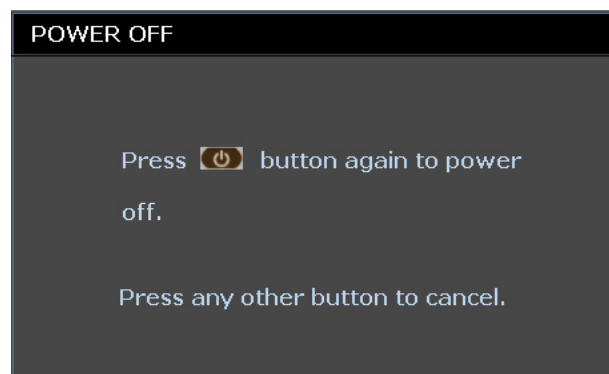
Caution:
Do not unplug the power cord until the POWER LED change to amber–indicating the projector has cooled down.

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 lower the level of the projector, twist the adjusters clockwise.
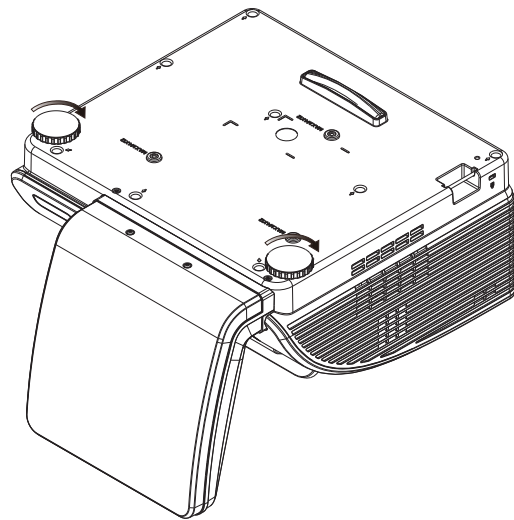
2. To raise the level of the projector, lift the projector and twist the adjusters counter clockwise.
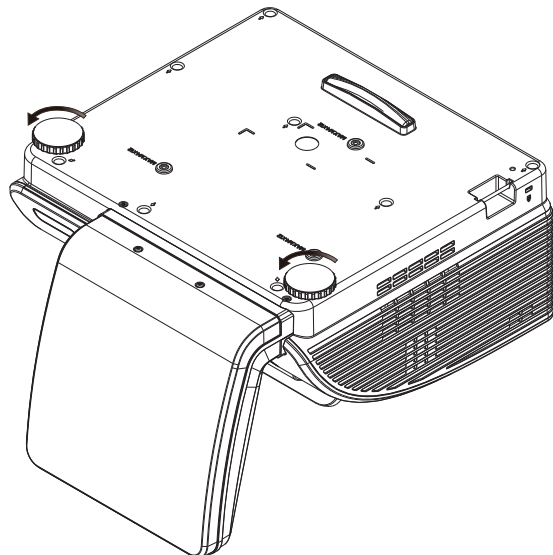
Adjusting the Keystone

1. Use the **KEYSTONE** buttons on the remote control to correct image-trapezoid (wider top or bottom) effect.
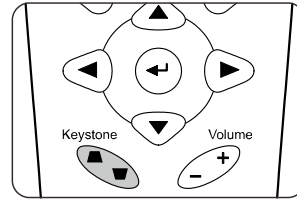
2. The keystone control appears on the display.

Keystone	0	

Adjusting the Volume

1. Press the **Volume** +/- buttons on the remote control.
The volume control appears on the display.
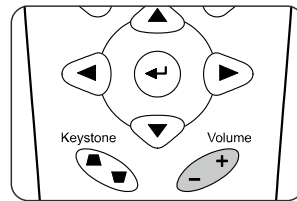
Volume	5	

2. Press the **MUTE** button to turn off the volume

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 down in a menu.

4. Press ◄► to change values for settings.

5. Press **MENU** to close the OSD or leave a sub menu.

PICTURE >> Basic	
Display Mode	User 3
Brightness	50
Contrast	50
Color	50
Tint	50
Sharpness	0
Flesh Tone	0
Reset Picture Settings	
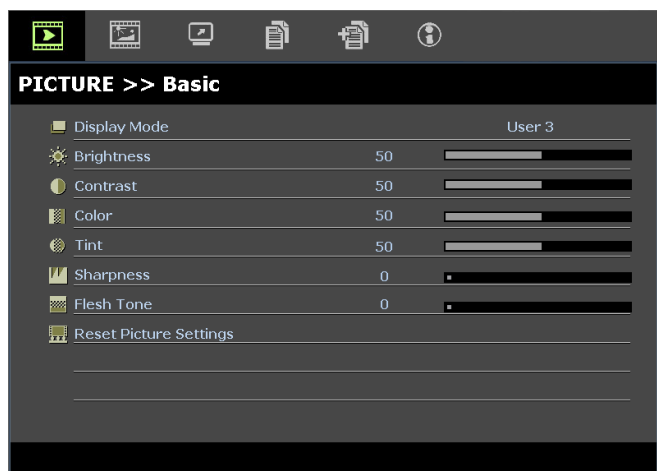
> *Note:*
> *Depending on the video source, not all items in the OSD are available. For example, the **PC Detail Adjustment** item in the Display menu can only be modified when connected to a PC. Items that are not available cannot be accessed and are grayed out.*

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	Display Mode	Movie/Bright/Normal/User 1/User 2/User 3
	Brightness	
	Contrast	
	Color	
	Tint	
	Sharpness	
	Flesh Tone	
	Reset Picture Setting	Enter → Yes/No

PICTURE>> Advanced	Noise Reduction	
	Color Temperature	Lamp Native/Warm/Normal/Cool/Cooler/High Cool
	Gamma	
	HSG Adjustment	
	Color Space	Auto/RGB/STDV/HDTV
	White Balance	Red Gain/Green Gain/Blue Gain/Red Bias/Green Bias/Blue Bias
	User Color Temp	White Gain Red/White Gain Green/White Gain Blue

PICTURE>> Advanced	HSG Adjustment	Primary Color	R/G/B/Y/C/M
	Hue	
	Sturation	
	Gain	

DISPLAY	Aspect Ratio	Auto/16:9/4:3/Letter Box/Real
	Keystone	
	Overscan	
	PC Detail Adjustment	Auto/Frequency/Phase/Horizontal Position/Vertical Position
	Size & Position Adjustment	Zoom Out/H Offset/V Offset/Rest

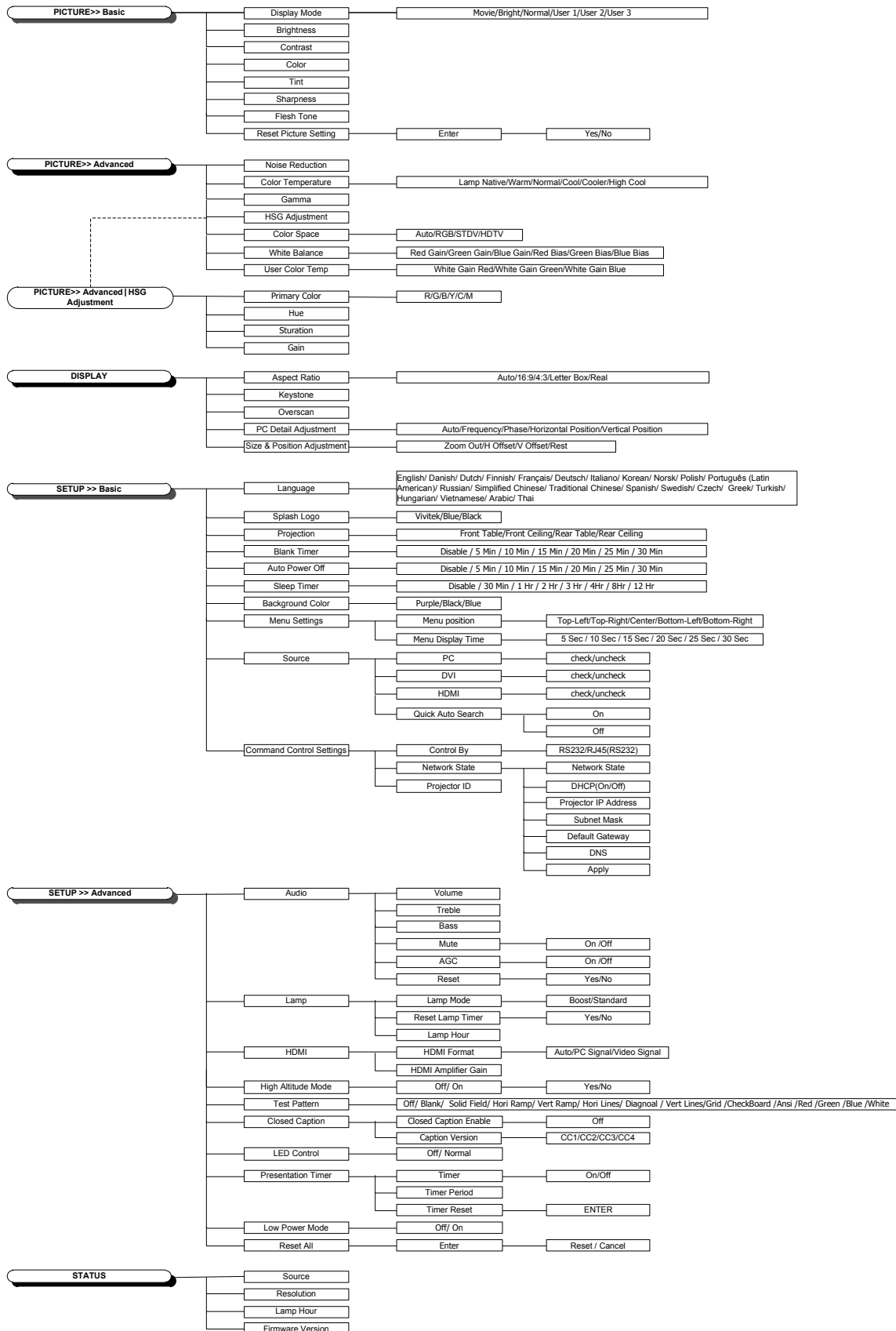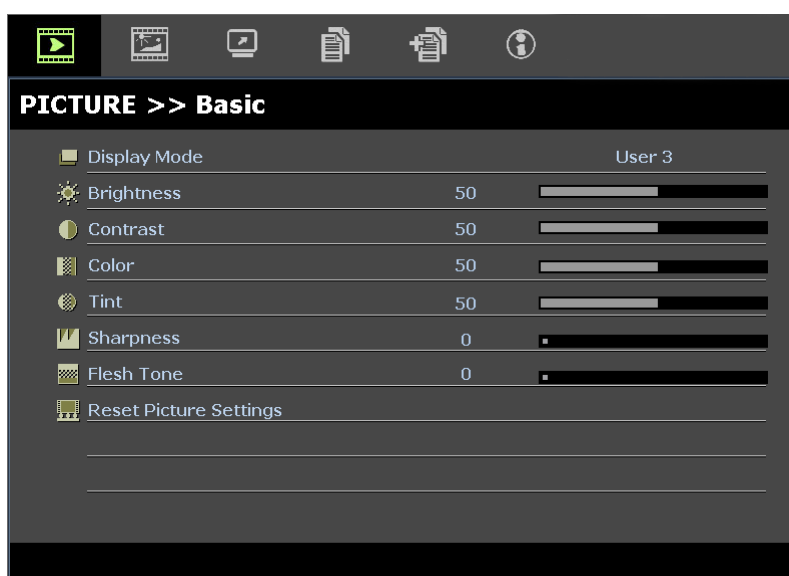| SETUP >> Basic | Language | English/ Danish/ Dutch/ Finnish/ Français/ Deutsch/ Italiano/ Korean/ Norsk/ Polish/ Português (Latin American)/ Russian/ Simplified Chinese/ Traditional Chinese/ Spanish/ Swedish/ Czech/ Greek/ Turkish/ Hungarian/ Vietnamese/ Arabic/ Thai |
	Splash Logo	Vivitek/Blue/Black
	Projection	Front Table/Front Ceiling/Rear Table/Rear Ceiling
	Blank Timer	Disable / 5 Min / 10 Min / 15 Min / 20 Min / 25 Min / 30 Min
	Auto Power Off	Disable / 5 Min / 10 Min / 15 Min / 20 Min / 25 Min / 30 Min
	Sleep Timer	Disable / 30 Min / 1 Hr / 2 Hr / 3 Hr / 4Hr / 8Hr / 12 Hr
	Background Color	Purple/Black/Blue
	Menu Settings	Menu position → Top-Left/Top-Right/Center/Bottom-Left/Bottom-Right
		Menu Display Time → 5 Sec / 10 Sec / 15 Sec / 20 Sec / 25 Sec / 30 Sec
	Source	PC → check/uncheck
		DVI → check/uncheck
		HDMI → check/uncheck
		Quick Auto Search → On / Off
	Command Control Settings	Control By → RS232/RJ45(RS232)
		Network State → Network State
		Projector ID → DHCP(On/Off) / Projector IP Address / Subnet Mask / Default Gateway / DNS / Apply

