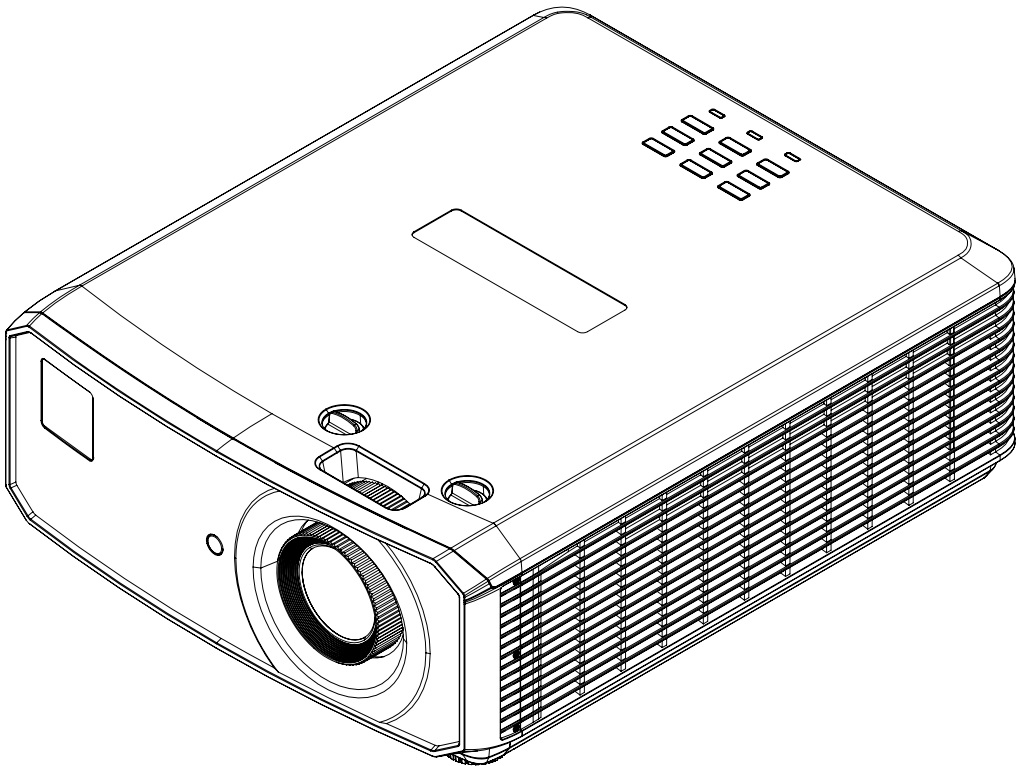


DIGITAL **PROJECTION**

E-Vision Laser 5900 Series

IMPORTANT INFORMATION



Rev B September 2020

121-182B

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Symbols used in this document

Some information in this document may be accompanied by the following symbols:

- 
LASER WARNING: this symbol indicates that there is a potential hazard of eye exposure to laser radiation unless the instructions are closely followed.

- 
ELECTRICAL WARNING: this symbol indicates that there is a danger of electrical shock unless the instructions are closely followed.

- 
WARNING: this symbol indicates that there is a danger of physical injury to yourself and/or damage to the equipment unless the instructions are closely followed.

- 
NOTE: this symbol indicates that there is some important information that you should read.

Additional Documentation

Full information about operating, connecting and setting up the projector can be found in the User Guides.

Please use the QR code (also located on the projector) to access the latest E-Vision projector user guides and other documentation via the Digital Projection website.



Or visit the products specification page on the Digital Projection website to download the latest user guide and other documentation.

Electrical and Physical Specifications

Mains Voltage	100-240VAC 50/60Hz 5.3A
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Operating Humidity	10% to 85% non-condensing
Storage Humidity	5% to 95% non-condensing
Dimensions	L:445.6mm (17.54in) X W: 360mm (14.17in) X H 163.5mm (6.43in)
Weight	11Kg (24.2lb) including lens
Power Consumption	at 100VAC: 500W typical (normal mode) at 240VAC: 480W typical (normal mode)
Standby Power	<2W (With LAN enabled), <0.5W (Without LAN enabled)
Thermal Dissipation	at 100VAC: 1706BTU/Hour typical (Normal mode) at 240VAC: 1638BTU/Hour typical (Normal mode)
Fan Noise	36dBA typical, 38dBA max (Normal mode)



Specifications are subject to change without notice.

