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Usage Notice

Safety Instructions

Read all of these instructions before you operate your projector and save for future reference.

1. Read instructions

All the safety and operating instructions should be read before the appliance is operated.

2. Notes and warnings

All notes and warnings in the operating instructions should be adhered to.

3. Cleaning

Unplug the projector from the wall socket before cleaning. Use a damp cloth for cleaning the projector housing. Do not use liquid or aerosol cleaners.

4. Accessories

Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product. Keep the plastic packing materials (from the projector, accessories and optional parts) out of the reach of children as these bags may result in death by suffocation. Be particularly careful around the small children.

5. Ventilation

The projector is equipped with ventilation holes (intake) and ventilation holes (exhaust). Do not block or place anything near these slots, or internal heat build-up may occur, causing picture degradation or damage to the projector.

6. Power sources

Check that the operating voltage of your unit is identical with the voltage of your local power supply.

7. Servicing

Do not attempt to service this projector yourself. Refer all servicing to qualified service personnel.

8. Replacement parts

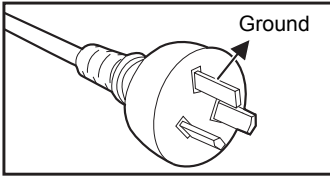
When replacement parts are required, be sure that the replacement parts are specified by the manufacture. Unauthorized substitutions may result in fire, electric shock or other hazards.

9. Moisture Condensation

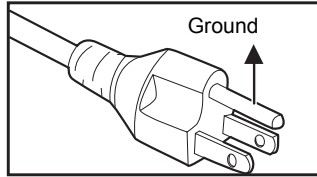
Never operate this projector immediately after moving it from a cold location to a warm one. When the projector is exposed to such a change in temperature, moisture may condense on the lens and the crucial internal parts. To prevent the unit from possible damage, do not use the projector for at least 2 hours when there is an extreme or sudden change in temperature.

Notes on the AC Power Cord

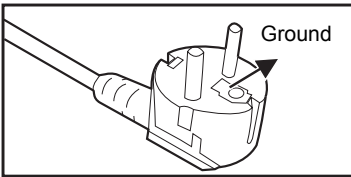
AC Power Cord must meet the requirement of countries where you use this projector. Please confirm your AC plug type with the graphics below and ensure that the proper AC Power Cord is used. If the supplied AC Power Cord does not match your AC outlet, please contact your sales dealer. This projector is equipped with a grounding type AC line plug. Please ensure that your outlet fits the plug. Do not defeat the safety purpose of this grounding type plug. We highly recommend using a video source device also equipped with a grounding type AC line plug to prevent signal interference due to voltage fluctuations.



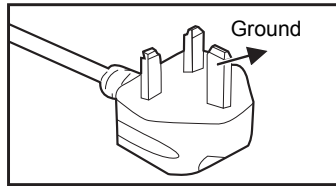
For Australia and Mainland China



For the U.S.A. and Canada



For Continental Europe



For the U.K.

Introduction

Projector Features

The projector integrates high-performance optical engine projection and a user - friendly design to deliver high reliability and ease of use.

The projector offers the following features:

- Single chip 0.65" Texas Instruments DLP® technology
- Full 3D 1080P (1920 x 1080 pixels)
- Compatibility with Macintosh® computers
- Compatibility with NTSC, PAL, SECAM and HDTV
- D-Sub 15-pin terminal for analog video connectivity
- RS-232 connector for serial control
- Quick Resume feature
- Eco mode for more economic usage
- HDMI compatibility
- Support wireless dongle via internal power of VGA 2
- 3D VESA port for 3D glasses emitter
- USB type A port for power charging

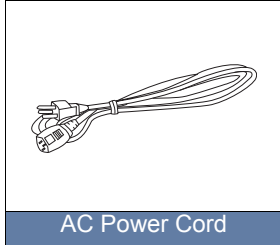
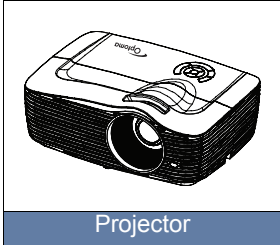
Note

- *The information in this manual is subject to change without notices.*
- *The reproduction, transfer or copy of all or any part of this document is not permitted without express written consent.*

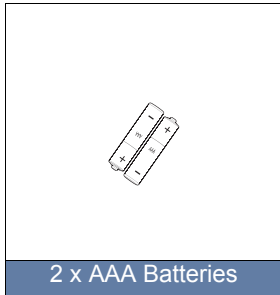
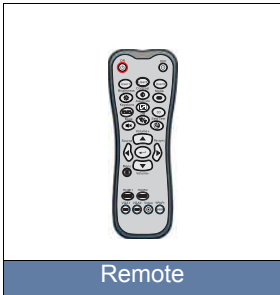
Package Overview

Unpack and inspect the box contents to ensure all parts listed below are in the box. If something is missing, please contact Optoma customer service.

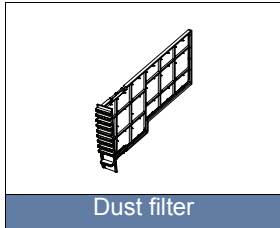
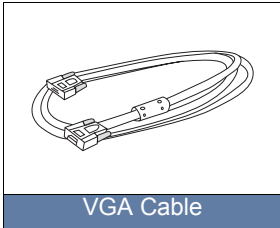
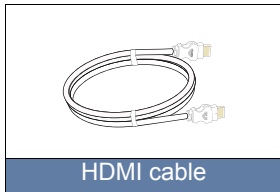
Standard Accessories



- User's Manual
 - Warranty Card
 - Quick Start Card
 - WEEE Card
(for EMEA only)
- Documentation



