Ultra-short Focus Laser Projector

User Manual

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

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Repair
Under normal use and storage conditions, Apptronics Corporation 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 the product is found to be defective during the warranty period, the sole obligation of Apptronics Corporation and the exclusive remedy are to replace any defective parts (including labor service). When you find the product is defective, 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. In particular, the ambient humidity must be between 10% and 90%, the temperature is between 0ºC and 40ºC, and the altitude is below 2000 meters. Do not operate the projector in a dusty environment.
For additional information, please visit www.apptronics.com.

This mark 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 for 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 problems.
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Important Safety Instructions

General Safety Instructions

- Please read this manual carefully before using this equipment and keep it for future reference.
- The device shall be installed, operated and maintained by a qualified professional authorized by the company.
- All warnings listed on this projector and listed in this manual should be observed.
- Strictly observe all instructions on operations and usage.
- Strictly observe all local installation standards.

Security Tips

This device complies with international safety standards IEC60950-1, EN60950-1, UL60950-1, CAN/CSA C22.2 No.60950-1 and domestic safety standards GB4943.1. These standards are safety standards for information technology equipment that are subject to stringent requirements for the use of critical safety components, components, materials and insulators in order to protect the user and operator from the following hazards:
- Electric shock
- Energy-related hazards
- Fire
- Heat-related hazards
- Mechanical hazards
- Radiation
- Chemical hazards

In addition, these standards also raise limitations in many ways, such as internal and external temperature rise levels, radiation levels, mechanical stability and intensity, peripheral construction and fire protection devices. Even if the normal operation of the equipment fails, the single-point fault simulation test can also ensure that the device can use the fuse, thermal circuit breakers, overcurrent protection devices and similar devices to provide adequate protection of the human body.

This manual is for authorized users only for professional purposes and these persons should be familiar with the potential hazards that may arise from this product. Only qualified maintenance personnel who are familiar with such hazards can open the product shell to perform maintenance operations.

FCC Statement

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This product is not a general customer product and is limited to operate in a specific scene.
Important Safety Instructions

Terms:
• Maintenance personnel:
  Refer to the professional personnel who may use the training and skills to avoid possible harms to
  themselves or others when they are in the maintenance contact area or the device in the restricted
  contact area has obvious dangers.
• Users:
  Refer to all persons except maintenance personnel.
• Restricted access area:
  Only a maintenance person can enter the restricted access area or only if the user is aware of the reasons
  for restricting access to the area and has taken preventive measures. It refers to an area where an
  operator must use a specific tool, lock, or key or take other safety measures to access; in addition, the
  access to this area is controlled by the specified agency.

Safety Precautions

■ 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. Do not ignore the role of grounding.
• 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 can 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.
Important Safety Instructions

- 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 you need to turn off the projector to access internal parts, you 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: High intensity light. Do not look into the lens! High-brightness light will cause damage to the eyes.
  - Warning: This projector uses a high-brightness laser light source. Do not try to look directly at the lens or laser light source.
  - Do not observe the end of the laser beam while the device is running. Laser radiation is harmful to the human eye and may cause injury.
  - Invisible infrared LEDs radiation may be emitted from disconnected optical fibers or connectors. Do not look directly at the beam or look straight to the optical instruments.
  - The laser has high density energy. These may be dangerous for skin tissue and may cause electrical, and chemical and non-ionizing radiation hazards.
  - This is a Class A product, which may cause radio interference in a living environment. In such conditions, you may require the user to take practical measures to interfere with.

- 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.
  - Keep the original shipping box and packing material. You can use it again when you need 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 device, 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, use a soft cloth instead of a damp cloth, cleanser 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.
## Important Safety Instructions

### 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. Do not use water to 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 10 cm (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 attached to walls or other similar surfaces to prevent clogging of these slots. 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.
  - Liquid is splashed into the equipment.
  - Equipment is in the rain or taking in water.
  - If the device is not operating 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 damage.
  - The device falls to the ground or the case is damaged.
  - If the equipment performance has changed significantly, ask the service 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 is repaired, request the service technician to perform a safety check to ensure that the device has returned to the normal operation state.
Important Safety Instructions

WEEE Directive

<Waste Electrical and Electronic Product Recycling Management Regulations>
Send the product to the local qualified recycling units when it is discarded.

<Waste battery>
This product contains the battery. Send the product to the local qualified recycling units when it is discarded.

