# vivitek®
Vivid Color, Vivid Life

**User's Manual**
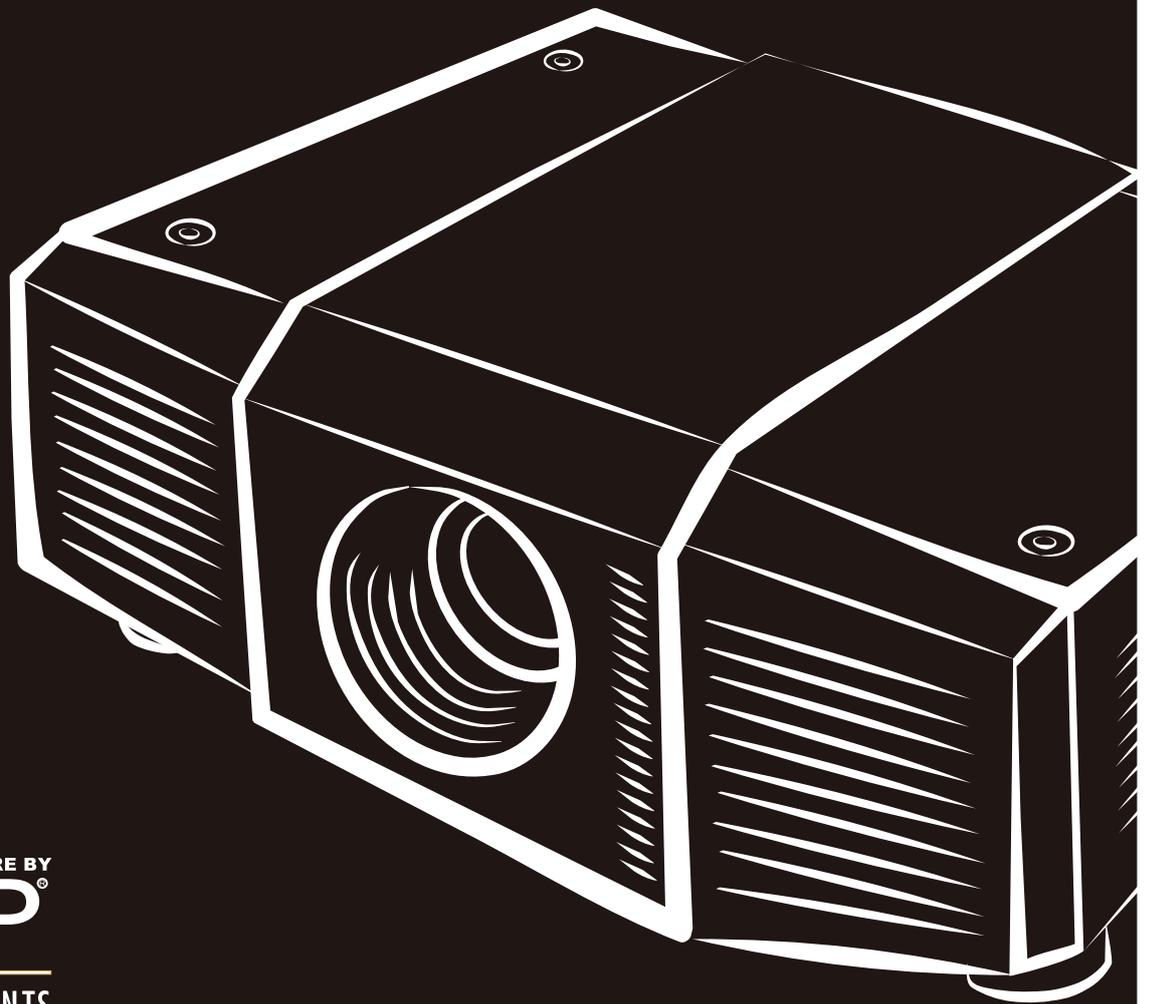
# D8800 Series

# CONTENTS

# COPYRIGHT INFORMATION

## COPYRIGHT

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## 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.

# IMPORTANT SAFETY INSTRUCTIONS

Thank you for your purchase of this quality product! For best performance, please read this manual carefully as it is your guide through the menus and operation.

1. Read and Keep these instructions.

2. Heed all warnings.

3. Follow all instructions.

4. Do not use this apparatus near water. And not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
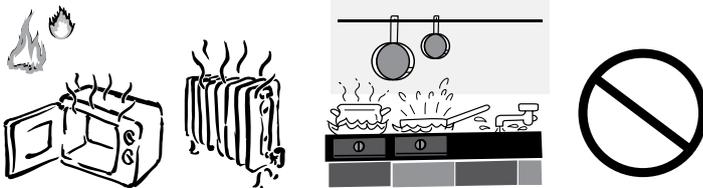
5. Clean only with a dry cloth.

6. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.

7. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for the replacement of the obsolete outlet.

8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

9. Only use the attachments/accessories specified by the manufacturer.

10. Use only with a cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus to avoid injury from tip-over.

11. Unplug this apparatus during lightning storms or when unused for long periods of time.
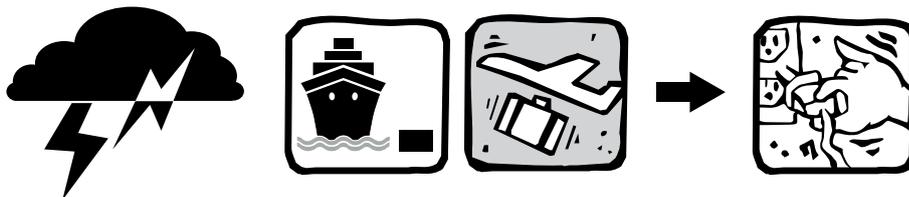
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

13. The +12V trigger only outputs 12V DC signal for triggering. Do not connect to any other power input or output. This could cause damage to this unit.

14. Keep the packing material in case the equipment should ever need to be shipped.

15. Never look into the lens when the projector is on.

AVOID EYE CONTACT TO THE LIGHT

## DISPOSAL OF OLD ELECTRICAL AND ELECTRONIC EQUIPMENT

(Applicable throughout the European Union and other European countries with separate collection programs)

This symbol found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources. This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

## 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.

# INTRODUCTION

## ABOUT THIS MANUAL

This User's Manual describes how to install, set up and operate the D8800/D8900/D8010W. Throughout this manual, the Projector is referred to as the "D8800/D8900/D8010W."

*Target Audience* Vivitek has prepared this manual to help installers and end users get the most out of the D8800/D8900/D8010W. Vivitek has made every effort to ensure that this manual is accurate as of the date it was printed. However, because of ongoing product improvements and customer feedback, it may require updating from time to time. You can always find the latest version of this and other Vivitek product manuals on-line, at www.vivitekcorp.com.

## DESCRIPTION, FEATURES AND BENEFITS

The Vivitek D8800/D8900/D8010W provide state-of-the-art technology for full HD (1920 x 1200, WUXGA 16:10) native resolution for crystal clear, pristine images. The D8800/D8900/D8010W offer incredibly high definition images at today's highest avail-able resolutions. Equipped with precision optics, the D8800/D8900/D8010W include zoom, focus and lens shift controls for a throw range of 1.85:1 to 2.40:1. For a smaller throw distance (1.56:1 to 1.86:1), the D8800/D8900/D8010W can be fitted with a varying optics package (optional) to meet different requirements. Exceptional scaling and film-to-video (3:2 pull-down) conversion is easily achieved. Combined with Vivitek's sophisticated parameters for white balancing, the D8800/D8900/D8010W's proprietary de-interlacing technology provides the highest level of development for gray-scale and color balancing and artifact-free images. Completing this engineering marvel are discrete infrared (IR) and RS-232 control, power and source selection controls for seamless, flexible operation.

### { Key Features and Benefits

The D8800/D8900/D8010W offer these key features and benefits:

— Native Resolution: 1920 x 1080 (16:10 Native Aspect Ratio).
— DLP system using high-performance Digital Micromirror Device (DMD).
— HDMI 1.3 Input with High-bandwidth Digital Content Protection (HDCP).
— HDTV Compatible.
— Excellent Video Processing on progressive and interlaced video inputs.

### { Green Product with:

— Lead free solder used for soldering including circuit and component electronics.
— Lead free glasses and coatings.
— Recycled paper used in the user manuals and packing cartons.
— Energy Saving: High efficiency power switching and less than 0.5W power consumption in standby mode.

■ **Additional Features of the D8800/D8900/D8010W**

— Horizontal and vertical lens shift.

— Keystone adjustment.

## PARTS LIST

Your D8800/D8900/D8010W is shipped with the following items, if any items are missing or damaged, please contact your dealer or Vivitek Customer Service.

| Accessory Box List | | | D8800/D8900/D8010W | |
|---|---|---|---|---|
| Item | Manual Assy | Q'ty | EU/ASIA/US/TWN | China |
| 1 | CD-ROM | 1 | ● | ● |
| 2 | WARRANTY CARD (US/EUR) | 1 | ● | - |
| 3 | WARRANTY CARD (CN) | 1 | - | ● |
| 4 | RoHS Card (CN) | 1 | - | ● |
| 5 | QC Pass Card (CN) | 1 | - | ● |
| 6 | Important Information (CN) | 1 | ● | ● |
| 7 | POWER CORD 125Vac USA | 1 | ● | - |
| 8 | POWER CORD 250Vac EUR | 1 | ● | - |
| 9 | POWER CORD 250Vac CHINA | 1 | - | ● |
| 10 | VGA Signal cable | 1 | ● | ● |
| 11 | SCREW M M4*0.7*70 PAN C SUS | 1 | ● | ● |
| 12 | BATTERY | 2 | ● | ● |
| 13 | REMOTE | 1 | ● | ● |
| 14 | MODULE COLOR TYPE COLOR WHEEL | 1 | ● | ● |

# CONTROLS AND FUNCTIONS

## D8800/D8900/D8010W at a Glance



Rear Infre-red window
(remote control)

Air inlet

Power switch

Power inlet

Adjustable
feet*4



Air outlet

Air outlet

Air outlet
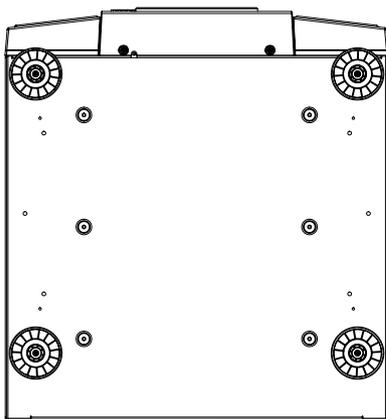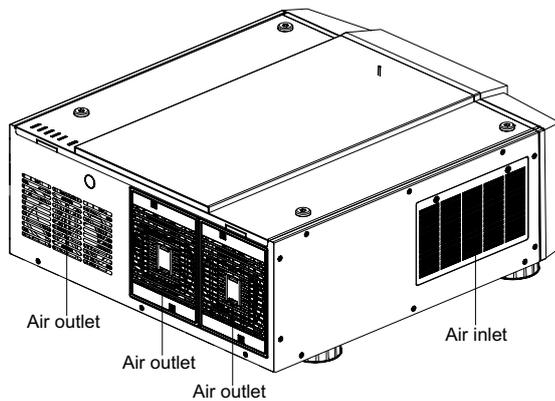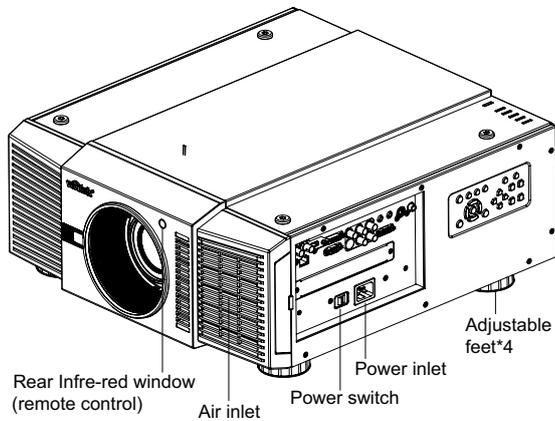
Air inlet



— **Air outlet**
Warm air exits the projector through this vent. Ensure that it is not blocked.

— **Air inlet**
Internal fans draw cool air into the projector through this vent.

— **Adjustable feet**
Use these when the projector is installed in a table-top configuration to level the image and/or adjust the projection angle.

— **Power Inlet**
For input power from wall outlet to projector.

— **Rear Infre-red window**
For receive the remote controller's message.

# I/O Panel
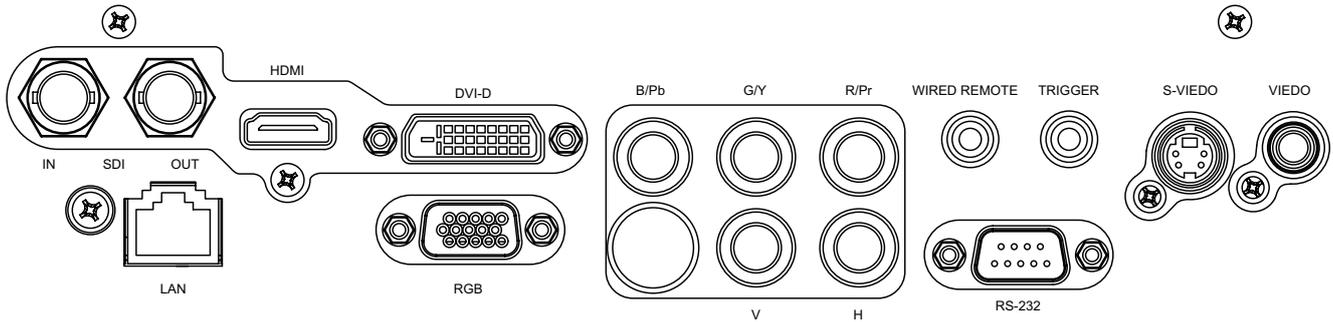


— **SDI**
Connect a BNC cable from a serial digital interface (SDI) device.

— **HDMI**
Connect an HDMI source.

— **DVI**
Connect a DVI source.

— **Component**
Connect a Component (YUV HS/VS-CS) source.

— **WIRED REMOTE**
Wired input from a Niles- or Xantech-compatible, infrared (IR) repeater system.

— **TRIGGER**
(3.5-mm, mini phone jack) Offers 12 (+/- 1.5) V of output for 350mA monitor relay with short circuit protection.

— **S-VIDEO**
A standard S-Video input for connecting a DVD player, satellite receiver or Super VHS (S-VHS) VCR.

— **VIDEO**
Standard composite video input for connecting a VCR, laser disc player or other composite video source. Also provides composite sync input for RGBS sources.

— **LAN**
Connect an RJ45 ethernet cable.

— **RGB**
Provides a standard, 15-pin VGA-style connection to either an RGB or component high-definition source, or to a personal computer.
The D8800/D8900/D8010W automatically detect the input signal resolution.

— **RS-232**
9-pin D-sub connector for interfacing with a PC or home theater automation/control system.

# KEYPAD
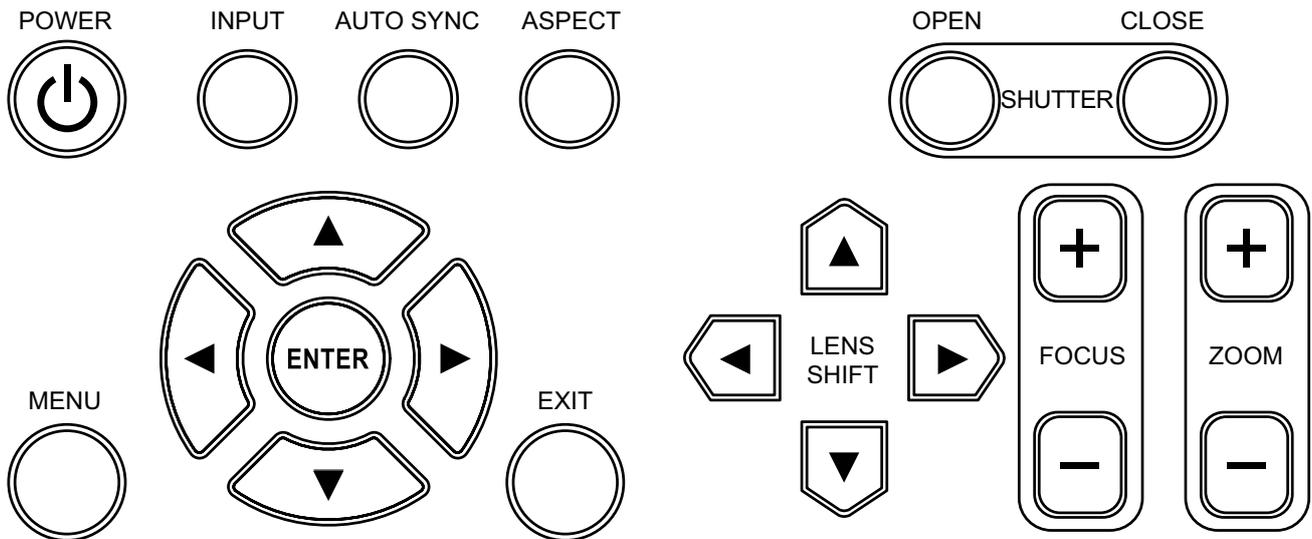


— **POWER**
Use the button to turn on/off the projector.

— **INPUT**
Press to select a video source. HDMI, DVI, VGA, Component / BNC Composite, S-Video or 3D-SGI.

Press this to re-acquire the current active source.

— **ASPECT**
Press this to change the aspect ratio of the current image.

— **SHUTTER**
Use the buttons to turn on/off shutter.

— **MENU**
Press this button to show or hide the OSD menu.

— **ENTER, ▲, ▼, ◄, ►**
Use these buttons to select items or settings, adjust settings or switch display patterns.

— **EXIT**
Press this to go one menu higher or exit the OSD menu.

— **LENS SHIFT**
Button to shift control of the lens, up/down or left/right.

— **FOCUS**
Button to focus the projected image.

— **ZOOM**
Button to zoom in/out the lens.

# REMOTE CONTROL

POWER

ON    ○    OFF

FOCUS    ZOOM

+    +    TEST PATTERN

◉    □⇌□    LENS SHIFT

—    —    ▱↕

▲

◀    ENTER    ▶

▼

MENU    EXIT

INPUT    PICTURE    NETWORK

AUTO SYNC    ASPECT    PIP
1    2    3

OVERSCAN    FREEZE    LAMP MODE
4    5    6

3D MODE    INFO.    LIGHT
7    8    9

CLEAR    SHUTTER    ID SET

0

**vivitek** ®
Vivid Color, Vivid Life
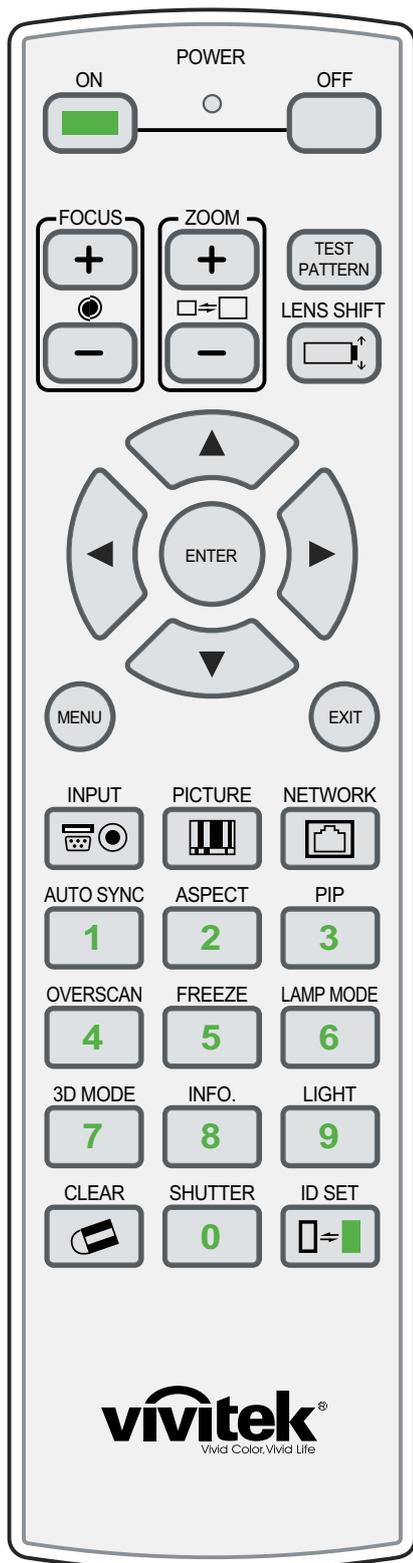
— **ON**
Use this button to turn the projector on.