Optional accessories

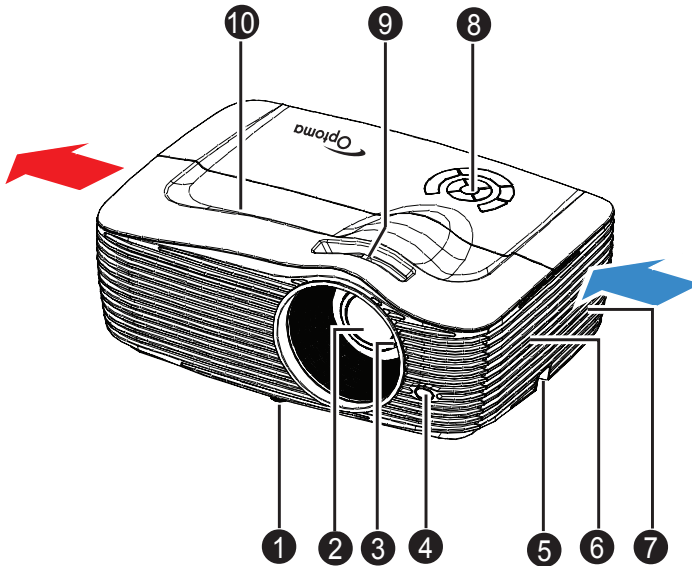


Note

■ *Optional accessories vary depending on model, specification and region.*

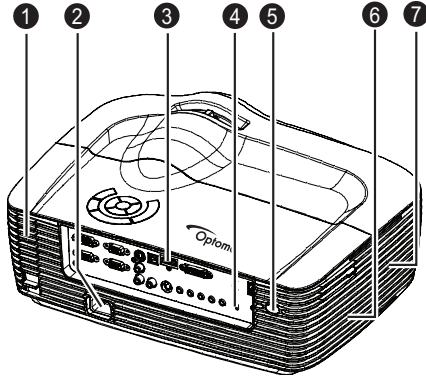
Projector Overview

Front View



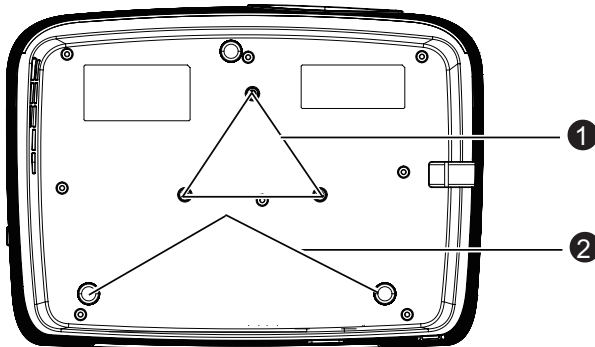
- | | |
|----------------------------------|---------------------|
| ① Front adjustment foot | ⑥ Speaker |
| ② Projection lens | ⑦ Ventilation holes |
| ③ Focus ring | ⑧ Control panel |
| ④ Front IR remote control sensor | ⑨ Zoom ring |
| ⑤ Security bar | ⑩ Top cover |

Rear View



- ❶ Optional dust filter
- ❷ AC power socket
- ❸ Connection ports
- ❹ Kensington lock
- ❺ Rear IR remote control sensor
- ❻ Speaker
- ❼ Ventilation holes

Bottom View



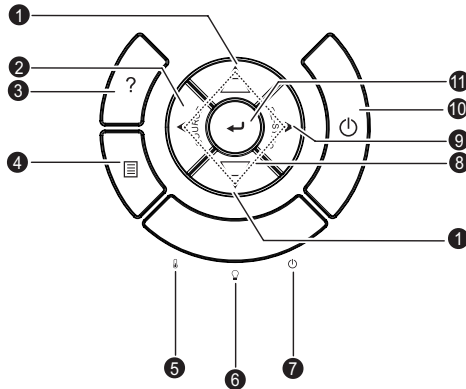
- ❶ Ceiling mount holes
- ❷ Rear adjustment feet

Note

- *This projector can be used with a ceiling mount for support. The ceiling mount is not included in the package.*
- *Contact your dealer for information to mount the projector on a ceiling.*

Using the Product

Control Panel



1 Keystone (▼/▲)

Manually correct distorted images resulting from an angled projection.

2 SOURCE

Switch between input signals.

3 HELP

Display Help menu.

4 MENU

Display or exit the on-screen display menus.

5 TEMP (Temp LED indicator)

Refer to “LED Indicator Messages” on [page 61](#).

6 LAMP (Lamp LED indicator)

Refer to “LED Indicator Messages” on [page 61](#).

7 POWER (Power LED indicator)

Refer to “LED Indicator Messages” on [page 61](#).

8 Four directional buttons

Use four directional buttons to select items or make adjustments to your selection.

9 Re-SYNC

Automatically synchronize the projector to the input source.

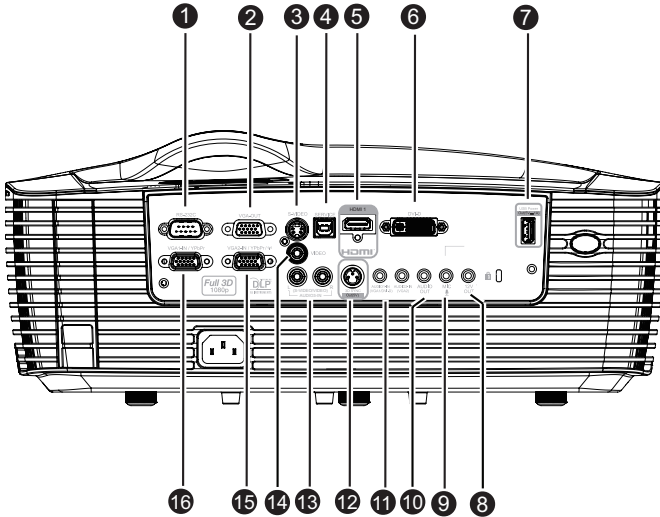
10 Power

Turn the projector on or off.

11 ENTER

Confirm your item selection.

Connection Ports



- 1 RS-232C**
When operating the projector via a computer, connect this to the controlling computer's RS-232C port.
- 2 VGA-OUT**
Connect to an external monitor.
In Eco mode (Standby), VGA-OUT is disabled.
In Active mode (Standby), VGA-OUT is enabled.
- 3 S-VIDEO**
Connect S-Video output from video equipment to this jack.
- 4 MOUSE/SERVICE**
This connector supports firmware update, remote mouse and page up/down.
■ *Remote mouse function is not available in some models.*
- 5 HDMI**
Connect HDMI output from video equipment to this jack.
- 6 DVI-D**
Connect DVI-D output from computer to this jack.

7 Power Out (5V DC 1A)

Power charging (5V DC 1A).

- *Do not connect devices that require or draw more power than 5v 1A. Over drawing can cause damage and create safety concerns.*

8 12V OUT

12V DC out

9 MIC

Microphone input jack.

10 AUDIO OUT

Connect to a speaker or other audio input equipment.

11 AUDIO1-IN (VGA1/DVI-D)/AUDIO2-IN (VGA2)

Connect an audio output from a computer to this jack.

12 3D SYNC OUT

For 3D glasses emitter

13 AUDIO3-IN (L/R) (S-VIDEO/VIDEO)

Connect an audio output from a video device to this jack.

14 VIDEO

Connect composite video output from video equipment to this jack.

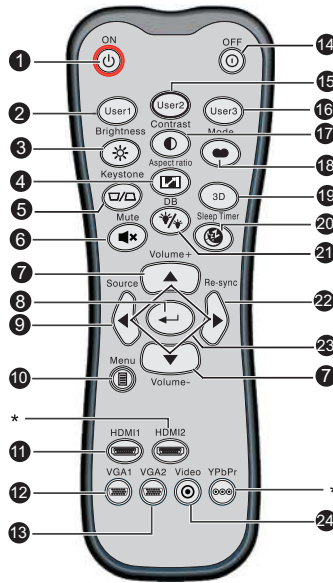
15 VGA2-IN / YPbPr / (1)

Connect image input signal (analog RGB or component) to this jack.
Support wireless dongle via internal power of VGA 2.

16 VGA1-IN / YPbPr

Connect image input signal (analog RGB or component) to this jack.

Remote Control



- 1 ON**
Turn the projector on.
- 2 User1**
User definable key for customized functions including DVI-D/S-VIDEO/ Color Settings/Color Temp./Gamma/Test Pattern/AV Mute. Default is Color Settings.
- 3 Brightness**
Display the setting bar for adjustment of brightness.
- 4 Aspect Ratio**
Toggle to switch the display aspect ratio.
- 5 Keystone (+/-)**
Manually correct distorted images resulting from an angled projection.
- 6 Mute**
Cut off the sound temporarily.
- 7 Volume+/Volume-**
Adjust the volume level.
- 8 Enter**
Confirmed selections.
- 9 Source**
Switch between input signals.