RoHS

According to the "electronic information products pollution control management approach", for controlling and reducing the electronic information products that may cause environmental pollution after discard, promote the production and sales of low-pollution electronic information products, to protect environment and human health. The harmful substances that may be contained in this product are as follows:

<table>
<thead>
<tr>
<th>Parts Name</th>
<th>Pb</th>
<th>Hg</th>
<th>Cd</th>
<th>Hexavalent chromium Cr (VI)</th>
<th>Polybrominated biphenyls PBB</th>
<th>Polybrominated diphenyl ethers PBDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power cord</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Internal power supply</td>
<td>×</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Plastic enclosure</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Light source assembly</td>
<td>×</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Lens assembly</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Optical receiver/transmitter assembly</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Fan assembly</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Speaker</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Antenna assembly</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>PCB assembly</td>
<td>×</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Other metal pieces</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Remote control</td>
<td>×</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

This form is prepared in accordance with IEC62321.
○: Indicates that the content of the hazardous substance in all homogeneous materials of the part is below the limit specified in IEC62321.
×: Indicates that the content of the hazardous substance in at least one of the homogeneous materials of the part exceeds the limit specified in IEC62321.
Note: Partial components marked with × contains more harmful substances due to limited industry technology level and are temporarily unable to achieve the replacement or reduction.

Caution

The projector products comply with the EU RoHS directive (restrictions on the use of certain hazardous substances directive in electrical and electronic equipment). All parts marked with × are exception parts permitted by EU RoHS instructions.
Overview

About This Manual

Repair: Only trained and qualified service technicians (understand laser safety, UV radiation, high voltage and connected circuits that create all the potential hazards) can open the projector for repair.

Disclaimer: Appotronics Corporation has 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 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 to obtain the latest version.

Safety Warnings and Guides

- **Labels and Tags**
  Observe and follow all warnings and instructions marked on the projector.

  - **Danger** Indicates a dangerous condition that, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme case.
  - **Warning** Indicates a dangerous condition that, if not avoided, could result in death or serious injury.
  - **Caution** Indicates a risk condition that, if not avoided, may result in minor or moderate injury.

Caution! is used to indicate a situation that is not related to personal injury.

- **General Warning Information**

  - **Warning** Failure to observe the following safety instructions may cause damage to eyes and skin.
  - **Warning** Never look directly at the projector lens or laser output. Extreme-high brightness may cause permanent eye damage. To avoid UV radiation, keep the housing complete when working with the projector. Use protective safety equipment and wear goggles during maintenance.
  - **Warning** When the laser is on, do not open the protective enclosure.
  - **Warning** Reflective objects in the laser beam are not allowed.
Overview

Projector Features

Thank you for purchasing Appotronics Corporation projector. This product is a laser ultra-short focus projector and adopts ultra-short focus lens and new-generation laser light source technology. The brightness of 3200 lumens, 3600 lumens, and 4200 lumens as well as the ultra-long laser light source lifetime make the projector keep highlight throughout the lifetime. The ultra-short focus technology avoids the radiation on the human body and can completely solve the interference by the shadow to the screen. It uses advanced laser fluorescence display technology, which achieves a great breakthrough on color performance. The color gamut range is beyond the REC.709 standard color gamut. In addition, features such as noise lower than 30 dB, centered lens design, interface layout on the back of the projector, provide a user-friendly experience.

The projector has the following major features:
- Adopt the long-lifetime laser light source;
- Adopt the TI XGA DLP (1024*768), WXGA DLP (1280*800), and 1080P DLP (1920*1080) display technologies;
- Adopt the ultra-short focus lens;
- Perfectly integrate the highlight and color;
- Adopt the digital stepless adjustable current technology, achieving adjustable segmented current;
- Multi-interface, dual-HDMI input;
- Instant on or off;
- DLP-link 3D;
- Industrial design, IP5X dustproof level of the optical receiver/transmitter and light source;
- ≤0.5W ultra-low power consumption standby mode;
- 360° free angle installation;
- Picture splicing;
- Automatic keystone correction
Overview

Packaging Overview

This product is delivered with all the items shown below. Check the packaging to ensure that the items are complete. If any items are missing, please contact the dealer immediately.

- Projector
- Power cable
- VGA cable
- User Manual CD-ROM
- Remote control and batteries
- Quick Start Guide
- Warranty card

**Caution**

- Because of the differences in the application in each country (region), the products delivered to some regions may come with different accessories.
Overview

Projector Appearance

1  Focusing ring
2  Projection lens
3  Speaker
4  Air vent (exhausting hot air)
5  Control panel
6  IR remote control sensor
7  Air vent (air inlet)
8  Kensington anti-theft lock slot
9  AC power cable port
10 Anti-falling fixed hole
11 Rear adjustment feet
12 Ceiling-mounted installation hole (M4x16 screw hole)
13 Front support feet
14 RJ45 port
15 USB port
16 HDMI 2 port
17 HDMI 1 port
18 VGA IN 1 port
19 VGA 2 IN/OUT port
20 RS232 port
21 COMPUTER AUDIO IN/AUDIO OUT/MIC port
22 S-VIDEO port
23 VIDEO IN port
24 AUDIO IN(R) port
25 AUDIO IN(L) port