SETUP >> Advanced	Audio	Volume
		Treble
		Bass
		Mute → On /Off
		AGC → On /Off
		Reset → Yes/No
	Lamp	Lamp Mode → Boost/Standard
		Reset Lamp Timer → Yes/No
		Lamp Hour
	HDMI	HDMI Format → Auto/PC Signal/Video Signal
		HDMI Amplifier Gain
	High Altitude Mode	Off/ On → Yes/No
	Test Pattern	Off/ Blank/ Solid Field/ Hori Ramp/ Vert Ramp/ Hori Lines/ Diagnoal / Vert Lines/Grid /CheckBoard /Ansi /Red /Green /Blue /White
	Closed Caption	Closed Caption Enable → Off
		Caption Version → CC1/CC2/CC3/CC4
	LED Control	Off/ Normal
	Presentation Timer	Timer → On/Off
		Timer Period
		Timer Reset → ENTER
	Low Power Mode	Off/ On
	Reset All	Enter → Reset / Cancel

STATUS	Source
	Resolution
	Lamp Hour
	Firmware Version

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.*

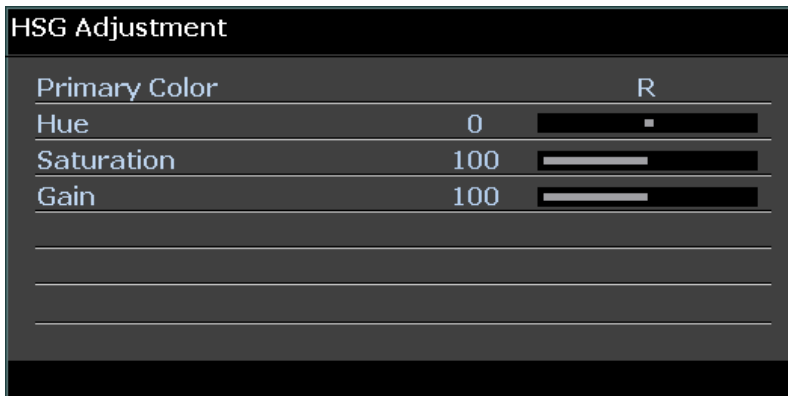| ITEM	DESCRIPTION
Display Mode	Press the cursor ◄► buttons to set the Display Mode. (Range: Movie/ Bright/ Normal/ User 1/ User 2/ User 3)
Brightness	Press the cursor ◄► buttons to adjust the display brightness.
Contrast	Press the cursor ◄► buttons to adjust the display contrast.
Color	Press the cursor ◄► buttons to adjust the video saturation. **Notes:** This function is only available when SOG/YUV from VGA or HDMI mode from HDMI input source is selected and Display Mode set to User 1/ User 2/ User 3.
Tint	Press the cursor ◄► buttons to adjust the video tint/hue. **Notes:** This function is only available when SOG/YUV from VGA or HDMI mode from HDMI input source is selected and Display Mode set to User 1/ User 2/ User 3.
Sharpness	Press the cursor ◄► buttons to adjust the display sharpness. **Notes:** This function is only available when SOG/YUV from VGA or HDMI mode from HDMI input source is selected and Display Mode set to User 1/ User 2/ User 3.
Flesh Tone	Press the cursor ◄► buttons to adjust the display flesh tone. **Notes:** This function is only available when SOG/YUV from VGA or HDMI mode from HDMI input source is selected and Display Mode set to User 1/ User 2/ User 3.
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.
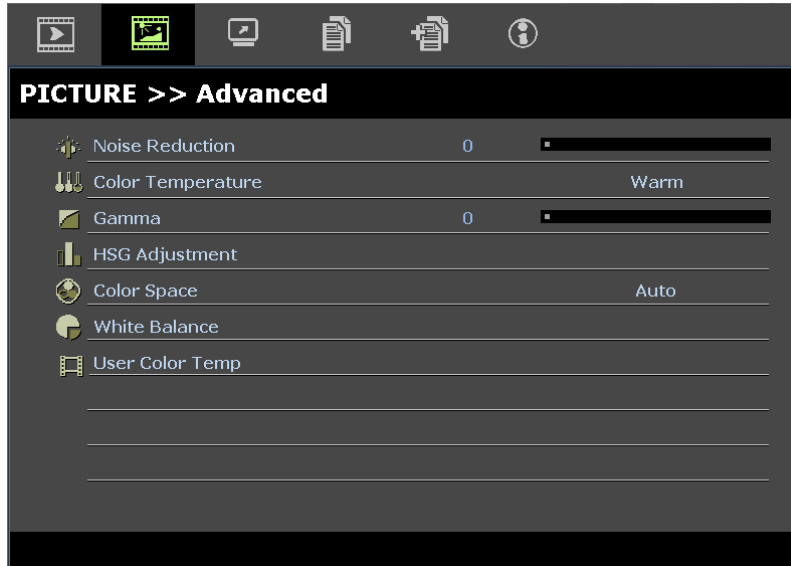
ITEM	DESCRIPTION
Noise Reduction	Press the cursor ◄► button to adjust the Noise Reduction.
Color Temperature	Press the cursor ◄► button to set the Color Temperature.
Gamma	Press the cursor ◄► button to adjust the gamma correction of the display. **Notes:** This function is only available in User 1/ 2/ 3 mode.
HSG Adjustment	Press the **ENTER** button to enter the **HSG Adjustment** sub menu. See *HSG Adjustment* on page 17.
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.
White Balance	Press the **ENTER** button to enter the **White Balance** sub menu. See *White Balance* on page 17
User Color Temp	Press the **ENTER** button to enter the **User Color Temp** sub menu. See *User Color Temp* on page 18

HSG Adjustment

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

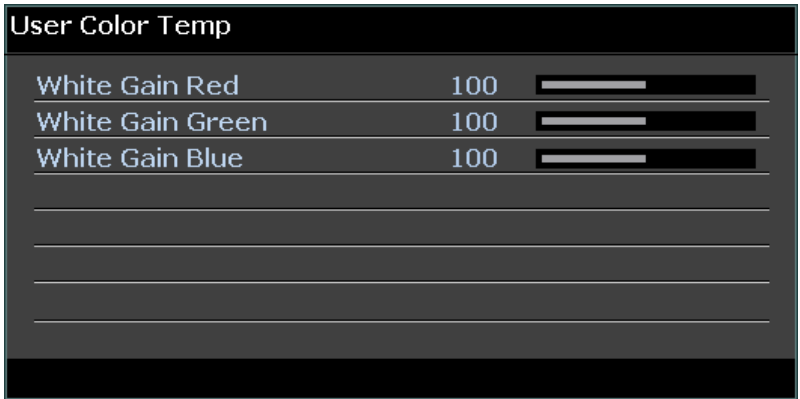| ITEM	DESCRIPTION
Primary Color	Press the ◄► buttons to set the Primary Color. **Notes:** There are six sets (**R**/ G/ B/ C/ M/ Y) of colors to be customized.
Hue	Press the ◄► buttons to adjust the Hue.
Saturation	Press the ◄► buttons to adjust the Saturation.
Gain	Press the ◄► buttons to adjust the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

White Balance

Press the **ENTER** button to enter the **White Balance** sub menu.

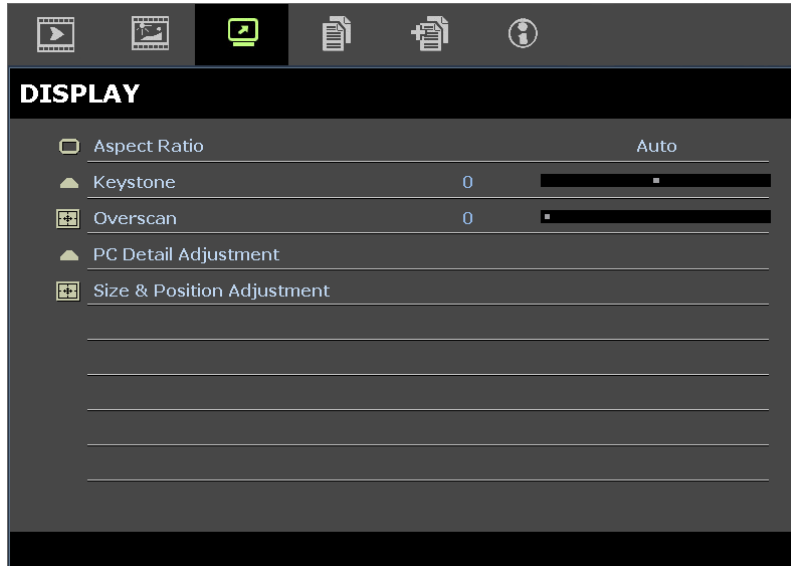| ITEM	DESCRIPTION
Red Gain	Press the ◄► buttons to adjust the Red Gain.
Green Gain	Press the ◄► buttons to adjust the Green Gain.
Blue Gain	Press the ◄► buttons to adjust the Blue Gain.
Red Bias	Press the ◄► buttons to adjust the Red Bias.
Green Bias	Press the ◄► buttons to adjust the Green Bias.
Blue Bias	Press the ◄► buttons to adjust the Blue Bias.