— **OFF**
Use this button to turn the projector off.

— **FOCUS**
Focuses the projected images.

— **ZOOM**
Zoom in/out the projected image.

— **TEST PATTERN**
Use this to enter test pattern menu.

— **LENS SHIFT**
Button to shift control of the lens, up/down or left/right.

— **ENTER, ▲, ▼, ◀, ▶**
Use these buttons to select items or settings, adjust settings or switch display patterns. ENTER: Press to select a highlighted menu item or confirm a changed setting.

— **MENU**
Press this button to show or hide the OSD menu.

— **EXIT**
Press this to go one menu higher or exit the OSD menu.

— **INPUT**
Press to select a input source.

— **PICTURE**
Starts the PICTURE function.

— **NETWORK**
Press this to enter the Network (LAN) menu.

— **AUTO SYNC**
Press this to re-acquire the current active source.

— **ASPECT**
Selection Button: Press this button repeatedly to select one of the following aspect ratios: 16 : 9: For viewing 16:9 DVDs or HDTV programs in their native aspect ratio.

— **PIP**
Press this to display the picture-in-picture screen.

— **OVERSCAN**
Press to select an overscan mode.

— **FREEZE**
Freeze/unfreezes the on-screen picture.

— **LAMP MODE**
Press this to select a higher or lower brightness setting.

— **3D MODE**
This function is not available for this model.

— **INFO.**
Starts the SERVICE function.

— **LIGHT**
Press this to turn on remote control backlight.

— **CLEAR**
Not available

— **SHUTTER**
Use the button to turn on/off shutter.

— **ID SET**
Not available

*Notes on Remote Control Operation*

— *In most situations, you can simply point the remote control at the screen which will reflect the IR signal from the re-mote back toward the IR receiver on the projector. In some cases, however, ambient conditions may prevent this. If so, point the remote control at the projector and try again.*

— *If the effective range of the remote control decreases, or it stops working, replace the batteries with new ones.*

— *The remote control may fail to operate if the infrared remote sensor is exposed to bright sunlight or fluorescent lighting.*

## TO INSTALL BATTERIES IN THE REMOTE CONTROL

STEP 1
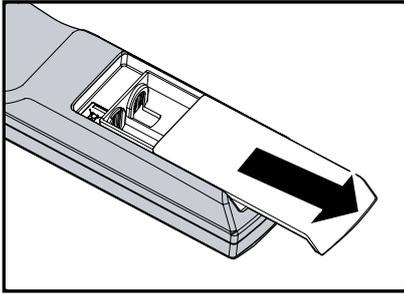


STEP 2
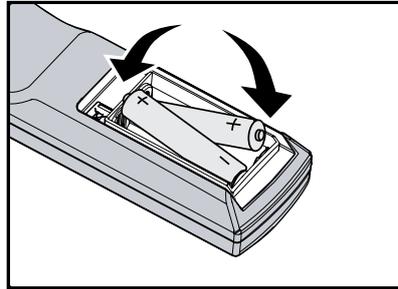


STEP 3
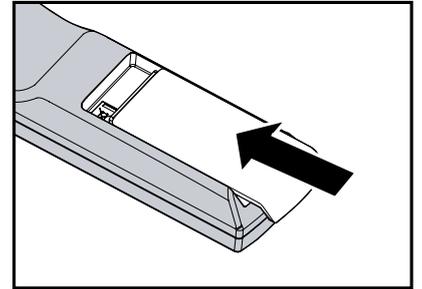


1.  Slide the battery compartment cover in the direction of the arrow to remove it.

2.  Install two AA batteries with the correct polarity.

3.  Replace the cover.

*Notes on Batteries*
*— Make sure that the battery polarities are correct when installing the batteries.*
*— Do not mix an old battery with a new one or different types of batteries.*
*— If you will not use the remote control for a long time, remove the batteries to avoid damage from battery leakage.*

## RANGE OF EFFECTIVE REMOTE CONTROL SIGNAL RECEPTION



10m

±30°

IR Reception effective Angles: ±30°
IR Reception effective distance: 10m
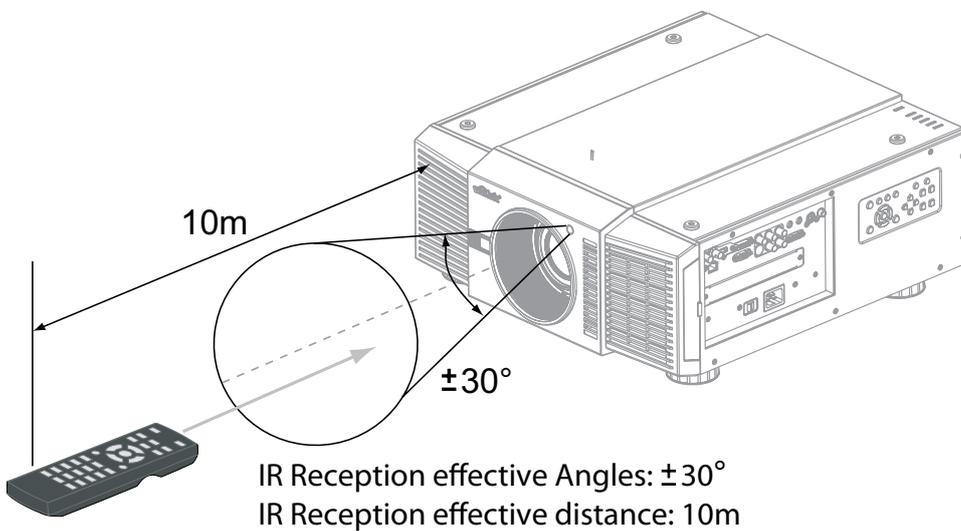
*Note:*
*Avoid placing the remote control at places of high temperature or humidity as it could cause the remote control to malfunction.*

# INSTALLATION CONSIDERATIONS

*PROPER INSTALLATION OF YOUR PROJECTOR WILL ENSURE THE QUALITY OF YOUR DISPLAY. WHETHER YOU ARE INSTALLING A PROJECTOR TEMPORARILY OR PERMANENTLY, YOU SHOULD TAKE THE FOLLOWING INTO ACCOUNT TO ENSURE YOUR PROJECTOR PERFORMS OPTIMALLY.*

## AMBIENT LIGHT

In general, minimize or eliminate light sources directed at the screen. Contrast ratio in your images will be noticeably reduced if light directly strikes the screen, such as when a shaft of light from a window or floodlight falls on the image. Images may then appear washed out and less vibrant.
Requires separate room Installation cost is usually higher.

## THROW DISTANCE

Throw distance is the distance measured from the front of the projector to the screen. This is an important calculation in any projector installation as it determines whether or not you have enough room to install your projector with a desired screen size and if your image will be the right size for your screen. You can quickly estimate the throw distance by taking the width of the screen and multiplying it by the lens throw ratio; see the image as following. The result of this calculation tells you roughly how far back the projector should be positioned from the screen in order to project a focused image large enough to fill the screen.

Throw Distance (TD) = Screen Width (W) x Throw Ratio (TR)
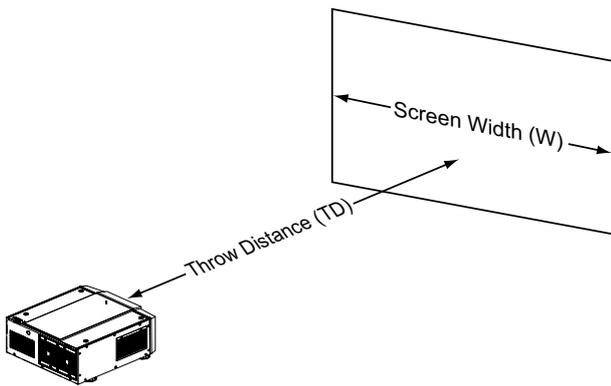


Two models of the D8800/D8900/D8010W are available, one with 1.56-1.86:1 lens and the other with 1.85-2.40:1 lens With optional zoom adaptors throw ratios of 1.24 – 3.0 can be achieved. The standard D8800/D8900/D8010W offer throw ratios between 1.85:1 and 2.40:1. With the optional, short-throw lens, the D8800/D8900/D8010W offer throw ratios between 1.56:1 and 1.86:1.

# MODES OF INSTALLATION

### ■ Frontal projection - desktop installation

Advantages: easy to install can be easily moved or adjusted easy to operate.

Disadvantage: occupies floor space and limits seating capacity.
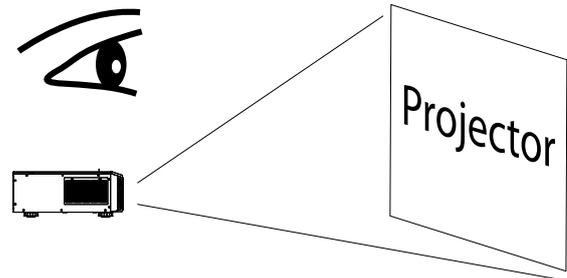
### ■ Rear projection - desktop installation

Advantage: the projector is completely hidden from plain view the projector can be easily operated this setup usually offers better reduction of ambient noise.

Disadvantage: requires an additional room for installation relatively higher costs for installation.
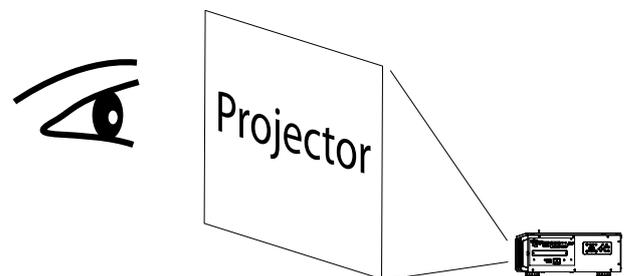
### ■ Frontal projection - ceiling mode

Advantage: does not occupy floor space does not draw attention to it. Eliminates the possibility that someone would accidentally move the projector.

Disadvantage: stricter installation requirements and conditions; care should be taken during the installation to ensure the projector has been securely mounted. Operation of the projector becomes inconvenient without the remote control.
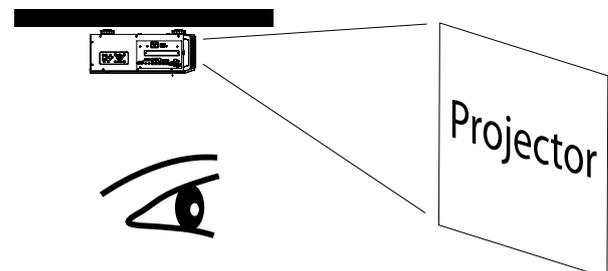
### ■ Rear projection - ceiling mode

Advantage: the projector is completely hidden from plain view this setup usually offers better reduction of ambient noise.

Disadvantage: requires an additional room for installation. Stricter installation requirements and conditions; care should be taken during the installation to ensure the projector has been securely mounted. Operation of the projector becomes inconvenient without the remote control.
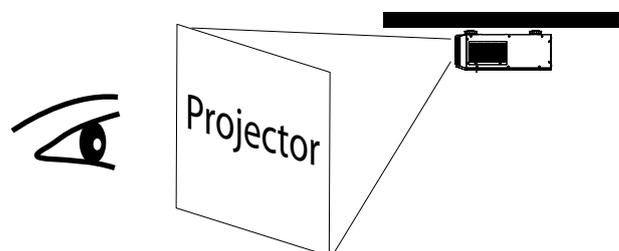
## ALLOW AT LEAST 50 CM CLEARANCE AROUND THE EXHAUST VENT.

The device need to have enough space to prevent issues as stated in this image.

**Side Way**

50cm
Or Greater

50cm
Or Greater

**Back Side**

70cm
Or Greater

**Celling Mount**

30cm
Or Greater

## ALLOW AT LEAST 50 CM CLEARANCE AROUND THE EXHAUST VENT.
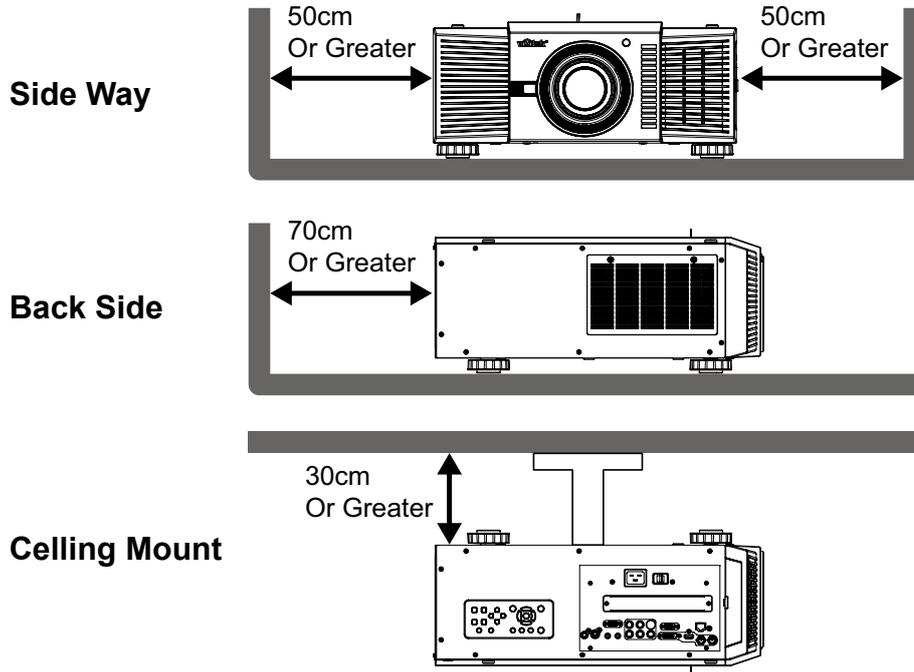
# LENS SHIFT

## VERTICAL LENS SHIFT

The D8800/D8900/D8010W have a lens shift capability which allows the vertical movement of the image without moving the projector. Lens shift is generally expressed as a percentage of the screen height. For ceiling mounted projectors, the lens can be moved 50% (0.6V) downward, while the lens can be moved 50% (0.6V) up or down on a desktop mounted projector.
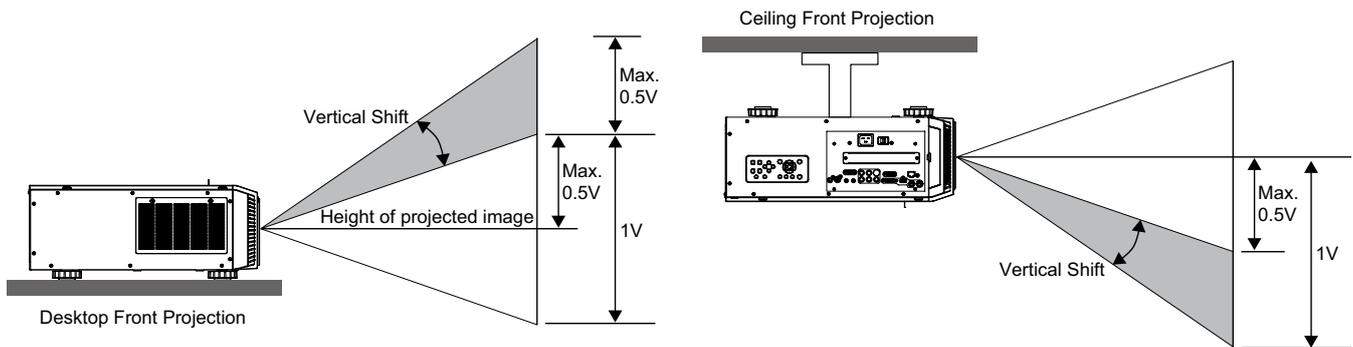


> Note:
> This is a general example of lens shift. Lenses vary in their shift capabilities. No particular lens or projector is used in this example.

## HORIZONTAL LENS SHIFT

The D8800/D8900/D8010W have a lens shift capability which allows the horizontal movement of the image without moving the projector. The lens can be moved 10% (0.1H) to the right or left within the housing.
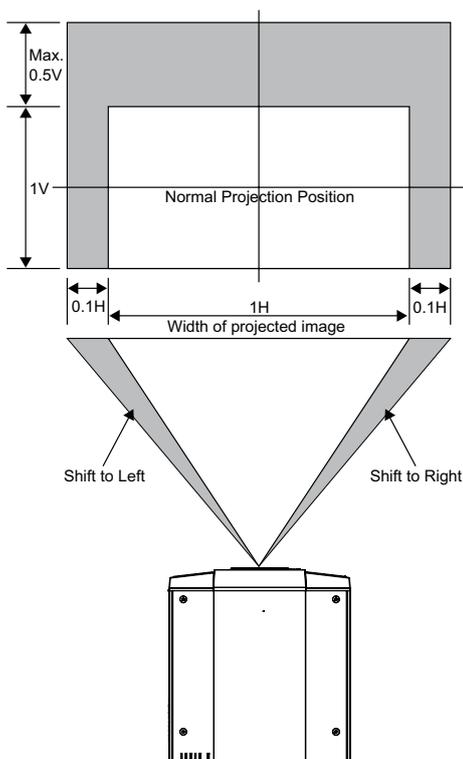


> Note::
> This is a general example of lens shift. Lenses vary in their shift capabilities. No particular lens or projector is used in this example.

# CONNECTING THE PROJECTOR TO OTHER DEVICES.

Proceed as follows to connect the D8800/D8900/D8010W to your video sources, external controller(s) - if present - and AC power. When connecting your equipment: •Use the correct signal cables for each source. •Ensure that the cables are securely connected. Tighten the thumbscrews on connectors that have them. Connecting Source Components to the D8800/D8900/D8010W Connect your video sources to the D8800/D8900/D8010W as shown and described in the sections that follow.