⚠️ Warning
- This device must be grounded.
- When installing the device, add an existing power-off apparatus to the fixed wiring, or connect the power plug to a convenient outlet near the device. If the device is faulty during operation, use a power-off apparatus to cut off the power supply.
Overview

Control Device and Functions

1. Focusing ring
   Adjust the focus definition of the projected picture.
2. Keystone correction/arrow keys (↑ up, ↓ down)
   Manually correct the distorted picture produced by the projection angle. When the user menu is
displayed, you can select the desired menu item.
3. ECO button
   Manually enable or disable the power-saving mode.
4. Volume key/arrow keys (< left, > right)
   Select items using "<" or ">".
   Adjust the volume using "<" or ">".
5. MENU button
   Access the screen display menu, exit the menu, and save the settings.
6. OK button
   Press to select or confirm the current value or item.
7. AUTO button
   Re-lock the signal source.
8. POWER button (power-on/off)
   Press the button to power on the device. In the power-on state, press the button twice to power off the
device.
9. SOURCE button
   Select different signal sources.
10. INDICATOR
    Display the projector state.
    When the indicator blinks green, the projector is in the exception protection state.
Overview

Remote Control

1  Power supply
   In standby mode, if you press this key, the device is powered on; in power-on mode, if you press this key, the screen prompts for the power-off operation. Press the power button to shut down the device.

2  MENU button
   Press to display the main menu. If you press the key again, the main menu disappears or the system returns to the previous-layer menu.

3  EXIT button
   Press to exit the settings.
Overview

4  ← ↑ ↓ → (arrow keys)
   You can use ↑ and ↓ to scroll up and down, ← to select from the left or decrease the value, and → to select from the right or increase the value.

5  OK button
   Press to select or confirm the current value or item.

6  INSTALLATION button
   Press to select the projector installation mode. The project supports four projection modes: ceiling rear, ceiling front, table rear and table front.

7  PICTURE MODE button
   Press to switch picture modes among standard, cinema, DICOM, demo, ECO, sRGB and user.

8  KEYSTONE +/- button
   Press “+” or “-” to carry out keystone correction.

9  VOLUME +/- button
   Press “+” or “-” to adjust the volume.

10 Number keys
    Press to enter the corresponding number.

11 SMART ECO button
    Press to set the display mode to smart ECO mode.

12 SOURCE button
    Press to set the input signal source to HDMI1, HDMI2, PC1, PC2, COMPONENT, VIDEO or S-VIDEO.

13 BLANK SCREEN button
    Press to switch the picture to the blank screen.

14 ASPECT RATIO button
    Set the aspect ratio to 4:3, 16:9, fill or native switching.

15 MIC button
    Press to set the audio output to microphone and press again to set the source audio output mode.

16 MUTE button
    If you press the key, the mute symbol is displayed on the screen, and the device has no audio output; if you press the key again, the mute symbol disappears, and the audio output resumes.

17 LANGUAGE button
    Press to select the desired language.
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 the two AAA batteries at the bottom of the battery compartment. The anode of the battery is towards the (+) direction, and the cathode is towards the (-) direction.
- Reattach the battery cover as indicated by the arrowhead in the figure.

⚠️ Warning

- 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 by the battery manufacturer 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, remove the battery to avoid damage of liquid leakage to the remote control.
Installation

Installation Modes

The projector supports four projection modes. You can install the projector according to the installation position. Before changing the projection mode, shut down the projector, change the projection mode, and then start up the projector. The projection mode can be preset to table front. You can also select another projection mode from the menu.

- **Ceiling rear**
  The projector is suspended on the wall or ceiling.
  The projection is on the rear of the semi-transparent projection screen.

- **Ceiling front**
  The projector is suspended on the wall or ceiling.
  The projection is in the front of the projection screen.

- **Table rear**
  The projection is on the rear of the semi-transparent projection screen.

- **Table front**
  The projection is in the front of the projection screen.

**Caution**

- The 1920x720 model does not support table front and table rear. The preset projection mode is ceiling front.
Installation

Installation Distance

Determine the projection distance according to the model differences and screen dimensions as specified in the following table.

