



DW3321 DX3351 Series

User Manual

用戶手冊

用戶手冊

Manual del usuario

Manuel de l'utilisateur

Benutzerhandbuch

사용자 설명서

Руководство пользователя

Gebruikershandleiding

Instrukcja obsługi

Uživatelská příručka

Εγχειρίδιο χρήσης

Kullanım Kılavuzu

Manuale d'uso

Handbok

Brugervejledning

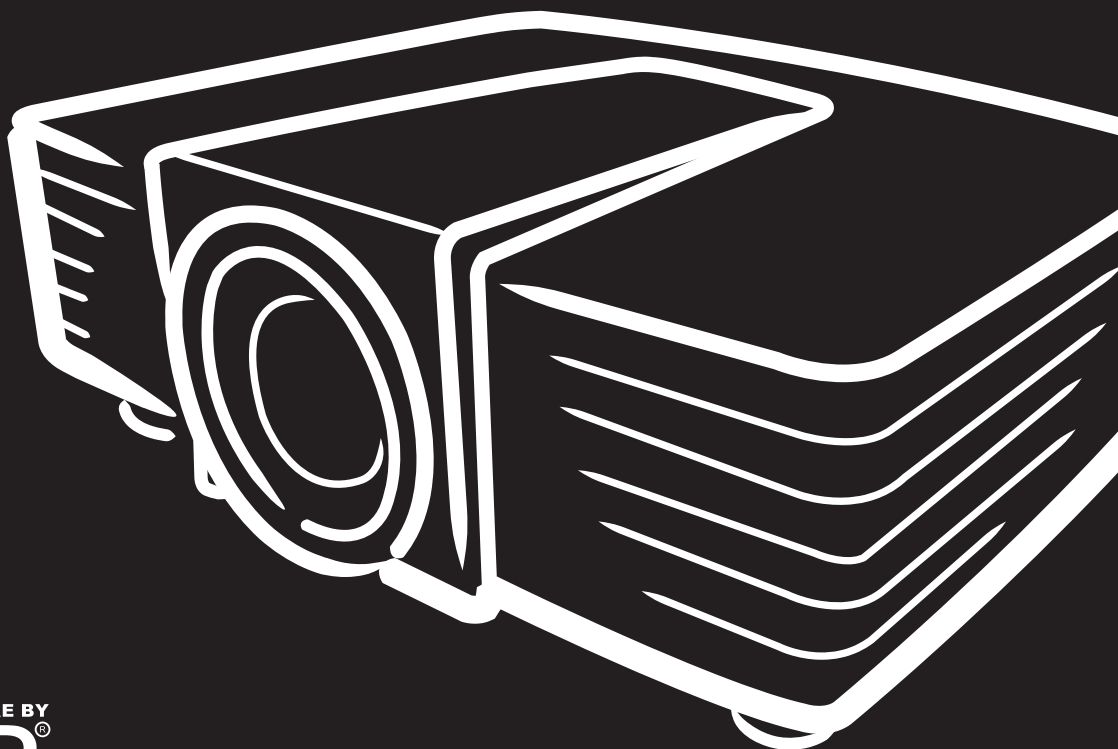
Brukerveiledning

Kyttöhje

Felhasználói kézikönyv

مدخستسما لیلد

Manual do Usuário



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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:

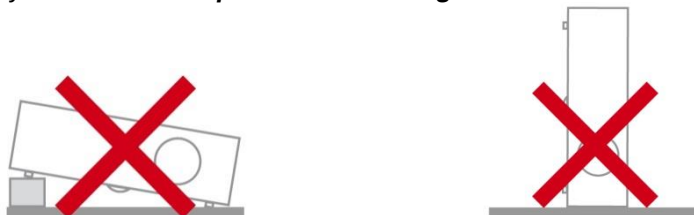
“Push the **Menu** button on the remote control to open the **Main** menu.”

General Safety Information

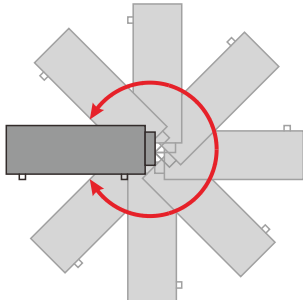
- Do not open the unit case. Aside from the projection lamp, there are no user-serviceable parts in the unit. For servicing, contact qualified service personnel.
- Follow all warnings and cautions in this manual and on the unit case.
- The projection lamp is extremely bright by design. To avoid damage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

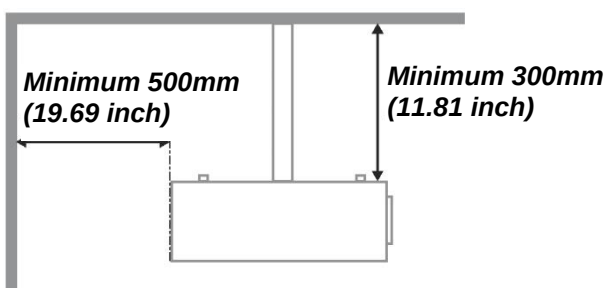
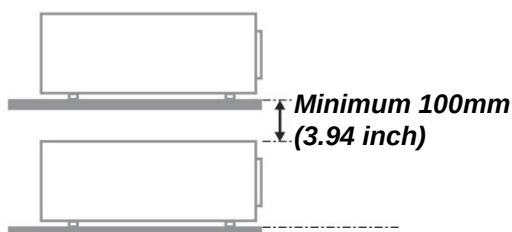
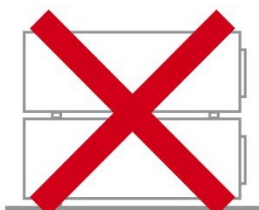
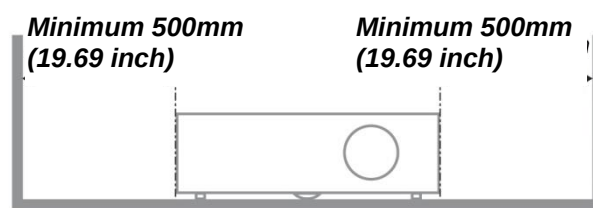
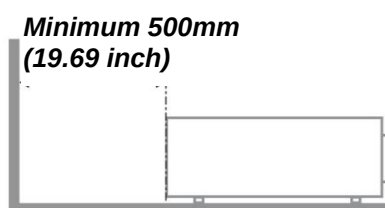
- **Do not tilt the projector to the left or right**, otherwise lamp life could decrease dramatically, and may lead to other **unpredictable damages**.



- **There is no limit on the tilt angle upward or downward.**



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



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

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 (>1 meter) 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 63 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 66.
- 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 83.

Important Recycle Instructions:



Lamp(s) inside this product contain mercury. This product may contain other electronic waste that can be hazardous if not disposed of properly. Recycle or dispose in accordance with local, state, or federal Laws. For more information, contact the Electronic Industries Alliance at WWW.EIAE.ORG. 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.*
- *Flexible setup allows for front, rear projections.*
- *Line-of-vision projections remain square, with advanced keystone correction for angled projections.*
- *Input source automatically detected.*
- *High brightness for projection in just about any environment.*
- *Supports resolutions up to WUXGA for clear and crisp images.*
- *DLP® and BrilliantColor™ technologies from Texas Instruments.*
- *Centered lens for easy installation.*
- *Horizontal and vertical lens shift.*
- *MHL device compatibility for streaming of video and audio content from a compatible mobile device.*
- *Built-in speaker with multiple audio-in and audio-out ports.*
- *Network ready for integration and system administration via RJ45.*
- *Sealed engine to minimizing the impact of dust and smoke.*
- *Top sided lamp cover for simple lamp removal and insertion.*
- *Anti-theft security features include: Kensington security slot, security bar.*

About this Manual

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

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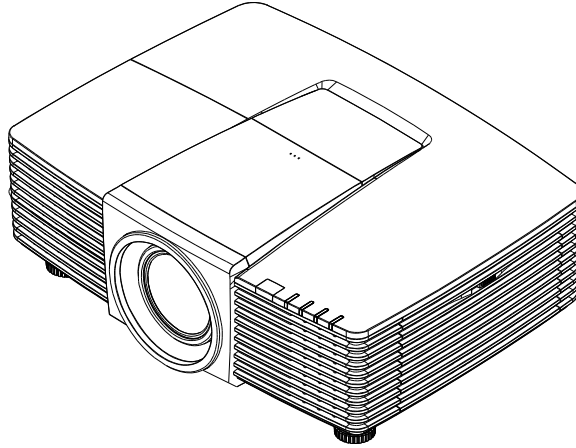
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GETTING STARTED

Packing Checklist

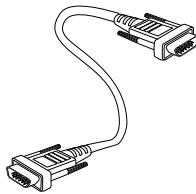
Carefully unpack the projector and check that the following items are included:



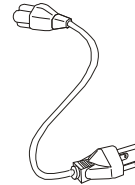
Projector



*Remote Control
(Batteries Included)*



VGA Cable



Power Cord



*CD-ROM
(This User's Manual)*



Warranty Card



Quick Start Card

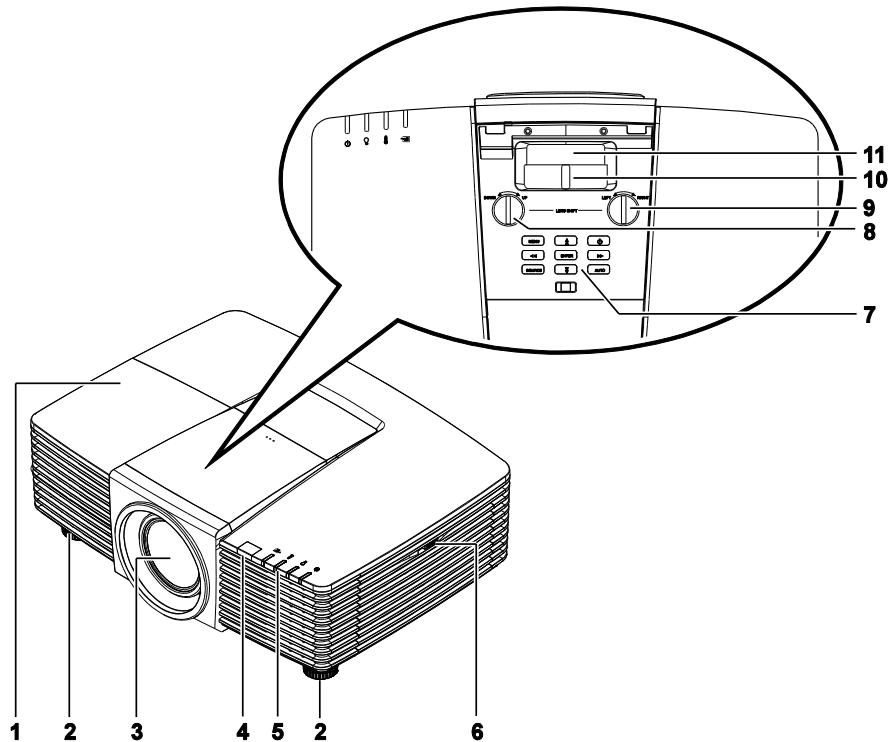
Contact your dealer immediately if any items are missing, appear damaged, or if the unit does not work. It is recommend that you keep the original packing material should you ever need to return the equipment for warranty service.



Caution:
Avoid using the projector in dusty environments.

Views of Projector Parts

Front-right View

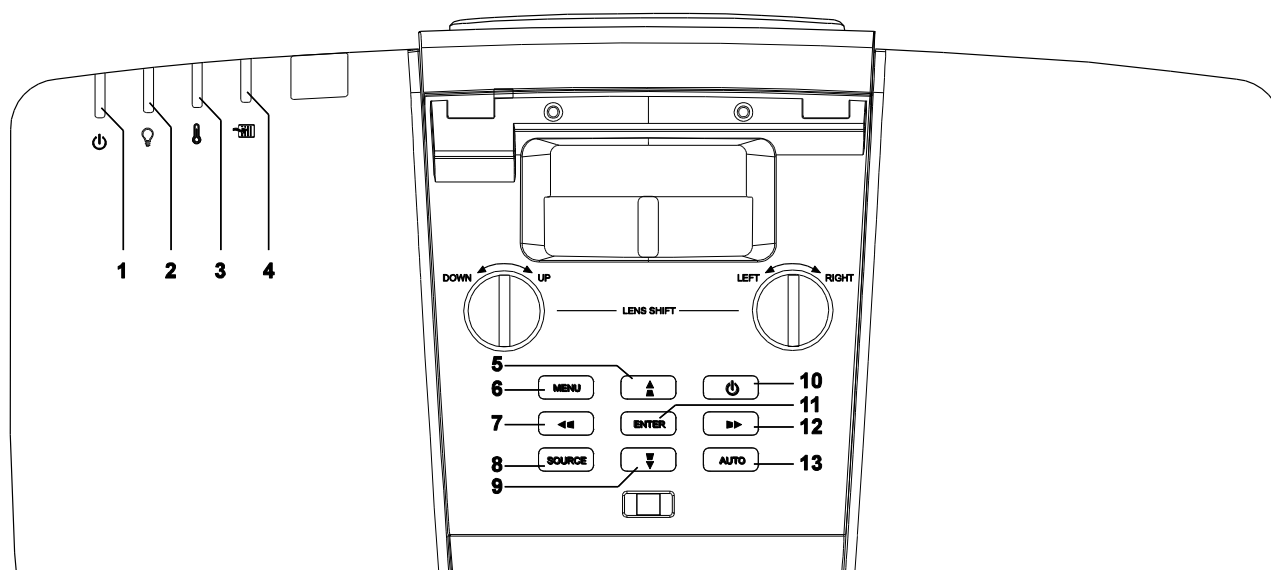


ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Lamp Cover	Remove cover to replace lamp.	63
2.	Tilt Adjuster	Rotate adjuster lever to adjust angle position.	14
3.	Lens	Projection Lens.	
4.	IR Receiver	Receives IR signal from remote control.	7
5.	LEDs	Displays the projector status.	3
6.	Vent	Cool air intake.	67
7.	Function Keys	On-Screen Display (OSD) buttons.	3
8.	Vertical Lens Shift	Adjusts the image position vertically.	16
9.	Horizontal Lens Shift	Adjusts the image position horizontally.	17
10.	Zoom Ring	Enlarges the projected image.	18
11.	Focus Ring	Focuses the projected image.	18



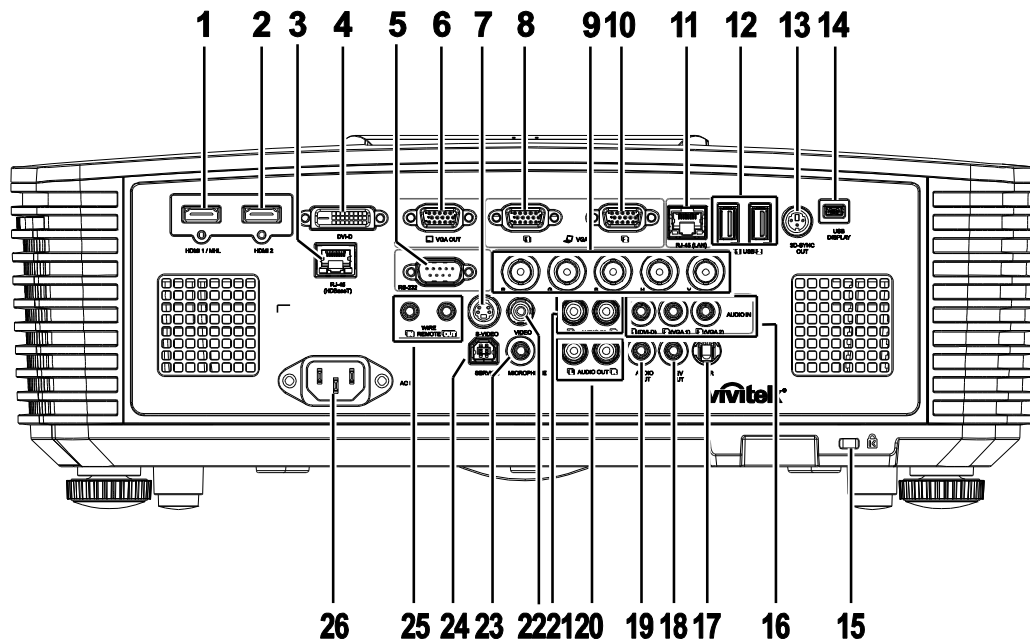
Important:

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.	Power LED	Display the power on/off sequence status.	72
2.	Lamp LED	Display the lamp status.	72
3.	Temp LED	Display the thermal status.	72
4.	Filter LED	Display the filter replacing warning message.	72
5.	▲ (Up Cursor) / ▼	Navigates and changes settings in the OSD. Quick Menu – For Vertical Keystone.	20
6.	MENU	Opens and exits OSD menus.	20
7.	◀ (Left Cursor) / ▶	Navigates and changes settings in the OSD. Quick Menu – For Horizontal Keystone.	20
8.	SOURCE	Enter the Source menu.	
9.	▼ (Down Cursor) / ▲	Navigates and changes settings in the OSD. Quick Menu – For Vertical Keystone.	20
10.	Power	Turn the projector on or off.	12
11.	ENTER	Enter or confirm highlighted OSD menu item.	20
12.	▶ (Right Cursor) / ◀	Navigates and changes settings in the OSD. Quick Menu – For Horizontal Keystone.	20
13.	AUTO	Optimizes image size, position, and resolution.	

Rear view



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	HDMI 1 /MHL	Connect the HDMI/MHL cable from an HDMI/MHL device. Note: Set the Source to HDMI 1/MHL also can be charging connected MHL compatible smart device as long as the projector Power On.	
2.	HDMI 2	Connect the HDMI cable from an HDMI device.	
3.	RJ45 (HDBaseT) (Available in DW3321)	Connect an RJ45 Cat5e/Cat6 cable for HDBaseT signal received.	
4.	DVI-D	Connect the DVI CABLE to a display.	
5.	RS-232	Connects RS-232 serial port cable for remote control.	
6.	VGA OUT	Connect an RGB cable to a display (Pass through by VGA1 only).	
7.	S-VIDEO	Connect a S-VIDEO cable from a video device.	
8.	VGA 1	Connect an RGB cable from a computer or a video enabled device.	
9.	BNC	Connect a BNC cable from a computer.	
10.	VGA 2	Connect an RGB cable from a computer or a video enabled device.	
11.	RJ45 (LAN)	Connect a LAN cable from Ethernet.	
12.	USB	Connect a USB cable for USB host. Note: Support 5V/1.0A for each port output as long as the projector Power On.	
13.	3D-SYNC OUT	Connect 3D IR glasses receiver unit.	
14.	USB DISPLAY	Connect your projector to a PC through a USB cable.	
15.	Kensington Security Slot	Secures to permanent object with a Kensington Lock system.	70

ITEM	LABEL	DESCRIPTION	SEE PAGE:
16.	AUDIO IN	Connect an AUDIO cable from the input device.	
17.	IR	Receive IR signal from remote control.	
18.	12V OUT	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).	
19.	AUDIO OUT	Connect an AUDIO cable for audio loop through.	
20.	AUDIO OUT L/R	Connect an AUDIO cable for audio loop through.	
21.	AUDIO IN L/R	Connect the audio cables from an audio device for VIDEO or S-VIDEO audio input.	
22.	VIDEO	Connect the composite cable from a video device.	
23.	MICROPHONE	Connect the microphone input device.	
24.	SERVICE	For service personnel only.	
25.	WIRE REMOTE	Connect the wire remote from remote control to the projector for wire remote control. Connect "WIRE REMOTE OUT" to another projector (same model) "WIRE REMOTE IN" for serial control.	
26.	AC IN	Connect the POWER cable.	

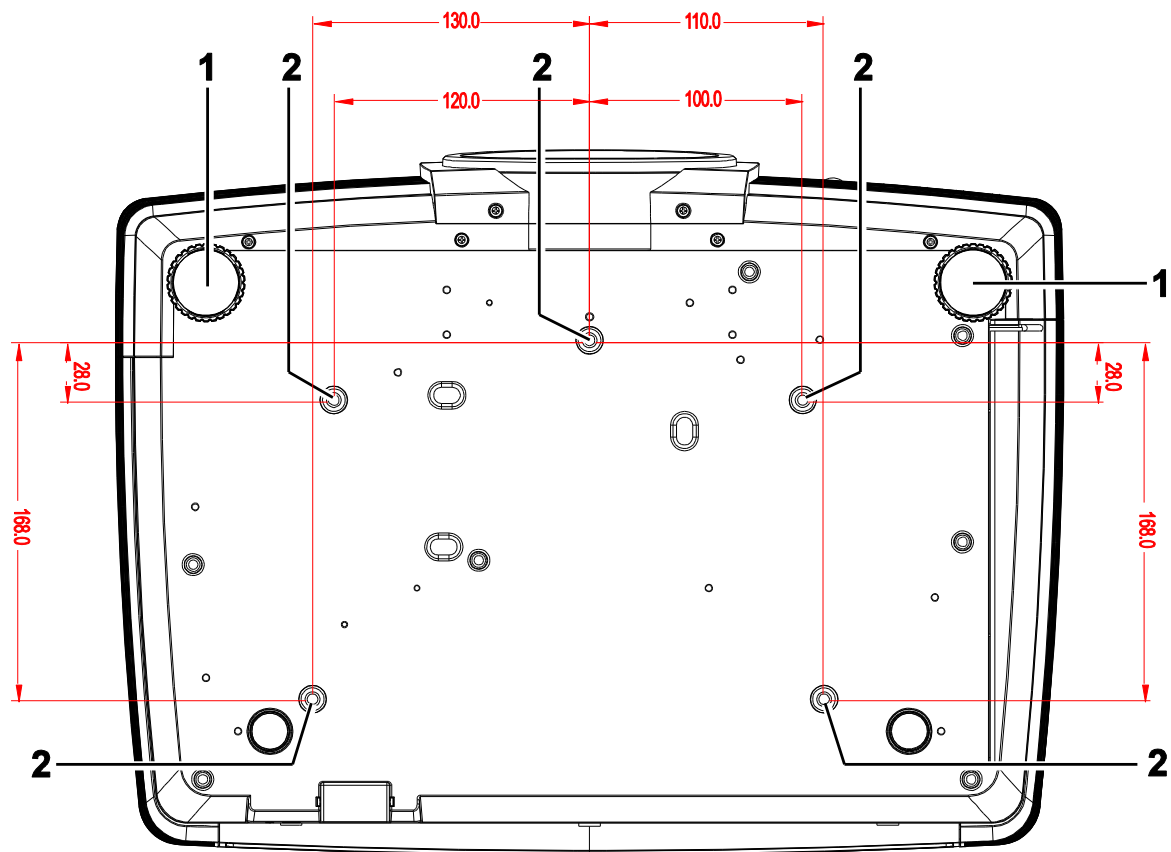
Note:

- 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.


Warning:

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

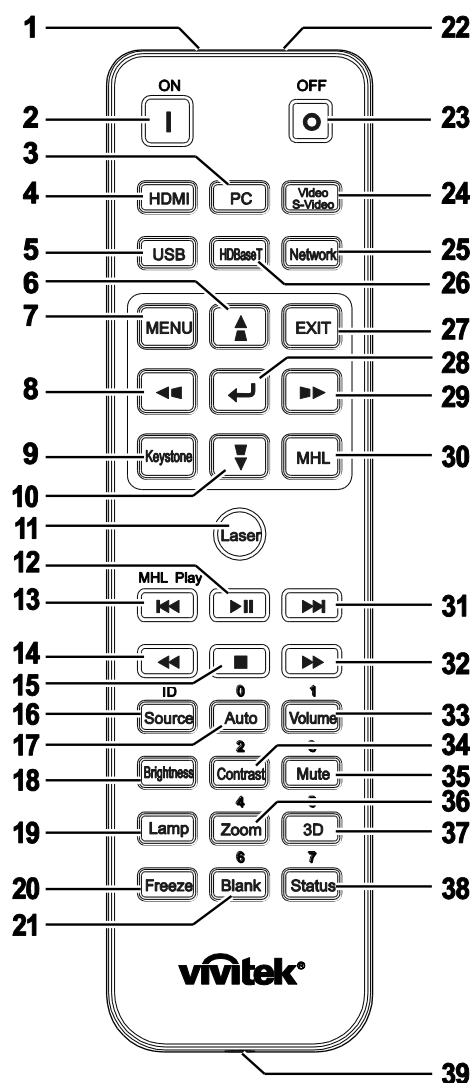
Bottom view



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Tilt Adjustor	Rotate adjuster lever to adjust angle position.	14
2.	Ceiling Mount 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.