## HDMI CONNECTION



DVI Source(s)
(BD/HD-DVD/DVD Player, HD SetTop Box, Game Console etc.)
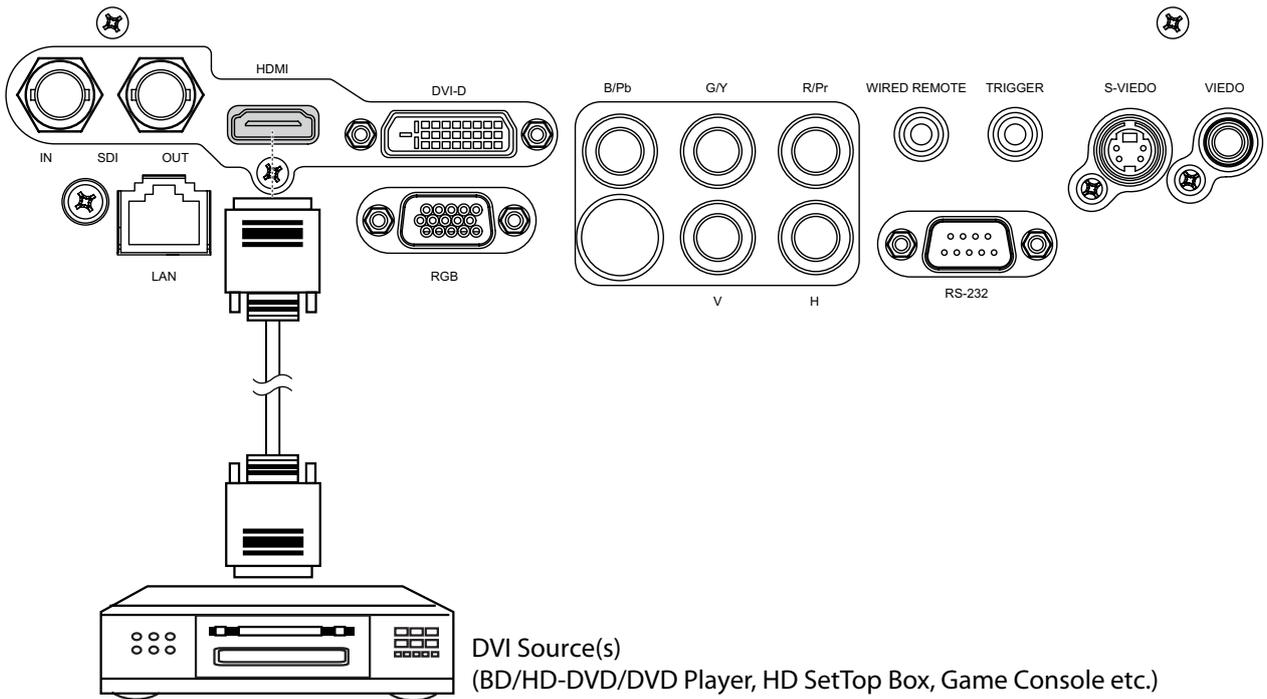
## TRIGGER CONNECTION

If your home theatre system includes a projector screen, screen cover or other 12V Trigger equipment, please connect such device/equipment to the projector's 12V Trigger output as illustrated. After you have done so, your screen will lower automatically whenever you turn on your projector for your convenience.
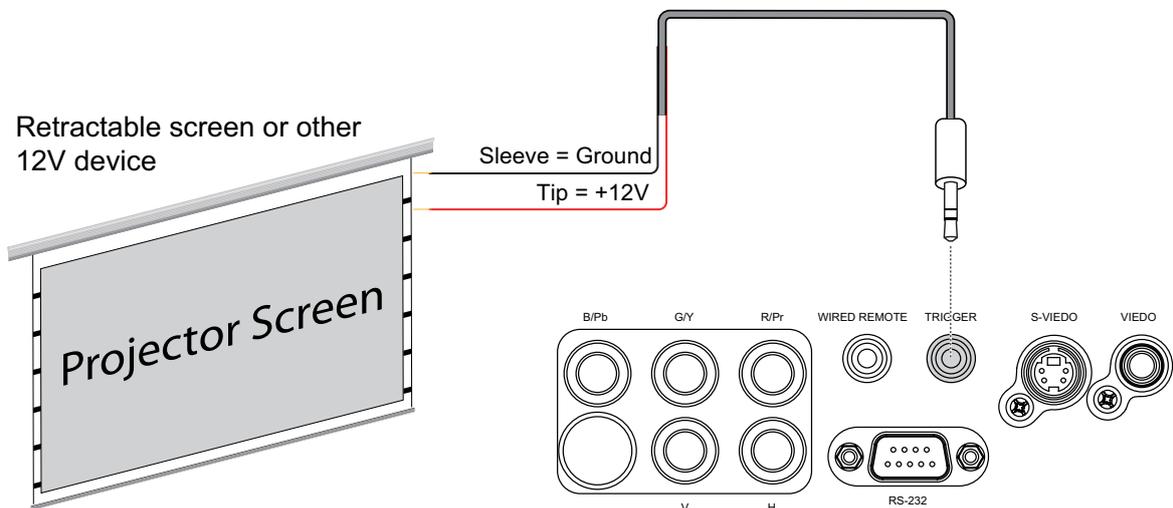
## IR INPUT CONNECTION

If infrared signals from the remote control cannot reach the projector due to excessive distance or obstructions such as walls or cabinet doors, you can connect an external IR repeater system to the IR INPUT on the D8800/D8900/D8010W to extend the range of the remote control.
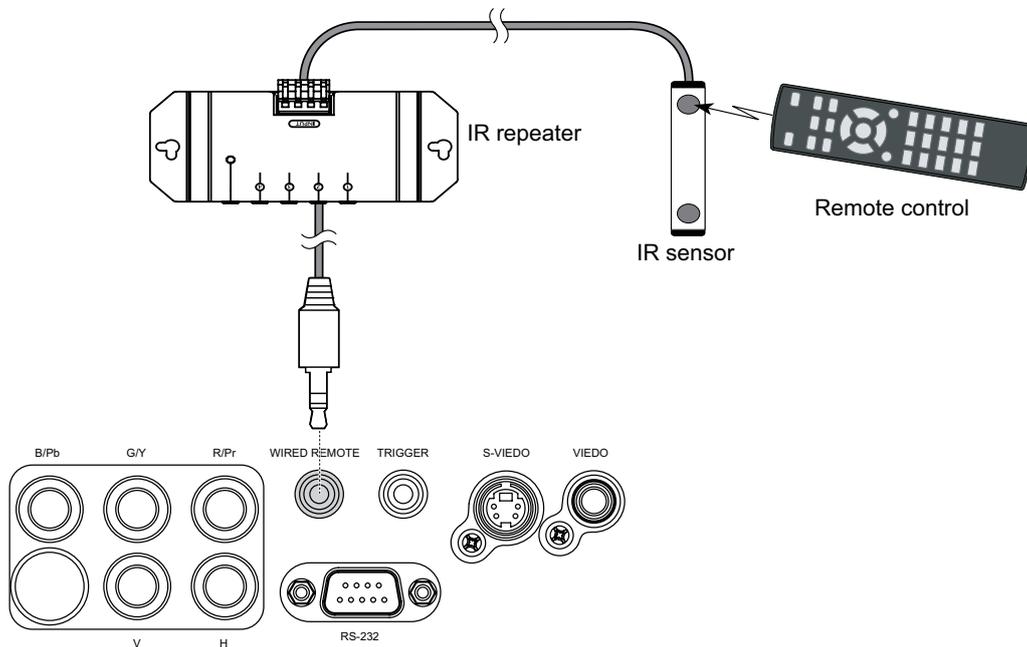


## S-VIDEO, VIDEO CONNECTION

If the image input device offers both S-Video and Video connection, it is recommended that you choose S-Video to obtain better image quality. If both the S-Video and Video inputs are connected to the projector, the projector will prioritize S-Video signal input and image from the Video input will not be played.



DVD player, VCR, satellite receiver, LD and so forth
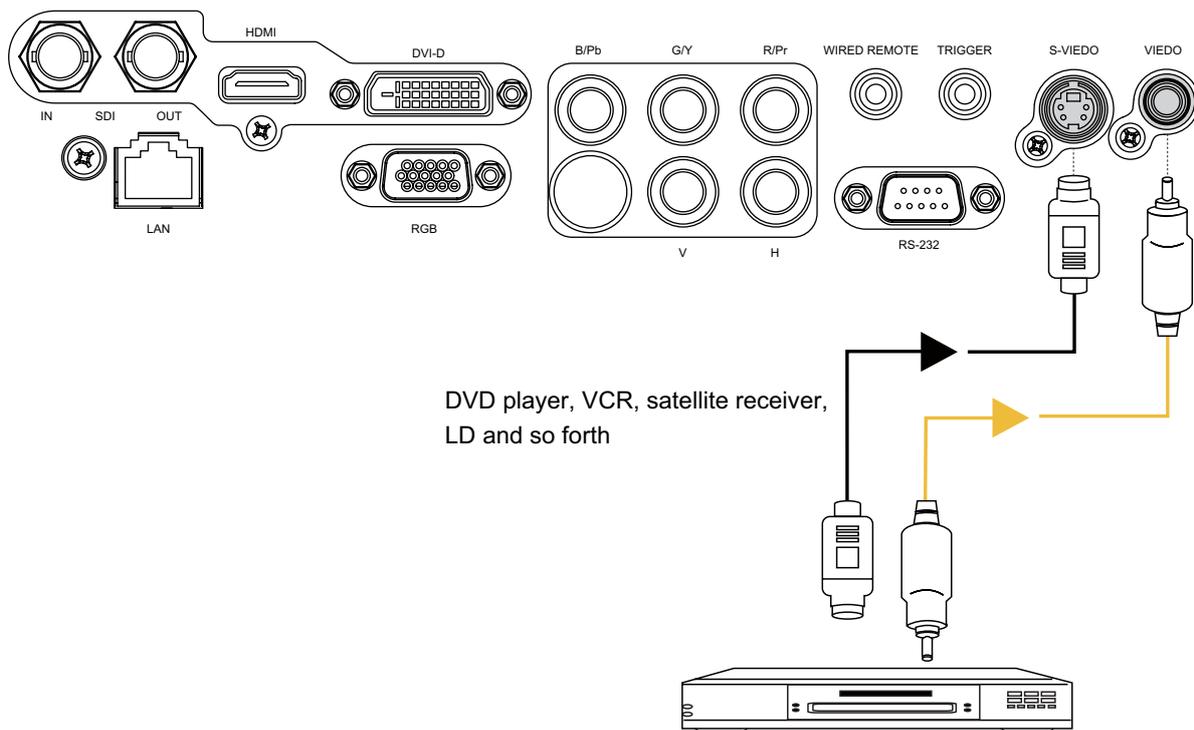
## COMPONENT CONNECTION

Take the 3/5 cabled RGB component video connectors from the source equipment to the projector's COMPONENT jacks.



DTV set-top-box or other component (YPbPr) input source
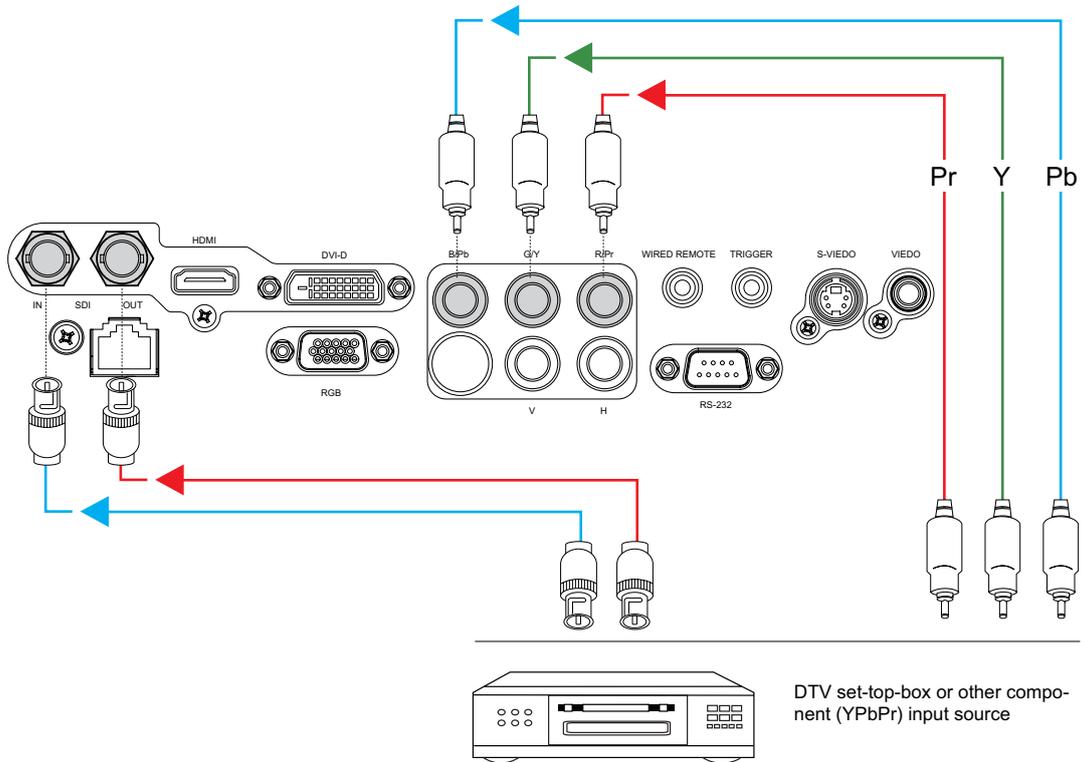
## RS-232 CONNECTION

Connect a PC or home theater control/automation system (if present) to the RS-232 port on the D8800/D8900/D8010W. Use a standard, 9-pin serial cable, wired straight-through.



Desk Top or Notebook

# LAN CONNECTION



Desk Top or Notebook

Network Swtich

HDMI

DVI-D

IN    SDI    OUT

LAN

RGB
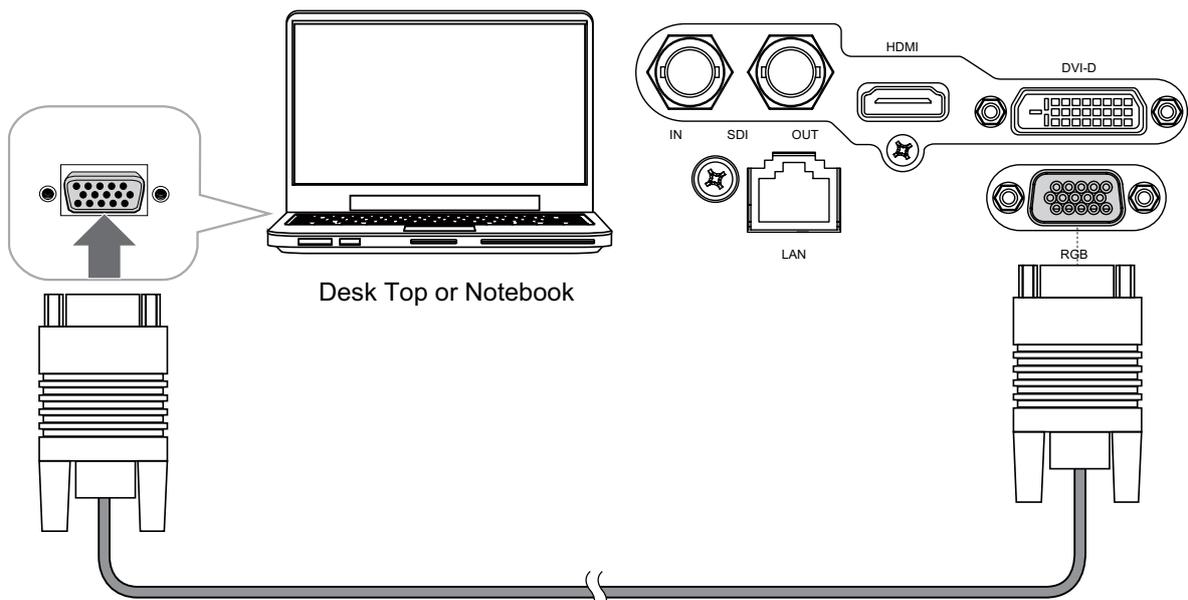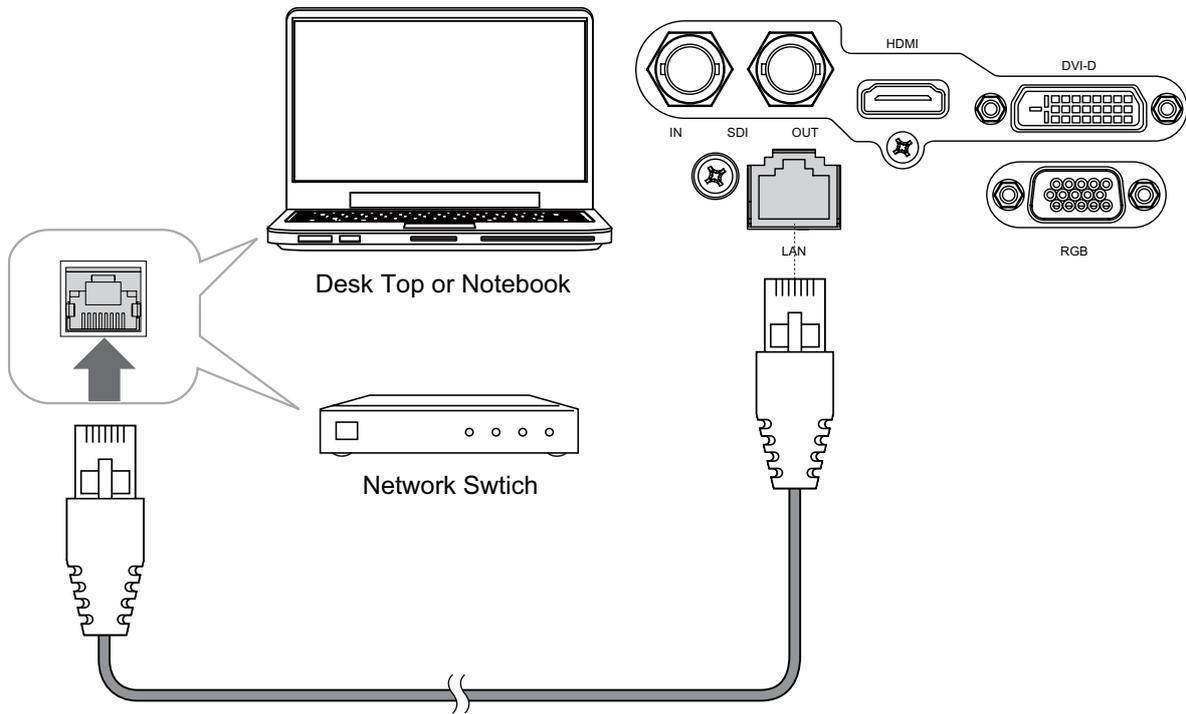
# START USING THE PROJECTOR - ADJUSTMENTS

## CONNECTING TO AC POWER

The D8800/D8900/D8010W ship with various types of AC power cords. Choose the one that is appropriate to your locale. Plug the female end of the power cord into the AC receptacle on the rear of the projector (AC 100V ~ 240V); Then, connect the other end to your AC power source.
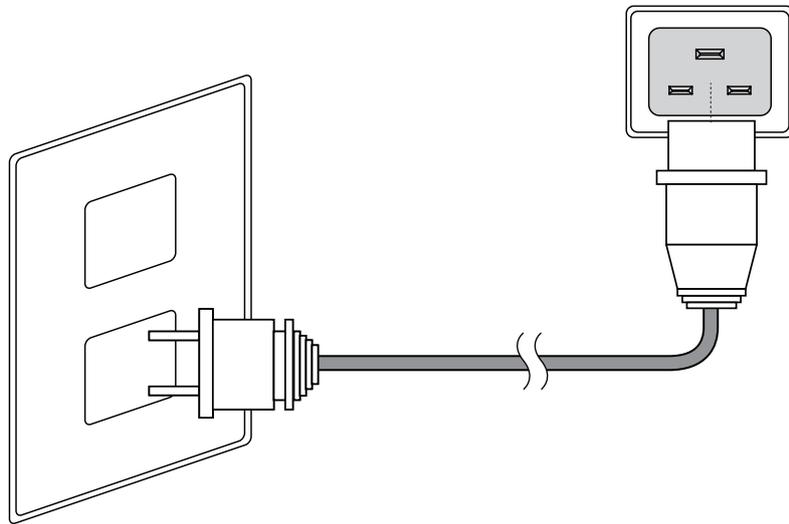
## TURNING ON THE POWER

Press **POWER SWITCH** on the projector.
Press **ON** on remote control or **POWER** on the projector. The power LED indicator flashes green to indicate that it is warming up. When the projector is ready for use, the LED indicator turns off, and the projector lights.
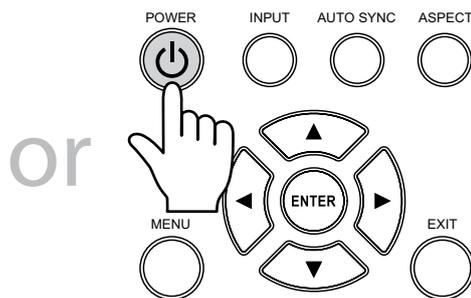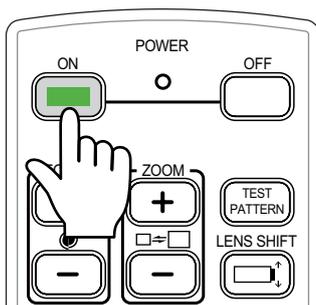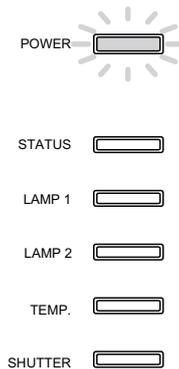
# CHANGING THE OSD LANGUAGE

The D8800/D8900/D8010W can display the menus in English, French, Spanish, German, Portuguese, Simplify Chinese, Traditional Chinese, Japanese or Korean. Press **MENU** to display the OSD, press ◄ ► to select **CONTROL** item. Then press ▲ ▼ to select **LANGUAGE** and press ▲ ▼ a language that you wanted. Then press **ENTER** to confirm your selection.

| INPUT | PICTURE | LAMPS | ALIGNMENT | CONTROL | SERVICE |
|-------|---------|-------|-----------|---------|---------|

| | | |
|---|---|---|---|
| **Language** | Eco Network Power | < Eco > |
| ■ **English** | Auto Power Off | < On > |
| Français | Auto Power On | < Off > |
| Español | Projector Control | < ----- > |
| Deutsch | Network | Enter |
| Português | Start Up Logo | < On > |
| 简体中文 | Trigger | < Auto > |
| 繁體中文 | Auto Search | < Off > |
| 日本語 | Dynamic Black | < On > |
| 한국어 | **Language** | **Enter** |

# ADJUSTING THE PICTURE ORIENTATION

If the D8800/D8900/D8010W is installed behind the screen, you must change the picture orientation to match the installation method.
Refer to "Modes of installation" on page 15. To do this, press **MENU** on the remote control. Then select **ALIGNMENT** -> **Projection Mode** -> **Rear**.
If the projector is ceiling-mounted, the D8800/D8900/D8010W will automatically inverts the image. If this automatic inversion is not desired, please select Ceiling Mode from the **Menu** -> **ALIGNMENT** -> **Projection Mode** -> **Ceiling + Front** or **Ceiling + Rear**.

| INPUT | PICTURE | LAMPS | ALIGNMENT | CONTROL | SERVICE |
|-------|---------|-------|-----------|---------|---------|

| | |
|---|---|
| Projection Mode | < Front > |
| Fan Mode | < Normal > |
| Lens Control | Enter |
| Lens Memory | Enter |
| Center Lens | Execute |
| Warp | Enter |
| Blanking | Enter |
| Edge Blend | Enter |

# Lens Adjustments

The D8800/D8900/D8010W gives you a great deal of control over the picture size, position and focus. Focus To focus the projected image, grasp the lens by the front ring and rotate it.
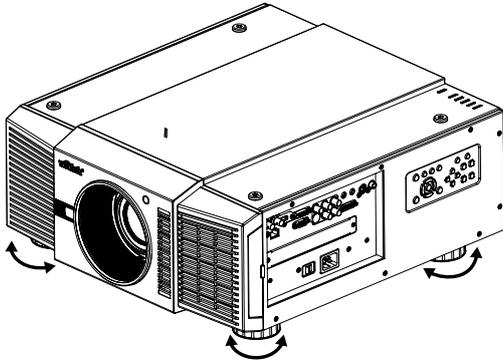
**Adjust foot**
Rotate the 4 feet on projector for image position.

