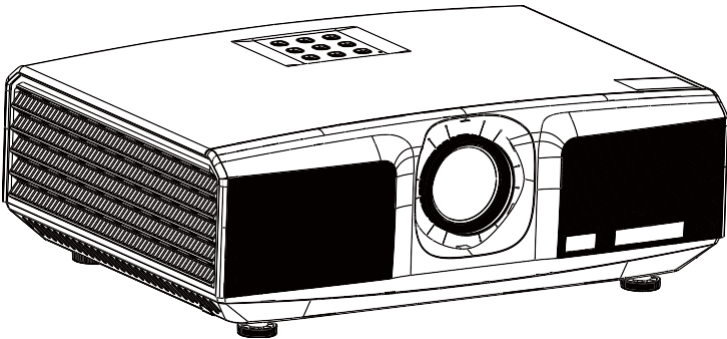


Laser Projector

User Manual



- Please read this manual carefully before using this product and keep it for future reference.
- Please read "Important Safety Instructions" carefully before using this product.

Declaration

Copyright

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Disclaimer

Appotronics does not make any express or implied representations or warranties with respect to any of the contents of this manual, and does not provide any warranties with respect to merchantability or fitness for a particular purpose. In addition, the company reserves the right to revise this publication and to modify the contents of this document at any time without notice to anyone.

Repair

Under normal use and storage conditions, Appotronics provides warranty on any materials and process defects of this product. Proof of purchase date must be provided when you require the warranty service. If any product defect is found during the warranty period, the sole obligation of Appotronics and the exclusive remedy are to replace the defective parts (including the service charge). When you find that the product is defective, please immediately notify the dealer to obtain the warranty service.

Important: If the customer fails to use the product in accordance with the written instructions, the above warranty will not apply. Ensure that the ambient humidity is between 10% and 90%, the ambient temperature is between 0°C and 40°C and the altitude is below 5000m. Avoid using the product in a dusty environment.



This symbol warns users that the uninsulated voltage in the projector may be sufficient to cause an electric shock. Therefore, there is a risk of electric shock due to any contact with any component inside the projector.



This symbol alerts users to notice important information about the operation and maintenance. Please read this information carefully to avoid such problems.

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Important Safety Instructions

General Safety Instructions

- Please read this manual carefully before using this projector and keep it for future reference.
- Installation, operation and maintenance should be performed by qualified professionals authorized by the company.
- All warnings listed on this projector and listed in this manual shall be observed.
- Please strictly observe all instructions on operations and usage.
- Please strictly observe all local installation standards.

Safety Tips

This equipment complies with safety standards stipulated for information technology equipment that are subject to stringent requirements for the use of critical safety assemblies, components, materials, and insulators in order to protect users and operators from the following hazards:

- Electric shock
- Energy-related hazards
- Fire
- Heat-related hazards
- Mechanical hazards
- Radiation
- Chemical hazards

In addition, these safety standards present limitations in several aspects, such as the degree of internal and external temperature rise, radiation levels, mechanical stability and strength, peripheral construction, and fire protection devices. Even if the normal operation of the equipment fails, single-failure condition simulation testing ensures that the equipment will provide adequate protection for the human body with the use of fuses, thermal circuit breakers, overcurrent protection devices, and similar devices.

This manual is intended for professional use only by authorized personnel who are familiar with the potential hazards of this product. Only qualified maintenance personnel may use the product for professional purposes.

Important Safety Instructions

Terms:

- ◆ Maintenance personnel:
Maintenance personnel are professionals who can use their training and skills to avoid possible injury to themselves or others when there is a clear hazard in the maintenance access area of the equipment or in the equipment within the restricted access area.
- ◆ Users:
Refer to all personnel other than professionals.
- ◆ Restricted Access Areas:
Only professionals can enter the restricted access area or only if a user is aware of the reasons for restricting access to the area and has taken preventive measures. The operator must use a specific tool, lock, or key or take other safety measures to access the areas. In addition, the access to the areas is controlled by the specified agency who is in charge of the area.

Important Safety Instructions

■ Preventing the risk of electric shock

- ◆ The projector should use AC power. Make sure that the main voltage and capacitance match the rated power of the projector. If the installation environment cannot meet the AC power requirements, please contact the electrician.
- ◆ The installation can only be carried out by qualified technical personnel in accordance with local electrical codes and regulations.
- ◆ This device uses a three-terminal power cable that includes a single-phase line that protects the ground wire (PE). If the installation environment cannot meet the AC power requirements, please contact the electrician. Please do not ignore the role of PE.
- ◆ Turn off the power to the projector and unplug the power cord to cut off all power connections from the projector.
- ◆ If you need to extend the cable, use a power cable with the current rated value not lower than that of the projector. If the rated value of the power cable is lower than the current value of the projector, it may cause overheating.
- ◆ Do not disassemble the projector. When it needs to be maintained or repaired, hand it over to a trained and authorized service person.
- ◆ Do not spill any liquid on the projector.
- ◆ To better protect the product during thunderstorms or when it is not used for a long period of time, unplug the power plug from the wall socket. This will prevent lightning or power line surges from causing damage to the projector.

■ Preventing battery explosion

- ◆ If the battery is improperly installed, an explosion may occur.
- ◆ Replace the battery with the manufacturer's recommended or equivalent type of battery
- ◆ When disposing used batteries, be sure to refer to the rules and regulations on disposal of hazardous wastes at the national, provincial and local levels to ensure proper disposal of waste.

■ Preventing personal injury

- ◆ To prevent personal injury and physical damage, refer to this manual and all the labels on the system before plugging the power plug into the electrical outlet, or commissioning the projector.
- ◆ To prevent injury, ensure that the lens and all covers are installed correctly.
- ◆ Before attempting to move or remove the projector, turn off the projector and unplug the power plug from the wall socket.
- ◆ When the user needs to turn off the projector to access internal parts, the user must disconnect the power cable from the power supply and unplug the power cable from the UPS power input socket (authorized maintenance personnel only). If the projector's power input is not accessible (for example, in ceiling-mounted installation mode), install a common disconnect device that is easily accessible in the fixed wiring.
- ◆ Warning: This is high intensity light. Never look into the lens! Too much brightness can damage your eyes.
- ◆ Warning: High intensity light. Do not look into the lens! High brightness will cause damage to the eyes.
- ◆ Never look at the end of the laser beam while the equipment is in operation. Laser radiation is harmful to the human eye and injury may occur.
- ◆ The laser has high density energy. These may be dangerous for skin tissue and may cause electrical, and chemical and non-ionizing radiation hazards.

■ Preventing damages to the projector

- ◆ When using the projector, be sure to open the lens shutter or remove the lens cover.
- ◆ If there is any abnormality in the projector, unplug the power cable immediately. Do not continue to use the projector when it comes to smoke or makes strange noise or odor. In this case, immediately unplug the power cable and then contact the dealer.
- ◆ Please keep the original shipping box and packing material which can be used again to transport the equipment. In order to maximize the protection of the equipment, re-package it in accordance with the original packaging at the factory.

- ◆ Before cleaning the equipment, please unplug the power plug from the electrical outlet. Do not use cleaners or spray cleaners, but use a damp cloth for cleaning. Do not use irritating solvents, such as thinners, gasoline, or corrosive cleaners, as they can cause damage to the case. You can use a damp cloth and a mild detergent to remove stubborn stains.
- ◆ To ensure maximum optical performance and resolution, the projection lens is coated with a special anti-reflective coating, so avoid touching the lens. If you need to remove dust from the lens, gently wipe the lens surface with wipe paper or a dust-free cloth with a small amount of alcohol, rather than using a damp cloth, cleaner or thinner.
- ◆ Do not place this projector on an unstable vehicle, shelf or table. Because it will cause serious damage once the projector is dropped. Functions may be affected. Therefore, you should replace them. For example, damages such as cracks or deep scratches may occur.

■ Preventing fire

- ◆ The design and manufacture of the projector conforms to the most stringent safety requirements. Putting the flammable material near the projector may cause the material to ignite itself, causing a fire. Once fire occurs, be sure to use sand, CO₂ or dry powder fire extinguishers. Please do not use water to extinguish a fire when an electrical fire occurs.
- ◆ It is advisable to leave a "quarantine" around all the outer surfaces of the projector. No flammable material shall be placed in this area. Do not use any material to cover the projector or lens while the projector is working.
- ◆ Do not block the vents around the projector. Do not place paper or other objects in the range of 10cm (4 inches) around the projector.
- ◆ The slots on the projector are used for ventilation and heat dissipation. To ensure reliable operation of the projector and to prevent it from overheating, do not block or cover these slots. The projector should not be placed close to walls or other similar surfaces to avoid clogging these slots. The projector should not be put close to a wall or other similar surface. The projector should not be placed near the radiator or heat regulator. Unless the ventilation is good, the projector should not be placed in the embedded device or enclosed device.
- ◆ The projection room must be well ventilated or have a cooling device to avoid heat buildup. The hot air discharged from the projector must be able to be discharged to the outside of the building.
- ◆ If the projector is not used for a long period of time, remove the power cable.

■ About repair

- ◆ Do not service this equipment privately because opening or removing the cover may expose you to high pressure and face an electric shock hazard.
- ◆ If you attempt to change the internal control functions set at the factory or to change other control settings that are not specifically addressed in this

manual, it will cause permanent damage to the laser light source suite and warranty failure.