Note:

Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007



Caution:

Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	IR Transmitter	Transmits signals to projector.	
2.	Power On	Turns the projector on.	12
3.	PC	Displays the VGA1/VGA2/PC source selection (toggle).	
4.	HDMI	Displays the HDMI1/HDMI 2/DVI source selection (toggle).	
5.	USB	Displays the USB source selection.	
6.	▲ (Up Cursor) / 	Navigates and changes settings in the OSD. Quick Menu – For Vertical Keystone.	20
7.	MENU	Opens the OSD.	20
8.	◀ (Left Cursor) / 	Navigates and changes settings in the OSD. Quick Menu – For Horizontal Keystone.	20
9.	Keystone	Opens the Keystone menu.	
10.	▼ (Down Cursor) / 	Navigates and changes settings in the OSD. Quick Menu – For Vertical Keystone.	20
11.	Laser	Press to operate the on-screen pointer. DO NOT POINT IN EYES.	
12.	Play/Pause	Play or pause video/music for MHL.	
13.	Reverse	Reverse in set increments for MHL.	
14.	Prev	Play the previous item on the programming list for MHL.	
15.	Stop	Stop video/music playing for MHL.	
16.	Source/ID	Alternate input source. Combo key function for Remote Control customer code settings (ID + Number).	20
17.	Auto/0	Auto adjustment for frequency, phase, and position. Number for Remote ID setting used.	20
18.	Brightness	Displays the brightness setting bar.	
19.	Lamp	Displays the lamp selections.	
20.	Freeze	Freezes/unfreezes the on-screen picture.	
21.	Blank/6	Makes the screen blank. Number for Remote ID setting used.	
22.	Laser	Use as on-screen pointer. DO NOT POINT IN EYES.	
23.	Power Off	Turns the projector off.	12
24.	Video/S-Video	Displays the VIDEO/S-VIDEO source selection.	
25.	Network	Displays the Network source selection.	
26.	HDBaseT	Displays the HDBaseT source selection.	
27.	EXIT	Return to last OSD page.	
28.	ENTER	Enters and confirms settings in the OSD.	20
29.	▶ (Right Cursor) / 	Navigates and changes settings in the OSD. Quick Menu – For Horizontal Keystone.	20
30.	MHL	Enable the Mobile High-Definition Link technology feature for smart devices.	
31.	Forward	Forward in set increments for MHL.	
32.	Next	Play the following item on the programming list for MHL.	

ITEM	LABEL	DESCRIPTION	SEE PAGE:
33.	Volume/1	Displays the Volume setting bar. Number for Remote ID setting used.	
34.	Contrast/2	Displays the Contrast settings bar. Number for Remote ID setting used.	
35.	Mute/3	Mutes the built-in speaker. Number for Remote ID setting used.	
36.	Zoom/4	Displays the digital zoom settings bar. Number for Remote ID setting used.	18
37.	3D/5	Enable 3D feature. Number for Remote ID setting used.	
38.	Status/7	Opens the OSD Status menu (the menu only opens when an input device is detected). Number for Remote ID setting used.	
39.	Wired Jack	Connect wire remote to the projector.	

Note:

Remote Combo Key Settings:

ID+0: Reset Remote Control customer code to default settings.

ID+1: Set Remote Control customer code to "1".

~

ID+7: Set Remote Control customer code to "7".

Projector also need setting ID for unique control. Projector ID settings see page 37.

Note:

*When the projector is under **MHL** mode, The keypad on projector should be with the same definition of the key on remote control.*

*When **MHL** function:*

***MENU** for App settings, ▲ **Up**, ▼ **Down**, ◀ **Left** and ▶ **Right** are used as directional arrows, also included **ENTER** and **EXIT**.*

Controlling your smart device with the remote control:

*When the projector projects the contents from your **MHL** compatible smart device, you can use the remote control to control your smart device.*

*To enter the **MHL** mode, the following buttons are available for controlling your smart device, Arrow keys (▲ **Up**, ▼ **Down**, ◀ **Left**, ▶ **Right**), **MENU**, **EXIT**, MHL control buttons.*

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.

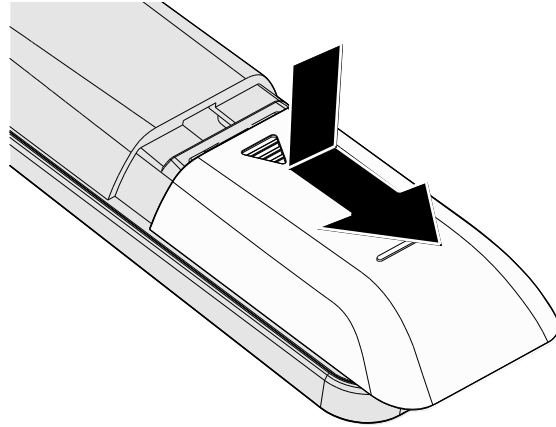
Projector and Remote Control Buttons

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.

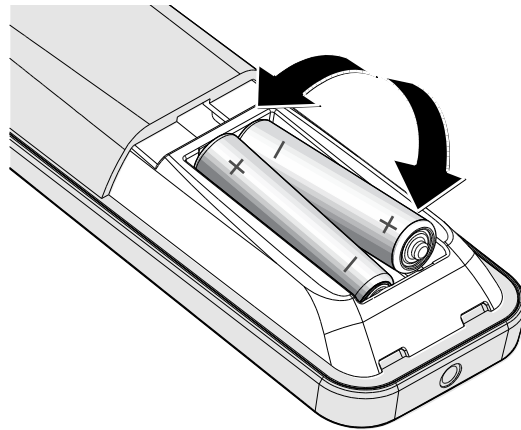
SETUP AND OPERATION

Inserting the Remote Control Batteries

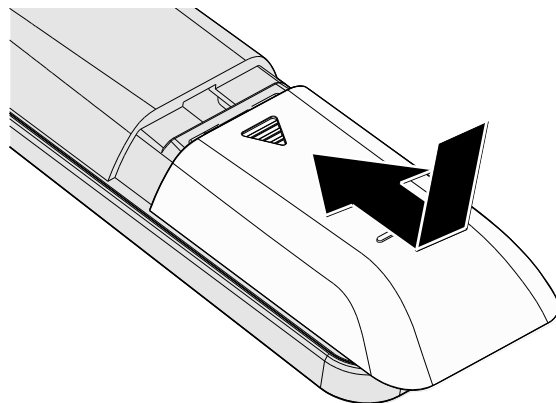
1. Remove the battery compartment cover by sliding the cover in the direction of the arrow.



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



3. Replace the cover.

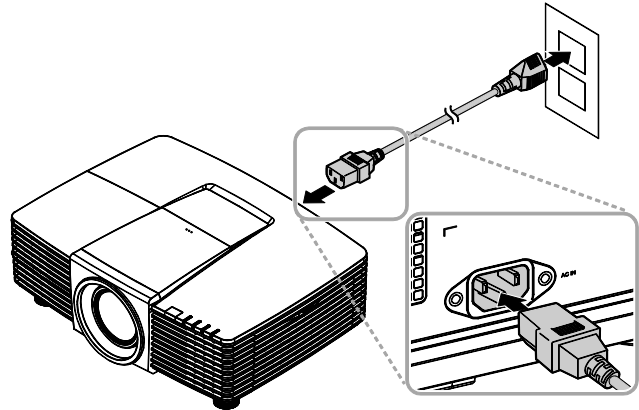


Caution:

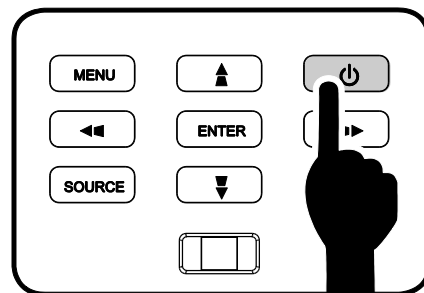
1. Only use AAA batteries (Alkaline batteries are recommended).
2. Dispose of used batteries according to local ordinance regulations.
3. Remove the batteries when not using the projector for prolonged periods.

Starting and Shutting down the Projector

1. Securely connect the power cord and signal cable. When connected, the power led will flash green to solid green.



2. Turn on the lamp by pressing “” button on the top of the projector or “” 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. (See [Setting the OSD Language](#) on page 21)



3. 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.)

HDMI 1 / MHL
HDMI 2
DVI
VGA 1
VGA 2
BNC
Video
S-Video
Network Display
USB Reader
USB Display
HDBaseT

- HDMI 1 / MHL: High-Definition Multimedia Interface and Mobile High-Definition Link compatible
- HDMI 2: High-Definition Multimedia Interface compatible
- DVI: DVI
- VGA 1 / 2: Analog RGB
DVD input YCbCr/ YPbPr, or HDTV input YPbPr via D-sub connector
- BNC: Analog RGB
- VIDEO: Tradition composite video
- S-Video: Super video (Y/C separated)
- Network Display: Network Display Source
- USB Reader: USB reader Source
- USB Display: USB Display from PC USB connection
- HDBaseT: Digital Video through the HDBaseT transmitter (Available in DH3321)

Note: Using a single HDBaseT CAT5e cable, the projector supports an HDBaseT connection distances to 100m/328ft.

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



Caution:

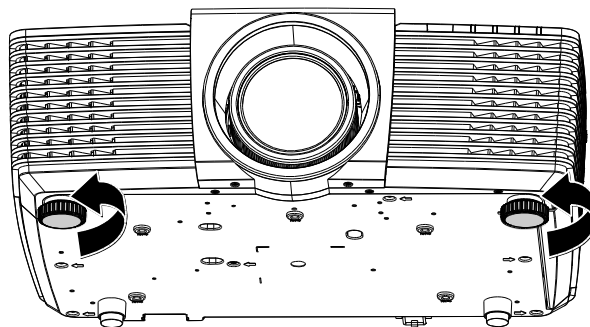
Do not unplug the power cord until the **POWER LED** stops flashing – indicating the projector has cooled down.

Adjusting the Projector Level

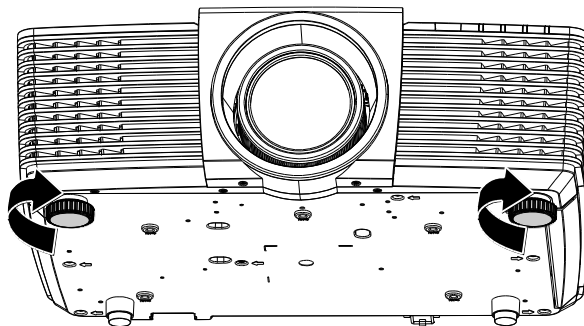
Take note of the following when setting up the projector:

- *The projector table or stand should be level and sturdy.*
- *Position the projector so that it is perpendicular to the screen.*
- *Ensure the cables are in a safe location. You could trip over them.*

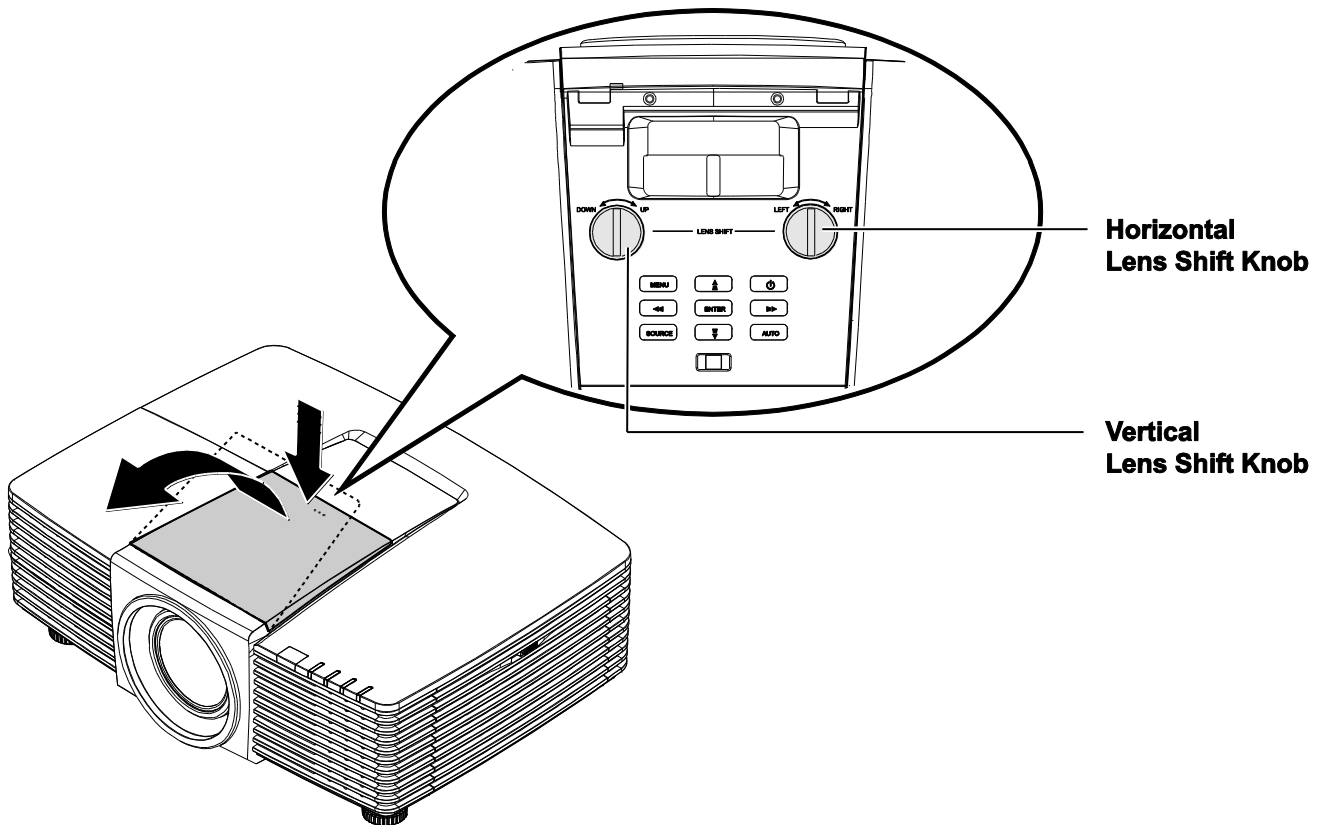
- 1.** To raise the level of the projector, twist the adjusters counter clockwise.



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



Adjusting Projected Image Position Using Lens Shift



The Lens 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.

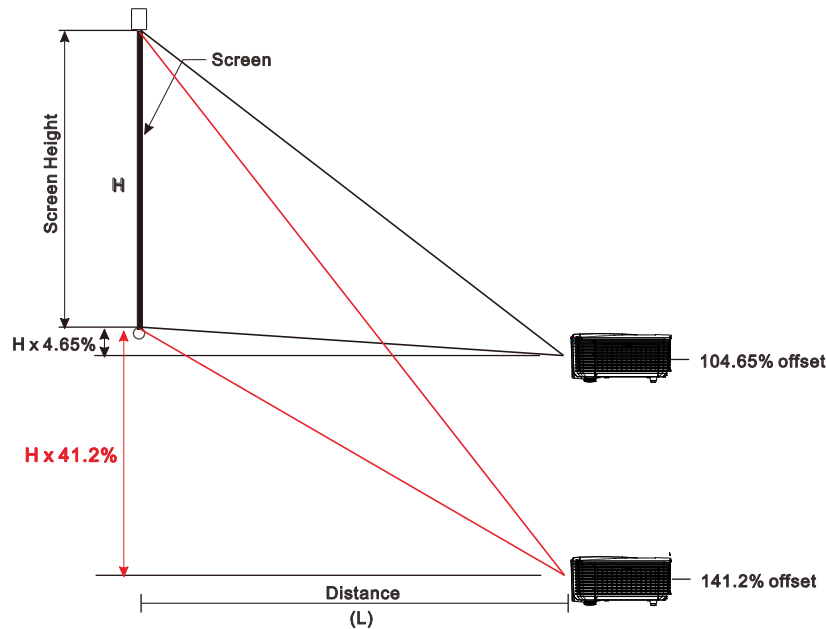
Note:

Do not rotate lens shift knob further under click sound and lightly press the knob to rotate back.

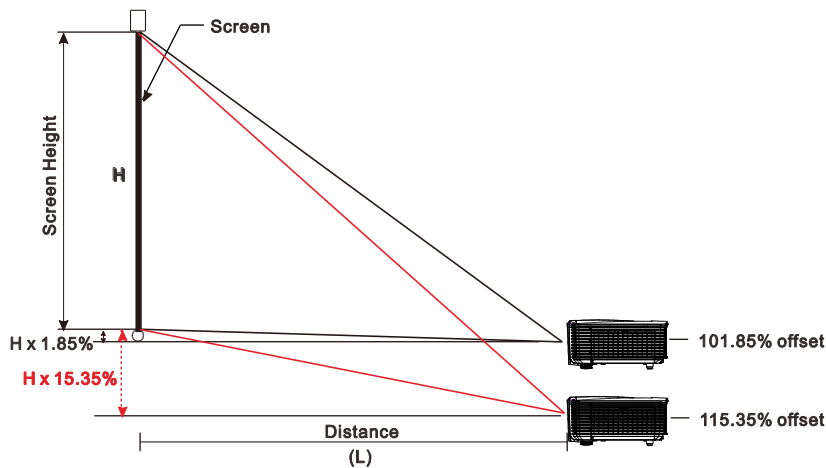
Adjusting the vertical image position

The vertical image height can be adjusted between 141.2% and 104.65% for WXGA, 115.35% and 101.85% for XGA of 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.

WXGA

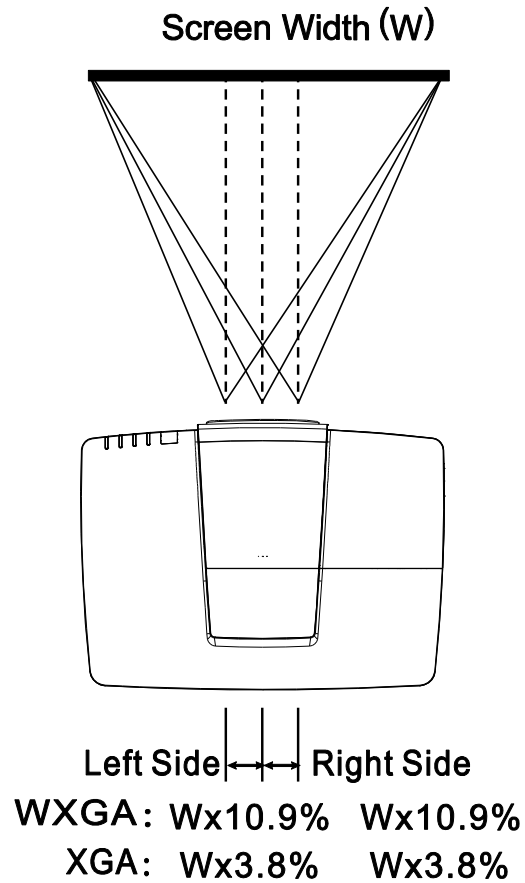


XGA



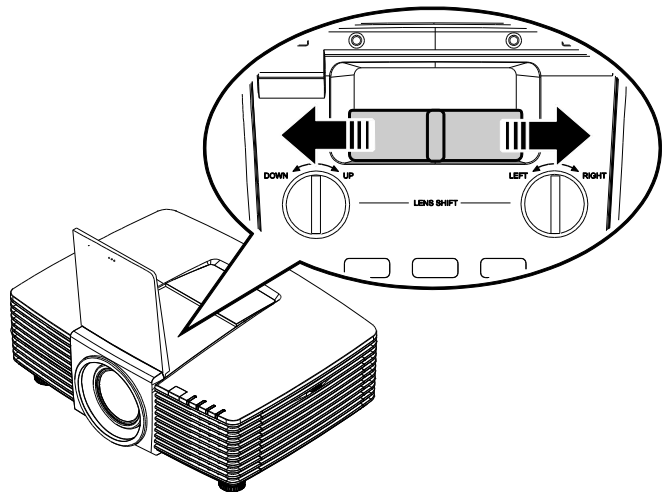
Adjusting the horizontal image position

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 10.9% for WXGA, 3.8% for XGA of the 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.

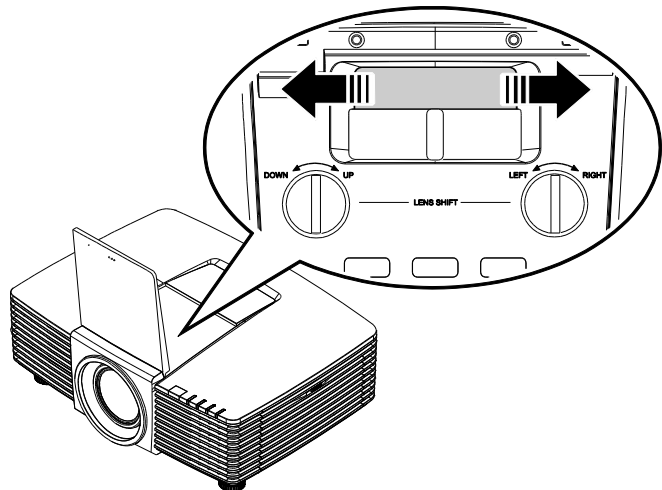


Adjusting the Zoom, Focus and Keystone

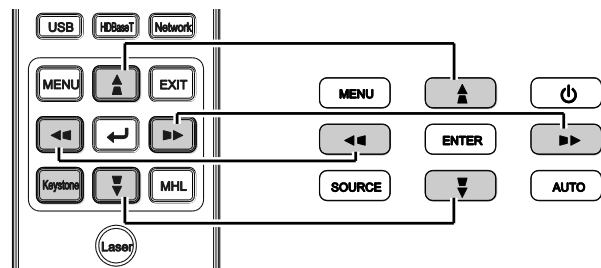
1. Use the **Image-zoom** control (on the projector only) to resize the projected image and screen size.



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



3. Press the / / / buttons (on the projector or the remote control) to correct vertical or horizontal image-trapezoid or press the **Keystone** button (on the remote) to selected V (Vertical) or H (Horizontal) keystone.

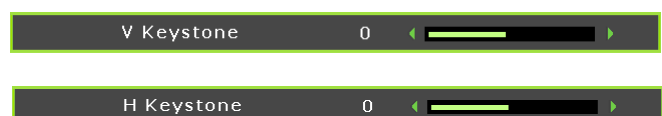


Remote control and OSD panel

4. The keystone control appears on the display.

Press / for V Keystone correcting image.

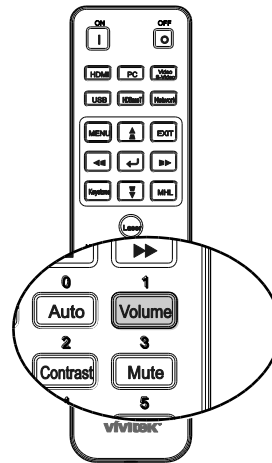
Press / for H Keystone correcting image.