Laser Precautions

Projector



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.

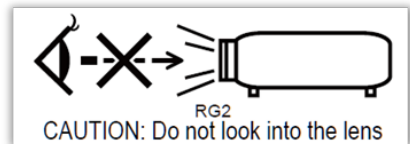
There is a potential hazard of eye exposure to laser radiation if the included instructions are not followed.

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

Non-laser emission. There remains non-laser emission from the projection lens. This portion of emission has been tested per IEC/EN 62471-5:2015 to be Risk Group 2 (low risk).



RISK GROUP 2 CAUTION. Possibly hazardous optical radiation emitted from this product. Do not stare at operating light source. May be harmful to the eyes.



Laser Parameters

Wavelength	450-460nm (Blue)
Mode of operation	Pulsed, due to frame rate
Pulse duration	1.34ms
Pulse repetition rate	120Hz
Maximum pulse energy	0.698mJ
Total internal power	>100W
Apparent source size	>10mm, at lens stop
Divergence	>100 mili Radian

Remote Control - Laser Pointer



CLASS 2 LASER PRODUCT

This Laser Product is designated as Class 2 during all procedures of operation.

LASER LIGHT - AVOID DIRECT EYE EXPOSURE.

Do not stare into the beam.

Do not view directly with optical instruments.

Do not point laser or allow laser light to be directed or reflected towards people, animals, transportation or reflective objects.

Only allow use by responsible persons.

Keep out of reach of children.

This device is not a toy.

Laser Pointer Parameters

Wavelength 640-660nm

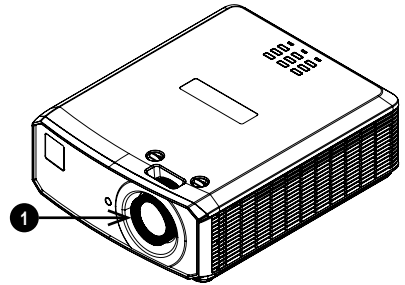
Max Output <1mW

Location of Laser Aperture

1. The laser aperture is located as indicated below.



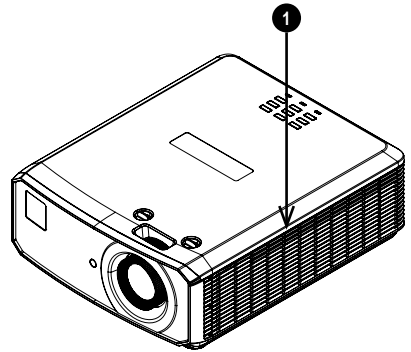
Be careful not to expose the eye to direct laser light.



Interlock Switches

Interlock switches are installed at the main frame, inside the cover. These will power-off the system individually when activated.

1. Will be activated when the top cover is removed.



General Precautions



The unit is never to be operated if the unit is defective or the cover or seal is damaged.

No maintenance allowed by end user.

Do not open the cabinet. There are no user serviceable parts inside.

No service is allowed except by authorized personnel.

Use only the power cable provided.

Ensure that the power outlet includes a Ground connection, as this equipment **MUST** be earthed.

Take care to prevent small objects such as paper or wire from falling into the projector. If this does happen, switch off immediately, and have the objects removed by authorised service personnel.

Do not expose the projector to rain or moisture, and do not place any liquids on top of the projector.

Unplug before cleaning, and use a damp, not wet, cloth.

Do not touch the power plug with wet hands.

Do not touch the power plug during a thunder storm.

Handle the power cable carefully and avoid sharp bends. Do not use a damaged power cable.



Do not touch the ventilation outlets, as they will become hot in use.

Do not cover or obstruct the ventilation outlets or inlets.

Do not cover the lens whilst the projector is switched on. This could cause a fire.

Always allow the projector to cool for 5 minutes before disconnecting the power or moving the projector.

Never use strong detergents or solvents such as alcohol or thinners to clean the projector and lens.

Installation Precautions



The projector must be installed only by suitably qualified personnel, in accordance with local building codes.

The projector is heavy. Use safe handling techniques when lifting the projector.

Do not drop or knock the projector.

Do not install the projector close to anything that might be affected by its operational heat, for instance, polystyrene ceiling tiles, curtains etc.

Place the projector in a dry area away from sources of dust, moisture, steam, smoke, sunlight or heat.

Ensure that the intake vents do not recycle hot air from the exhaust vent.