- ♦ When the following cases occur, unplug the device from the electrical outlet and allow qualified service personnel to service:
 - The power cable or power plug is damaged or worn out.
 - Liquid enters into the equipment.
 - The equipment is exposed to rain or water.
 - If the equipment cannot operate properly in accordance with the operation instructions, adjust only the adjustment apparatuses mentioned in the operation instructions because improper adjustment of other apparatuses may cause equipment damage.
 - The equipment falls to the ground or the housing is damaged.
 - If the equipment performance deteriorates significantly, please ask the maintenance personnel for help.
- ♦ Replacement parts: When using replacement parts, ensure that the service technician uses approved replacement parts or approved replacement parts that are identical to the original parts. Unauthorized alternatives may result in deteriorated performance and stability, causing fire, electric shock, or other hazards. Unapproved alternatives may void the warranty.
- ♦ Safety check: When the projector service is complete, it is important to have the service technician perform a safety check to determine that the equipment has been returned to normal operating condition.

Overview

Use of the Manual

Maintenance: Only trained and qualified maintenance technicians (who understand laser safety, UV radiation, high voltages and all potential hazards from connected circuits) should perform maintenance tasks that involve opening the projector.

Disclaimer: We have endeavored to ensure the accuracy and reliability of the information provided in this document. However, as the product continues to improve, the information in this document is subject to change without notice. Appotronics Corporation Ltd. is not responsible for omissions or inaccurate information. The updated version of this document is issued on a regular basis as needed. Please contact Appotronics Corporation Ltd. (hereinafter referred to as "Appotronics") for updated version.

Overview

Safety Warnings & Guidelines

■ Labels & remarks

Please observe and comply with all warnings and instructions marked on the projector.



Caution – As with any bright light source, do not stare into the beam, RG2 IEC 62471-5:2015



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



Laser-illuminated projectors—although generally Class 1 laser products during operation—usually contain Class 4 embedded lasers. Service shall be performed only by authorized, trained servicing personnel (IEC 60825-1).

■ General Warning Information



This symbol alerts users to notice important information about the operation and maintenance. Please read this information carefully to avoid problems.

■ Laser Safety Information



- Do not stare into the beam
- Laser radiation warning sign



Optical Radiation warning symbol, Hazard RG2



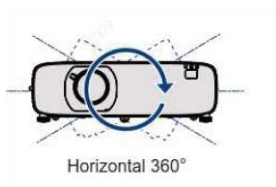
Overview

Projector Features

Thank you for purchasing Appotronics laser projector. This product applies a shiftable lens and Appotronics' new laser light source technology. High-efficiency laser engine and long-life laser light source make it display high brightness for a long time throughout its lifetime. It applies advanced laser fluorescent display technology to achieve a great breakthrough in color performance, with a color gamut that exceeds REC.709. Moreover, ergonomic designs such as silent, centered lens, and rear-mounted interface provide a user-friendly experience.

The projector has the following key features:

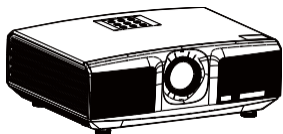
- ◆ ☐ High brightness, perfect color blending;
- ◆ ☐ Long-life laser light source; ☐
- ◆ ☐ Manual shiftable lens;
- ◆ ☐ TI DLP display technology;
- ◆ ☐ Digital stepless current adjustment technology, and Adjustable sectional current;
- ◆ ☐ DLP-Link and IR 3D.
- ◆ ☐ Instant on/off;
- ◆ ☐ Industrial-grade design, IP5X dust-proof rating for the light source of the light engine;
- ◆ ☐ Low power consumption design;
- ◆ ☐ 360° free angle installation, see the figure below , the projector is for reference only.



Overview

Packaging Overview

Please check the items in the package according to the following list. If any items are missing, please contact the dealer immediately.



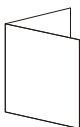
Projector



Power Cable



Remote Control & Batteries



Quick Start Guide



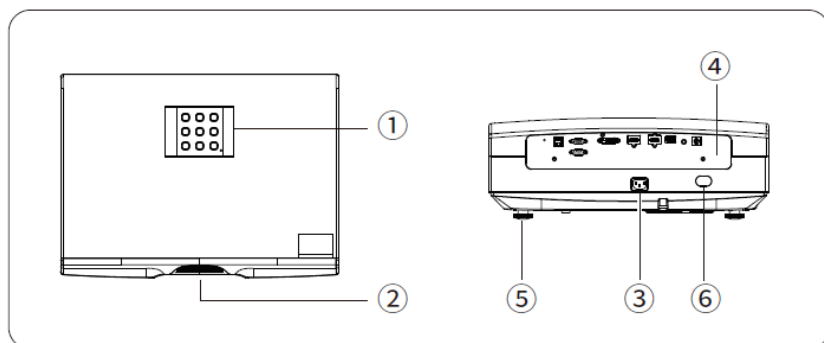
Caution

- The list of items comes with the projector varies depending on the country (region) of sale.

Overview

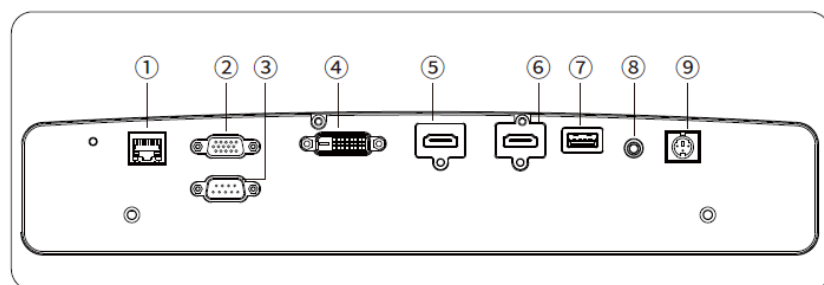
Projector Appearance

■ Host



- | | |
|-------------------|----------------------|
| ① Control Panel | ④ Input/Output Panel |
| ② Projection Lens | ⑤ Adjustment Foot |
| ③ Power Socket | ⑥ IR Receiver |

■ Input/Output Panel

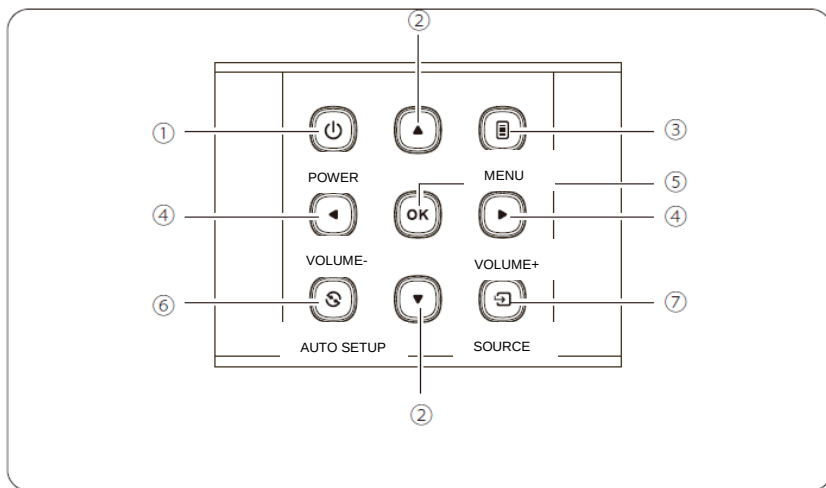


- | | | |
|--------------|------------------------|--------------|
| ① RJ45 port | ⑤ HDMI 1 port | ⑧ IR IN port |
| ② VGA port | ⑥ HDMI 2 port | ⑨ IR 3D port |
| ③ RS232 port | ⑦ USBport :
5VDC 1A | |
| ④ DVI port | | |

Overview

Projector Appearance

■ Control Panel



① POWER (power on/off)

Press once to turn on the power, and press twice consecutively to turn off the power while it is on.

② Arrow keys (▲up, ▼down)

When the screen shows the user menu, press ▲/▼ to select the desired menu item.

③ MENU

Opens the on-screen menu, and exits and saves the menu settings.

④ VOLUME / Arrow keys (◀▶)

left, ▶ right)

Press ◀/▶ to select items left/right in the user menu.

⑤ OK

Selects/confirms the current value or selects an item.

⑥ AUTO SETUP

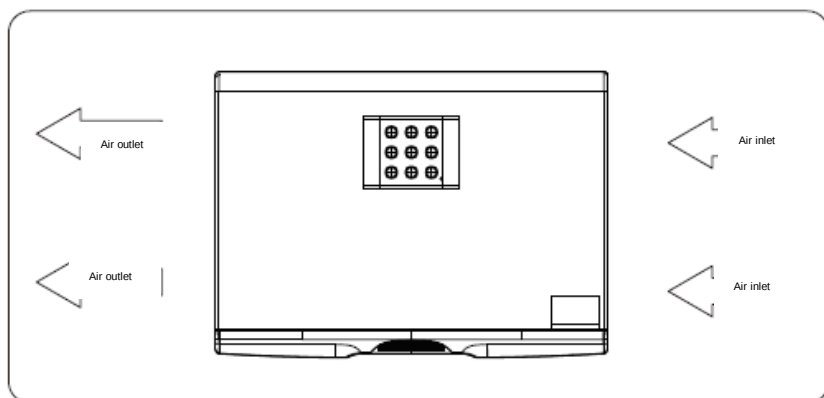
Automatically adjusts the function in the VGA channel.