Adjusting the Volume

1. Press the **Volume** buttons on the remote control.

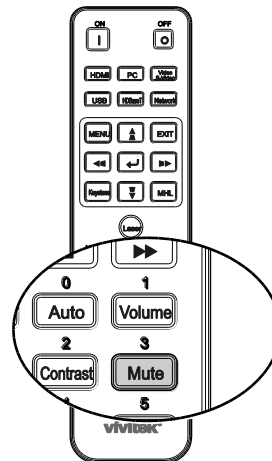
The volume control appears on the display.



2. Press the ◀ / ▶ 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).



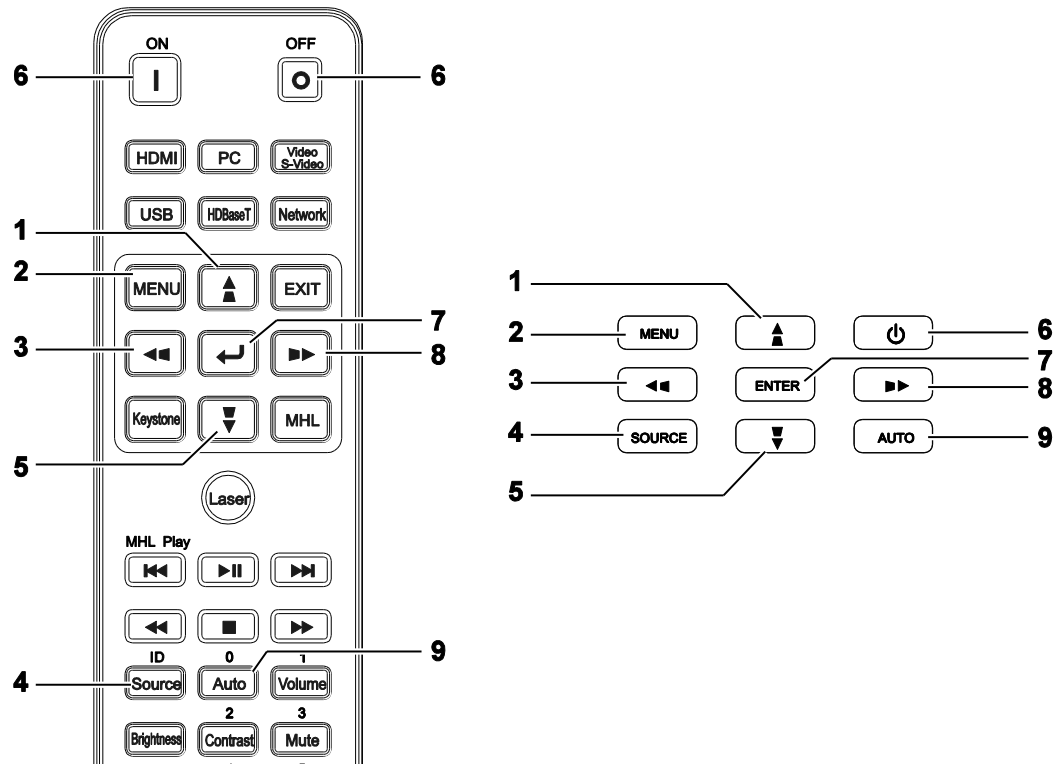
ON-SCREEN DISPLAY (OSD) MENU SETTINGS

OSD Menu Controls

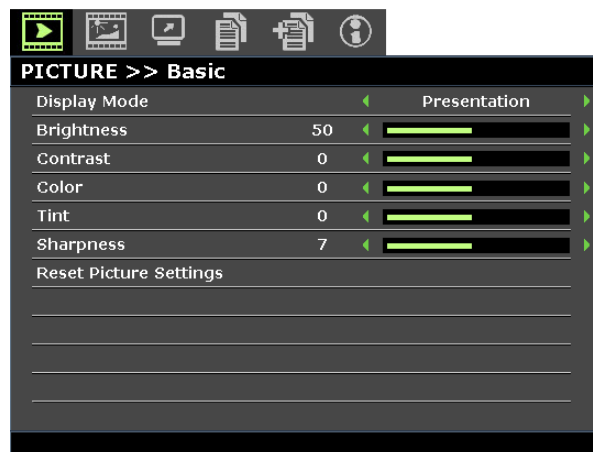
The projector has an OSD that lets you make image adjustments and change various settings.

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 **◀ / ▶** buttons to move through the menus.
3. Press the cursor **▲ / ▼** buttons to move up and down in a menu.
4. Press the cursor **◀ / ▶** buttons to change values for settings.
5. Press the **MENU** button to close the OSD or leave a submenu. Press the **EXIT** button to return to the previous menu.



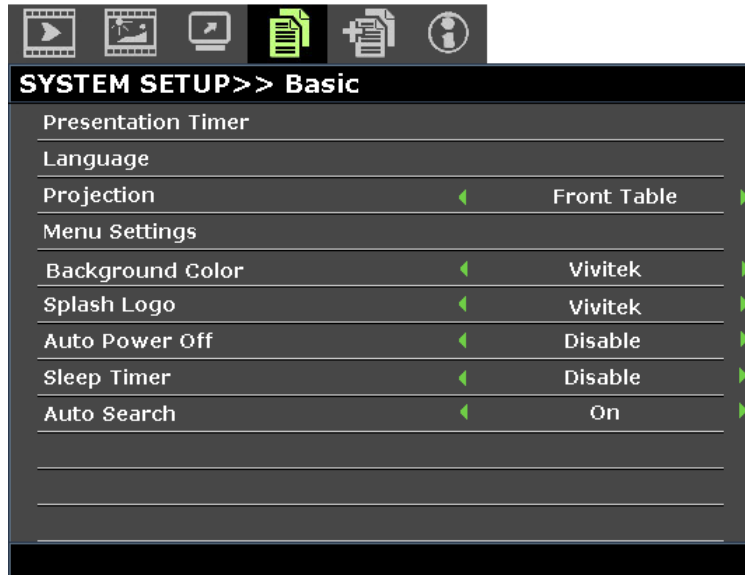
Note:

Depending on the video source, not all items in the OSD are available. For example, the **Horizontal/Vertical Position** items in the **PC Detail Adjustment** 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 ◀ / ▶ buttons to navigate to **SYSTEM SETUP >> Basic**.



2. Press the cursor ▲ / ▼ buttons until **Language** is highlighted.
3. Press the cursor ◀ / ▶ buttons 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.

MAIN MENU	SUB MENU	SETTINGS
PICTURE >> Basic	Display Mode	Presentation, Bright, Game, Movie, Vivi, TV, sRGB, Blackboard, DICOM SIM, 3D, User1, User2
	Brightness	0~100
	Contrast	50~50
	Color	50~50
	Tint	50~50
	Sharpness	0~15
	Reset Picture Settings	Current
		All
		Cancel
PICTURE >> Advanced	Brilliant Color	On, Off
	Color Temperature	D65 (Warm), D75 (Normal), D83 (Cool)
	Wall Color	Off, Light Yellow, Pink, Light Green, Blue, Blackboard
	Gamma	1.8, 2.0, 2.2, 2.4, B&W, Linear, S-curve
	HSG Adjustment	Primary Color
		Hue
		Saturation
		Gain
	User Color Temp	White Gain Red
		White Gain Green
		White Gain Blue
	White Balance	Red Gain
		Green Gain
		Blue Gain
		Red Offset
		Green Offset
		Blue Offset

MAIN MENU	SUB MENU	SETTINGS
DISPLAY	Aspect Ratio	Fill, 4:3, 16:9, 16:10, Letter, Box, Native, 2.35:1
	V Keystone	-30 ~30
	H Keystone	-25 ~25
	4 Corner	Left-Top, Right-Top, Right-Bottom, Left-Bottom
	Pincushion	Horz. Left, Horz. L+R, Horz. Right, Vert. Top, Vert. T+B, Vert. Bottom
	PC Detail Adjustment	Auto
		Frequency
		Phase
		Horizontal Position
		Vertical Position
	3D Setting	3D Mode
		3D Sync
		3D Sync Invert
	Digital Zoom	0 ~10 Video/YUV signal only 0~8
SYSTEM SETUP >> Basic	Presentation Timer	Timer Period
		Timer
	Language	English, 한국어, Hrvatski, Français, Svenska, Română, Deutsch, Nederlands, Norsk, Italiano, Türkçe, Dansk, Español, Čeština, Български, Русский, Português, Suomi, 繁體中文, 體中文, 體中文, Indonesian, 體中文, Polski, Ελληνικά, 日本語, Magyar, العربية, हिन्दी
	Projection	Front Table, Rear Table, Front Ceiling, Rear Ceiling
	Menu Settings	Menu Display Time
		Menu position
	Background Color	Vivitek, Black, Blue, Purple
	Splash Logo	Vivitek, Black, Blue
	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
	Auto Search	On, Off

MAIN MENU	SUB MENU	SETTINGS
SYSTEM SETUP >> Advanced	High Altitude Mode	Off, On
	Audio Settings	Mute
		Off, On
		Volume
		0 ~ 10
	Lamp Settings	Out
		Off, Mini, RCA
		Lamp Mode
		Normal, ECO, Dynamic ECO
	Reset Lamp Timer	Yes, No
		Total Lamp Hour
	Test Pattern	Off, Grid, White, Red, Green, Blue, Black
	Closed Caption	Closed Caption Enable
		Off, On
	Caption Version	CC1, CC2, CC3, CC4
		Low Power Mode
		Off, On, On By Lan
	Network Settings	Wired Lan
		Status
		Connect, Disconnect
		DHCP
		On, Off
		IP Address
		0~255, 0~255, 0~255, 0~255
		Subnet Mask
		0~255, 0~255, 0~255, 0~255
		Default Gateway
		0~255, 0~255, 0~255, 0~255
		DNS Server
		0~255, 0~255, 0~255, 0~255
		Apply
		Wireless Lan
		Status
		Connect, Disconnect
		SSID
		Refresh, Other
		SSID Display
		On, Off
		IP Address
		0~255, 0~255, 0~255, 0~255
		Connection Mode
		AP, Infrastructure
		Apply
	Remote Desktop	Account
		Password
		Connection Mode
		AP, Infrastructure
	Projection Login Code	On, Off
	Broadcasting	Broadcasting
		On, Off
		Channel
		2~25
	IP Address	AMX Device Discovery
		On, Off
	MAC Address	xx.xx.xx.xx.xx.xx
	Reset All Settings	Reset, Cancel
	Air Filter Timer Reset	Yes, No
	Remote ID	Default, 1, 2, 3, 4, 5, 6, 7

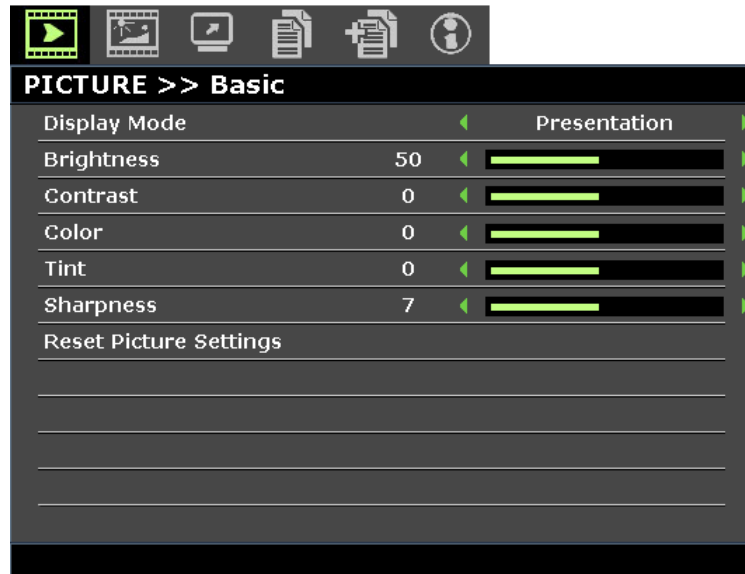
MAIN MENU	SUB MENU	SETTINGS
INFORMATION	Source	
	Picture Mode	
	Lamp Mode	
	Resolution	
	3D Info	
	Lamp Hour (Normal, ECO, Total)	
	Air filter hour	
	Firmware Version	
	Remote ID	
	S/N	

PICTURE >> Basic Menu

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

Note:

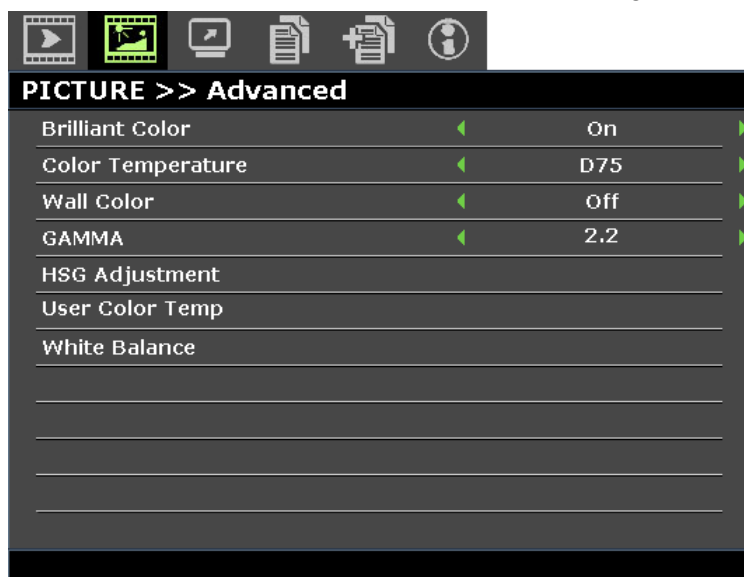
Customizing the settings in **PICTURE >> Basic** menu is only available in User 1 / 2 mode.



ITEM	DESCRIPTION
Display Mode	Press the cursor ◀ / ▶ buttons to set the display mode. Note: The DISCOM SIM mode simulates the grayscale/gamma performance of the equipment used for "Digital Image and Communication in Medicine"(DICOM). Important: This display mode should NEVER be used for medical diagnosis; it is for education/training purpose only.
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. Note: 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. Note: 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. Note: This function is only available when Component, Video or S-Video input source is selected.
Reset Picture Settings	Press the ENTER button to reset Current or All settings to default values.

PICTURE >> Advanced Menu

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



ITEM	DESCRIPTION
Brilliant Color	Press the cursor ◀ / ▶ buttons to set the brilliant color.
Color Temperature	Press the cursor ◀ / ▶ buttons to set the color temperature.
Wall Color	Press the cursor ◀ / ▶ buttons to select different wall color setting.
Gamma	Press the cursor ◀ / ▶ buttons 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 28.
User Color Temp	Press the ENTER button to enter the User Color Temp sub menu. See User Color Temp on page 28.
White Balance	Press the ENTER button to enter the White Balance sub menu. See White Balance on page 29.

HSG Adjustment

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



ITEM	DESCRIPTION
Primary Color	Press the cursor ◀ / ▶ buttons to set the Primary Color.
Hue	Press the cursor ◀ / ▶ buttons to adjust the Hue.
Saturation	Press the cursor ◀ / ▶ buttons to adjust the Saturation.
Gain	Press the cursor ◀ / ▶ buttons to adjust the Gain.

User Color Temp

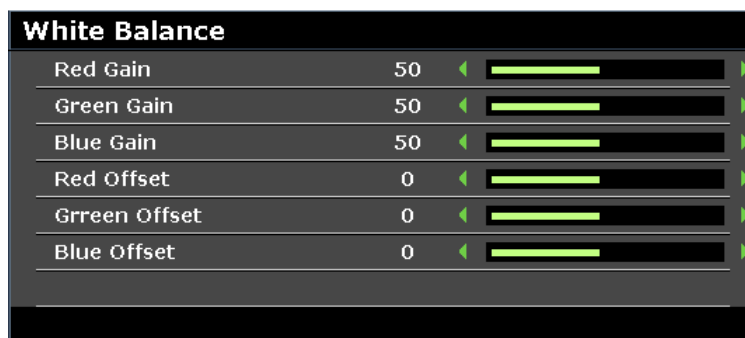
Press the **ENTER** button to enter the **User Color Temp** sub menu.



ITEM	DESCRIPTION
White Gain Red	Press the cursor ◀ / ▶ buttons to adjust the White Gain Red.
White Gain Green	Press the cursor ◀ / ▶ buttons to adjust the White Gain Green.
White Gain Blue	Press the cursor ◀ / ▶ buttons to adjust the White Gain Blue.

White Balance

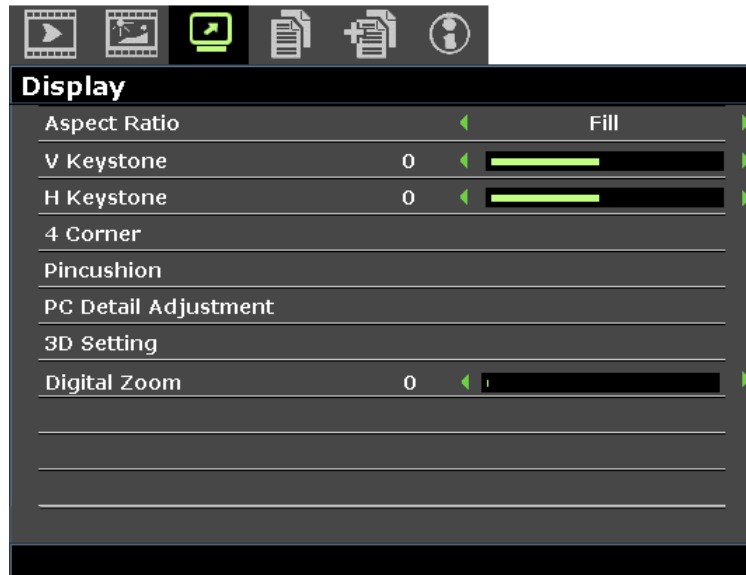
Press the **ENTER** button to enter the **White Balance** sub menu.



ITEM	DESCRIPTION
Red Gain	Press the cursor ◀ / ▶ buttons to adjust the Red Gain.
Green Gain	Press the cursor ◀ / ▶ buttons to adjust the Green Gain.
Blue Gain	Press the cursor ◀ / ▶ buttons to adjust the Blue Gain.
Red Offset	Press the cursor ◀ / ▶ buttons to adjust the Red Offset.
Green Offset	Press the cursor ◀ / ▶ buttons to adjust the Green Offset.
Blue Offset	Press the cursor ◀ / ▶ buttons to adjust the Blue Offset.

DISPLAY Menu

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



ITEM	DESCRIPTION
Aspect Ratio	Press the cursor ◀ / ▶ buttons to set the aspect ratio. Note: Without support when 3D mode activated.
Vertical Keystone	Press the cursor ◀ / ▶ buttons to adjust the vertical keystone.
Horizontal Keystone	Press the cursor ◀ / ▶ buttons to adjust the horizontal keystone. Note: Without support when 3D mode activated.
4 Corner	Press the ENTER button to enter the 4 Corner sub menu. See 4 Corner on page 31. Note: Without support when 3D mode activated.
Pincushion	Press the ENTER button to enter the Pincushion sub menu. See Pincushion on page 32. Note: Without support when 3D mode activated.
PC Detail Adjustment	Press the ENTER button to enter the PC Detail Adjustment sub menu. See PC Detail Adjustment on page 33.
3D Setting	Press the ENTER button to enter the 3D Setting sub menu. See 3D Setting on page 34.
Digital Zoom	Press the cursor ◀ / ▶ buttons to adjust the digital zoom. Note: - Without support when 3D mode activated. - Resync signal will adjust digital zoom to 0 automatically. - Aspect ratio adjustment will make digital zoom back to 0 automatically. - Signal re-sync will make digital zoom back to 0. - Only 0~8 is allowed to adjust for Video/YUV signal.

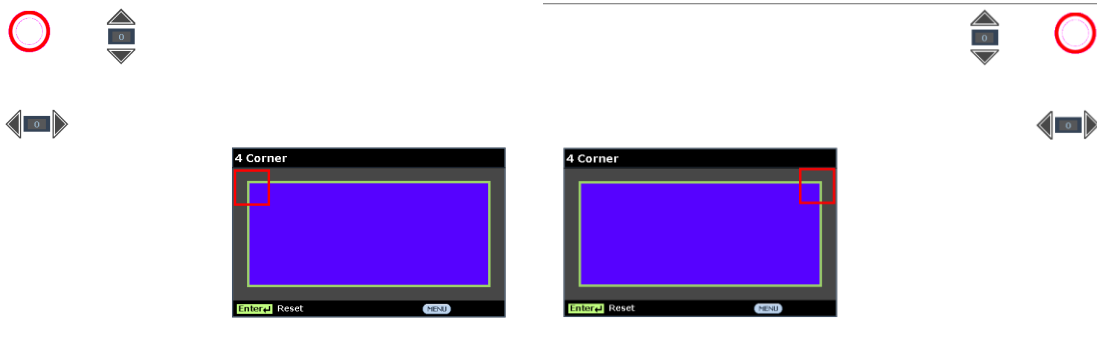
4 Corner

Press the **ENTER** button to enter the **4 Corner** sub menu.

1. Press the cursor **▲** / **▼** / **◀** / **▶** buttons to select a corner and press **ENTER**.



2. Press the cursor **▲** / **▼** buttons to adjust vertical and press the cursor **◀** / **▶** buttons to adjust horizontal.
3. Press **ENTER** to save the settings.



Pincushion

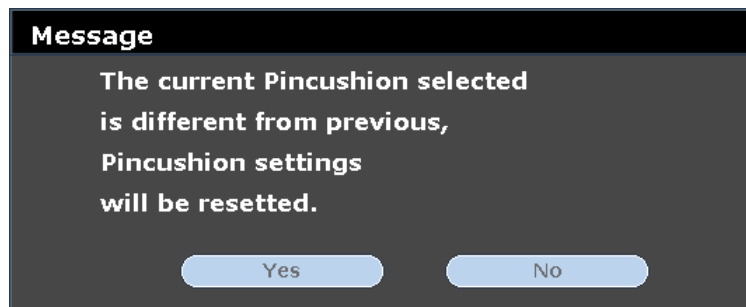
Press the **ENTER** button to enter the **Pincushion** sub menu.

1. Press the cursor **▲** / **▼** buttons to select one or both side and press **ENTER**.

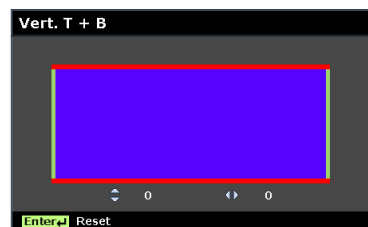
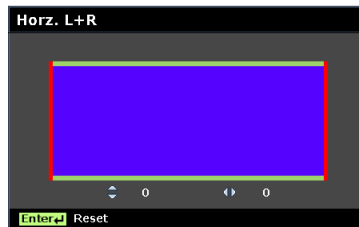
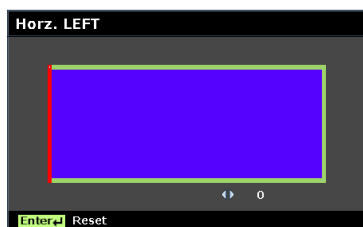


Note:

Only one Pincushion setting will be stored so if you want to change from the previous direction to the other, the notice message will pop-up to remind you to reset the previous Pincushion setting.



2. Press the cursor **▲** / **▼** / **◀** / **▶** buttons to adjust the desired side convex or concave.
3. Press **ENTER** to save the settings.