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Screen Specifications (Inch)</th>
<th>Screen Size (mm)</th>
<th>Distance A (mm) Between the Front End of Projection and the Screen</th>
<th>Relative Height B (mm)</th>
<th>Distance C (mm) Between the Lens Center and the Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>XGA</td>
<td>80 1626 x 1219</td>
<td>170 ± 5</td>
<td>367 ± 40</td>
<td>474 ± 14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 2032 x 1524</td>
<td>295 ± 9</td>
<td>430 ± 40</td>
<td>599 ± 18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>120 2438 x 1829</td>
<td>420 ± 13</td>
<td>497 ± 40</td>
<td>724 ± 22</td>
<td></td>
</tr>
<tr>
<td>WXGA</td>
<td>80 1723 x 1077</td>
<td>101 ± 3</td>
<td>281 ± 40</td>
<td>405 ± 12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 2154 x 1346</td>
<td>202 ± 6</td>
<td>324 ± 40</td>
<td>506 ± 15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>120 2585 x 1615</td>
<td>312 ± 9</td>
<td>369 ± 40</td>
<td>616 ± 18</td>
<td></td>
</tr>
<tr>
<td>1920 x 720</td>
<td>90 2140 x 803</td>
<td>180 ± 5</td>
<td>338 ± 40</td>
<td>484 ± 15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 2378 x 892</td>
<td>234 ± 7</td>
<td>363 ± 40</td>
<td>538 ± 16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>120 2854 x 1070</td>
<td>342 ± 10</td>
<td>412 ± 40</td>
<td>646 ± 19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>140 3330 x 1249</td>
<td>451 ± 14</td>
<td>461 ± 40</td>
<td>755 ± 13</td>
<td></td>
</tr>
<tr>
<td>1080P</td>
<td>80 1771 x 996</td>
<td>90 ± 5</td>
<td>297 ± 15</td>
<td>396 ± 20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 2214 x 1245</td>
<td>197 ± 10</td>
<td>346 ± 17</td>
<td>503 ± 25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>120 2657 x 1494</td>
<td>302 ± 15</td>
<td>393 ± 20</td>
<td>608 ± 30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>150 3321 x 1868</td>
<td>459 ± 23</td>
<td>465 ± 23</td>
<td>765 ± 38</td>
<td></td>
</tr>
</tbody>
</table>

**Caution**

- The projection height values are for reference only.
Installation

⚠️ Warning ⚠️

- Special installation methods are required to suspend the projector on the wall or ceiling. If not properly installed, the projector may fall and cause accidents and injuries.
- If the mounting point on the wall or ceiling hanger frame uses adhesive to prevent the screws from loosening, or the projector is lubricated with lubricating oil or other oil, the projector case may break, causing the projector to fall. This may cause the person standing under the hanger frame to be seriously injured and the projector may be damaged. When installing or adjusting the hanger frame, do not use adhesive to prevent the screws from loosening and do not use lubricating oil or other oil.
- Do not cover the projector’s air inlet or air outlet. If any air outlet is covered, the internal temperature may rise and result in system shutdown.
- When the ceiling-mounted installation mode is required, contact the professional installation personnel. When installing the projector on a wall or ceiling, use correct tools. The preset projection mode is set to table front. You can change the projection mode in Menu > SETUP > INSTALLATION (TABLE FRONT/TABLE REAR/CEILING FRONT/CEILING REAR).
Device Connection

Before connecting the signal source to the projector, confirm the following:
- Disable all devices before any connection operation.
- Select the appropriate signal cable for each signal source.
- Ensure that the power cable is securely inserted.

⚠️ Caution ⚠️

- In the following figure, certain cables may not be included in the projector packaging (see the packaging overview). You can purchase the required cables at the electrical store.
- The following connection diagram is for reference only.
- For details, see the following pages.
Device Connection

Connecting the Projector to the Computer or Display

■ Connecting the project to the computer

The projector can be connected to a laptop computer or a desktop computer. If the projector needs to be connected to a computer in an earlier version, configure the corresponding adapter.

Connect the projector to the laptop computer or desktop computer.

- Connect one end of the VGA cable to the D-sub output port of the computer.
- Connect the other end of the VGA cable to the computer input port of the projector.

![Caution]

- The external video ports of many laptop computers connected to the projector are not enabled. Generally, you can enable or disable the external display by pressing Fn+F3 or CRT/LCD.
- On the laptop computer, find the CRT/LCD functional key or the functional key with the display symbol. Then, press Fn and the marked functional key simultaneously. For details, see the laptop computer instruction or the composite key description.

■ Connecting the projector to the display

To enable the display and screen to play the demo simultaneously, connect the computer output port of the projector to the external display using the VGA cable.

To connect the projector to the display, perform the following steps:

- Connect one end of an appropriate VGA cable to the D-sub input port of the video display. If the display has the DVI input port, connect the DVI end of the VGA-DVI-A cable to the DVI input port of the video display.
- Connect the other end of the cable to the computer output port of the projector.
Device Connection

Connecting the Projector to the Video Source Device

You can connect the projector to a variety of video signal source devices with the following ports:

- HDMI
- S-video
- Video (composite video)

You can connect the projector to the video signal source device using any of the preceding connection methods. The methods correspond to different video quality. The connection method depends on whether the projector and video source device have the matched terminals.

■ Best video quality

The optimal video connection method is using the HDMI port. You can enjoy the uncompressed digital video quality if the source device provides the HDMI port.