⑦ SOURCE

Switches to different signal sources for selection.

Overview

Orientation of Air Duct



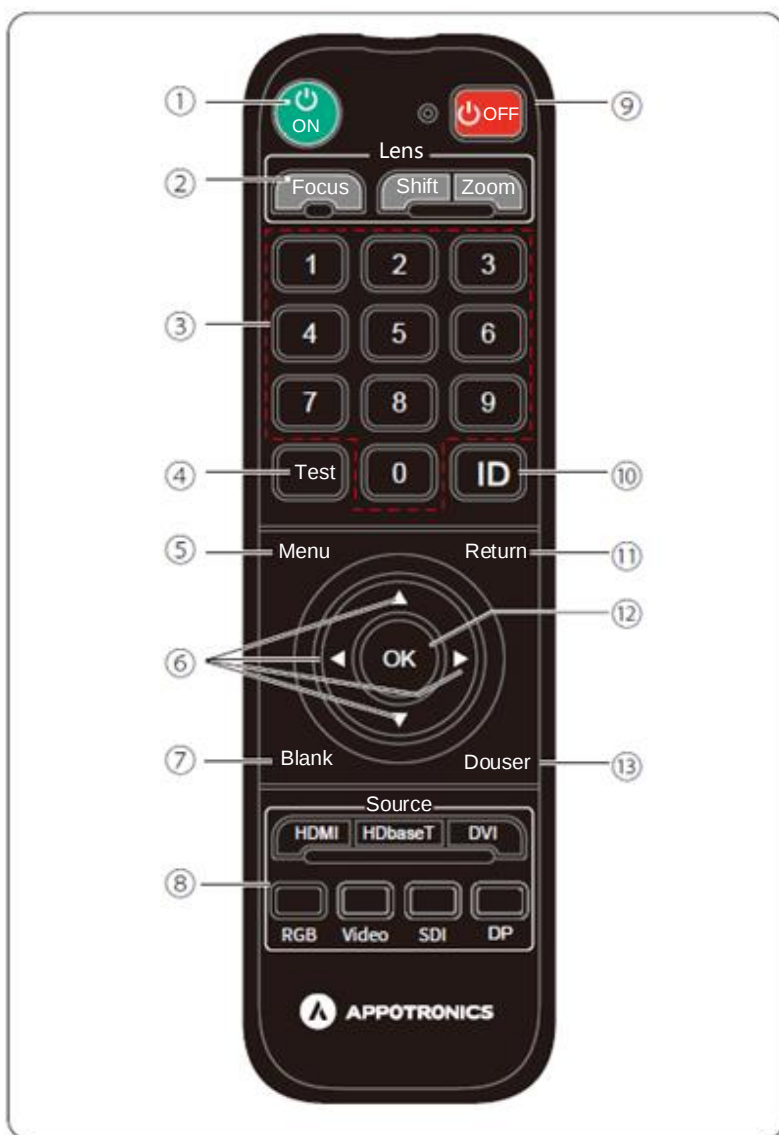
Schematic Diagram of Air Duct Orientation

Caution

- The maximum heat dissipation and exhaust air volume of the projector is 200CFM. If it is necessary to install a fan around the projector, please refer to the schematic diagram of air duct orientation above for the installation position of the fan. The fan shall be installed on the side of air inlet direction.

Overview

Remote Control



Overview

Remote Control

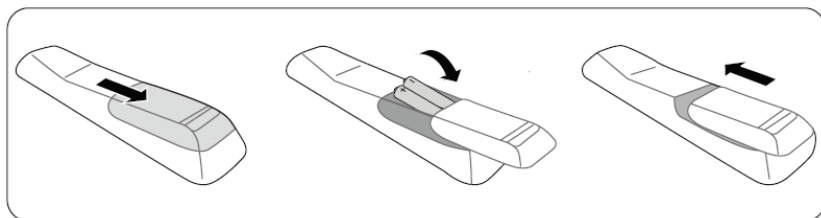
- ① ON
Press once to power on when the projector is in standby mode;
 - ② Lens
Press the corresponding key to enter the Lens Focus, Shift and Zoom Menu.
 - Focus: adjusts the lens focus settings.
 - Shift: adjusts the lens movement settings.
 - Zoom: adjusts the size settings of the lens projection image.

* Focus and zoom buttons are not available for manual lenses.
 - ③ 1/2/3/4/5/6/7/8/9/0 (number keys)
 - Input password.
 - Enter the number of network settings in the configuration menu with this button.
 - ④ Test
Displays the test pattern.
 - ⑤ Menu
Displays and closes the configuration menu.
 - ⑥ ▲▼◀▶ (Arrow keys)
When the configuration menu is displayed, press these buttons to select menu items and settings.
 - ⑦ Blank
Switches the image to blank screen mode.
 - ⑧ Input-source short-cut keys: switch to the signal image of each input port.
 - One key corresponds to one signal channel.
 - The corresponding button does not work for ports that are not available in the project.
 - ⑨ OFF
Press OFF to show the shutdown prompt when the projector is on, and press the OFF button again to shut down the computer normally.
 - ⑩ ID
ID setup key is for entering or exiting the Remote ID setup screen.
Projection ID setting:
Menu → Installation → Projection ID, only if the projection ID and the remote control ID are the same or the remote control ID is 0, then the remote control can control the projector.
 - ⑪ Return
Press this button to end a function currently being used.
 - Press this button to go to the previous menu while the configuration menu is displayed.
 - ⑫ OK
Press this button to accept and enter the current selection and go to the next level while the configuration menu is displayed.
 - ⑬ Douser
Turns the display screen on or off.
-  **Caution**
- The operating angle of the remote control is within $\pm 30^\circ$.

Overview

Replacing the Battery of the Remote Control

- ♦ To open the battery cover, turn the remote control with the back facing up, and pull the battery cover as indicated by the arrowhead in the figure to remove the battery cover.
- ♦ Remove the old battery (if necessary) and install two new AAA alkaline dry batteries at the bottom of the battery compartment according to the polarity instructions. The anode of the battery should face towards the (+) direction, and the cathode should face towards the (-) direction.
- ♦ Reattach the battery cover as indicated by the arrowhead in the figure.



Caution

- Do not place the remote control and battery in high-temperature and high-humidity environments such as kitchens, bathrooms, saunas, solariums or closed cars.
- Use only the same or similar battery recommended for the remote control.
- Deal with old and waste batteries according to the manufacturer's instructions and local environmental regulations.
- Do not throw the battery into the fire, since there may be a risk of explosion.
- If the battery is exhausted or the remote control is not used for a long period of time, take out the battery to avoid damage to the remote control due to liquid leakage.

Installation

Lens Options

Appotronics' D-series has the following three lens options, with the aspect ratio as below:

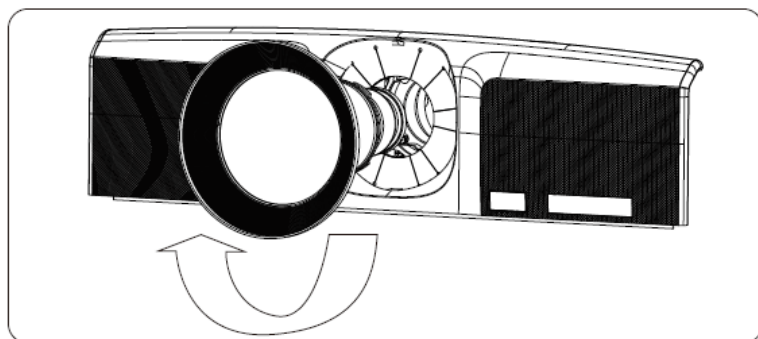
I: 0.62: 1

II: 0.80: 1

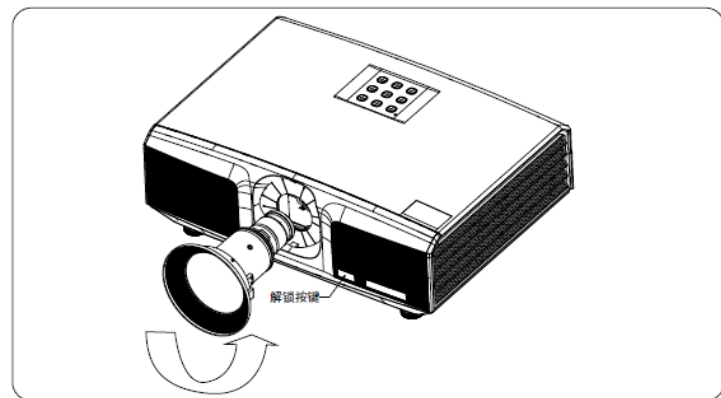
III: 1.23~1.97:1

The lenses are packaged separately at the factory and should be assembled by the customer. Please refer to the following steps for the assembly method:

(Note: When the projector is carried over long distances, please remove the lens first.)



Insert the lens into the mounting position and rotate clockwise until the lens is fully seated.