User Color Temp

Press the **ENTER** button to enter the **User Color Temp** sub menu.

User Color Temp		
White Gain Red	100	
White Gain Green	100	
White Gain Blue	100	

ITEM	DESCRIPTION
White Gain Red	Press the ◄► buttons to adjust the White Gain Red.
White Gain Green	Press the ◄► buttons to adjust the White Gain Green.
White Gain Blue	Press the ◄► buttons to adjust the White Gain Blue.

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.
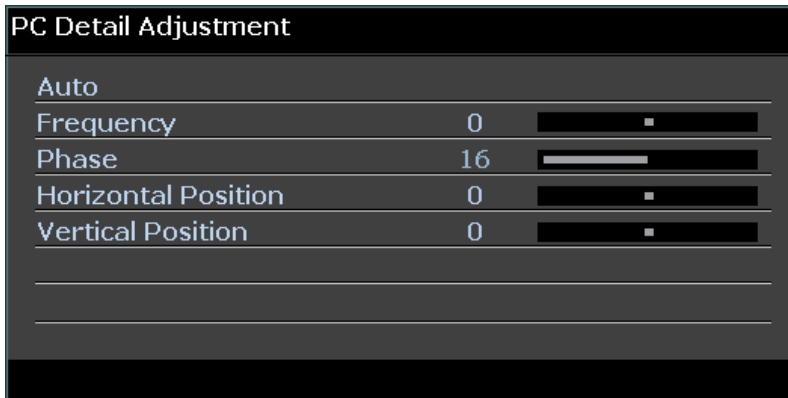

ITEM	DESCRIPTION
Aspect Ratio	Press the cursor ◄► button to set the Aspect Ratio. (Range: **Auto**/ 16:9/ 4:3/ Letter Box/ Real)
Keystone	Press the cursor ◄► button to adjust the Keystone.
Overscan	Press the cursor ◄► button to adjust the Overscan.
PC Detail Adjustment	Press the **ENTER** button to enter the **PC Detail Adjustment** sub menu. See *PC Detail Adjustment* on page 20.
Size & Position Adjustment	Press the **ENTER** button to enter the **Size & Position Adjustment** sub menu. See *Size & Position Adjustment* on page 20.

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.*

```
PC Detail Adjustment

Auto
Frequency              0      ▪
Phase                 16      ▬▬▬▬
Horizontal Position    0      ▪
Vertical Position      0      ▪
```

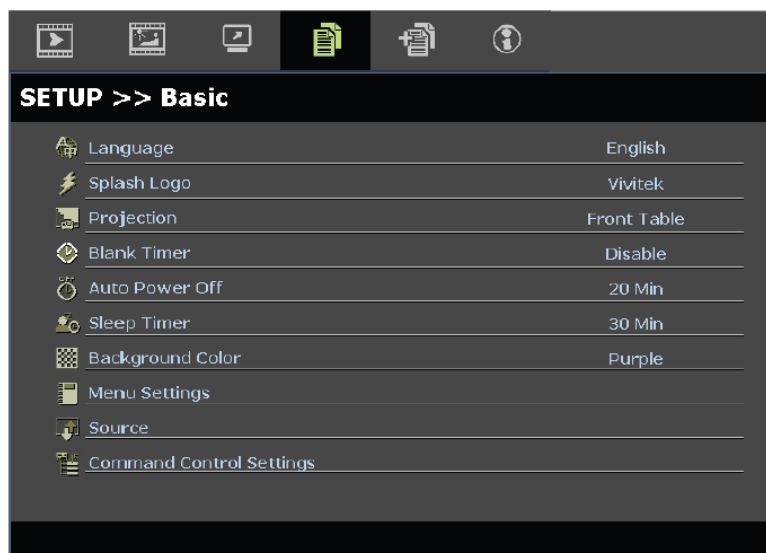| ITEM	DESCRIPTION
Auto	Press the **ENTER/AUTO** button on the control panel or the **ENTER/AUTO** button on the remote control to automatically adjust frequency, phase, and position.
Frequency	Press the ◄► buttons to adjust the A/D sampling number.
Phase	Press the ◄► buttons to adjust the A/D sampling 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.

Size & Position Adjustment

Press the **ENTER** button to enter the **Size & Position Adjustment** sub menu.

```
Size & Position Adjustment

Zoom Out               0      ▪
H Offset                      0
V Offset                      0
Reset
```
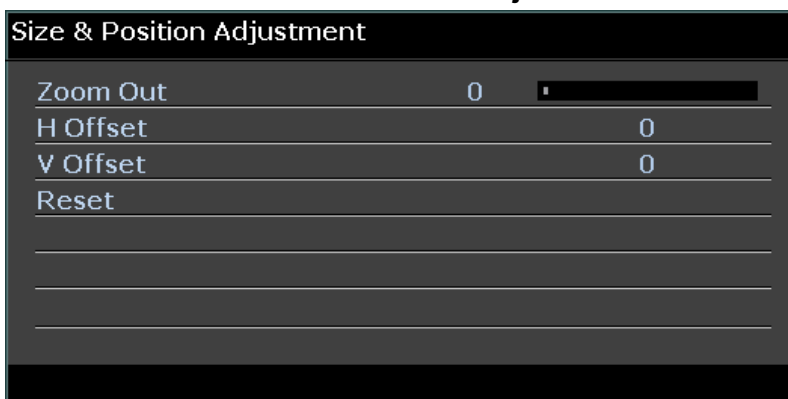
ITEM	DESCRIPTION
Zoom Out	Press the ◄► buttons to adjust the Zoom Out factor.
H Offset	Press the ◄► buttons to adjust the horizontal image shift.
V Offset	Press the ◄► buttons to adjust the vertical image shift.
Reset	Press the **ENTER** button to reset **Size & Position Adjustment** settings to default values.

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.

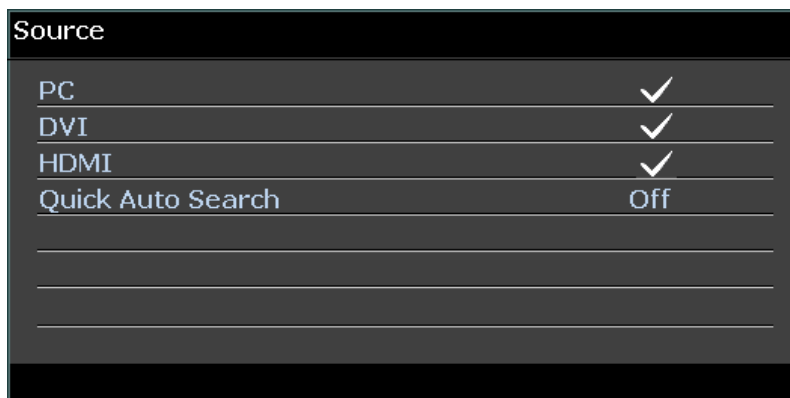| ITEM	DESCRIPTION
Language	Press the cursor ◄► buttons to select a different localization menu. (Range: English/ Danish/ Dutch/ Finnish/ Français/ Deutsch/ Italiano/ Korean/ Norsk/ Polish/ Português (Latin American)/ Russian/ Simplified Chinese/ Traditional Chinese/ Spanish/ Swedish/ Czech/ Greek/ Turkish/ Hungarian/ Vietnamese/ Arabic/ Thai)
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 22.
Source	Press the **ENTER** button to enter the **Source** sub menu. See *Source* on page 22.
Command Control Settings	Press the **ENTER** button to enter the **Command Control Settings** sub menu. See *Command Control Settings* on page 23.

Menu Settings

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

Menu Settings	
Menu Position	Center
Menu Display Time	5 Sec

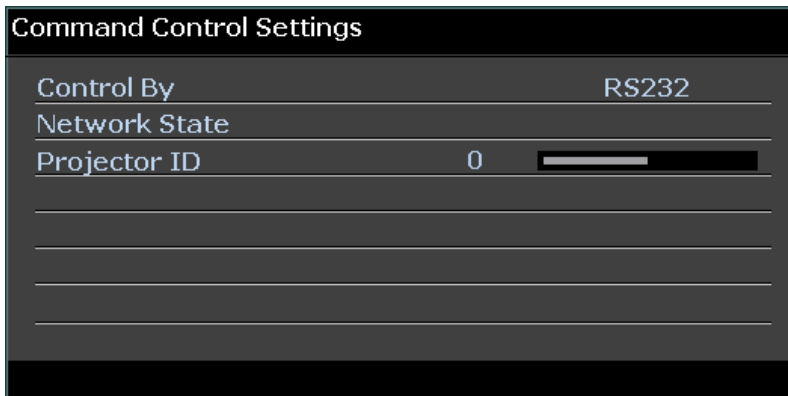| ITEM	DESCRIPTION
Menu Position	Press the ◄► buttons to select from five OSD locations: Top-Left/ Top-Right/ **Center**/ Bottom-Left/ Bottom-Right.
Menu Display Time	Press the ◄► buttons to set the Menu Display timer before the OSD times out. (Range: 5sec/ 10sec/ **15sec**/ 20sec/ 25sec/ 30sec)