For details about how to connect the projector to the HDMI source device, see the chapter "Connecting the Projector to the HDMI Device".

■ Good video quality

The S-video connection method provides better analog video compared with the standard composite video. If the video source device provides both composite video and S-video output sources, you can select the S-video option. For details about how to connect the projector to the S-video source device, see the chapter "Connecting the Projector to the S-video Device".

■ Worst video quality

The composite video is a type of analog video. Although the quality is not the best, it is acceptable. The video quality of this connection method is the worst compared with the preceding available connection methods. For details about how to connect the projector to the composite video source device, see the chapter "Connecting the Projector to the Composite Video Source Device".

Connecting the Projector to the Audio Source

The projector has a mono speaker designed to provide basic audio features, with commercial data demonstrations. They are not dedicated to stereo audio reproduction and are intended for home cinemas. Any stereo audio input (if provided) is mixed through the projector speaker into a common mono audio output.

The following table shows the sources of the sound when the projector is connected to different signal sources.

<table>
<thead>
<tr>
<th>Input Signal Source</th>
<th>Computer Input</th>
<th>S-video or Video Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>The projector can play the sound from the</td>
<td>Computer audio input</td>
<td>AV audio input</td>
</tr>
<tr>
<td>following sources.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Device Connection

The projector also provides a separate MIC input. The projector provides an external MIC input for computer input or video input (including S-video). The corresponding audio input will not play any sound at this time.

Connecting the HDMI Device

Check the video source device to determine whether it has an unused HDMI output port. If available, you can continue to use the program. If not, you need to reevaluate the methods that can be used to connect to the projector.

Connecting the projector to the device with the HDMI signal source
- Connect one end of the HDMI cable (not provided with the projector) to the HDMI output port of the HDMI signal source.
- Connect the other end of the HDMI cable to the HDMI1 or HDMI2 port of the projector. You can select the display channel using the remote control or the corresponding keys.
Operation

Powering On the Projector

- Insert the power cable to the projector and the wall socket. Switch on the wall socket (if available). Check whether the power indicator on the projector is on red.
- Press the power button on the projector or remote control to power on the projector. After the projector is on, the indicator is steady on green. If necessary, rotate the focusing ring to adjust the picture definition.
- If the projector is initially started up, select the language from the menu as prompted on the screen.
- The projector starts to search for input signals. You can also select desired input signals by pressing the signal source button on the projector or remote control.

Menus

The following figure shows the level-1 menu, including display, picture, source, setup and advance options. You can move the cursor among these options. The menu supports automatic preview of sub-menus.
Operation

DISPLAY

- **ASPECT RATIO** refers to the resolution of the DMD display panel, and native refers to the length-width ratio of the signal source.
- **KEYSTONE ADJUST** is performed manually instead of automatically.
- **DIGITAL ZOOM**: Display the partial magnification of a picture.
- **H-POSITION**: Depend on the input signal. Its value is uncertain, but it can fine tune the picture display position.
- **V-POSITION**: When the input signal jitter on the screen jitter, adjust the value to achieve the appropriate state.
- **OVERSCAN**: Set the display rate of video signals.
- **ASPECT CROP**: Select the screen position (OFF\LEFT-TOP\LEFT-BELLOW\RIGHT-TOP\RIGHT-BELLOW) of the current projector in the cropping module.
- **AUTO KEYSTONE**: Automatically perform keystone correction according to the screen position.
- **VGA2 OUTPUT**: Select VGA2 signal channel for signal output.

### Display Configuration

<table>
<thead>
<tr>
<th>Function</th>
<th>Attribute Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPECT RATIO</td>
<td>FILL, 4:3, 16:9, NATIVE</td>
</tr>
<tr>
<td>KEYSTONE ADJUST</td>
<td>-40-40</td>
</tr>
<tr>
<td>DIGITAL ZOOM</td>
<td>&gt;&gt;</td>
</tr>
<tr>
<td>H-POSITION</td>
<td>-5-5</td>
</tr>
<tr>
<td>V-POSITION</td>
<td>-5-5</td>
</tr>
<tr>
<td>PHASE ADJUST</td>
<td>0-31</td>
</tr>
<tr>
<td>CLOCK</td>
<td>-5-5</td>
</tr>
<tr>
<td>OVERSCAN</td>
<td>ON/OFF</td>
</tr>
<tr>
<td>ASPECT CROP (not available for the 1920x720 model)</td>
<td>OFF\LEFT-TOP\LEFT-BELLOW\RIGHT-TOP\RIGHT-BELLOW</td>
</tr>
<tr>
<td>AUTO KEYSTONE (not available for the 1920x720 model)</td>
<td>ON/OFF</td>
</tr>
<tr>
<td>VGA2 OUTPUT (not available for the 1920x720 model)</td>
<td>ON/OFF</td>
</tr>
</tbody>
</table>
The PICTURE MODE is associated with the brightness, contrast, tint, color, sharpness, color temperature, gamma, brilliant color, and 3D color management.

