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# **1.General Information**

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 $\mathsf{HDBaseT}^{\mathsf{M}}$  and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance.

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

# Important Safety Information

#### Important:

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

### Symbols used

Warning symbols are used on the unit and in this manual to alert you of hazardous situations. The following styles are used in this manual to alert you to important information.

#### Note:

Provides additional information about the topic.



#### Important:

Provides additional information that should not be overlooked.



#### Caution:

Alerts you to situations that may damage the unit.



#### Warning:

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

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

"Push the Menu button on the remote control to open the Main menu."

### General Safety Information

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

### Symbols used

This product is intended for the adults who have the ability to operate this machine.

Please write down your projector model number and serial number and keep the information for maintenance purposes in the future. Should the equipment be lost or stolen, the information could also be used for the police report.

Model number: Serial number:

# Laser Warning

### Class 3R Laser Product

This Laser Product is designated as Class 3R during all procedures of operation.



LASER LIGHT - AVOID DIRECT EYE EXPOSURE.

Do not point laser or allow laser light to be directed or reflected toward other people or reflective objects .



Direct or scattered light can be hazardous to eyes and skin. There is a potential hazard of eye exposure to laser radiation if the included instructions are not followed.

**Caution** – use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure

### Laser Parameter

| Wavelength            | 449nm - 461nm (Blue)      |
|-----------------------|---------------------------|
| Mode of operation     | Pulsed, due to frame rate |
| Pulse width           | 1.12ms                    |
| Pulse repetition rate | 120Hz                     |
| Maximum laser energy  | 0.611mJ                   |
| Total internal power  | >100w                     |
| Apparent source size  | >10mm, at lens stop       |
| Divergence            | >100 mili Radian          |

# **Risk Group 3 Information**

#### Light hazard warning

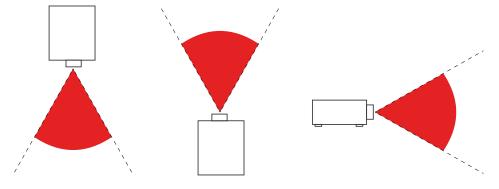


Failure to comply with the following may result in serious injury:

- No direct exposure to the beam is permitted, RG3 IEC 62471-5:2015.
- Operators control access to the beam within the hazard distance or install the projector at sufficient height to prevent exposures of spectators' eyes within the hazard distance.

The hazard distance is the distance measured from the projection lens at which the intensity or energy per unit of surface is lower than the applicable exposure limit on the cornea or skin. If the person is within the hazard distance, the beam is considered unsafe for exposure.

#### The hazard distance for this projector is 0-150 cm.



#### Note:

This projector is an RG3 product, which must be installed in a safe place and must be han-dled by qualified and professionally skill trained personnel

For the installation and removal of the lens, please consult your dealer with qualified profes-sionals to install it. Do not try to install the projector yourself, otherwise your eyesight may be damaged

In case to install the projector over head, keep over 3m distance at least between the floor surface and the RG3 area. Operators shall control access to the beam within the hazard distance or install the product at the height that will prevent exposures of spectators' eyes within the hazard distance.

# Warning Labels

Safety Hazard and Warning information Labels are placed at the following locations:

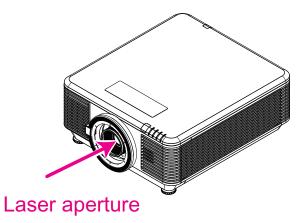


Hazard Warning Symbol and Aperture Label and Explanatory Label

| <b>∢</b> -×→≧ <b>I</b>  |  |   |  |  |  |
|---|--|---|--|--|--|
| Complies with FDA performance standards<br>for laser products except for deviations<br>pursuant to Laser Notice No. 50, dated June<br>24, 2007  | LASER AFERTURE<br>室前職計之孔径<br>武林編創作日<br>OUVERTURE LASER   | CLASE 1 LASTR PRODUCT IFC/IN (#025-7-2014<br>PRODUIT LASTR/PC (LASSE 1 EC/IN #025-5-2014<br>LASER#PRODUCT EDE KLASSE 1 IECEN 6025-12014<br>Nー材面応 / 一気帯水戸為 |  |  |  |
| LASER RADIATION<br>AVOID DIRECT EYE EXPOSURE<br>CLASS ar LASER PRODUCT<br>Wavelength : 449-461 nm<br>Max, Pulse energy: 0.6111 mJ<br>Pulse duration: 1.12 ms                                  | 雷射輻射<br>避免現時受到直接照射<br>3R類雷射產品 波長: 449-461 nm (斷)<br>最大脈衝除量: 0.611 mJ (斷),<br>脈衝時間: 1.12 ms (斷) | RISK GROUP 3<br>WARNING<br>OD NOT LOOK INTO THE BEAM.<br>NO DIRECT FYE SUPERIES TO THE BEAM IS PERMITTED.<br>NOZHO DERVICE: HER IN THE MANUAL.            |  |  |  |
| RAYONNEMENT LASER<br>EVITER DEXPOSER DIRECTEMENT LENS YEUX<br>PRODUIT LASER DE CLASES 3R<br>Longueur D'onde: 449-461nm<br>Energie D'impulsion Max: 0.611 mJ<br>Durée de L'impulsion : 1.12 ms | 激光輻射<br>遊免線積受到直接照射<br>3R地算於"后 遗怯": 449-461 nm (置)<br>最大脉冲能量:0.611 m/(窗),<br>脉冲时间:1.12 ms (蓝)   | IECEN 62471-5:2015  |  |  |  |

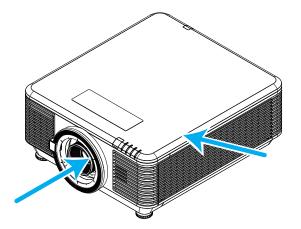
# Location of laser aperture

Below drawing is the laser aperture location. Be careful not to let the eye see the light directly.



## Interlock switches

This machine has 2 (Top cover x 1, Lens x 1) Interlock switches to protect the laser light Leakage.



- **1.** Will power-off the system individually when the top cover is removed.
- 2. Will power-off the system individually when the lens is removed or not install correctly.

# General Notice

#### Power Supply

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

### Cleaning the Projector

- Unplug the power cord before cleaning.
- Allow the light source to cool for about one hour.

#### **Regulatory Warnings**

Before installing and using the projector, read the regulatory notices in the Regulatory Compliance on page 59.

### Symbol Explanations



**DISPOSAL:** Do not use household or municipal waste collection services for disposal of electrical and electronic equipment. EU countries require the use of separate recycling collection services.

### Special Care for Laser Beams!

Special care should be considered when DLP projectors and high power laser equipment are used in the same room as. Direct or indirect hit of a laser beam on to the projector lens can severely damage the Digital Mirror Devices (DMD<sup>™</sup>).

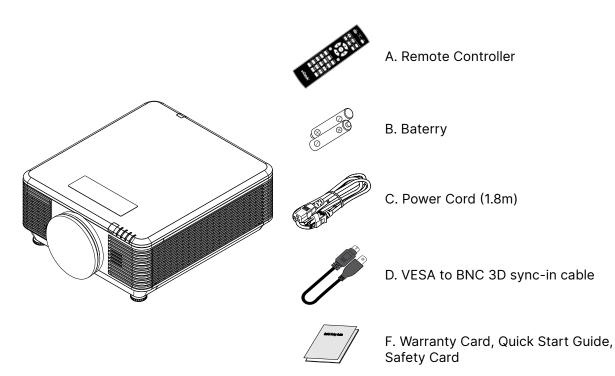
### Sun Light Warning

Avoid using the series of projector in direct sun light. Sun light on the projector lens can severely damage the Digital Mirror Devices (DMD<sup>™</sup>).

# **2.Getting Started**

# Package Content

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



#### Note:

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



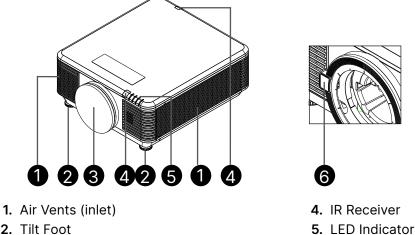
#### Caution:

Avoid using the projector in dusty environments.

# **Projector Features**

- Compatible with all major video standards including NTSC, PAL, and SECAM
- A high brightness rating allows for presentations in daylight or in lit rooms
- Flexible setup allows for front, rear projections
- Line-of-vision projections remain square, with advanced keystone correction for angled projections
- Input source automatically detected
- High brightness for projection in just about any environment
- Supports resolutions up to 4K UHD for clear and crisp images
- DLP<sup>®</sup> and BrilliantColor<sup>™</sup> technologies from Texas Instruments
- Centered lens for easy installation
- Horizontal and vertical lens shift
- Network ready for integration and system administration via RJ45
- · Sealed engine to minimizing the impact of dust and smoke
- Anti-theft security features include: Kensington security slot, security bar
- Built-in HDBaseT receiver. HDBaseT<sup>™</sup> interface with support for distribution of HD video, digital audio content RS232, RJ45 and IR function over standard CAT5e/6 LAN cable
- Advanced laser phosphor light engine for superior brightness and color uniformity
- Laser design deliveries up to 20,000 hours of operational time

## **Projector Functions**



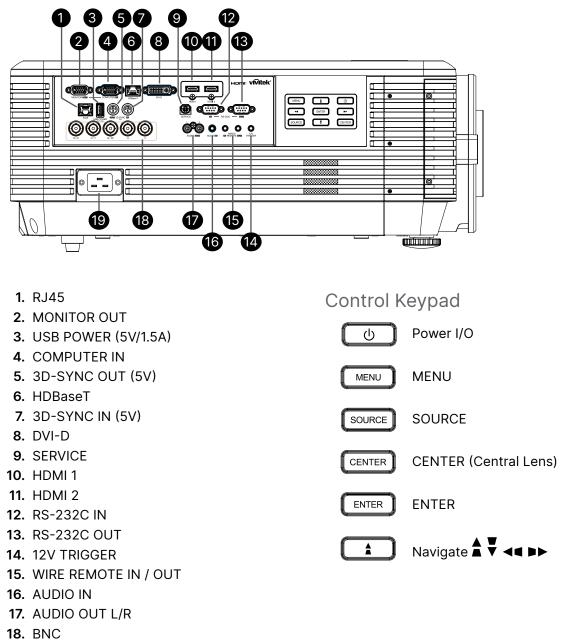
- 2. Tilt Foot
- 3. Lens Filter Sponge

#### Important:

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

6. Lens Release Button

## **Connect Source Devices**



19. AC IN

Note:

- To use this feature, you must plug in the connector before turn on/off the projector.
- Screen controllers are supplied and supported by screen manufacturers.
- Do not use this jack for anything other than intended use.

#### Warning:

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

# Remote Controller (SRC) + Function

1 1. IR Transmitter 2. Power ON 3. Power OFF POWER 4. ZOOM + 5. FOCUS + ST PATTERN 6. FOCUS -+7. ZOOM -0/ ENS SHIE 8. TEST PATTERN 9. LENS SHIFT 10. Navigation 11. Menu 10 12. Exit 13. BLANK 12 14. AUTO PC EX[ 15. STATUS AUTO PC BLANK STATUS 13 15 16. ASPECT / ID 3 14 ASPECT COMPONENT 17. VGA / ID 1 16 17 3 2 18. COMPONENT / ID 2 18 D٧ 23 19 19. HDMI1 / ID 4 6 20 20. HDMI2 / ID 5 HDBaseT 8 9 21. 3G-SDI / ID 7 (Not Available) ID SET FREEZ 22. Displayport / ID 8 (Not Available) 0 23. DVI / ID 6 24. HDBaseT / ID 9 25. CLEAR vívitek 26. Freeze / ID 0 27. ID SET 28. Wired Jack 28

#### Important:

1. Avoid using the projector with bright fluorescent lighting turned on. Certain high-frequency fluorescent lights can disrupt remote control operation.

2. Be sure nothing obstructs the path between the remote control and the projector. If the path between the remote control and the projector is obstructed, you can bounce the signal off certain reflective surfaces such as projector screens.

3. The buttons and keys on the projector have the same functions as the corresponding buttons on the remote control. This user's manual describes the functions based on the remote control.

### Set Control ID Number

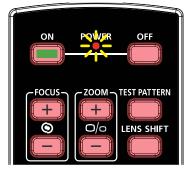
Select Control ID Number option then press Enter button, use the  $\blacktriangleright$  button to increase the number or the  $\triangleleft$  button to decrease the number. This option is available when Projector ID Control is turned on.

#### Set the identification number of remote control

Press and hold ID SET button on the remote control around 5 seconds, Power LED indicator is flashing red periodically. Press two digits to set desired ID number, each pressing shall be leisurely. Power LED will flash on time when the remote control is confirmed the setting.

Press and Hold ID SET button Power LED is flashing around 5 seconds





Press two digits for ID number



#### Note:

Setting the identification number will overwrite the ID number you had set. You can set the ID number directly if you would like to give a new ID number for the remote control.

#### Erase the identification number of the remote control

The set ID number is overwritten if new ID number is set, you can press ID SET and CLEAR button to erase ID number of the remote control.

Press ID SET and CLEAR buttons simultaneously

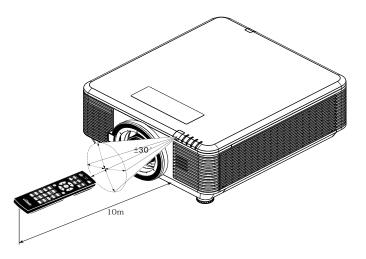


The backlight of the buttons is flashing one time



### **Operating Range**

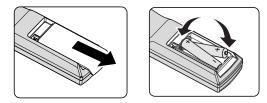
- The Remote Controller uses infrared transmission to control the projector.
- It is not necessary to point the remote directly at the projector.
- The Remote Controller will function properly within a distance radius of about 10 meters (25 feet) and vertical angle of 15 degrees above or below the projector level.



#### Note:

If the projector does not respond to the Remote Controller, Move to a closer range or Replace batteries.

#### **Batteries**



- Slide IN/OUT the battery compartment cover.
- Insert the battery with the positive side facing up.



#### Caution:

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

# Installation Guide

### Verify Installation Location

- To supply power, use the 3-blade (with earthing lead) socket to ensure proper grounding and equalized ground potential for all Projector System equipments.
- Use the power cord provided with the Projector. In case the item is missing, use a qualified 3-blade (with earthing lead) power cord; DO NOT USE 2-BLADE POWER CORD.
- Verify that the voltage is stable, grounded properly and there is no electricity leakage.
- Measure the total power consumption and ensure it is within the safety capacity to avoid safety issue and short circuit.
- Turn on Altitude Mode when located in high altitude areas
- The projector can be installed and will function properly without limitation at any angle or orientation.
- Ensure installation brackets are firmly secured and can support the projector weight
- Avoid installing near air conditioner duct or sub-woofer.
- Avoid installing in locations with high temperature, insufficient cooling and heavy dust.
- Keep away from fluorescent lamps (>1 Meter) to avoid malfunction caused by IR interference
- Ensure the VGA IN connector is connected tightly to the VGA IN port. The screws on both sides securely fastened will secure the proper connection and wire signal to achieve optimal display.
- The AUDIO IN connector should only be connected to the AUDIO IN port. DO NOT connect to AUDIO OUT port or any other ports like BNC, RCA.
- Before you Power ON, ensure power cord and signal cable are connected properly. To avoid damaging the projector while starting and operating, DO NOT insert or remove the signal cable or the power cord.

### **Cooling Notes**

#### Air Outlet

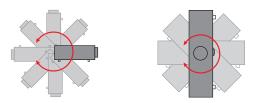
- Make sure the air outlet is 50cm clear of any obstruction to ensure proper cooling.
- Air outlet location should not be in front of the lens of other projector to avoid causing illusions.
- Keep the outlet at least 100cm away from the inlets of other projectors
- The projector generates a massive amount of heat during use. The internal fan dissipates the heat of the projector when shutting down, and such process may continue for a certain period. After the project enters STANDBY MODE status, press the AC power button to turn off the projector and remove the power cord. DO NOT remove the power cord during the shut-down process, as it may cause damage to the projector. In the meantime, the delayed heat radiating will also affect the service life of the projector. The shut-down process may vary depending on the model used. Whatever the case may be, make sure to disconnect the power cord till after the projector enters the STANDBY status.

#### Air Inlet

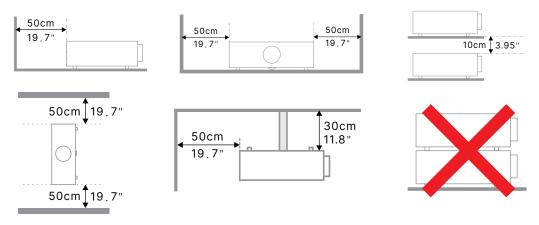
- Make sure there is no object blocking air input within 30 cm.
- Keep the inlet away from other heat sources
- Avoided heavy dust area

#### Installation Notice

• There is no limitation angle for projector installation



• Insure a minimum clearance space of > 500mm (19.7 inch) around all exhaust vents.