Source

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

Source	
PC	✓
DVI	✓
HDMI	✓
Quick Auto Search	Off

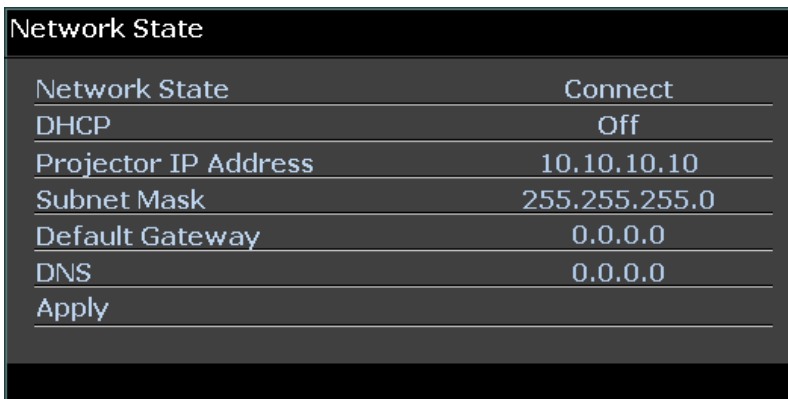| ITEM	DESCRIPTION
PC	Press the ◄► buttons to enable or disable the PC source.
DVI	Press the ◄► buttons to enable or disable the DVI source.
HDMI	Press the ◄► buttons to enable or disable the HDMI source.
Quick Auto Search	Press the ◄► buttons to enable or disable Quick Auto Search for available input 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 23.
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.
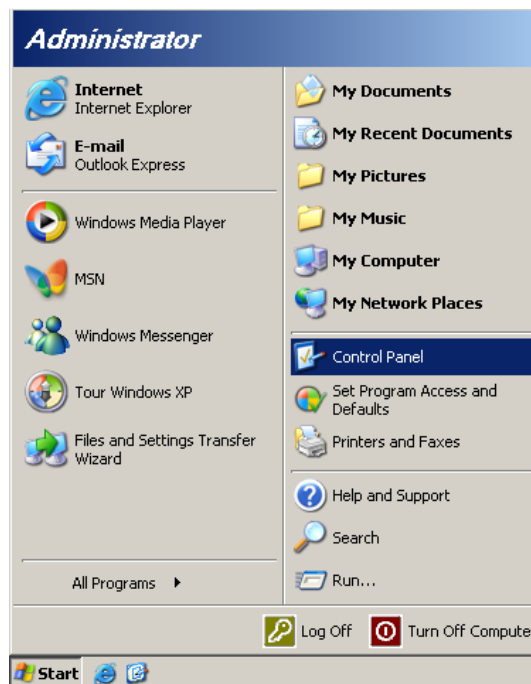
The LAN/RJ45 function of the projector through a network, such as remotely manage: Power On/Off, Brightness and Contrast settings. Also, projector status information, such as: Video-Source, Sound-Mute, etc.
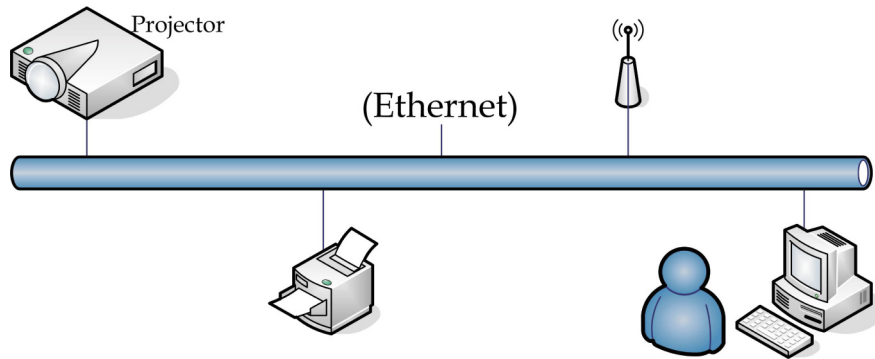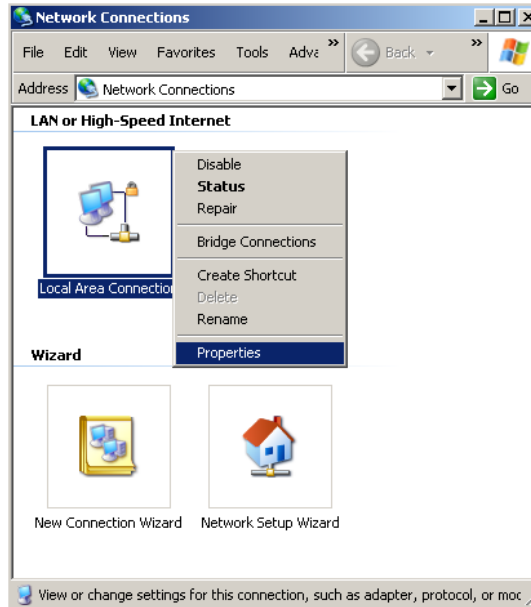

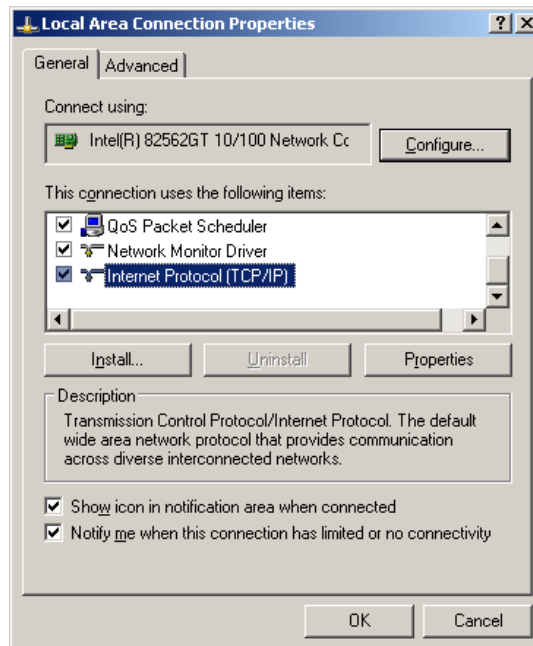1. Connect an RJ45 cable to RJ45 ports on the projector and the PC (Laptop).
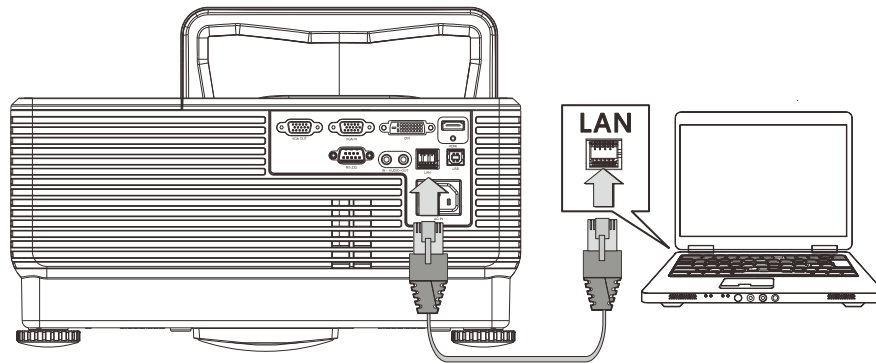
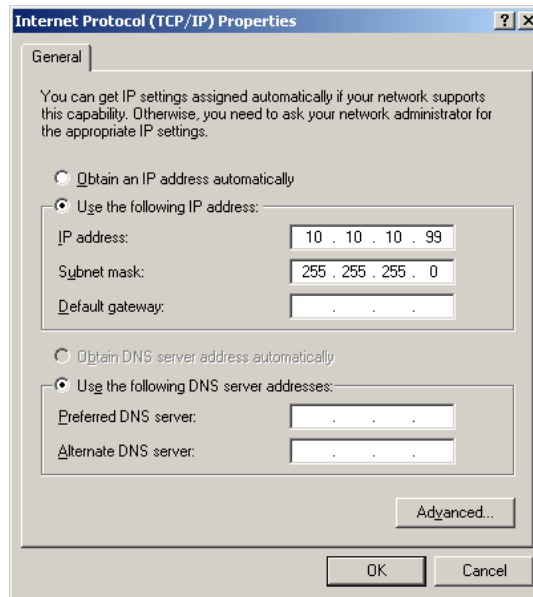2. On the PC (Laptop), select **Start → Control Panel → Network Connections**.

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 **OSD →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.

11. Open a web browser (for example, Microsoft Internet Explorer with Adobe Flash Player 9.0 or higher).
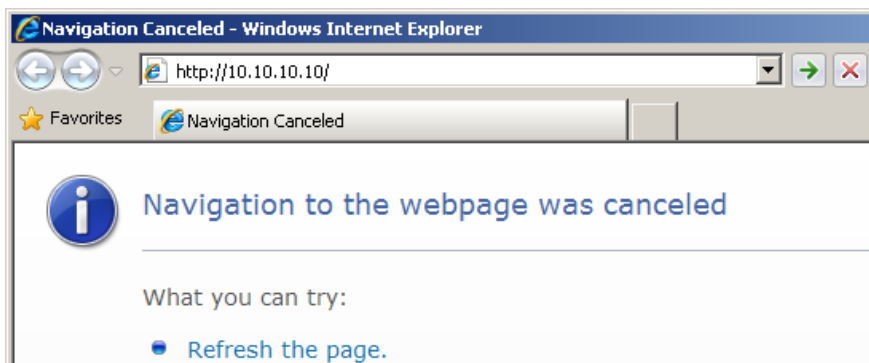
12. In the Address bar, input the IP address: 10. 10. 10. 10.

13. Press ◄┘ (Enter) / ►.

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

Based on network web-page for the input-string in **tools** tab, the limitation for Input-Length is in the below list ("space" and the other punctuation key included):

CATEGORY	ITEM	INPUT-LENGTH
Crestron Control	IP Address	15
	IP ID	3
	Port	5
Projector	Projector Name	10
	Location	9
	Assigned To	8
Network Configuration	DHCP (Enabled)	(N/A)
	IP Address	15
	Subnet Mask	15
	Default Gateway	15
	DNS Server	15
User Password	Enabled	(N/A)
	New Password	15
	Confirm	15
Admin Password	Enabled	(N/A)
	New Password	15
	Confirm	15

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

RS232 by Telnet Function

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

Quick Start-Guide for "RS232 by TELNET"

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

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

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

Start => All Programs => Accessories => Command Prompt
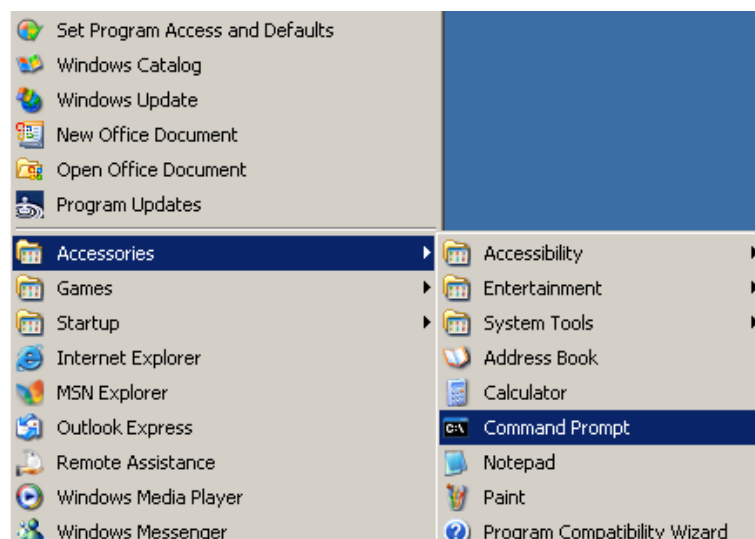
Input the command format like the below:

telnet ttt.xxx.yyy.zzz 23 ("Enter" key pressed)