>> indicates that you can go to the sub-menu (the same below).

3D COLOR MANAGE: You can adjust the color coordinates and brightness of monochromatic light. This option is applicable to the advanced user group. Common users are not recommended to change the setting of this option.

ENHANCE CONTRAST: When this function is enabled, the system improves contrast of the full black and full white test screens.
Operation

SOURCE

<table>
<thead>
<tr>
<th>DISPLAY FUNCTION</th>
<th>SOURCE FUNCTION</th>
<th>SOURCE ATTRIBUTE</th>
<th>SOURCE VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO DETECT</td>
<td>ON/OFF</td>
<td>COLOR SPACE</td>
<td>AUTOMATIC</td>
</tr>
<tr>
<td>COLOR SPACE</td>
<td>RGB</td>
<td>TEST PATTERNS</td>
<td>NONE</td>
</tr>
<tr>
<td>TEST PATTERNS</td>
<td>RGB RAMPS/...</td>
<td>BLANK SCREEN</td>
<td>BLACK</td>
</tr>
<tr>
<td>BLANK SCREEN</td>
<td>RGB RAMPS/...</td>
<td>RE-SYNC</td>
<td>RGB RAMPS/...</td>
</tr>
</tbody>
</table>

- AUTO DETECT indicates that the system automatically detects signal source input within the supported signal source list in a circular manner until the input is detected.
- TEST PATTERNS and BLANK SCREEN use the pre-stored pictures and colors to facilitate installation and commissioning.
- RE-SYNC indicates that the system re-lock the signal source.
Operation

SETUP

<table>
<thead>
<tr>
<th>Function</th>
<th>Attribute Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANGUAGE</td>
<td>&gt;&gt;</td>
</tr>
<tr>
<td>VOLUME</td>
<td>0~10</td>
</tr>
<tr>
<td>SMART ECO</td>
<td>ON/OFF</td>
</tr>
<tr>
<td>LOGO</td>
<td>ON/OFF</td>
</tr>
<tr>
<td>SECURITY</td>
<td>&gt;&gt;</td>
</tr>
<tr>
<td>KEYPAD LOCK</td>
<td>ON/OFF</td>
</tr>
<tr>
<td>HIGH LAND</td>
<td>ON/OFF</td>
</tr>
<tr>
<td>INSTALLATION</td>
<td>TABLE REAR</td>
</tr>
<tr>
<td>STANDBY MODE</td>
<td>NOMAL</td>
</tr>
<tr>
<td>SYSTEM RESET</td>
<td>&gt;</td>
</tr>
</tbody>
</table>

Language Settings

- English
- Simplified Chinese
- (Other types of language)

Authorization Manage

<table>
<thead>
<tr>
<th>Authorization</th>
<th>ON/OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Password</td>
<td>8 digits</td>
</tr>
</tbody>
</table>

System Reset

<table>
<thead>
<tr>
<th>Confirm Factory Reset</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

Caution

- The 1920x720 model supports only ceiling front and ceiling rear modes.
- When the altitude is higher than 3000 meters, you need to enable the HIGH LAND mode.
Operation

- **LANGUAGE** refers the language displayed on the menu. The system supports 18 types of language: English, French, German, Spanish, Portuguese, Russian, Italian, Dutch, Finnish, Indonesian, Vietnamese, Simplified Chinese, Traditional Chinese, Polish, Arabic, Korean, Uygur, and Japanese.

- **SMART ECO**: When this function is enabled, the system automatically enters the power-saving mode if there is no input and operation in five consecutive minutes. In this mode, the current is about 80% of the normal mode, in order to achieve power-saving purposes; if there is no input in 10 consecutive minutes, the system changes to the light source disabled mode; if there is no input in 15 consecutive minutes, the system changes to the standby mode. When the ambient temperature is higher than 35°C, the system automatically enters the power-saving mode to allow the projector to work in even more harsh environments.

- **LOGO** refers to the logo of the brand displayed in 10s after the projector is powered on.

- **SECURITY**: The system allows you to set the power-on password for the projector to prevent unauthorized users from using the projector. The password contains 8 Arabic digits and does not support other characters. If you forget your password, please contact customer service personnel.

- **KEYPAD LOCK**: After the key lock is enabled, the projector’s keypad will be invalid, and you can control the projector only through the remote control or host computer.

- **HIGH LAND**: When using the projector in a high-altitude area, enable the high altitude mode. Otherwise, the project lifetime may be affected.