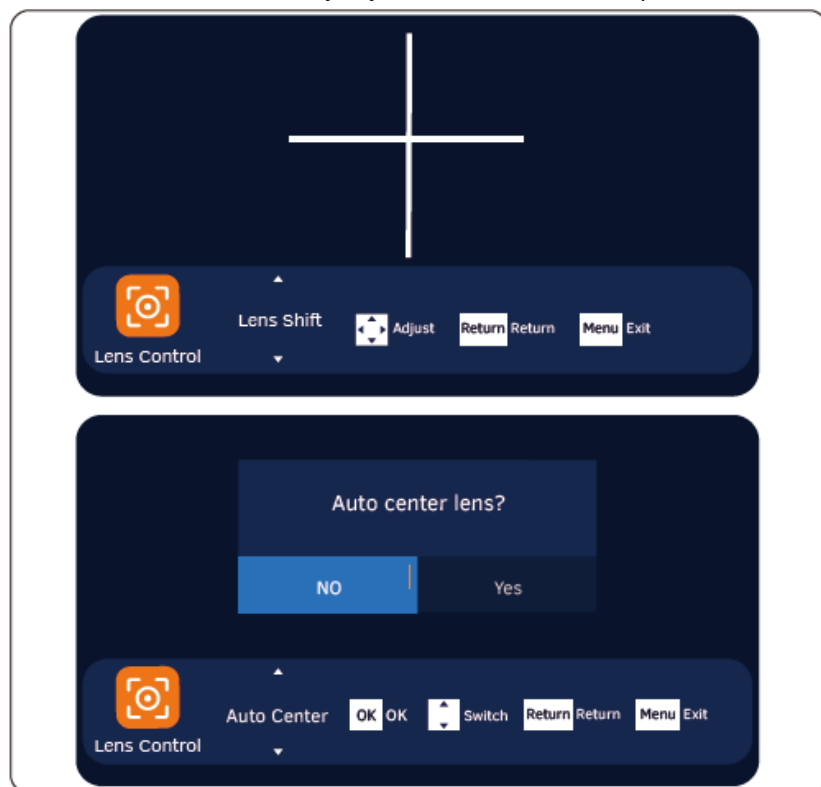
To remove the lens: press the unlock button while rotating counterclockwise to remove the lens outward.

Installation

Lens Control

Lens Control: Lens Shift & Auto Center

- **Lens Shift:** The projector can be adjusted for Lens Shift and Auto Center to adjust the position of the projected image according to the actual situation;
Adjust: Press [Shift] on the remote control and press OK to enter the lens adjustment menu. Press ▲▼◀▶ arrow keys to adjust the position of the projected image according to the actual situation;
- **Auto Center:** Press [Menu] on the remote control → [Installation] → [Lens Adjustment] → the prompt "Auto center lens?" pops up, then select [Yes] to make the lens automatically adjusted to be in the center position.



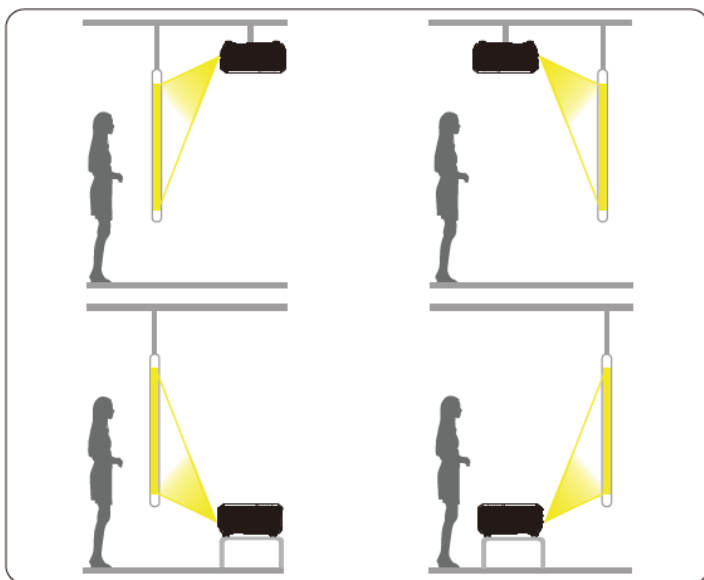
Caution

- The focus and zoom functions are disabled for manual lenses.

Installation

Projection Modes

The projector supports four projection modes. Please install the projector according to the installation position. Shut down the projector before changing the projection mode and then start up the projector after changing the projection mode. The projection mode can be preset to desktop-mounted front projection. You can also select another projection mode from the menu: Menu-Settings-Installation Methods (ceiling rear/ceiling front/desk rear/desk front).



- Special installation methods are required when mounting the projector from a wall or ceiling. If it is not installed correctly, it may fall and cause accidents and injuries.
- If adhesive is used at the wall or ceiling mounting points to prevent screws from loosening, or if lubricant or other oil is used on the projector, the projector housing may break, causing the projector to fall. This could cause serious injury to a person standing under the hanger, and the projector could be damaged. When installing or adjusting the hanger, do not use adhesives to prevent the screws from loosening, or lubricants or other oils.
- Do not cover the air inlet or exhaust port of the projector. Covering one of the air vents may cause the internal temperature to rise and shutdown may occur.
- To ensure the performance and safety of the projector, the installation of the mounting bracket must be performed by a qualified technician.

Installation

Adjusting the Projected Image

■ Adjusting the position of the projector

When determining where to place the projector, please consider the size and shape of the screen, the location of the electrical outlet, and the distance between the projector and other equipment. Here are some basic principles:

- ◆ Place the projector on a flat surface and at the correct angle to the screen.
- ◆ Place the projector in an appropriate position away from the screen.
- ◆ The distance from the projector lens to the screen, the zoom setting and the video format determine the size of the projected image.

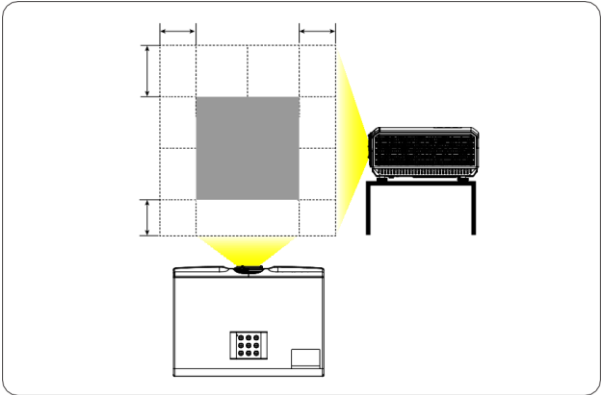
For the image offset (shift) range of this projector, see the table below:

Category	Resolution	AL-DL055FR	AL-DL062FR	AL-080FR	AL-DL120MA
Lens Vertical Shift	1080P	±100%	±60%	±90%	±110%
	WUXGA		±34%	±80%	
Lens Horizontal Shift	1080P	±40%	±20%	±40%	±40%
	WUXGA		±14%		
Note: Lens shift is calculated in half frame, half frame = 100%.					

 Caution

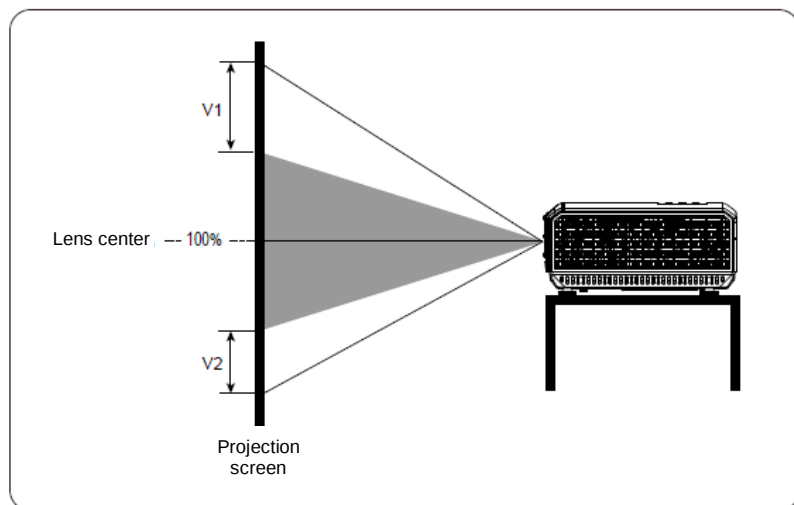
- The values in the above table are approximate and may differ slightly from the actual values.

Diagram of the horizontal/vertical shift of the image when the lens is centered (taking the WUXGA model as an example):

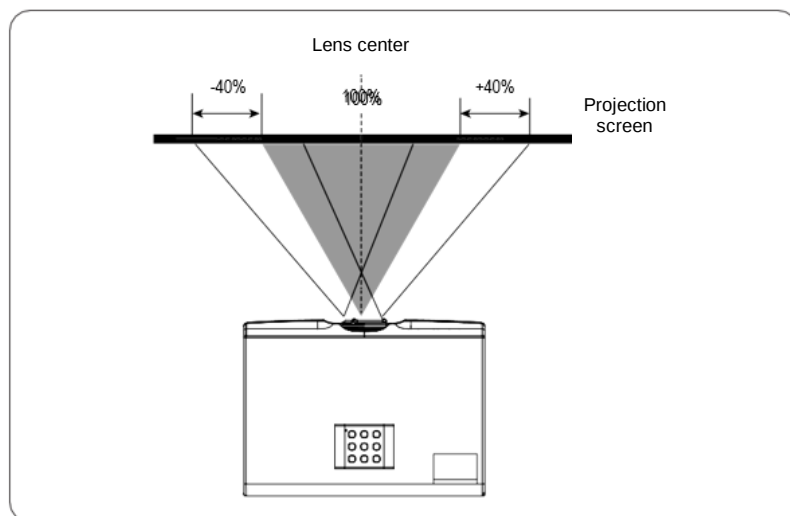


Installation

Schematic of the vertical shift of the image when the lens is centered.
Please refer to the table above for the vertical offset range (V1/V2) of the image when the lens is centered on each model.