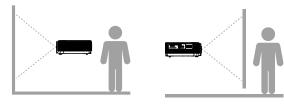


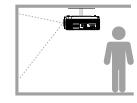
• When operating the projector in an enclosed space, ensure that the surrounding air temperature does not exceed the maximum allowed operating temperature and that all air intake and exhaust vents are unobstructed.

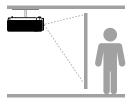


- Ensure that the intake vents do not recycle hot air or exhaust air from the exhaust vents as this may cause the device to shut-down even if the enclosure temperature is within the acceptable operating temperature range.
- All enclosures should pass a certified thermal evaluation to ensure that the projector does not recycle exhaust air.

### Setup and Projection options







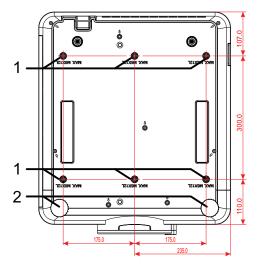
Front

Rear

Ceiling Front

Ceiling Rear

### Mounting the Projector





When installing, ensure that you use only UL Listed ceiling mounts.

For ceiling installations, use approved mounting hardware and M6 screws with a maximum screw depth of 12mm (0.47 inch).

The construction of the ceiling mount must be of a suitable shape and strength. The ceiling mount load capacity must exceed the weight of the installed equipment, and as an additional precaution be capable of withstanding three times the weight of the equipment over a period of 60 seconds.

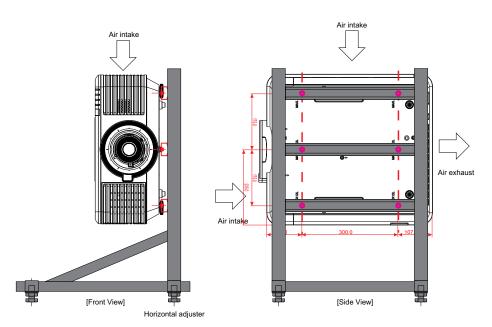
### **Custom Stand Mount Installation compliances**

For custom design mount installation such as portait, Please comply to the following :

- Use 6 screws to securly anchor the projector to the mount.
- Screw hole center dimension:300 × 350 (pitch = 175) mm
- Ensure a sturdy base design to support the projector weight and avoid toppling over.

#### Note:

The drawing showing below is for referal only. It is not an accurate stand design drawing.



20

## Installing or Removing the Optional Lens

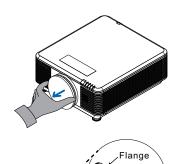
#### Caution:

1. Do not shake or place excessive pressure on the projector or the lens components as the projector and lens components contain precision parts.

2. Before removing or installing the lens, be sure to turn off the projector, wait until the cooling fans stop, and turn off the main power switch.

- 3. Do not touch the lens surface when removing or installing the lens.
- 4. Keep fingerprints, dust or oil off the lens surface.
- 5. Do not scratch the lens surface.
- 6. Work on a level surface with a soft cloth under it to avoid scratching.
- 7. If you remove and store the lens, attach the lens cap to the projector to keep off dust and dirt.

#### Installing the New Lens



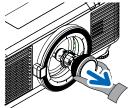
Please take off lens filter sponge.

Align the flange and correctly position as shown in the picture.

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

#### Removing the Existing Lens From the Projector





Push the LENS RELEASE button to the unlock position.

Grasp the lens.

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

Pull out the existing lens slowly.

#### Lenses Series

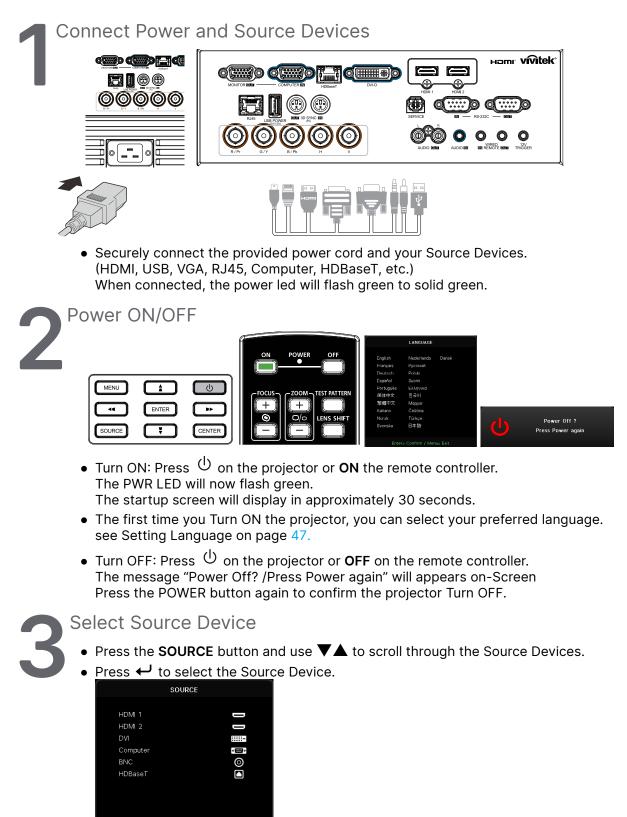
Eight types of optional electric lenses are available for the projector as below table. Contact the authorized dealer of Vivitek for details.

#### Lenses Group (Optional)

| Lens                             | Throw Ratio | Zoom Ratio | lmage Size<br>(Diagonal) | Projection Distance |
|----------------------------------|-------------|------------|--------------------------|---------------------|
| Short Throw Zoom<br>D86-0711     | 0.77 - 1.1  | 1.42x      | 42.3"~300"               | 1 – 4.98m           |
| Standard Short Throw<br>D86-1113 | 1.1 - 1.3   | 1.18x      | 35.8" - 379.8"           | 1 – 9m              |
| Semi Short Throw<br>D86-1216     | 1.25 -1.60  | 1.28x      | 39.1"~300"               | 1.35 – 8.08m        |
| Standard<br>D86-1519             | 1.54 - 1.93 | 1.25x      | 48.2"~300"               | 2 – 10m             |
| Long Throw<br>D86-1929           | 1.93 - 2.9  | 1.5x       | 32.1" - 481.1"           | 2.0 – 20m           |
| Semi Long Zoom<br>D88-SMLZ01     | 2.22 -3.67  | 1.65x      | 40"~500"                 | 1.05 – 19.59m       |
| Long Zoom<br>D88-LOZ101          | 3.58 - 5.38 | 1.5x       | 40"~500"                 | 1.05 – 19.59m       |
| Long Zoom<br>D88-LOZ201          | 5.31- 8.26  | 1.55x      | 40"~500"                 | 1.05 – 19.59m       |

**Note:** The best performance of above zoom lenses is within vertical shift -40%~50%, horizontal shift ±13%, the projector may support to wider adjustable shift range for flexibility in installation.

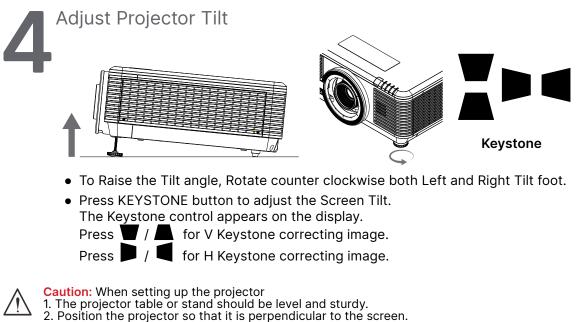
## **Projector Start Guide**



#### Note:

Component is supported through the RGB to Component adapter.

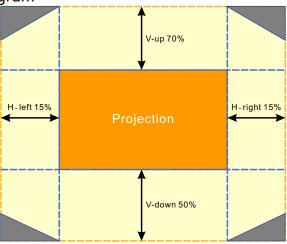
Using a single HDBaseT CAT5e (above) cable, the projector supports an HDBaseT connection distances to 100m/328ft.



3. Ensure the cables are in a safe location. You could trip over them.

## Adjusting Projected Image Position Using Lens Shift

The projector has the powered lens shift feature; the image can be shifted vertically or horizontally without moving the projector. The lens shift range is shown in the percentage of the image height and width, the maximum vertical shift range can be up to 70% of the image height and down to 50% of the image height, and maximum horizontal shift range is 15% of the image width to right and left. Please refer to below illustration.



Lens Shift Range Diagram

The area is the Boundary of Lens Shift

#### Note:

The projector is equipped with a safety switch inside the lens mount hole. The projection lens must be installed in the projector before turning on the power or the projection can't be started.

There is a Lens Lock function on OSD menu to disable lens control adjustment for avoiding possible misoperation after you finish the adjustment. Please make sure to disable the lock before performing the lens control.

# 3.On-Screen Display (OSD) Menu Settings

# OSD Menu Control

The On-Screen Display (OSD) lets you make image adjustments, change various settings and check the projector's current status.

### Navigating the OSD

You can use the remote control or the control buttons on the projector to navigate and make changes to the OSD.



- To enter the OSD, press the MENU button.
- There are six top menus icons. Press ◀ / ▶ buttons to select menus.
- Press  $\mathbf{\nabla}/\mathbf{\Delta}$  buttons to scroll through the submenus.
- Press ◀ / ▶ buttons to change the submenus settings.
- Press ← to enter the advanced submenus settings
- Press the MENU button to close the OSD or leave a submenu.
- Press the EXIT button to return to the previous menu.

#### Note:

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

# INPUT Menu

| Auto Source  | On, Off   | <i>i</i>                              |             |                 |          |               |
|--------------|---|---------------------------------------|-------------|-----------------|----------|---------------|
|              | _   |                                       |             | -               | مقد      | vívitek       |
| HDMI         | HDMI Format: Auto, RGB<br>Limited, RGB Full, YUV Limit-<br>ed, YUV Full   | NPUT PICTURE                          |             |                 | SETTINGS | INFO<br>Off   |
|              | HDR: Auto, Off, HDR 10  | HDMI<br>Analog                        |             |                 |          | t t           |
|              | HDMI EDID: HDMI1, HDMI2   | 3D<br>Signal Power On<br>Test Pattern |             |                 |          | ↓<br>↓<br>Off |
| Analog       | H Position: -5~5  |                                       |             |                 |          |               |
|              | V Position: -5~5  |                                       |             |                 |          |               |
|              | Phase: 0~31   |                                       |             |                 |          |               |
|              | Phase: 0~31   | Menu= Return                          | / Menu Sele | ct <b>∢ ▶</b> / | Scrol    |               |
|              | Auto Sync: On, Off  |                                       |             |                 |          |               |
| 3D           | 3D: DLP-Link, IR  |                                       |             |                 |          |               |
| 50           | 3D Sync Invert: Off, On   |                                       |             |                 |          |               |
|              | 3D Format: Auto, Top,<br>Bottom, Frame Sequential,<br>Frame Packing, Side By<br>Side, Off   |                                       |             |                 |          |               |
|              | 3D Sync Out Delay: 0 ~ 359  |                                       |             |                 |          |               |
|              | 3D Sync Output: Internal,<br>External   |                                       |             |                 |          |               |
| Signal Power | Computer: Off, On   |                                       |             |                 |          |               |
| on           |   |                                       |             |                 |          |               |
|              | HDMI: Off, On   |                                       |             |                 |          |               |
|              |   |                                       |             |                 |          |               |
| Test Pattern | Grid, White, Red, Green,<br>Blue, Black, RGB Ramps,<br>Color Bar, Step Bar, Check-<br>Board, Horizontal Lines, Ver-<br>tical Lines, Diagonal Lines,<br>Horizontal Ramps, Vertical<br>Ramps, Off |                                       |             |                 |          |               |

### Auto Source

- Use **◄**/**▶** to set On/Off.
- On: Lets projector searching for the input signal automatically.
- Off: Select the input signal manually.

#### HDMI

- Press ← and use ▼/▲ to scroll through submenus.
- HDMI Format: Set HDMI Format.
   Auto: According to HDMI Info Frame to detect color space automatically.
   RGB Limited: Force to select RGB limited range color space.
   RGB Full: Force to select RGB full range color space.
   YUV Limited: Force to select YUV limited range color space.
   YUV Full: Force to select YUV full range color space
- HDR: Use ◀/▶ to set Auto, Off, HDR 10.
   Auto: Switch to HDR setting automatically when detecting HDR sync.
   Off: No matter detect HDR sync or not , force to close HDR settings .
   HDR 10: No matter detect HDR sync or not , force to select HDR settings
- HDMI EDID:Press ← and use ▼/▲ to set HDMI1, HDMI2 Enhanced: Select to use HDMI 2.0 EDID. Standard: Select to use HDMI 1.4b EDID.

### Analog

- Press ← and use ▼/▲ to scroll through submenus.
- **H Position**: Use **◄**/**▶** to adjust the display position in horizontal direction.
- V Position: Use ◀/▶ to adjust the display position in vertical direction.
- Phase: Use ◀/▶ to adjust the frequency to reduce analog RGB image distortion.
- Clock: Use ◀/▶ to adjust the horizontal width of the analog RGB image.
- Auto Sync: Use ◀/▶ to select On/Off to lock image sync.

#### 3D

- Press ← and use ▼/▲ to set 3D source, sync method and 3D format.
- Before performing 3D setting, make sure that the input signal with 3D sync is connected.
- 3D: Use ◀/▶ to enable or disable 3D functions. DLP-Link: Enable internal 3D sync. IR: Enable external 3D sync.
- 3D Sync Invert: Use 
   to swap the 3D signal L/R or R/L.
   On: Enable inverse signal.
   Off: Follow received signal sync.
- **3D Format:** Press ← and use ▼/▲ to select 3D format type : Auto, Top, Bottom, Frame Sequential, Frame Packing, Side By Side, Off.
- 3D Sync Input Delay: Use ◀/▶ to adjust delay the Input 3D sync.
- 3D Sync Out Delay: Use ◀/► to adjust delay the output 3D sync.
- 3D Sync Output: Use ◀/▶ to select 3D format type : Internal: 3D Sync is from internal sync generator. External: 3D Sync is from external input connector.



#### Important:

People with the following conditions should view 3D image with great care: Children under six years in age.

People who are sensitive to light or allergic to light, unhealthy and have a history of cardiovascular diseases.

People who are tired or lack of sleep.

People who are under the impact of drugs or alcohol.

Normally, it is safe to watch 3D images. However, some people might feel uncomfortable. Refer to the guidelines that were revised and released by the 3D League on December 10, 2008. It states that those who watch 3D images, need to take a break for at least 5 to 15 minutes every thirty minutes or one hour.

#### Signal Power on

- Press ← and use ▼/▲ to scroll through submenus.
- **Computer:** Use **◄**/**▶** to set On/Off to enable or disable auto Power On by VGA input.
- HDMI: Use **◄**/**▶** to set On/Off to enable or disable auto Power On by HDMI input.

#### Test Pattern

 Use ◄/▶ to select Grid, White, Red, Green, Blue, Black, RGB Ramps, Color Bar, Step Bar, CheckBoard, Horizontal Lines, Vertical Lines, Diagonal Lines, Horizontal Ramps, Vertical Ramps, Off to enable the test pattern image.

# **PICTURE Menu**

| Picture Mode          | Presentation, Bright, Game,<br>Movie, Vivid, Blending,<br>sRGB, DICOM SIM, User, (3D<br>), (HDR 10) | INPUT PICTURE ALIGNMENT CONTROL SETTINGS                  |
|-----------------------|---|---|
| Brightness            | 0~100   | Picture Mode Presentation<br>Brightness 50<br>Contrast 50 |
| bigittiess            | 0.0100  | Color Manager 🛁   |
| Contrast              | 0~100   | Advanced 🛛 🚽 Picture Mode Reset 🚽                         |
| Color Manager         | Color: R, G, B, C, M, Y, W  |   |
|                       | Hue: -99~99<br>Red : 0~399 (only W)   | Menu= Return / Menu Select ◀ ► / Scroll ▲▼                |
|                       | Saturation: 0~199<br>Green : 0~399 (only W)   | vívitek   |
|                       | Gain: 5~195<br>Blue : 0~399 (only W)  | INPUT PICTURE ALIGNMENT CONTROL SETTINGS INFO             |
|                       |   | Advanced > Input Balance                                  |
| Advanced              | Brilliant Color: 0~10   | R Gain 0<br>G Gain 0                                      |
|                       | Sharpness: 0~31   | B Gain 0<br>R Offset 0                                    |
|                       | Gamma: 1.8, 2.0, 2.2, 2.4,<br>B&W, Linear, DICOM SIM  | G Offset 0<br>B Offset 0                                  |
|                       | HDR PQ: PQ-L300, PQ-<br>L400, PQ-L500, PQ-L600,<br>PQ-L700 (for HDR only)                           |   |
|                       | Color Temperature: Warm,<br>Normal, Cold  | Menu= Return / Menu Select ◀ ► / Scroll ▲▼                |
|                       | Input Balance: R Gain, G<br>Gain, B Gain, R Offset, G Off-<br>set, B Offset                         | vŵtek<br>→ <u>∠</u> [+] ‡ ‡ 6                             |
| Picture Mode<br>reset | Current: (OK, Cancel)   | INPUT PICTURE ALIGNMENT CONTROL SETTINGS INFO             |
|                       | All: (OK, Cancel)   |   |
|                       |   |   |

Vivitek - DU7099Z\_DU7199Z\_DU7299Z Series

Menu= Return / Menu Select ◀ ► / Scroll ▲▼

### Picture Mode

- Use **◄**/**▶** to select a mode according to personal preference.
- Presentation: Suggest to use. The best projection effect for presentation.
- Bright: The mode is suitable for the application environment where is needed with highest brightness output .
- Game: Using for video game.
- **Movie:** To provide good balance of color saturation, contrast and brightness. Suggest to use in a dark environment.
- Vivid: To provide Vivid colors.
- Blending: The mode is suitable for immersive environment.
- sRGB: Optimization RGB colors to reach true-to-life images with limited brightness setting.
- **DICOM SIM:** To use for Digital Imaging and Communications in Medicine.
- User: Personalization with preference of Brightness, Contrast, Color.
- 3D: Automatically switch when detecting 3D sync.
- HDR 10: Automatically switch when detecting HDR sync.