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

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

How to have TELNET enabled in Windows VISTA / 7

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

Open "Control Panel" in Windows VISTA
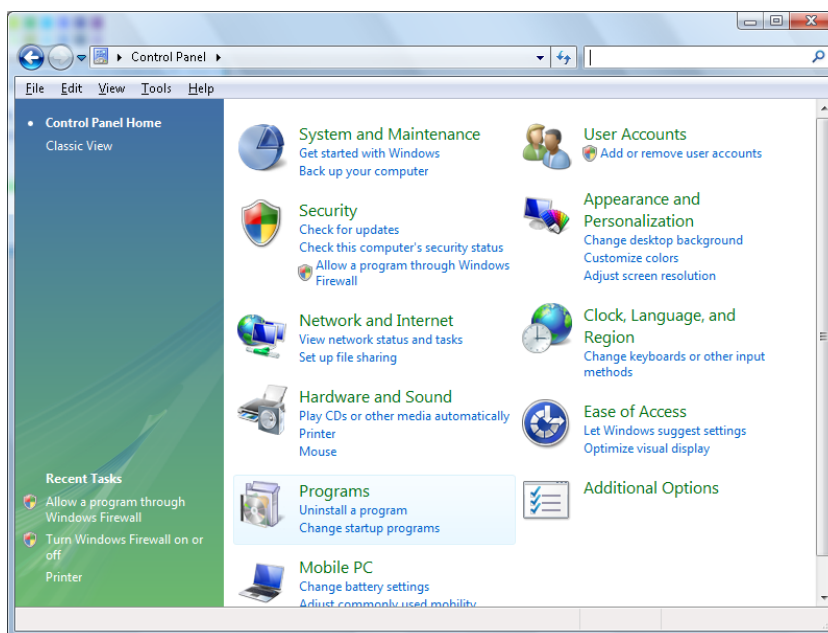
Open "Programs"
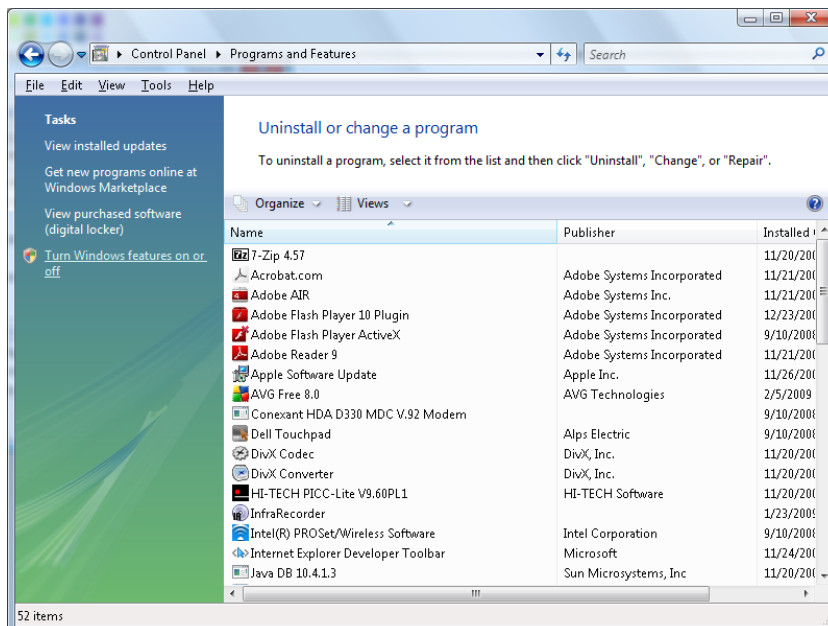
Select "Turn Windows features on or off" to open
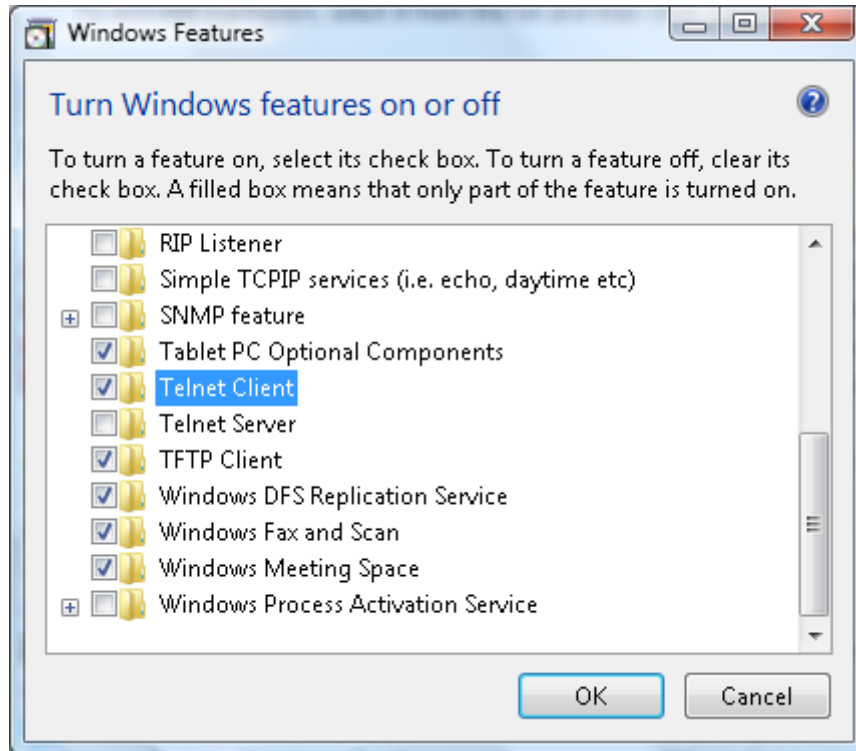
Have "Telnet Client" option checked, then press "OK" button.
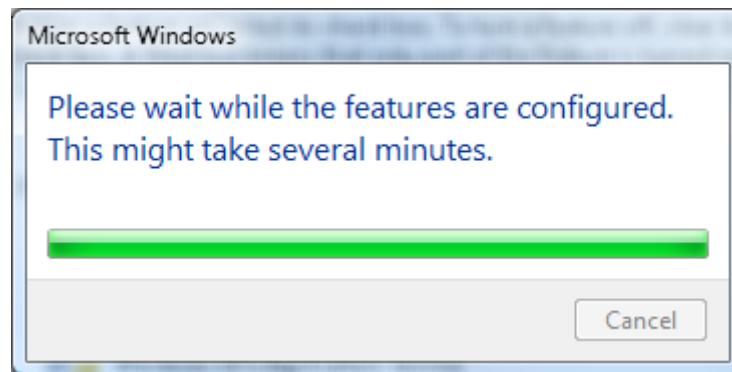
Specsheet for "RS232 by TELNET" :

1. Telnet: TCP

2. Telnet port: 8000

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

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

5. Limitation 1 for Telnet-Control: there is only one connection for Telnet-Control in one projector

   Limitation 2 for Telnet-Control: there is less than 50 bytes for successive network payload for Telnet-Control application.

   Limitation 3 for Telnet-Control: there is less than 26 bytes for one complete RS232 command for Telnet-Control.

   Limitation 4 for Telnet-Control: Minimum delay for next RS232 command must be more than 200 (ms).

   (*, In Windows XP built-in "TELNET.exe" utility, "Enter" key pressed will have "Carriage-Return" and "New-Line" code.)

6. The IP-Address setting/modification on OSD would be 'tempo-DISABLED', while RS232-by-Telnet connected running.

7. There is either/or option concerned for the RS232-by-Telnet, Crestron RoomView-Connected functions.

8. The Crestron RoomView-Connected is enabled by default. Once the RS232-by-Telnet enabled, the Crestron RoomView-Connected and IP-Address changing(re-configuration) function would be disabled silently.

9. Once the RS232-by-Telnet disconnected normally, the Crestron RoomView-Connected would be re-start in 5 seconds for control of manual re-connection in LAN.

10. Before the RS232-by-Telnet connection running, kindly please have the IP Address field to be "0.0.0.0" setting of"Crestron Control"in the Crestron web-FLASH UI to ease the bulky massive Crestron-Type packets.

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.
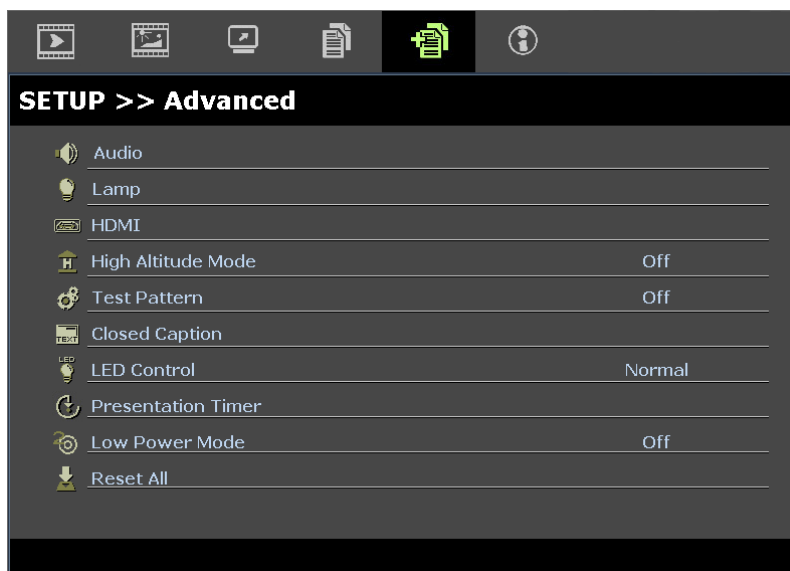
ITEM	DESCRIPTION
Audio	Press the **ENTER** button to enter the **Audio** sub menu. See *Audio* on page 34.
Lamp	Press the **ENTER** button to enter the **Lamp** sub menu. See *Lamp* on page 34.
HDMI	Press the **ENTER** button to enter the **HDMI** sub menu. See *HDMI* on page 35.
High Altitude Mode	Press 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 turn on or off the grid test pattern.
Closed Caption	Press the **ENTER** button to enter the **Closed Caption** sub menu. See *Closed Caption* on page 35.
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 36.
Low Power Mode	Press the cursor ◄► buttons to set Low Power Mode whether is on or off. When Low Power Mode set to off, it means VGA output port can output signal on power down status.
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.
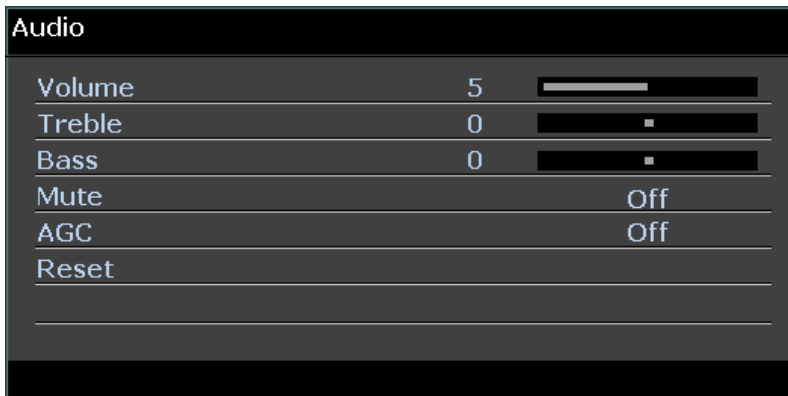
ITEM	DESCRIPTION
Volume	Press the ◄► buttons to adjust the audio Volume.
Treble	Press the ◄► buttons to adjust the audio Treble.
Bass	Press the ◄► buttons to adjust the audio Bass.
Mute	Press the ◄► buttons to turn on or off the speaker.
AGC	Press the ◄► buttons to turn on or off the AGC setting.
Reset	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.