Schematic of the horizontal shift of the image when the lens is centered.



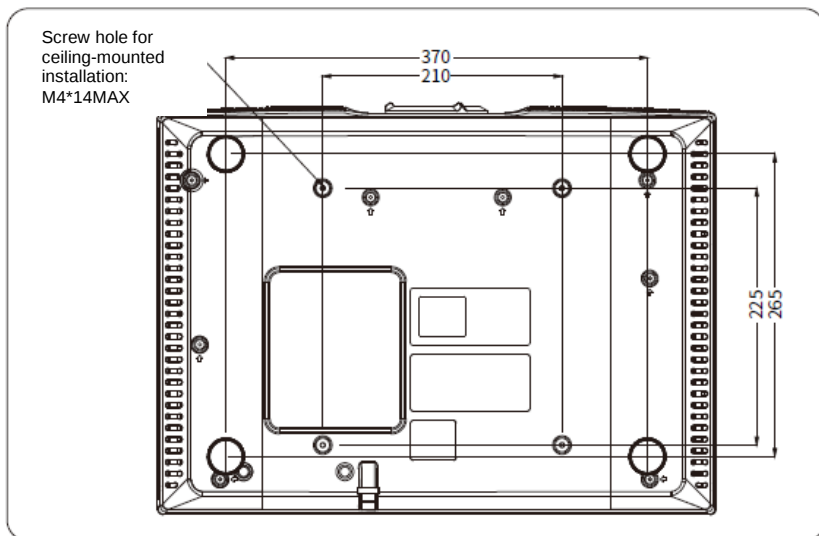
Installation

Ceiling-mounted Installation

Please ensure that the screws used to fix the mounting bracket to the projector meet the following specifications:

Screw: It is recommended to use M4*14 size screws.

Assembly dimensions: See the figure below.



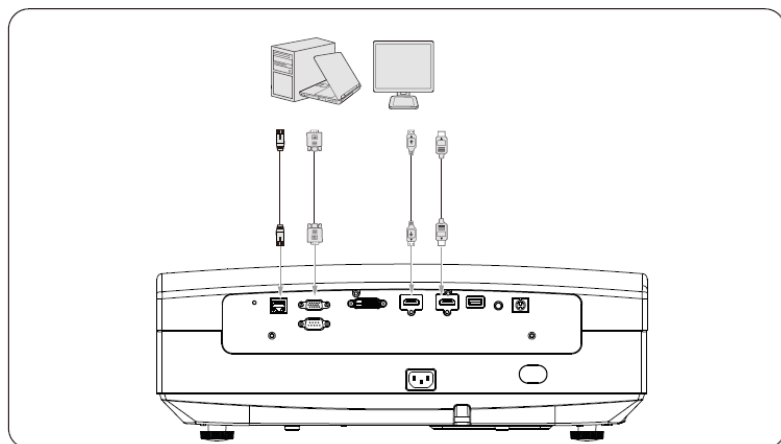
- Damage caused by incorrect installation will invalidate the warranty.

Connecting Devices

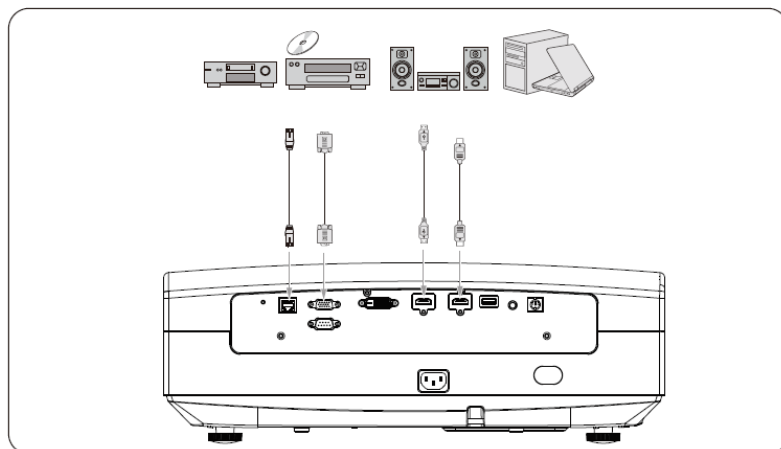
When connecting a signal source to the projector, be sure to:

- ◆ □ Turn off all equipment before making any connections.
- ◆ □ Use the correct signal cable for each signal source.
- ◆ □ Make sure the power cable is securely plugged in.

Connecting a Computer or Laptop



Connecting Audio and Video Devices



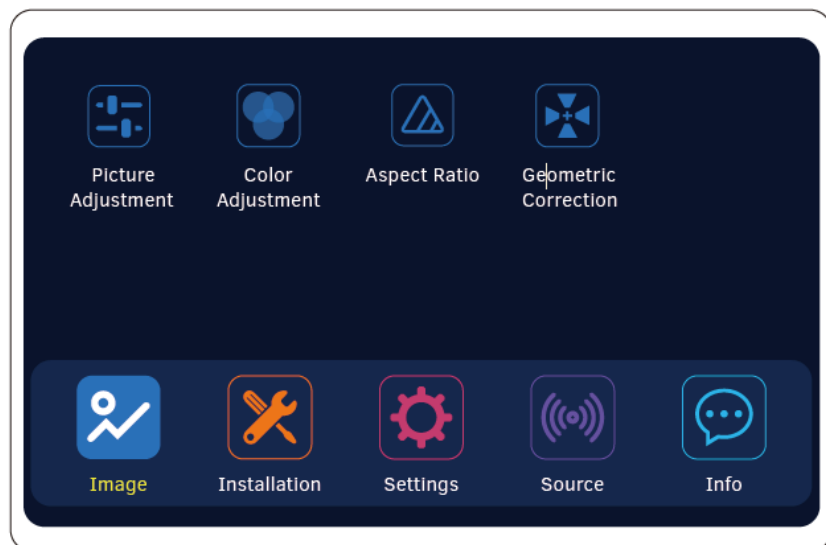
Operation

Turning on the Projector

- ♦ Plug the power cable into the projector and the wall outlet. Turn on the wall outlet switch (if any) and check if the power indicator on the projector lights red after powering up.
- ♦ Press the power button on the projector or remote control to start the projector. When the projector is turned on, the indicator light will always be green. If necessary, rotate the focus ring to adjust the image sharpness.
- ♦ If this is the first time to start the projector, please select the menu language as indicated on the screen.
- ♦ Then, the projector starts searching for input signals. The user can also press the source button on the projector or remote control to select the input signal as needed.

Menu Overview

The following figure shows the first level menu of the system, which is divided into five categories: [Image] [Installation] [Settings] [Source] [Info]. The cursor can be moved between the five items. Select one of them and press [OK] key to enter the sub-menu:

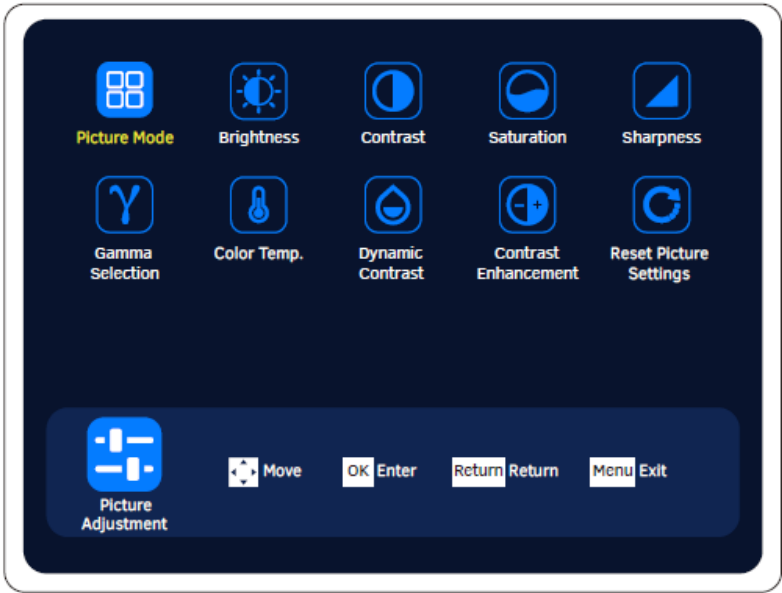


Operation

Image

Picture Adjustment

Select [Image] from the main menu, and then select [Picture Mode] in [Picture Adjustment]. It is easy to obtain the best image quality by simply selecting the setting that best matches the environment. The projected image changes according to the selected mode.