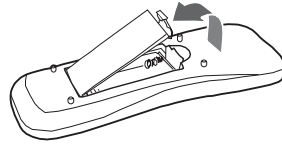
- ⑩ **Menu**
Display or exit the on-screen display menus.
- ⑪ **HDMI1**
Switch between HDMI and DVI-D signal.
- ⑫ **VGA1**
Display input signal (analog RGB or component) from **VGA1-IN / YPbPr** port.
- ⑬ **VGA2**
Display input signal (analog RGB or component) from **VGA2-IN / YPbPr** port.
- ⑭ **OFF**
Turn the projector off.
- ⑮ **User2**
User definable key for customized functions including DVI-D/S-VIDEO/Color Settings/Color Temp./Gamma/Test Pattern/AV Mute. Default is Color Temp.
- ⑯ **User3**
User definable key for customized functions including DVI-D/S-VIDEO/Color Settings/Color Temp./Gamma/Test Pattern/AV Mute. Default is Gamma.
- ⑰ **Contrast**
Adjust the image contrast.
- ⑱ **Mode**
Toggle to switch display mode.
- ⑲ **3D**
Turn on or off 3D function.
- ⑳ **Sleep Timer**
Turn on/off the sleep timer.
- ㉑ **DynamicBlack**
Turn on/off the dynamicblack.
- ㉒ **Re-sync**
Automatically synchronize the projector to the input source.
- ㉓ **Four directional buttons**
Use four directional buttons to select items or make adjustments to your selection.
- ㉔ **Video**
Toggle between Video and S-Video

Note

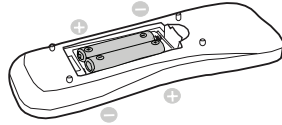
- (*) *No function for this model.*

Installing the Batteries

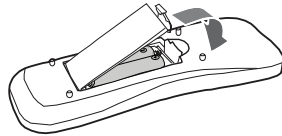
1. Open the battery cover in the direction shown.



2. Install batteries as indicated by the diagram inside the compartment.



3. Close the battery cover into position.



Caution

- *Risk of explosion if battery is replaced by an incorrect type.*
- *Dispose of used batteries according to the instructions.*
- *Make sure the plus and minus terminals are correctly aligned when loading a battery.*

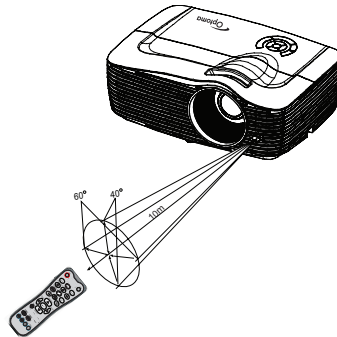
Note

- *Keep the batteries out of the reach of children. There is a danger of death by accidentally swallowing the batteries.*
- *Remove batteries from remote control when not using for extended periods.*
- *Do not dispose of the used batteries along with household waste. Dispose of used batteries according to local regulations.*
- *Danger of explosion may happen if batteries are incorrectly replaced. Replace all the batteries with new ones.*
- *Batteries should not be in or near to fire or water, keep batteries in a dark, cool and dry place.*
- *If suspect battery leakage, wipe out the leakage and then replace new batteries. If the leakage adheres to your body or clothes, rinse well with water immediately.*

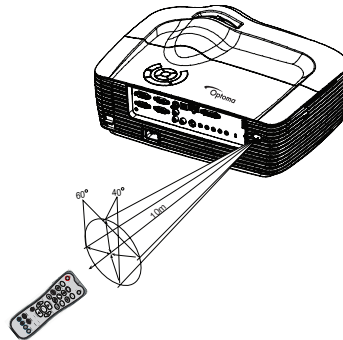
Remote Control Operation

Point the remote control at the infrared remote sensor and press a button.

- Operating the projector from the front



- Operating the projector from the rear



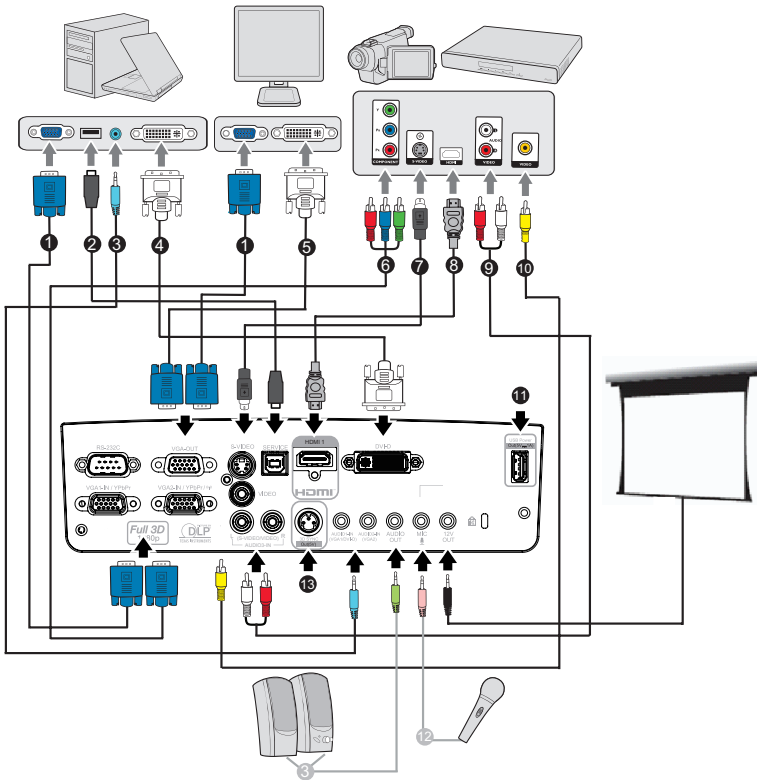
Note

- *The remote control may not operate when there is sunlight or other strong light such as a fluorescent lamp shining on the remote sensor.*
- *Operate the remote control from a position where the remote sensor is visible.*
- *Do not drop the remote control or jolt it.*
- *Keep the remote control out of locations with excessively high temperature or humidity.*
- *Do not get water on the remote control or place wet objects on it.*
- *Do not disassemble the remote control.*

Connection

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

1. Turn all equipment off before making any connections.
2. Use the correct signal cables for each source.
3. Ensure the cables are firmly inserted.



1. *VGA cable (D-Sub to D-Sub)
2. *USB cable (B type to A type)
3. *Audio cable
4. *DVI-D cable
5. *VGA to DVI-A cable
6. *VGA (D-Sub) to HDTV (RCA) cable
7. *S-Video cable
8. *HDMI cable

- 9. *Audio L/R cable
- 10. *Composite video cable
- 11. USB port for power charging
- 12. *Microphone 3.5 mini jack cable
- 13. *3D glasses emitter

Note

- *Due to the difference in applications for each country, some regions may have different accessories.*
- (*) *Optional Accessory*

Connecting a computer or monitor

Connecting a computer

The projector provides two VGA input sockets that allow you to connect them to both IBM® compatible and Macintosh® computers. A Mac adapter is needed if you are connecting legacy version Macintosh computers.