HDMI	
HDMI Format	Auto
HDMI Amplifier Gain	3
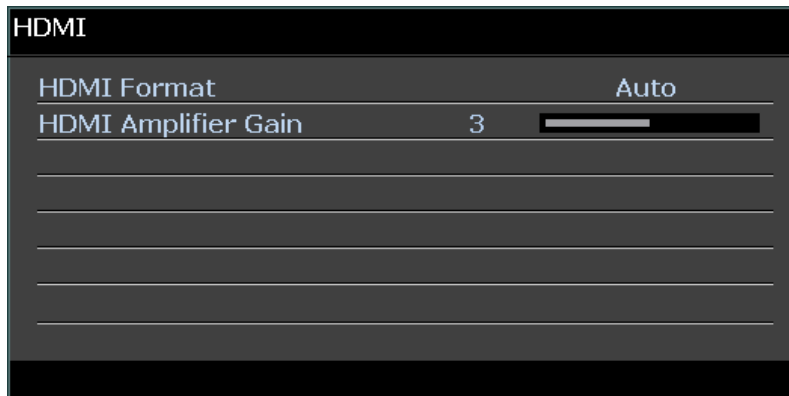
ITEM	DESCRIPTION
HDMI Format	Press the ◄► buttons to select from three HDMI display formats: Auto/ PC signal/ Video signal.
HDMI Amplifier Gain	Press the ◄► buttons to adjust HDMI Amplifier Gain.

Closed Caption

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

Closed Caption	
Closed Caption Enable	Off
Caption Version	CC1
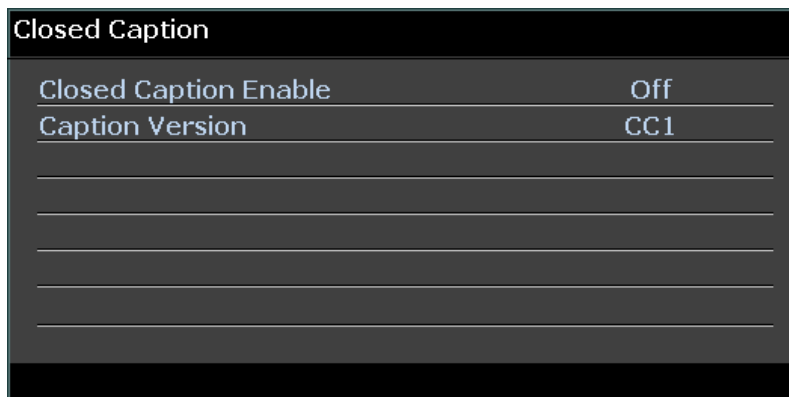
ITEM	DESCRIPTION
Closed Caption Enable	Press the ◄► buttons to turn on or off Closed Caption.
Caption Version	Press the ◄► buttons to select the Caption Version.

Presentation Timer

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

Presentation Timer	
Timer	Off
Timer Period	10
Timer Reset	

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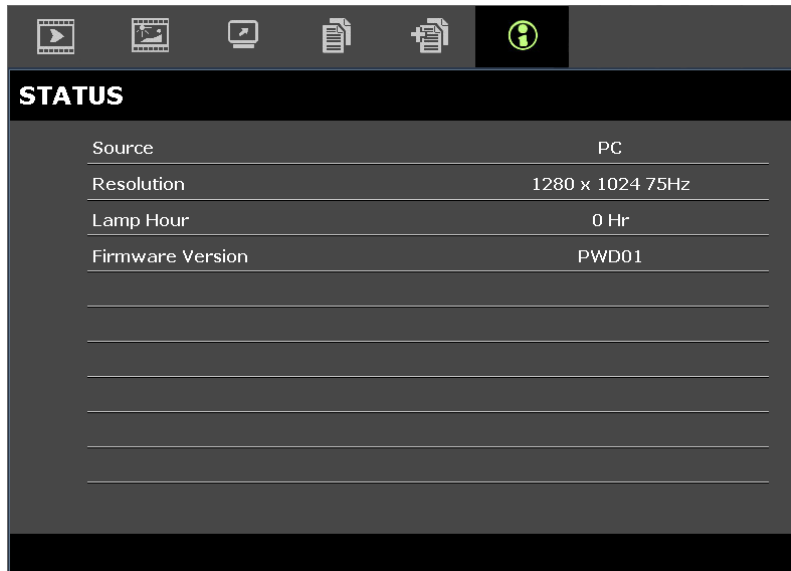
ITEM	DESCRIPTION
Source	Displays the activated input source.
Resolution	Displays the native resolution of input source.
Lamp Hour	Displays the number of hours the lamp has been in use.
Firmware Version	Displays the firmware version of the projector.

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.

⚠️ *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. Remove the single screw on the lamp compartment cover.
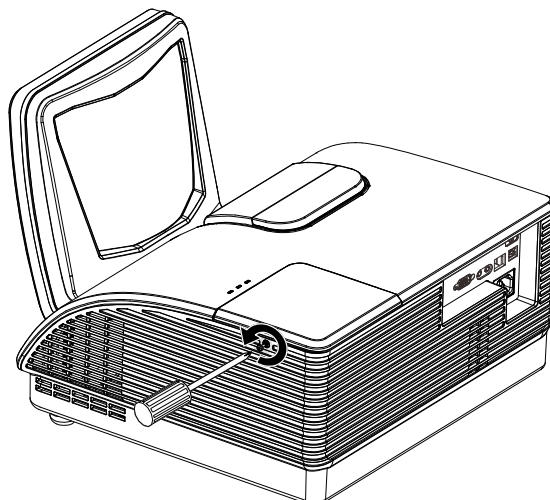
2. Remove the lamp compart-
ment cover.
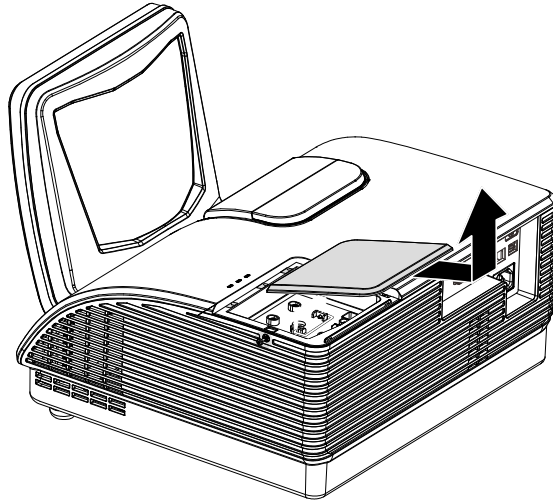
3. Remove the two screws from
the lamp module.

4. Lift the module handle up.

5. Pull firmly on the module
handle to remove the lamp
module.
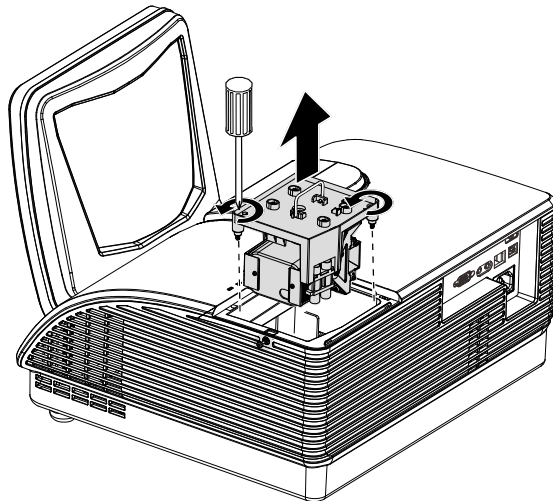
6. Reverse steps 1 to 5 to install
the new lamp module.
While installing, align the
lamp module with the
connector and ensure it is level
to avoid damage.
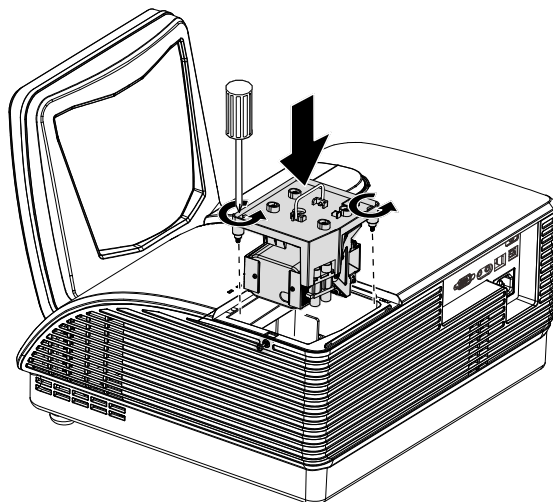
Note: The lamp module must
sit securely in place and the
lamp connector must be con-
nected properly before
tightening the screws.

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 Projector Mirror:
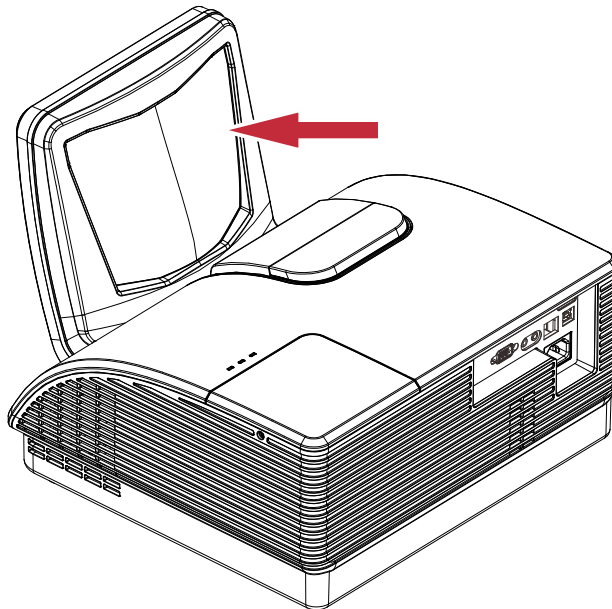
1. Remove dust with a "Bellows/Lens Blower" readily available from Camera shops to prevent scratching the mirror when subsequently wiped.

2. Gently wipe with a lens cleaning cloth or alternatively, use a lens cleaning tissue in conjunction with a small amount of lens cleaning fluid.