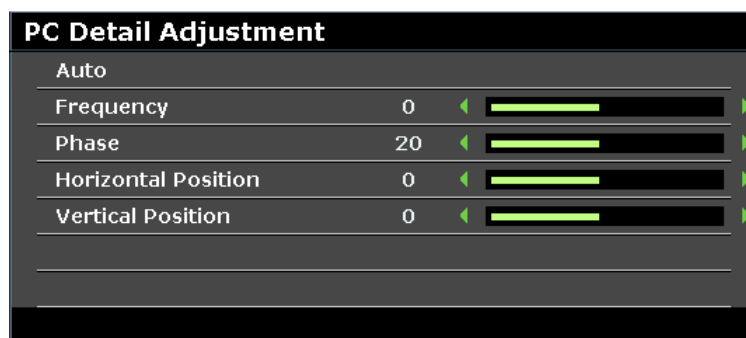


PC Detail Adjustment

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.



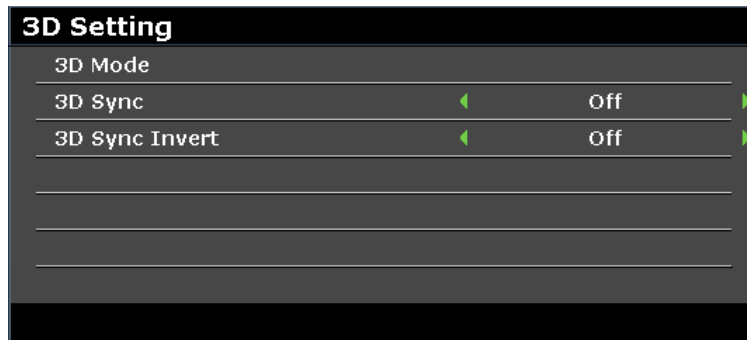
ITEM	DESCRIPTION
Auto	Press the ENTER/AUTO buttons on the control panel or the ENTER/AUTO buttons on the remote control to automatically adjust frequency, phase, and position.
Frequency	Press the cursor ◀ / ▶ buttons to adjust the A/D sampling number.
Phase	Press the cursor ◀ / ▶ buttons to adjust the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

3D Setting

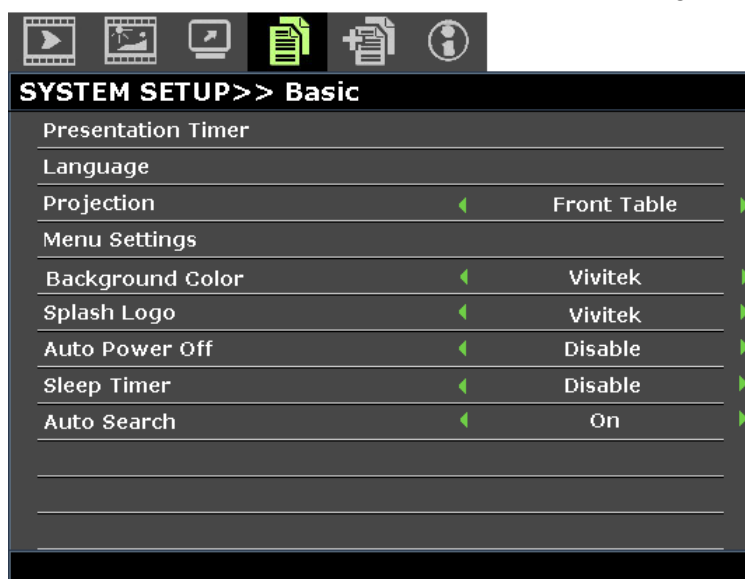
Press the **ENTER** button to enter the **3D Setting** sub menu.



ITEM	DESCRIPTION
3D Mode	Press the cursor ◀ / ▶ buttons to select different 3D mode.
3D Sync	Press the cursor ◀ / ▶ buttons to select different 3D Sync.
3D Sync Invert	Press the cursor ◀ / ▶ buttons to enable or disable 3D Sync Invert.

SYSTEM SETUP >> Basic Menu

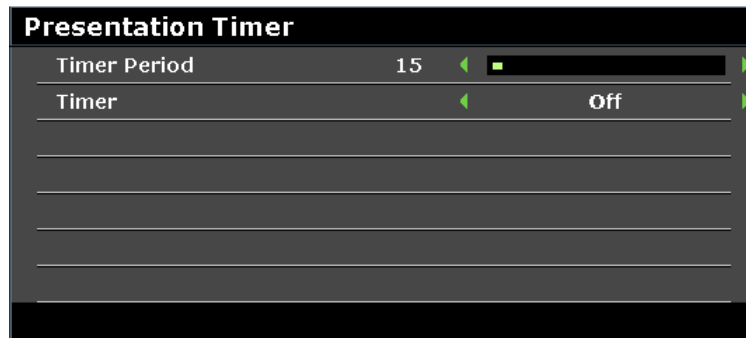
Press the **MENU** button to open the **OSD** menu. Press the cursor ◀ / ▶ buttons to move to the **SYSTEM SETUP >> BASIC** menu. Press the cursor ▲ / ▼ buttons to move up and down in the **SYSTEM SETUP >> BASIC** menu. Press the cursor ◀ / ▶ buttons to change values for settings.



ITEM	DESCRIPTION
Presentation Timer	Press the ENTER button to the presentation timer menu. See Presentation Timer on page 36.
Language	Press the cursor ◀ / ▶ buttons to select a different localization menu.
Projection	Press the cursor ◀ / ▶ buttons to choose from four projection methods.
Menu Settings	Press the ENTER button to enter the Menu Settings sub menu. See Menu Settings on page 36.
Background Color	Press the cursor ◀ / ▶ buttons to select the background color when no input source is detected.
Splash Logo	Press the cursor ◀ / ▶ buttons to select a different startup screen.
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.
Sleep Timer	Press the cursor ◀ / ▶ buttons to set sleep timer. The projector automatically turns off after the preset period of time.
Auto Search	Press the cursor ◀ / ▶ buttons to turn on or off auto search.

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 Period	Press the cursor ◀ / ▶ buttons to select timer period (1 ~ 240).
Timer	Press the cursor ◀ / ▶ buttons to enable or disable presentation timer.

Menu Settings

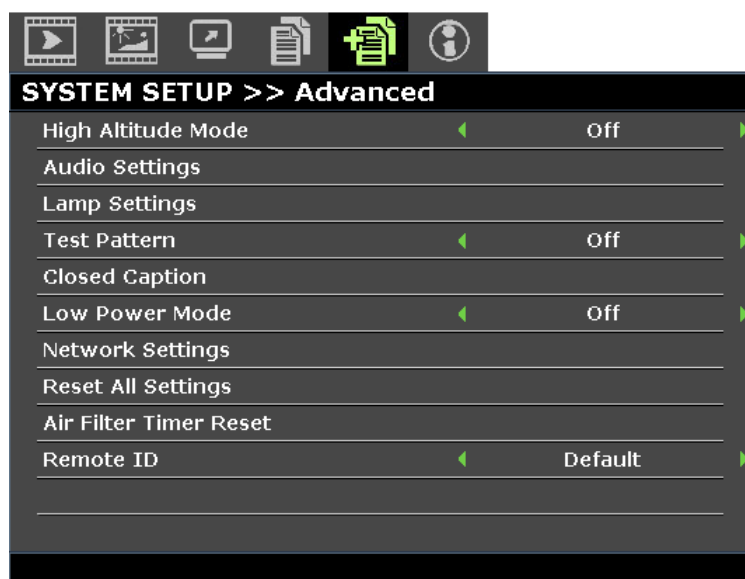
Press the **ENTER** button to enter the **Menu Settings** sub menu.



ITEM	DESCRIPTION
Menu Display Time	Press the cursor ◀ / ▶ buttons to set the menu display timer before the OSD times out.
Menu Position	Press the cursor ◀ / ▶ buttons to select from five OSD locations.

SYSTEM SETUP >> Advanced Menu

Press the **MENU** button to open the **OSD** menu. Press the cursor ◀ / ▶ buttons to move to the **SYSTEM SETUP >> Advanced** menu. Press the cursor ▲ / ▼ buttons to move up and down in the **SYSTEM SETUP >> Advanced** menu.



ITEM	DESCRIPTION
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).
Audio Settings	Press the ENTER button to enter the Audio Settings sub menu. See Audio Settings on page 38.
Lamp Settings	Press the ENTER button to enter the Lamp Settings sub menu. See Lamp Settings on page 38.
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 39.
Low Power Mode	Press the cursor ◀ / ▶ buttons to set Low Power Mode Off, On or On by LAN. Note: When Low Power Mode set to Off and On by LAN, VGA OUT terminal can output signal during projector in Standby mode.
Network Settings	Press the ENTER button to enter the Network Settings sub menu. See Network Settings on page 39.
Reset All Settings	Press the ENTER button to reset all settings to default values.
Air Filter Timer Reset	Press the ENTER button to reset air filter timer.
Remote ID	Press the cursor ◀ / ▶ buttons to select remote ID to fit the current remote ID settings.

Audio Settings

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



ITEM	DESCRIPTION
Mute	Press the cursor ◀ / ▶ buttons to turn on or off the speaker.
Volume	Press the cursor ◀ / ▶ buttons to adjust the audio Volume.
Out	Press the cursor ◀ / ▶ buttons to select audio output connector. Note: When select Off, the default sound is output from speakers.

Lamp Settings

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



ITEM	DESCRIPTION
Lamp Mode	Press the cursor ◀ / ▶ buttons to adjust lamp brightness.
Reset Lamp Timer	Press the ENTER button to reset the Lamp Hour after the lamp is replaced.
Total Lamp Hour	Displays the number of equivalent hours the lamp has been in use. Note: Lamp Mode is not allowed to adjust when 3D mode is activated.

Closed Caption

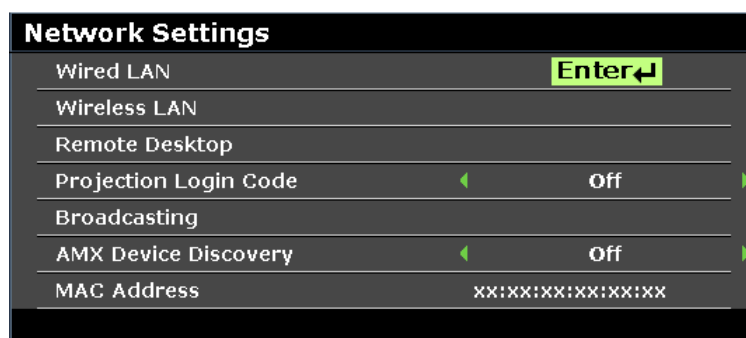
Press the **ENTER** button to enter the **Closed Caption** sub menu.



ITEM	DESCRIPTION
Closed Caption Enable	Press the cursor ◀ / ▶ buttons to turn on or off Closed Caption.
Caption Version	Press the cursor ◀ / ▶ buttons to select the Caption Version.

Network Settings

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



ITEM	DESCRIPTION
Wired LAN	Press the ENTER button to enter the Wired LAN sub menu. See Wired LAN on page 40.
Wireless LAN	Press the ENTER button to enter the Wireless LAN sub menu.
Remote Desktop	Press the ENTER button to enable remote access to the computer.
Projection Login Code	Press the cursor ◀ / ▶ buttons to turn on or off the projection of the login code.
Broadcasting	Press the ENTER button to enter the Broadcasting sub menu.
AMX Device Discovery	Press the cursor ◀ / ▶ buttons to turn on or off discovery of AMX devices.
MAC Address	Press the ENTER button to enter the MAC address.

Wired LAN

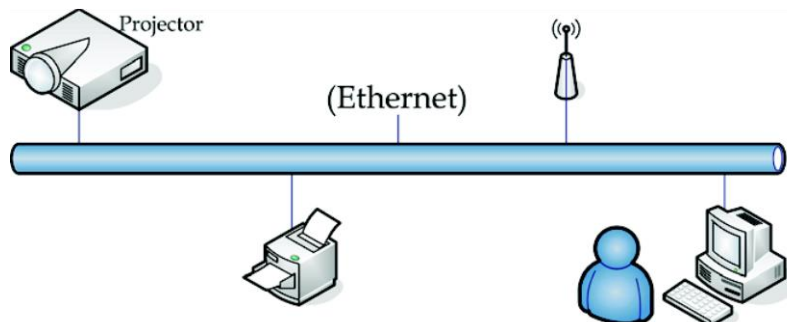
Press the **ENTER** button to enter the **Wired LAN** sub menu.

Wired Lan	
Status	Connect
DHCP	On
IP Address	192.168.2.1
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.254
DNS Server	192.168.0.1
Apply	

ITEM	DESCRIPTION
Status	Displays the network connection status.
DHCP	Press the cursor ◀ / ▶ buttons to turn DHCP On or Off. Note: If you select DHCP Off, complete the IP Address, Subnet Mask, Gateway, and DNS fields.
IP Address	Enter a valid IP address if DHCP is turned off.
Subnet Mask	Enter a valid Subnet Mask if DHCP is turned off.
Default Gateway	Displays the default Gateway address on the network.
DNS Server	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.



Wired LAN Terminal Function

Remote control and monitoring of a projector from a computer through a wired LAN is possible. Compatibility with Crestron / AMX (Device Discovery) / Extron control boxes enables projector management through a network as well as a remote computer's browser.

* Crestron is a registered trademark of Crestron Electronics, Inc. of the United States.

* Extron is a registered trademark of Extron Electronics, Inc. of the United States.

* AMX is a registered trademark of AMX LLC of the United States.

Supported External Devices

This projector supports command inputs from a Crestron Electronics controller and related software (RoomView[®]), for further information: <http://www.crestron.com/>

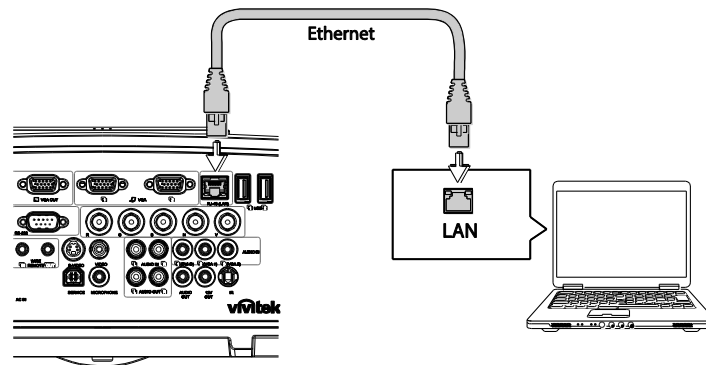
This projector supports the AMX (Device Discovery), for further information: <http://www.amx.com/>

This projector complies and supports Extron device(s), for further information: <http://www.extron.com/>

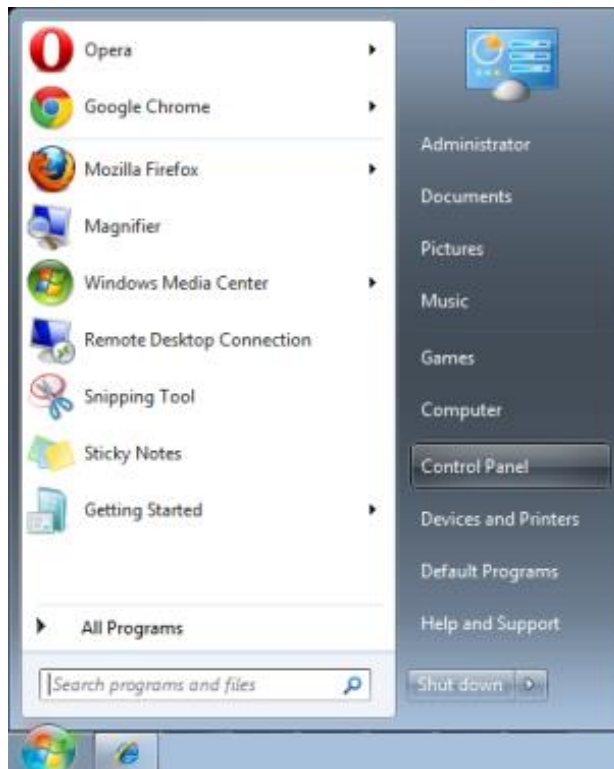
For more information on the external devices and their related control commands supported through the LAN/RJ45 port and the projector's remote/control function contact the service support team directly.

LAN RJ45

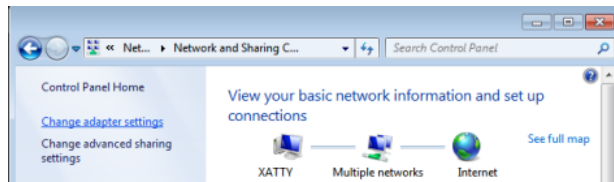
1. Connect an RJ45 cable to the RJ45 port on the projector and computer.



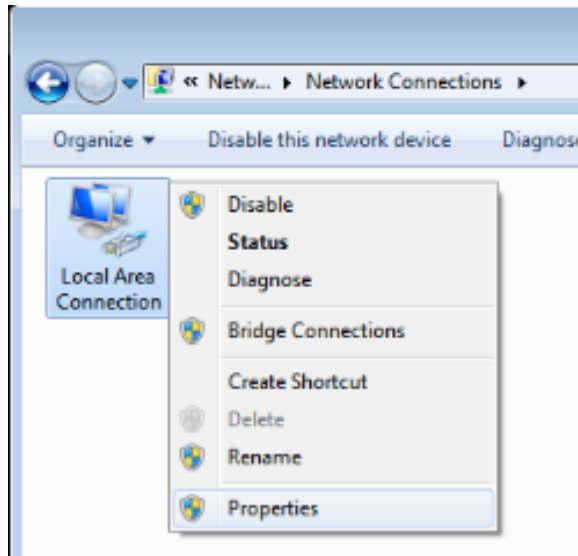
2. On the computer, select **Start >> Control Panel >> Network and Internet**.



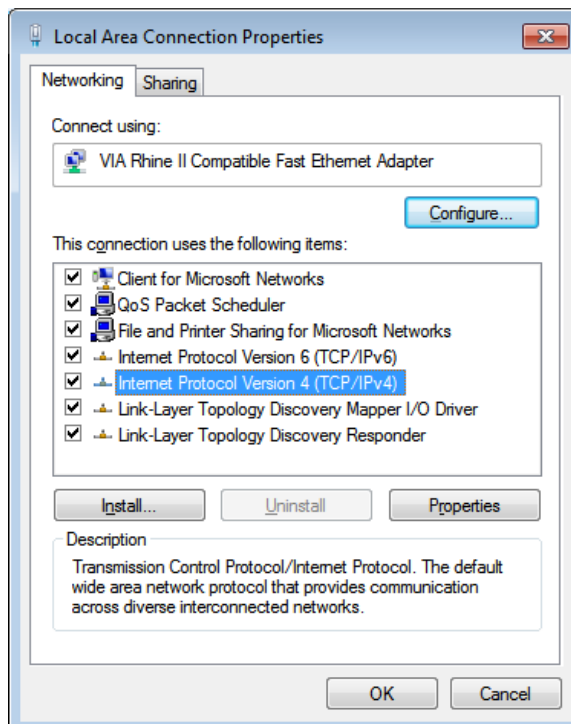
The Network and Internet screen displays.



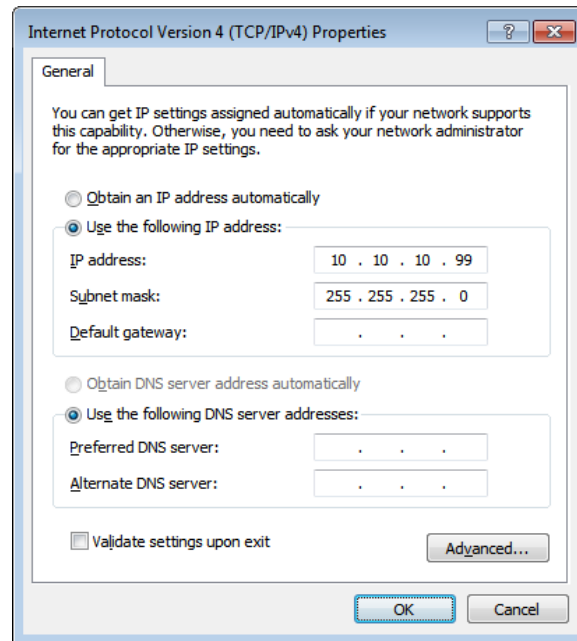
3. Click **Change adapter settings** to continue.
4. Right-click on **Local Area Connection**, and select **Properties**.



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



7. Click **Use the following IP address** and fill in the IP address and Subnet mask.
For this example, the IP address used is as follows:
IP address: 10.10.10.99
Subnet mask: 255.255.255.0
8. Click **OK** to save the settings.



9. On the projector (remote control) press the **MENU** button.
10. Select **SYSTEM SETUP >> Advanced >> Network Settings >> Wired LAN**. The Wired LAN screen displays.
11. Change the IP Address and the Subnet Mask. Make sure the network settings are compatible with those on the computer. The project and computer must be configured to use the same subnet, see the following example.

Example:

Projector IP settings: 10.10.10. X (whereas, X is a number between 1 and 254).

Subnet Mask: 255.255.255.0

Wired Lan	
Status	Connect
DHCP	On
IP Address	10.10.10.99
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
Apply	

Wireless LAN Settings

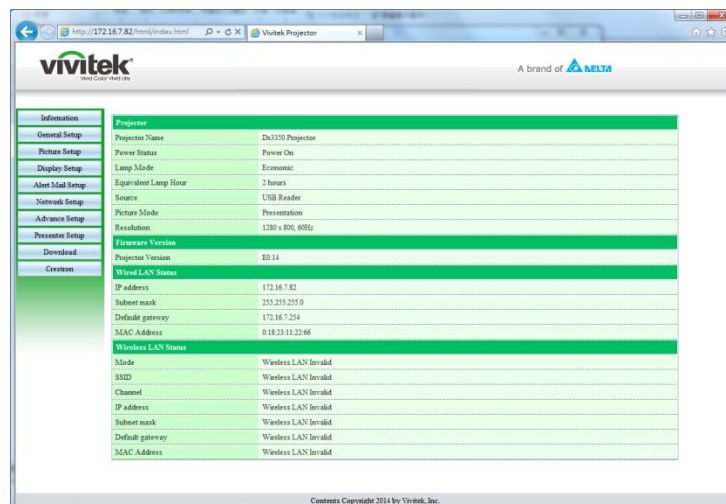
1. Connect the Vivitek wireless dongle (optional) to the USB TYPE-A port of the projector.
2. Select **SYSTEM SETUP >> Advanced >> Network Settings >> Wireless LAN** menu
3. In an AP mode connection, you must first obtain the target SSID information. In the pwPresenter search for the wireless SSID host.
For a connection in infrastructure mode, select the projector's SSID to connect.



4. On the computer, use the wireless network function to connect to a wireless network.
5. If the wireless network requires a password, the user must manually enter the password.

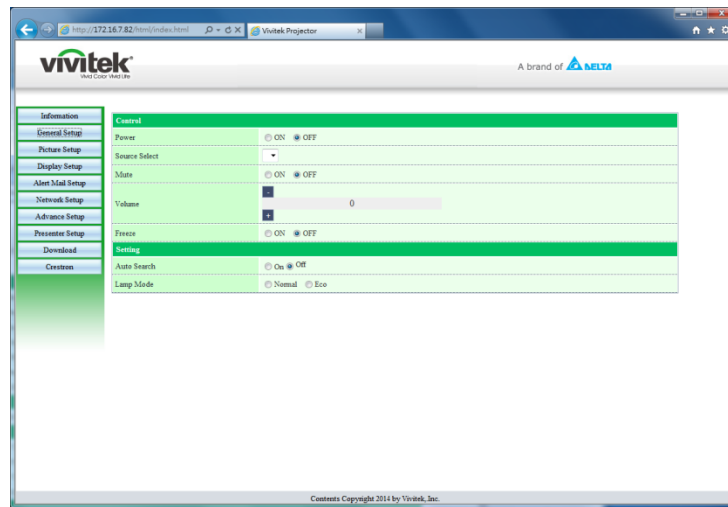
Browser Based Management

1. Open a browser such as the Microsoft Internet Explorer*.
2. In the Address bar, type the projector's IP address as set in Wired LAN Terminal Function. The projector is setup for web control page. The LAN/RJ45 function displays as follows. The Information page displays the information and status of this projector.