When operating the projector in an enclosed space, ensure that the surrounding air temperature within the enclosure does not exceed operation temperature while the projector is running, and the air intake and exhaust vents are unobstructed.

All enclosures should pass a certified thermal evaluation to ensure that the projector does not recycle exhaust air, as this may cause the device to shutdown even if the enclosure temperature is with the acceptable operation temperature range.

Avoid installing at high temperature, insufficient cooling and heavy dust locations. Keep your product away from fluorescent lamps (>1 Meter) to avoid malfunction caused by IR interference.

Avoid installing near an air conditioner duct or a subwoofer.

The projector should be installed as close to the power outlet as possible.

The power connection should be easily accessible, so that it can be disconnected in an emergency.

Please pay attention to projector installation with respect to other staging laser light equipment set-up. These systems can cause permanent damage to the DMD imaging devices used in our projectors. This damage is not covered by our warranty.

When using projectors in environments with third party high power laser systems avoid direct laser beams pointing towards the projection lens. This may cause incident light to converge into the optical engine and cause damage to the DLP DMD.

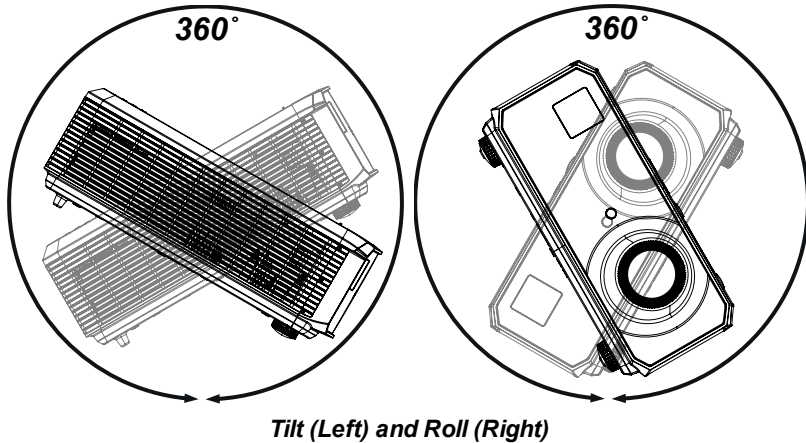


Before installation, make sure that the surface, ceiling or rigging that is to support the projector is capable of supporting the combined weight of the projector and lens.

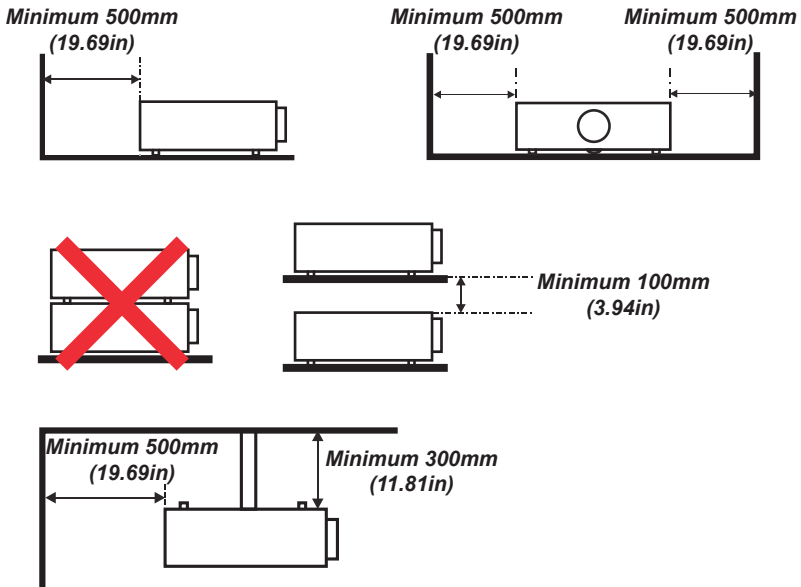
Backup safety chains or wires should always be used with ceiling mount installations.

When installing a ceiling mount, make sure the weight limit is not exceeded and the projector is firmly secured.

The projector can be operated any position, as shown in the diagram:



Allow at least 50cm (19.7in) of space between the ventilation outlets and any wall, and 30cm (11.8in) on all other sides.



Example Positioning



Make sure the lens cap is removed from the lens before operating the projector. Light energy levels have been known to cause damage to both the lens and projector optics. This damage is not covered by our warranty.