> *Cautions:*
>
> *1. Always turn the projector off and allow to cool for at least 30 minutes prior to cleaning.*
>
> *2. Never touch the projector mirror or Lens directly by hand.*
>
> *3. Do not use hard fibre cloths.*
>
> *4. Do not use abrasive cleaners, solvents or other harsh chemical cleaners.*

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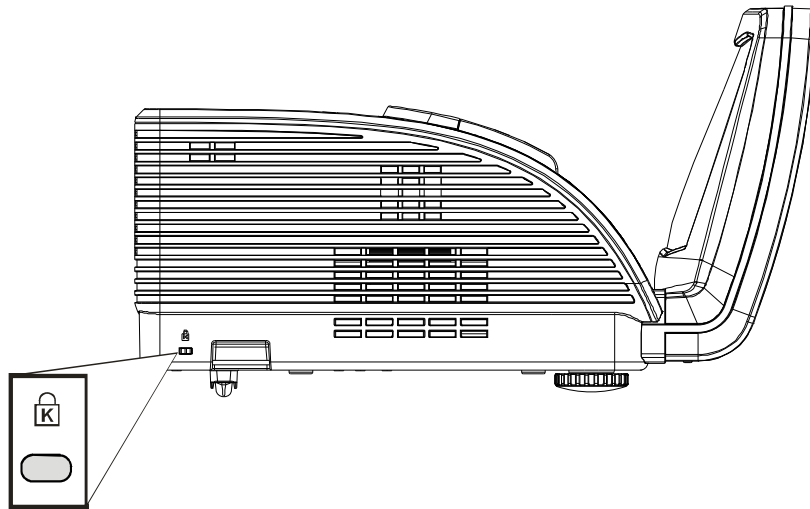
Note:
Contact your vendor for details on purchasing a suitable Kensington security cable.

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.
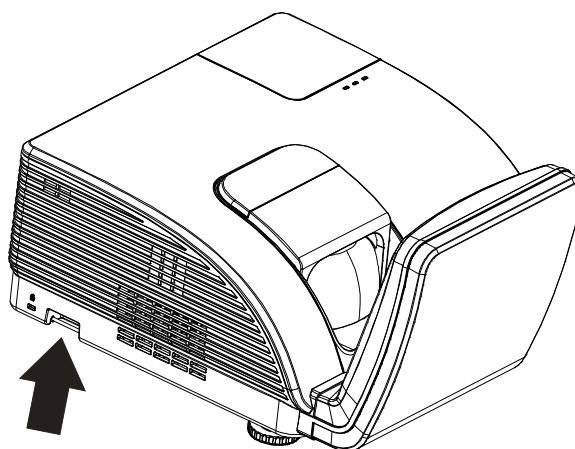
⚠️ **Caution:**
Do NOT touch the aspheric mirror.

Adjusting the Focus

Open the Focus Cover
in the direction as
shown.
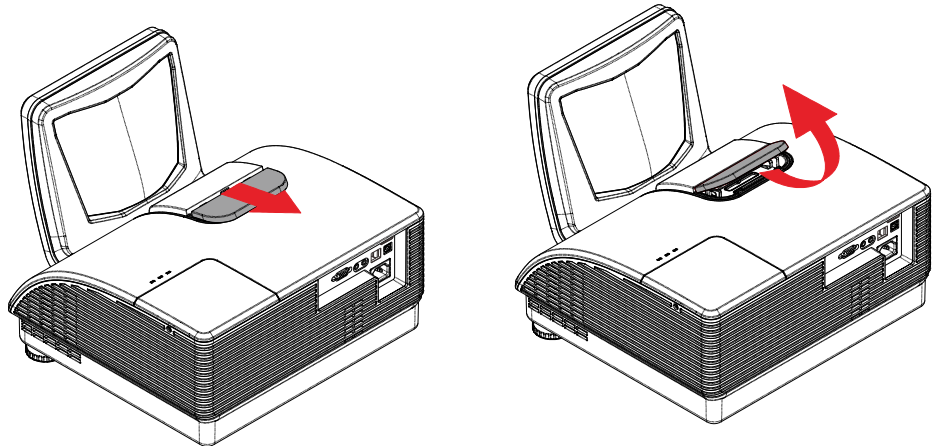
Focusing Procedure (I)

When alignment lines are clearly marked on
the focus rings the following presets are
available:

● For **88.5"** ActivBoard, adjust the focus
rings until the **white lines** align
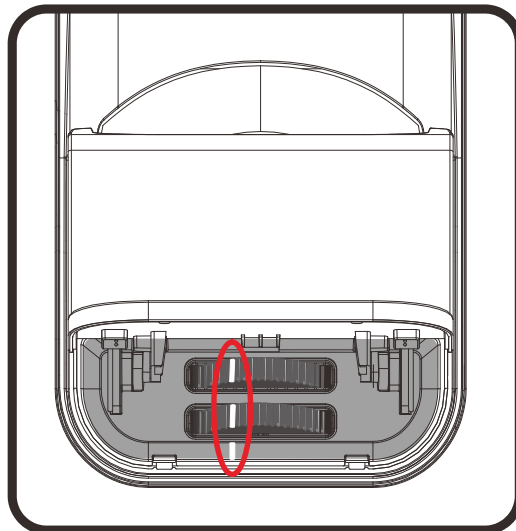
Focusing Procedure (II)

1. With the projector mounted and operator facing ActivBoard, turn the **Front Focus Ring** all the way to the left.

2. Adjust the **Rear Focus Ring** to obtain the best overall focus of the image.

3. If unable to focus the whole image, turn the **Front Focus Ring** slightly to the right.

4. Again, adjust the **Rear Focus Ring** to obtain the best overall focus of the image.

5. If still unable to focus the whole image, turn the **Front Focus Ring** slightly to the right again.

6. Repeat steps 4 and 5 until an evenly focused image is obtained .

Front Focus Ring

Rear Focus Ring
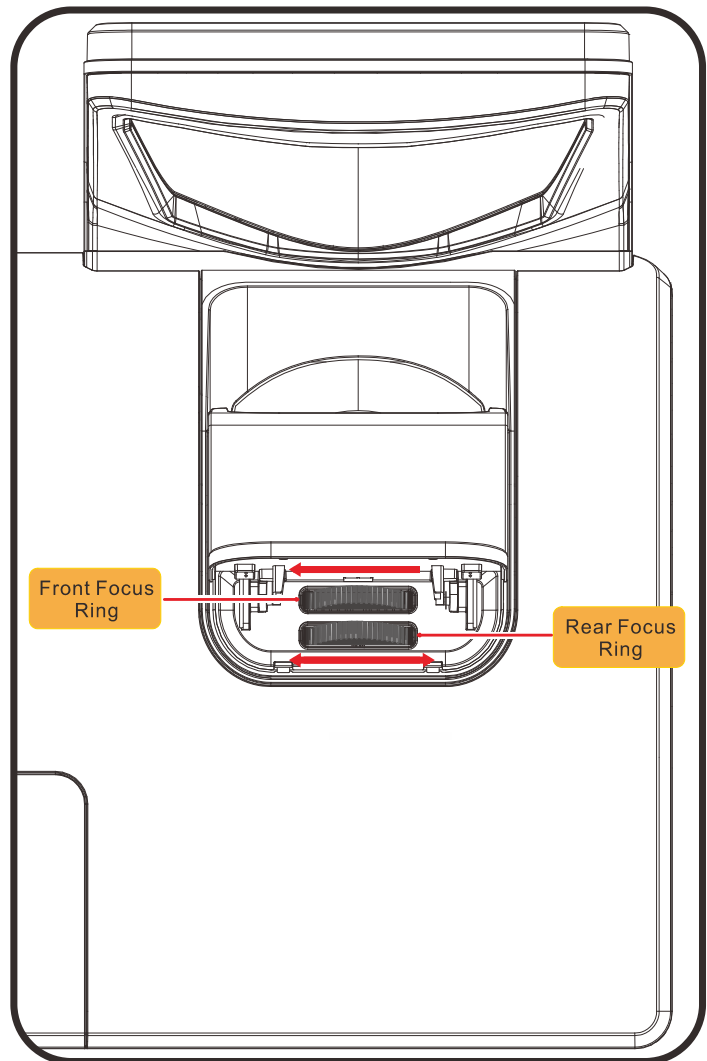
TROUBLESHOOTING

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		LAMP LED	WARNING LED
	BLUE	AMBER	RED	RED
Lamp Ready	ON	–	–	–
Start	–	flashing	–	–
Cooling	–	flashing	–	–
Over Temperature	–	–	–	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 restarting 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 **SYSTEM SETUP : Basic > Projection** menu of the OSD.

Problem: The image is streaked

1. Set the **Frequency** and **Phase** settings on the **Display** 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 Blue.
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

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

Model	D7180	H7080HD
Display type	TI DMD 0.65" 1080P	
Resolution	1080P 1920 x 1080 Native	
Projection distance	22.4 mm ~ 62.3 mm(+/-10mm)	
Projection screen size	88.5 to 99 inches	
Projection lens	Fix	
Vertical keystone correction	+/- 40 steps	
Projection methods	Front, Rear, Desktop/Ceiling (Rear, Front)	
Data compatibility	VGA, SVGA, XGA, SXGA, SXGA+, UXGA, Mac	
SDTV/EDTV/ HDTV	480i, 576i, 480p, 576p, 720p, 1080i, 1080p	
Video compatibility	—	
H-Sync	15, 30 – 91.4 kHz	
V-Sync	43 – 87 Hz	
Safety certification	FCC-B, UL, CB, CE	FCC-B, cUL, UL, CCC, China ECO
Operation temperature	5° ~ 35°C	
Dimensions	354 mm (W) x 219 mm (H) x 411 mm (D)	
AC Input	AC Universal 100 – 240, Typical @ 110VAC (100 – 240)/+-10%	
Power consumption	370W / 310W (ECO Type)	
Stand By	<1 watts	
Lamp	280W	
Audio speaker	10W mono speaker	
Input Terminals	VGA x 1	
	DVI x 1	
	Audio jack x 1	
	HDMI x 1	
Output Terminals	VGA x 1	
	Audio jack x 1	
Control Terminals	RS-232C	
	RJ45	
	USB (Service only)	
Security	Kensington lock	