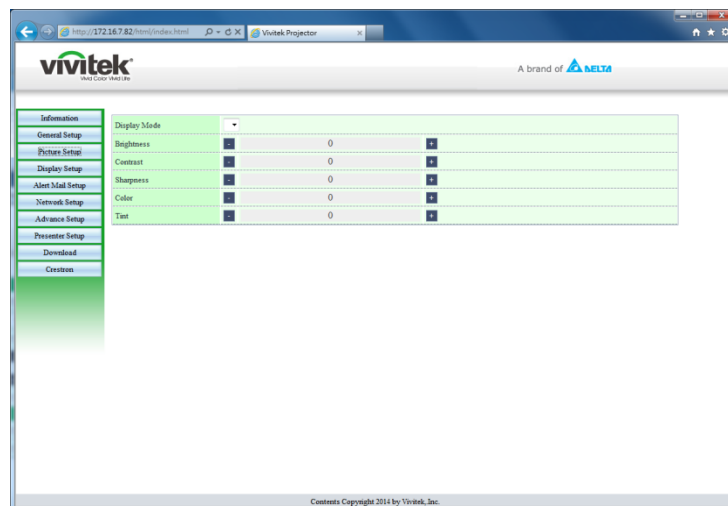


* Adobe Flash Player 9.0 or higher is required to view the interface through the browser.

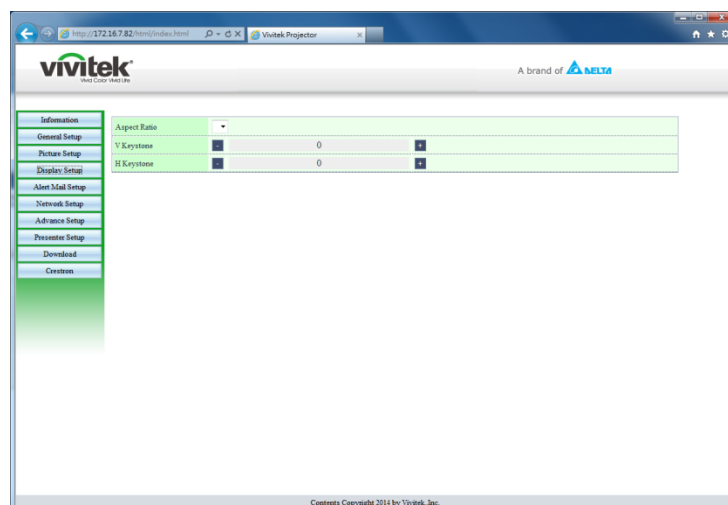
The General Setup page provides the normal functionality of the OSD, such as: power/source/volume/Freeze Auto search/Lamp mode control.



The Display Setup page provides image fine tuning functionality.



The Display Setup page provides keystone and aspect ratio adjustment functionality.



The Alert and Mail Settings pages provide status and mail notification functionality.

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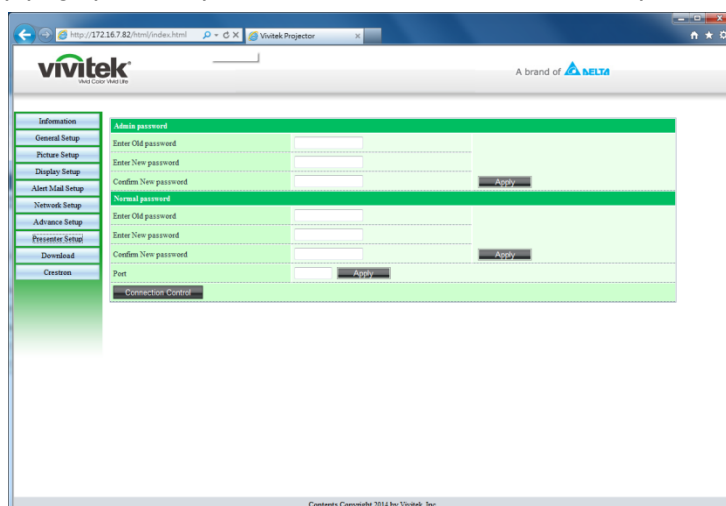
The Network Setup page provides configuration functionality for wired or wireless network setup.

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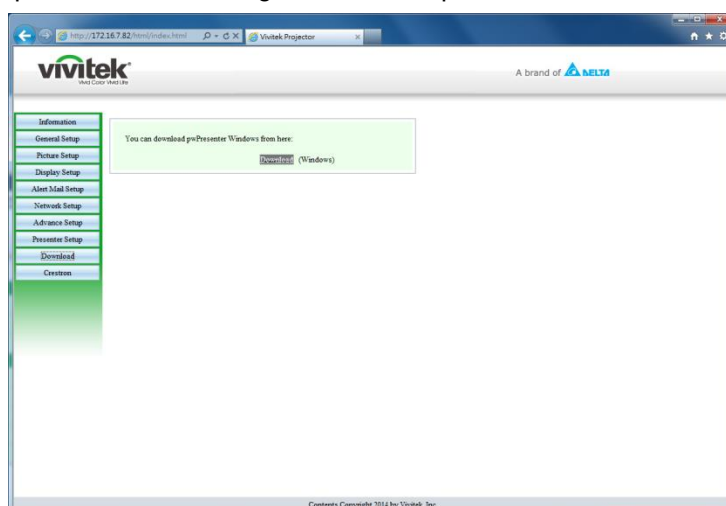
The Advance Setup page provides broadcasting and projector name modification functionality.

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The Presenter Setup page provides pwPresenter admin and normal user password setup.



The download page provides downloading a function for pwPresenter.



The Crestron page, supporting RoomView version 6.2.2.9, is only available on a Wired LAN network setup. It allows remote control of the projector.

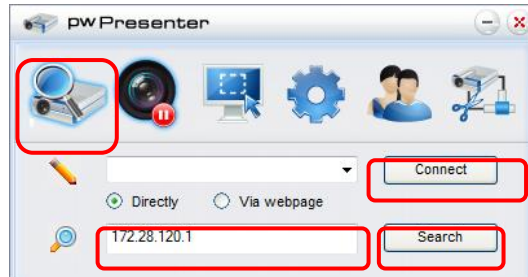


For more information, visit <http://www.crestron.com>.

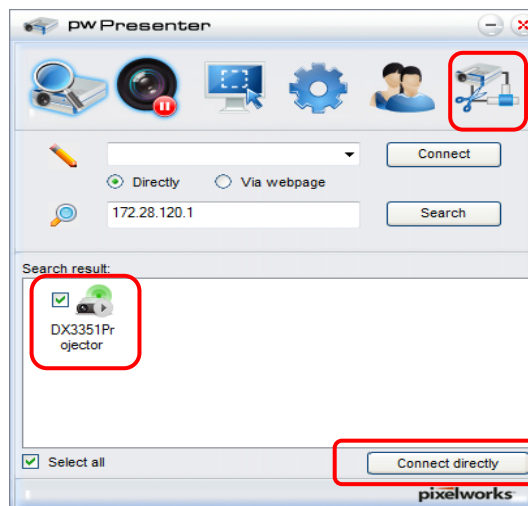
pwPresenter

The pwPresenter is a computer-based application to allow remote display of the computer's desktop on the projector. pwPresenter works through a properly configured wireless or wired network connection. Make sure all other virtual networks control programs are disabled before using pwPresenter.

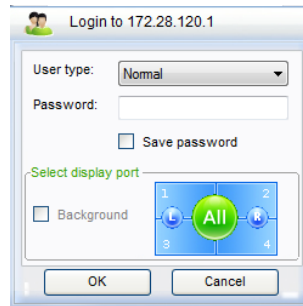
1. Connect an RJ45 cable to the projector and computer's RJ45 ports.
2. Enter the IP address of the projector in the address bar of an open browser.
3. Download pwPresenter (Zipped file) from the web control page. Unzip it and install the pwPresenter on the computer.
4. Once installed, double click the pwPresenter icon. The pw Presenter page appears.
5. Click the Search icon to search and connect to a networked display.



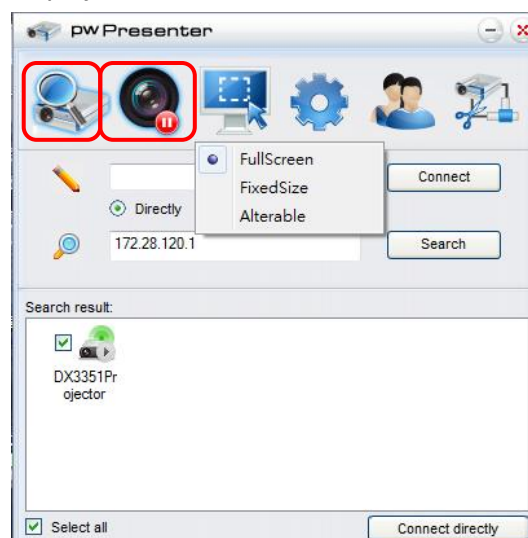
- a. Type in the IP address (see [Browser Based Management](#) on page 44 for details.) and click Search.
- b. The networked projector is displayed. Select it to continue.
- c. Click Connect and the computer's desktop image is displayed through the projector.



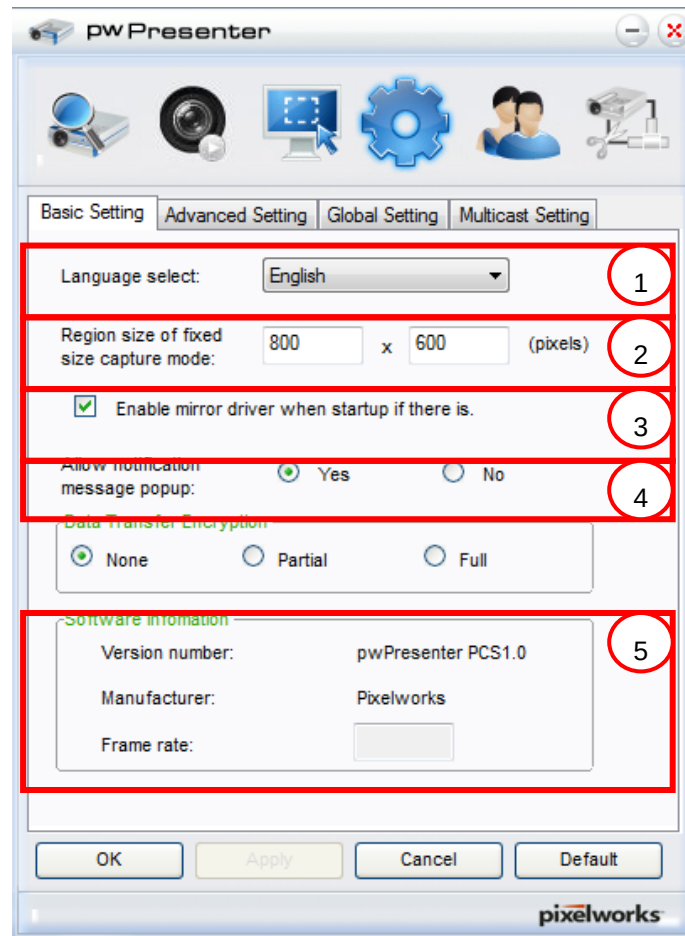
- d. After connecting to the projector, pwPresenter prompts for a password, as set up in the Presenter Setup screen.



- e. Click the disconnect button to disconnect all available projectors.
6. Controlling the remote display
 - a. Click **Play/Pause**  to display the desktop on the connected network display.
 - b. Display up to four computers on a single projector at one time. Click a location to display the image. Four locations can be selected (1-4) or two in a continuous mode (Left and right) for two computers.
 - c. Once the display is selected the image displays through the projector. Select any location or revert to full screen or blank out mode.
 - d. Capture mode allows management of advanced functions.
 - e. Define the projector's display area
 - i. Full Screen: displays the entire screen through the projector.
 - ii. FixedSize: displays a fixed screen, place the screen over a desired area to identify the display area for the projector.
 - iii. Alterable: displays an adjustable screen, which is used to identify the display area for the projector.

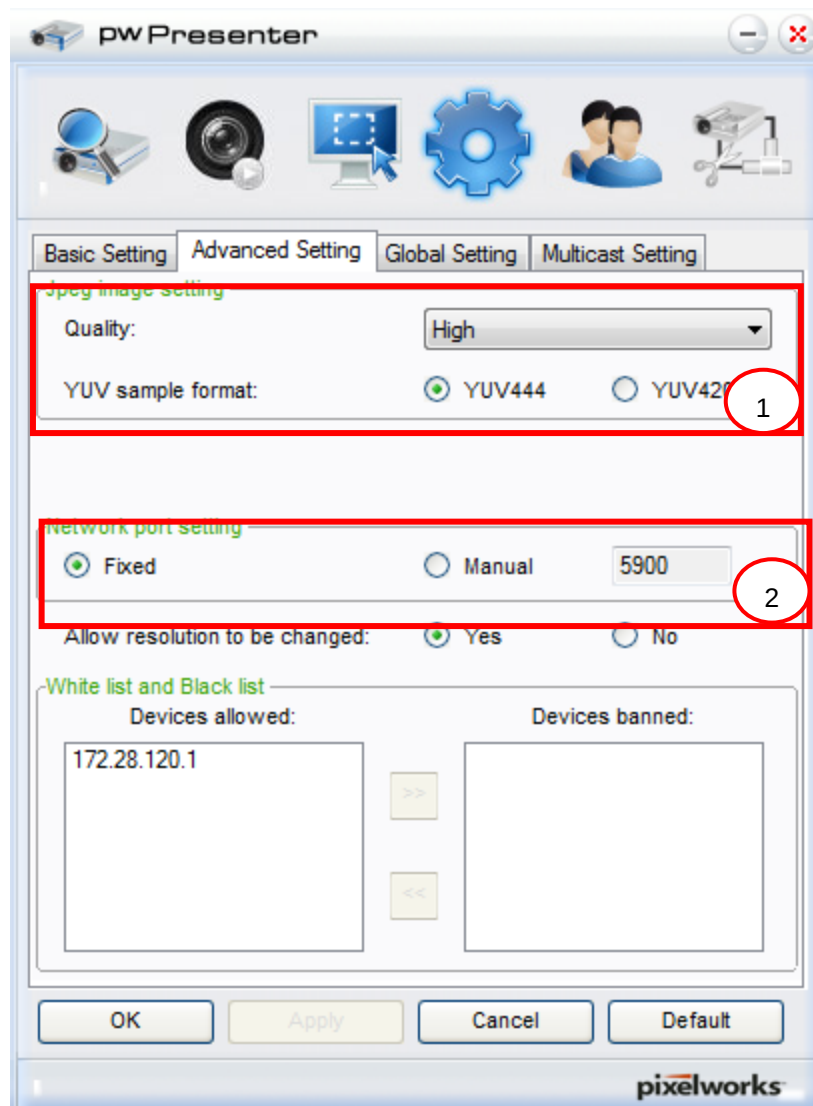


7. Click the **Basic** Setting tab to configure pwPresenter basic settings.



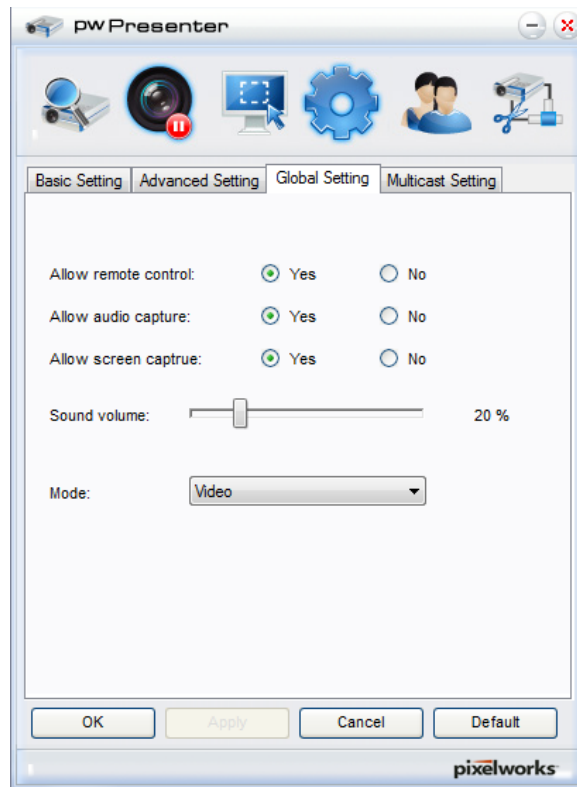
- Select the interface language: click the drop-down menu and select the desired language. Click **Apply**.
- Change the size of the FixedSize frame in capture mode. Enter the size in pixels units. Click **Apply** to save the settings.
- Enable the mirror driver upon startup (driver must be previously installed).
- Allow message notification. Click **Yes**, then **Apply** to save the settings.
- Displays the software information.

8. Click the **Advanced** Setting tab to configure pwPresenter advanced settings.

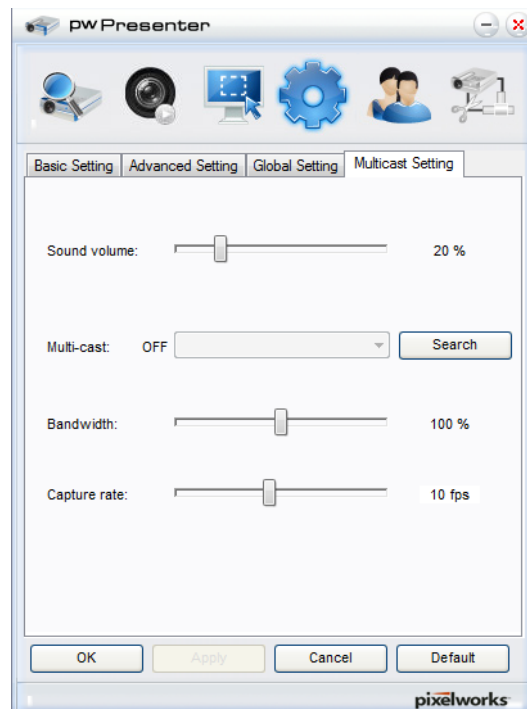


- a. Set the image quality setting. Click the drop-down menu to select the desired image quality. Click **Apply** to save the setting.
- b. Define the network port, fixed or manual. If manual is selected, enter the port number. Click **Apply** to save the setting.

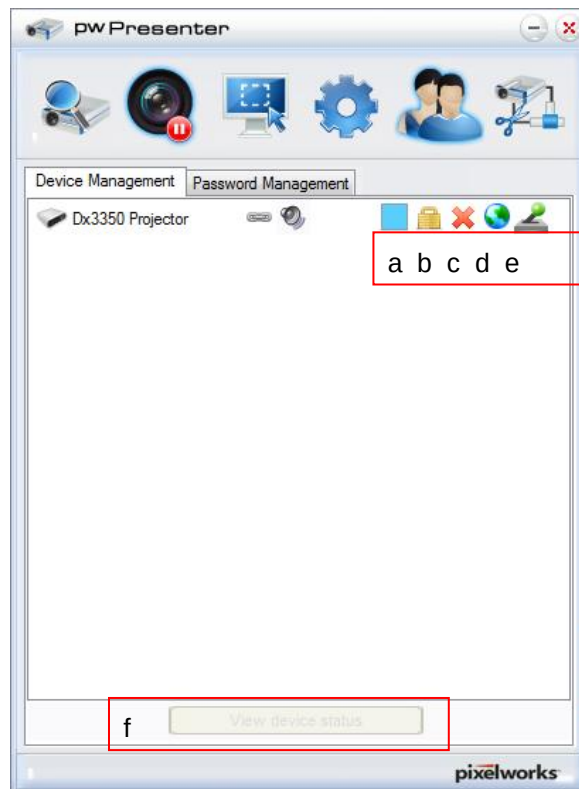
- Click the **Global Setting** tab to configure pwPresenter global settings, which allows for remote control of the computer through the projector.



- Click the **Multicast Setting** tab to configure pwPresenter broadcast settings.



11. Device management.



- a. Click the **Display Port Location** icon to adjust the location of the displayed area.
- b. Click the **Password** icon to change the user password.
- c. Click the **Disconnect** icon to disconnect the projector from the network.
- d. Click the **Webpage** icon to allow access to the Vivitek webpage control interface.
- e. Click the **Remote Desktop** icon to enable the remote access function.
- f. Displays the device status and setting information. Also, provides access to conference control mode.

Using the Broadcasting Function

The 1:N LAN Display is available in two ways.

- TCP/IP—supporting up to 8 projectors (default)
- Multicast—supporting up to 255 projectors (new design)

Select the channel for the corresponding IP address (grayed out): 1 to 25.

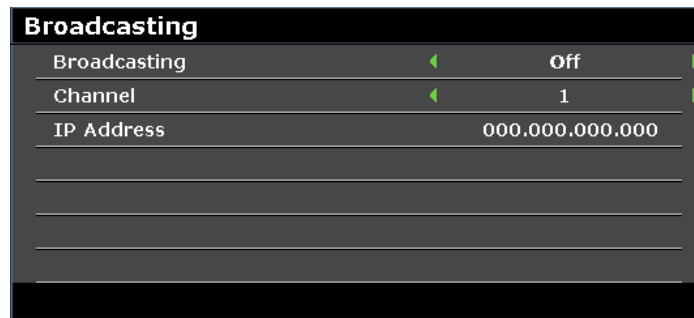
Twenty five channels (25 IPs) are available for selection, for example: 239.192.19.21 ~ 45.

Pre-set channels, such as a channel setup for emergency broadcasting, are automatically detected by the projector and the source is displayed. Manual source selection is not required.

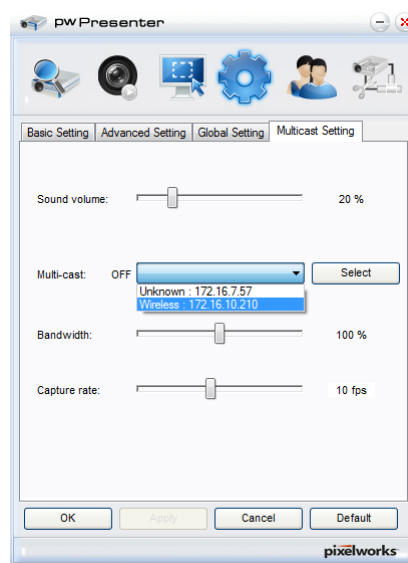
To activate this function:

1. Go to the **SYSTEM SETUP >> Advanced >> Network Settings** menu after opening the OSD menu.
2. Press **ENTER**.

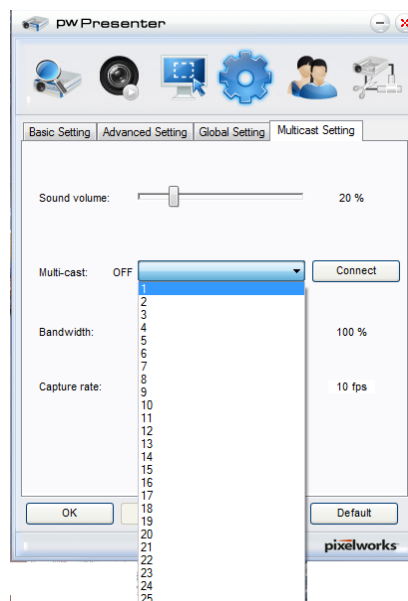
- Press ▼ to select **Broadcasting** and press ◀ / ▶ to select **On**.



- Open pwPresenter and select the Multicast Setting tab.
- Click **Search** and click **Apply**.
- From the Multi-cast drop-down menu select the broadcasting device (IP address).