#### Brightness

• Use **◄**/**▶** to increase or decrease the brightness level of the image.

### Contrast

• Use **◄**/**▶** to adjust the contrast level of the image.

### Color Manager

- Press ← and use ▼/▲ to scroll through submenus.
- Color:To select and adjust the color(Red,Green,Blue,Cyan,Magenta,Yellow, White).
- Hue: Use ◀/▶ to adjust the Color Hue value.
- Saturation: Use ◀/▶ to adjust the Color Saturation value.
- Gain: Use ◀/▶ to adjust the Color Gain value.
- **Red:**Use **◄**/**▶** to adjust the White Color's Red value.
- Green:Use ◀/▶ to adjust the White Color's Green value.
- Blue:Use ◀/▶ to adjust the White Color's Blue value.
- These three options are used to adjust the range of color input for the entire image. If minimal amount of red, green or blue appears in the gray areas, lower the gain of the corresponding color accordingly. As gain increases, the contrast of the image will become lower.

### Advanced

- Press ← and use ▼/▲ to scroll through submenus.
- Brilliant Color: Use ◀/► to adjust the brilliant color of image.
- Sharpness: Use ◀/▶ to adjust the sharpness of image.
- Gamma: Use ◄/▶ to select the different chrominance of image.
   When the ambient light is so bright that may affect the projection image in the dim area. , you can change the gamma to adjust the chrominance. The available options are 1.8, 2.0, 2.2, 2.4, B&W, Linear, DICOM SIM.
- HDR PQ: Use ◀/▶ to select PQ settings PQ-L300, PQ-L400, PQ-L500, PQ-L600, PQ-L700.
- Color Temperature: Use ◀/▶ to select the color temperature. Warm : Make image reddish white. Normal : Normal colorings of white. Cold : Make image bluish white.
- Input Balance: Press ← and use ▼/▲ to scroll through submenus.
   Use ◀/▶ to adjust Gain and Offset values of Red ,Green ,Blue color for white balance.
   Gain: Adjust the brightness level of Red ,Green,Blue.
   Offset: Adjust the contrast level of Red, Green,Blue.

### Picture Mode Reset

- Press ← and use ▼/▲ to scroll through submenus.
- Current: Press ← to reset current Picture Mode to the defaut settings.
- All: Press ← to reset all Picture Mode to the defaut settings.

#### Note:

"Picture Mode Reset" is only reset according to input signal.

# ALIGNMENT Menu

| Aspect Ratio   | Fill, 4:3, 16:9, Letter Box,<br>2.35:1, 16:10, Auto | <b>₽</b>                         | <b>F</b> _1 +     | vívitek           |
|----------------|---|----------------------------------|-------------------|-------------------|
|                | _   |                                  | ALIGNMENT CONTROL | SETTINGS INFO     |
| Digital Zoom   | Zoom In: 0~10 (1.0x~2.0x)                           | Aspect Ratio                     |                   | Auto              |
|                | Zoom Out: -40~0                                     | Digital Zoom<br>Keystone         |                   | t t               |
|                | (0.8x~1.0x)   | 4 Corner                         |                   | Ļ                 |
|                | Image Shift: H Image Shift, V<br>Image Shift        | Masking<br>Projection            |                   | <b>↓</b><br>Front |
|                | indge onit  | Screen Settings<br>Lens Settings |                   | 1 1               |
| Keystone       | V Keystone: -30~0~30                                | Alignment Reset                  |                   | Ļ                 |
| nojetene       | H Keystone: -30~0~30                                |                                  |                   |                   |
|                |   | Menu= Return                     | / Menu Select ৰ 🕨 | / Scroll ▲▼       |
| 4 Corner       | Corner: Top-Left, Top-Right,                        |                                  |                   |                   |
|                | Bottom-Left, Bottom-Right                           |                                  |                   |                   |
|                | H: 0~60   |                                  |                   |                   |
|                | V: 0~60   |                                  |                   |                   |
|                | _   |                                  |                   |                   |
| Masking        | Тор: 0~100  |                                  |                   |                   |
|                | Bottom: 0~100                                       |                                  |                   |                   |
|                | Left: 0~100   |                                  |                   |                   |
|                | Right: 0~100  |                                  |                   |                   |
|                | 7   |                                  |                   |                   |
| Projection     | Front, Rear, Front+ Ceiling,                        |                                  |                   |                   |
|                | Rear+ Ceiling                                       |                                  |                   |                   |
| Screen Setting | Screen Format: 16:10, 16:9,                         |                                  |                   |                   |
| Screen Setting | 4:3, 2.35:1   |                                  |                   |                   |
|                | Screen Position: Grey Out,                          |                                  |                   |                   |
|                | -60~0~60(When 16:9),                                |                                  |                   |                   |
|                | -160~0~160(When 4:3),<br>-191~0~191(When 2.35:1)    |                                  |                   |                   |
|                |   |                                  |                   |                   |
| Lens Settings  | Lens Lock: Off, On                                  |                                  |                   |                   |
| C C            | Lens Type: non-UST Lens,                            |                                  |                   |                   |
|                | UST Lens  |                                  |                   |                   |
|                | Lens Control: Zoom & Focus,<br>Lens Shift           |                                  |                   |                   |
|                |   |                                  |                   |                   |
|                | Lens Memory: Save , Load<br>Memory : 1~10           |                                  |                   |                   |
|                | Center Lens (execute)                               |                                  |                   |                   |
|                | L   |                                  |                   |                   |
| Alignment      | (OK, Cancel)  |                                  |                   |                   |
| Reset          |   |                                  |                   |                   |
|                |   |                                  |                   |                   |

### Aspect Ratio

• Use ◀/▶ to select the image aspect ration (Fill ,4:3 ,16:9 or 16:10 , Letter Box ,2.35:1, Auto)

### Digital Zoom

- Press  $\leftarrow$  and use  $\nabla/\blacktriangle$  to scroll through submenus.
- **Zoom In:** Use  $\triangleleft/\triangleright$  to make the image seem to large the content from 0~10 value.
- Zoom Out: Use ◀/▶ to make the image seem to small the image from 0~-40 value. Adjust Zoom Out will reset HV image shift to default value.
- Image Shift: Press ← and use ▼/▲ to scroll through submenus. H Image Shift: Use ◀/▶ to Shift the image Horizontally (left / right). V Image Shift: Use ◀/▶ to Shift the image Vertically (up / down). Depend on Zoom Out, not fixed.

### Keystone

- Press  $\leftarrow$  and use  $\nabla/\blacktriangle$  to scroll through submenus.
- V Keystone: Use ◀/▶ to adjust the value to correct the image Vertical distortion. The adjustable value is ±30.
- **H Keystone:** Use **◄**/**▶** to adjust the Horizontal distortion of image. The adjustable value is ±30.

### 4 Corner

This function is used to correct the image distortion that may occur in a corner due to installation or projected surface.

- Press  $\leftarrow$  and use  $\nabla/\blacktriangle$  to scroll through submenus.
- Corner: Use ◀/▶ to select a corner (Top Left, Top Right, Bottom Left, Bottom Right).
- H: Use ◀/▶ to increase or decrease the Horizontal value.
- V: Use ◀/▶ to increase or decrease the Vertical value.

### Masking

- Press  $\leftarrow$  and use  $\nabla/\blacktriangle$  to scroll through submenus.
- Top: Use ◀/▶ to adjust Masking function on the screen from Top side, Bottom side, Left side and Right side value.

### Projection

- Use  $\triangleleft/\triangleright$  to select the Projection position.
- Front: Install the projector on the desktop and project the image forward.
- Rear: Install the projector on the desktop and project the image from the rear of the screen.
- Front Ceiling: Mount the projector on the ceiling and project the image forward.
- **Rear Ceiling:** Mount the projector on the ceiling and project the image from the rear of the screen.

### Screen Setting

- Press  $\leftarrow$  and use  $\nabla/\blacktriangle$  to scroll through submenus.
- Screen Format: Use ◀/▶ to select the screen format to 16:10, 16:9, 4:3 and 2.35:1.
- Screen Position: Use ◀/► to adjust the Position of Screen.

#### Lens Settings

- Press ← and use ▼/▲ to scroll through submenus.
- Lens Lock: Use ◀/▶ to adjust the Lens Lock to On or Off.
- Lens Type: Use ◀/▶ to adjust the Lens Type to non-UST Lens, UST Lens.
- Lens Control: Use ◀▶ to adjust Lens Focus. Use ▼▲ to adjust Lens Zoom. Press Enter to switch Lens Shift menu. Press ▼▲ ◀▶ to adjust Lens Shift. Press Enter to switch Lens Control menu.
- Lens Memory: Press ← and use V/▲ to scroll through submenus.
   Save Memory: Press ← to select the memory set for storing the setting then press ENTER button to confirm.
   Load Memory: Press ← to select the desired memory setting then press ENTER button to execute the lens setting, the projector will adjust the Lens position, Zoom and Focus automatically.
- Center Lens: Press ← to do Lens Shift central calibration.

### Alignment Reset

• Press ← to reset all Alignment to the defaut settings.

# **CONTROL Menu**

| Direct Power<br>On | Off, On  |   |                   | vivitek   |
|--------------------|--|---|-------------------|---|
|                    |  |   | ALIGNMENT CONTROL | SETTINGS INFO                                     |
| Light Source       | Light Mode: Normal, ECO,<br>Custom Light                             | Direct Power On<br>Light Source         |                   | Off<br>L  |
|                    | Custom Light: 25~100   | High Altitude<br>IR Control             |                   | Normal<br>Front+ Rear IR On                       |
|                    | Constant Brightness: Off, On   | Remote ID<br>HDBaseT                    |                   | Default<br><b>↓</b>                               |
|                    | ViviBlack: Dynamic Black,<br>Light Off Timer                         | Network<br>Art-Net Setup<br>Rental Mode |                   | 111   |
| High Altitude      | Normal, High   |   |                   |   |
|                    |  | Menu= Return                            | / Menu Select ৰ 🕨 | / Scroll 🔺 🗸                                      |
| IR Control         | Front+ Rear IR On, Front IR<br>On, Rear IR On, Front+ Rear<br>IR Off |   |                   | vivitek   |
|                    |  |   | ALIGNMENT CONTROL | SETTINGS INFO                                     |
| Remote ID          | Default~99   | INFOT FICTORE                           | Network           |   |
|                    |  | Network State<br>DHCP                   |                   | Disconnect  |
| HDBaseT            | HDBaseT-IR_RS232_RJ45:<br>Off, On                                    | IP Address<br>Subnet Mask               |                   | Off<br>255.255.255.255<br>255.255.255.255         |
|                    | HDBaseT EDID: Enhanced,<br>Standard                                  | Gateway<br>DNS<br>Apply                 |                   | 255.255.255.255<br>255.255.255.255<br><b>4</b> -1 |
| Network            | Network State: Connect,<br>Disconnect                                |   |                   |   |
|                    | DHCP: Off, On  | Menu= Return                            | / Menu Select ৰ 🕨 | / Scroll ▲▼                                       |
|                    | IP Address: 0~255, 0~255, 0~255, 0~255, 0~255                        |   |                   |   |
|                    | Subnet Mask: 0~255, 0~255, 0~255, 0~255, 0~255                       |   |                   |   |
|                    | Gateway: 0~255, 0~255, 0~255, 0~255, 0~255, 0~255                    |   |                   |   |
|                    | DNS: 0~255, 0~255, 0~255, 0~255, 0~255                               |   |                   |   |
|                    | Apply: OK, Cancel  |   |                   |   |
|                    |  |   |                   |   |

| Art-Net Setup | Art-Net Enable: Off, On<br>(2.X.X.X), On (10.X.X.X), On<br>(Manual)  | -)                            |         | [+]       | <b>++</b> | ₽         | vívitek             |
|---------------|--|-------------------------------|---------|-----------|-----------|-----------|---------------------|
|               | Net: 0~127   | INPUT<br>Direct P             | PICTURE | ALIGNMENT | CONTROL   | SETTINGS  | INFO<br>Off         |
|               | Sub Net: 0~15  | Light So                      | urce    |           |           |           | •                   |
|               | Universe: 0~15   | High Alti<br>IR Contr         |         |           |           | Front+ Re | Normal<br>ear IR On |
|               | Universe: 0~15   | Remote<br>HDBase <sup>-</sup> |         |           |           |           | Default             |
|               | Apply: (OK, Cancel)  | Network                       |         |           |           |           | Ļ                   |
|               | Art-Net Channel Settings:<br>Channel 1, Channel 2, Chan-<br>nel 3, Channel 4, Channel 5                      | Art-Net<br>Rental M           |         |           |           |           | t<br>t              |
|               | 1  | Menu= F                       | Return  | / Menu Se | lect ৰ 🕨  | / Scro    | ∥▲▼                 |
| Rental Mode   | Power Locked Level :<br>60~100<br>Power Locked Level Reset   |                               |         |           |           |           |                     |
|               | Usage Locked Time : Disa-<br>ble, Enable<br>Usage Locked Settings<br>(HRS) : 1~9999<br>Expiration Time Reset |                               |         |           |           |           |                     |
|               | Change Password: New<br>Password, Confirm Pass-<br>word  |                               |         |           |           |           |                     |

#### Direct Power On

• Use **◄**/**▶** to switch On/Off.

This function is set to Off by default. When it is set to On, the projector will turn on automatically when the AC power is turned on the next time. You can use this function and the power switch (instead of the remote control) to turn on the projector.

### Light Source

- Press  $\longleftarrow$  and use  $\blacktriangledown/\blacktriangle$  to scroll through submenus.
- Light Mode: Use ◀/▶ to select (Normal, Eco, Custom Light).
- Custom Light: Use ◀/▶ to adjust brightness level between 25% to 100%.
- Constant Brightness: Use ◀/▶ to switch On/Off.
- ViviBlack: Press ← and use ▼/▲ to scroll through submenus. Dynamic Black: Use 
   to switch On/Off. Light Off Timer: Use 
   to select light-off time(Disable, 1 Sec./ 2 Sec., 3 Sec., 4 Sec.).

#### High Altitude

• Use **◄**/**▶** to adjust cooling fan speed (Noraml, High).

### **IR** Control

• Use ◀/▶ to select the prefered IR control location (Front+ Rear IR On, Front IR On, Rear IR On, Front+ Rear IR Off).

This function let you select which IR remote controller receiver is active.

## Remote ID

Display current projector ID and remote control ID number. To set a unique ID for the projector and control independently.

## HDBaseT

- Press ← and use ▼/▲ to scroll through submenus.
- HDBaseT-IR\_RS232\_RJ45: Use ◀/► to switch HDBaseT-IR\_RS232\_RJ45 On/Off Enable the control function of HDBaseT with IR, RS232 and RJ45.
- HDBaseT EDID: Use ◀/▶ to select HDBaseT mode (Enhanced, Standard).

#### Note:

If HDBaseT control set to On, Low power mode will set to "On by HDBaseT", and disable this function to select.

## Network

Use this function to configure the network settings, so that you can control the projector via the network.