To connect the projector to a notebook or desktop computer:

1. Take the supplied VGA cable and connect one end to the D-Sub output socket of the computer.
2. Connect the other end of the VGA cable to the **VGA1/YPbPr** or **VGA2/YPbPr** signal input socket on the projector.

Important

- *Many notebooks do not turn on their external video ports when connected to a projector. Usually a key combo like FN + F3 or CRT/LCD key turns the external display on/off. Locate a function key labeled CRT/LCD or a function key with a monitor symbol on the notebook. Press FN and the labeled function key simultaneously. Refer to your notebook's documentation to find your notebook's key combination.*

Connecting a monitor

If you want to view your presentation close-up on a monitor as well as on the screen, you can connect the **VGA-OUT** signal output socket on the projector to an external monitor with a VGA cable following the instructions below:

To connect the projector to a monitor:

1. Connect the projector to a computer as described in [“Connecting a computer” on page 18](#).
2. Take a suitable VGA cable (only one supplied) and connect one end of the cable to the D-Sub input socket of the video monitor.

Or if your monitor is equipped with a DVI input socket, take a VGA to DVI-A cable and connect the DVI end of the cable to the DVI input socket of the video monitor.

3. Connect the other end of the cable to the **VGA-OUT** socket on the projector.

VGA-OUT loop through:

During working mode:

1. If VGA1 is projecting out, VGA-OUT source will be VGA1.
2. If VGA2 is projecting out, VGA-OUT source will be VGA2.
3. If VGA1 and VGA2 are all have sources, default VGA-OUT is VGA1.
4. If none of VGA1 and VGA2 is projecting out, VGA-OUT is disabled.

During Standby





1. VGA-OUT will keep the latest display VGA source signal. Default VGA-OUT is VGA1.
2. If the projector is in Power Mode (Standby) < 0.5W, VGA-OUT is disabled.

Connecting Video source devices

You can connect your projector to various Video source devices that provide any one of the following output sockets:

- HDMI
- Component Video
- S-Video
- Video (composite)

You need only connect the projector to a Video source device using just one of the above connecting methods, however each provides a different level of video quality. The method you choose will most likely depend upon the availability of matching terminals on both the projector and the Video source device as described below:

| Terminal name | Terminal appearance | Reference | Picture quality |
|-----------------|--|---|-----------------|
| HDMI | HDMI  | “Connecting an HDMI source device” on page 21 | Best |
| Component Video | VGA1/YPbPr or VGA2/YPbPr  | “Connecting a Component Video source device” on page 21 | Better |
| S-Video | S-VIDEO  | “Connecting an S-Video source device” on page 22 | Good |
| Video | VIDEO  | “Connecting a composite Video source device” on page 22 | Normal |

Connecting an HDMI source device

Examine your Video source device to determine if it has a set of unused HDMI output jacks available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to an HDMI source device:

1. Take an HDMI cable and connect one end to the HDMI output of the HDMI source device.
2. Connect the other end of the HDMI cable to the HDMI input on the projector.

Connecting a Component Video source device

Examine your Video source device to determine if it has a set of unused Component Video output sockets available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to a Component Video source device:

1. Take a VGA (D-Sub) to HDTV (RCA) cable and connect the end with 3 RCA type connectors to the Component Video output sockets of the Video source device. Match the color of the plugs to the color of the sockets; green to green, blue to blue, and red to red.
2. Connect the other end of the cable (with a D-Sub type connector) to the **VGA1/YPbPr** or **VGA2/YPbPr** socket on the projector.

Important

- *If the selected video image is not displayed after the projector is turned on and the correct video source has been selected, check that the Video source device is turned on and operating correctly. Also check that the signal cables have been connected correctly.*

Connecting an S-Video source device

Examine your Video source device to determine if it has an unused S-Video output socket available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to an S-Video source device:

1. Take an S-Video cable and connect one end to the S-Video output socket of the Video source device.
2. Connect the other end of the S-Video cable to the **S-VIDEO** socket on the projector.

Important

- *If the selected video image is not displayed after the projector is turned on and the correct video source has been selected, check that the Video source device is turned on and operating correctly. Also check that the signal cables have been connected correctly.*
- *If you have already made a Component Video connection between the projector and this S-Video source device using Component Video connections, you need not connect to this device using an S-Video connection as this makes an unnecessary second connection of poorer picture quality. See [“Connecting Video source devices” on page 20](#) for details.*

Connecting a composite Video source device

Examine your Video source device to determine if it has a set of unused composite Video output sockets available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to a composite Video source device:

1. Take a Video cable and connect one end to the composite Video output socket of the Video source device.
2. Connect the other end of the Video cable to the **VIDEO** socket on the projector.


Important

- *If the selected video image is not displayed after the projector is turned on and the correct video source has been selected, check that the Video source device is turned on and operating correctly. Also check that the signal cables have been connected correctly.*
- *You need only connect to this device using a composite Video connection if Component Video and S-Video inputs are unavailable for use. See [“Connecting Video source devices” on page 20](#) for details.*

Operation

Powering On/Off the Projector

Powering On the Projector:




1. Connect the AC power cord and relevant peripheral signal cable(s) to the projector.
2. Press  to turn on the projector.
The projector takes a minute or so to warm up.
3. Turn on your source (computer, notebook, DVD, etc.). The projector automatically detects your source.
 - If you are connecting multiple sources to the projector simultaneously, press **SOURCE** on the projector or **Source** on the remote control to select your desired signal or press your desired signal key on the remote control.



Warning

- *Never look into the lens when the lamp is on. This can damage your eyes.*
- *This focal point concentrates high temperature. Do not place any object near it to avoid possible fire hazard.*

Powering Off the Projector:

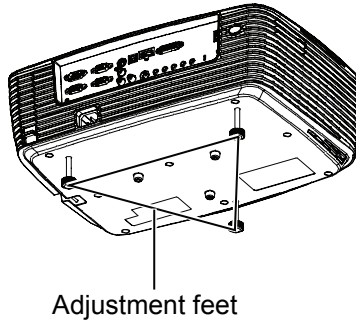
1. Press  to turn off the projector lamp. You will see a message "Power off? Press Power again" appear on the screen.
2. Press  again to confirm.
 - The cooling fans continue to operate for cooling cycle.
 - When the Power LED becomes steady red, the projector has entered stand-by mode.
 - If you want to turn the projector back on, you must wait until the projector has completed the cooling cycle and has entered stand-by mode. Once in stand-by mode, simply press  to restart the projector.
3. Disconnect the AC power cord from the electrical outlet and the projector.
4. Do not turn on the projector right after power off.



Warning

- *When Quick Resume is on, if turning off the projector accidentally and Quick Resume selected within a period of 100 seconds, the projector will instantly power on again.*
- *When Quick Resume is off, if turning off the projector, users need to wait until the cooling process is finished and then restart the projector. It will take a few minutes because the fan will keep running until the internal temperature is reduced to certain level.*

Adjusting the Projector Height



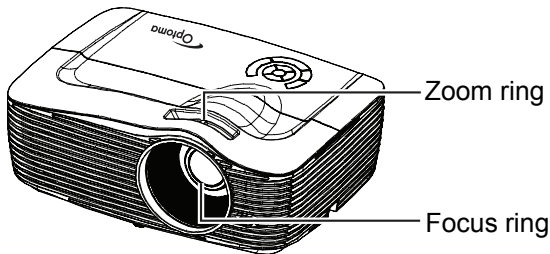
The projector is equipped with three adjustment feet to adjust the image height.