- Select the channel as it is setup in the projector **Broadcasting** menu.



- Press **Connect** to broadcast the captured screen from the computer.

Note:

The function requires the pwPresenter software available on the provided CD.

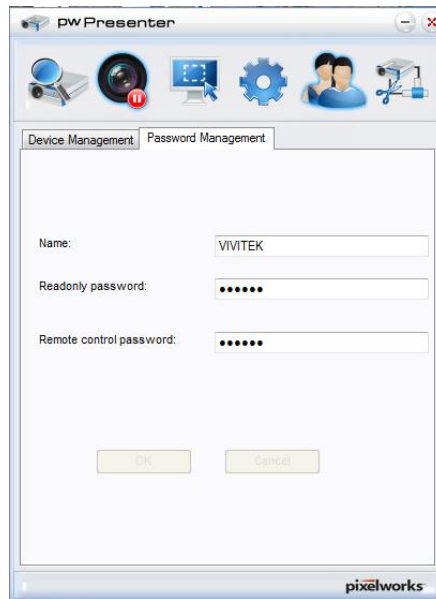
This function is only available when the Network Display source is selected.

Minimum system requirements: Intel® Core 2 Duo, 2.4GHz CPU, 2G DDR.

Remote Desktop Control through pwPresenter

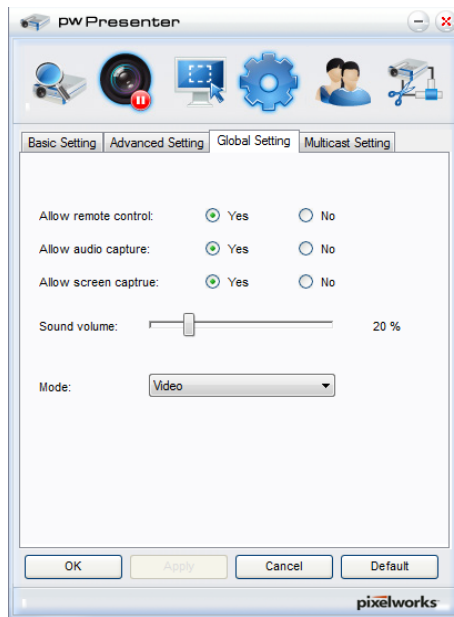
pwPresenter provides remote desktop control function for the projector.

1. Setup a login account (User name and Password) in pwPresenter. Enter the user name in the Name field.
2. Designate a password for read-only access in the Read-only password field.
3. Designate a password for remote control access in the Remote control password field.



- Name: must be eight or more characters, capital letters (A~Z) and/or numbers (0 ~9).
 - Password: must be a numerical combination (1 ~ 4), a minimum of six digits.
 - The on-screen password is visible as left, down, right symbols.
 - If identical pwPresenter names are used, a **duplicate** error is displayed.
4. Click the tab **pwPresenter** >> **Parameter Settings** >> **Global Settings** to open Remote Desktop screen.

5. Select the radio button and click **Yes** to enable the remote control/audio capture/screen capture function.



When you installing the pwPresenter, the operating system's default language is selected for pwPresenter. If a language is not available, English is selected.

- a. You can select whether to allow notification message popup.
 - b. Once you set to activate 1:N display, 1PC/NB can display up to 8 projectors at the same time.
 - c. Once set, press **Apply** to save the changes.
 - d. You can select Video or Graphic display mode.
Graphic Mode: worse image quality but faster transmission speed.
Video Mode: better image quality but slower transmission speed.
The actual transmission performance is determined by the current network bandwidth.
 - e. You can select whether to automatically open the pwPresenter application when the computer is powered on.
 - f. Once set, press **Apply** to save the changes.
6. Open the OSD menu and go to the **SYSTEM SETUP >> Advanced > Network Settings > Remote Desktop**.

7. Enter the **Account** and **Password** the same as defined in Remote Desktop Control through pwPresenter.



8. Select **Connect** and press **ENTER** to connect to the selected PC.
9. Connect USB keyboard or mouse to control the host PC's desktop through the projector.
 - Remote Desktop Control does not support PC Standby mode.
 - Remote Desktop Control only supports LAN source so the projector source is fixed on LAN.

Presenting From a USB Reader

This feature displays a slide show of images stored on a USB flash drive connected to the projector. It can eliminate the need for a computer source.

Image File Types

USB Reader displays images files in JPEG, GIF, TIFF, PNG and BMP formats.

- A square box on the filename identified unknown characters.
- Thai file naming system is not supported.
- GIF, TIFF, PNG and BMP formatted files can be displayed if the file is under WXGA (1280 x 800).
- If a folder contains more than 200 photos, only the first 200 photos are displayed.

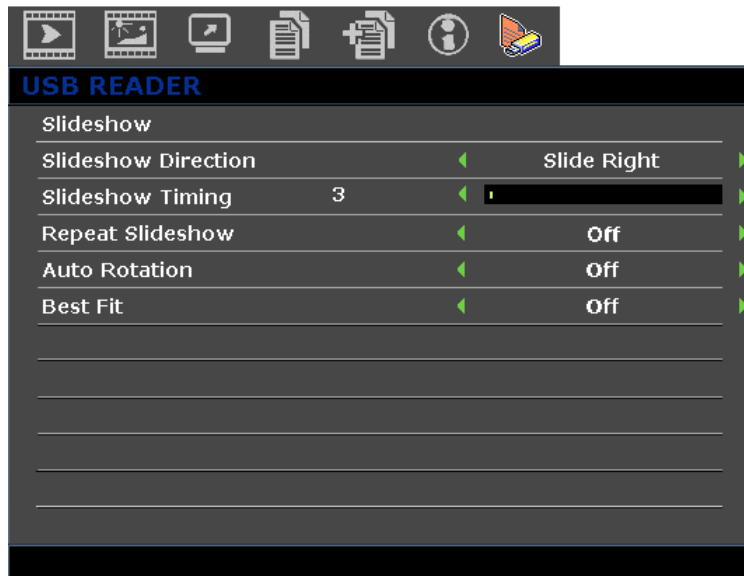
Preparation

To view your pictures as a slideshow, follow these steps:

1. Connect a USB flash drive to your computer and copy files from your computer to the USB flash drive.
2. Turn on your projector.
3. Remove the USB flash drive from your computer and plug it into the USB jack of the projector.
4. Select **USB Reader** from the source selection bar.

USB Reader menu

The USB Reader menu displays only when a USB device source is selected. This menu includes a slideshow feature for selecting settings.



ITEM	DESCRIPTION
Slideshow	Press the ENTER button to start slideshow.
Slideshow Direction	Press the cursor ◀ / ▶ buttons to select a slideshow direction.
Slideshow Timing	Press the cursor ◀ / ▶ buttons to select the image display frequency.
Repeat Slideshow	Press the cursor ◀ / ▶ buttons to turn on or off the repeat slideshow function.
Auto Rotation	Press the cursor ◀ / ▶ buttons to turn on or off auto rotate.
Best Fit	Press the cursor ◀ / ▶ buttons to turn on or off the best fit function, which adjusts the image for the best screen fit.

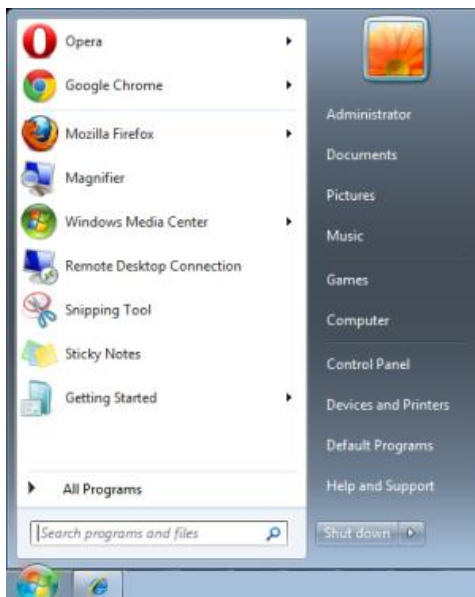
RS232 by Telnet Function

The projector supports RS232 control functionality through Telnet by using a RJ45 connection.

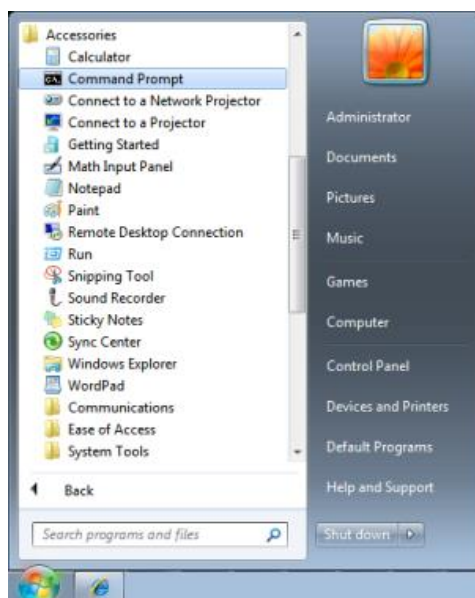
Quick Start-Guide for TELNET

Obtain the projector's IP-Address. Make sure the projector is properly setup to function within the local network.

1. Disable any Windows Firewall settings to allow for Telnet access.



2. Navigate to **Start > All Programs > Accessories** and select **Command Prompt**. The command window displays.



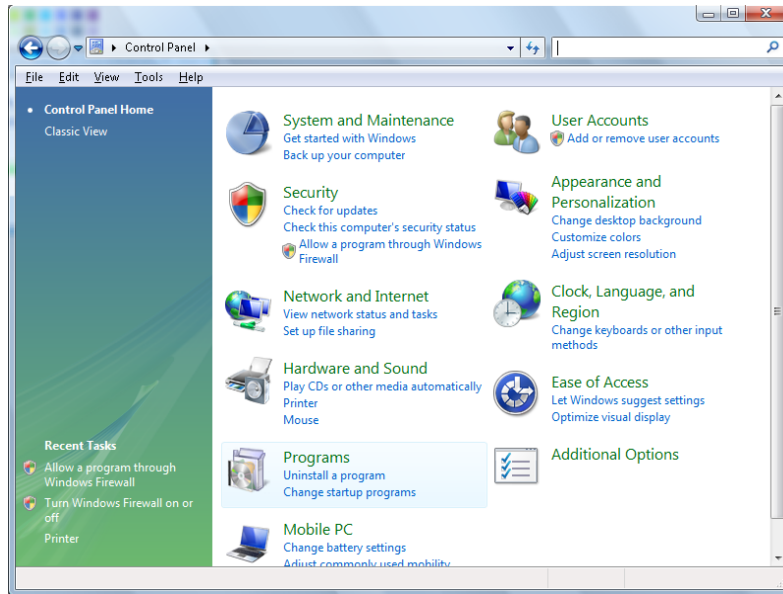
3. In the command window, type the IP address of the projector in the following format.
telnet ttt.xxx.yyy.zzz 23 (whereas **ttt.xxx.yyy.zzz** is the IP-Address of the projector).
4. Press **Enter** to continue.

Once the Telnet connection is established, enter commands to remotely control the project.

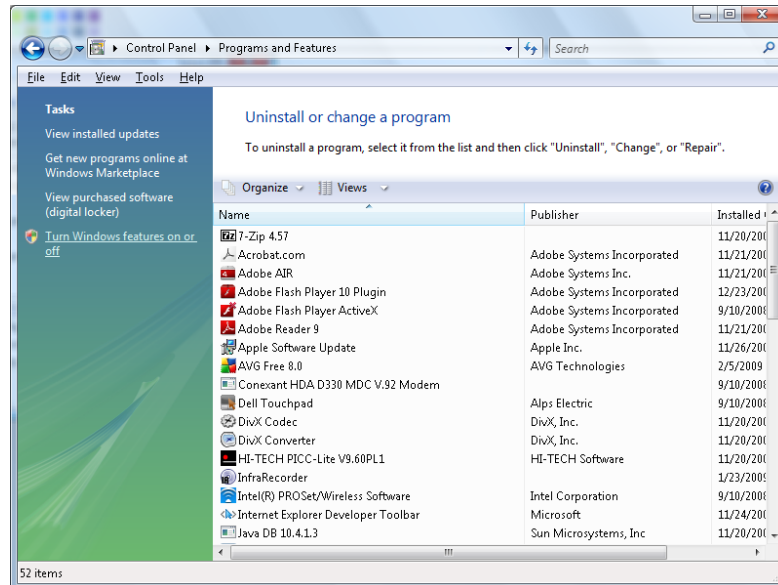
Enabling TELNET in Windows VISTA and Windows 7

By default installation for Windows VISTA the Telnet function is not enabled. It is enabled by configuring Windows features..

1. Navigate to **Start > Control Panel** in Windows Vista.

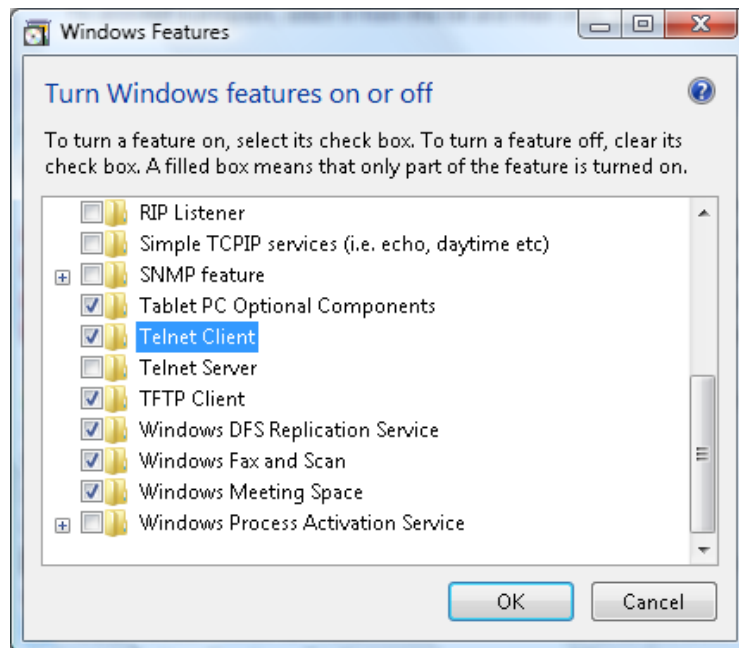


2. Select **Programs** to continue.

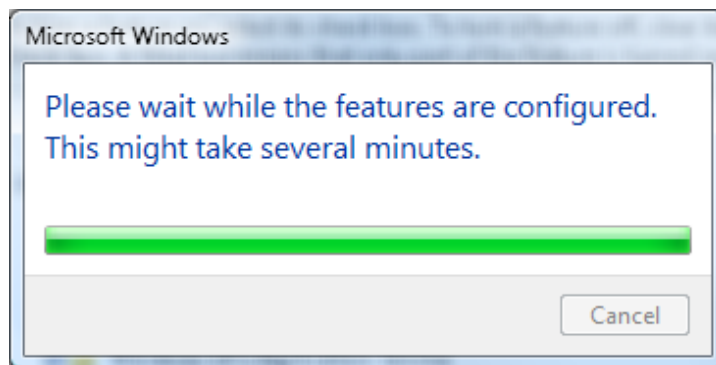


3. Select **Turn Windows features on or off** to open the Windows Features window.
4. Scroll down until the Telnet Client feature is displayed.

- Click the radio box to enable the Telnet Client feature.



- Click **OK** to continue.
The feature requires additional Windows configuration.

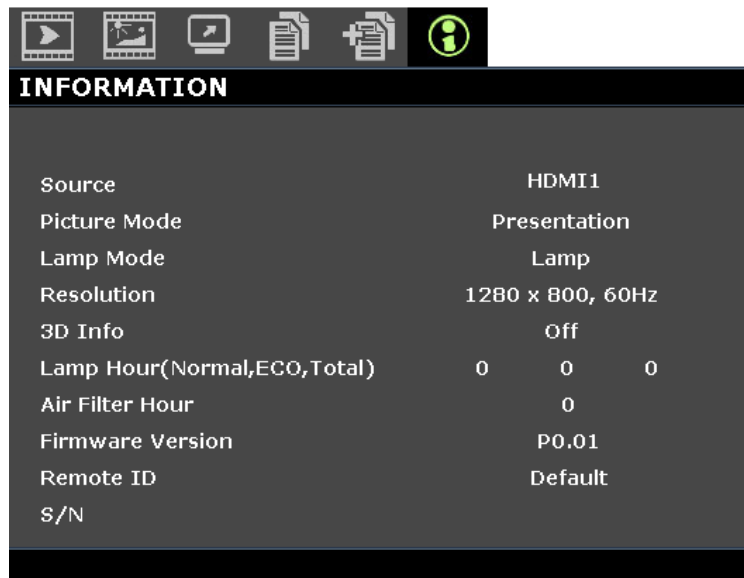


RS232 Spec sheet for Telnet

- Telnet: TCP.
- Telnet port: 23 (for further information, contact the system administrator).
- In console mode, type Telnet.exe to open the Windows console utility.
- Disconnect from RS232-by-Telnet normally:
Close Windows Telnet utility after Telnet connection is established.
- Limitation 1 for Telnet-Control: there is only one connection for Telnet-Control per projector.
Limitation 2 for Telnet-Control: there are less than 50 bytes for successive network payload for Telnet-Control application.
Limitation 3 for Telnet-Control: there are less than 26 bytes for one complete RS232 command for Telnet-Control.
Limitation 4 for Telnet-Control: Minimum delay between RS232 commands must be more than 200 (ms).
(*In Windows built-in **TELNET.exe** utility, **Enter** key represents a Carriage-Return and New-Line code value.)

INFORMATION Menu

Press the **MENU** button to open the **OSD** menu. Press the cursor ◀ / ▶ buttons to move to the **INFORMATION** Menu.



ITEM	DESCRIPTION
Source	Displays the activated input source.
Picture Mode	Displays picture mode for projection.
Lamp Mode	Displays lamp mode for projection.
Resolution	Displays the native resolution of input source.
3D Info	Displays 3D image information for projection.
Lamp Hour (Normal, ECO, Total)	Displays the number of hours the lamp has been in use.
Air Filter Hour	Displays the number of hours the air filter has been in use.
Firmware Version	Displays the firmware version of the projector.
Remote ID	Displays the projector ID to for remote viewing.
S/N	Displays the serial number of the projector

Note:

INFORMATION 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.



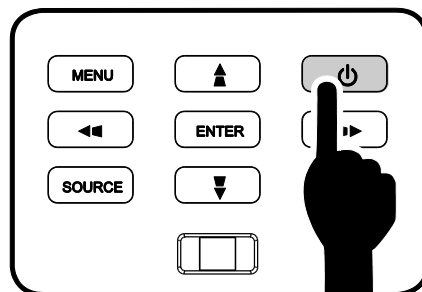
IF A LAMP EXPLODES

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.

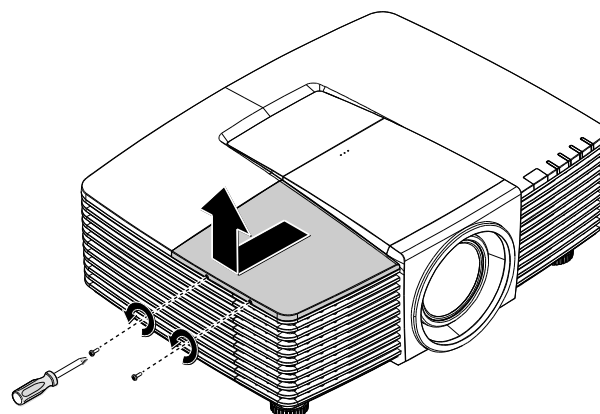
If you inhale the gas or the shards of the broken lamp enter your eyes or mouth, consult the doctor immediately.

- 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.



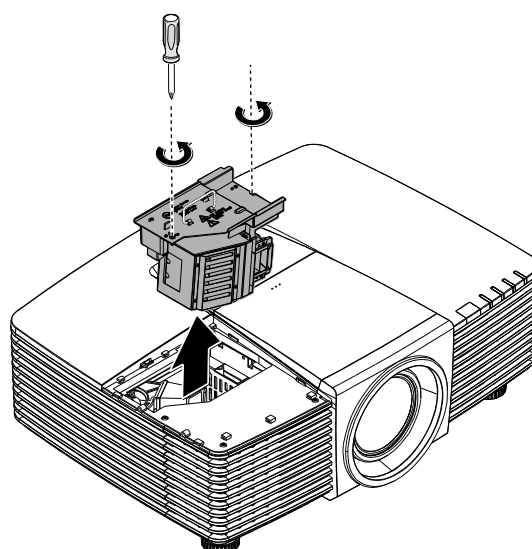
4. Unlock the lamp cover.

5. Pull up and remove the cover.



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

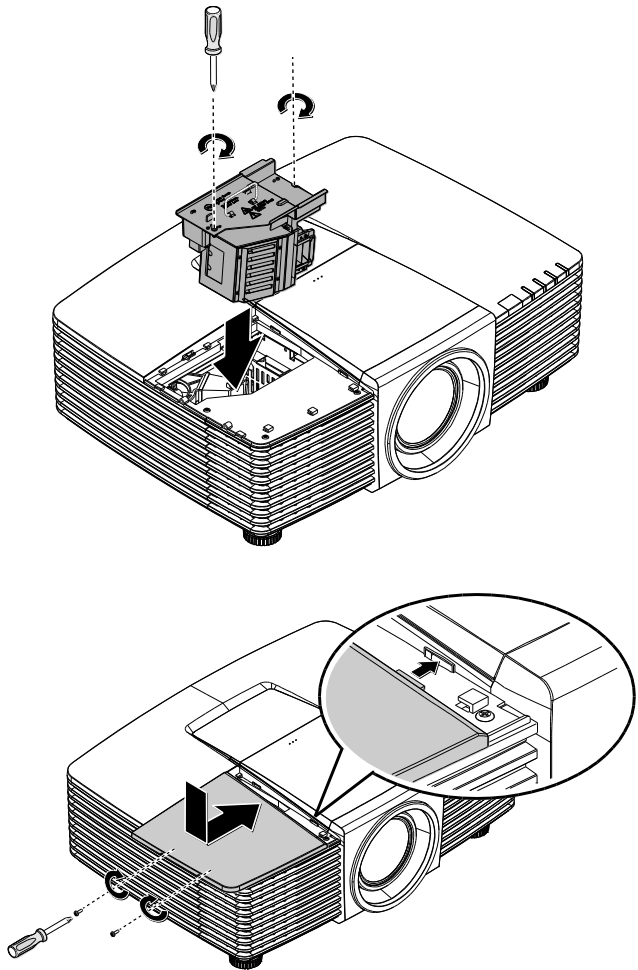
7. Pull out the lamp module.



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 Settings** > 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.