> *Note:*
> *Ceiling Mode can't adjust this function.*
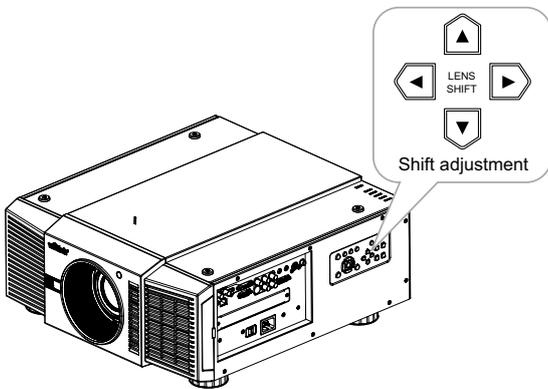
**Vertical Lens Shift**
To shift the projected image vertically, press ▲ ▼ on the keypad.
Range: Up, 50%; Down, 0%.

**Horizontal Lens Shift**
To shift the projected image horizontally, press ◀ ▶ on the keypad.
Range: Right, 10%; Left, 10%.
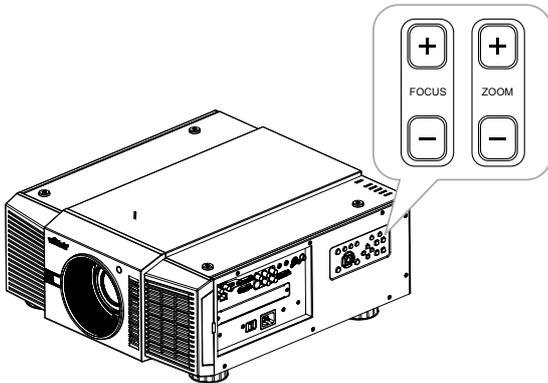
**Zoom**
To make the picture smaller (zoom out) or larger (zoom in).
Press **ZOOM** on the keypad the appropriate direction.

**Focus**
To make the picture clear or Fuzzy.
To focus the current image, press **FOCUS** on the keypad appropriate direction.

# START USING THE PROJECTOR - OPERATION

## SELECTING AN INPUT SOURCE

When you turn on the D8800/D8900/D8010W, it switches to the last selected input and looks for a valid signal. Press **INPUT** on the remote control to select an input source directly.

## SELECTING AN ASPECT RATIO

Press **ASPECT** to adjust the video aspect ratio.

## USING THE OSD

1. Press the **MENU** button on the remote control or machine top cover's keypad to display the OSD main menu.

2. Press ◄ or ► to select a sub-menu.

3. Press ▲ or ▼ to select a sub-menu item.

4. For each sub-menu item, the currently-selected value is highlighted. Press ▲ or ▼ to choose a setting for that item, and press **ENTER** on the remote controller or **SELECT** on the keypad to adjust the value of that item.

5. If want return to the previous menu, please press **MENU**.

6. In the Main Menu, press **MENU** to turn off the OSD menu. The D8800/D8900/D8010W OSD menus are arranged.

# START USING THE PROJECTOR - OSD INTRODUCTION

## OSD MENU TREE

| INPUT | Input Selection | HDMI<br>DVI<br>VGA<br>Component / BNC<br>Composite<br>S-Video<br>3G-SDI |
|---|---|---|
| | PIP | PIP Option<br>PIP Input<br>PIP Swap<br>Position |
| | Test Pattern | Color Bar<br>Crosshatch<br>Burst<br>Res<br>Green<br>Blue<br>White<br>Black<br>Uncorrected Red<br>Uncorrected Green<br>Uncorrected Blue<br>H Ramp<br>Off |
| | Color Space | Auto<br>YCbCr<br>YPbPr<br>RGB-PC<br>RGB-Video |
| | Input Lock | Auto<br>48Hz<br>50Hz<br>60Hz |
| | Background | Logo<br>Blue<br>Black<br>White |
| | Video Standard | Auto<br>PAL<br>SECAM<br>NTSC |
| | Auto Sync Adjust | Off<br>Auto<br>Always |

| PICTURE | Display Mode | High Bright<br>Presentation<br>Video |
|---|---|---|
| | Contrast<br>Brightness | 0~200 |
| | Adaptive Contrast | On<br>Off |
| | Saturation<br>Hue | 0~200 |
| | Gamma | Film<br>Graphics<br>Video |
| | Color | Color Temperature<br>Trim |
| | Sharpness<br>Noise Reduction | 0~200 |
| | Aspect Ratio | 5:4<br>4:3<br>16:10<br>16:9<br>1.88<br>2.35<br>Letterbox<br>Native<br>Unscaled |
| | Overscan | Off<br>Crop<br>Zoom |
| | VGA Setup | H Total<br>H Start<br>H Phase<br>V Start |
| | Auto Sync | Execute |

| LAMP | Mode | Single<br>Dual |
|---|---|---|
| | Power | Eco<br>Normal<br>Custom Power Level |
| | High Altitude | On<br>Off |
| | Custom Power Level | 80.4%~100% |
| | Lamp 1 Status | On |
| | Lamp 2 Status | Off |

| ALIGNMENT | Projection Mode | Front |
| | | Rear |
| | | Ceiling + Front |
| | | Ceiling + Rear |
| | Fan Mode | Normal |
| | | Up |
| | | Down |
| | Lens Control | Zoom |
| | | Focus |
| | Lens Memory | Load Memory |
| | | Save Memory |
| | Center Lens | Execute |
| | Warp | Keystone |
| | | Rotation |
| | | Pincushion / Barrel |
| | | Top Left Corner |
| | | Top Right Corner |
| | | Bottom Left Corner |
| | | Bottom Right Corner |
| | | Custom Warp |
| | | Reset |
| | Blanking | Top |
| | | Bottom |
| | | Left |
| | | Right |
| | | Reset |
| | Edge Blend | Edge Blend |
| | | Blend Width |
| | | Black Level Uplift |
| | | Reset |

| CONTROL | Eco Network Power | Standard |
| | | Eco |
| | Auto Power Off | On |
| | Auto Power On | Off |
| | Projector Control | RS232 |
| | | Network |
| | Network | IP Address |
| | | Subnet mask |
| | | Gateway |
| | | DHCP |
| | Start Up Logo | On |
| | | Off |
| | Trigger | 5:4 |
| | | 4:3 |
| | | 16:10 |
| | | 16:9 |
| | | 1.88 |
| | | 2.35 |
| | | Letterbox |
| | | Native |
| | | Unscaled |
| | | Auto |
| | Auto Search | On |
| | Dynamic Black | Off |
| | Language | English |
| | | Français |
| | | Español |
| | | Deutsch |
| | | Português |
| | | 简体中文 |
| | | 繁體中文 |
| | | 日本語 |
| | | 한국어 |

| SERVICE | Model | |
| | Serial Number | |
| | Software Version | |
| | Active/PIP Source | |
| | Pixel Clock | |
| | Signal Format | |
| | H/V Refresh Rate | |
| | Lamp 1 Time | x HRS |
| | Lamp 2 Time | x HRS |
| | Power On Time | x HRS |
| | Blue Only | On |
| | | Off |
| | Factory Reset | |

## OSD Introduction - INPUT

| **INPUT** | PICTURE | LAMPS | ALIGNMENT | CONTROL | SERVICE |
|---|---|---|---|---|---|

| | | |
|---|---|---|
| Input Selection | | Enter |
| PIP | | Enter |
| Test Pattern | | Enter |
| Color Space | < | RGB-PC | > |
| Input Lock | < | Auto | > |
| Background | < | Logo | > |
| Video Standard | < | ----- | > |
| Auto Sync Adjust | < | Always | > |

──**Input Selection**

This function is same as the hotkey which on Remote controller. You can use remote controller or this function to select the correct input source. Refer to .

──**HDMI**

HDMI input from PC or media device.

──**DVI**

DVI input from PC.

──**VGA**

Analog RGB from PC.

──**Component / BNC**

Analog / serial digital interface from media device.

──**Composite**

Traditional composite video from media device.

──**S-Video**

Super video (Y/C seperated).

──**3G-SDI**

Uncompressed digital video from a serial connection (coaxial).

| Timing | SDI Link mode | Signal Standards | Color Encode | Sampling Structure | Bit depth | Cable Length Tested |
|---|---|---|---|---|---|---|
| NTSC | SD | SMPTE 259M-C 270Mbps SD | YCbCr | 4:2:2 | 10 | 128m |
| PAL | SD | SMPTE 259M-C 270Mbps SD | YCbCr | 4:2:2 | 10 | 128m |
| 1035i 60Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 1080i 59.94Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 1080i 60Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 30Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 25Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 50Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |

| Timing | SDI Link mode | Signal Standards | Color Encode | Sampling Structure | Bit depth | Cable Length Tested |
|---|---|---|---|---|---|---|
| 1080P 24Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 720P 60Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 720P 50Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 1080Sf 25Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 1080Sf 30Hz | HD-Single | SMPTE 292M292M 1.5Gbps HD | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 50Hz | 3G Level A | SMPTE 424M 3Gbps | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 59.94Hz | 3G Level A | SMPTE 424M 3Gbps | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 60Hz | 3G Level A | SMPTE 424M 3Gbps | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 50Hz | 3G Level B | SMPTE 424M 3Gbps | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 59.94Hz | 3G Level B | SMPTE 424M 3Gbps | YCbCr | 4:2:2 | 10 | 128m |
| 1080P 60Hz | 3G Level B | SMPTE 424M 3Gbps | YCbCr | 4:2:2 | 10 | 128m |

*Note:*
*Signals are not supplied for D8800/D8900/D8010W, if it is not in the table.*

— PIP

You can use this function to display multiple windows each containing an image.

— PIP Option

Use this to turn the function On/Off.

— PIP Input

Use this to select the input.

— PIP Swap

Use this to exchange displayed images.

— Position

Use this to select the location of the PIP window (Top left, Top Right, Bottom Left, Bottom Right, or Split L-R).
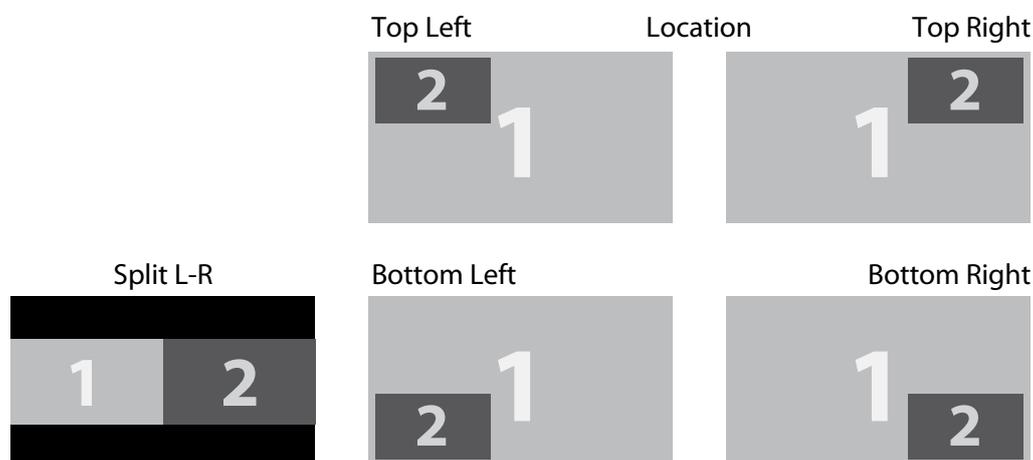


— Test Pattern

Select this to enter the display test function.

| Source | HDMI | DVI | RGB | BNC | S-Video | Video | HDSDI |
|---|---|---|---|---|---|---|---|
| HDMI | X | X | O | O | O | O | X |
| DVI | X | X | O | O | O | O | X |
| RGB | O | O | X | X | O | O | O |
| BNC | O | O | X | X | O | O | O |
| S-Video | O | O | O | O | X | X | O |
| Video | O | O | O | O | X | X | O |
| HDSDI | X | X | O | O | O | O | X |

— **Color Space**

This function allows you to change component, composite, and RGB sources. You can select different color space for different color performance.

— The default setting, Auto, functions as follows:

**HDMI:** If the Auxiliary Video Information (AVI) infoframe contains color space and/or range data, the D8800/D8900/D8010W use that information. Otherwise, for RGB sources, the D8800/D8900/D8010W use the RGB-Video color space. For component SDTV and EDTV resolutions, REC601 is used. For other component video resolutions, REC709 is used.

**RGB:** If Hsync or Vsync signals are present, the D8800/D8900/D8010W use the RGB-PC color space. Otherwise, REC601 is used for SDTV and EDTV sources, and REC709 for all other sources.

**Component:** For SDTV and EDTV resolutions, the D8800/D8900/D8010W use the REC601 color space. For all other resolutions REC709 is used.

— In most cases, the Auto setting determines the correct color space to use. If it does not, you can force the D8800/D8900/D8010W to use a specific color space. Choose one of the following:

**YCbCr** uses component color space and sets black at 0,0,0 and white at 255,255,255.

**YPbPr** uses composite color space and sets black at 0,0,0 and white at 255,255,255.

**RGB-PC** uses RGB color space and sets black at 0,0,0 RGB and white at 255,255,255 RGB, assuming an 8-bit image.

**RGB-Video** uses RGB color space and sets black at 16,16,16 RGB and white at 235,235,235, assuming an 8-bit image, to correspond to the luminance values defined in digital component standards.

— **Input Lock**

Use this function to lock a source to an internal sync signal (Auto, 48Hz, 50Hz, or 60Hz). Auto setting locks the sync signal to the current source.

— **Background**

Use this function to specify the content or color to be displayed on the blank screen when no input signal is available. You can choose from **Logo, Blue, Black, White**. The default value is **Logo**.

— **Video Standard**

Different countries may use different video signal formats. Please choose the video standard in your area.

— **Auto**

The color systems are automatically identified and the format is set accordingly.

— **PAL** (Phase Alternation By Line)

This is the standard used in Europe, Australia and many other parts of the world, typically with a 50Hz frame rate.

— **SECAM** (Sequential Color With Memory)

This is a standard format used mainly in France and Russia. Gamma: Select Gamma from the ADVANCED menu to choose a DLP de-gamma curve. Used correctly, the Gamma control can improve contrast while maintaining good details for blacks and whites. If excess ambient light washes out the image and it becomes difficult or impossible to see details in dark areas, lower the gamma setting to compensate. This improves contrast while maintaining good details for blacks. Conversely, if the image is washed out and unnatural, with excessive detail in black areas, increase the setting.

— **NTSC** (National Television Systems Committee)

This is the standard format used mainly in the United States and Japan.

> *Note:*
> *Generally speaking, the projector will be able to automatically detect the video standard used in your area. However, there are circumstance where the projector will fail to interpret the video standard used and the user will have to manually configure the video format. If you are unsure of the video standard used in your area, please contact a qualified personnel and inquire about the video standard used in your area.*

— **Auto Sync Adjust**

Use this function to set the automatic adjust setting for the incoming signal by adjusting the black level, gain, and reference (Off, Auto, Always).

# OSD Introduction - PICTURE

| INPUT | **PICTURE** | LAMPS | ALIGNMENT | CONTROL | SERVICE |
|---|---|---|---|---|---|
| Display Mode | < Video > | | | | |
| Contrast | < 100 > | | | | |
| Brightness | < 50 > | | | | |
| Adaptive Contrast | < Off > | | | | |
| Saturation | < ----- > | | | | |
| Hue | < ----- > | | | | |
| Gamma | < Film > | | | | |
| Color | Enter | | | | |
| Sharpness | < 0 > | | | | |
| Noise Reduction | < 0 > | | | | |
| Aspect Ratio | < 16:10 > | | | | |
| Overscan | < Off > | | | | |
| VGA Setup | Enter | | | | |
| Auto Sync | Execute | | | | |

— **Display Mode**
Use ◄ ► to select the display mode.

— **Contrast**
Use ◄ ► to adjust the contrast of the projected image.

> *Note:*
> *Brightness and Contrast controls are interactive. The screen change to one may require a subtle change to the other in order to achieve the optimum setting.*

— **Brightness**
Use ◄ ► to adjust the level of black in the image to increase or decrease image brightness.

— **Adaptive Contrast**
Use ◄ ► to adjust the light and dark aspects of the contrast curve.

— **Saturation**
Use ◄ ► to adjust the color saturation levels (higher the level the higher the saturation).

— **Hue**
Use ◄ ► to adjust the Hue level for true color reproduction (Video and S-Video for NTSC). **Gamma**
Different Gamma settings will affect viewers' perception of the image. For images that are darker, it is recommended that Gamma be set higher to yield better image quality in darker regions by sacrificing details in brighter areas. In contrast, when projecting brighter images, you can set the Gamma lower to give up details in the darker areas to make the brighter areas (i.e. clouds) more visible.

— **Film** set the gamma to 2.2.

— **Graphics** should only be used for computer presentations that require increased brightness at the cost of grayscale accuracy.

— **Video** is similar to Film gamma but differs in dark areas of the image to correspond to the function that video cameras use to create images.

—**Color**
Use ◀ ▶ to adjust the color temperature of the projected image.

—**Sharpness**
The adjustment of sharpness primarily changes the value of high frequency detail. Use ◀ ▶ to adjust it.

—**Noise Reduction**
Use ◀ ▶to adjust the noise of the projected image. This function is suitable for the elimination of image noise from interleaving SD input. Generally speaking, reducing image noise will lower the value of high frequency detail and make the image appear more mellow.

—**Aspect Ratio**
This function allow user adjust the picture's Aspect ratio.
When Native input is 16:10, the images as following is the result of picture's Aspect ratio for your reference.

Native input 16:10 | Output aspect ratio 5:4 | Output aspect ratio 4:3 | Output aspect ratio 16:9 | Output aspect ratio 1.88

Output aspect ratio 2.35 | Output aspect ratio Letterbox | Output aspect ratio Native | Output aspect ratio Unscaled
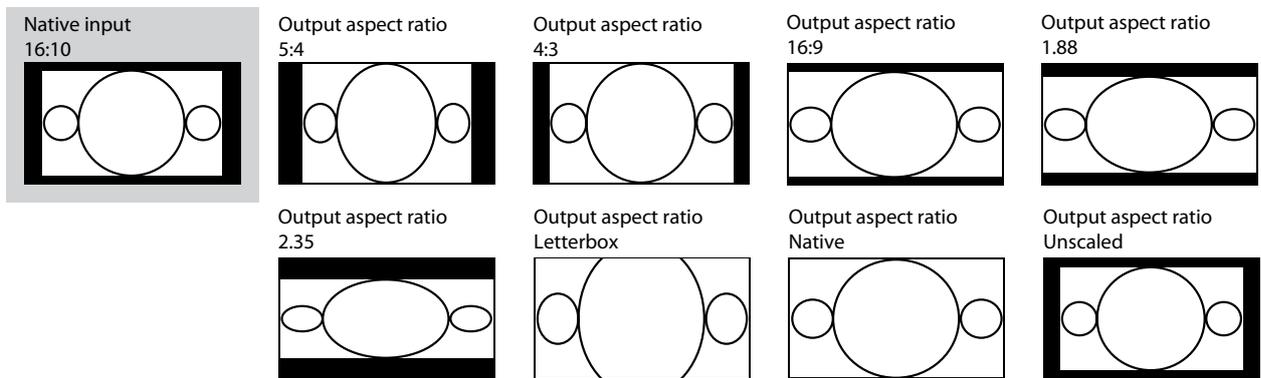
When Native input is 4:3, the images as following is the result of picture's Aspect ratio for your reference.