1. To raise or lower the image, turn the front adjustment foot.
2. To level the image on the screen, turn the rear adjustment feet to fine-tune the height.

Note

- *To avoid damaging the projector, make sure that the adjustment feet are fully retracted before placing the projector in its carrying case.*

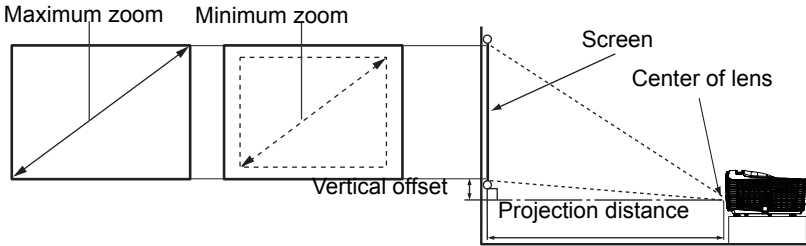
Adjusting the Projector Zoom and Focus



1. Focus the image by rotating the focus ring. A still image is recommended for focusing.
2. Adjust the image size by rotating the zoom ring.

Adjusting Projection Image Size

Refer to the graphic and table below to determine the screen size and projection distance.



| Screen size Diagonal [inch (cm)] | 16:9 Screen | | | |
|--|--------------------------------|-------------|-----------------------------|--------------------------------|
| | Projection distance [feet (m)] | | Image height [inch (cm)] | Vertical offset [inch (cm)] |
| | (min. zoom) | (max. zoom) | | |
| 30 (76) | 3.0 (0.9) | 4.6 (1.4) | 15 (37) | 2.2 (6) |
| 40 (102) | 4.0 (1.2) | 6.0 (1.8) | 20 (50) | 2.9 (7) |
| 60 (152) | 6.0 (1.8) | 9.0 (2.7) | 29 (75) | 4.4 (11) |
| 80 (203) | 8.0 (2.4) | 12.0 (3.7) | 39 (100) | 5.9 (15) |
| 100 (254) | 10.0 (3.1) | 15.0 (4.6) | 49 (125) | 7.4 (19) |
| 120 (305) | 12.0 (3.7) | 18.0 (5.5) | 59 (149) | 8.8 (22) |
| 150 (381) | 15.0 (4.6) | 22.5 (6.9) | 74 (187) | 11 (28) |
| 200 (508) | 20.0 (6.1) | 30.0 (9.2) | 98 (249) | 14.7 (37) |
| 250 (635) | 25.0 (7.6) | 37.5 (11.4) | 123 (311) | 18.4 (47) |
| 300 (762) | 30.0 (9.2) | 45.0 (13.7) | 147 (374) | 22.1 (56) |

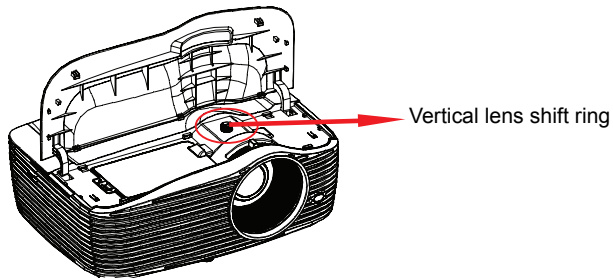
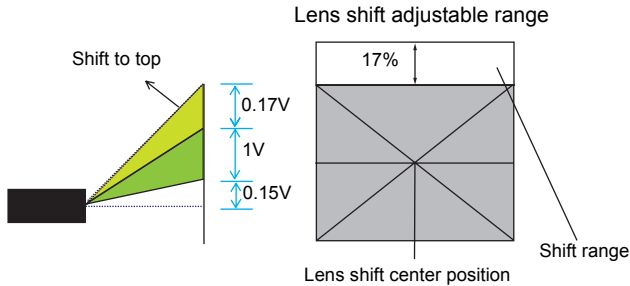
Note

- **Position the projector in a horizontal position; other positions can cause heat build-up and damage to the projector.**
- **Keep a space of 30 cm or more between the sides of the projector.**
- **Do not use the projector in a smoky environment. Smoke residue may build-up on critical parts and damage the projector or its performance.**
- **Consult with your dealer for special installation such as suspending from a ceiling.**

Adjusting the position using the vertical lens shift function

If the projector is not positioned right in front of the center of the screen, you can adjust the vertical position of projected image by moving the vertical lens shift ring within the shift range of the lens.

The display position can be shifted upward up to 17% elevation of the display. (When turn the vertical lens shift ring to the right (left), the display moves up (down)).



Attention

Please note the following s when using the projector.

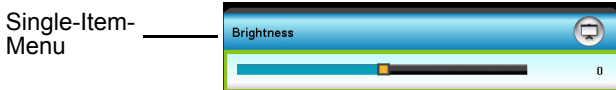
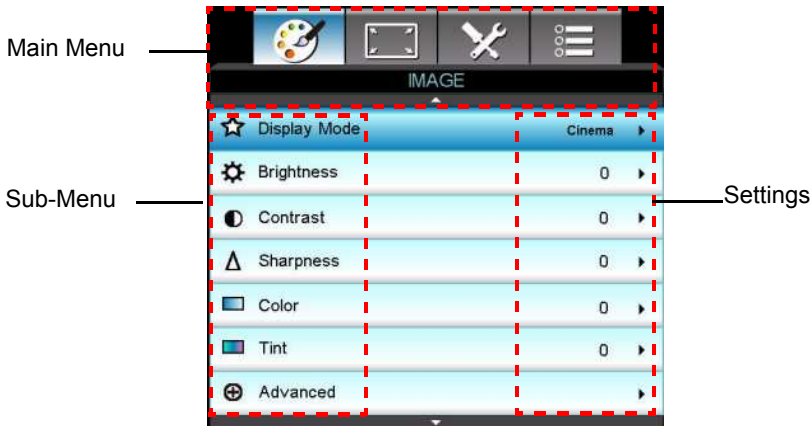
- Do not touch the lens while it is moving as this could cause injury to the fingers.
- Never allow children to touch the lens.

Menu Operation

The projector has multilingual on-screen display menus that allow you to make image adjustments and change a variety of settings.

How to operate

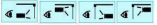
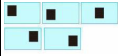
1. To open the OSD menu, press “Menu” on the Remote Control or Projector Keypad.
2. When OSD is displayed, use ◀/▶ key to select to select any item in the main menu. While making a selection on a particular page, press ▼ or “Enter key to enter sub menu.
3. Use ▲/▼ key to select the desired item and press ◀/▶/”Enter” key to enter the Single-Item-Menu.
4. Use the ◀/▶ key to adjust the value. Use “Enter” to confirm the selection.
5. Select the next item to be adjusted in the sub menu and adjust as described above.
6. Press ”Menu” to go back to Sub-Menu.
7. To exit, press “Menu” again. The OSD menu will close and the projector will automatically save the new settings.