- Press  $\longleftarrow$  and use  $\blacktriangledown/\blacktriangle$  to scroll through submenus.
- Network State: Connect / Disconnect the network automatically.
- DHCP: Use 
   Vert to Set DHCP to On/Off.
   When DHCP is set to On, the DHCP server of the domain will assign an IP address to the projector. The IP address will appear on the IP address window without applying any input. If the domain cannot assign any IP address, 0.0.0.0 will be shown on the IP address window.
- IP Adress: Press ← to show the IP address input window. Use ◄/► to select the number in the address to change. Use ▼/▲ to increase or decrease the number in the IP address. (Example :Network IP Address 172. xxx. xxx.)
- Subnet Mask: Set the subnet mask. The input method is the same as the setting for IP address.
- Gateway: Set the gateway. The input method is the same as the setting for IP address.
- DNS: Set the DNS. The input method is the same as the setting for IP address.
- Apply: Press ← and use ▼/▲ to scroll through submenus.

#### Wired LAN Terminal functionalites

Remote control and monitoring of a projector from a PC (or Laptop) via wired LAN is also possible. Compatibility with Crestron / AMX (Device Discovery) / Extron control boxes enables not only collective projector management on a network but also management from a control panel on a PC (or Laptop) browser screen.

- Crestron is a registered trademark of Crestron Electronics, Inc. of the United States.
- Extron is a registered trademark of Extron Electronics, Inc. of the United States.
- AMX is a registered trademark of AMX LLC of the United States.
- PJLink applied for trademark and logo registration in Japan, the United States of America, and other countries by JBMIA.

#### Supported External Devices

This projector is supported by the specified commands of the Crestron Electronics controller and related software (ex, RoomView <sup>®</sup>).

#### http://www.crestron.com/

This projector is supported by AMX (Device Discovery).

http://www.amx.com/

This projector is compliant to support Extron device(s) for reference.

http://www.extron.com/

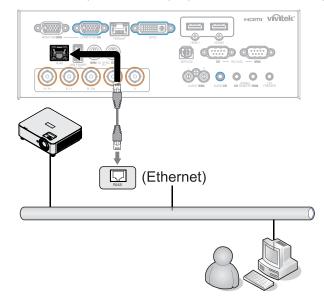
This projector supports all commands of PJLink Class1 (Version 1.00).

#### http://pjlink.jbmia.or.jp/english/

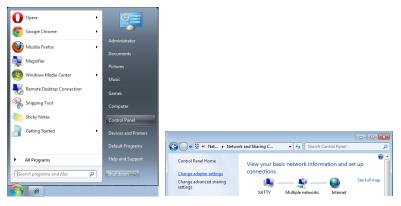
For more detail of information about the diverse types of external devices which can be connected to the LAN/RJ45 port and remote/control the projector, as well as the related control commands supporting for each external device, kindly please get contact with the Support-Service team directly.

#### Connecting with LAN

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



**2.** On the PC (Laptop), select Start  $\rightarrow$  Control Panel  $\rightarrow$ Network and Internet.



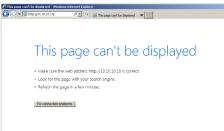
- 3. Right-click on Local Area Connection, and select Properties.
- 4. In the Properties window, select the Networking tab, and select Internet Protocol (TCP/IP).
- 5. Click Properties.
- 6. Click Use the following IP address and fill in the IP address and Subnet mask, then click OK.

|                          |     |                                     | Local Area Connection Properties     Internet Protocol Version 4 (TCP/IPv4) Properties   | ? 💌                          |
|--------------------------|-----|-------------------------------------|--|------------------------------|
|                          | 🗊 « | Netw > Network Connections >        | Networking Sharing General   |                              |
| Organize 🔻               |     | Disable this network device Diagnos |  | irk supports<br>iministrator |
|                          | ۲   | Disable                             | Congore  | 99                           |
| Local Area<br>Connection |     | Status<br>Diagnose                  | ✓         Bile and Printer Sharing for Microsoft Networks         Sybret madic         255 . 255 . 255 .           ✓         → Internet Protocol Version 6 (TCP/IN6)         Default gateway:         .           ✓         → Internet Protocol Version 1 (TCP/IN6)         Default gateway:         . |                              |
|                          | ۲   | Bridge Connections                  |  |                              |
|                          | 0   | Create Shortcut<br>Delete           | Igstal         Uninitial         Proposies         Preferred DVS server:         .           Description         Transmission Cortrol Protocol/Internet Protocol. The default         Alternate DNS server:         .  |                              |
|                          | 0   | Rename                              | wide area network protocol that provides communication<br>across diverse interconnected networks.  | Ad <u>v</u> anced            |
|                          |     | Properties                          | OK Cancel  | Cancel                       |

- 7. Press the Menu button on the projector.
- **8.** Select CONTROL  $\rightarrow$  Network
- 9. After getting into Network, input the following:
  - DHCP: Off
  - IP Address: 10.10.10.10
  - Subnet Mask: 255.255.255.0
  - Gateway: 0.0.0.0
  - DNS Server: 0.0.0.0
- **10.** Press (Enter) / ► to confirm settings.

Open a web browser

(for example, Microsoft Internet Explorer with Adobe Flash Player 9.0 or higher).



**11.** In the Address bar, input the IP address: 10.10.10.10.

12. Press (Enter) / ►.

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

| vivitek                 |                 |                   |
|-------------------------|-----------------|-------------------|
| Vivid Color, Vivid Life |                 |                   |
|                         | _               |                   |
| Projector Info          | Model Name      |                   |
| Projector Control       |                 | System            |
|                         | System Status   | Power Off         |
| Network Setup           | Display Source  | No Source         |
| Alert Mail Settings     | Lamp Hours      | 10                |
| niert Hun oettingo      | Display Mode    | N/A               |
|                         | Projection Mode | N/A               |
|                         | Light Mode      | N/A               |
|                         | Error Status    | No Error          |
|                         |                 | LAN Status        |
|                         | IP address      | 10.10.10          |
|                         | Subnet mask     | 255.255.255.0     |
|                         | Default gateway | 0.0.0.0           |
|                         | DNS Server      | 0.0.0.0           |
|                         | MAC address     | 00:18:23:00:00:00 |
|                         |                 | Version           |
|                         | LAN Version     |                   |
|                         | F/W Version     |                   |
|                         |                 |                   |
|                         |                 |                   |

| Projector Info<br>Projector Control<br>Network Setup | Projector Name:         | 000000 Apply                                       |
|--|-------------------------|--|
| Alert Mail Settings                                  | Crestron Control        | 0.0.0.0  |
|  | IP ID:<br>Control Port: |  |
|  | CAUTION: Incorrect      | Apply settings will break the Crestron connection. |
|  |                         |  |

| CATEGORY         | ITEM           | INPUT-LENGTH |
|------------------|----------------|--------------|
| Crestron Control | IP Address     | 15           |
|                  | IP ID          | 3            |
|                  | Port           | 5            |
| Projector        | Projector Name | 10           |

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

#### **Preparing Email Alerts**

- **1.** Make sure that user can access the homepage of LAN RJ45 function by web browser (for ex-ample, Microsoft Internet Explorer v6.01/v8.0).
- 2. From the Homepage of LAN/RJ45, click Alert Mail Settings.
- 3. By default, these input boxes in Alert Mail Settings are blank.

|                    |                 |                   | Projector Info                       | Send E-Mai                | 1                                    |
|--------------------|-----------------|-------------------|--------------------------------------|---------------------------|--------------------------------------|
| rojector Info      | Model Name      |                   | Projector Control                    | Enter the appropriate set | tings in the fields below:           |
|                    |                 | System            | Network Setup<br>Alert Mail Settings | (Your SMTP server may r   | ot require a user name or password.) |
| rojector Control   | System Status   | Power Off         | Alert Mail Settings                  |                           |                                      |
| etwork Setup       | Display Source  | No Source         |                                      | SMTP Server:              | Port: 25                             |
|                    | Lamp Hours      | 10                |                                      | User Name:                |                                      |
| lert Mail Settings | Display Mode    | N/A               |                                      | Password:                 |                                      |
|                    | Projection Mode | N/A               |                                      |                           | Mail Server Apply                    |
|                    | Light Mode      | N/A               |                                      | From:                     |                                      |
|                    | Error Status    | No Error          |                                      | To:                       |                                      |
|                    |                 | LAN Status        |                                      | CC:                       |                                      |
|                    | IP address      | 10.10.10.10       |                                      |                           | Mail Address Apply                   |
|                    | Subnet mask     | 255.255.255.0     |                                      | E-mail Alert O            | otions:<br>V Over_lieat: V           |
|                    | Default gateway | 0.0.0.0           |                                      | Case Open:                | V Lamp Fail: V                       |
|                    | DNS Server      | 0.0.0.0           |                                      | Lamp Hours O              |                                      |
|                    | MAC address     | 00:18:23:00:00:00 |                                      | Weekly Report             | Alert Option Apply                   |
|                    |                 | Version           |                                      |                           | Alert Uption Apply                   |
|                    | LAN Version     |                   |                                      |                           | Send Test Mail                       |
|                    | F/W Version     |                   | 1                                    |                           |                                      |

- 4. For Sending alert mail, input the following:
  - The SMTP field is the mail server for sending out email (SMTP protocol). This is a required field.
  - The To field is the recipient's email address (for example, the projector administrator). This is a required field.
  - The Cc field sends a carbon copy of the alert to the specified email address. This is an optional field (for example, the projector administrator's assistant).
  - The From field is the sender's email address (for example, the projector administrator). This is a required field.
  - Select the alert conditions by checking the desired boxes.

| vivitek   |   |
|---|---|
| Projector Info<br>Projector Control<br>Network Setup<br>Alert Mail Settings | Send E-Mail<br>Inter the oppropriate settings in the fields below:<br>(Your SMT9 server may not require a user name or password.)   |
|   | SMTP Server: mail cop.com Port: 25<br>User Name: Sandor US<br>Password:<br>From: sen@mail.cop.com<br>Tr: everl@mail.cop.com<br>CG: verl@mail.cop.com<br>CG:<br>From la Alert Options:<br>E-mail Alert Options:<br>E-mail Alert Options:<br>Case Open:<br>Lamp Hours Over:<br>Waekly Report:<br>Alert Option Appy.<br>Send Test Mail |
|   |   |

Note: Fill in all fields as specified. User can click Send Test Mail to test what setting is correct. For successful sending an e-mail alert, you must select alert conditions and enter a correct e-mail address.

### RS232 by Telnet Function

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

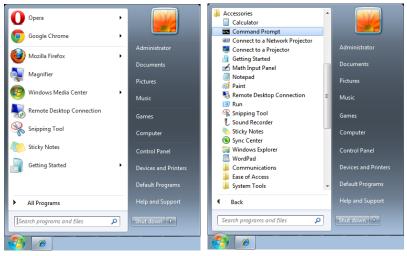
#### Quick Start-Guide for "RS232 by TELNET"

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

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

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

Start ⇒ All Programs ⇒ Accessories ⇒ Command Prompt



Input the command format like the below:

telnet ttt.xxx.yyy.zzz 7000 ("Enter" key pressed)

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

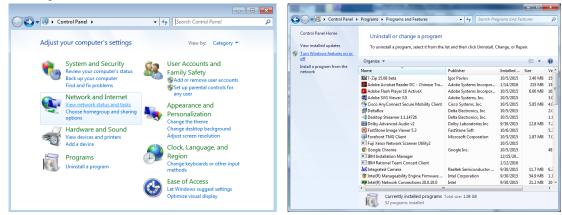
If Telnet-Connection ready, and user can have RS232 command input, then "Enter" key pressed, the RS232 command will be workable.

### How to have TELNET enabled in Windows

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

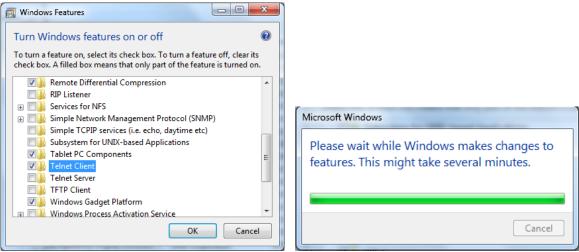
Open "Control Panel" in Windows

Open "Programs"



#### Select "Turn Windows features on or off" to open

Have "Telnet Client" option checked, then press "OK" button.



### Specsheet for "RS232 by TELNET" :

- 1. Telnet: TCP
- **2.** Telnet port: 7000 (for more detail, kindly please get contact with the service agent or team)
- 3. Telnet utility: Windows "TELNET.exe" (console mode)
- **4.** Disconnection for RS232-by-Telnet control normally: Close Windows Telnet utility directly after TELNET connection ready
- Limitation 1 for Telnet-Control: there is less than 50 bytes for successive network payload for Telnet-Control application. Limitation 2 for Telnet-Control: there is less than 26 bytes for one complete RS232 command for Telnet-Control. Limitation 3 for Telnet-Control: Minimum delay for next RS232 command must be more than 200 (ms). (\*, In Windows built-in "TELNET.exe" utility, "Enter" key pressed will have "Carriage-Return"

Art-Net Setup

and "New-Line" code.)

- Press ← and use ▼/▲ to scroll through submenus
- Art-Net Enable: Use 
   to select Art-Net
   Off: Disable Art-Net.
   On (2.X.X.X) and On (10.X.X.X): IP will be calculated automatically.
   On (Manual): Setting IP address manually.
- Net: Uuse ◀/▶ to select Net groups.
- Sub Net: Use ◀/▶ to select Sub-Net for each Net.
- Universe: Use ◀/▶ to select universes for each Sub net.
- Start Address: Use ◀/► to select Address starting point.
- Apply: Use ◀/▶ to select OK or Cancel after finish ArtNet settings.

• Art-Net Channel Settings: Use ◄/▶ to set function mapping for each channel of Art-Net. The Channel Setting definition is used to control projector with Art-Net. Please refer below table:

| Channel | Channel<br>Function | Performance                | Channel<br>Parameter | Default<br>Value | Operation Content        |  |
|---------|---------------------|----------------------------|----------------------|------------------|--------------------------|--|
|         |                     | Standby                    | 0 ~ 63               |                  |                          |  |
| 1       | Power               | No Operation               | 64 ~ 191             | 128              | Light on/off projeactor  |  |
|         |                     | Power On                   | 192 ~ 255            |                  |                          |  |
|         |                     | Shutter Open               | 0 ~ 63               |                  | Frable ( Disable A)(     |  |
| 2       | PIC-MUTE            | No Operation               | 64 ~ 191             | 128              | Enable / Disable AV      |  |
|         |                     | Shutter Closed             | 192 ~ 255            |                  | Mute                     |  |
|         |                     | 30%                        | 0 ~ 115              |                  |                          |  |
|         |                     | 31%                        | 116~ 117             |                  | A divet brightness lovel |  |
| 3       | Power Level         |                            |                      | 255              | Adjust brightness level  |  |
|         |                     | 99%                        | 252 ~ 253            |                  | of projector             |  |
|         |                     | 100%                       | 254 ~ 255            |                  |                          |  |
|         | Input               | No Operation               | 0 ~ 31               |                  |                          |  |
|         |                     | HDMİ 1                     | 32 ~ 47              |                  |                          |  |
|         |                     | HDMI 2                     | 48 ~ 63              | _                |                          |  |
|         |                     | VGA                        | 64 ~ 79              |                  |                          |  |
|         |                     | BNC                        | 80 ~ 95              |                  |                          |  |
|         |                     | (Component)                |                      | •                |                          |  |
| 4       |                     | DisplatyPort               | 96 ~ 111             | 0                | Change input source      |  |
|         |                     | No operation               | 112 ~ 127            |                  |                          |  |
|         |                     | HDBaseT                    | 128 ~ 143            |                  |                          |  |
|         |                     | 3G-SD                      | 144 ~ 159            |                  |                          |  |
|         |                     | DVI                        | 160 ~ 175            |                  |                          |  |
|         |                     | No operation               | 178 ~ 255            |                  |                          |  |
|         |                     | Channel control            | 0 ~ 63               |                  |                          |  |
|         | Ohammal             | is disabled                | 0~63                 |                  |                          |  |
| 5       | Channel             | No Operation               | 64 ~ 191             | 0                | Enable / Disable         |  |
|         | Control(*)          | Channel control is enabled | 192 ~ 255            |                  | channel operation        |  |

(\*): Not accepted for all other channels operation when set tor "Disable".

## **Rental Mode**

- Press  $\leftarrow$  and use  $\nabla/\blacktriangle$  to scroll through submenus and enter 5 digits password.
- Power Locked Leve: Press ← and use ▼/▲ to scroll through submenus. Power Locked Level: To select fixed power level output (60~100). Power Locked Level Reset: To reset power level output to default.
- Usage Locked Time: Press ← and use ▼/▲ to scroll through submenus. Usage Locked Time: To select Disable / Enable usage locked time. Usage Time Setting (HRS): Set the usage time. There will jump out a caution window when time run out.
  - Expiration Time Reset: To restart and countdown the expiration time.
- Change Password: Press ← to change the password of Rental Mode.

#### Note:

If want to enable Rental Mode, please contact local agent to obtain 5 digits password.