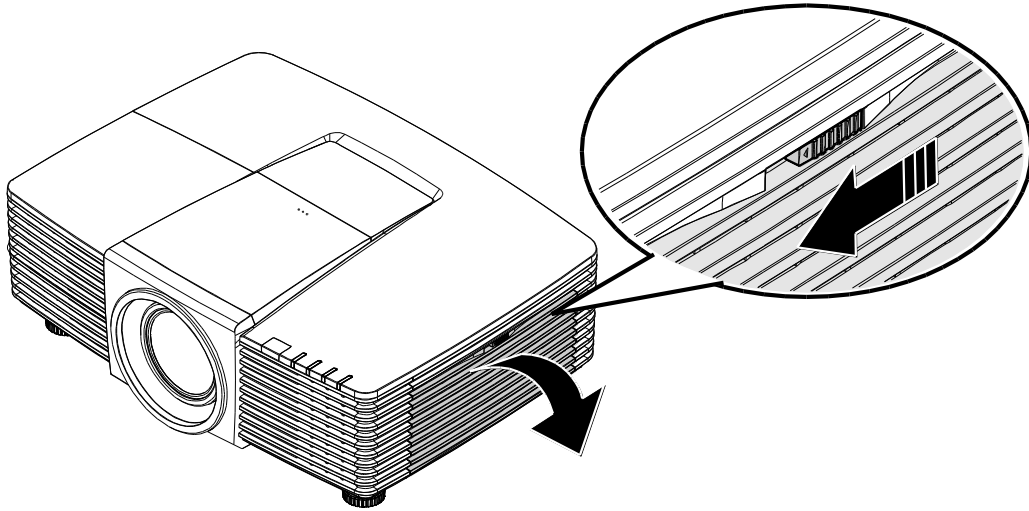
Caution:

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

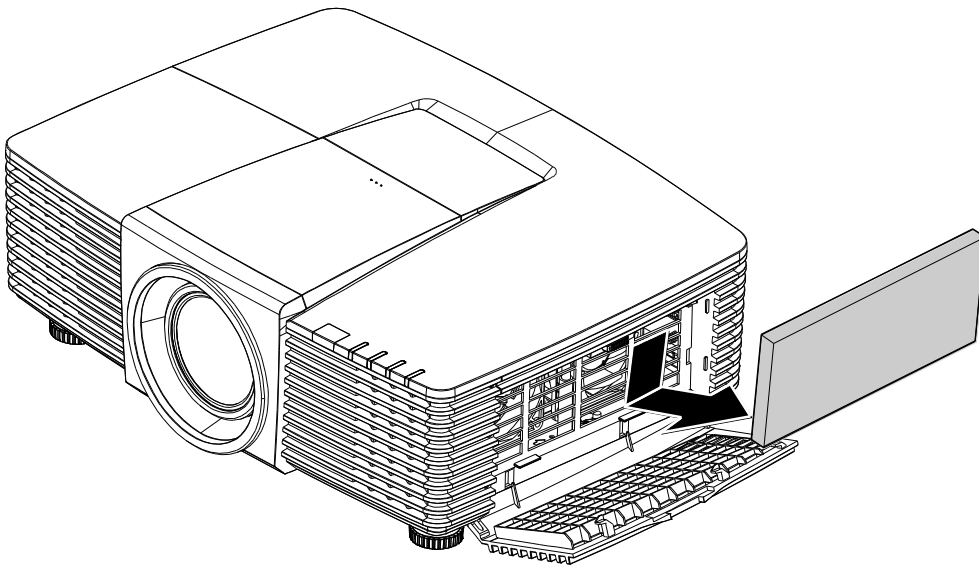
Cleaning the Air Filter

Refer to the following to clean the air filter.

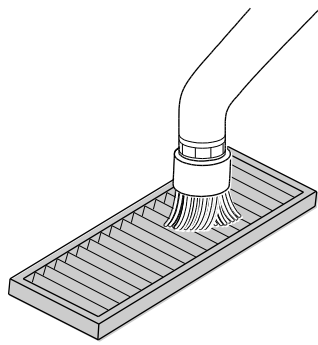
1. Open the latch to open the filter door.



2. Remove the filter.



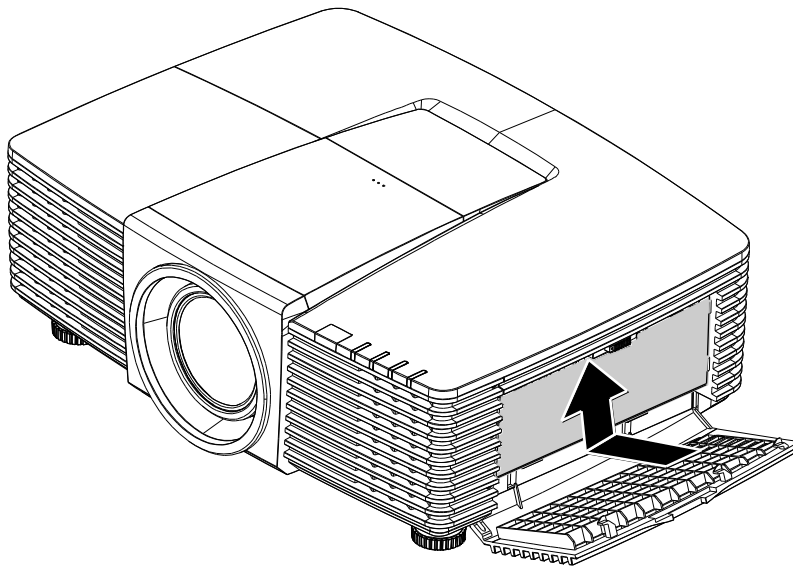
3. Use a vacuum cleaner to vacuum the dust inside.



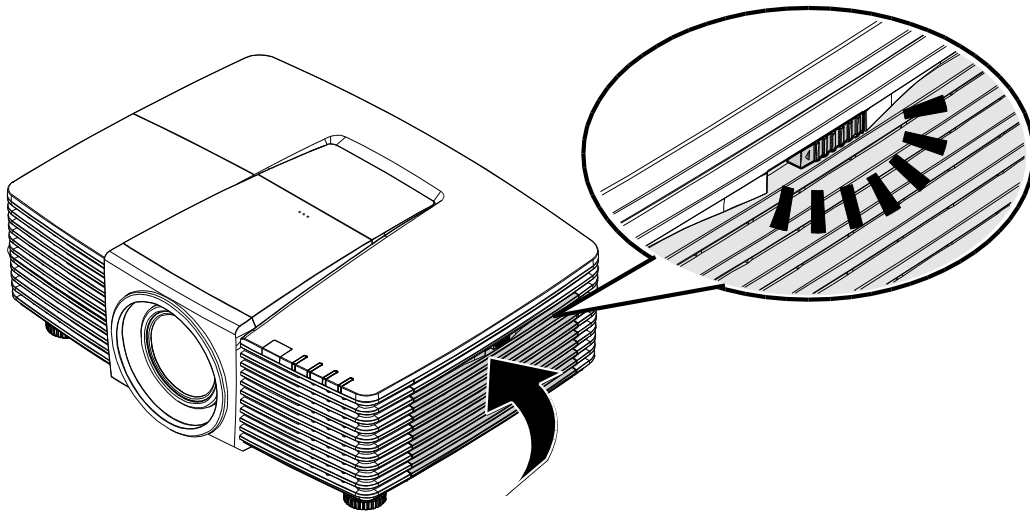
Note:

1. Use the soft brush attachment when you vacuum the filter to avoid damage it.
2. Do not wash the filter with water. Doing so can result in filter clogging.

4. Put the filter back.



5. Close the filter door and lock the latch.



6. Turn on the projector and reset the lamp after the lamp module is replaced.
Lamp Reset:
Press **MENU** > Select **SYSTEM SETUP >> Advanced** and select **Air Filter Timer Reset**.
Press **ENTER** to reset timer.



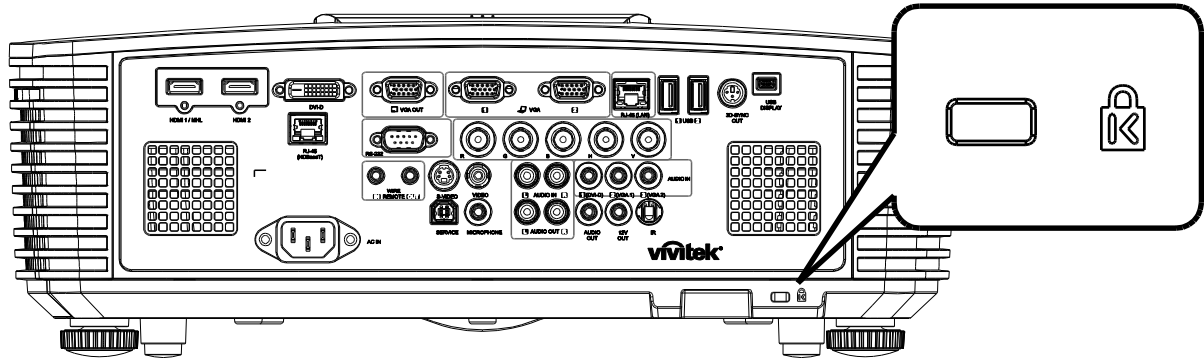
Important:

*The Filter LED lights when the filter service time is on (1000 hours).
If the filter is broken, please use a new one.*

Using the Physical Lock

Using the Kensington Security Slot

If you are concerned about security, attach the projector to a permanent object with the Kensington slot and a security cable.



Note:

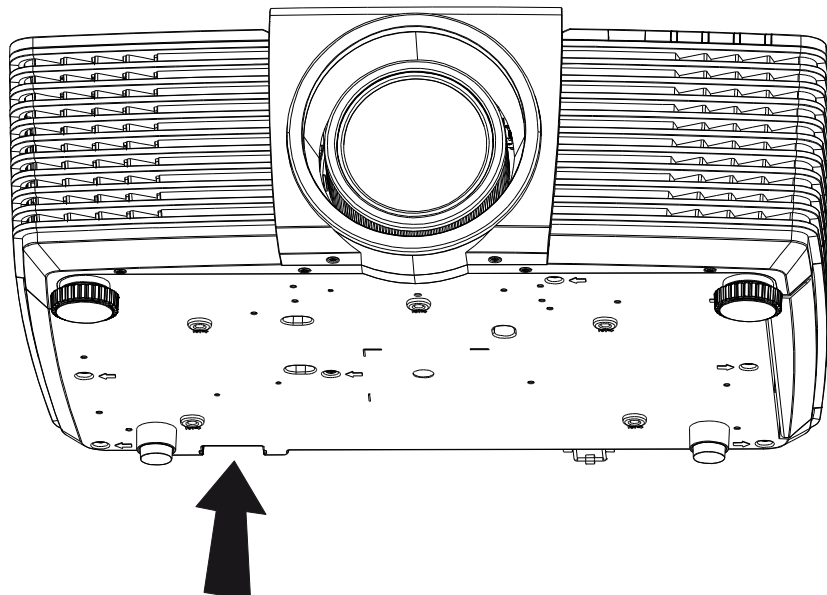
Contact your vendor for details on purchasing a suitable Kensington security cable.

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 Bar Lock

In addition to the password protection function and the Kensington lock, the Security Bar 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	LAMP LED	TEMP LED	FILTER LED
Lamp Ready	ON			
Start	Flashing			
Cooling	Flashing			
Over Temperature			ON	
Thermal Break Sensor error	4 blinks			
Lamp Re-Strike 6 times Failed	5 blinks			
Lamp Temperature shut down (Ballast Temp)	5 blinks	1 blinks		
Lamp Short circuit in output detected (Ballast circuit short)	5 blinks	2 blinks		
Lamp End of lamp life detected	5 blinks	3 blinks		
Lamp did not ignite	5 blinks	4 blinks		
Lamp extinguished during normal operation	5 blinks	5 blinks		
Lamp extinguished during run-up phase	5 blinks	6 blinks		
Lamp voltage too low	5 blinks	7 blinks		
Lamp Ballast Fail	5 blinks	8 blinks		
Lamp Ballast COMM Fail	5 blinks	10 blinks		
Lamp Ballast Over Temp	5 blinks	11 blinks		
Lamp voltage too low	5 blinks	12 blinks		
FAN1 error(Blower FAN1)	6 blinks	1 blinks		
FAN2 error(Blower FAN2)	6 blinks	2 blinks		
FAN3 error(Lamp FAN3)	6 blinks	3 blinks		
FAN4 error(DMD FAN)	6 blinks	4 blinks		
FAN5 error (Power FAN)	6 blinks	5 blinks		
1W MCU detects scaler stops working	2 blinks			
Case Open	7 blinks			
DMD error	8 blinks			
DDP442x not ready	8 blinks	1 blinks		
Color wheel error	9 blinks			
Air Filter replace warning	ON			ON

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, 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 **PC Detail Adjustment** 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 **PICTURE >> Basic** 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 **PICTURE >> Advanced** menu of the OSD.

Lamp Problems

Problem: There is no light from the projector

1. Check that the power cable is securely connected.
2. Ensure the power source is good by testing with another electrical device.
3. Restart the projector in the correct order and check that the Power LED is on.
4. If you have replaced the lamp recently, try resetting the lamp connections.
5. Replace the lamp module.
6. Put the old lamp back in the projector and have the projector serviced.

Problem: The lamp goes off

1. Power surges can cause the lamp to turn off. Re-plug power cord. When the Power LED is on, press the power button.
2. Replace the lamp module.
3. Put the old lamp back in the projector and have the projector serviced.

Remote Control Problems

Problem: The projector does not respond to the remote control

1. Direct the remote control towards remote sensor on the projector.
2. Ensure the path between remote and sensor is not obstructed.
3. Turn off any fluorescent lights in the room.
4. Check the battery polarity.
5. Replace the batteries.
6. Turn off other Infrared-enabled devices in the vicinity.
7. Have the remote control serviced.

Audio Problems

Problem: There is no sound

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

Problem: The sound is distorted

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

Having the Projector Serviced

If you are unable to solve the problem, you should have the projector serviced. Pack the projector in the original carton. Include a description of the problem and a checklist of the steps you took when trying to fix the problem: The information may be useful to service personnel. For servicing, return the projector to the place you purchased it.

HDMI Q & A

Q. What is the difference between a “Standard” HDMI cable and a “High-Speed” HDMI cable?

Recently, HDMI Licensing, LLC announced that cables would be tested as Standard or High-Speed cables.

Standard (or “category 1”) HDMI cables have been tested to perform at speeds of 75Mhz or up to 2.25Gbps, which is the equivalent of a 720p/1080i signal.

High Speed (or “category 2”) HDMI cables have been tested to perform at speeds of 340Mhz or up to 10.2Gbps, which is the highest bandwidth currently available over an HDMI cable and can successfully handle 1080p signals including those at increased color depths and/or increased refresh rates from the Source. High-Speed cables are also able to accommodate higher resolution displays, such as WQXGA cinema monitors (resolution of 2560 x 1600).

Q. How do I run HDMI cables longer than 10 meters?

There are many HDMI Adopters working on HDMI solutions that extend a cable's effective distance from the typical 10 meter range to much longer lengths. These companies manufacture a variety of solutions that include active cables (active electronics built into cables that boost and extend the cable's signal), repeaters, amplifiers as well as CAT5/6 and fiber solutions.

Q. How can I tell if a cable is an HDMI certified cable?

All HDMI products are required to be certified by the manufacturer as part of the HDMI Compliance Test Specification. However, there may be instances where cables bearing the HDMI logo are available but have not been properly tested. HDMI Licensing, LLC actively investigates these instances to ensure that the HDMI trademark is properly used in the market. We recommend that consumers buy their cables from a reputable source and a company that is trusted.

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

SPECIFICATIONS

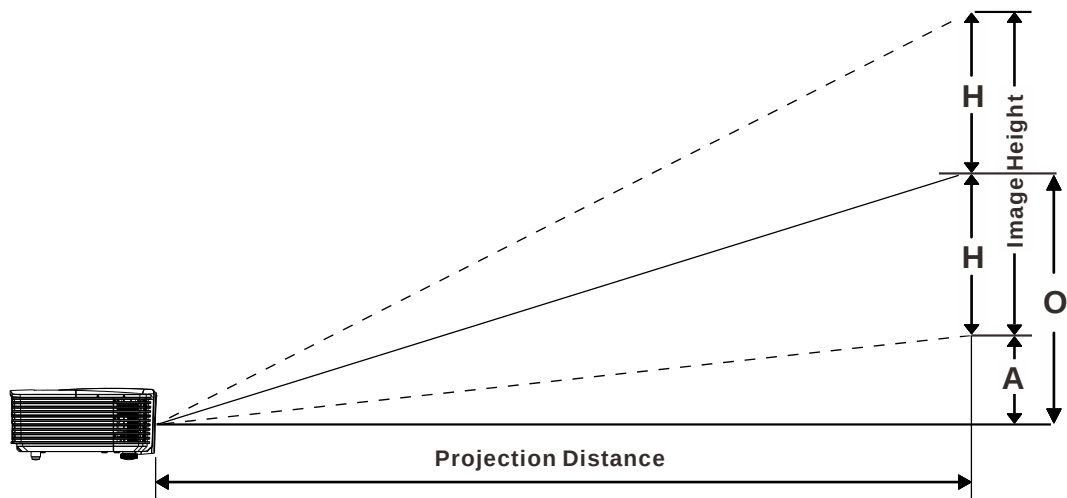
Specifications

Model Name		DX3351	DW3321
Display Type		0.7" XGA	0.65" WXGA
Resolution		1024x768 Native	1280x800 Native
Projection Distance		1 meters ~ 10 meters	
Projection Screen Size		22.3"~378.6" inches	20.7"~351.7" inches
Projection Lens		Manual Focus/Manual Zoom	
Zoom Ratio		1.7x	
Keystone Correction	Vertical	$\pm 30^\circ$ for ± 30 steps	
	Horizontal	$\pm 25^\circ$ for ± 25 steps	
Projection Methods		Front, Rear, Desktop/Ceiling (Rear, Front)	
Data Compatibility		VGA, SVGA, XGA, SXGA, SXGA+, UXGA, WUXGA@60hz, 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		24 - 30Hz, 47 – 120 Hz	
Safety Certification		FCC-B, cUL, UL, CE, C-tick, CCC, KC, CB, CU, ICES-003, NOM, SASO, China CECP	
Operation Temperature		5° ~ 35°C	
Dimensions		444.6mm (W) x 330.2mm (D) x 161.5mm (H)	
AC Input		AC Universal 100 – 240, Typical @ 110VAC (100 – 240)/+-10%	
Power Consumption		Typical 530W (Normal) / Typical 430W (Eco)	
Stand By		<0.5 watts	
Lamp		370W (Normal) / 280W (Eco)	
Audio Speaker		7W RMS x 2	
Input Terminals		VGA x 2	
		DVI-D x 1	
		S-Video x 1	
		5 BNC (RGBHV) x 1	
		Mini-jack Stereo x 3	
		Composite video x 1	
		HDMI (MHL) x 1, HDMI x 1	
		Audio RCA (R/L) x 1	
		Microphone mini jack x 1	
		USB type A x 2	
		-	RJ45 (HDBaseT)

Output Terminals	VGA x 1
	Audio RCA (R/L) x 1
	PC audio x 1
	3D-Sync x 1
Control Terminals	RS-232C x 1
	RJ45 x 1
	12V OUT: PC Jack x 1 (DC12V 200mA output function)
	Wired Remote x 1
	Wired Remote Out x 1
	USB (Type B) (Service only)
	USB Display (Mini B) x 1
Security	Kensington Security Slot
	Security Bar

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

Projection Distance vs. Projection Size



Projection Distance and Size Table

DW3321 0.65" WXGA

	TELE					WIDE				
Distance (m)	1.93	3.86	4.82	9.65	10	1.42	2.84	5.69	8.53	10
Diagonal (")	40	80	100	200	207	50	100	200	300	352
Image Width (cm)	86.2	172.3	215.4	430.8	446.4	107.7	215.4	430.8	646.2	757.6
Image Height (cm)	53.8	107.7	134.6	269.2	279	67.3	134.6	269.2	403.9	473.5
H (cm)	27	54	67	135	140	34	67	135	202	237
O (cm)	36	72	90	181	187	45	90	181	271	318
A (cm)	9.2	18.5	23.1	46.2	47.8	11.5	23.1	46.2	69.3	81.2

DX3351 XGA 0.7" XGA

	TELE					WIDE				
Distance (m)	1.8	3.59	4.49	8.98	10	1.32	2.64	5.28	7.92	10
Diagonal (")	40	80	100	200	223	50	100	200	300	378.5 6
Image Width (cm)	81.3	162.6	203.2	406.4	452.5	101.6	203.2	406.4	609.6	769.2
Image Height (cm)	61	121.9	152.4	304.8	339.4	76.2	152.4	304.8	457.2	579.2
H (cm)	31	61	76	152	170	38	76	152	229	290
O (cm)	38	76	95	190	212	48	95	190	285	361
A (cm)	7.5	15.1	18.8	37.6	41.9	9.4	18.8	37.6	56.5	71.3

Timing Mode Table

SIGNAL	RESOLUTION	H-SYNC (KHz)	V-SYNC (Hz)	COMPOSITE S_VIDEO	COMPO NENT	VGA/BNC (ANALOG)	HDMI (DIGITAL)
NTSC	—	15.734	60.0	○ (3D:S)	—	—	—
PAL/SECAM	—	15.625	50.0	○	—	—	—
VESA	720 x 400	31.5	70.1	—	—	○	○
	640 x 480	31.5	60.0	—	—	○ (3D:FS, TB, SBS)	○ (3D:FS, TB, SBS)
	640 x 480	35.0	66.667	—	—	MAC13	MAC13
	640 x 480	37.86	72.8	—	—	—	○
	640 x 480	37.5	75.0	—	—	○	○
	640 x 480	43.3	85.0	—	—	○	○
	640 x 480	61.9	119.5	—	—	○(3D:FS)	○
	800 x 600	37.9	60.3	—	—	○ (3D:FS, TB, SBS)	○ (3D:FS, TB, SBS)
	800 x 600	46.9	75.0	—	—	○	○
	800 x 600	48.1	72.2	—	—	○	○
	800 x 600	53.7	85.1	—	—	○	○
	800 x 600	76.3	120.0	—	—	○(3D:FS)	○(3D:FS)
	832 x 624	49.722	74.546	—	—	MAC16	MAC16
	1024 x 576	35.82	60.0	—	—	○	—
	1024 x 600	37.5	60.0	—	—	○	—
	1024 x 600	41.47	60.0	—	—	○	—
	1024 x 768	48.4	60.0	—	—	○ (3D:FS, TB, SBS)	○ (3D:FS, TB, SBS)
	1024 x 768	56.5	70.1	—	—	○	○
	1024 x 768	60.241	75.02	—	—	MAC19	MAC19
	1024 x 768	60.0	75.0	—	—	○	○
	1024 x 768	68.7	85.0	—	—	○	○
	1024 x 768	97.6	120.0	—	—	○ (3D:FS)	○ (3D:FS)
	1152 x 870	68.68	75.06	—	—	MAC21	MAC21
	1280 x 720	45.0	60.0	—	—	○ (3D:FS, TB, SBS)	○ (3D:FS, TB, SBS)
	1280 x 720	90.0	120.0	—	—	○ (3D:FS)	○ (3D:FS)

SIGNAL	RESOLUTION	H-SYNC (KHz)	V-SYNC (Hz)	COMPOSITE S_VIDEO	COMPO NENT	VGA/BNC (ANALOG)	HDMI (DIGITAL)
VESA	1280 x 768 (Reduce Blanking)	47.4	60	—	—	○ (3D:FS, TB, SBS)	○ (3D:FS, TB, SBS)
	1280 x 768	47.8	59.9	—	—	○○ (3D:FS, TB, SBS)	○ (3D:FS, TB, SBS)
	1280 x 800	49.7	59.8	—	—	○○ (3D:FS, TB, SBS)	○ (3D:FS, TB, SBS)
	1280 x 800	62.8	74.9	—	—	○	○
	1280 x 800	71.6	84.9	—	—	○	○
	1280 x 800	101.6	119.9	—	—	○ (3D:FS)	○ (3D:FS)
	1280 x 1024	64.0	60.0	—	—	○ (3D:TB, SBS)	○ (3D:TB, SBS)
	1280 x 1024	80.0	75.0	—	—	○	○
	1280 x 1024	91.1	85.0	—	—	○	○
	1280 x 960	60.0	60.0	—	—	○ (3D:TB, SBS)	○ (3D:TB, SBS)
	1280 x 960	85.9	85.0	—	—	○	○
	1400 x 1050	65.3	60.0	—	—	○ (3D:TB, SBS)	○ (3D:TB, SBS)
	1440 x 900	55.9	59.9	—	—	○ (3D:TB, SBS)	○ (3D:TB, SBS)
	1600 x1200	75.0	60	—	—	○ (3D:TB, SBS)	○ (3D:TB, SBS)
	1680 x1050 (Reduce Blanking)	64.67	59.88	—	—	○ (3D:TB, SBS)	○ (3D:TB, SBS)
	1920 x 1080	67.5	60.0	—	—	○	○
	1920 x 1200 (Reduce Blanking)	74.038	59.95	—	—	○ (3D:TB, SBS)	○ (3D:TB, SBS)
SDTV	480i	15.734	60.0	—	○	—	(3D:FS)
	576i	15.625	50.0	—	○	—	—