- The software supports two standby modes, namely, normal standby mode and ultra-low power standby mode. In normal standby mode, the power consumption is higher than 1 W. The LAN module can still work, and the network can be waken up. In ultra-low power standby mode, the power consumption is lower than 0.5 W. The LAN module is powered off, and the network cannot be waken up.
Operation

ADVANCE

---

**DISPLAY**

**ADVANCE**

**ETHERNET**

**3D**

---

**ADVANCE**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHERNET</td>
<td>&gt;&gt;</td>
</tr>
<tr>
<td>3D</td>
<td>&gt;&gt;</td>
</tr>
</tbody>
</table>

---

**ETHERNET**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IP ADDRESS</td>
<td>0~255</td>
</tr>
<tr>
<td>SUBNET MASK</td>
<td>0~255</td>
</tr>
<tr>
<td>GATEWAY</td>
<td>0~255</td>
</tr>
<tr>
<td>DNS</td>
<td>0~255</td>
</tr>
<tr>
<td>MAC ADDRESS</td>
<td>A8-00-00-00-00-00</td>
</tr>
</tbody>
</table>

---

**3D SETTING**

<table>
<thead>
<tr>
<th>FORMAT</th>
<th>VSYNC_SEPARATED_HALF</th>
<th>VSYNC_SEPARATED_FULL</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERT_PACKCD_HALF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HORIZ_PACKED_HALF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
Operation

ABOUT

### ABOUT

<table>
<thead>
<tr>
<th>Function</th>
<th>Attribute Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVE SOURCE</td>
<td>&gt;&gt;</td>
</tr>
<tr>
<td>INPUT RESOLUTION</td>
<td>&gt;</td>
</tr>
<tr>
<td>ELAPSED TIME</td>
<td>0 Hours</td>
</tr>
<tr>
<td>SOFTWARE VERSION</td>
<td>Vxx</td>
</tr>
<tr>
<td>SERIAL NUMBER</td>
<td>APPOXXXXXXX</td>
</tr>
</tbody>
</table>

**ACTIVE SOURCE**: When the external signal is input, the current signal channel is displayed; when there is no signal input, the blank screen is displayed.

**INPUT RESOLUTION**: Identify the external signal resolution.

**ELAPSED TIME**: Indicate the accumulative time since the light source is on.

**SOFTWARE VERSION**: Display the version number of the current software.

**SERIAL NUMBER**: Indicates the SN used to identify the device.
Serial Port

The serial port on the interface board of the projector complies with the RS-232 interface specifications. Therefore, you can control the projector through the personal computer connected to this port.

RS-232 connection diagram

*Pin 1 and pin 2 are not connected.

Communication Device

<table>
<thead>
<tr>
<th>Communication settings</th>
<th>Serial port RS232</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication type</td>
<td></td>
</tr>
<tr>
<td>Baud rate</td>
<td>115200</td>
</tr>
<tr>
<td>Parity bit</td>
<td>NONE</td>
</tr>
<tr>
<td>Data bit</td>
<td>8 bits</td>
</tr>
<tr>
<td>Stop bit</td>
<td>1 bit</td>
</tr>
</tbody>
</table>
# Reference Command List