Picture Adjustment Menu	
Function	Description
Picture Mode	Standard, Cinema, REC709, DICOM, Low Latency Mode, Custom
Brightness	Adjusts the overall brightness of the digital image.
Contrast	Adjusts the digital image to make the bright places brighter and the dark places darker.
Saturation	Regulates the intensity or purity of a color
Sharpness	Adjusts the detail of an image's edges or lines
Gamma	Adjusts the image input and output luminance response curves
Color Temp.	Adjusts the color temperature of the image to get the display effect needed.
Dynamic Contrast	Equalizes the image brightness and dynamically adjust the laser current value.
Contrast Enhancement	Obtains higher contrast projected images
Reset Picture Settings	Resets all picture adjustments below to default

Operation

Image

■ Color Adjustment

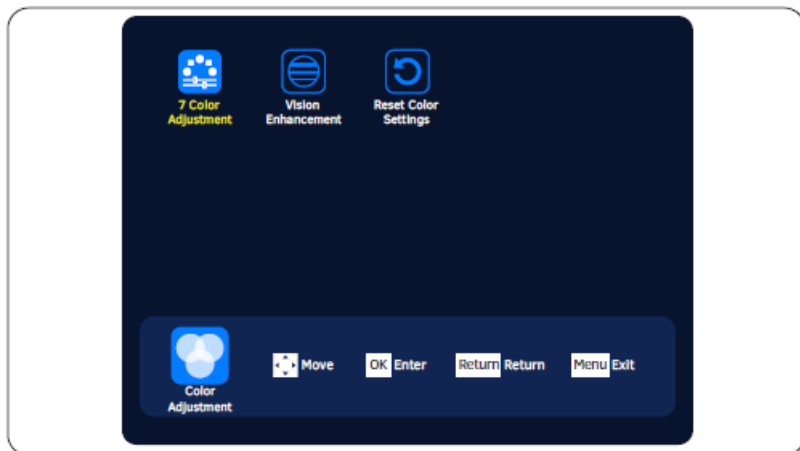
7 Color Adjustment: The user can adjust the hue (tone), saturation (vividness) and brightness of the following six axes according to their preference: R (Red), G (Green), B (Blue), C (Cyan), M (Magenta), Y (Yellow) and W (White).

Press the [Image] button during projection and select [7 Color Adjustment] from the [Color Adjustment] menu to set.

Vision Enhancement: They are user-defined values, the corresponding tonal values for the 6 items of gain (Red, Green, Blue, Cyan, Magenta, Yellow) adjusted in the 7-Color Adjustment.

Press the [Image] button during projection and select [Vision Enhancement] from the [Color Adjustment] menu to set.

Reset Color Settings: Supports to reset the projector image to the default value. The user can choose whether to restore the image to the default state or not as needed.



Press [OK] key to adjust the corresponding value in the above modes. Press ◀▶ keys to plus or minus the values, or the user can switch to the selection mode (press ▲▼◀▶ keys to select the values).

	Red	Green	Blue	Cyan	Magenta	Yellow	White
Saturation	100	199	199	100	0	55	Red 0
Hue	-99	55	99	0	-99	55	Green 55
Gain	◀ 55 ▶	55	199	100	0	55	Blue 199

 Vision Enhancement	◀ Default ▶	Red	100	Cyan	100
		Green	100	Magenta	100
		Blue	100	Yellow	100

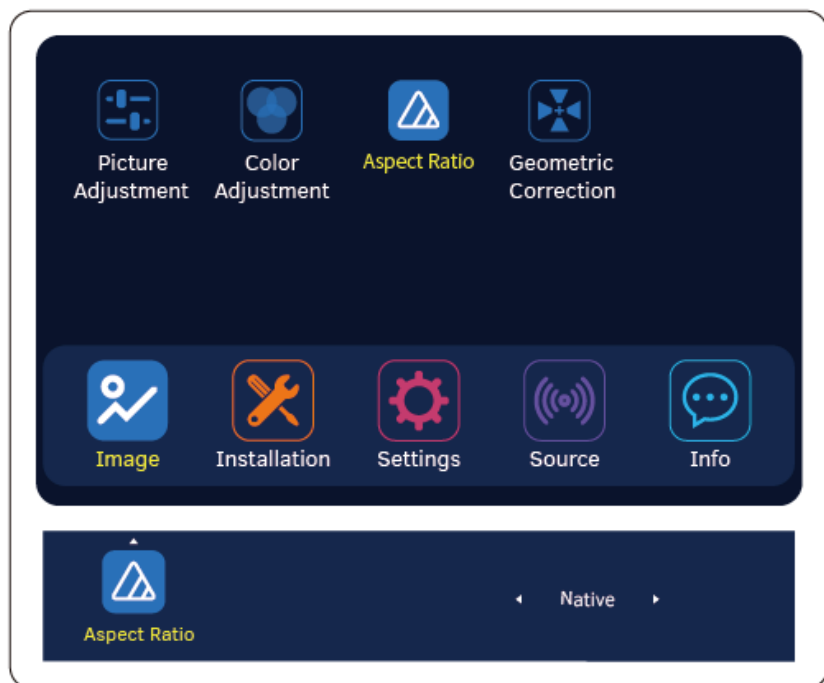
Operation

Image

■ Aspect Ratio

The user can change the aspect ratio of the projected image to match the input signal's type, height & width scales, and resolution.

Go to the main menu and select [Screen Ratio] in the [Image] menu, the screen ratio can be changed by switching with the ◀▶ keys to find the appropriate aspect ratio for the projected image.



Perform Mode	Note
Full	Projection at the size of the input source image.
Native	Display at an aspect ratio of 16:10 in full screen
16:9	Projection at an aspect ratio of 16:9.
16:6	Projection at an aspect ratio of 16:6.
4:3	Projection at an aspect ratio of 4:3.

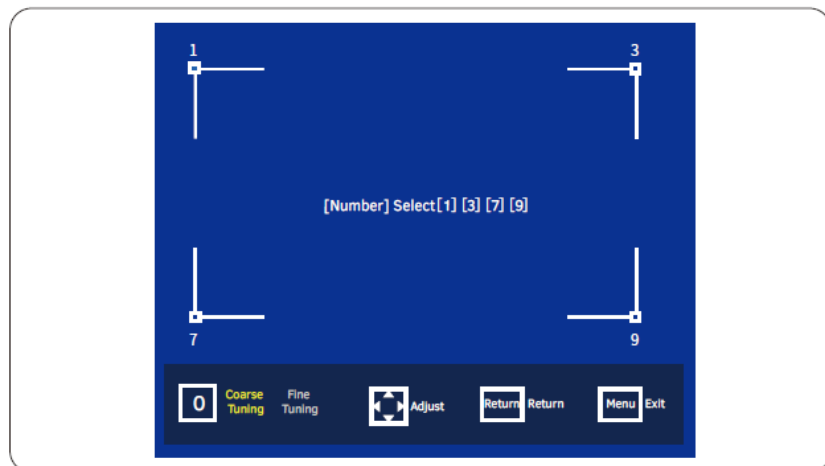
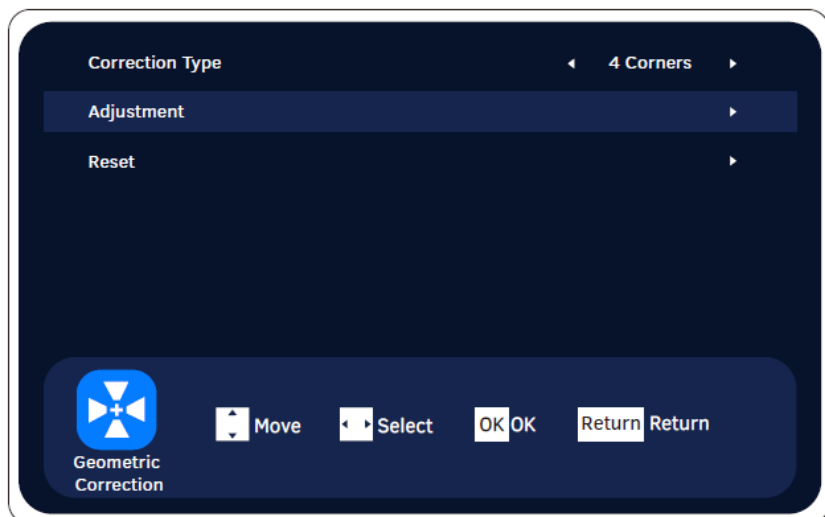
Operation

Image

■ Geometric Correction

When the display area needs to be controlled inside a specific screen, geometric correction function is required. Geometric correction is divided into 4 Corners and Keystone for the user to choose.

Select [Aspect Ratio] from [Image] of the main menu to enter [Geometric Correction], and then turn on this function.



Operation

Settings



Settings Menu	
Function	Description
Power Settings	Standby Settings, Auto Standby, Power on Settings, High Altitude Mode
Network Settings	LAN, 4G Settings
Serial Settings	Baud Rate: 115200 (default)/9600
Menu Settings	Language, Source Prompt, No Signal Prompt, Menu Display Time
Operating Mode	Standard, Eco1, Eco2, Custom
Reset System Settings	It supports data reset to factory defaults, and the user can choose whether to restore it to the default state or not.

Operation

Settings

■ Network Settings

The user can control the projector through the wired network. First, connect the projector's RJ45 network port via a network cable to the network, configure the projector's network setting information, then the user can control the projector via network.