Connect the LAN cable only to a computer LAN connection. Other similar connectors may have a dangerously high voltage source.

A VGA IN connector should be used to connect to the VGA IN port on the projector. It should be inserted tightly, with the screws on both sides securely fastened to ensure proper connection of the signal wire for achieving optimal display effect.

An AUDIO IN connector should be used to connect to the AUDIO IN port on the projector. It CANNOT be connected to AUDIO OUT otherwise, it will lead to mute output and even DAMAGE the port.

The power cord and signal cable should be connected before the projector is powered on. During startup and operation, DO NOT insert or remove the signal cable or the power cord to avoid damaging the projector.

Turn on High Fan Speed Mode when located in high altitude areas.



The projector generates heat during use. The internal fans dissipate the heat of the projector when shutting down, which could continue for a certain period. After the projector enters **STANDBY MODE**, remove the power cord. **DO NOT** remove the power cord during shutdown as it may cause damage to the projector and may affect the service life of the projector.

Do not place heavy objects on top of the projector chassis.

Product Labels


Projector

DIGITAL PROJECTION DLP Projector / Projecteur
(數位投影機 / 數字投影機)

Model Name / Modèl(型號 / 型号): E-Vision Laser 5900 WUXGA
INPUT / Entrée(輸入 / 輸入): 100-240V ~ 50/60Hz 5.3A

This device complies with Part 15 of the FCC rules, Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.
CAN ICES-3(B) / NMB-3(B).

Caution: Do not open. No user serviceable parts inside.
警告: 請勿打開外殼, 設備內無服務性維修之元件。
警告: 請勿打開外殼, 設備內無服務性維修之元件。
Cuidado: no abra la tapa. Ninguna parte interna es reparable por Usuario.
Avertissement: ne pas ouvrir le couvercle. Le produit ne contient aucune pièce interne réparable par l'utilisateur.








Digital Projection Limited Made in China/製造地: 中國 3284663300 XXXXX XXXXX

Manufacturers ID Label

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

LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS II LASER PRODUCT
Emitted wavelength: 450-460 nm
Max. Pulse energy: 0.088 mJ, Pulse duration: 1.34 ms
雷射輻射 避免直接照射眼睛 3 類雷射產品
波長: 450-460 nm
最大脈沖能量: 0.088 mJ, 脈沖時間: 1.34 ms
最大脈沖能量: 0.088 mJ, 脈沖時間: 1.34 ms



EXPOSITION DIRECTE DANGEREUSE POUR LES YEUX
APPAREIL À LASER DE CLASSE II
longueur d'onde: 450-460nm
maximum énergie de impulsion: 0.088 mJ
durée de impulsion: 1.34 ms

RAYONNEMENT LASER
OB 7247-1-2012 / IECEN 60825-1:2007
CLASS 1 LASER PRODUCT PRODUIT LASER DE CLASSE 1
IECEN 60825-1:2014 IECEN 60825-1:2014

Explanatory Label



LASER APERTURE
雷射輻射之孔徑
激光辐射窗口
OUVERTURE LASER

Laser Aperture Label



E-Vision User Guides

Follow link for Projector Documentation
Suivre le lien pour accéder à la documentation du projecteur
Produktdokumentation finden Sie unter dem Link
このリンク元ホームページをモバイルブラウザで取得してください
請扫描条码获取投影机文件
프로젝터 설명서를 보려면 링크를 방문하십시오

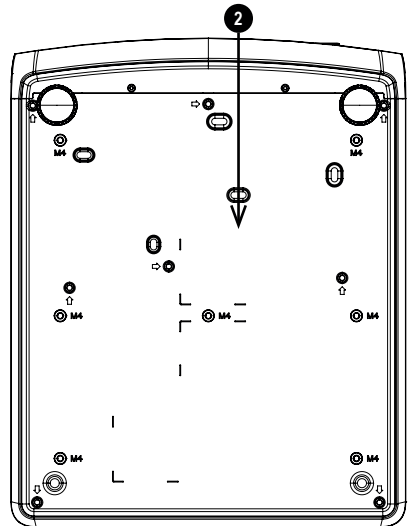
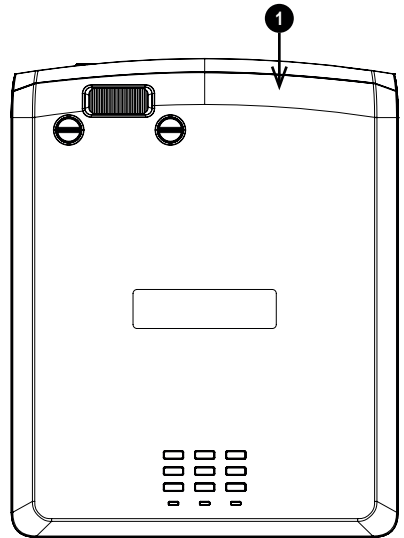
User Guides Label