Menu tree

| Main Menu | Sub-Menu | | | Single-Item Menu | | | |
|-----------|--------------|----------------|-----------------|--|---|--|---|
| IMAGE | Display Mode | | | Cinema / Reference / Vivid / Bright / Game / 3D / User / ISF Day / ISF Night | | | |
| | | Brightness | | | | | |
| | | Contrast | | | | | |
| | | Sharpness | | | | | |
| | | Color | | | | | |
| | | Tint | | | | | |
| | Advanced | Color Settings | Noise Reduction | | 0~10 | | |
| | | | Gamma | | Film / Video / Graphics / 2.2 / 1.8 / 2.0 / 2.6 | | |
| | | | BrilliantColor™ | | | | |
| | | | DynamicBlack | | On / Off | | |
| | | | Color Temp. | | Warm / Standard / Cool/ Cold | | |
| | | | Red | Color Settings | Red | | Hue / Saturation / Gain |
| | | | | | Green | | Hue / Saturation / Gain |
| | | | | | Blue | | Hue / Saturation / Gain |
| | | | | | Cyan | | Hue / Saturation / Gain |
| | | | | | Magenta | | Hue / Saturation / Gain |
| | | | | | Yellow | | Hue / Saturation / Gain |
| | | | | | White | | Red / Green / Blue |
| | | | | | Reset | | |
| | | | Exit | | | | |
| | | | | Color Space | | | Not HDMI Input: Auto / RGB / YUV HDMI Input: Auto/ RGB(0~255) / RGB(16~235)/ YUV |

| | | | | | |
|----------------|---------------|-----------|-------------------|---|--|
| IMAGE | Advanced | Signal | Automatic | On / Off | |
| | | | Phase (VGA) | | |
| | | | Frequency (VGA) | | |
| | | | H. Position (VGA) | | |
| | | | V. Position (VGA) | | |
| | Exit | | | | |
| | Reset | | | Yes / No | |
| DISPLAY | Format | | | 4:3 / 16 :9 / LBX / Native / Auto / Superwide | |
| | Edge Mask | | | | |
| | Zoom | | | | |
| | Image Shift | H | | | |
| | | V | | | |
| | V Keystone | | | | |
| | Auto Keystone | | | On / Off | |
| | 3D | 3D Mode | | | Off / DLP-Link / VESA 3D |
| | | 3D--->2D | | | 3D / L / R |
| | | 3D Format | | | Auto / SBS / Top and Bottom / Frame Sequential |
| 3D Sync Invert | | | | On / Off | |

| | | | | | |
|-------|----------------|-------------------|-------|--|--------------------------|
| SETUP | Language | | | English / Deutsch / Français / Italiano / Español / Português / Svenska / Nederlands / Norsk/Dansk / Polski / Pyccká / Suomi / ελληνικά / Magyar / Čeština / العربية / 繁體中文 / 簡體中文 / 日本語 / 한국어 / יידיש / Türkçe / Farsi / Vietnamese / Romanian / Indonesian | |
| | Projection | | |  | |
| | Menu Location | | |  | |
| | Security | Security | | | On / Off |
| | | Security Timer | | | Month / Day / Hour |
| | | Change Password | | | |
| | | Exit | | | |
| | Projector ID | | | | |
| | Audio Settings | Internal Speaker | | | On / Off |
| | | Mute | | | On / Off |
| | | Volume | Audio | | |
| | | | Mic | | |
| | Audio Input | | | Default / Audio 1 / Audio 2 / Audio 3 | |
| | Advanced | Logo | | | Default / Neutral / User |
| | | Logo Capture | | | |
| | | Closed Captioning | | | Off / CC1 / CC2 |
| Exit | | | | | |

| | | | | | |
|---------|------------------|-------|--|--|--|
| OPTIONS | Input Source | | | VGA1 / VGA2 / Video / S-video / HDMI / DVI | |
| | Source Lock | | | On / Off | |
| | High Altitude | | | On / Off | |
| | Information Hide | | | On / Off | |
| | Keypad Lock | | | On / Off | |
| | Test Pattern | | | None / Grid / White | |
| | 12V Trigger | | | On / Off / Auto 3D | |
| | IR Function | | | On / Front / Back / Off | |
| | Background Color | | | Black / Red / Blue / Green / White | |
| | Remote Settings | User1 | | | DVI-D/S-VIDEO/Color Settings/Color Temp./Gamma/ Test Pattern/AV Mute |
| | | User2 | | | DVI-D/S-VIDEO/Color Settings/Color Temp./Gamma/ Test Pattern/AV Mute |
| | | User3 | | | DVI-D/S-VIDEO/Color Settings/Color Temp./Gamma/ Test Pattern/AV Mute |

| | | | | |
|---------|--------------------------|---------------------------|--|--------------------------------------|
| OPTIONS | Advanced | Direct Power On | | On / Off |
| | | Signal Power On | | On / Off |
| | | Auto Power Off (min.) | | |
| | | Sleep Timer (min.) | | |
| | | Quick Resume | | On / Off |
| | | Power Mode (Standby) | | Active / Eco |
| | Lamp Settings | Lamp Hour | | |
| | | Lamp Reminder | | On / Off |
| | | Lamp Mode | | Bright / Eco |
| | | Lamp Reset | | Yes / No |
| | | Exit | | |
| | Optional Filter Settings | Optional Filter Installed | | Yes / No |
| | | Filter Usage Hours | | |
| | | Filter Reminder | | Off / 300hr / 500hr / 800hr / 1000hr |
| | | Filter Reset | | Yes / No |
| | | Exit | | |
| | Reset | | | Yes / No |

IMAGE



Display Mode

There are many factory presets optimized for various types of images.

- Cinema: For home theater.
- Reference: This mode is intended to reproduce, as close as possible, the image the way the movie director intended. Color, color temperature, brightness, contrast and gamma settings are all configured to standard reference levels.
- Vivid: Optimized to produce strikingly bright colorful images.
- Bright: Maximum brightness from PC input.
- Game: For game content.
- 3D: Recommended setting for 3D mode enabled. Any further adjustments by the user in 3D will be saved in this mode for further use.
- User: User's settings.
- ISF Day: Optimize the image with the ISF Day mode to be perfectly calibrated and high picture quality.
- ISF Night: Optimize the image with the ISF Night mode to be perfectly calibrated and high picture quality.

Brightness

Brighten or darken the image.

Contrast

Set the difference between light and dark areas.

Sharpness

Sharpen or soften the image.

Color

Adjust a video image from black and white to fully saturated color.

Tint

Shift colors toward red or green.

Note

- *“Color” and “Tint” functions are only supported under Video mode.*

Advanced



Noise Reduction

The Noise Reduction reduces the amount of visible noise interlaced signals.

Gamma

This allows you to choose a degamma table that has been fine-tuned to bring out the best image quality for the input.

- Film: for home theater.
- Video: for video or TV source.
- Graphics: for image source.
- 2.2/1.8/2.0/2.6: for PC or video source.

BrilliantColor™

This adjustable item utilizes a new color-processing algorithm and system level enhancements to enable higher brightness while providing true, more vibrant colors in picture. The range is from “1” to “10”. If you prefer a stronger enhanced image, adjust toward the maximum setting. For a smoother, more natural image, adjust toward the minimum setting.