- ◆ Select [Network Settings] in the [Settings] menu to enter and configure the IP address of the projector.
- ◆ The Settings menu also allows you to choose to set the IP address manually or get the IP address automatically.
- ◆ The Network Types include: LAN, 4G Settings



- ◆ Specific operation steps for manual setting:

IP address: In the case of manual setting, press the left/right buttons to shift to the IP that needs to be set, and increase or decrease the value with the up/down keys, or enter the desired IP address directly with the numeric keys on the remote control.

- ① Subnet Mask: Same as IP address setting. Move left/right directly to the value to be adjusted, and add or subtract the value with the up/down keys, or input the desired value directly with the numeric keys of the remote control.
- ② Default Gateway: Configured as above.
- ③ Application: After configuring the IP address, move the cursor (left/right keys) to the application button. Once confirmed, the configured IP address will be used to execute the application.

Operation

Settings

■ Menu Settings

◆ Language:

Select [Language] in [Menu Settings], press the confirmation key to enter the [Language] menu, and press the ◀▶ keys to select the language as needed.

◆ Source Prompt:

Display (On)/ No Display (Off), the signal source name is displayed at the upper left corner of the screen.

◆ No Signal Prompt:

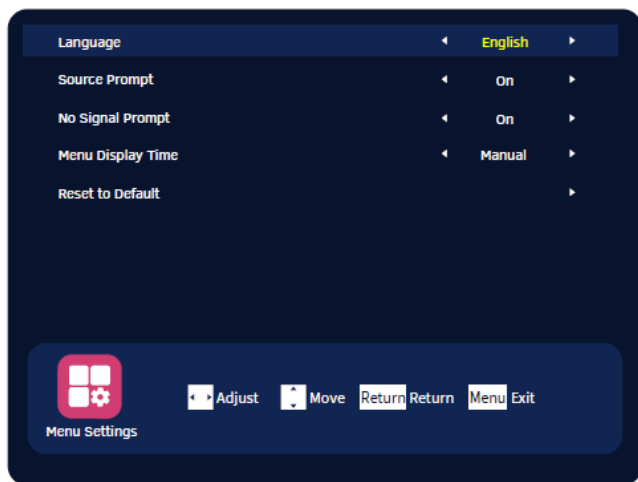
When there is no signal input, no matter the setting is display (On)/ no display (Off), there is no signal menu in the middle of the screen.

◆ The menu exits automatically:

Within the set time, in the case of no signal, no operation (remote control, network valid command, serial port valid command...), the remaining 60s will start to indicate that it is about to enter the standby mode, and count down the time. The countdown can be interrupted by any operation in the middle of the countdown.

◆ Reset to Default:

The user can choose whether to revert to the default state or not as needed.

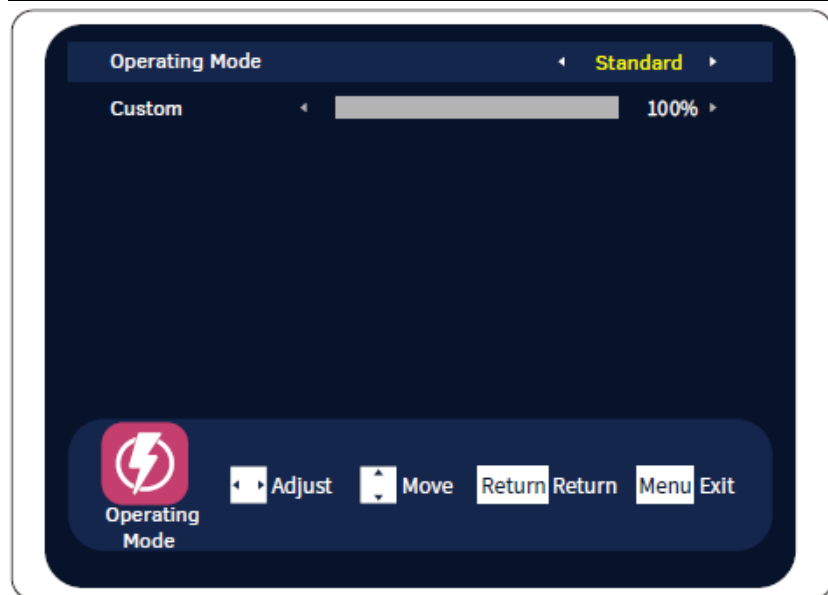


Operation

Settings

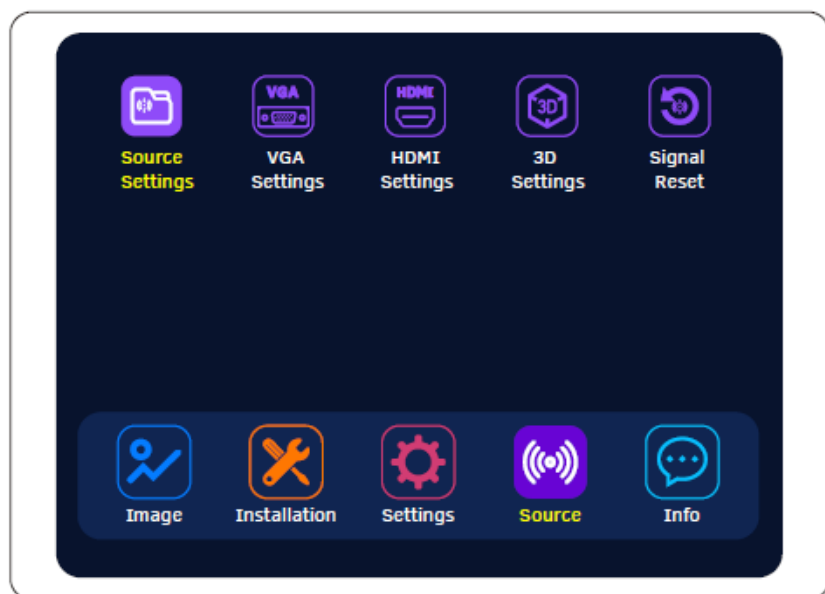
- Operating Mode
- ◆ Set the Operation Mode to change the brightness of the projector.
During projection, go to [Settings] to select [Operating Mode] from the menu to set, and press ◀▶ keys to adjust the mode. The user can also customize the brightness.

Operating Mode	Adjustment Setting
Standard	100%
Eco1	50%
Eco2	30%
Custom	30% ~ 100% adjustable



Operation

Source



Source Menu	
Function	Description
Signal Settings	Signal channel settings
VGA Settings	VGA signal settings
HDMI Settings	HDMI signal settings
3D Settings	3D format settings
Signal Reset	Reset all signal settings to defaults

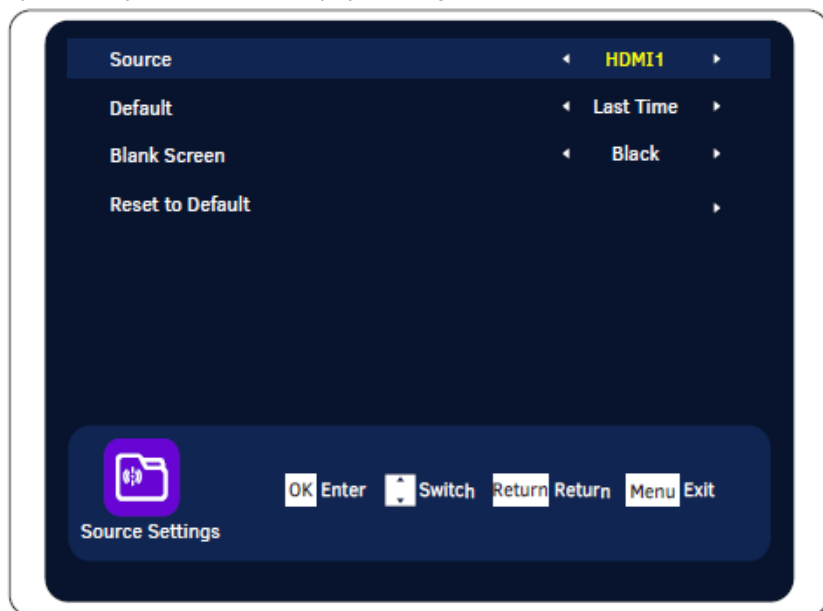
Operation

Source

■ Source Settings

Selecting the input signal and changing the projected image

Press Menu on the remote control or the control panel, select [Source], go to [Source Settings], select the source (HDMI1, HDMI2, VGA, DVI), and the projector will detect the input source you selected and display the image.