Remote Control

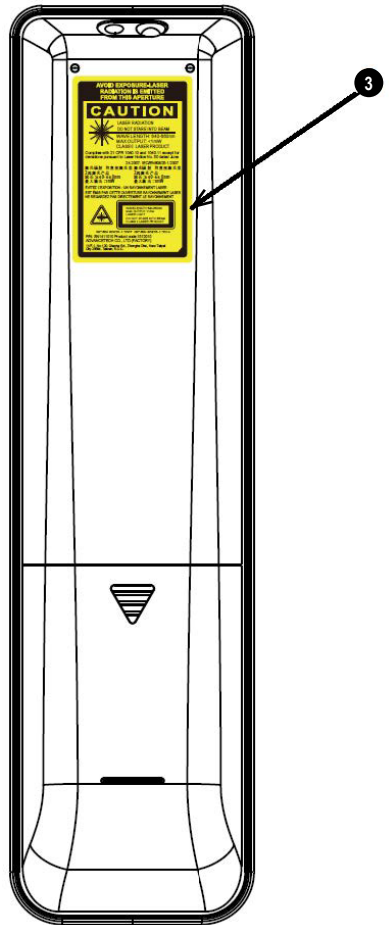
**Remote Control Label**

Label Locations

1. Location of Hazard Warning Symbol and Laser Aperture Label on the body of the projector.
2. Location of Manufacturer's ID Label and Explanatory Label with Certification Statement and Risk Statement on the body of the projector.



- 3. Location of Remote Control Label on the back of the remote.



Operation and Configuration Precautions



Do not make changes to the networking configuration unless you understand what you are doing, or have taken advice from your Network Manager. If you make a mistake, it is possible that you will lose contact with the projector. Always double-check your settings before pressing the APPLY button. Always keep a written note of the original settings, and any changes you have made.



Software updates should NOT be carried out except by, or with the supervision of, Digital Projection Service personnel.

Compliance with International Standards



RF Interference

FCC

The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by Digital Projection in this manual. Failure to comply with this government regulation could void your right to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant with 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 may cause harmful interference, in which case the user will be responsible for correcting any interference.

Noise

GSGV Acoustic Noise Information Ordinance

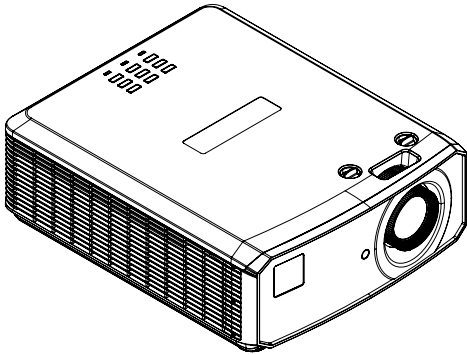
The sound pressure level is less than 39 dB (A) according to ISO 3744 or ISO 7779.

European Waste Electrical and Electronic Equipment (WEEE) Directive



Digital Projection Ltd is fully committed to minimising Waste Electrical and Electronic Equipment. Our products are designed with reuse, recycling and recovery of all components in mind. To this end, at end of life, your projector may be returned to Digital Projection Ltd or its agent so that the environmental impact can be minimised.

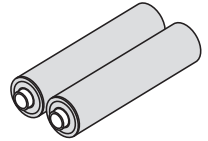
What's in the box?