## SETTINGS Menu

| Eco           | Standby Power: Normal,<br>ECO, On By Lan, (On By<br>HDBaseT)  | -)                               |                   | vívitek       |  |
|---------------|---|----------------------------------|-------------------|---------------|--|
|               | No Signal Power Off (min.):<br>0~30~180   | INPUT PICTURE<br>ECO<br>Audio    | ALIGNMENT CONTROL | SETTINGS INFO |  |
|               | Sleep Timer (min.): 0~600   | Air Filter<br>Blank Screen Color |                   | Logo          |  |
|               |   | Menu                             |                   | ,<br>,        |  |
| Audio         | Volume: 0~5~10  | Keypad Lock<br>Security Lock     |                   | Off<br>Off    |  |
|               | Internal Speaker: Off, On   | Language<br>Environment Status   |                   | English       |  |
|               | Mute: Off, On   | Reset All                        |                   | ,<br>L        |  |
|               | -   |                                  |                   |               |  |
| Air Filter    | Air Filter Hours (Read Only)  | Menu= Return                     | / Menu Select ৰ 🕨 | / Scroll ▲▼   |  |
|               | Time Reminder: Off, 300hrs.,<br>500hrs., 1000hrs., 1500hrs.,<br>2000hrs.  | r                                |                   |               |  |
|               | Reset Timer: Reset Timer<br>(execute)   |                                  | LANGUAGE          |               |  |
|               |   | English                          | Nederlands        | Dansk         |  |
| Blank Screen  | Logo, Black, Red, Green,  | Français                         | Русский           |               |  |
| Color         | Blue, White   | Deutsch                          | Polski            |               |  |
|               | -   | Español                          | Suomi             |               |  |
| Menu          | Logo: Std., Black, Blue   | Português<br>简体中文                | Ελληνικά<br>한국어   |               |  |
|               | Message: Off, On  | 繁體中文                             | Magyar            |               |  |
|               | Menu Position: Center, Up,<br>Down, Left, Right   | Italiano<br>Norsk                | Čeština<br>Türkçe |               |  |
|               | Menu Timer: Off, 20 sec., 40 sec., 60 sec.  | Svenska                          | 日本語               |               |  |
|               | Menu Translucent: Off, 50%, 100%  | Ente                             | r= Confirm / Menu | ı= Exit       |  |
|               |   |                                  |                   | ~             |  |
| Keypad Lock   | Off, On   |                                  |                   |               |  |
|               | 1   |                                  |                   |               |  |
| Security Lock | Off, On   |                                  |                   |               |  |
|               |   |                                  |                   |               |  |
| Language      | English, Français, Deutsch,<br>Español, Português,<br>简体中文, 繁體中文, Italiano,<br>Norsk, Svenska, Nederlands,<br>Русский, Polski, Suomi,<br>Ελληνικά, 한국어, Magyar,<br>Čeština, Türkçe, 日本語,<br>Dansk |                                  |                   |               |  |

| Environment | execute |
|-------------|---------|
| Status      |         |

Reset All

OK, Cancel

Eco

- Press ← and use ▼/▲ to scroll through submenus.
- Standby Power: Use ◀/▶ to switch Normal / Eco / On by LAN / On By HDBaseT (Only shown and gray out when HDBaseT-IR\_RS232\_RJ45 set "On").
- No Signal Power Off (mins): Use ◀/► to increase or decrease time lapse before automatic Power Off mode to count down under no signal before turning off projector automatically.
- Sleep Timer (mins): Use 
   Ito increase or decrease time lapse before automatic sleep mode.

### Audio

- Press  $\leftarrow$  and use  $\nabla/\blacktriangle$  to scroll through submenus.
- Volume: Use ◀/▶ to increase or decrease the projector sound volume.
- Internal Speaker: Use ◀/▶ to switch On/Off the built in Internal Speaker of projector.
- Mute: Use **◄/**► to switch On/Off the built in Speaker of projector.

## Air Filter

- Press ← and use ▼/▲ to scroll through submenus.
- Air Filter Hours: Display accumulated hours usage of Air Filter.
- Time Reminder: Use ◀/▶ to switch On/Off of the Air Filter Timer.
- Reset Timer: Press ← to reset air filter timer.

### Blank Screen Color

• Use ◀/▶ to select screen background color (Logo, Black, Red, Green, Blue, White).

### Menu

- Press  $\leftarrow$  and use  $\nabla/\blacktriangle$  to scroll through submenus.
- Logo: Use ◀/▶to select the Logo (Std., Black, Blue).
- Message: Use ◀/▶ to switch On/Off.
- Menu Position: Use ◀/▶ to select the menu position (Center,Up,Down,Left,Right).
- Menu Timer: Use ◀/▶ to switch time : Off / 20sec. / 40sec. / 60sec. to pop off Menu.
- Menu Translucent: Use ◀/▶ to switch Off / 50% /100% for Menu transparency.

## Keypad Lock

• Use **◄**/**▶** to to switch On/Off for Keypad lock.

#### Note :

To unlock by keypad, please press "  $\mathbf{\nabla}$  " for 5 sec and then pop-out "keypad unlock".

## Security Lock

• Use **◄**/**▶** to switch On/Off for Security Lock.

#### Password

| PASSWORD          | PASSWORD          |  |  |
|-------------------|-------------------|--|--|
| Register Password | Register Password |  |  |
| Menu= Return      | Menu= Return      |  |  |

- When Security Lock is on, show popup "password input".
- Press  $\blacktriangle/ \bigtriangledown/ \checkmark/ \lor$  to set the password, total 5 digits.

#### Note:

Every time will show "password check" to key in when startup. If wrong over 5 times ,please contact with local service center.

### Language

- Press and use ▼/▲ to scroll through submenus.
- Press ← to enter the languages submenus.
- Press  $\Delta / \nabla / \langle \rangle$  button to scroll and highlight your language.
- Press the MENU button to exit the language submenus.

### **Environment Status**

● Press ← to display the Environment Status sub menu.

| Environment Status |            |       |      |       |      |  |  |  |
|--------------------|------------|-------|------|-------|------|--|--|--|
| T1                 | 25         | Fan1  | 1100 | Fan11 | 1100 |  |  |  |
| T2                 | 25         | Fan2  | 1100 | Fan12 | 1100 |  |  |  |
| ТЗ                 | 25         | Fan3  | 1100 | Fan13 | 1100 |  |  |  |
| Τ4                 | 25         | Fan4  | 1100 | Fan14 | 1100 |  |  |  |
| T5                 | 25         | Fan5  | 1100 | Fan15 | 1100 |  |  |  |
| Т6                 | 25         | Fan6  | 1100 |       |      |  |  |  |
| Τ7                 | 25         | Fan7  | 1100 |       |      |  |  |  |
| Т8                 | 25         | Fan8  | 1100 |       |      |  |  |  |
| Т9                 | 25         | Fan9  | 1100 |       |      |  |  |  |
| T10                | 25         | Fan10 | 1100 |       |      |  |  |  |
| T State            | 1st        |       |      |       |      |  |  |  |
|                    | Menu= Exit |       |      |       |      |  |  |  |

## Reset All

• Press ← to select the reset all will show popup "reset all confirm" to check.



#### Note:

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

## **INFO Screen**



This screen displays the projector current status information to be used for technical support.

# 4.Troubleshooting

## **Common Problems and Solutions**

These guidelines provide tips to deal with problems you may encounter while using the projector. If the problem remains unsolved, contact your dealer for assistance.

Often after time spent troubleshooting, the problem is traced to something as simple as a loose connection.

Check the following before proceeding to the problem-specific solutions.

- Use some other electrical device to confirm that the electrical outlet is working.
- Ensure the projector is turned on.
- Ensure all connections are securely attached.
- Ensure the attached device is turned on.
- Ensure a connected PC is not in suspending mode.
- Ensure a connected notebook computer is configured for an external display.

(This is usually done by pressing an Fn-key combination on the notebook.)

## **Troubleshouting Tips**

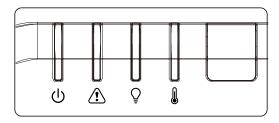
In each problem-specific section, try the steps in the order suggested. This may help you to solve the problem more quickly.

Try to pin point the problem and thus avoid replacing non-defective parts.

For example, if you replace batteries and the problem remains, put the original batteries back and go to the next step.

Keep a record of the steps you take when troubleshooting: The information may be useful when calling for technical support or for passing on to service personnel.

## LED Indicator Messages



| LED Code Messages                            | Power LED<br>(Green) | Status LED<br>(Red) | Light LED<br>(Red) | Temp LED<br>(Red) |
|--|----------------------|---------------------|--------------------|-------------------|
| Light Ready                                  | ON                   | OFF                 | OFF                | OFF               |
| Start  | Flashing             | OFF                 | OFF                | OFF               |
| Cooling                                      | Flashing             | OFF                 | OFF                | OFF               |
| 1W MCU detects scaler stops working          | 2 blinks             | OFF                 | OFF                | OFF               |
| Over Temperature T1 / Sensor T1 lost connect | OFF                  | OFF                 | 1 blinks           | ON                |
| Over Temperature T2 / Sensor T2 lost connect | OFF                  | OFF                 | 2 blinks           | ON                |
| Over Temperature T3 / Sensor T3 lost connect | OFF                  | OFF                 | 3 blinks           | ON                |
| Over Temperature T4 / Sensor T4 lost connect | OFF                  | OFF                 | 4 blinks           | ON                |
| Over Temperature T5 / Sensor T5 lost connect | OFF                  | OFF                 | 5 blinks           | ON                |
| Over Temperature T6 / Sensor T6 lost connect | OFF                  | OFF                 | 6 blinks           | ON                |
| Over Temperature T7 / Sensor T7 lost connect | OFF                  | OFF                 | 7 blinks           | ON                |
| Over Temperature T8 / Sensor T8 lost connect | OFF                  | OFF                 | 8 blinks           | ON                |
| Thermal Break Sensor error                   | OFF                  | 4 blinks            | OFF                | OFF               |
| Laser Light Source error                     | OFF                  | 4 blinks            | 1 blinks           | OFF               |
| FAN1 error                                   | OFF                  | 6 blinks            | 1 blinks           | OFF               |
| FAN2 error                                   | OFF                  | 6 blinks            | 2 blinks           | OFF               |
| FAN3 error                                   | OFF                  | 6 blinks            | 3 blinks           | OFF               |
| FAN4 error                                   | OFF                  | 6 blinks            | 4 blinks           | OFF               |
| FAN5 error                                   | OFF                  | 6 blinks            | 5 blinks           | OFF               |
| FAN6 error                                   | OFF                  | 6 blinks            | 6 blinks           | OFF               |
| FAN7 error                                   | OFF                  | 6 blinks            | 7 blinks           | OFF               |
| FAN8 error                                   | OFF                  | 6 blinks            | 8 blinks           | OFF               |
| FAN9 error                                   | OFF                  | 6 blinks            | 9 blinks           | OFF               |
| FAN10 error                                  | OFF                  | 6 blinks            | 10 blinks          | OFF               |
| Case Open                                    | OFF                  | 7 blinks            | OFF                | OFF               |
| Lens Open                                    | OFF                  | 7 blinks            | 1 blinks           | OFF               |
| DMD error                                    | OFF                  | 8 blinks            | OFF                | OFF               |
| Color wheel error                            | OFF                  | 9 blinks            | OFF                | OFF               |
| Phosphor wheel error                         | OFF                  | 9 blinks            | 1 blinks           | OFF               |

Note:

In the event of an error, please disconnect the AC power cord and wait for one (1) minute before restarting the projector. If the Power or Light source LEDs are still blinking or the Over Temp LED is lit, contact your service center.

## Image Problems Q&A

### Q. NO image appears on the screen

- Verify the settings on your notebook or desktop PC.
- Turn off all equipment and power up again in the correct order.

#### Q. The image is blurred

- Adjust the Focus on the projector.
- Ensure the projector-to-screen distance is within the specified range.
- Check that the projector lens is clean.

#### Q. The image is reversed

• Check the Projection setting on the ALIGNMENT menu of the OSD.

#### Q. The image is streaked

- Set the Phase and Clock settings on the Input → Analog menu of the OSD to the default settings.
- To ensure the problem is not caused by a connected PC's video card, connect to another computer.

#### Q. The image is flat with no contrast

- Adjust the Contrast setting on the PICTURE menu of the OSD.
- Q. The colour of the projected image does not match the source image.
- Adjust the Color Temperature and Gamma settings on the PICTURE > Advanced menu of the OSD.

## Light Source Problems

### Q. There is no light from the projector

- Check that the power cable is securely connected.
- Ensure the power source is good by testing with another electrical device.
- Restart the projector in the correct order and check that the Power LED is on.

### **Remote Control Problems**

### Q. The projector does not respond to the remote control

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

## Audio Problems

- Q. There is no sound
- Adjust the volume on the remote control.
- Adjust the volume of the audio source.
- Check the audio cable connection.
- Test the source audio output with other speakers.
- Have the projector serviced.
- Q. The sound is distorted
- Check the audio cable connection.
- Test the source audio output with other speakers.
- Have the projector serviced.

## Having the Projector Serviced

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

## HDMI Q&A

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

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

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

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

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

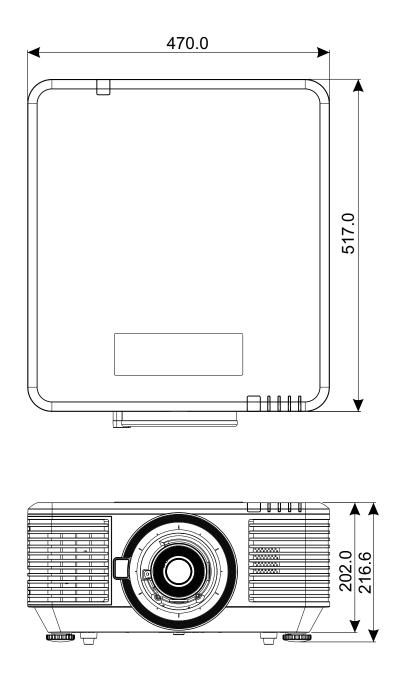
There are many HDMI Adopters working on HDMI solutions that extend a cable's effective distance from the typical 10 meter range to much longer lengths. These companies manufacture a variety of solutions that include active cables (active electronics built into cables that boost and extend the cable's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

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

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

# 5. Specifications

## **Projector Dimensions**



## Projector DataSheet

| Model Name                             | DU7099Z  | 99Z DU7199Z DU7299Z   |  |  |  |  |  |  |  |
|--|--|---|--|--|--|--|--|--|--|
| Display Type                           | 0.67 WUXGA , 1 DLP   | -<br>-  |  |  |  |  |  |  |  |
| Brightness                             | 7600 lumens  | 8600 lumens   | 9600 lumens  |  |  |  |  |  |  |
| Native Resolution                      | WUXGA (1,920 x 1,200)  |   |  |  |  |  |  |  |  |
| Maximum Resolution                     | 4K(3840×2160)@60Hz   |   |  |  |  |  |  |  |  |
| Contrast Ratio                         | 1,300:1 (Native) / 20,000:1 (Dynamic) / 3,000,000:1 (Full On/Off)                |   |  |  |  |  |  |  |  |
| Laser Life/Type                        | Up to 20,000 hours (Laser Phosphor)  |   |  |  |  |  |  |  |  |
| Throw Ratio(*)                         | 1.54 - 1.93  |   |  |  |  |  |  |  |  |
| Image Size (Diagonal)<br>(*)           | 48.2" - 300"   |   |  |  |  |  |  |  |  |
| Projection Distance(*)                 | 2m - 10m (6.56ft – 32.   | 8ft)  |  |  |  |  |  |  |  |
| Projection Lens(*)                     | F#2.02~2.4 , f= 22.84  | ~28.61mm  |  |  |  |  |  |  |  |
| Zoom Ratio(*)                          | 1.25X Manual Zoom, M   | anual Focus   |  |  |  |  |  |  |  |
| Aspect Ratio                           | 16:10  |   |  |  |  |  |  |  |  |
| Keystone Correction                    | Vertica/Horizontal ±30   | 0   |  |  |  |  |  |  |  |
| Horizontal Frequency                   | 15 or 31 - 91.4kHz   |   |  |  |  |  |  |  |  |
| Vertical Frequency                     | 24 - 30Hz, 47 - 120Hz  |   |  |  |  |  |  |  |  |
| 3D Compatibility                       | Yes (DLP® Link™, HDMI v2.0 Blu-ray, side by side, frame packing, top and bottom) |   |  |  |  |  |  |  |  |
| Speaker                                | Peak 10W *2  |   |  |  |  |  |  |  |  |
| Lens Shift                             | Vertical: -50% to +70%, Horizontal: -15% to +15%                                 |   |  |  |  |  |  |  |  |
| Computer Compati-<br>bility            | VGA, SVGA, XGA, SXG  | A, SXGA+, UXGA, WUXG  | GA, 4K@60hz, Mac   |  |  |  |  |  |  |
| I/O Connection Ports                   | (RGBHV), 3D-Sync-In,<br>Audio-Out RCA (L/R), 3<br>Trigger, RS-232-In, RS         | 2.2 Compliant), DVI-D, C<br>VGA-In , Audio-In (Mini<br>3D Sync-Out, USB Type<br>-232-Out, Wired Remot<br>)(10/100Mbps), USB (Se | -Jack), Monitor-Out,<br>A Power (5V/1.5A),12V<br>e-In, Wired Remote-Out, |  |  |  |  |  |  |
| Projection Method                      | Table Top, Ceiling Mou   | int, Portrait (Front or Re  | ar)  |  |  |  |  |  |  |
| Security Solutions                     | Kensington® Security S   | Slot, Security Bar, Keypa   | ad Lock  |  |  |  |  |  |  |
| Dimensions (WxDxH)                     | 470 x 517 x 202mm (18  | 3.5" x 20.35" x 7.95")(wi   | thout ADJ-foot)  |  |  |  |  |  |  |
| Weight                                 | 20.6kg (45.5lbs)   |   | 23.5Kg (63.0lbs)   |  |  |  |  |  |  |
| Available Colors                       | Black or White   |   |  |  |  |  |  |  |  |
| Noise Level                            | 34dB/32dB (Normal/<br>Eco. Mode)   | 37dB/34dB (Normal/<br>Eco. Mode)  | 40dB/38dB (Normal/<br>Eco. Mode)   |  |  |  |  |  |  |
| Power Supply                           | AC 100-240V, 50/60Hz   | Ζ   |  |  |  |  |  |  |  |
|  | 465W (Normal) 540W (Normal) 575W (Normal)  |   |  |  |  |  |  |  |  |
| Power Consumption                      | <0.5W (Standby), <2W (on by Lan)   |   |  |  |  |  |  |  |  |
| Environmental Opera-<br>tion Condition | At temperature 0 to 40°C, relative humidity 10% to 85%, non-conden-<br>sation    |   |  |  |  |  |  |  |  |
| Environmental Storage<br>Condition     | At temperature -10 to 60°C, relative humidity 5% to 95%, non-conden-<br>sation   |   |  |  |  |  |  |  |  |

Note: "\*" : Standard lens.