Native input 4:3 | Output aspect ratio 5:4 | Output aspect ratio 4:3 | Output aspect ratio 16:9 | Output aspect ratio 1.88

Output aspect ratio 2.35 | Output aspect ratio Letterbox | Output aspect ratio Native | Output aspect ratio Unscaled
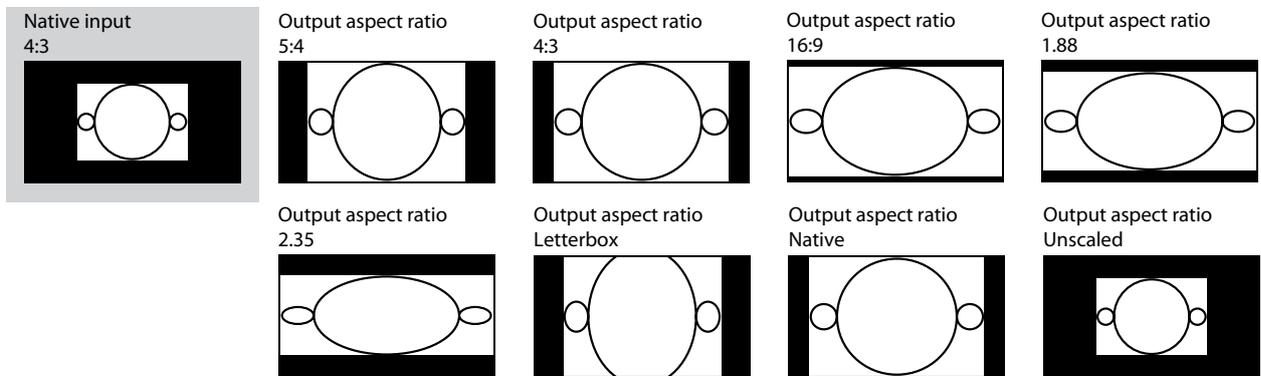
— **Overscan**

Some consumers may use the image that input source is not 16:9, and some programs may not display the edges of the image. Use this function to hide the image edge by choosing one of the following three options:

| | Off | Crop | Zoom |
|---|---|---|---|
| 4:3 | | | |
| 16:9 | | | |
| 4:3 Narrow | | | |
| Native (720p) | | | |

➡ Source image area
➡ Edge Noise
➡ Screen (16:9)
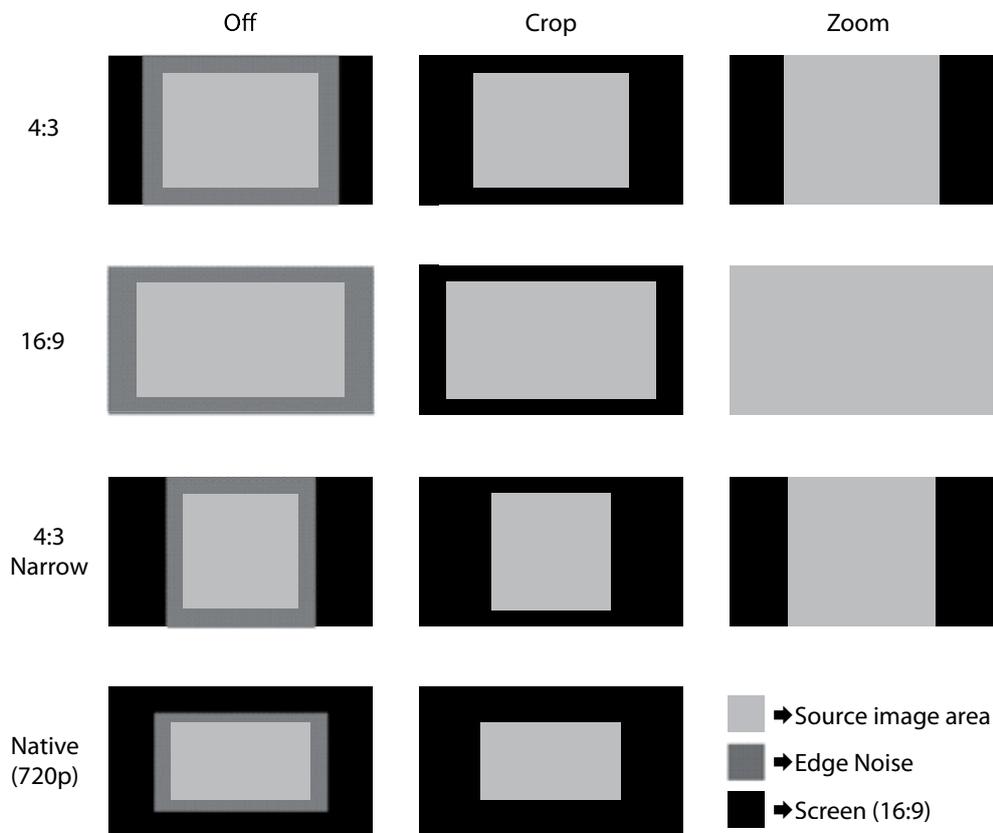
— **VGA Setup**

Use this function to set up the VGA display.

— **Auto Sync**

Use this function to set the automatic adjust setting for the incoming signal by adjusting the black level, gain, and reference (**Off**, **Auto**, **Always**).

## OSD Introduction - LAMPS

| INPUT | PICTURE | **LAMPS** | ALIGNMENT | CONTROL | SERVICE |
|-------|---------|-----------|-----------|---------|---------|
| | | Mode | < | Single | > |
| | | Power | < | Eco | > |
| | | High Altitude | < | Off | > |
| | | Custom Power Level | < | ----- | > |
| | | Lamp 1 Status : | | On | |
| | | Lamp 2 Status : | | Off | |

—**Mode**
Use ◄ ► function to select single or dual lamp mode.

—**Power**
Use ◄ ► function to select Eco, normal, or custom power level.

—**High Altitude**
Use this function to control the projector's cooling fan. You can set it to **Off** or **On**. The default setting is **Off**.

Under normal circumstances, the projector will operate normally with this function set to Off. By default, the projector will detect the temperature of the surrounding environment to regulate the speed of the cooling fan. When the ambient temperature rises, fan speed will increase (generates louder noise) to make sure the heat inside the projector gets discharged and keep the projector working normally.

However, if you were to operate the projector in environment of excessive heat or in areas of high altitude, the projector may automatically shut down. When this happens, you can enable this function by setting it to On to force the cooling fan to work at a higher speed to regulate the temperature inside the projector.

> *Note:*
> *High altitude region refers to area with elevation over 5000 feet.*

—**Custom Power Level**
Use ◄ ► function to select a custom power level (80.4% to 100%).

—**Lamp 1 Status**
Use ◄ ► function to set lamp status to On/Off.

—**Lamp 2 Status**
Use ◄ ► function to set lamp status to On/Off.

# OSD Introduction - ALIGNMENT

| INPUT | PICTURE | LAMPS | ALIGNMENT | CONTROL | SERVICE |
|-------|---------|-------|-----------|---------|---------|

| | | | |
|---|---|---|---|
| Projection Mode | < | Front | > |
| Fan Mode | < | Normal | > |
| Lens Control | | Enter | |
| Lens Memory | | Enter | |
| Center Lens | | Execute | |
| Warp | | Enter | |
| Blanking | | Enter | |
| Edge Blend | | Enter | |

—**Projection Mode**
Use ◄ ► function to select the projection mode (**Front**, **Rear**, **Ceiling + Front**, **Ceiling + Rear**).

—**Fan Mode**
Use ◄ ► function to set the fan mode (**Normal**, **Up**, **Down**).

—**Lens Control**
Use this function to set the lens control mode (**Zoom**/**Focus**).

—**Lens Memory**
**Load Memory:** Select this item to load the your own setting.
**Save setting:** You can adjust the OSD's items by yourself then use this function to save your setting.

—**Center Lens**
Use this to center the lens.

—**Warp**
Use this to correct image distortion.

  —**Keystone**
  Press ◄ ► to correct horizontal keystone due to projection angle. Press ▲ ▼to correct Vertical keystone due
  to projection angle.

  —**Rotation**
  Press ◄ ► to correct incorrect image angle.
  Press ◄ to adjust angle to correct.          Correct angle          Press ► to adjust angle to correct.

— **Pincushion / Barrel**

Press ◀ ▶ to correct pincushion/barrel distortion.
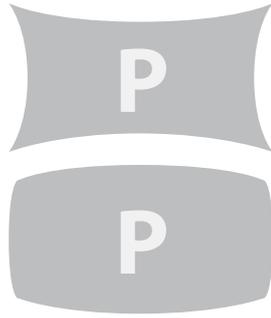
Press ◀ ▶ to correct pincushion distortion to correct image.

Press ◀ ▶ to correct barrel distortion to correct image.

— **Top Left Corner**

Press ◀ ▶ to correct top left corner image distortion.

Press ◀ ▶ to correct top left corner image distortion to correct image.

— **Top Right Corner**

Press ◀ ▶ to correct the right corner image distortion.

Press ◀ ▶ to correct top right corner image distortion to correct image.

— **Bottom Left Corner**

Press ◀ ▶ to correct the bottom left image distortion.

Press ◀ ▶ to correct bottom left corner image distortion to correct image.

— **Bottom Right Corner**

Press ◀ ▶ to correct the bottom left image distortion.

Press ◀ ▶ to correct bottom right corner image distortion to correct image.

— **Custom Warp**

Use this to create custom warp values.

— **Reset**

Set all values to factory defaults.

**─Blanking**

Use this function to adjust the edges of the image and hide unwanted sections of the screen.

**─TOP**

Press ◀ ▶ on the remote control to adjust the top blanking area on the projected image.

**─Bottom**

Press ◀ ▶ on the remote control to adjust the bottom blanking area on the projected image.

**─Left**

Press ◀ ▶ on the remote control to adjust the left blanking area on the projected image.

**─Right**

Press ◀ ▶ on the remote control to adjust the right blanking area on the projected image.

**─Reset**

It will reset all the blanking functions to the default settings that is without any blanking functions enabled.

Use left blanking function to block the additional image on the screen.
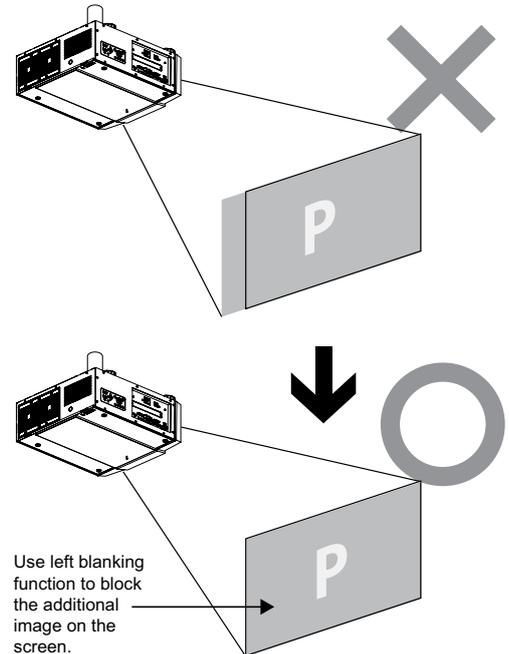
**─Edge Blend**

Edge blend function requires multiple projectors simultaneously displaying on the same screen. Use this to adjust the uniformity of the images.
To use this function, Edge Blend must be enabled on both projectors.

**─Edge Blend**

1. Press **Menu** to activate menu.
2. Press ◀ ▶ to select Alignment and press **Enter**.
3. Press ◀ ▶ to select Edge Blend and press **Enter**.

    *Note:*
    *Notice that red and green lines appear to indicate the edge of the screen. The green lines indicate the start/end of the blend zone.*

**─Blend Width**

The menu White Level allows for Top, Bottom, Left, and Right adjustment of a blending zone.

1. Press **Menu** to activate menu.
2. Press ◀ ▶ to select Alignment and press **Enter**.
3. Press ◀ ▶ to select Edge Blend and press **Enter**.
4. Press ◀ ▶ to select Blend Width and press **Enter**.
5. Select an adjustment zone and use ◀ ▶ to correct the blend zone.

| White Level | | |
|---|---|---|
| Top | ◀ 0 ▶ | |
| Bottom | ◀ 0 ▶ | |
| Left | ◀ 0 ▶ | |
| Right | ◀ 0 ▶ | |

— **Black Level Uplift**

Black Level Uplift is used to compensate for the lack of pure black output from projectors, due to light leaking to the projection screen. When projecting black , the hot area where the two images overlap project twice the projectors' black output levels.

The solution is to adjust the Black Level Uplift. First make sure that the units connected to the projectors are outputting black. Then increase the Black Level Uplift (Top, Bottom, Left, Right) until the non-overlap area's brightness matches the overlap area.

To adjust Black Level Uplift

1. Press **Menu** to activate menu
2. Press ◀ ▶ to select Alignment and press **Enter**.
3. Press ◀ ▶ to select Edge Blend and press **Enter**.
4. Press ◀ ▶ to select Black Level Uplift and press **Enter**.
5. Adjust the black level in zone A by setting the Selected Area (Top, Bottom, Left, Right) to match the black levels in zones B and C. You can also use Adjust (All, Red, Green, Blue) to set all primary colors.

*Note:*

— *Four corners, black level uplift adjustment function is not available.*

— *Corner blending, black level uplift adjustment function is not available.*

| Black Level Uplift | | |
|---|---|---|
| Select Area | | |
| Top | ◀ 0 ▶ | |
| Bottom | ◀ 0 ▶ | |
| Left | ◀ 0 ▶ | |
| Right | ◀ 0 ▶ | |
| Adjust | | |
| All | ◀ 0 ▶ | |
| Red | ◀ 0 ▶ | |
| Gerrn | ◀ 0 ▶ | |
| Blue | ◀ 0 ▶ | |

— **Reset**

This function sets Edge Blend figures to the factory default settings.

— **Align Pattern**

Enable this function to use a test pattern to align and adjust multiple images.

To use the Align Pattern:

1. Setup two projects on a horizontal position and display the test grid pattern image on each.
2. Create an overlap zone with the two test patterns by using the ▲ ▼ ◀ ▶ buttons on the remote control.
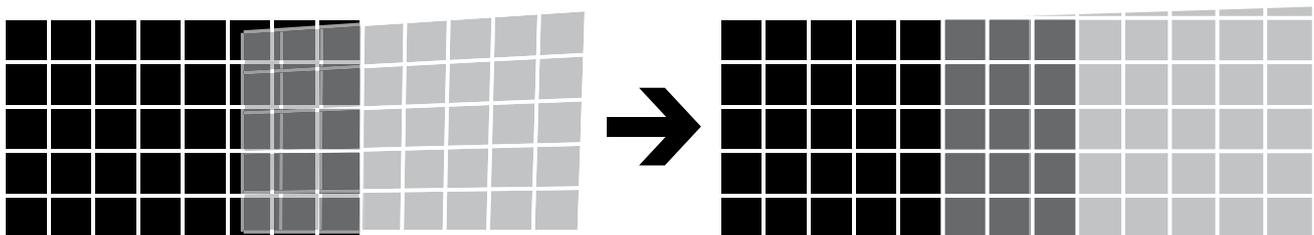


*Note:*

— *Blanking and Blend combinations are specific to each model.*

— *Do not adjust black levels in order to use the Edge blend / four corner combination function.*

— *Do not adjust black levels in order to use the blend along corners function.*

# OSD Introduction - CONTROL

| INPUT | PICTURE | LAMPS | ALIGNMENT | CONTROL | SERVICE |
|---|---|---|---|---|---|
| | | | Eco Network Power | < Eco > | |
| | | | Auto Power Off | < On > | |
| | | | Auto Power On | < Off > | |
| | | | Projector Control | < ----- > | |
| | | | Network | Enter | |
| | | | Start Up Logo | < On > | |
| | | | Trigger | < Auto > | |
| | | | Auto Search | < Off > | |
| | | | Dynamic Black | < On > | |
| | | | Language | Enter | |

— **Eco Network Power**
Use ◀ ▶ function to set Standard or Eco network power.

— **Auto Power Off**
The default value is **OFF**. If you set it to **ON**, the projector will automatically shut down after 20 minutes without input signal.

— **Auto Power On**
The default value is **Off**. If you set it to **ON**, the projector will automatically start up when it is connected to AC power. If you plug the projector's power cord into an AC socket with a switch, you can use this function to start up the projector using the socket's switch instead of the remote. If you do not need this function, please set it to **Off**.

— **Projector Control**
Use ◀ ▶ function to select RS232 or Network for the projector control.

— **Network**
Use this function to setup the network configuration.

To connect to a network (LAN), refer to the following steps:

1. Connect an RJ45 cable to LAN ports on the projector and a router or hub on the network.
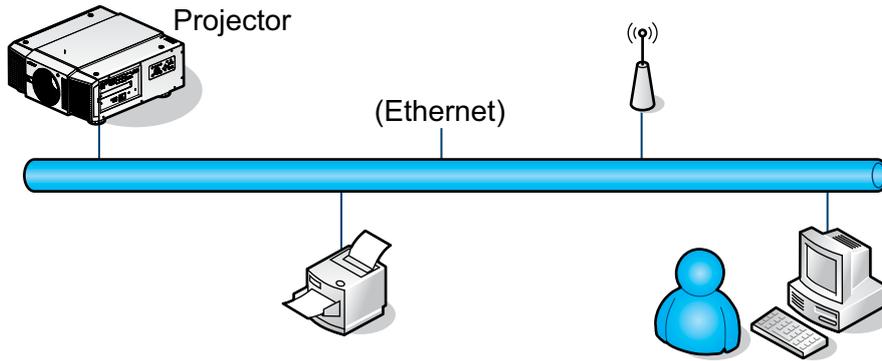


2. On the control PC, open a web browser and enter the IP address of the projector.



The Projector Web Server home page displays. In the example, the projector resides at IP address **192.168.0.100**.

3. Make any desired changes to projector settings, then Click **Save**.
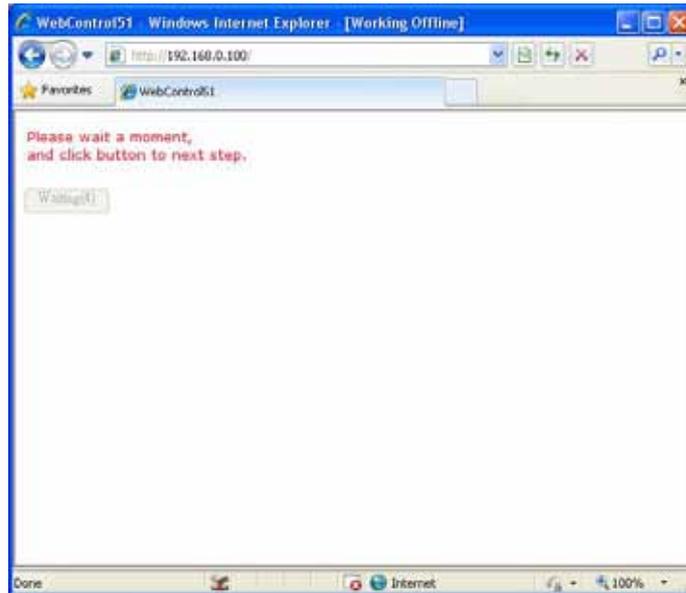


To connect to a stand alone PC or notebook, refer to the following steps:

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



Desk Top or Notebook
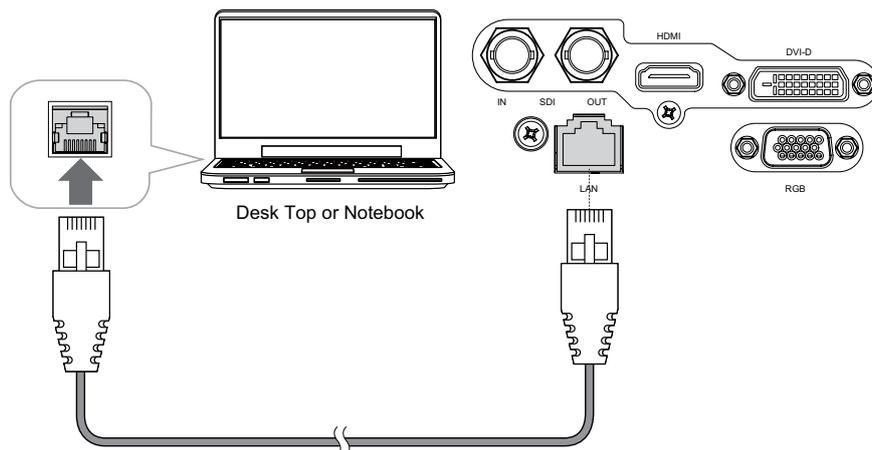
2. On the PC (Laptop), select **Start** -> **Control Panel** -> **Network Connections**.