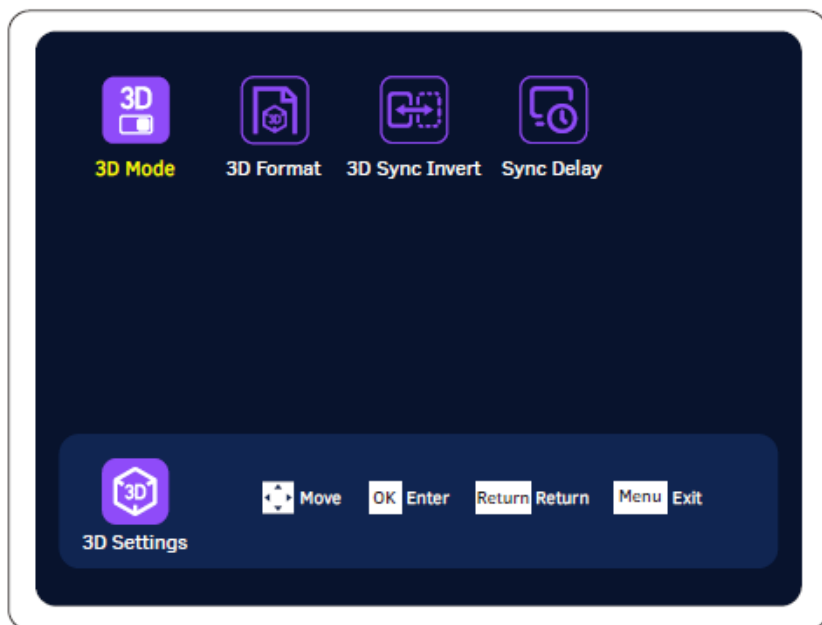
Operation

Source

■ 3D Mode

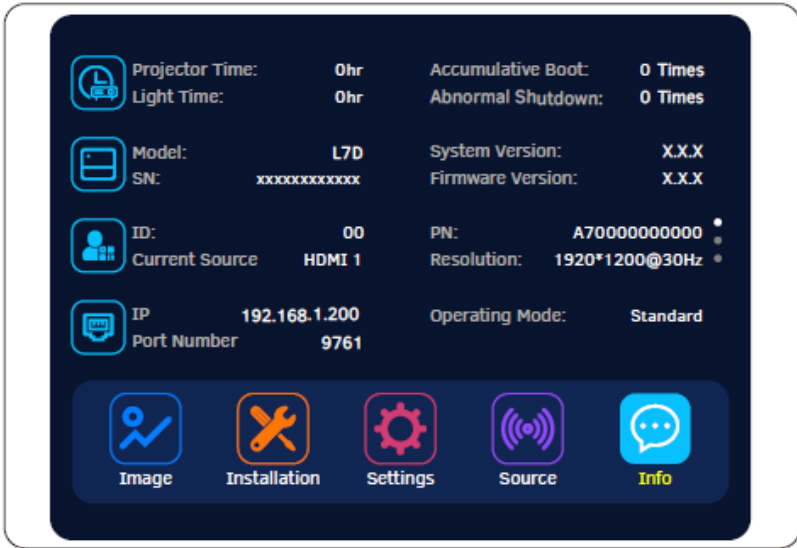
During projection, go to [Source] menu, select [3D Settings] to enter 3D Mode to set, and press ◀▶ keys to select the preferred mode.

Mode	Settings
3D Mode	Off (default)/ IR/DLP Link
3D Format	Left/Right (default)/Up/Down/Frame Sequence/Frame Encapsulation (Blu-ray)
3D Sync Invert	Normal(default)/ Inversion
Sync Delay	Adjusts the delay between the start of each pair of inverted frames and the display of the images



Operation

Info

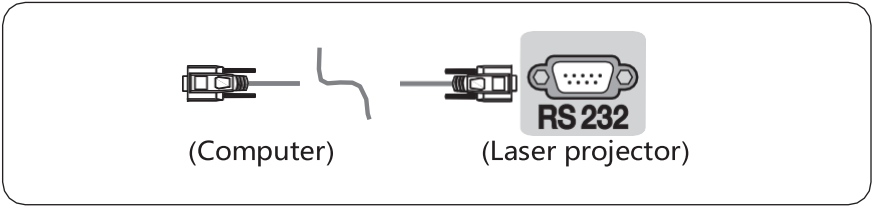


Info Function	Info Description
Projector Time	Displays the user's projector usage time
Light Time	Displays the user's light source usage time
Accumulated Boot	Projector boot times
Abnormal Shutdown	Abnormal shutdown times
Model	Projector Model
SN	Projector serial number
System Version	Hardware system version
Firmware Version	Software version
ID	Projector ID
Current Source	Displays the current source channel used
PN	Projector PN
Resolution	Displays the resolution information of the current signal
Port Number	Network port number
IP Address	Displays the wireless network connection status
Operating Mode	Standard, ECO1, ECO2, Custom

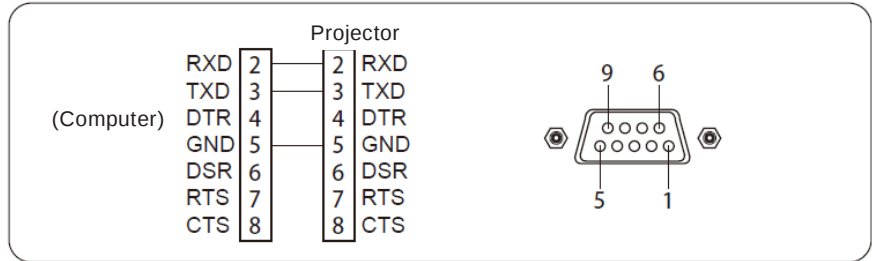
Serial Port

Serial port

The interface board of the projector provides a RS232 serial port and a LAN cable port, through which you can control the projector on the external central control device.



RS232 connection diagram



* Jack 1 and Jack 9 are not connected.

Communication equipment

Communication Settings	
Communication type	Consistent with menu settings
Baud rate	115200
Parity bit	NONE
Data bit	8-bit
Stop bit	1-bit

Maintenance

Projector Maintenance

The projector needs to be maintained. You need to regularly maintain the projector to keep the lens clean.

After cleaning the projector lens or case, do not turn on the projector for use until the surface water is completely.

Do not disassemble any parts of the projector. To replace with other parts, please contact the dealer.

■ Cleaning the Lens

You can clean the lens when you find that the lens surface is stained or dusty.

- ◆ Remove dust with a compressed air tank.
- ◆ If there is dust or stain, gently wipe the lens surface with lens tissue or wet soft cloth with some detergent.



- Do not rub the lens with abrasive materials.

■ Cleaning the Projector Enclosure

- ◆ To remove dirt or dust, please wipe the enclosure with a soft, lint-free cloth.
- ◆ To remove strong dirt or spots, wet the soft cloth with water and neutral pH detergent, and then wipe the enclosure.



- Do not use wax, alcohol, benzene, thinner, or other chemical cleaners as these substances can damage the enclosure.

■ Projector Storage

If you need to store the projector for a long period of time, follow the instructions below:

- ◆ Ensure that the temperature and humidity of the storage area are within the recommended range for the projector.
- ◆ Retract the adjustment feet.
- ◆ Remove the battery from the remote control.
- ◆ Use the projector's original packaging or equivalent material to package the projector.

■ Projector Transportation

It is recommended to use the original packaging or equivalent material when transporting the projector.

Troubleshooting

■ The projector fails to power on

Causes	Solutions
The power cable is not energized.	Insert one end of the power cable to the AC port on the projector, and insert the other end to the electrical outlet. If the electrical outlet has a switch, ensure that the switch is turned on.

■ No image

Causes	Solutions
The video signal source is not enabled or is incorrectly connected.	Enable the video signal source and check whether the signal cable is properly connected.
The projector and the input signal device are not properly connected.	Check the connection.
The input signal is not correctly selected.	Select the correct input signal source using the signal source key on the projector or remote control.

■ Blurred image

Causes	Solutions
The projector does not accurately align with the screen.	Adjust the projection angle and direction. If necessary, adjust the projector's height or distance.

■ Image Distortion

Causes	Solutions
The screen is not smooth.	Professional screens such as whiteboards are recommended.

■ Remote control failure

Causes	Solutions
The battery level is low.	Replace the battery.
There are obstacles between the remote control and the projector.	Move the obstacles.
It is too far away from the projector.	The distance to the projector should be no more than 5 m (16 inches).

Troubleshooting

Indicator Light

Display	Status	Number of flashing lights (+ means the interval)	Type of fault
	Flashing	2+6	High ambient temperature
	Flashing	2+9	High DMD temperature
	Flashing	2+8	High color wheel temperature
	Flashing	2+5	Laser 1 temperature is too high
	Flashing	2+5	Laser 2 temperature is too high
	Flashing	3+3	Thermal logic - current reduced to zero
	Flashing	4+1	DLP FLASH check failed
	Flashing	4+2	DLP memory initialization failed
	Flashing	4+3	DLP kernel initialization failed
	Flashing	4+4	DLP memory pool initialization failed
	Flashing	4+5	DLP main task initialization failed
	Flashing	4+6	DDP check failed
	Flashing	4+7	DLP Color Wheel Timing Failure
	Flashing	4+8	DLP module initialization failure
	Flashing	4+9	DLP module initialization failure
	Flashing	5+1	DLP Color Wheel Timing Failure
	Flashing	5+3	DLP module initialization failure
	Flashing	5+4	DLP module initialization failure
	Flashing	5+5	DLP module initialization failed
	Flashing	5+6	DLP module initialization failed
	Flashing	5+7	DLP module initialization failed
	Flashing	6+4	DLP EEPROM read failure
	Flashing	5+2	DLP color wheel speed is too low
	Flashing	6+8	DLP system operation failure
	Flashing	5+8	DLP Segment Error
	Flashing	5+9	DLP pre-addr abnormality
	Flashing	6+1	DLP invalid pointer abnormality



Caution

- Red light flashes for 0.5s/time (0.5s on/0.5s off), with an interval of 2s;
- The number of red flashing light + the number of red flashing light after the interval = fault type;
- Fault code sequence is cyclic display, every 5s cyclic display.



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