## Projector Time Table

| Signal       | Resolu-<br>tion                    | H-SYNC<br>(KHz) | V-SYNC<br>(Hz) | Com-<br>posite | Com-<br>ponent | VGA/BNC<br>(Analog)  | DVI             |            | HDBase |  |
|--------------|------------------------------------|-----------------|----------------|----------------|----------------|----------------------|-----------------|------------|--------|--|
| NTCO         |                                    |                 |                | S_Video        |                | (Analog)             | (DIGITAL)       |            |        |  |
| NTSC<br>PAL/ | _                                  | 15.734          | 60             | O(3D:S)        | -              | _                    |                 |            |        |  |
| SECAM        | _                                  | 15.625          | 50             | 0              | -              | _                    |                 | -          |        |  |
| VESA         | 720 x 400                          | 31.5            | 70.1           | _              | _              | 0                    |                 | 0          | _      |  |
|              | 640 x 480                          | 31.5            | 60             | _              | _              | O(3D:FS,TB,SBS)      | 0               | (3D:FS,TB, | SBS)   |  |
|              | 640 x 480                          | 35              | 66.667         | _              | _              | MAC13                |                 | MAC13      |        |  |
|              | 640 x 480                          | 37.86           | 72.8           | _              | -              | -                    |                 | 0          |        |  |
|              | 640 x 480                          | 37.5            | 75             | _              | _              | 0                    |                 | 0          |        |  |
|              | 640 x 480                          | 43.3            | 85             | _              | _              | 0                    |                 | 0          |        |  |
|              | 640 x 480                          | 61.9            | 119.5          | _              | _              | 0                    |                 | 0          |        |  |
|              | 800 x 600                          | 37.9            | 60.3           | _              | _              | O(3D:FS,TB,SBS)      | 0               | (3D:FS,TB, | SBS)   |  |
|              | 800 x 600                          | 46.9            | 75             | _              | -              | 0                    |                 | 0          |        |  |
|              | 800 x 600                          | 48.1            | 72.2           | _              | -              | 0                    |                 | 0          |        |  |
|              | 800 x 600                          | 53.7            | 85.1           | _              | _              | 0                    |                 | 0          |        |  |
|              | 800 x 600                          | 76.3            | 120            | _              | -              | O(3D:FS)             |                 | O(3D:FS    | )      |  |
|              | 832 x 624                          | 49.722          | 74.546         | _              | -              | MAC16                | MAC16           |            |        |  |
|              | 1024 x 768                         | 48.4            | 60             | _              | _              | O(3D:FS,TB,SBS)      | O(3D:FS,TB,SBS) |            |        |  |
|              | 1024 x 768                         | 56.5            | 70.1           | _              | -              | 0                    |                 | 0          |        |  |
|              | 1024 x 768                         | 60.241          | 75.02          | _              | -              | MAC19                | MAC19           |            |        |  |
|              | 1024 x 768                         | 60              | 75             | _              | _              | 0                    | 0               |            |        |  |
|              | 1024 x 768                         | 68.7            | 85             | _              | _              | 0                    | 0               |            |        |  |
|              | 1024 x 768                         | 97.6            | 120            | _              | -              | O(3D:FS)             | O(3D:FS)        |            |        |  |
|              | 1152 x 870                         | 68.68           | 75.06          | _              | -              | MAC21                | MAC21           |            |        |  |
|              | 1280 x 720                         | 45              | 60             | _              | _              | OO(3D:FS,<br>TB,SBS) | 0               | (3D:FS,TB, | SBS)   |  |
|              | 1280 x 720                         | 90              | 120            | _              | _              | O(3D:FS)             | O(3D:FS)        |            | 0      |  |
|              | 1280 x 768<br>(Reduce<br>Blanking) | 47.4            | 60             | _              | _              | OO(3D:FS,<br>TB,SBS) | 0               | (3D:FS,TB, | SBS)   |  |
|              | 1280 x 768                         | 47.8            | 59.9           | _              | _              | OO(3D:FS,<br>TB,SBS) | 0               | (3D:FS,TB, | SBS)   |  |
|              | 1280 x 800                         | 49.7            | 59.8           | _              | _              | OO(3D:FS,<br>TB,SBS) | 0               | (3D:FS,TB, | SBS)   |  |
|              | 1280 x 800                         | 62.8            | 74.9           | _              | -              | 0                    |                 | 0          |        |  |
|              | 1280 x 800                         | 71.6            | 84.9           | _              | -              | 0                    |                 | 0          |        |  |
|              | 1280 x 800                         | 101.6           | 119.9          | _              | -              | O(3D:FS)             |                 | O(3D:FS    | )      |  |
|              | 1280 x 1024                        | 64              | 60             | _              | _              | O<br>(3D:TB,SBS)     |                 | O(3D:TB,SI | 3S)    |  |
|              | 1280 x 1024                        | 80              | 75             | -              | -              | 0                    | 0               |            |        |  |
|              | 1280 x 1024                        | 91.1            | 85             | _              | _              | 0                    |                 | 0          |        |  |
|              | 1280 x 960                         | 60              | 60             | _              | _              | O<br>(3D:TB,SBS)     |                 | O(3D:TB,SI | 3S)    |  |
|              | 1280 x 960                         | 85.9            | 85             | _              | _              | 0                    |                 | 0          |        |  |

| Signal | Resolu-                             | H-SYNC | V-SYNC                      | Com-<br>posite | Com-   | VGA/BNC          | DVI               | HDMI                | HDBase |
|--------|-------------------------------------|--------|-----------------------------|----------------|--------|------------------|-------------------|---------------------|--------|
|        | tion                                | (KHz)  | (Hz)                        | S_Video        | ponent | (Analog)         |                   | (DIGITAL)           |        |
| VESA   | 1400 x 1050                         | 65.3   | 60                          | _              | _      | O<br>(3D:TB,SBS) |                   | O(3D:TB,SBS)        |        |
|        | 1440 x 900                          | 55.9   | 59.9                        | _              | -      | O(3D:TB,SBS)     | (                 | O(3D:TB,SE          | 3S)    |
|        | 1600 x1200                          | 75     | 60                          | _              | -      | O(3D:TB,SBS)     | O (3D:TB<br>,SBS) | 0(3                 | BD:TB) |
|        | 1680 x1050<br>(Reduce<br>Blanking)  | 64.67  | 59.88                       | _              | _      | O(3D:TB,SBS)     | (                 | O(3D:TB,SE          | 3S)    |
|        | 1680 x1050                          | 65.29  | 59.95                       | _              | -      | O(3D:TB,SBS)     | (                 | O(3D:TB,SE          | 3S)    |
|        | 1920 x 1080                         | 67.5   | 60                          | _              | _      | O(3D:TB,FS,SBS)  | 0                 | (3D:TB,FS,          | SBS)   |
|        | 1920 x 1200<br>(Reduce<br>Blanking) | 74.038 | 59.95                       | _              | _      | O(3D:TB,FS,SBS)  | 0                 | O(3D:TB,FS,SBS)     |        |
|        | 1280 x 1024                         | 130    | 120<br>(Reduce<br>Blanking) | _              | _      | _                | -                 | 0                   | _      |
|        | 1400 x 1050                         | 93.9   | 85                          | _              | -      | _                | _                 | 0                   | _      |
|        | 1440 x 900                          | 114.2  | 120<br>(Reduce<br>Blanking) | _              | _      | _                | _                 | 0                   | _      |
|        | 1600 x 1200                         | 87.5   | 70                          | _              | -      | -                | - O               |                     | _      |
|        | 1600 x 1200                         | 93.8   | 75                          | _              | -      | -                | _                 | 0                   | _      |
|        | 1600 x 1200                         | 106.3  | 85                          | _              | -      | -                | _                 | 0                   | _      |
|        | 1600 x 1200                         | 152.4  | 120<br>(Reduce<br>Blanking) | _              | _      | _                | _                 | 0                   | _      |
|        | 1680 x 1050                         | 82.3   | 75                          | _              | -      | _                | _                 | 0                   | _      |
|        | 1680 x 1050                         | 93.9   | 85                          | _              | -      | _                | _                 | 0                   | _      |
|        | 1680 x 1050                         | 133.4  | 120<br>(Reduce<br>Blanking) | _              | _      | _                | _                 | 0                   | _      |
|        | 1920 x 1200                         | 74.6   | 60                          | _              | -      | _                | _                 | O(3D:TB<br>,FS,SBS) | _      |
|        | 1920 x 1200                         | 94     | 75                          | _              | -      | _                | _                 | 0                   | _      |
|        | 1920 x 1200                         | 107.2  | 85                          | _              | -      | _                | _                 | 0                   | _      |
|        | 3840 x 2160                         | 53,946 | 23.976                      | _              | -      | _                | _                 |                     | 0      |
|        | 3840 x 2160                         | 54     | 24                          | _              | _      | _                | _                 | - O                 |        |
|        | 3840 x 2160                         | 56.25  | 25                          | _              | _      | _                | _                 |                     | 0      |
|        | 3840 x 2160                         | 67.5   | 30                          | _              | _      | -                | _                 | - 0                 |        |
|        | 3840 x 2160                         | 112.5  | 50                          | _              | _      | _                | _                 | - O                 |        |
|        | 3840 x 2160                         | 135    | 60                          |                |        | _                | _                 |                     | 0      |

| Signal | Resolu-<br>tion | H-SYNC<br>(KHz) | V-SYNC<br>(Hz) | Com-<br>posite<br>S_Video | Com-<br>ponent | VGA/BNC<br>(Analog) | DVI | HDMI<br>(DIGITAI    | HDBaseT<br>_) |
|--------|-----------------|-----------------|----------------|---------------------------|----------------|---------------------|-----|---------------------|---------------|
| SDTV   | 480i            | 15.734          | 60             | _                         | 0              | _                   | _   | (3                  | D:FS)         |
|        | 576i            | 15.625          | 50             | _                         | 0              | _                   |     | _                   |               |
| EDTV   | 576p            | 31.3            | 50             | _                         | 0              | _                   |     |                     |               |
|        | 480p            | 31.5            | 60             | _                         | 0              | _                   | _   | (3D:FS)             |               |
| HDTV   | 720p            | 37.5            | 50             | _                         | 0              | _                   | _   | (3D:FP,TB,SBS)      |               |
|        | 720p            | 45              | 60             | _                         | 0              | _                   | _   | – (3D:FP,TB,FS,SBS) |               |
|        | 1080i           | 33.8            | 60             | _                         | 0              | _                   |     | _                   |               |
|        | 1080i           | 28.1            | 50             | _                         | 0              | _                   | _   | (30                 | D:SBS)        |
|        | 1080p           | 27              | 24             | _                         | 0              | _                   |     | _                   |               |
|        | 1080p           | 28              | 25             | _                         | 0              | _                   |     | _                   |               |
|        | 1080p           | 33.7            | 30             | _                         | 0              | _                   |     | _                   |               |
|        | 1080p           | 56.3            | 50             | _                         | 0              | _                   | _   | – (3D:TB,SBS)       |               |
|        | 1080p           | 67.5            | 60             | -                         | 0              | _                   | -   | (3D:TB,SBS)         |               |

O: Supported frequency

-: Not Supported frequency

FS ⇒ Field Sequential

TB  $\Rightarrow$  Top / Bottom

 $\mathsf{SBS} \Rightarrow \mathsf{Side}\text{-}\mathsf{By}\text{-}\mathsf{Side}$ 

FP ⇒ Frame Packing

The native resolution of the panel is 1920 x 1200. Resolution other than native resolution may be display with uneven size of text or line.

SDTV \ EDTV \ HDTV may have a little noise is acceptable.

# 6. Regulatory Compliance

## FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Changes or modifications not expressly approved by the parties responsible for compliance could void the user's authority to operate the equipment.

## Canada

This class B digital apparatus complies with Canadian ICES-003.

## Safety Certifications

FCC Class A, CE, C-tick, CCC, KC/KCC, CU, CB, BIS, RoHS, PSB, ICES-003 (Canada), cTUVus, BSMI and China CECP

## Disposal and Recycling

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.

# 7. RS-232 Communication

## Communication parameter setup

You can use the serial control command to input commands for projector control or retrieve its operational data through Windows client terminal software

| ItemItem       | Parameter: |
|----------------|------------|
| Bit per Second | 9600 bps   |
| Data Bit       | 8-bit      |
| Parity         | None       |
| Stop Bit       | 1          |
| Flow Control   | None       |

**Operation commands** 

### Operation command syntax

An operation command is prefixed by character "op", followed by control commands and settings separated by space blank [SP], and ended by carriage return pair "CR" and "ASCII hex 0D".Syntax of serial control commands:

op[SP]<operation command>[SP]<Setting Value>[CR]

op A constant indicating this is an operation command.

[SP] Indicate one blank space.