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



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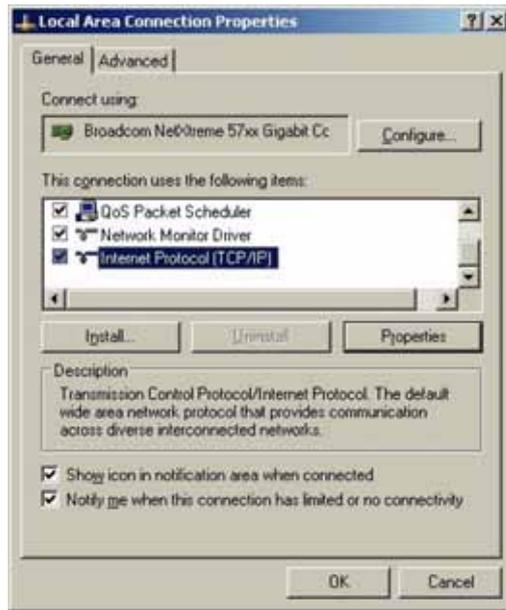


6.  Click **Use the following IP address**.
7.  Fill in the IP address and subnet mask. Make sure the IP address of the projector and PC are in the same network group. For example, 192.168.0.X. Whereas X must contain a different value. Then click **OK**.

8. On the control PC, open a web browser and enter the IP address of the projector.
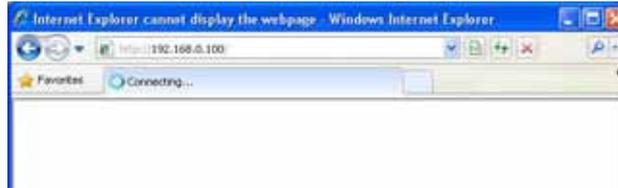
The Projector Web Server home page displays. In the example, the projector resides at IP address **192.168.0.100**.
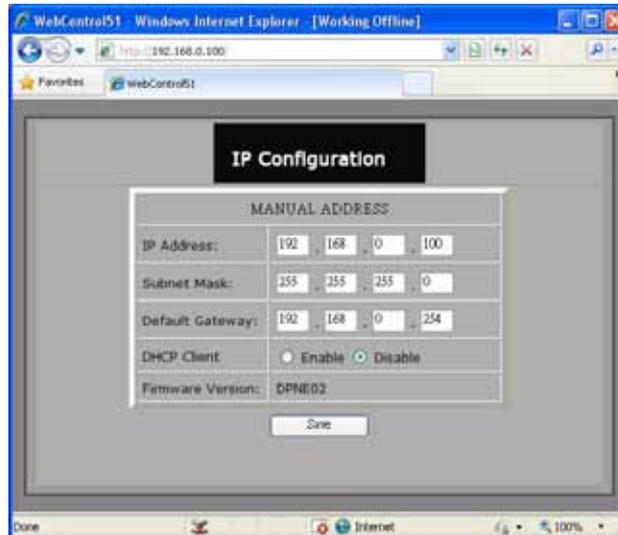
9. Make any desired changes to projector settings, then Click **Save**.
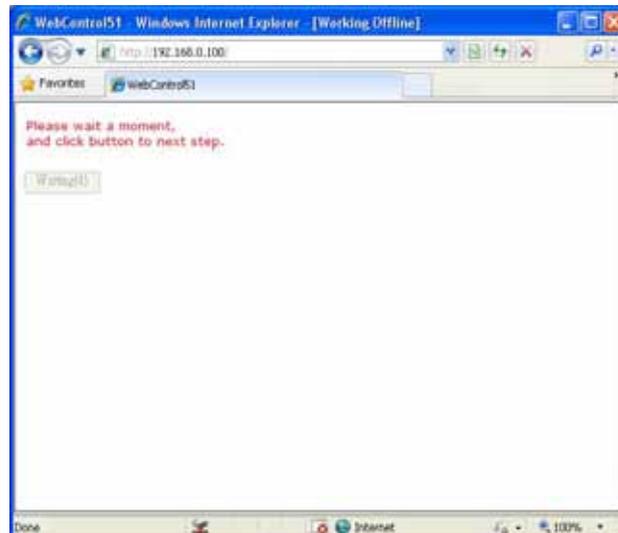
10. Access Tera Term tool.

Use RS-232 command to control the Projector.

— **Start Up Logo**
Use ◀ ▶ function to turn On/Off the start up logo.

— **Trigger**
The projector comes with one set of Trigger output. You can configure one devices connected to the projector via the trigger port to be automatically turned on when the projector is on. There will be a 2-3 second delay prior to activation to prevent operation of this function when the user is choosing the desired aspect ratio.

> — **5:4:** Outputs 12V of power on Trigger when chooses the 5:4 aspect ratio.
> — **4:3:** Outputs 12V of power on Trigger when chooses the 4:3 aspect ratio.
> — **16:10:** Outputs 12V of power on Trigger when chooses the 16:10 aspect ratio.
> — **16:9:** Outputs 12V of power on Trigger when chooses the 16:9 aspect ratio.
> — **1.88:** Outputs 12V of power on Trigger when chooses the 1.88 aspect ratio.
> — **2.35:** Outputs 12V of power on Trigger when chooses the 2.35 aspect ratio.
> — **Letterbox:** Outputs 12V of power on Trigger when chooses the Letterbox aspect ratio.
> — **Native:** Outputs 12V of power on Trigger when chooses the Native aspect ratio.
> — **Unscaled:** Outputs 12V of power on Trigger when chooses the Unscaled aspect ratio.
> — **Auto:** Outputs 12V of power on Trigger automatically.

— **Auto Search**
Use ◀ ▶ function to turn On/Off auto search.

— **Dynamic Black**
Use ◀ ▶ function to turn On/Off dynamic black .

— **Language**
Choose the OSD display language that you familiar. English, French, Spanish, Dutch, Portuguese, Simplify Chinese, Traditional Chinese, Japanese or Korean.

# OSD Introduction - SERVICE

| INPUT | PICTURE | LAMPS | ALIGNMENT | CONTROL | **SERVICE** |
|-------|---------|-------|-----------|---------|-------------|

| | |
|---|---|
| Model : | DP9675QDPxA |
| Serial Number : | C202XXXX00767 |
| Software Version : | MD05-GD02-Ub01- 9999-31-DPNE02-D02 |
| Active/PIP Source : | HDMI              / Off |
| Pixel Clock : | 83 .30 MHZ |
| Signal Format : | 1280x800@60Hz |
| H/V Refresh Rate : | H: 49.578 KHZ V: 60 HZ |
| Lamp 1 Time : | 7 HRS |
| Lamp 2 Time : | 7 HRS |
| Power On Time : | 7 HRS |
| Blue Only | <          Off          > |
| Factory Reset |              Enter |

The functions covered in this unit relate to the display of some basic information about the projector.

*Note:*
*Memory of the custom timing files will be erased in the Factory Reset operation.*

## —Model
The designated model number of the projector.

## —Serial Number
The designated serial number of the projector.

## —Software Version
The version of software installed on the projector.

## —Active/PIP Source
Displays the current Active/PIP sources.

## —Pixel Clock
Displays the pixel clock of the current input signal.

## —Signal Format
Displays the format of the current input signal.

## —H/V Refresh Rate
Displays the horizontal and vertical refresh rates for the current image.

## —Lamp 1 Time
Display the lamp 1 usage time. When you change the new lamp. The lamp hours will re-calculate the time.

— **Lamp 2 Time**
Display the lamp 2 usage time. When you change the new lamp. The lamp hours will re-calculate the time.

— **Power On Time**
Display the total On time for projector. Display only.

— **Blue Only**
Enabling this option will make the projector display only blue color to facilitate the process of image inspection for the service personnel. For detailed instructions on how to use this function, consult a qualified service personnel.

— **Factory Reset**
Use this function to restore the configurations in the OSD Menu back to factory default. Note that this function will not apply to items including no signal, network, Projector control, startup Logo, language, High Altitude mode and lamp hours.

> *Note:*
> *When Factory Reset is executed, all source memories created by the projector (i.e. timings files) will be erased.*

# CHANGE LAMP

The lifecycle of ordinary projection lamp typically lasts for 1200 hours before requiring replacement (different lamp configurations will affect lamp life). From the OSD Menu, you can go to "OSD Introduction - SERVICE" on page 45 to check how long a lamp has been used. You should also replace the lamp when the projected image gets noticeably darker. Contact your local dealer to purchase new certified lamps for your projector.

## TO REPLACE THE PROJECTOR LAMP1

1.  Turn off the projector and unplug the power cord. Let the projector cool for approximately 60 minutes before removing the lamp module for replacement.

    > *Note:*
    > *When you turn off the projector, the lamp inside the projector will still be very hot (approximately 200 ~ 300°C). If you attempt to replace the lamp without allowing the projector to cool, you could risk scalding yourself. This is why you should wait for no less than 60 minutes for the lamp to cool down in order to perform the replacement safely.*

2.  Loosen the fan.
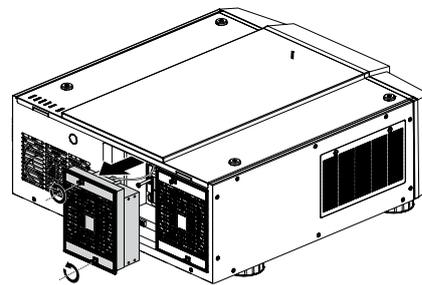
3.  Use a screw driver to loosen the screws as shown in the illustration and pull the lamp out.
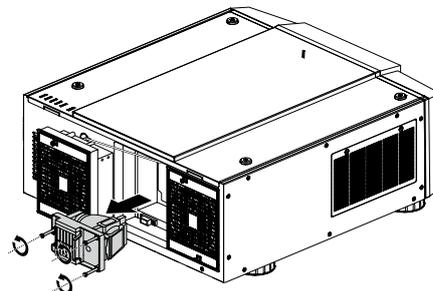
4.  Insert the new lamp in the direction shown in the illustration into the lamp assembly; tighten the three screws using a screw diver and make sure the lamp is firmly secured to prevent the lamp from shaking or poor contact.
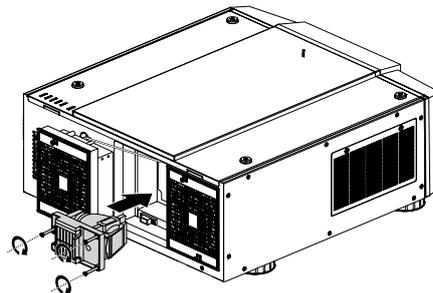
5.  Replace the fan and firmly secure the one screw on the fan.
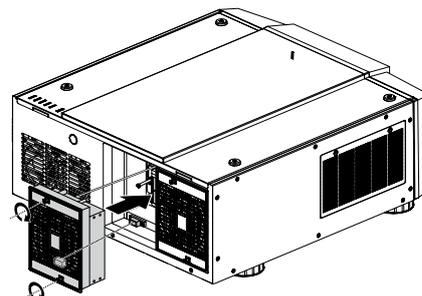
## TO REPLACE THE PROJECTOR LAMP2

1. Loosen the fan.
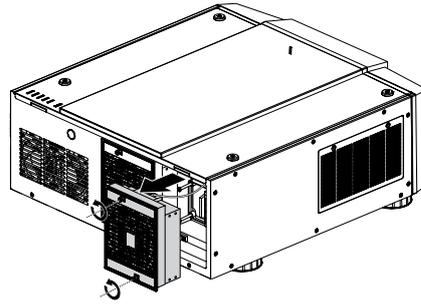
2. Use a screw driver to loosen the screws as shown in the illustration and pull the lamp out.
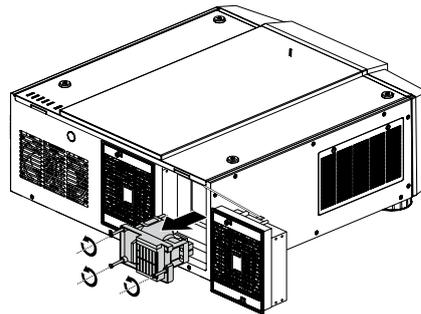
3. Insert the new lamp in the direction shown in the illustration into the lamp assembly; tighten the three screws using a screw diver and make sure the lamp is firmly secured to prevent the lamp from shaking or poor contact.
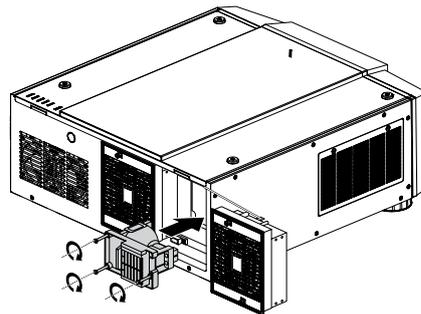
4. Replace the fan and firmly secure the one screw on the fan.
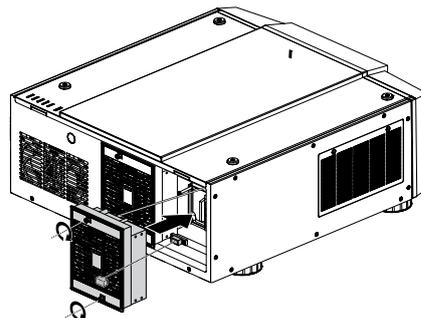
# Change Lens

## To replace the projector Lens

1. Remove the front cover.
2. Press and hold the lens lock button. Support the lens with one hand and turn clockwise loose the lens.
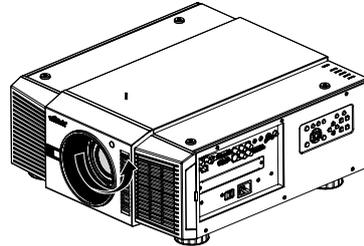
3. Pull the lens backward and slide the lens out of the lens holder.
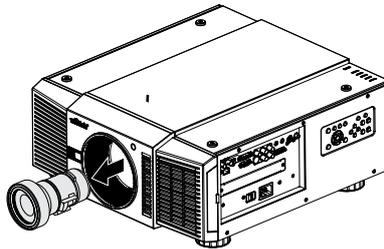
4. Insert the lens that female jeck is in front of the male jack (upper left corner). Ensure the lens touches the lens holder.
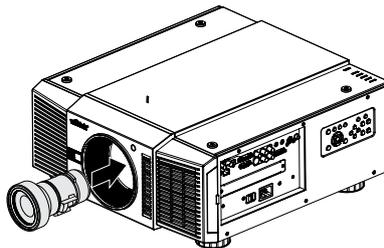
5. Secure the lens in the lens holder by turning counterclockwise the lens to the "locked" position.
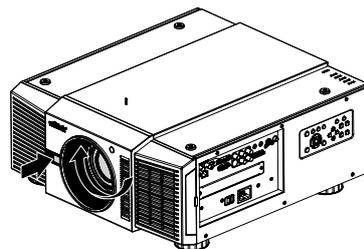
6. Check if the lens is really secured by trying to pull the lens out of the lens holder.

⟨ **Six models of lens for D8800(WUXGA)**

| Vivitek Part Number | Lens | F# | TR | Zoom Ratio |
|---|---|---|---|---|
| D88-ST001 | Standard Lens | 1.7 ~ 1.9 | 1.73 ~ 2.27 | 1.3 |
| D88-WF18501 | Wide Fix | 1.85 | 0.79 | N/A |
| D88-WZ01 | Wide Zoom | 1.85 ~ 2.50 | 1.25 ~ 1.79 | 1.41 |
| D88-SMLZ01 | Semi Long Zoom 1 | 1.86 ~ 2.48 | 2.22 ~ 3.67 | 1.65 |
| D88-LOZ101 | Long Zoom 1 | 1.85 ~ 2.41 | 3.58 ~ 5.38 | 1.5 |
| D88-LOZ201 | Long Zoom 2 | 1.85 ~ 2.48 | 5.31 ~ 8.26 | 1.55 |

### ■ Six models of lens for D8900(XGA)

| Vivitek Part Number | Lens | F# | TR | Zoom Ratio |
|---|---|---|---|---|
| D88-ST001 | Standard Lens | 1.7 ~ 1.9 | 1.79 ~ 2.35 | 1.3 |
| D88-WF18501 | Wide Fix | 1.85 | 0.8 | N/A |
| D88-WZ01 | Wide Zoom | 1.85 ~ 2.50 | 1.3 ~ 1.85 | 1.41 |
| D88-SMLZ01 | Semi Long Zoom | 1.86 ~ 2.48 | 2.3 ~ 3.81 | 1.65 |
| D88-LOZ101 | Long Zoom1 | 1.85 ~ 2.41 | 3.67 ~ 5.64 | 1.5 |
| D88-LOZ201 | Long Zoom2 | 1.85 ~ 2.48 | 5.5 ~ 8.56 | 1.55 |

### ■ Six models of lens for D8010W(WXGA)

| Vivitek Part Number | Lens | F# | TR | Zoom Ratio |
|---|---|---|---|---|
| D88-ST001 | Standard Lens | 1.7 ~ 1.9 | 1.80 ~ 2.38 | 1.3 |
| D88-WF18501 | Wide Fix | 1.85 | 0.76 | N/A |
| D88-WZ01 | Wide Zoom | 1.85 ~ 2.50 | 1.31 ~ 1.87 | 1.41 |
| D88-SMLZ01 | Semi Long Zoom | 1.86 ~ 2.48 | 2.33 ~ 3.86 | 1.65 |
| D88-LOZ101 | Long Zoom1 | 1.85 ~ 2.41 | 3.71 ~ 5.57 | 1.5 |
| D88-LOZ201 | Long Zoom2 | 1.85 ~ 2.48 | 5.56 ~ 8.67 | 1.55 |

# CHANGE FILTER

The filter should be changed every 3000 hours.