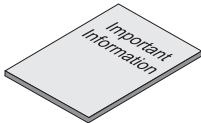
Projector



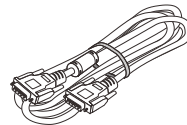
Remote Control



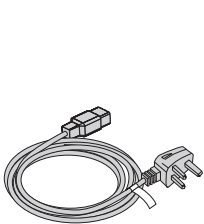
Batteries (2xAAA)



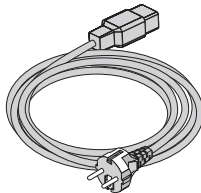
Important Information Book



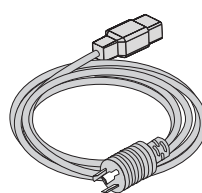
VGA Cable



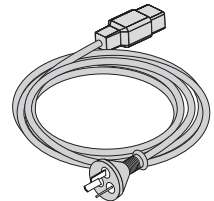
Power Cable, UK



Power Cable, Europe



Power Cable, North America



Power Cable, China

Basic Operating Instructions

Positioning the screen and projector

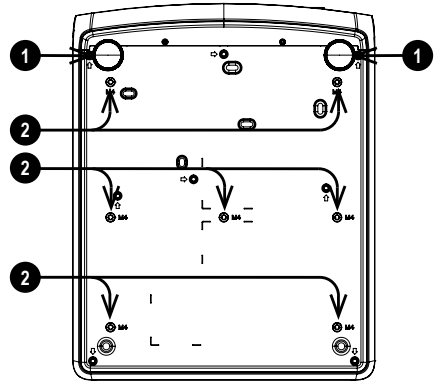
1. Install the screen, ensuring that it is in the best position for viewing by your audience.
2. Mount the projector, ensuring that it is at a suitable distance from the screen for the image to fill the screen. Set the adjustable feet so that the projector is level, and perpendicular to the screen.

The drawing shows the positions of the feet for table mounting, and the fixing holes for ceiling mounting.

1. Two adjustable feet
2. **Seven M4 holes for ceiling mount.**
The screws should not penetrate more than 8 mm into the body of the projector.



Do not use the threaded holes for the adjustable feet to hang or mount the projector.



Connecting the power supply

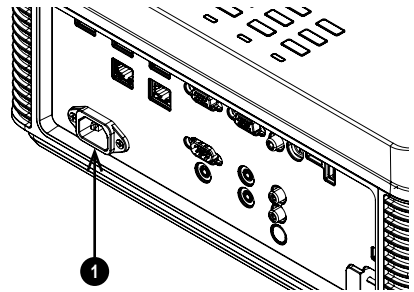
1. Firmly push the mains connector into the AC In socket **1**



Use only the power cable provided.

Ensure that the power outlet includes a ground connection as this equipment MUST be earthed.

Handle the power cable carefully and avoid sharp bends. Do not use a damaged power cable.



Switching the projector on

1. Connect the power cable between the mains supply and the projector.
The **POWER** indicator lights green to indicate that the projector is in STANDBY mode.
2. Press one of the following buttons:
 - On the remote control, the **ON** button
 - On the projector control panel, the **POWER** button.

The **POWER** indicator begins flashing green. In approximately 20 seconds, the startup screen appears. The projector is now switched on.



The first time you use the projector, you can set OSD language from the quick menu. (See Setting the OSD language in the user manual.)

Switching the projector off

1. Press **OFF** on the remote control or **POWER** on the control panel, then press again to confirm your choice.
The **POWER** indicator on the control panel will start flashing green, the light source will go out and the cooling fans will run for a short time. The **POWER** indicator stops flashing green and changes to solid green when the projector enters Standby mode.
2. If you need to switch the projector off completely, wait until the projector enters Standby mode, then disconnect the AC power cable from the projector.

Selecting an input signal

1. Connect one or more image sources to the projector.
2. Select the input you want to display:
 - Press one of the input buttons or the source button on the remote control.
 - Press **MENU** on the remote control or control panel and navigate to the Source setting in the Settings 1 tab, or press **SOURCE** on the control panel. Use the **UP** and **DOWN** navigation buttons to select the input source in the **SOURCE** menu. Press **ENTER** to confirm your choice.

Selecting a test pattern

The following test patterns are available: RGB Ramps, Color Bars, Step Bars, Check Board, Grid, Horizontal Lines, Vertical Lines, Diagonal Lines, Horizontal Ramp, Vertical Ramp, White, Red, Green, Blue, Black, *None*.

To display a test pattern:

1. Press **MENU** on the remote or control panel to open the OSD.
2. Use the **LEFT** and **RIGHT** arrow buttons to access the **Settings 1** menu.
3. Use the **UP**, **DOWN** and **RETURN** buttons to access the **Advanced 2** sub menu.
4. Highlight **Test Pattern** and select a test pattern using the **LEFT** and **RIGHT** arrow buttons.

To return to the main image, set the test pattern to none and exit the OSD by pressing **EXIT**.