DynamicBlack

Dynamic Black enables the projector to automatically optimize the brightness of the display during dark/light movie scenes to be shown in incredible detail.

Color Temp.

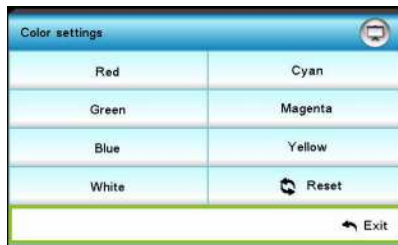
If set to cold temperature, the image looks more blue. (cold image)

If set to standard temperature, the image maintains normal colorings for white.

If set to warm temperature, the image looks more red. (warm image)

Color Settings

Press ◀/▶/“Enter” key to enter the next menu as below and then use ▲/▼/◀/▶ key to select color. Press “Enter” to finalize the selection.



- Red/Green/Blue/Cyan/Magenta/Yellow/White: Use ▲/▼ to toggle Hue/Saturation/Gain and then use ◀/▶ to adjust the value.
- Reset: Choose “Yes” to return the factory default settings for color adjustments.

Color Space

Select an appropriate color matrix type from AUTO, RGB, RGB (0-255)(*), RGB (16-235)(*), or YUV.

Note

(*) for *HDMI only*.

Signal

- Automatic: Automatically selects the signal. If you use this function, the Phase, frequency items are grayed out, and if Signal is not automatic, the phase, frequency items will appear for user to manually tune and saved in settings after that for next time projector turns off and on again.
- Phase: Synchronize the signal timing of the display with the graphic card. If the image appears to be unstable or flickers, use this function to correct it.
- Frequency: Change the display data frequency to match the frequency of your computer’s graphic card. Use this function only if the image appears to flicker vertically.

- H. Position: Adjust the image left or right within the projection area.
- V. Position: Adjust the image up or down within the projection area.

Reset

Return the display parameters on IMAGE menu to the factory default settings.

DISPLAY



Format

Use this function to choose your desired aspect ratio.

| 16 : 9 screen | 480i/p | 576i/p | 1080i/p | 720p | PC |
|----------------|--|--------|---------|------|----|
| 4:3 | 1440x1080 center | | | | |
| 16:9 | 1920x1080 center | | | | |
| LBX | 1920x1440 center, then get the central 1920x1080 image to display. | | | | |
| Native | 1:1 mapping centered | | | | |
| Auto (Default) | If this format is select, Screen type will auto become 16:9 (1920 x 1080). If source is 4:3, auto resize to 1440 x 1080. If source is 16:9 auto resize to 1920 x 1080. If source is 16:10 auto resize to 1920 x 1200 and cut 1920 x 1080 area to display. | | | | |
| Superwide | Scale to 2534 x 1426 (132% Enlarge), then get the central 1920x1080 image to display. Ps: End-user can use this format to see non-subtitle of 2.35:1 source to fulfill 100% of 1080p DMD. | | | | |

Edge Mask

Edge Mask function removes the noise in a video image. Overscan the image to remove video encoding noise on the edge of video source.

Note

- Each I/O has different setting of “Edge Mask”.
- “Edge Mask” and “Zoom” can’t work at same time.

Zoom

Zoom in and out the images.

Image Shift

Shift the projected image position horizontally and vertically.

V Keystone

Adjust image distortion vertically. If the image looks trapezoidal, this option can help make the image rectangular.

Note

- *Keystone adjustment might affect the complete presentation of the OSD menu.*
- *When adjusting the V Keystone, Auto Keystone will be set at "Off" automatically.*

Auto Keystone

Automatically correct distorted images resulting from an angled projection.

3D

3D Mode

- Off: Select "Off" to turn off 3D mode.
- DLP Link: Select "DLP Link" to use optimized settings for DLP Link 3D glasses.
- VESA 3D: Select "VESA 3D" to use optimized settings for VESA 3D glasses.

3D--->2D

- 3D: Select 3D format.
- L: Select left eye data.
- R: Select right eye data.

3D Format

- SBS: Use this mode for "Side-by-side" format 3D content.
- Top and Bottom: Use this mode for "Top and Bottom" format 3D content.
- Frame Sequential: Use this mode for "Frame Sequential" format 3D content.

3D Sync. Invert

- Press the "On" to invert left and right frame contents.
- Press the "Off" for default frame contents.

SETUP



Language

Select the language used by the on-screen menu. Press ◀/▶ /“Enter” key to enter the sub menu and then use the ▲/▼/◀/▶ key to select your preferred language. Press “Enter” to finalize the selection.

Projection

Adjust the picture to match the orientation of the projector: upright or upside-down, in front of or behind the screen. Invert or reverse the image accordingly.

Menu Location

Choose the menu location on the display screen.

Security

Security

- On: Choose “On” to use security verification when the turning on the projector.
- Off: Choose “Off” to be able to switch on the projector without password verification.

Security Timer

Use this function to set the how long (Month/Day/Hour) the projector can be used. Once this time has elapsed you will be requested to enter your password again.

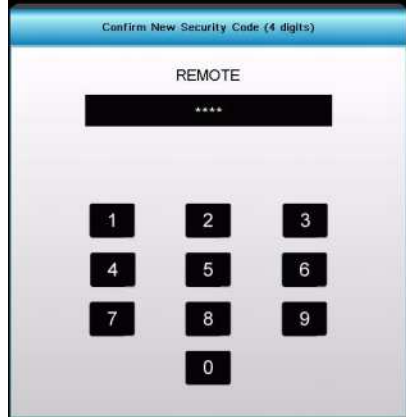
Change Password

■ First time:

1. Press "Enter" to set the password.
2. The password has to be 4 digits.
3. Use arrows buttons on the remote to choose number icons in OSD for password entering and then press "Enter" key to confirm your password.

■ Change Password:

1. Press "Enter" to input old password.
2. Use arrow buttons to choose current password and then press "Enter" to confirm.
3. Enter new password (4 digits in length) by using the arrow buttons on the remote, then press "Enter" to confirm.
4. Enter new password again and press "Enter" to confirm.
 - If the incorrect password is entered 3 times, the projector will automatically shut down.
 - If you have forgotten your password, please contact your local office for support.



Note

- *Password default value is "1234" (first time).*

Projector ID

ID definition can be set up by menu (range 0~99), and allow user control an individual projector by RS232.

Audio Settings

Internal Speaker

Use the internal speaker of projector.

Mute

Cut off the sound temporarily.

Volume

Adjust the volume level for Audio or Mic input source.

Audio Input

Select audio input sources.

Advanced

Logo

Use this function to set the desired startup screen. If changes are made they will take effect the next time the projector is powered on.

- Default: The default startup screen.
- Neutral: Neutral startup screen.
- User: "User" is the screen that you captured.

Logo Capture

Capture the current projection screen as a start up screen.

Closed Captioning

Use this function to set the desired startup screen. If changes are made they will take effect the next time the projector is powered on.

- Off: select "Off" to turn off the closed captioning feature.
- CC1:CC1 language: American English.
- CC2:CC2 language (depending on the TV channel of the user):Spanish, French, Portuguese, German, Danish.