## TO REPLACE THE FILTER ON THE LEFT SIDE OF THE PROJECTOR

1. Remove the cover on the left side of the projector.
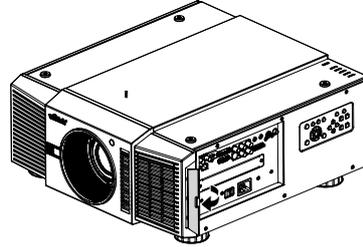
2. Remove the filter from it.
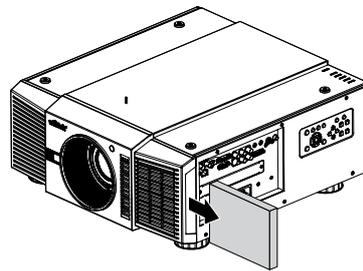
3. Insert a new filter.
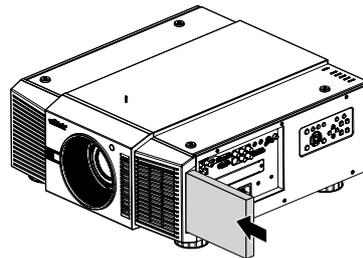
4. Install the cover on the left side of the projector.
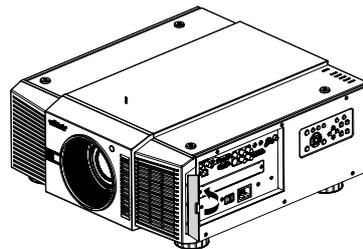
## To replace the Filter on the right side of the projector

1. Loosen the fan cover on the right side of the projector.
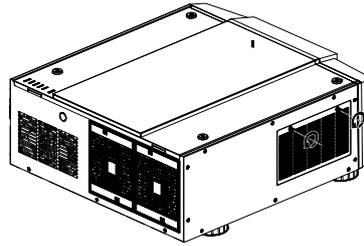
2. Open the fan cover and remove the filter from it.
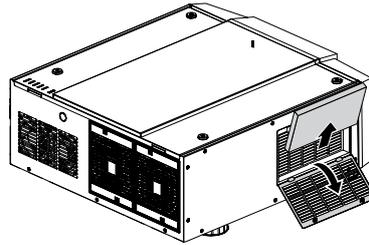
3. Insert a new filter and install the fan cover on the right side of the projector.
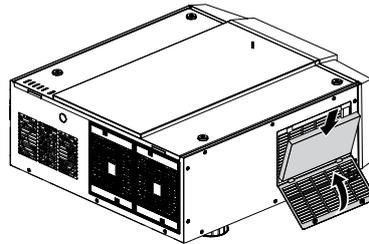
4. Secure the fan cover.
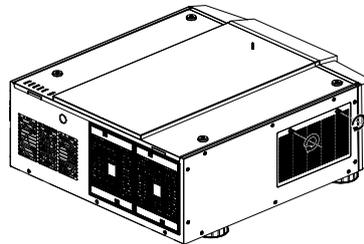
■ **Optional component**

| Component | P/N |
|-----------|-----|
| Handle | D88-Acc-HDL-oo |
| Foot | D88-Acc-Fot-oo |
| Filter | D88-AFoo |

# Change the Color Wheel

The color wheel is on the top side.
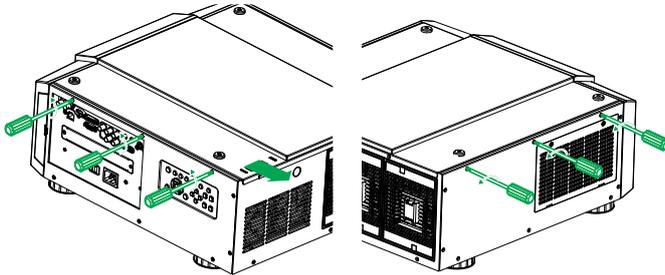
① Loosen the top cover
  Slide the cover and remove it.
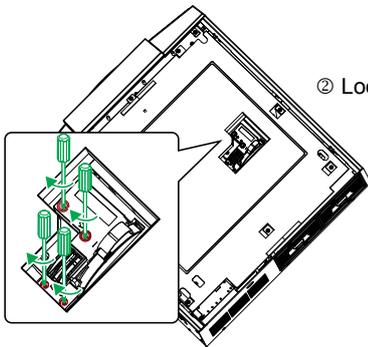
② Loosen the color wheel's screw.
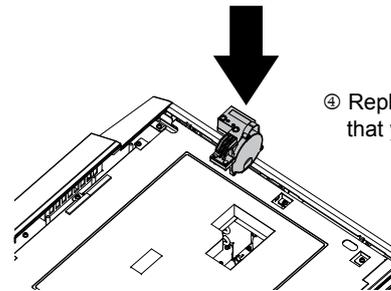
④ Replace the color wheel
  that you wanted.
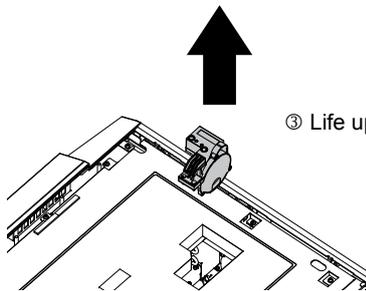
③ Life up the color Wheel
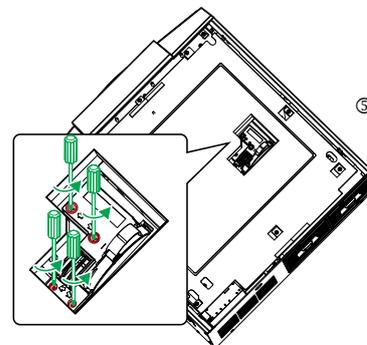
⑤ Tighten the screws.
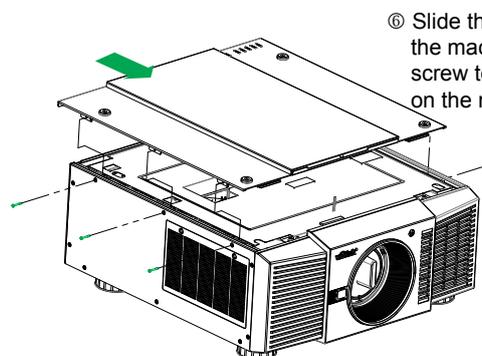
⑥ Slide the bracket to recover
  the machine then use the
  screw to fix the top bracket
  on the machine.

# *LED Status*
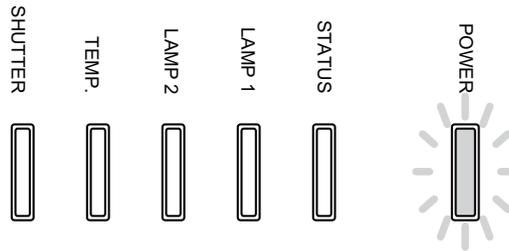


## *Power LED*

| LED Display | | Projector status | Procedure |
|---|---|---|---|
| Off | | Power is off | |
| Flashing | Green | Prepare to turn on projector | Wait till projector start displaying |
| | Orange | Projector cooling | Wait until cooling finish ( ~ 90 sec) |
| On | Red | Standby mode | |
| | Green | Projector is on | |

## *Status LED*

| LED Display | | Projector status | Procedure |
|---|---|---|---|
| Off | | No Problem | |
| Flashing | Red (Cycles of 1) | Cover Problem | Contact local Vivitek Server Center |
| | Red (Cycles of 4) | Fan Problem | Contact local Vivitek Server Center |
| On | Red | System Error | Contact local Vivitek Server Center |

## *Lamp1/Lamp2 LED*

| LED Display | | Projector status | Procedure |
|---|---|---|---|
| Off | | Lamp off | |
| Flashing | Green | Prepare to light lamp | |
| | Red (Cycles of 6) | Lamp lit fail | |
| On | Red | Lamp is end-of-life | |
| | Green | Lamp lit | |

## *Temp LED*

| LED Display | | Projector status | Procedure |
|---|---|---|---|
| Off | | No Problem | |
| Flashing | Red | Temperature problem | Contact local Vivitek Server Center |

## *Shutter LED*

| LED Display | | Projector status | Procedure |
|---|---|---|---|
| Off | | Shutter is open | |
| Flashing | Green | Shutter is closed | |

# SPECIFICATIONS

| Model | D8800 | D8900 | D8010W |
|---|---|---|---|
| Display Type | DLP | | |
| Brightness | 8000 ANS Lumens | 10,000 ANS Lumens | 8000 ANS Lumens |
| Native Resolution | WUXGA (1920 x 1200) | XGA (1024 x 768) | WXGA (1280 x 800) |
| Maximum Resolution | WUXGA (1920 x 1200)@60Hz | | |
| Contrast Ratio | 3000:1 | | |
| Lamp Life and Type | 2000/2500 Hours (Std. / Eco Mode), 400W x 2 | | |
| Throw Ratio (Standard Lens) | 1.73 - 2.27:1 | 1.79-2.35:1 | 1.81-2.38:1 |
| Image Size (Diagonal) | 40"- 500" | 40"- 500" | 40"- 500" |
| Projection Distance | 1.83 – 14.9m (6 - 49ft) | 1.79 – 14.54m (5.87 – 47.07ft) | 1.93 – 15.64m (6.3 – 51.31ft) |
| Projection Lens | F = 1.7 - 1.9<br>f = 25.7 - 33.7mm | | |
| Zoom Ratio (Standard Lens) | 1.3X | | |
| Aspect Ratio | 16.10 Native, 4.3 and 16:9 Compatible | | |
| Offset | 0% ~ +50% | | |
| Keystone Correction | Vertical: +/-30°<br>Horizontal:+/-35° | | |
| Synchronization | Vertical: 48 - 120 Hz<br>Horizontal: 15 - 108kHz | | |
| Edge Blending | Yes (built-in) | | |
| Lens Shift Range | Vertical: +/- 50%<br>Horizontal: +/- 10% | | |
| Video Compatibility | SDTV(480i/576i), EDTV (480p/576p), HDTV (720p, 1080i/p), NTSC/NTSC 4.43, PAL B/G/H/I/M/N 60, SECAM | | |
| I/O Connection Ports | HDMI v1.3, DVI-D, Component (YPbPr), VGA-In (x2), S-Video, Composite, 3G HDSDI-In, 3G HDSDI-Out, RJ45, 12V Trigger, RS-232C, Wired Remote | | |
| Projection Method | Table Top, Ceiling Mount (Front or Rear) | | |
| Dimensions (W x D x W) | 508 x 552.6 x 229mm (20" x 21.8" x 9") | | |
| Weight (Without Lens) | 24kg (52.9lbs) | | |
| Noise Level | 39 dB/39 dB (Single Lamp Eco./Std Mode)<br>39 dB/43 dB (Dual Lamp Eco./Std Mode) | | |
| Power Supply | AC 100-240V, 50/60Hz | | |
| Power Consumption | <table><tr><td>Lamp Style</td><td>Dual Lamp</td><td>Single Lamp</td></tr><tr><td>220V</td><td>960W</td><td>450W</td></tr><tr><td>110V</td><td>995W</td><td>440W</td></tr></table> Standby: 0.5W (Without RJ-45, RS-232 Enabled) | | |
| Standard Accessories | AC Power Cord<br>VGA Cable<br>Remote Control<br>Lens Cap<br>Documentation Kit | | |
| Optional Accessories | Replacement Lamp<br>Remote<br>Carry Handle<br>Foot Socket<br>Interchangeable Lens Options (x6) | | |

# SERIAL INTERFACE SPECIFICATIONS

## TRANSFER SPECIFICATIONS

| Item | Specifications |
|---|---|
| Transmission Speed | 38400 bps |
| Data Length | 8 bit |
| Parity | None |
| Stop Bit | 1 |
| Flow Control | None |

## RS-232 COMMANDS

There are 2 types of commands:

— Key commands

— Operation commands

All commands start with 2 letters as shown in the following:

— "ky" for key commands.

— "op" for operations commands.

— Key Commands The following example is the syntax for key commands: ky <keyname> [CR]

## IR CODES AND KEY NAMES

| Key | Code | RS232 Key name | Key Wording | Description |
|---|---|---|---|---|
| 1 | 0x90 | | ON | Turn power on. |
| 2 | 0x91 | | OFF | Turn power off. |
| 3 | 0xB6 | | FOCUS+ | |
| 4 | 0xB7 | | ZOOM+ | Zoom in. |
| 5 | 0xB8 | | TEST PATTERN | Enter test pattern menu. |
| 6 | 0xB9 | | FOCUS- | |
| 7 | 0xBA | | ZOOM- | Zoom out. |
| 8 | 0xBB | | LENS SHIFT | Shift control of the lens. |
| 9 | 0xC1 | | ▲ | Keypad up arrow. |
| 10 | 0xC3 | | ◄ | Keypad left arrow. |
| 11 | 0xC4 | | ► | Keypad right arrow. |
| 12 | 0xC5 | | ENTER | Keypad enter. |
| 13 | 0xC2 | | ▼ | Keypad down arrow. |
| 14 | 0x87 | | MENU | Show or hide the OSD menu. |
| 15 | 0xBC | | EXIT | Exit the OSD menu. |
| 16 | 0x83 | | INPUT | Switch the active source. |
| 17 | 0x98 | | PICTURE | Open PICTURE menu. |
| 18 | 0x8C | | NETWORK | |
| 19 | 0x86 | | AUTO SYNC | |
| 20 | 0x9F | | ASPECT | Switch to the next aspect ratio. |
| 21 | 0x8F | | PIP | |
| 22 | 0xBD | | OVERSCAN | |
| 23 | 0x8E | | FREEZE | |
| 24 | 0x8b | | LAMP MODE | |
| 25 | 0xBE | | 3D MODE | Not available. |
| 26 | 0xBF | | INFO | Open SERVICE menu. |

| Key | Code | RS232 Key name | Key Wording | Description |
|-----|------|----------------|-------------|-------------|
| 27 | 0x9E | | **LIGHT** | |
| 28 | 0x9A | | **CLEAR** | Not available. |
| 29 | 0x9B | | **SHUTTER** | Turn on or off the shutter. |
| 30 | 0x9C | | **ID SET** | Not available. |

## OPERATIONS COMMANDS

The following example is the syntax for operations commands:

      op <operation> <command> [CR]

| No. | Function | Command | Action on unit |
|-----|----------|---------|----------------|
| 1 | Set | =<value> | Makes the unit take that value. |
| 2 | Get | ? | Asks what the current value is. |
| 3 | Increment | + | Adds 1 to the current value. |
| 4 | Decrement | - | Subtracts 1 from the current value. |
| 5 | Execute | (none) | Performs an action. |

| Operation | Command | Values |
|-----------|---------|--------|
| **1. INPUT** | | |
| input.sel | = ? | 0 = HDMI<br>1 = DVI<br>2 = VGA<br>3 = Component / BNC<br>4 = Composite<br>5 = S-Video<br>6 = 3G-SDI<br>7 = Option Board (Reserved) |
| pip | = ? | 0 = Off<br>1 = On |
| pip.sel | = ? | 1 = HDMI<br>2 = DVI<br>3 = VGA<br>4 = Component / BNC<br>5 = Composite<br>6 = S-Video<br>7 = 3G-SDI<br>8 = Option Board (Reserved) |
| pip.swap | (execute) | Swap main and PIP source |
| pip.pos | = ? | 0 = Top Left<br>1 = Top Right<br>2 = Bottom Left<br>3 = Bottom Right<br>4 = Split L-R |

| Operation | Command | Values |
|---|---|---|
| pattern | = ? | 0 = Color Bar<br>1 = Cross Hatch<br>2 = Burst<br>3 = Red<br>4 = Green<br>5= Blue<br>6 = White<br>7 = Black<br>8 = Red (TI)<br>9 = Green (TI)<br>10 = Blue (TI)<br>11 = HRamp (TI)<br>12 = Off |
| color.space | = ? | 0 = Auto<br>1 = YCbCr<br>2 = YPbPr<br>3 = RGB-PC (0-255)<br>4 = RGB-Video (16-235) |
| input.lock | = ? | 0 = Auto<br>1 = 48 Hz<br>2 = 50 Hz<br>3 = 60 Hz |
| no.signal | = ? | 0 = Logo<br>1 = Blue<br>2 = Black<br>3 = White |
| vid.std | = ? | 0 = Auto<br>1 = PAL<br>2 = SECAM<br>3 = NTSC |
| auto.imgadj | = ? | 0 = Off<br>1 = Auto<br>2 = Always |
| **2. PICTURE** | | |
| pic.mode | = ? | 0 = High Bright<br>1 = Presentation<br>2 = Video |
| contrast | = ? + - | 0 - 200 |
| dyna.cont | = ? | 0 = Off<br>1 = On |
| bright | = ? + - | 0 - 200 |
| saturat | = ? + - | 0 - 200 |
| tint | = ? + - | 0 - 200 |
| gamma | = ? | 0 = Film<br>1 = Graphics<br>2 = Video<br>3 = Linear |
| color.temp (pic.mode is "High Bright" or "Presentation") | = ? | 0 = Default<br>1 = Native |
| color.temp ( pic.mode is "Video") | = ? | 0 = 5000K<br>1 = 6500K<br>2 = 7800K<br>3 = 9300K<br>4 = Native |

| Operation | Command | Values |
|---|---|---|
| red.offset | = ? + - | 0-200 |
| green.offset | = ? + - | 0-200 |
| blue.offset | = ? + - | 0-200 |
| red.gain | = ? + - | 0-200 |
| green.gain | = ? + - | 0-200 |
| blue.gain | = ? + - | 0-200 |
| sharp | = ? + - | 0-200 |
| nr | = ? + - | 0-200 (Noise Reduction) |
| aspect | = ? | 0 = 5:4<br>1 = 4:3<br>2 = 16:10<br>3 = 16:9<br>4 = 1.88<br>5 = 2.35<br>6 = Letterbox<br>7 = Native<br>8 =Unscaled |
| zoom (Overscan) | = ? | 0 = 5:4<br>1 = 4:3<br>2 = 16:10<br>3 = 16:9<br>4 = 1.88<br>5 = 2.35<br>6 = Letterbox<br>7 = Native<br>8 =Unscaled |
| h.total | = ? + - | 0-200 |
| h.pos | = ? + - | 0-200 |
| h.phase | = ? + - | 0-200 |
| v.pos | = ? + - | 0-200 |
| auto.img (Auto Sync) | (execute) | |

## 3. LAMP

| Operation | Command | Values |
|---|---|---|
| lamps | = ? | 0 = Single<br>1 = Dual |
| lamp.mode (Drive) | = ? | 0 = Economy<br>1 = Standard<br>2 = Dimming |
| lamp.pwr | = ? | 0-25 (80.4 % ~100.0 %) |
| altitude (High Altitude) | = ? | 0 = Off<br>1 = On |
| lamp1.stat | ? | 0 = Off<br>1 = On |
| lamp2.stat | ? | 0 = Off<br>1 = On |

## 4. ALIGNMENT

| Operation | Command | Values |
|---|---|---|
| proj.mode | = ? | 0 = Front<br>1 = Rear<br>2 = Ceiling + Front<br>3 = Ceiling + Rear |

| Operation | Command | Values |
|---|---|---|
| fan.pos | = ? | 0 = Normal |
|  |  | 1 = Vertical |
|  |  | 2 = Down |
| zoomio | + - | + => Zoom out |
|  |  | - => Zoom in |
| focus | + - | + => Focus Near |
|  |  | - => Focus Far |
| vert.offset | + - | + => Up |
|  |  | - => Down |
| horiz.offset | + - | + => Right |
|  |  | - => Left |
| lens.load | = | 1~10 set of lens memory (Load) |
| lens.save | = | 1~10 set of lens memory (Save) |
| lens.center | (execute) | Midposition shift |
| h.keystone | = ? + - | -350~+350 |
| v.keystone | = ? + - | -200~+200 |
| warp.rotat | = ? + - | -20 ~ +20 (in fb 1/4 unit) |
| warp.pinbrl | = ? + - | -100 ~ +100 |
| warp.tlc.x | = ? + - | 'x: -192 ~ +192 |
| warp.tlc.y |  | 'y: -120 ~ +120 |
| warp.trc.x | = ? + - | 'x: -192 ~ +192 |
| warp.trc.y |  | 'y: -120 ~ +120 |
| warp.blc.x | = ? + - | 'x: -192 ~ +192 |
| warp.blc.y |  | 'y: -120 ~ +120 |
| warp.brc.x | = ? + - | 'x: -192 ~ +192 |
| warp.brc.y |  | 'y: -120 ~ +120 |
| warp.cust | = ? | 0 = Off |
|  |  | 1 = On |
| warp.reset | (execute) |  |
| blank.top | = ? + - | 0 ~ 360 |
| blank.btm | = ? + - | 0 ~ 360 |
| blank.left | = ? + - | 0 ~ 534 |
| blank.right | = ? + - | 0 ~ 534 |
| blank.rst | (execute) |  |
| eb.stat (Edge Blend) | = ? |  |
| eb.wht.top | = ? + - | 0, 200 ~ 500 |
| eb.wht.btm | = ? + - | 0, 200 ~ 500 |
| eb.wht.left | = ? + - | 0, 200 ~ 800 |
| eb.wht.right | = ? + - | 0, 200 ~ 800 |
| eb.blk.top | = ? + - | 0, 8, 16, 24, 32 |
| eb.blk.btm | = ? + - | 0, 8, 16, 24, 32 |
| eb.blk.left | = ? + - | 0, 4, 8, 12, 16, 20, 24, 28, 32 |
| eb.blk.right | = ? + - | 0, 4, 8, 12, 16, 20, 24, 28, 32 |
| eb.all | = ? + - | 0 ~ 32 |
| eb.red | = ? + - | 0 ~ 32 |
| eb.green | = ? + - | 0 ~ 32 |
| eb.blue | = ? + - | 0 ~ 32 |
| eb.reset | (execute) |  |

| Operation | Command | Values |
|---|---|---|
| w2.recover | (execute) | |
| eb.adl (Align Pattern) | | 0 = Off |
| | | 1 = On |

## 5. CONTROL

| Operation | Command | Values |
|---|---|---|
| eco.net.pow | = ? | 0 = Off (ECO Standby Mode) |
| | | 1 = On (Standard Standby Mode) |
| auto.powoff | = ? | 0 = Off |
| | | 1 = On |
| auto.powon | = ? | 0 = Off |
| | | 1 = On |
| proj.ctrl | = ? | 0 = rs232 |
| | | 1 = network |
| net.ipaddr | = ? | <string> |
| net.subnet | = ? | <string> |
| net.gateway | = ? | <string> |
| net.dhcp | = ? | 0 = Off |
| | | 1 = On |
| startup.logo | = ? | 0 = Off |
| | | 1 = On |
| trig.1 | = ? | 0 = 5:4 |
| | | 1 = 4:3 |
| | | 2 = 16:10 |
| | | 3 = 16:9 |
| | | 4 = 1.88 |
| | | 5 = 2.35 |
| | | 6 = Letterbox |
| | | 7 = Native |
| | | 8 = Unscaled |
| | | 9 = Auto |
| auto.src (Auto Search) | = ? | 0 = Off |
| | | 1 = On |
| dblack | = ? | 0 = Off |
| | | 1 = On |
| lang | = ? | 0 = English |
| | | 1 = French |
| | | 2 = Spanish |
| | | 3 = German |
| | | 4 = Portuese |
| | | 5 = Chinese Simplified |
| | | 6 = Chinese Traditional |
| | | 7 = Japanese |
| | | 8 = Korean |