<table>
<thead>
<tr>
<th>Control Content</th>
<th>Description</th>
<th>Hexadecimal Control Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>STARTUP</td>
<td></td>
<td>5A 00 00 00 03 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>SHUTDOWN</td>
<td></td>
<td>5A 00 00 00 03 00 00 00 00 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>SOURCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDMI 1</td>
<td></td>
<td>5A 00 00 00 04 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>HDMI 2</td>
<td></td>
<td>5A 00 00 00 04 00 00 00 02 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>VGA 1</td>
<td></td>
<td>5A 00 00 00 04 00 00 00 09 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>VGA 2</td>
<td></td>
<td>5A 00 00 00 04 00 00 00 05 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>AV</td>
<td></td>
<td>5A 00 00 00 04 00 00 00 06 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>S-VIDEO</td>
<td></td>
<td>5A 00 00 00 04 00 00 00 00 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>SOUND</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td>5A 00 00 00 05 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>OFF</td>
<td></td>
<td>5A 00 00 00 05 00 00 00 00 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>VOLUME SETTINGS</strong></td>
<td></td>
<td>5A 00 00 00 06 00 00 00 xx 00 00 00 00 xx 00 00 00 5A</td>
</tr>
<tr>
<td><strong>VOLUME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>5A 00 00 00 07 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>-</td>
<td></td>
<td>5A 00 00 00 07 00 00 00 00 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>MICROPHONE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td>5A 00 00 00 08 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>OFF</td>
<td></td>
<td>5A 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>PICTURE MODE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STANDARD</td>
<td></td>
<td>5A 00 00 00 09 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>CINEMA</td>
<td></td>
<td>5A 00 00 00 09 00 00 00 02 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>DEMO</td>
<td></td>
<td>5A 00 00 00 09 00 00 00 03 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>ECO</td>
<td></td>
<td>5A 00 00 00 09 00 00 00 04 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>DICOM SIM</td>
<td></td>
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</tr>
<tr>
<td>sRGB</td>
<td></td>
<td>5A 00 00 00 09 00 00 00 06 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>CUSTOMER</td>
<td></td>
<td>5A 00 00 00 09 00 00 00 07 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>ASPECT RATIO</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILL</td>
<td></td>
<td>5A 00 00 00 0a 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>NATIVE</td>
<td></td>
<td>5A 00 00 00 0a 00 00 00 02 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>4:3</td>
<td></td>
<td>5A 00 00 00 0a 00 00 00 03 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>16:9</td>
<td></td>
<td>5A 00 00 00 0a 00 00 00 04 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>3D SETTING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td>5A 00 00 00 0b 00 00 00 00 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>VSYNC_SEPARATED_HALF</td>
<td></td>
<td>5A 00 00 00 0b 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>VSYNC_SEPARATED_FULL</td>
<td></td>
<td>5A 00 00 00 0b 00 00 00 02 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>VERT_PACKED_HALF</td>
<td></td>
<td>5A 00 00 00 0b 00 00 00 03 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>VERT_PACKED_FULL</td>
<td></td>
<td>5A 00 00 00 0b 00 00 00 04 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>HORIZ_PACKED_HALF</td>
<td></td>
<td>5A 00 00 00 0b 00 00 00 05 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>HORIZ_PACKED_FULL</td>
<td></td>
<td>5A 00 00 00 0b 00 00 00 06 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>SMART ECO</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td>5A 00 00 00 0d 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>OFF</td>
<td></td>
<td>5A 00 00 00 0d 00 00 00 00 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td><strong>KEYPAD LOCK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td>5A 00 00 00 12 00 00 00 01 00 00 00 00 00 00 00 5A</td>
</tr>
<tr>
<td>OFF</td>
<td></td>
<td>5A 00 00 00 12 00 00 00 00 00 00 00 00 00 00 00 5A</td>
</tr>
</tbody>
</table>
Projector Maintenance

You need to regularly maintain the projector and clean the lens. You can power on the projector only after the surface water is dried if you clean the lens or enclosure. Do not disassemble any parts of the projector. To replace the parts, please contact the dealer.

- Cleaning the lens
  You can clean the lens when you find that the lens surface is stained or dusty.
  - Use a compressed air tank to remove dust.
  - If there is dust or stain, gently wipe the lens surface using the lens paper or damp cloth with some cleaning agent.

**Caution**
- Do not rub the lens with abrasive materials.

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

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

- Storing the projector
  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.

- Transporting the projector
  It is recommended to use the original packaging or equivalent material when transporting the projector.
# Troubleshooting

- **The projector fails to power on.**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The power cable supplies no power.</td>
<td>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.</td>
</tr>
</tbody>
</table>

- **No picture**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The video signal source is not enabled or is incorrectly connected.</td>
<td>Enable the video signal source and check whether the signal cable is properly connected.</td>
</tr>
<tr>
<td>The projector and the input signal device are not properly connected.</td>
<td>Check the connection.</td>
</tr>
<tr>
<td>The input signal is not correctly selected.</td>
<td>Select the correct input signal source using the signal source key on the projector or remote control.</td>
</tr>
</tbody>
</table>

- **The picture is fuzzy.**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The lens of the projector cannot accurately focus.</td>
<td>Adjust the focus of the lens using the focusing ring.</td>
</tr>
<tr>
<td>The projector does not accurately align with the screen.</td>
<td>Adjust the projection angle and direction. If necessary, adjust the projector's height or distance.</td>
</tr>
</tbody>
</table>

- **The picture is deformed.**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The screen is not smooth.</td>
<td>Professional screens such as digital board are recommended.</td>
</tr>
</tbody>
</table>

- **The remote control fails.**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The battery level is low.</td>
<td>Replace the battery.</td>
</tr>
<tr>
<td>There are obstacles between the remote control and the projector.</td>
<td>Move the obstacles.</td>
</tr>
<tr>
<td>The distance to the projector is too far.</td>
<td>The distance to the projector should be no longer than 5 m (16 inches).</td>
</tr>
</tbody>
</table>
Troubleshooting

Indicator

<table>
<thead>
<tr>
<th>Light</th>
<th>State and Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Off</td>
<td>Power-off</td>
</tr>
<tr>
<td>Green Off</td>
<td>Standby mode</td>
</tr>
<tr>
<td>Off On</td>
<td>Power-on state</td>
</tr>
<tr>
<td>Off Blinking</td>
<td>Protection state upon running anomalies</td>
</tr>
</tbody>
</table>

⚠️ Caution ⚠️

- When the projector is in the exception protection state (the indicator blinks green), press and hold the power button on the remote control or control panel for 10s. Then, the projector exits the exception protection state and enters the standby mode.