SIGNAL	RESOLUTION	H-SYNC (KHz)	V-SYNC (Hz)	COMPOSITE S_VIDEO	COMPO NENT	VGA/BNC (ANALOG)	HDMI (DIGITAL)
EDTV	576p	31.3	50.0	—	○	—	—
	480p	31.5	60.0	—	○	—	—
HDTV	720p	37.5	50.0	—	○	—	(3D:FP, TB)
	720p	45.0	60.0	—	○	—	(3D:FP, TB)
	1080i	33.8	60.0	—	○	—	(3D:SBS)
	1080i	28.1	50.0	—	○	—	(3D:SBS)
	1080p	27	24.0	—	○	—	(3D:FP, TB)
	1080p	28	25.0	—	○	—	—
	1080p	33.7	30.0	—	○	—	—
	1080p	56.3	50.0	—	○	—	—
	1080p	67.5	60.0	—	○	—	—

O: Frequency supported

—: Frequency not supported

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

3D:

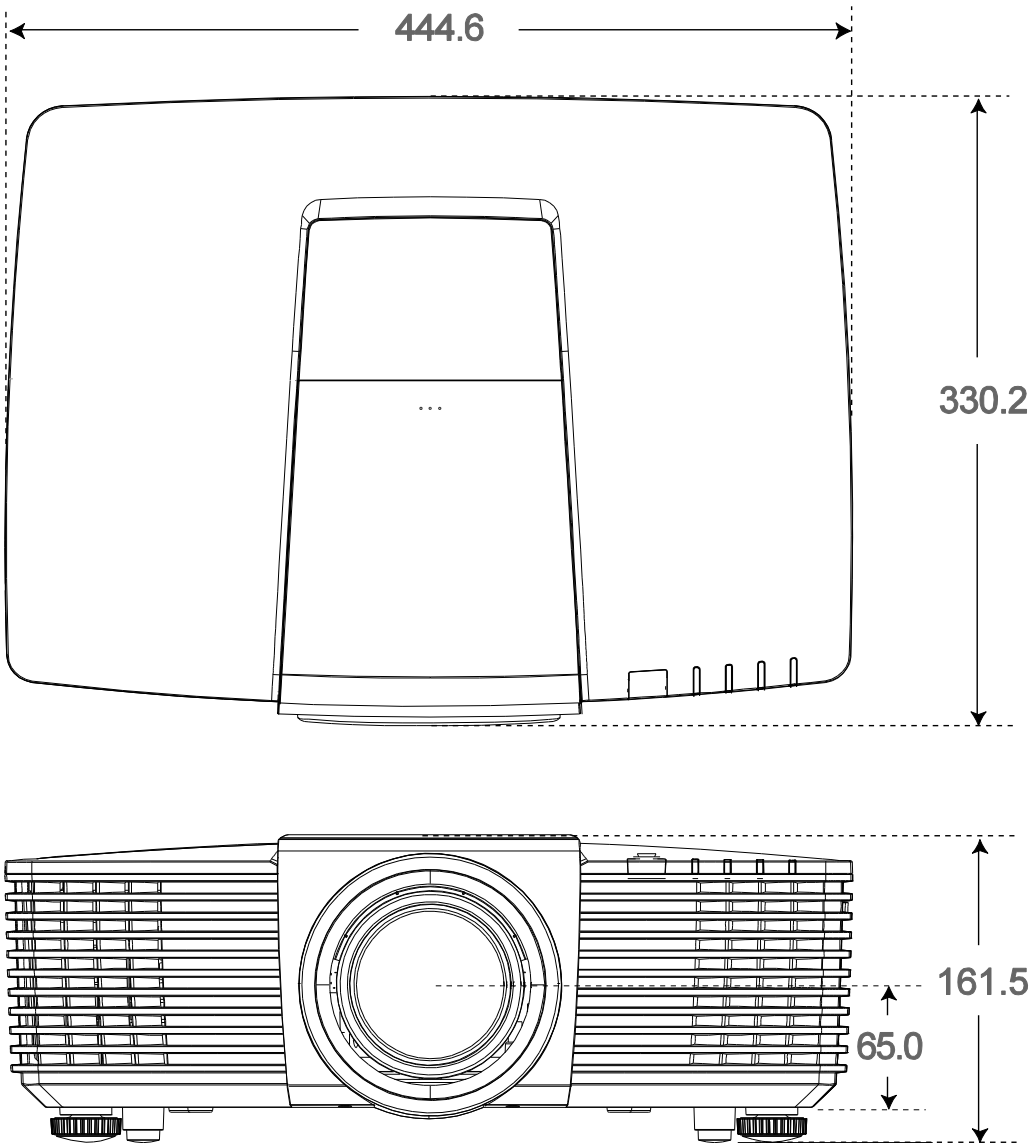
FS: Field Sequential

TB: Top / Bottom

SBS: Side-By-Side

FP: Frame Packing

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.

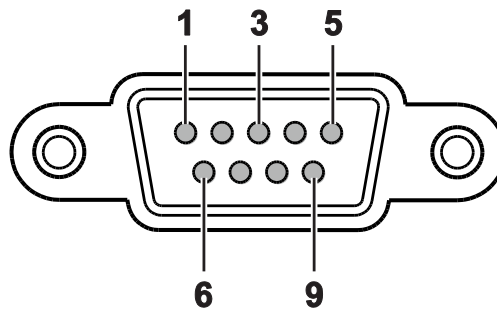
Canada

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.

RS232 Pin Assignments (Projector Side)



PIN NO.	NAME	I/O (FROM PROJECTOR SIDE)
1	NC	—
2	RXD	IN
3	TXD	OUT
4	NC	—
5	GND	—
6	NC	—
7	NC	—
8	NC	—
9	NC	—

RS-232C Protocol

RS232 Setting

Baud rate:	9600
Parity check:	None
Data bit:	8
Stop bit:	1
Flow Control	None
UART16550 FIFO	Disable

Control Command Structure

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

	HEADER CODE	COMMAND CODE	DATA CODE	END CODE
HEX		Command	Data	0Dh
ASCII	'V'	Command	Data	CR

Operation Command

Note:

"CR" mean Carriage Return

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
VXXS0001	56H 39H 39H 53H 30H 30H 30H 31H 0DH	Power On	
VXXS0002	56H 39H 39H 53H 30H 30H 30H 32H 0DH	Power Off	
VXXS0003	56H 39H 39H 53H 30H 30H 30H 33H 0DH	Resync	
VXXG0004	56H 39H 39H 47H 30H 30H 30H 34H 0DH	Get Lamp Hours	
VXXS0005n	56H 39H 39H 53H 30H 30H 30H 35H n 0DH	Set Air filter timer	n= 0~60000
VXXG0005	56H 39H 39H 47H 30H 30H 30H 35H 0DH	Get Air filter timer	n= 0~60000
VXXS0006	56H 39H 39H 53H 30H 30H 30H 36H 0DH	System Reset	
VXXG0007	56H 39H 39H 47H 30H 30H 30H 37H 0DH	Get System Status	1: Standby 2: Operation 3: Cooling
VXXG0008	56H 39H 39H 47H 30H 30H 30H 38H 0DH	Get F/W Version	

COMMAND GROUP 01			
ASCII	HEX	FUNCTION	DESCRIPTION
VXXG0101	56H 39H 39H 47H 30H 31H 30H 31H 0DH	Get Brightness	n= 0~100
VXXS0101n	56H 39H 39H 53H 30H 31H 30H 31H n 0DH	Set Brightness	n= 0~100
VXXG0102	6H 39H 39H 47H 30H 31H 30H 32H 0DH	Get Contrast	n= -50~50
VXXS0102n	56H 39H 39H 53H 30H 31H 30H 32H n 0DH	Set Contrast	n= -50~50
VXXG0103	56H 39H 39H 47H 30H 31H 30H 33H 0DH	Get Color	n= -50~50
VXXS0103n	56H 39H 39H 53H 30H 31H 30H 33H n 0DH	Set Color	n= -50~50
VXXG0104	56H 39H 39H 47H 30H 31H 30H 34H 0DH	Get Tint	n= -50~50
VXXS0104n	56H 39H 39H 53H 30H 31H 30H 34H n 0DH	Set Tint	n= -50~50
VXXG0105	56H 39H 39H 47H 30H 31H 30H 35H 0DH	Get Sharpness	0~15
VXXS0105n	56H 39H 39H 53H 30H 31H 30H 35H n 0DH	Set Sharpness	0~15
VXXG0106	56H 39H 39H 47H 30H 31H 30H 36H 0DH	Get Color Temperature	0: D65 (Warm) 1: D75 (Normal) 2: D83 (Cold)
VXXS0106n	56H 39H 39H 53H 30H 31H 30H 36H n 0DH	Set Color Temperature	0: D65 (Warm) 1: D75 (Normal) 2: D83 (Cold)

COMMAND GROUP 01			
ASCII	HEX	FUNCTION	DESCRIPTION
VXXG0107	56H 39H 39H 47H 30H 31H 30H 37H 0DH	Get Gamma	0: 1.8 1: 2.0 2: 2.2 3: 2.4 4: S Curve 5: B&W 6: Linear
VXXS0107n	56H 39H 39H 53H 30H 31H 30H 37H n 0DH	Set Gamma	0: 1.8 1: 2.0 2: 2.2 3: 2.4 4: S Curve 5: B&W 6: Linear
XXG0108	56H 39H 39H 47H 30H 31H 30H 38H 0DH	Get Display Mode	0: Presentation 1: Bright 2: Game 3: Movie 4: Vivi 5: TV 6: sRGB 7: Blackboard 8: DICOM SIM 10: User1 11: User2
VXXS0108n	56H 39H 39H 53H 30H 31H 30H 38H n 0DH	Set Display Mode	0: Presentation 1: Bright 2: Game 3: Movie 4: Vivi 5: TV 6: sRGB 7: Blackboard 8: DICOM SIM 10: User1 11: User2

COMMAND GROUP 02			
ASCII	HEX	FUNCTION	DESCRIPTION
VXXS0201	56H 39H 39H 53H 30H 32H 30H 31H 0DH	Select VGA1	
VXXS0202	56H 39H 39H 53H 30H 32H 30H 32H 0DH	Select VGA2	
VXXS0203	56H 39H 39H 53H 30H 32H 30H 33H 0DH	Select DVI	
VXXS0204	56H 39H 39H 53H 30H 32H 30H 34H 0DH	Select Video	
VXXS0205	56H 39H 39H 53H 30H 32H 30H 35H 0DH	Select S-Video	
VXXS0206	56H 39H 39H 53H 30H 32H 30H 36H 0DH	Select HDMI 1	
VXXS0207	56H 39H 39H 53H 30H 32H 30H 37H 0DH	Select BNC	
VXXS0209	56H 39H 39H 53H 30H 32H 30H 39H 0DH	Select HDMI 2	
VXXS0212	56H 39H 39H 53H 30H 32H 32H 31H 0DH	Select Network	

COMMAND GROUP 02			
ASCII	HEX	FUNCTION	DESCRIPTION
		Display	
VXXS0213	56H 39H 39H 53H 30H 32H 33H 31H 0DH	Select USB Reader	
VXXS0214	56H 39H 39H 53H 30H 32H 34H 31H 0DH	Select USB Display	
VXXS0215	56H 39H 39H 53H 30H 32H 35H 31H 0DH	Select HD BasT	
VXXG0220	56H 39H 39H 47H 30H 32H 32H 30H 0DH	Get Current Source	Return 1: VGA 1 2: VGA 2 3: DVI 4: Video 5: S-Video 6: HDMI 1 / MHL 7: BNC 9: HDMI 2 12: Network Display 13: USB Reader 14: USB Display 15: HDBaseT

COMMAND GROUP 03			
ASCII	HEX	FUNCTION	DESCRIPTION
VXXG0301	56H 39H 39H 47H 30H 33H 30H 31H 0DH	Get Scaling	0: Fill 1: 4:3 2: 16:9 3: 16:10 4: Letter Box (Not support in 3D) 5: Native 6: 2.35:1
VXXS0301n	56H 39H 39H 53H 30H 33H 30H 31H n 0DH	Set Scaling	0: Fill 1: 4:3 2: 16:9 3: 16:10 4: Letter Box (Not support in 3D) 5: Native 6: 2.35:1
VXXG0302	56H 39H 39H 47H 30H 33H 30H 32H 0DH	Get Blank	
VXXS0302n	56H 39H 39H 53H 30H 33H 30H 32H n 0DH	Set Blank	n= 0 UnBlank, n= 1 Blank
VXXG0304	56H 39H 39H 47H 30H 33H 30H 34H 0DH	Get Freeze	
VXXS0304n	56H 39H 39H 53H 30H 33H 30H 34H n 0DH	Set Freeze	n= 0 UnFreeze, n= 1 Freeze
VXXG0305	56H 39H 39H 47H 30H 33H 30H 35H 0DH	Volume	n= 0~10
VXXS0305n	56H 39H 39H 53H 30H 33H 30H 35H n 0DH	Volume	n= 0~10

COMMAND GROUP 03			
ASCII	HEX	FUNCTION	DESCRIPTION
VXXG0308	56H 39H 39H 47H 30H 33H 30H 38H 0DH	Projection Mode	0: Front 1: Rear 2: Ceiling 3: Rear+Ceiling
VXXS0308n	56H 39H 39H 53H 30H 33H 30H 38H n 0DH	Projection Mode	0: Front 1: Rear 2: Ceiling 3: Rear+Ceiling
VXXG0309	56H 39H 39H 47H 30H 33H 30H 39H 0DH	Set vertical keystone value	n= -30~30
VXXS0309n	56H 39H 39H 53H 30H 33H 30H 39H n 0DH	Set vertical keystone value	n= -30~30
VXXG0310	56H 39H 39H 47H 30H 33H 31H 30H 0DH	Set horizontal keystone value	n= -25~+25
VXXS0310n	56H 39H 39H 53H 30H 33H 31H 30H n 0DH	Set horizontal keystone value	n= -25~+25
VXXG0315	56H 39H 39H 47H 30H 33H 31H 35H 0DH	Get 3D	0:Off(When Set 3D Format is Off, this 3D sync returns Off.) 1:DLP-Link 2:IR
VXXS0315n	56H 39H 39H 53H 30H 33H 31H 35H n 0DH	Set 3D	0:Off(Not support item "Off", Use Set 3D Format to turn 3D sync Off.) 1:DLP-Link 2:IR
VXXG0316	56H 39H 39H 47H 30H 33H 31H 36H 0DH	Get 3D Sync Invert	0: Off 1: On
VXXS0316n	56H 39H 39H 53H 30H 33H 31H 36H n 0DH	Set 3D Sync Invert	0: Off 1: On
VXXG0317	56H 39H 39H 47H 30H 33H 31H 37H 0DH	Get 3D Format	0: Off 2: Top/Bottom 3: Frame Sequential 4: Frame Packing 5: Side-By-Side 7: Auto
VXXS0317n	56H 39H 39H 53H 30H 33H 31H 37H n 0DH	Set 3D Format	0: Off 2: Top/Bottom 3: Frame Sequential 4: Frame Packing 5: Side-By-Side 7: Auto
VXXG0319	56H 39H 39H 47H 30H 33H 31H 38H 39H 0DH	Get Lamp Mode	0: Eco 1: Normal 2: Dynamic ECO

COMMAND GROUP 03			
ASCII	HEX	FUNCTION	DESCRIPTION
VXXS0319n	56H 39H 39H 53H 30H 33H 31H 38 39H n 0DH	Get Lamp Mode	0: Eco 1: Normal 2: Dynamic ECO
VXXG0321	56H 39H 39H 47H 30H 33H 32H 31H 0DH	Get Splash Logo	0: STD (Vivitek) 1: Black 2: Blue
VXXS0321n	56H 39H 39H 53H 30H 33H 32H 31H n 0DH	Set Splash Logo	0: STD (Vivitek) 1: Black 2: Blue
VXXG0330	56H 39H 39H 47H 30H 33H 33H 30H 0DH	Get Sleep Timer	0: Disable 1: 30min 2: 60min 3: 120min 4: 180min 5: 240min 6: 480min 7: 720min
VXXS0330n	56H 39H 39H 53H 30H 33H 33H 30H n 0DH	Set Sleep Timer	0: Disable 1: 30min 2: 60min 3: 120min 4: 180min 5: 240min 6: 480min 7: 720min
VXXG0331	56H 39H 39H 47H 30H 33H 33H 31H 0DH	Get R Gain	n= 0~100
VXXS0331n	56H 39H 39H 53H 30H 33H 33H 31H n 0DH	Set R Gain	n= 0~100
VXXG0332	56H 39H 39H 47H 30H 33H 33H 32H 0DH	Get G Gain	n= 0~100
VXXS0332n	56H 39H 39H 53H 30H 33H 33H 32H n 0DH	Set G Gain	n= 0~100
VXXG0333	56H 39H 39H 47H 30H 33H 33H 33H 0DH	Get B Gain	n= 0~100
VXXS0333n	56H 39H 39H 53H 30H 33H 33H 33H n 0DH	Set B Gain	n= 0~100
VXXG0334	56H 39H 39H 47H 30H 33H 33H 34H 0DH	Get R Offset	n= -50~50
VXXS0334n	56H 39H 39H 53H 30H 33H 33H 34H n 0DH	Set R Offset	n= -50~50
VXXG0335	56H 39H 39H 47H 30H 33H 33H 35H 0DH	Get G Offset	n= -50~50
VXXS0335n	56H 39H 39H 53H 30H 33H 33H 35H n 0DH	Set G Offset	n= -50~50
VXXG0336	56H 39H 39H 47H 30H 33H 33H 36H 0DH	Get B Offset	n= -50~50
VXXS0336n	56H 39H 39H 53H 30H 33H 33H 36H n 0DH	Set B Offset	n= -50~50
VXXG0337	56H 39H 39H 47H 30H 33H 33H 37H 0DH	Get White R Gain	n= 0~100
VXXS0337n	56H 39H 39H 53H 30H 33H 33H 37H n 0DH	Set White R Gain	n= 0~100
VXXG0338	56H 39H 39H 47H 30H 33H 33H 38H 0DH	Get White G Gain	n= 0~100
VXXS0338n	56H 39H 39H 53H 30H 33H 33H 38H n 0DH	Set White G Gain	n= 0~100
VXXG0339	56H 39H 39H 47H 30H 33H 33H 39H 0DH	Get White B Gain	n= 0~100
VXXS0339n	56H 39H 39H 53H 30H 33H 33H 39H n 0DH	Set White B Gain	n= 0~100
VXXG0340	56H 39H 39H 47H 30H 33H 34H 30H 0DH	Get R_Hue	n= -99~99

COMMAND GROUP 03			
ASCII	HEX	FUNCTION	DESCRIPTION
VXXS0340n	56H 39H 39H 53H 30H 33H 34H 30H n 0DH	Set R_Hue	n= -99~99
VXXG0341	56H 39H 39H 47H 30H 33H 34H 31H 0DH	Get R_Saturation	n= 0~199
VXXS0341n	56H 39H 39H 53H 30H 33H 34H 31H n 0DH	Set R_Saturation	n= 0~199
VXXG0342	56H 39H 39H 47H 30H 33H 34H 32H 0DH	Get R_Gain	n= 5~195
VXXS0342n	56H 39H 39H 53H 30H 33H 34H 32H n 0DH	Set R_Gain	n= 5~195
VXXG0343	56H 39H 39H 47H 30H 33H 34H 33H 0DH	Get G_Hue	n= -99~99
VXXS0343n	56H 39H 39H 53H 30H 33H 34H 33H n 0DH	Set G_Hue	n= -99~99
VXXG0344	56H 39H 39H 47H 30H 33H 34H 34H 0DH	Get G_Saturation	n= 0~199
VXXS0344n	56H 39H 39H 53H 30H 33H 34H 34H n 0DH	Set G_Saturation	n= 0~199
VXXG0345	56H 39H 39H 47H 30H 33H 34H 35H 0DH	Get G_Gain	n= 5~195
VXXS0345n	56H 39H 39H 53H 30H 33H 34H 35H n 0DH	Set G_Gain	n= 5~195
VXXG0346	56H 39H 39H 47H 30H 33H 34H 36H 0DH	Get B_Hue	n= -99~99
VXXS0346n	56H 39H 39H 53H 30H 33H 34H 36H n 0DH	Set B_Hue	n= -99~99
VXXG0347	56H 39H 39H 47H 30H 33H 34H 37H 0DH	Get B_Saturation	n= 0~199
VXXS0347n	56H 39H 39H 53H 30H 33H 34H 37H n 0DH	Set B_Saturation	n= 0~199
VXXG0348	56H 39H 39H 47H 30H 33H 34H 38H 0DH	Get B_Gain	n= 5~195
VXXS0348n	56H 39H 39H 53H 30H 33H 34H 38H n 0DH	Set B_Gain	n= 5~195
VXXG0349	56H 39H 39H 47H 30H 33H 34H 39H 0DH	Get C_Hue	n= -99~99
VXXS0349n	56H 39H 39H 53H 30H 33H 34H 39H n 0DH	Set C_Hue	n= -99~99
VXXG0350	56H 39H 39H 47H 30H 33H 35H 30H 0DH	Get C_Saturation	n= 0~199
VXXS0350n	56H 39H 39H 53H 30H 33H 35H 30H n 0DH	Set C_Saturation	n= 0~199
VXXG0351	56H 39H 39H 47H 30H 33H 35H 31H 0DH	Get C_Gain	n= 5~195
VXXS0351n	56H 39H 39H 53H 30H 33H 35H 31H n 0DH	Set C_Gain	n= 5~195
VXXG0352	56H 39H 39H 47H 30H 33H 35H 32H 0DH	Get M_Hue	n= -99~99
VXXS0352n	56H 39H 39H 53H 30H 33H 35H 32H n 0DH	Set M_Hue	n= -99~99
VXXG0353	56H 39H 39H 47H 30H 33H 35H 33H 0DH	Get M_Saturation	n= 0~199
VXXS0353n	56H 39H 39H 53H 30H 33H 35H 33H n 0DH	Set M_Saturation	n= 0~199
VXXG0354	56H 39H 39H 47H 30H 33H 35H 34H 0DH	Get M_Gain	n= 5~195
VXXS0354n	56H 39H 39H 53H 30H 33H 35H 34H n 0DH	Set M_Gain	n= 5~195
VXXG0355	56H 39H 39H 47H 30H 33H 35H 35H 0DH	Get Y_Hue	n= -99~99
VXXS0355n	56H 39H 39H 53H 30H 33H 35H 35H n 0DH	Set Y_Hue	n= -99~99
VXXG0356	56H 39H 39H 47H 30H 33H 35H 36H 0DH	Get Y_Saturation	n= 0~199
VXXS0356n	56H 39H 39H 53H 30H 33H 35H 36H n 0DH	Set Y_Saturation	n= 0~199
VXXG0357	56H 39H 39H 47H 30H 33H 35H 37H 0DH	Get Y_Gain	n= 5~195
VXXS0357n	56H 39H 39H 53H 30H 33H 35H 37H n 0DH	Set Y_Gain	n= 5~195