[CR] Indicate the command ending carriage return pair "CR" and "ASCII hex 0D". Setting value Settings of operation command

| Types of setup strings                        | Characters of<br>settings | Description   |
|---|---------------------------|---|
| Query current setup                           | ?                         | Question mark "?" indicates querying<br>current setup                               |
| Setup   | = <settings></settings>   | Syntax: Symbol "=" suffixed with setup values                                       |
| Increase setup order of ad-<br>justment items | +                         | Some settings are changed in steps.<br>Symbol "+" indicates changing one step<br>up |
| Decrease setup order of ad-                   | -                         | Some settings are changed in steps.   |

justment items Symbol "-" indicates changing one step down Execute operation command None Certain operation commands execute after input without further setting or regulators.

| Examples:                   |                      |                          |
|-----------------------------|----------------------|--------------------------|
| Control items               | Input command row    | Projector return message |
| Query current brightness    | op bright ?[CR]      | OP BRIGHT = 50           |
| Set up brightness           | op bright = 100[CR]  | OP BRIGHT = 100          |
| Out of range or not support | op bright = 200[CR]  | OP BRIGHT = NA           |
| Illegal command             | op abright = 100[CR] | *Illegal format#         |

| Function          | Operation         | Set | Get | Inc | Dec | EXE | Values                |
|-------------------|-------------------|-----|-----|-----|-----|-----|-----------------------|
| Auto Source       | auto.src          | V   | V   |     |     |     | 0 = Off               |
|                   |                   |     |     |     |     |     | 1 = On                |
| HDMI Color Space  | color.space       | V   | V   |     |     |     | 0 : Auto              |
|                   |                   |     |     |     |     |     | 1 : RGB               |
|                   |                   |     |     |     |     |     | 2 : YUV               |
| HDMI Range        | hdmi.range        | V   | V   |     |     |     | 0 : Auto              |
|                   |                   |     |     |     |     |     | 1 : Full              |
|                   |                   |     |     |     |     |     | 2 : Limited           |
| HDMI Format       | hdmi.format       | V   | V   |     |     |     | 0 : Auto              |
|                   |                   |     |     |     |     |     | 1 : RGB Limited       |
|                   |                   |     |     |     |     |     | 2 : RGB Full          |
|                   |                   |     |     |     |     |     | 3 : YUV Limited       |
|                   |                   |     |     |     |     |     | 4 : YUV Full          |
| Video AGC         | video.agc         | V   | V   |     |     |     | 0 : Off               |
|                   |                   |     |     |     |     |     | 1 : On                |
| Video Saturation  | video.saturation  | V   | V   | V   | V   |     | 0 ~ 100               |
| Video Tint        | video.tint        | V   | V   | V   | V   |     | 0 ~ 100               |
| Closed Caption    | cc                | V   | V   |     |     |     | 0 : Off               |
|                   |                   |     |     |     |     |     | 1 : On                |
| H Position        | h.pos             | V   | V   | V   | V   |     | -5 ~ +5               |
|                   |                   |     |     |     |     |     | -100 ~ +100(Auto Sync |
|                   |                   |     |     |     |     |     | Off)                  |
| V Position        | v.pos             | V   | V   | V   | V   |     | -5 ~ +5               |
|                   |                   |     |     |     |     |     | -100 ~ +100(Auto Sync |
|                   |                   |     |     |     |     |     | Off)                  |
| Phase             | phase             | V   | V   | V   | V   |     | 0 ~ 31                |
| clock             | clock             | V   | V   | V   | V   |     | -5 ~ +5               |
| Auto Sync         | auto.sync         | V   | V   |     |     |     | 0:Off                 |
|                   |                   |     |     |     |     |     | 1 : On                |
| HDBaseT Control   | hdbaset           | V   | V   |     |     |     | 0:Off                 |
|                   |                   |     |     |     |     |     | 1:On                  |
| HDBaseT Connect   | hdbaset.connect   |     | V   |     |     |     | 0 : Disconnect        |
|                   |                   |     |     |     |     |     | 1: Connected          |
| 3D                | threed            | V   | V   |     |     |     | 0 : DLP-Link          |
|                   |                   |     |     |     |     |     | 1:IR                  |
| 3D Sync Invert    | threed.syncinvert | V   | V   |     |     |     | 0 = Off               |
|                   |                   |     |     |     |     |     | 1 = On                |
| 3D Format         | threed.format     | V   | V   |     |     |     | 0 : Auto              |
|                   |                   |     |     |     |     |     | 1 : Top / Bottom      |
|                   |                   |     |     |     |     |     | 2 : Frame Sequential  |
|                   |                   |     |     |     |     |     | 3 : Frame Packing     |
|                   |                   |     |     |     |     |     | 4 : Side by side      |
|                   |                   |     |     |     |     |     | 5:Off                 |
| 3D Sync Out Delay | threed.syncdelay  | V   | V   |     |     |     | 0 ~ 359               |
| 3D Sync Input     | threed.syncinput  |     | V   |     |     |     | 0 : Internal          |
|                   |                   |     |     |     |     |     | 1: External           |
| 3D Sync Output    | threed.syncoutput | V   | V   |     |     |     | 0 : Internal          |
|                   |                   |     |     |     |     |     | 1 : External          |

| Function               | Operation          | Set | Get | Inc | Dec | EXE | Values             |
|------------------------|--------------------|-----|-----|-----|-----|-----|--------------------|
| Picture Mode           | pic.mode           | V   | V   |     |     |     | 0:Presentation     |
|                        |                    |     |     |     |     |     | 1:Bright           |
|                        |                    |     |     |     |     |     | 2:Game             |
|                        |                    |     |     |     |     |     | 3:Movie            |
|                        |                    |     |     |     |     |     | 4: Vivid           |
|                        |                    |     |     |     |     |     | 5: Blending        |
|                        |                    |     |     |     |     |     | 6: sRGB            |
|                        |                    |     |     |     |     |     | 7:DICOM SIM        |
|                        |                    |     |     |     |     |     | 8:User             |
|                        |                    |     |     |     |     |     | 9: 3D              |
|                        |                    |     |     |     |     |     |                    |
| Prightness             | bright             | V   | V   | V   | V   |     | 10: HDR 10         |
| Brightness<br>Contrast | bright<br>contrast | V   | V   | V   | V   |     | 0 ~ 100<br>0 ~ 100 |
| HDR Control            |                    | V   | V   | V   | V   |     |                    |
| HDR Control            | hdr.control        | V   | V   |     |     |     | 0 : Auto           |
|                        |                    |     |     |     |     |     | 1:Off              |
|                        |                    |     |     |     |     |     | 2 : HDR 10         |
| HDR Mode               | hdr.mode           | V   | V   |     |     |     | 0:PQ-L300          |
|                        |                    |     |     |     |     |     | 1:PQ-L400          |
|                        |                    |     |     |     |     |     | 2 : PQ-L500        |
|                        |                    |     |     |     |     |     | 3 : PQ-L600        |
|                        |                    |     |     |     |     |     | 4 : PQ-L700        |
| Dynamic Black          | dblack             | V   | V   |     |     |     | 0 = Off            |
|                        |                    |     |     |     |     |     | 1 = On             |
| "Projector Light       | projector.light    | V   | V   |     |     |     | 0 : Disable        |
| (Light Off Timer)"     |                    |     |     |     |     |     | 1: 1 Sec           |
|                        |                    |     |     |     |     |     | 2: 2 Sec           |
|                        |                    |     |     |     |     |     | 3: 3 Sec           |
|                        |                    |     |     |     |     |     | 4: 4 Sec           |
| HSG/Red Gain           | hsg.r.gain         | V   | V   | V   | V   |     | 5 ~ 195            |
| HSG/Green Gain         | hsg.g.gain         | V   | V   | V   | V   |     | 5 ~ 195            |
| HSG/Blue Gain          | hsg.b.gain         | V   | V   | V   | V   |     | 5 ~ 195            |
| HSG/Cyan Gain          | hsg.c.gain         | V   | V   | V   | V   |     | 5 ~ 195            |
| HSG/Magenta Gain       | hsg.m.gain         | V   | V   | V   | V   |     | 5 ~ 195            |
| HSG/Yellow Gain        | hsg.y.gain         | V   | V   | V   | V   |     | 5 ~ 195            |
| HSG/Red/Saturation     | hsg.r.sat          | V   | V   | V   | V   |     | 0 ~ 199            |
| HSG/Green/Saturation   | hsg.g.sat          | V   | V   | V   | V   |     | 0 ~ 199            |
| HSG/Blue/Saturation    | hsg.b.sat          | V   | V   | V   | V   |     | 0 ~ 199            |
| HSG/Cyan/Saturation    | hsg.c.sat          | V   | V   | V   | V   |     | 0 ~ 199            |
| HSG/Magenta/Saturation | hsg.m.sat          | V   | V   | V   | V   |     | 0 ~ 199            |
| HSG/Yellow/Saturation  | hsg.y.sat          | V   | V   | V   | V   |     | 0 ~ 199            |
| HSG/Red/Hue            | hsg.r.hue          | V   | V   | V   | V   |     | -99 ~ 99           |
| HSG/Green/Hue          | hsg.g.hue          | V   | V   | V   | V   |     | -99 ~ 99           |
| HSG/Blue/Hue           | hsg.b. hue         | V   | V   | V   | V   |     | -99 ~ 99           |
| HSG/Cyan/Hue           | hsg.c. hue         | V   | V   | V   | V   |     | -99 ~ 99           |
| HSG/Magenta/Hue        | hsg.m. hue         | V   | V   | V   | V   |     | -99 ~ 99           |
| HSG/Yellow/Hue         | hsg.y. hue         | V   | V   | V   | V   |     | -99 ~ 99           |
| HSG/White/Red Gain     | hsg.wr.gain        | V   | V   | V   | V   |     | 0 ~ 399            |
| HSG/White/Green Gain   | hsg.wg.gain        | V   | V   | V   | V   |     | 0 ~ 399            |
| HSG/White/Blue Gain    | hsg.wb.gain        | V   | V   | V   | V   |     | 0 ~ 399            |
| Brilliant Color        | bri.color          | V   | V   | V   | V   |     | 0 ~ 10             |
| Sharpness              | sharp              | V   | V   | V   | V   |     | 0 ~ 31             |
| Gamma                  | gamma              | V   | V   |     |     |     | 0 = 1.8            |
| -                      |                    | -   |     |     |     |     | 1 = 2.0            |
|                        |                    |     |     |     |     |     | 2 = 2.2            |
|                        |                    |     |     |     |     |     | 3 = 2.4            |
|                        |                    |     |     |     |     |     | 4 = B&W            |
|                        |                    |     |     |     |     |     | 5 = Linear         |
|                        |                    |     | I   | 1   |     |     |                    |

| Function                   | Operation      | Set      | Get | Inc | Dec | EXE | Values                |
|----------------------------|----------------|----------|-----|-----|-----|-----|-----------------------|
| Color Temperature          | color.temp     | V        | V   |     |     |     | 0 = Warm              |
|                            |                |          |     |     |     |     | 1 = Normal            |
|                            |                |          |     |     |     |     | 2 = Cold              |
| Input Balance /Red Offset  | red.offset     | V        | V   | V   | V   |     | -100 ~ +100           |
| Input Balance /Green Offse |                | V        | V   | V   | V   |     | -100 ~ +100           |
| Input Balance /Blue Offset | blue.offset    | V        | V   | v   | v   |     | -100 ~ +100           |
| Input Balance /Red Gain    | red.gain       | V        | v   | v   | v   |     | 0 ~ 200               |
| Input Balance /Green Gain  | green.gain     | V        | v   | v   | v   |     | 0 ~ 200               |
| Input Balance /Blue Gain   | blue.gain      | V        | v   | v   | v   |     | 0 ~ 200               |
| Picture Mode Reset         | pic.mode.reset | V        | -   | -   | -   |     | 0 = Current           |
|                            | piennedeneeet  |          |     |     |     |     | 1 = All               |
| Aspect Ratio               | aspect         | V        | V   |     |     |     | O = Fill              |
|                            | aspeet         |          | •   |     |     |     | 1 = 4:3               |
|                            |                |          |     |     |     |     | 2 = 16:9              |
|                            |                |          |     |     |     |     | 3 = LetterBox         |
|                            |                |          |     |     |     |     | 4 = 2.35:1            |
|                            |                |          |     |     |     |     |                       |
|                            |                |          |     |     |     |     | 5 = 16:10             |
|                            | ·              |          |     |     |     |     | 6 = Auto              |
| Digital Zoom               | digi.zoom.in   | V        | V   | V   | V   |     | 0 ~ +10               |
|                            | digi.zoom.out  | V        | V   | V   | V   |     | -40 ~ 0               |
| H Image Shift              | img.hshift     | <u>V</u> | V   | V   | V   |     | -50 ~ +50             |
| V Image Shift              | img.vshift     | V        | V   | V   | V   |     | -50 ~ +50             |
| V Keystone                 | v.keystone     | V        | V   | V   | V   |     | -30 ~ +30             |
| H Keystone                 | h.keystone     | V        | V   | V   | V   |     | -30 ~ +30             |
| Auto Keystone              | auto.keystone  | V        | V   |     |     |     | 0 = Off               |
|                            |                |          |     |     |     |     | 1 = On                |
| 4 Corner Top Left X        | 4corner.tlx    | V        | V   | V   | V   |     | 0 ~ +60               |
| 4 Corner Top Left Y        | 4corner.tly    | V        | V   | V   | V   |     | 0 ~ +60               |
| 4 Corner Top Right X       | 4corner.trx    | V        | V   | V   | V   |     | 0 ~ +60               |
| 4 Corner Top Right Y       | 4corner.try    | V        | V   | V   | V   |     | 0 ~ +60               |
| 4 Corner Bottom Left X     | 4corner.blx    | V        | V   | V   | V   |     | 0 ~ +60               |
| 4 Corner Bottom Left Y     | 4corner.bly    | V        | V   | V   | V   |     | 0 ~ +60               |
| 4 Corner Bottom Right X    | 4corner.brx    | V        | V   | V   | V   |     | 0 ~ +60               |
| 4 Corner Bottom Right y    | 4corner.bry    | V        | V   | V   | V   |     | 0 ~ +60               |
| 4 Corner Reset             | 4corner.reset  |          |     |     |     | V   |                       |
| Mask Top                   | mask.top       | V        | V   | V   | V   |     | 0 ~ 100               |
| Mask Bottom                | mask.bottom    |          | V   | V   |     |     | 0 ~ 100               |
| Mask Left                  | mask.left      | V        | V   | V   | V   |     | 0 ~ 100               |
| Mask Right                 | mask.right     | V        | V   | V   | V   |     | 0 ~ 100               |
| Projection                 | projection     | V        | V   |     |     |     | 0 = Front             |
|                            |                |          |     |     |     |     | 1 = Rear              |
|                            |                |          |     |     |     |     | 2 = Ceiling           |
|                            |                |          |     |     |     |     | 3 = Rear + Ceiling    |
| Screen Format              | screen.format  | V        | V   |     |     |     | 0 : 16:10             |
|                            |                |          |     |     |     |     | 1 : 16:9              |
|                            |                |          |     |     |     |     | 2:4:3                 |
|                            |                |          |     |     |     |     | 3: 2.35:1             |
| Screen Position            | screen.shift   | V        | V   | V   | V   |     | 16:10 : Not Available |
|                            |                |          | •   | 1   |     |     | 16:9 : -60 ~ 60       |
|                            |                |          |     |     |     |     | 4:3 : -160 ~ 160      |
|                            |                |          |     |     |     |     | 2.35:1 : -191 ~ 191   |
| Alignment Reset            | align.reset    |          |     |     |     | V   | 2.33.1 181 ~ 181      |
| Alighthetit Reset          | angniteset     |          |     | 1   | L   | V   |                       |

| Function                | Operation         | Set | Get    | Inc | Dec | EXE | Values                       |
|-------------------------|-------------------|-----|--------|-----|-----|-----|------------------------------|
| Test Pattern            | test.pattern      | V   | V      |     |     |     | 0 = Grid                     |
|                         |                   |     |        |     |     |     | 1 = White                    |
|                         |                   |     |        |     |     |     | 2 = Red                      |
|                         |                   |     |        |     |     |     | 3 = Green                    |
|                         |                   |     |        |     |     |     | 4 = Blue                     |
|                         |                   |     |        |     |     |     | 5 = Black                    |
|                         |                   |     |        |     |     |     |                              |
|                         |                   |     |        |     |     |     | 6 = RGB Ramps                |
|                         |                   |     |        |     |     |     | 7 = Color Bar                |
|                         |                   |     |        |     |     |     | 8 = Setp Bar                 |
|                         |                   |     |        |     |     |     | 9 = CheckBoard               |
|                         |                   |     |        |     |     |     | 10 = Horizontal Lines        |
|                         |                   |     |        |     |     |     | 11 = Vertical Lines          |
|                         |                   |     |        |     |     |     | 12 = Diagnoal Lines          |
|                         |                   |     |        |     |     |     | 13 = Horizontal Ramps        |
|                         |                   |     |        |     |     |     | 14 = Vertical Ramps          |
|                         |                   |     |        |     |     |     | 15 = Off                     |
| Direct Power On         | direct.poweron    | V   | V      |     |     |     | 0 : Off                      |
|                         |                   |     |        |     |     |     | 1 : On                       |
| Signal Power On VGA     | signal.poweron.   | V   | V      |     |     |     | 0 : Off                      |
|                         | vga               |     | ľ      |     |     |     | 1 : On                       |
| Signal Power On HDMI    | signal.poweron.   | V   | V      |     |     |     | 0 : Off                      |
| Signal Tower Of The Mil | hdmi              | ľ   | v      |     |     |     | 1 : On                       |
| Light Mode              | light.mode        | V   | V      |     |     |     | 0: Normal                    |
| Light Mode              | light.mode        | V   | v      |     |     |     |                              |
|                         |                   |     |        |     |     |     | 1: ECO                       |
|                         |                   |     |        |     |     |     | 2: Custom Light              |
| Custom Light            | custom.light      | V   | V      | V   | V   |     | 25 ~ 100                     |
| Fan Speed               | fanspeed          | V   | V      |     |     |     | 0 = Normal                   |
|                         |                   |     |        |     |     |     | 1 = High                     |
| IR Control              | ir.control        | V   | V      |     |     |     | 0 : Front + Rear IR On       |
|                         |                   |     |        |     |     |     | 1 : Front IR On              |
|                         |                   |     |        |     |     |     | 2 : Rear IR On               |
|                         |                   |     |        |     |     |     | 3 : Front + Rear IR Off      |
| Remote ID               | remote.id         | V   | V      |     |     |     | 0 ~ 99                       |
| HDMI1 EDID              | edid.mode.hdmi1   | V   | V      |     |     |     | 0 : Enhanced                 |
|                         |                   |     |        |     |     |     | 1 : Standard                 |
| HDMI2 EDID              | edid.mode.hdmi2   | V   | V      |     |     |     | 0 : Enhanced                 |
|                         |                   |     | -      |     |     |     | 1 : Standard                 |
| HDBaseT EDID            | edid.mode.hdbt    | V   | V      |     |     |     | 0 : Enhanced                 |
|                         |                   | 1   |        |     |     |     | 1 : Standard                 |
| NetWork Status          | net.status        |     | V      |     |     |     | 0 : Disconnect               |
|                         | netistatas        |     | v      |     |     |     | 1 : Connected                |
| NetWork / DHCP          | net.dhcp          | V   | V      |     |     |     | 0 = Off                      |
| Network / DHCF          | net.uncp          | V I | v      |     |     |     | 1 = On                       |
| NetWork / IP Address    | net.ipaddr        | V   | V      |     |     |     | <pre><string></string></pre> |
|                         |                   | V   | V      |     |     |     |                              |
| NetWork / Subnet        | net.subnet        | V   | V<br>V |     |     |     | <string></string>            |
| NetWork / Gateway       | net.gateway       | V   | V<br>V |     |     |     | <string></string>            |
| NetWork / DNS           | net.dns           | V   | V      |     |     |     | <string></string>            |
| NetWork Apply           | net.apply         | V   |        |     |     |     | 0 : Cancel                   |
| Other allers D          |                   |     |        |     |     |     | 1: OK                        |
| Standby Power           | standby.power     | V   | V      |     |     |     | 0: Normal                    |
|                         |                   |     |        |     |     |     | 1: ECO                       |
|                         |                   |     |        |     |     |     | 2: On By Lan                 |
|                         |                   |     |        |     |     |     | 3: On By HDBaseT             |
| No Signal Power Off     | nosignal.poweroff | V   | V      |     |     |     | 0 ~ 36                       |
| Sleep Timer             | sleep.timer       | V   | V      |     |     |     | 0 ~ 120                      |
| Volume                  | volume            | V   | V      | V   | V   |     | 0 ~ 10                       |
| Mic Volume              | mic.volume        | V   | V      | V   | V   |     | 0 ~ 10                       |