## 6. SERVICE

| Operation | Command | Values |
|---|---|---|
| model | ? | <string> |
| ser.no | ? | <string> |
| sw.ver | ? | <string> |

| Operation | Command | Values |
|---|---|---|
| act.src | ? | 0 = HDMI<br>1 = DVI<br>2 = VGA<br>3 = Component / BNC<br>4 = Composite<br>5 = S-Video<br>6 = 3G-SDI<br>7 = Option Board (Reserved) |
| pip.src | ? | 0 = PIP OFF<br>1 = HDMI<br>2 = DVI<br>3 = VGA<br>4 = Component / BNC<br>5 = Composite<br>6 = S-Video<br>7 = 3G-SDI<br>8 = Option Board (Reserved) |
| pixel.clock | ? | <string> |
| signal | ? | <string> |
| h.refresh | ? | <string> |
| v.refresh | ? | <string> |
| lamp1.hours | ? | <string> |
| lamp2.hours | ? | <string> |
| proj.runtime | ? | <string> |
| blue.only | = ? | 0 = Off<br>1 = On |
| fact.reset | (execute) | |

| | | |
|---|---|---|
| Ir Cursor | | |
| power.on | (execute) | |
| power.off | (execute) | |
| picture.mute | = ? | 0 = Off<br>1 = On |
| status | ? | 0 = standby<br>1 = warm up<br>2 = imaging<br>3 = cooling<br>4 = warning |
| errcode | ? | 0=ErrMsgOverTempInlet<br>1=ErrMsgOverTempDMD<br>2=ErrMsgOverTempLamp1<br>3=ErrMsgOverTempLamp2<br>4=Reserved<br>5=Reserved<br>6=ErrMsgOverTempBallast1<br>7=ErrMsgOverTempBallast2<br>8=Reserved<br>9=Reserved<br>10=ErrMsgFanInitError<br>11=ErrMsgFan1RotateError<br>12=ErrMsgFan2RotateError<br>13=ErrMsgFan3RotateError<br>14=ErrMsgFan4RotateError<br>15=ErrMsgFan5RotateError<br>16=ErrMsgFan6RotateError<br>17=ErrMsgFan7RotateError<br>18=ErrMsgFan8RotateError<br>19=ErrMsgFan9RotateError<br>20=ErrMsgFan10RotateError<br>21=ErrMsgFan11RotateError<br>22=ErrMsgFan12RotateError<br>23=ErrMsgFan13RotateError<br>24=Reserved<br>25=Reserved<br>26=Reserved<br>27=ErrMsgDMDInitFail<br>28=ErrMsgLampInitFail<br>29=ErrMsgLampLitFail<br>30=ErrMsgBallastUart1Error<br>31=ErrMsgExGpioFail<br>32=ErrMsgInterLockOpen<br>33=ErrMsgGF9450NoResponse<br>34=ErrMsgSystemI2cFail<br>35=ErrMsgSoftwareI2cFail<br>36=ErrMsgEepromFail<br>37=ErrMsgEdidFail<br>38=ErrMsgEepVersionFail<br>39=ErrMsgRstGennum<br>40= ErrMsgLamp2LitFail<br>41= ErrMsgBallast2UartError<br>42=ErrMsgGtInletTp<br>43=ErrMsgGtDmdTp<br>44=ErrMsgInletTempSensorFail<br>45=ErrMsgDMDTempSensorFail<br>46=ErrMsgGeoSystemFail<br>47=ErrMsgLampDoor1Open<br>48=ErrMsgLampDoor2Open<br>49= ErrMsgLCUFail,<br>50= ErrMsgLCUVerFail<br>51= ErrMsgLowTempStart<br>52= ErrMsgDDP3021ASICError<br>53= ErrMsgDDP3021MainRLDRam<br>54= ErrMsgDDP3021SlaveRLDRam<br>55= ErrMsgColorWheelSpin<br>56= ErrMsgFETempSensorFail<br>57= ErrMsgOverTempFE<br>58=ErrMsgColorWheelCover<br>59=ErrMsgAllBallastUartError<br>60= ErrMsgHDMIDecoderFail<br>61= ErrMsgVideoDecoderFail<br>62= ErrMsgAD9984Fail |
| remote.set | = ? | 1 ~ 10 : Set Projector ID<br>255 : Clear Projector ID (No ID) |
| mot.ver | ? | Get firmware version of motor board |
| hw.ver | ? | Get hardware version of main PCB |

# DIMENSIONS

508.8mm

549.2mm

508.8mm

204.9mm

549.2mm

230.3mm

719mm

664mm

417mm

509.8

254.9

Use 6pcs M4 screws.
Lenth max=15mm to
fix this machine
on the ceiling mount.

150

150

108.8

547.6

104.4          300

230.1

204.5

# SUPPORTED TIMINGS

| Signal Type | Resolution | Frame rate | DVI | Video | SCART | S-Video | Y-Pb-Pr | HD15-YUV | HD15-RGB |
|---|---|---|---|---|---|---|---|---|---|
| PC | 640x480 | 59.94 | X | | | | | | X |
| | 640x480 | 74.99 | X | | | | | | X |
| | 640x480 | 85 | X | | | | | | X |
| | 800x600 | 60.32 | X | | | | | | X |
| | 800x600 | 75 | X | | | | | | X |
| | 800x600 | 85.06 | X | | | | | | X |
| | 848x480 | 47.95 | X | | | | | | X |
| | 848x480 | 59.94 | X | | | | | | X |
| | 1024x768 | 60 | X | | | | | | X |
| | 1280x1024 | 60.02 | X | | | | | | X |
| | 1280x1024 | 75.02 | X | | | | | | X |
| | 1280x1024 | 85.02 | X | | | | | | X |
| | 1600x1200 | 60 | X | | | | | | X |
| | 1680x1050 | 59.954 | X | | | | | | X |
| | 1920x1080 | 47.95 | X | | | | | | X |
| Apple Mac | 640x480 | 66.59 | X | | | | | | X |
| SDTV | RGBs | 50 | | | X | | | | |
| | 1440x480i | 60 | X | | | | | | |
| | 1440x576i | 50 | X | | | | | | |
| | 480i | 59.94 | | | | | X | | |
| | 576i | 50 | | | | | X | | |
| EDTV | 480p | 59.94 | X | | | | X | X | X |
| | 576p | 50 | X | | | | X | X | X |
| HDTV | 1035i | 60 | X | | | | X | X | X |
| | 1080i | 50 | X | | | | X | X | X |
| | 1080i (Aus) | 50 | X | | | | X | X | X |
| | 1080i | 59.94 | X | | | | X | X | X |
| | 1080i | 60 | X | | | | X | X | X |
| | 720p | 50 | X | | | | X | X | X |
| | 720p | 59.94 | X | | | | X | X | X |
| | 720p | 60 | X | | | | X | X | X |
| | 1080p | 23.98 | X | | | | X | X | X |
| | 1080p | 24 | X | | | | X | X | X |
| | 1080p | 25 | X | | | | X | X | X |
| | 1080p | 29.97 | X | | | | X | X | X |
| | 1080p | 30 | X | | | | X | X | X |
| | 1080p | 50 | X | | | | X | X | X |
| | 1080p | 59.94 | X | | | | X | X | X |
| | 1080p | 60 | X | | | | X | X | X |
| NTSC | NTSC (M 4.43) | 59.94 | | X | | X | | | |
| PAL | PAL (B,G,H,I) | 50 | | X | | X | | | |
| | PAL (N) | 50 | | X | | X | | | |
| | PAL (M) | 59.94 | | X | | X | | | |
| SECAM | SECAM (M) | 50 | | X | | X | | | |

# PROJECTION DISTANCE AND SCREEN SIZE

## Optional Lenses (D88-LOZ101)

**Long Zoom 1 Lens Features and Specifications**
- Motorized Zoom and Focus
- Lens Shift Position: 0-50% Vertical; +/-10% Horizontal
- Focus adjustable Range: 40" - 500"
- Optical Performance Range: 50" - 300"
- F-Number: 1.85 - 2.41
- Focal Length: 52.8-79.1mm
- Screen Size: 50"-300"
- Zoom Ratio: 1.5:1
- Throw Distance Ratio: 3.71-5.57:1(XGA); 3.76-5.64:1(WXGA); 3.58-5.38:1(WUXGA)

**Projection Distance V.S. Projection Size**

| D88-LOZ101 Long Zoom 1 Lens | XGA Projection Distance (m) +/-10% | | WXGA Projection Distance (m) +/-10% | | WUXGA Projection Distance (m) +/-10% | |
|---|---|---|---|---|---|---|
| Screen Size (inch) | Minimum Wide | Maximum Tele | Minimum Wide | Maximum Tele | Minimum Wide | Maximum Tele |
| 40 | 2.94 | 4.49 | 3.17 | 4.83 | 3.01 | 4.6 |
| 50 | 3.71 | 5.65 | 4.00 | 6.08 | 3.8 | 5.78 |
| 60 | 4.48 | 6.80 | 4.83 | 7.32 | 4.59 | 6.96 |
| 80 | 6.02 | 9.12 | 6.48 | 9.80 | 6.16 | 9.33 |
| 100 | 7.56 | 11.43 | 8.14 | 12.29 | 7.73 | 11.7 |
| 120 | 9.10 | 13.74 | 9.79 | 14.77 | 9.31 | 14.06 |
| 150 | 11.41 | 17.21 | 12.27 | 18.50 | 11.67 | 17.61 |
| 180 | 13.72 | 20.68 | 14.75 | 22.22 | 14.03 | 21.16 |
| 200 | 15.26 | 22.99 | 16.41 | 24.71 | 15.6 | 23.53 |
| 300 | 22.95 | 34.56 | 24.68 | 37.13 | 23.47 | 35.36 |
| 400 | 30.65 | 46.12 | 32.95 | 49.55 | 31.34 | 47.19 |
| 500 | 38.34 | 57.69 | 41.22 | 61.97 | 39.21 | 59.02 |

## Optional Lenses (D88-LOZ201)

**Long zoom 2 Lens Features and Specifications**
- Motorized Zoom and Focus
- Lens Shift Position: 0-50% Vertical; +/-10% Horizontal
- Focus adjustable Range: 40" - 500"
- Optical Performance Range: 50" - 300"
- F-Number: 1.85 - 2.48
- Focal Length: 78.5-121.9mm
- Screen Size: 50"-300"
- Zoom Ratio: 1.55:1
- Throw Distance Ratio: 5.5-8.56:1(XGA); 5.56-8.67:1(WXGA); 5.31-8.26:1(WUXGA)

**Projection Distance V.S. Projection Size**

| D88-LOZ201 Long Zoom 2 Lens | XGA Projection Distance (m) +/-10% | | WXGA Projection Distance (m) +/-10% | | WUXGA Projection Distance (m) +/-10% | |
|---|---|---|---|---|---|---|
| Screen Size (inch) | Minimum Wide | Maximum Tele | Minimum Wide | Maximum Tele | Minimum Wide | Maximum Tele |
| 40 | 4.31 | 6.89 | 4.65 | 7.42 | 4.42 | 7.05 |
| 50 | 5.46 | 8.68 | 5.89 | 9.35 | 5.59 | 8.89 |
| 60 | 6.61 | 10.48 | 7.13 | 11.28 | 6.77 | 10.73 |
| 80 | 8.91 | 14.07 | 9.60 | 15.13 | 9.13 | 14.4 |
| 100 | 11.22 | 17.66 | 12.08 | 18.99 | 11.48 | 18.07 |
| 120 | 13.52 | 21.25 | 14.55 | 22.85 | 13.84 | 21.75 |
| 150 | 16.97 | 26.64 | 18.27 | 28.63 | 17.37 | 27.26 |
| 180 | 20.42 | 32.03 | 21.98 | 34.42 | 20.91 | 32.77 |
| 200 | 22.73 | 35.62 | 24.45 | 38.28 | 23.26 | 36.44 |
| 300 | 34.24 | 53.57 | 36.83 | 57.56 | 35.04 | 54.81 |
| 400 | 45.75 | 71.53 | 49.20 | 76.85 | 46.82 | 73.18 |
| 500 | 57.26 | 89.48 | 61.58 | 96.13 | 58.6 | 91.54 |

# Optional Lenses (D88-SMLZ01)

**Semi Long Zoom Lens Features and Specifications**
•Motorized Zoom and Focus
•Lens Shift Position: 0-50% Vertical; +/-10% Horizontal
•Focus adjustable Range: 40" - 500"
•Optical Performance Range: 50" - 300"
•F-Number: 1.86 - 2.48

•Focal Length: 32.9-54.2mm
•Screen Size: 50"-300"
•Zoom Ratio: 1.65:1
•Throw Distance Ratio: 2.3-3.81(XGA); 2.33-3.86:1(WXGA); 2.22-3.67: 1(WUXGA)

Projection Distance V.S. Projection Size

| D88-SMLZ01 Semi Long Zoom Lens | XGA Projection Distance (m) +/-10% | | WXGA Projection Distance (m) +/-10% | | WUXGA Projection Distance (m) +/-10% | |
|---|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum |
| Screen Size (inch) | Wide | Tele | Wide | Tele | Wide | Tele |
| 40 | 1.83 | 3.08 | 1.97 | 3.31 | 1.87 | 3.15 |
| 50 | 2.30 | 3.87 | 2.48 | 4.16 | 2.36 | 3.96 |
| 60 | 2.78 | 4.66 | 3.00 | 5.01 | 2.85 | 4.77 |
| 80 | 3.73 | 6.24 | 4.02 | 6.71 | 3.82 | 6.39 |
| 100 | 4.69 | 7.82 | 5.05 | 8.41 | 4.80 | 8.00 |
| 120 | 5.64 | 9.40 | 6.07 | 10.10 | 5.78 | 9.62 |
| 150 | 7.07 | 11.77 | 7.61 | 12.65 | 7.24 | 12.04 |
| 180 | 8.50 | 14.14 | 9.15 | 15.19 | 8.70 | 14.47 |
| 200 | 9.46 | 15.72 | 10.17 | 16.89 | 9.68 | 16.08 |
| 300 | 14.23 | 23.62 | 15.30 | 25.38 | 14.56 | 24.16 |
| 400 | 18.99 | 31.52 | 20.42 | 33.86 | 19.44 | 32.25 |
| 500 | 23.76 | 39.42 | 25.55 | 42.35 | 24.32 | 40.33 |

# Optional Lenses (D88-ST001)

**STD Lens Features and Specifications**
•Motorized Zoom and Focus
•Lens Shift Position: 0-50% Vertical; +/-10% Horizontal
•Focus adjustable Range: 40" - 500"
•Optical Performance Range: 50" - 300"
•F-Number: 1.7 - 1.9

•Focal Length: 26 - 34mm
•Screen Size: 50"-300"
•Zoom Ratio: 1.3:1
•Throw Distance Ratio: 1.79-2.35:1(XGA); 1.81-2.38:1(WXGA); 1.73-2.27:1(WUXGA)

Projection Distance V.S. Projection Size

| D88-ST001 STD Lens | XGA Projection Distance (m) +/-10% | | WXGA Projection Distance (m) +/-10% | | WUXGA Projection Distance (m) +/-10% | |
|---|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum |
| Screen Size (inch) | Wide | Tele | Wide | Tele | Wide | Tele |
| 40 | 1.42 | 1.88 | 1.53 | 2.03 | 1.45 | 1.93 |
| 50 | 1.79 | 2.37 | 1.93 | 2.55 | 1.83 | 2.42 |
| 60 | 2.16 | 2.86 | 2.33 | 3.07 | 2.21 | 2.92 |
| 80 | 2.90 | 3.83 | 3.13 | 4.12 | 2.97 | 3.92 |
| 100 | 3.65 | 4.80 | 3.93 | 5.17 | 3.73 | 4.92 |
| 120 | 4.39 | 5.78 | 4.72 | 6.22 | 4.49 | 5.91 |
| 150 | 5.50 | 7.24 | 5.92 | 7.79 | 5.63 | 7.41 |
| 180 | 6.62 | 8.70 | 7.12 | 9.36 | 6.77 | 8.9 |
| 200 | 7.36 | 9.67 | 7.92 | 10.40 | 7.53 | 9.9 |
| 300 | 11.07 | 14.54 | 11.91 | 15.64 | 11.33 | 14.88 |
| 400 | 14.79 | 19.41 | 15.90 | 20.88 | 15.13 | 19.87 |
| 500 | 18.50 | 24.28 | 19.90 | 26.11 | 18.93 | 24.85 |

# Optional Lenses (D88-WF18501)

**Wide Fix Lens Features and Specifications**
•Motorized Focus
•Lens Shift Position: 0%
•Focus adjustable Range: 40" - 500"
•Optical Performance Range: 50" - 300"
•F-Number: 1.85

•Focal Length: 11.6mm
•Screen Size: 50"-300"
•Zoom Ratio: N/A
•Throw Distance Ratio: 0.79:1(XGA); 0.8:1(WXGA); 0.76:1(WUXGA)

**Projection Distance V.S. Projection Size**

| D88-WF18501 Wide Fix Lens | XGA Projection Distance (m) +/-10% | WXGA Projection Distance (m) +/-10% | WUXGA Projection Distance (m) +/-10% |
|---|---|---|---|
| Screen Size (inch) | Wide | Wide | Wide |
| 40 | 0.62 | 0.67 | 0.64 |
| 50 | 0.79 | 0.85 | 0.81 |
| 60 | 0.96 | 1.03 | 0.98 |
| 80 | 1.29 | 1.39 | 1.32 |
| 100 | 1.62 | 1.75 | 1.66 |
| 120 | 1.96 | 2.11 | 2.01 |
| 150 | 2.46 | 2.64 | 2.52 |
| 180 | 2.96 | 3.18 | 3.03 |
| 200 | 3.3 | 3.54 | 3.37 |
| 300 | 4.97 | 5.33 | 5.08 |
| 400 | 6.64 | 7.13 | 6.79 |
| 500 | 8.31 | 8.92 | 8.5 |

# Optional Lenses (D88-WZ01)

**Wide Zoom Lens Features and Specifications**
•Motorized Zoom and Focus
•Lens Shift Position: 0-50% Vertical; +/-10% Horizontal
•Focus adjustable Range: 40" - 500"
•Optical Performance Range: 50" - 300"
•F-Number: 1.85 - 2.5

•Focal Length: 18.7-26.5mm
•Screen Size: 50"-300"
•Zoom Ratio: 1.41:1
•Throw Distance Ratio: 1.3-1.85:1(XGA); 1.31-1.87:1(WXGA); 1.25-1.79:1(WUXGA)

**Projection Distance V.S. Projection Size**

| D88-WZ01 Wide Zoom Lens | XGA Projection Distance (m) +/-10% | | WXGA Projection Distance (m) +/-10% | | WUXGA Projection Distance (m) +/-10% | |
|---|---|---|---|---|---|---|
| Screen Size (inch) | Minimum Wide | Maximum Tele | Minimum Wide | Maximum Tele | Minimum Wide | Maximum Tele |
| 40 | 1.03 | 1.49 | 1.11 | 1.60 | 1.02 | 1.51 |
| 50 | 1.30 | 1.87 | 1.40 | 2.01 | 1.29 | 1.9 |
| 60 | 1.57 | 2.25 | 1.69 | 2.43 | 1.56 | 2.29 |
| 80 | 2.11 | 3.02 | 2.27 | 3.25 | 2.1 | 3.07 |
| 100 | 2.65 | 3.79 | 2.85 | 4.08 | 2.64 | 3.85 |
| 120 | 3.18 | 4.56 | 3.43 | 4.90 | 3.18 | 4.63 |
| 150 | 3.99 | 5.71 | 4.30 | 6.14 | 3.99 | 5.8 |
| 180 | 4.80 | 6.86 | 5.17 | 7.38 | 4.8 | 6.97 |
| 200 | 5.34 | 7.63 | 5.75 | 8.20 | 5.33 | 7.75 |
| 300 | 8.04 | 11.47 | 8.65 | 12.33 | 8.03 | 11.65 |
| 400 | 10.74 | 15.31 | 11.55 | 16.45 | 10.72 | 15.56 |
| 500 | 13.44 | 19.14 | 14.45 | 20.58 | 13.42 | 19.46 |