Projection Distance vs. Projection Size
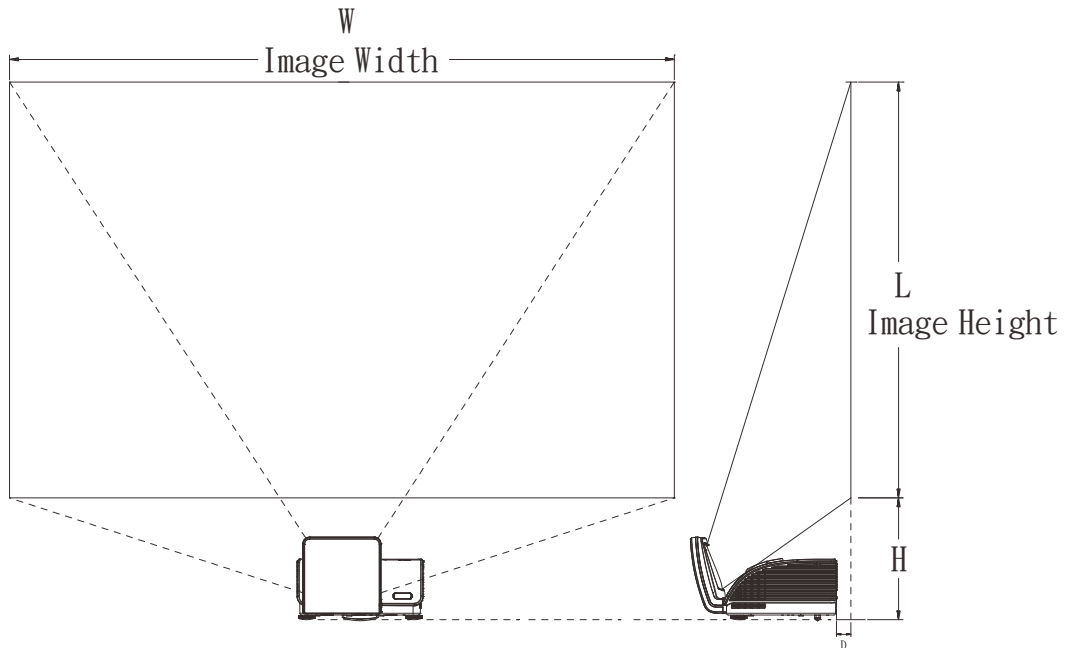
Projection Distance and Size Table

	1080P	
	16:9	
Distance (D)	62.3+/-10mm	22.4+/-10mm
Diagonal	99"	88.5"
Image Width (W)	2193mm	1961mm
Image height (L)	1233mm	1103mm
H	404.3+/-50mm	373.8+/-50mm

Timing Mode Table

The projector can display several resolutions. The following table outlines the resolutions that can be displayed by the projector.

SIGNAL	RESOLUTION	H-SYNC (KHZ)	V-SYNC (HZ)	VGA (RGBHV)	VGA (YUV /SOG)	HDMI (DIGITAL)
VESA	720 x 400	37.9	85.0	O	—	O
	640 x 480	31.5	60.0	O	—	O
	640 x 480	37.9	72.8	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	56.3	O	—	O
	800 x 600	37.9	60.3	O	—	O
	800 x 600	46.9	75.0	O	—	O
	800 x 600	48.1	72.2	O	—	O
	800 x 600	53.7	85.1	O	—	O
	1024 x 768	48.4	60.0	O	—	O
	1024 x 768	56.5	70.1	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	64.0	60.0	O	—	O
	1280 x 1024	80.0	75.0	O	—	O
	1280 x 1024	91.1	85.0	O	—	O
	1400 x 1050	65.3	60.0	O	—	O
	1440 x 900	55.9	60.0	O	—	O
	1600 x1200	75.0	60	O	—	O
	1920 x1080	67.2	60	O	—	O
Apple Macintosh	640 x 480	35.0	66.7	O	—	O
	832 x 624	49.7	74.5	O	—	O
	1024 x 768	60.2	74.9	O	—	O
	1152 x 870	68.7	75.1	O	—	O
SDTV	480i	15.734	60.0	—	O	O
	576i	15.625	50.0	—	O	O
EDTV	576p	31.3	50.0	—	O	O
	480p	31.5	60.0	—	O	O

SIGNAL	RESOLUTION	H-SYNC (KHZ)	V-SYNC (HZ)	VGA (RGBHV)	VGA (YUV /SOG)	HDMI (DIGITAL)
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

The native resolution of the panel is1920 x 1080 Resolution other than native resolution may display with uneven size of text or lines.

Projector Dimensions (mm)

411.00

319.00

354.00

219.00

157.00
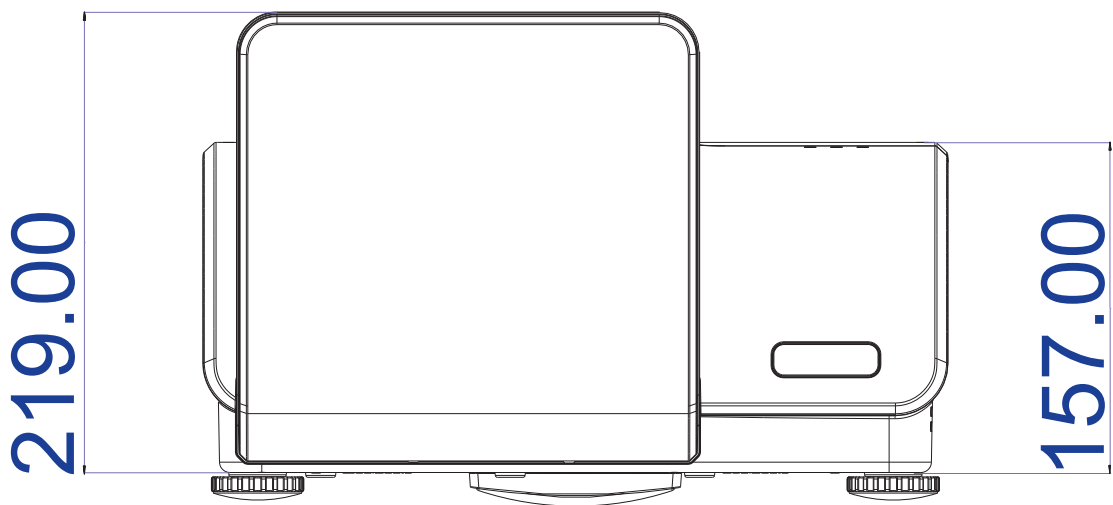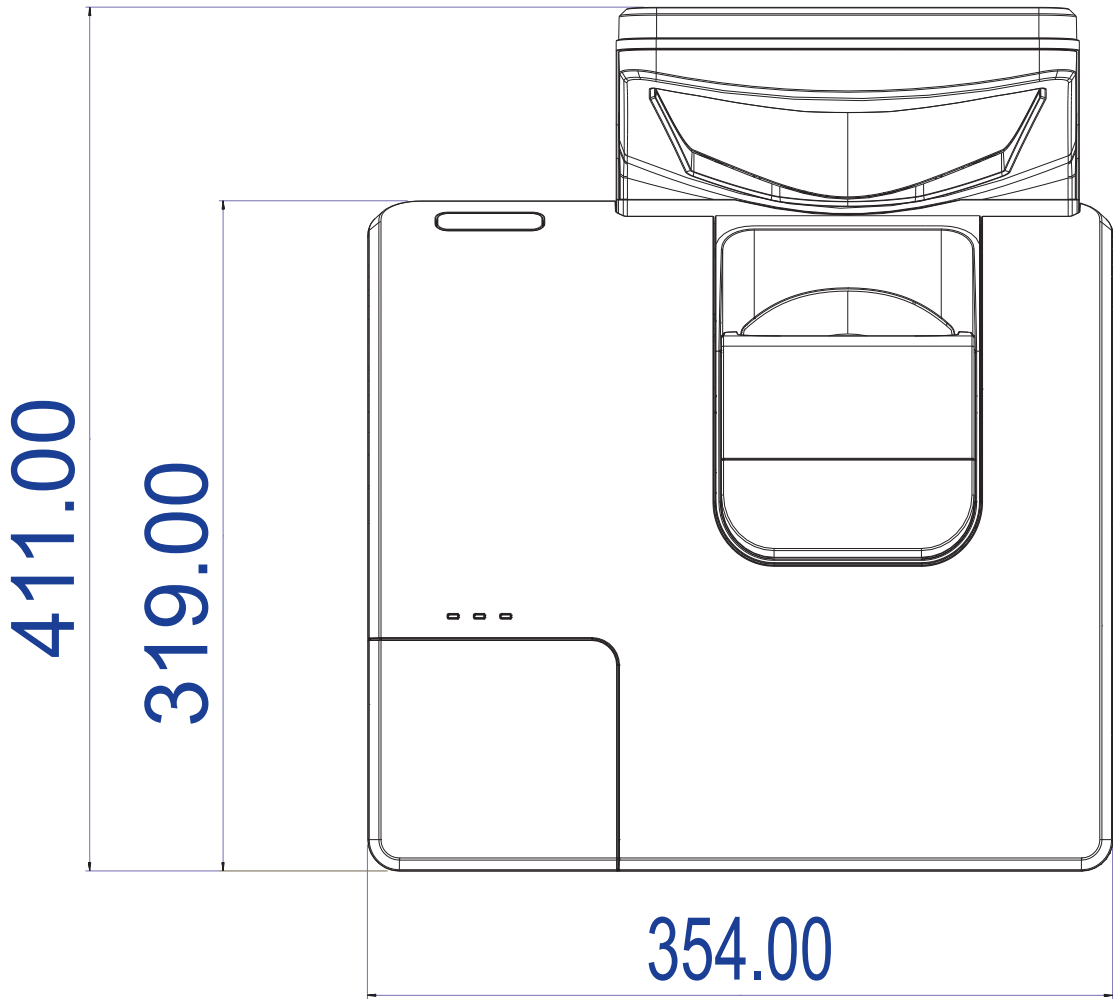
REGULATORY COMPLIANCE

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, CB, CE

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

Command Group 01

ASCII	HEX	Function	Description	Return Value
VXXS0103n	56h Xh Xh 53h 30h 31h 30h 33h nh 0Dh	Set Color	n=0~100	P/F
VXXG0104	56h Xh Xh 47h 30h 31h 30h 34h 0Dh	Get Tint	n=0~100	Pn/F
VXXS0104n	56h Xh Xh 53h 30h 31h 30h 34h nh 0Dh	Set Tint	n=0~100	P/F
VXXG0105	56h Xh Xh 47h 30h 31h 30h 35h 0Dh	Get Sharpness	0~31	Pn/F
VXXS0105n	56h Xh Xh 53h 30h 31h 30h 35h nh 0Dh	Set Sharpness	0~31	P/F
VXXG0106	56h Xh Xh 47h 30h 31h 30h 36h 0Dh	Get Color Temperature	0:Warm 1:Normal 2:Cool 3:Cooler 4:High Cool 5:Lamp Native	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 5:Lamp Native	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 6:2.8	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 6:2.8	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
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=0~16	Pn/F
VXXS0306n	56h Xh Xh 53h 30h 33h 30h 36h nh 0Dh	Treble	n=0~16	P/F
VXXG0307	56h Xh Xh 47h 30h 33h 30h 37h 0Dh	Bass	n=0~16	Pn/F
VXXS0307n	56h Xh Xh 53h 30h 33h 30h 37h nh 0Dh	Bass	n=0~16	P/F
VXXG0308	56h Xh Xh 47h 30h 33h 30h 38h 0Dh	Projection Mode	0:Front 1:Rear 2: Ceiling 3: Rear+Ceiling	Pn/F
VXXS0308n	56h Xh Xh 53h 30h 33h 30h 38h nh 0Dh	Projection Mode	0:Front 1:Rear 2: Ceiling 3: Rear+Ceiling	P/F
VXXG0309	56h Xh Xh 47h 30h 33h 30h 39h 0Dh	Set vertical 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

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