| Function                 | Operation          | Set | Get | Inc | Dec | EXE | Values             |
|--------------------------|--------------------|-----|-----|-----|-----|-----|--------------------|
| Mic                      | mic                | V   | V   |     |     |     | 0 : Off            |
|                          | - :                |     |     | -   |     |     | 1:On               |
| Air Filter Hours         | airfilter.hours    |     | V   |     |     |     | <string></string>  |
| Air Filter Time Reminder | airfilter.reminder | V   | V   |     |     |     | 0 : Off (default)  |
|                          |                    |     |     |     |     |     | 1 : 300 Hrs        |
|                          |                    |     |     |     |     |     | 2 : 500 Hrs        |
|                          |                    |     |     |     |     |     | 3 : 1000 Hrs       |
|                          |                    |     |     |     |     |     | 4:1500 Hrs         |
|                          |                    |     |     |     |     |     | 5 : 2000 Hrs       |
| Air Filter Reset Timer   | airfilter.reset    |     |     |     |     | V   |                    |
| Rental Mode Password     | rental.pwd.reset   |     |     |     |     | V   |                    |
| Reset                    |                    |     |     |     |     |     |                    |
| Constant Brightness      | laser.cbc.enable   | V   | V   |     |     |     | 0 : Off            |
| _                        |                    |     |     |     |     |     | 1 : On             |
| Blank Screen Color       | blankscreen.color  | V   | V   |     |     |     | 0 = Logo           |
|                          |                    |     |     |     |     |     | 1 = Black          |
|                          |                    |     |     |     |     |     | 2 = Red            |
|                          |                    |     |     |     |     |     | 3 = Green          |
|                          |                    |     |     |     |     |     | 4 = Blue           |
|                          |                    |     |     |     |     |     | 5 = White          |
| Logo                     | logo               | V   | V   |     |     |     | 0 = Std.           |
| 2090                     | logo               | 1   | •   |     |     |     | 1 = Black          |
|                          |                    |     |     |     |     |     | 2 = Blue           |
| Message                  | message            | V   | V   |     |     |     | 0 : Off            |
| Wessage                  | message            | V   | ľ   |     |     |     | 1 : On             |
| MENU Position            | menu.position      | V   | V   |     |     |     | 0 : Center         |
|                          | inena.poolaon      | 1   | •   |     |     |     | 1 : Up             |
|                          |                    |     |     |     |     |     | 2 : Down           |
|                          |                    |     |     |     |     |     | 3 : Left           |
|                          |                    |     |     |     |     |     | 4 : Right          |
| MENU Timer               | menu.timer         | V   | V   |     |     |     | 0 : Off            |
|                          | inenu.unei         | ľ   | ľ   |     |     |     | 1 : 20 sec.        |
|                          |                    |     |     |     |     |     | 2 : 40 sec.        |
|                          |                    |     |     |     |     |     | 3 : 60 sec.        |
| MENU Translucent         | menu.trans         | V   | V   |     |     |     | 0 : Off            |
|                          |                    | V   | v   |     |     |     |                    |
|                          |                    |     |     |     |     |     | 1:50%              |
| Keypad Lock              | keypad.lock        | V   | V   |     |     |     | 2 :100%<br>0 : Off |
| кеурай Lock              | кеурац.юск         | V   | V   |     |     |     |                    |
| Security Look            | o o urity lo ok    | V   | V   |     |     |     | 1:0n               |
| Security Lock            | security.lock      | V   | V   |     |     |     | 1:Up               |
|                          |                    |     |     |     |     |     | 2 : Down           |
|                          |                    |     |     |     |     |     | 3:Left             |
|                          |                    |     |     |     |     |     | 4:Right            |
| Security Unlock          | security.unlock    | V   |     |     |     |     | 1:Up               |
|                          |                    |     |     |     |     |     | 2 : Down           |
|                          |                    |     |     |     |     |     | 3 : Left           |
|                          |                    |     |     |     |     |     | 4 : Right          |

| Function            | Operation    | Set | Get    | Inc | Dec | EXE | Values                        |
|---------------------|--------------|-----|--------|-----|-----|-----|-------------------------------|
| Language            | lang         | V   | V      |     |     |     | 0 = English                   |
|                     |              |     |        |     |     |     | 1 = French                    |
|                     |              |     |        |     |     |     | 2 = German                    |
|                     |              |     |        |     |     |     | 3 = Spanish                   |
|                     |              |     |        |     |     |     | 4 = Portugues                 |
|                     |              |     |        |     |     |     | 5 = Simplified Chinese        |
|                     |              |     |        |     |     |     | 6 = Traditional Chinese       |
|                     |              |     |        |     |     |     | 7 = Italian                   |
|                     |              |     |        |     |     |     | 8 = Norwegian                 |
|                     |              |     |        |     |     |     | 9 = Swedish                   |
|                     |              |     |        |     |     |     | 10 = Dutch                    |
|                     |              |     |        |     |     |     | 11 = Russian                  |
|                     |              |     |        |     |     |     | 12 = Polish                   |
|                     |              |     |        |     |     |     | 13 = Finnish                  |
|                     |              |     |        |     |     |     | 14 = Greek                    |
|                     |              |     |        |     |     |     | 15 = Korean                   |
|                     |              |     |        |     |     |     | 16 = Hungarian                |
|                     |              |     |        |     |     |     | 17 = Czech                    |
|                     |              |     |        |     |     |     | 18 = Turkish                  |
|                     |              |     |        |     |     |     | 19 = Japanese                 |
|                     |              |     |        |     |     |     | 20 = Danish                   |
| Reset All           | reset.all    |     |        |     |     | V   |                               |
| Source Info         | source.info  |     | V      |     |     | V   | <string></string>             |
| Light Hours 1       | light1.hours |     | v      |     |     |     | <string></string>             |
| Light Hours 1 Reset | light1.reset |     | -      |     |     | V   |                               |
| Remote Code         | remote.code  |     | V      |     |     |     | <string></string>             |
| Software Version    | sw.ver       |     | V      |     |     |     | <string></string>             |
| Serial Number       | ser.no       |     | V      |     |     |     | <string></string>             |
| Auto Image          | auto.img     |     |        |     |     | V   |                               |
| Light 1 Status      | light1.stat  |     | V      |     |     |     | 0 = Off                       |
|                     |              |     |        |     |     |     | 1 = On                        |
| Model               | model        |     | V      |     |     |     | <string></string>             |
| Pixel Clock         | pixel.clock  |     | V      |     |     |     | <string></string>             |
| H Refresh Rate      | h.refresh    |     | V      |     |     |     | <string></string>             |
| V Refresh Rate      | v.refresh    | V   | V<br>V |     |     |     | <string><br/>0 = Off</string> |
| Blank               | blank        | V   | v      |     |     |     | 1 = On                        |
| Power On            | power.on     |     |        |     |     | V   |                               |
| Power Off           | power.off    |     |        |     |     | V   |                               |
| Projector Status    | status       |     | V      |     |     | •   | 0 : Reset                     |
|                     |              |     | -      |     |     |     | 1 : Standby                   |
|                     |              |     |        |     |     |     | 2 : Active                    |
|                     |              |     |        |     |     |     | 3 : Cooling                   |
|                     |              |     |        |     |     |     | 4 : Warmup                    |
|                     |              |     |        |     |     |     | 5 : Powerup                   |
|                     |              |     |        |     |     |     | 6 : Failure                   |
| Mute                | mute         | V   | V      |     |     |     | 0 : Off                       |
| -                   |              |     |        |     |     |     | 1 : On                        |
| Freeze              | freeze       | V   | V      |     |     |     | 0 : Off                       |
|                     |              |     |        |     |     |     | 1 : On                        |
| Internal Speaker    | speaker      | V   | V      |     |     |     | 0 : Off                       |
| -                   | 1.           | 1   | 1      | 1   | 1   | 1   | 1 : On                        |

| Function                   | Operation         | Set | Get | Inc | Dec | EXE | Values              |
|----------------------------|-------------------|-----|-----|-----|-----|-----|---------------------|
| Input Select               | input.sel         | V   | V   |     |     |     | 1 :VGA              |
|                            |                   |     |     |     |     |     | 2: RGB2             |
|                            |                   |     |     |     |     |     | 3: DVI              |
|                            |                   |     |     |     |     |     | 4: Video            |
|                            |                   |     |     |     |     |     | 5: S-Video          |
|                            |                   |     |     |     |     |     | 6: HDMI 1           |
|                            |                   |     |     |     |     |     | 7: BNC              |
|                            |                   |     |     |     |     |     | 8: Component        |
|                            |                   |     |     |     |     |     | 9: HDMI 2           |
|                            |                   |     |     |     |     |     | 15: HDBaseT         |
| Art-Net Enable             | artnet.enable     | V   | V   |     |     |     | 0 = Off             |
| Art-Net Enable             | arthet.enable     | V   | V   |     |     |     |                     |
|                            |                   |     |     |     |     |     | 1 = On (2.X.X.X)    |
|                            |                   |     |     |     |     |     | 2 = On (10.X.X.X)   |
|                            |                   |     |     |     |     |     | 3 = On (Manual)     |
| Art-Net Net                | artnet.net        | V   | V   |     |     |     | 0 ~ 127             |
| Art-Net SubNet             | artnet.subnet     | V   | V   |     |     |     | 0 ~ 15              |
| Art-Net Universe           | artnet.universe   | V   | V   |     |     |     | 0 ~ 15              |
| Art-Net Start Address      | artnet.start.addr | V   | V   |     |     |     | 1 ~ 508             |
| Art-Net Apply              | artnet.apply      | V   | V   |     |     |     | 0 : Cancel          |
|                            |                   |     |     |     |     |     | 1 : OK              |
| Art-Net Channel 1 Function | artnet.ch1.func   | V   | V   |     |     |     | 0 = None            |
|                            |                   |     |     |     |     |     | 1 = Power           |
|                            |                   |     |     |     |     |     | 2 = PIC-MUTE        |
|                            |                   |     |     |     |     |     | 3 = Power Level     |
|                            |                   |     |     |     |     |     | 4 = Input           |
|                            |                   |     |     |     |     |     | 5 = Channel Control |
| Art-Net Channel 2 Function | artnet.ch2.func   | V   | V   |     |     |     | 0 = None            |
|                            |                   |     |     |     |     |     | 1 = Power           |
|                            |                   |     |     |     |     |     | 2 = PIC-MUTE        |
|                            |                   |     |     |     |     |     | 3 = Power Level     |
|                            |                   |     |     |     |     |     | 4 = Input           |
|                            |                   |     |     |     |     |     | 5 = Channel Control |
| Art-Net Channel 3 Function | artnet.ch3.func   | V   | V   |     |     |     | 0 = None            |
|                            |                   |     |     |     |     |     | 1 = Power           |
|                            |                   |     |     |     |     |     | 2 = PIC-MUTE        |
|                            |                   |     |     |     |     |     | 3 = Power Level     |
|                            |                   |     |     |     |     |     | 4 = Input           |
|                            |                   |     |     |     |     |     | 5 = Channel Control |
| Art-Net Channel 4 Function | artnet ch4 func   | V   | V   |     |     |     | 0 = None            |
|                            |                   | ľ   | •   |     |     |     | 1 = Power           |
|                            |                   |     |     |     |     |     | 2 = PIC-MUTE        |
|                            |                   |     |     |     |     |     | 3 = Power Level     |
|                            |                   |     |     |     |     |     | 4 = Input           |
|                            |                   |     |     |     |     |     | 5 = Channel Control |
| Art-Net Channel 5 Function | artnet ch5 func   | V   | V   |     |     |     | 0 = None            |
|                            |                   | v   | v   |     |     |     | 1 = Power           |
|                            |                   |     |     |     |     |     | 2 = PIC-MUTE        |
|                            |                   |     |     |     |     |     |                     |
|                            |                   |     |     |     |     |     | 3 = Power Level     |
|                            |                   |     |     |     |     |     | 4 = Input           |
|                            |                   |     | L   |     |     |     | 5 = Channel Control |

## Lens related function

| Function          | Operation    | Set | Get | Inc | Dec | EXE    | Values                           |
|-------------------|--------------|-----|-----|-----|-----|--------|----------------------------------|
| Lens Lock         | lens.lock    | V   | V   |     |     |        | 0: off                           |
| Lens zoom in      | zoom.in      |     |     |     |     | V      | 1:on                             |
| Lens zoom in 2    | zoom.in.2    |     |     |     |     | V      |                                  |
| Lens zoom in 3    | zoom.in.3    |     |     |     |     | V<br>V |                                  |
|                   |              |     |     |     |     |        |                                  |
| Lens zoom out     | zoom.out     |     |     |     |     | V      |                                  |
| Lens zoom out 2   | zoom.out.2   |     |     |     |     | V      |                                  |
| Lens zoom out 3   | zoom.out.3   |     |     |     |     | V      |                                  |
| Lens focus near   | focus.near   |     |     |     |     | V      |                                  |
| Lens focus near 2 | focus.near.2 |     |     |     |     | V      |                                  |
| Lens focus near 3 | focus.near.3 |     |     |     |     | V      |                                  |
| Lens focus far    | focus.far    |     |     |     |     | V      |                                  |
| Lens focus far 2  | focus.far.2  |     |     |     |     | V      |                                  |
| Lens focus far 3  | focus.far.3  |     |     |     |     | V      |                                  |
| Lens up           | lens.up      |     |     |     |     | V      |                                  |
| Lens up 2         | lens.up.2    |     |     |     |     | V      |                                  |
| Lens up 3         | lens.up.3    |     |     |     |     | V      |                                  |
| Lens down         | lens.down    |     |     |     |     | V      |                                  |
| Lens down 2       | lens.down.2  |     |     |     |     | V      |                                  |
| Lens down 3       | lens.down.3  |     |     |     |     | V      |                                  |
| Lens left         | lens.left    |     |     |     |     | V      |                                  |
| Lens left 2       | lens.left.2  |     |     |     |     | V      |                                  |
| Lens left 3       | lens.left.3  |     |     |     |     | V      |                                  |
| Lens right        | lens.right   |     |     |     |     | V      |                                  |
| Lens right 2      | lens.right.2 |     |     |     |     | V      |                                  |
| Lens right 3      | lens.right.3 |     |     |     |     | V      |                                  |
| Lens center       | lens.center  |     |     |     |     | V      |                                  |
| Lens type         | lens.type    | V   | V   |     |     |        | 0 : Non-UST Lens<br>1 : UST Lens |
| Lens load         | lens.load    | V   |     |     |     |        | 1~8                              |
| Lens save         | lens.save    | V   |     |     |     |        | 1~8                              |
| Lens clear        | lens.clear   | V   |     |     |     |        | 1~8                              |

# 8. Servies

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