Adjusting the image

Orientation

This can be set from the **Settings 1** menu.

Highlight **Projection** and choose from **Desktop Front**, **Desktop Rear**, **Ceiling Front** and **Ceiling Rear**.

Geometry

Settings such as **Keystone** and **4 Corners** can be set from the **Settings 1** menu.



Keystone requires an external signal input to enable it to be set.

Picture

Settings such as **Display Modes**, **Brightness**, **Contrast**, **Color Manager** (**Hue**, **Saturation** and **Gain**), and **Advanced** (**Sharpness** and **Gamma**) can be set from the **Image** menu.



This product includes a DICOM simulation feature intended for training and other non-medical diagnosis purposes.

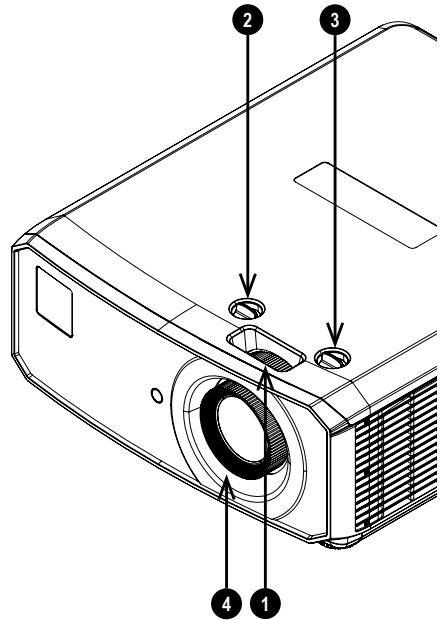
Adjusting the lens

The lens can be adjusted using the controls on the lens and the controls on the body of the projector:

- Use the horizontal shift control **2** and the vertical shift control **3** on the body of the projector to adjust the position of the image on the screen.
- Use the focus control **4** on the lens to focus the image.

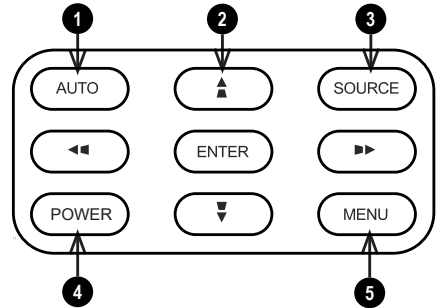


See *Remote control* on page 29 for full details of how to adjust the lens using the remote control.



Control panel

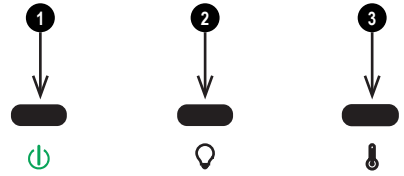
- AUTO**
Optimizes the image size, position and resolution
- Arrow buttons & ENTER**
Navigation buttons used to highlight menu entries in the OSD. Press **ENTER** to open or execute the highlighted menu entry.
Adjusts keystone when OSD is off. Left and right adjust horizontal keystone, up and down adjust vertical keystone.
- SOURCE**
Displays and exits the source menu
- POWER**
Switches the projector on and off (STANDBY).
- MENU**
Displays and exits the OSD.



Control Panel

Projector indicators

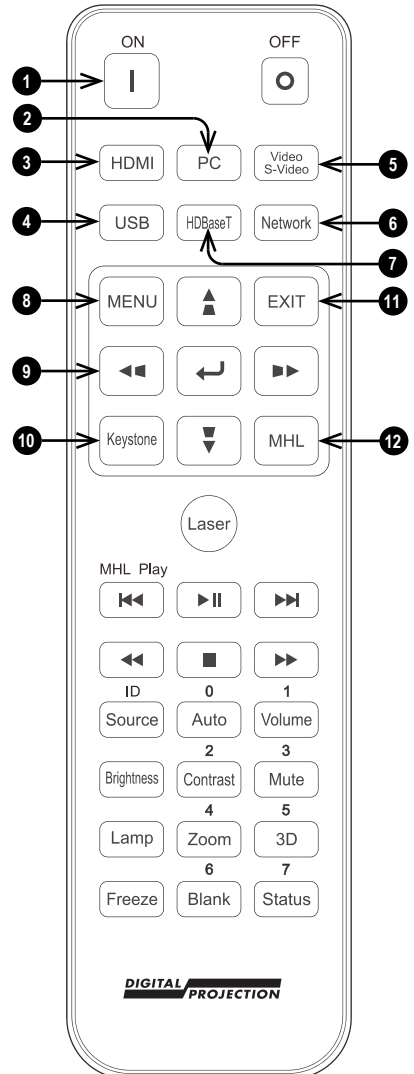
1. **Power**
On = projector is switched on
Flashing = starting up or cooling down
2. **Light**
On = error
3. **Temp.**
On = error



Indicators

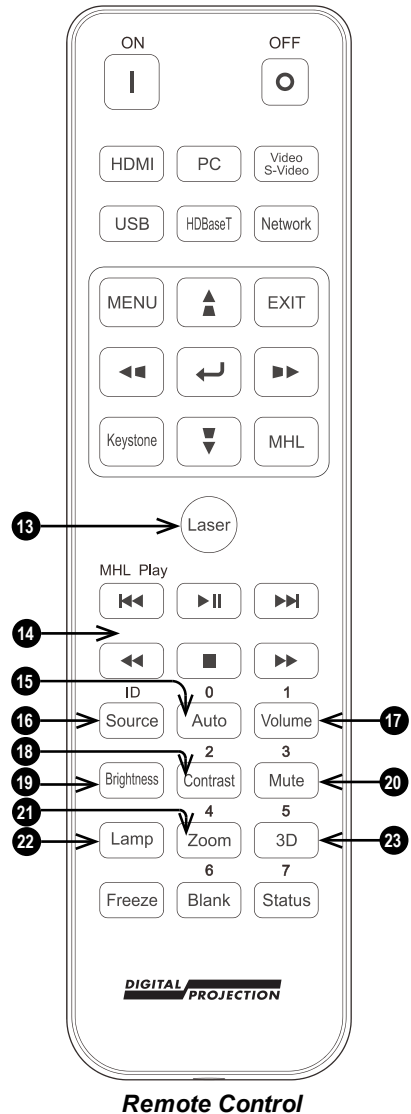
Remote control

1. **Power ON / OFF**
Turns power on and off.
2. **PC**
Select the Computer In input.
3. **HDMI**
Select and toggle the HDMI 1, HDMI 2 or DVI-D input.
4. **USB**
There is no USB function on this projector.
5. **Video S Video**
Select the Video input.
There is no S Video on this projector.
6. **Network**
Open the Network menu in the OSD.
7. **HDBaseT**
Select the HDBaseT input.
8. **MENU**
Access the OSD. If the OSD is open, press this button to go back to the previous menu.
9. **Keystone adjust (arrows)/Navigation (arrows and return)**
Adjust horizontal and vertical keystone. When the OSD is active, navigate through the menus with the arrows, confirm your choice with the return button.
10. **Keystone**
Open the Keystone menu in the OSD.
11. **EXIT**
Go up one level in the OSD. When the top level is reached, press to close the OSD.
12. **MHL**
Enable the Mobile High-Definition Link technology feature for smart devices.



Remote Control

13. **Laser**
Enables the laser pointer.
14. **MHL Play controls**
Play, pause, stop, rewind and fast forward MHL content.
15. **Auto / ID input 0**
Automatically adjust frequency, phase and position.
Use with **Source / ID** to set the remote ID to 0.
16. **Source / ID**
Select the next input source.
Use with a number key to set the remote ID.
17. **Volume / ID input 1**
Open the Volume slider.
Use with **Source / ID** to set the remote ID to 1.
18. **Contrast / ID input 2**
Open the Contrast slider.
Use with **Source / ID** to set the remote ID to 2.
19. **Brightness**
Open the Brightness slider.
20. **Mute / ID input 3**
Mute the audio output.
Use with **Source / ID** to set the remote ID to 3.
21. **Zoom / ID input 4**
Open the Zoom control.
Use with **Source / ID** to set the remote ID to 4.
22. **Lamp**
Open the light source options.
23. **3D / ID input 5**
Open the 3D settings menu in the OSD.
Use with **Source / ID** to set the remote ID to 5.



24. **Blank / ID input 6**
Shows and hides the projected image. When blanking is enabled, the light source is completely switched off and the screen is blank.
- Use with **Source / ID** to set the remote ID to 6.
25. **Freeze**
Freeze the current frame.
26. **Status / ID input 7**
Open the Status menu in the OSD. Use with **Source / ID** to set the remote ID to 7.