OPTIONS



Input Source

Use this option to enable / disable input sources. Press ◀/▶/“Enter” key to enter the sub menu and select which sources you require. Press “Enter” to finalize the selection. The projector will not search for inputs that are not selected.

Source Lock

- On: The projector will only search current input connection.
- Off: The projector will search for other signals if the current input signal is lost.

High Altitude

When “On” is selected, the fans will spin faster. This feature is useful in high altitude areas where the air is thin.

Information Hide

- On: Choose “On” to hide the info message.
- Off: Choose “Off” to show the “searching” message.

Keypad Lock

When the keypad lock function is “On”, the control panel will be locked however, the projector can be operated by the remote control. By selecting “Off”, you will be able to reuse the control panel.

Note

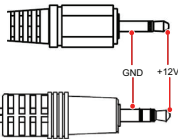
- *To turn off the keypad lock, press and hold “Enter” key on top of the projector for 5 seconds.*

Test Pattern

Display a test pattern. There are Grid, White pattern and None.

12V Trigger

Choose the setting from On / Off to Auto 3D to set 12V Trigger.



Note

- *12V Trigger A Relay Connector support 12V, 250mA. 3.5mm Mini Jack.*

IR Function

Choose the setting from On / Front / Back to Off and then choose "Yes" to apply the selection.

Background Color

Use this feature to display a “Black”, “Red”, “Blue”, “Green” or “White”, screen when no signal is available.

Remote Settings

Allow user to define a short cut key on the remote control, and the function item is selected in OSD menu.

Advanced

Direct Power On

Choose “On” to activate Direct Power mode. The projector will automatically power on when AC power is supplied, without pressing the “ ϕ ” key on the projector control panel or on the remote control.

Signal Power On

If Signal Power On is activated, the projector will turn on automatically when VGA signal is detected.

Auto Power Off (min)

Sets the countdown timer interval. The countdown timer will start, when there is no signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

Sleep Timer (min)

Sets the countdown timer interval. The countdown timer will start, with or without a signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

Quick Resume

If the projector is accidentally turned off, this feature allows the projector to be instantly powered on again within 100 seconds of power down.

Power Mode (Standby)

Set whether the **VGA-OUT** function works when the projector is in standby (powered off but connected to AC power).

- Eco: The **VGA-OUT** and **AUDIO-OUT** functions will not work when the projector is in standby.
- Active: The **VGA-OUT** and **AUDIO-OUT** functions will work when the projector is in standby.

Note

- *When Power mode (Standby) is set to Eco (<0.5W), the VGA output, Signal Power On, Audio pass-through will be deactivated when the projector is in standby.*

Lamp Settings

Lamp Hours

Display the projection time.

Lamp Reminder

Choose this function to show or to hide the warning message when the changing lamp message is displayed.

Lamp Mode

- Bright: Choose "Bright" to increase the brightness.
- Eco.: Choose "Eco." to dim the projector lamp which will lower power consumption and extend the lamp life.

Lamp Reset

Reset the lamp hour counter after replacing the lamp.

Optional Filter Settings

Optional Filter Installed

Choose "Yes" if an optional dust filter is installed.

Filter Usage Hours

Display the dust filter's elapsed operating time (in hours).

Filter Reminder

Sets a filter reminder if timer is up.

Filter Reset

Reset the dust filter hour counter after replacing the dust filter.

Reset

Choose "Yes" to return the display parameters on all menus to the factory default settings.

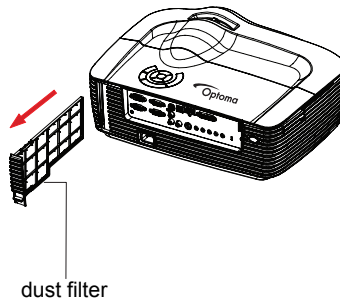
Appendix

Replacing the Dust Filter

Be sure to follow the steps to replace the dust filter.

☞ **The dust filter should be cleaned or replaced periodically (suggest after every 500 hours or 3 months of use). If it is not cleaned periodically, it can become clogged with dust and prevent the projector from being ventilated properly. This can cause over heating and damage the projector. If the projector is used in a dusty environment, be sure to cleaned or replaced the dust filter more frequently.**

1. Remove the dust filter, located at the rear side of the projector, by pulling it out as the illustration.



2. Clean the dust filter.
 - To clean the dust filter, you are advised to use a small vacuum cleaner designed for computers and other office equipment.
 - If the dust filter is torn, replace it.
3. **Turn on the projector, then press “Menu”, go to **OPTIONS > Optional Filter > Optional Filter Installed and select “Yes”.****
4. Turn on the projector, then press “Menu”, go to **OPTIONS > Optional Filter > Optional Filter Installed** and select “No” when you pull out the dust filter and would not use it again.

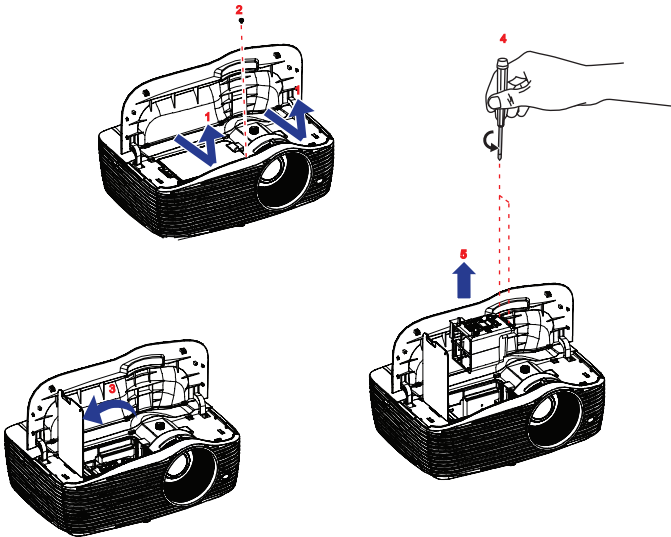
Replacing the Lamp

As the projector operates over time, the brightness of the projector lamp gradually decreases and the lamp becomes more susceptible to breakage. We recommend replacing the lamp if a warning message is displayed. Do not attempt to replace the lamp yourself. Contact the qualified service personnel for replacement.

Note

- *The lamp is extremely hot right after turning off the projector. If you touch the lamp, you may scald your finger. When you replace the lamp, wait for at least 45 minutes for the lamp to cool down.*
- *Do not touch the lamp glass at any time. The lamp may explode due to improper handling, including the touching of the lamp glass.*
- *Lamp lifetime may differ from lamp to lamp and according to the environment of use. There is no guarantee of the same lifetime for each lamp. Some lamps may fail or terminate their lifetime in a shorter period of time than other similar lamps.*
- *A lamp may explode as a result of vibration, shock or degradation as a result of hours of use as its lifetime draws to an end. Risk of explosion may differ according to the environment or conditions in which the projector and lamp are being used.*
- *Wear protective gloves and eyeglasses when fixing or detaching the lamp.*
- *Faster on-off-cycles will damage the lamp and reduce lamp life. Wait at least for 5 minutes to turn off the projector after powering on.*
- *Do not operate the lamp in proximity to paper, cloth, or other combustible material nor cover it with such materials.*
- *Do not operate the lamp in an atmosphere containing an inflammable substance, such as thinner.*
- *Thoroughly ventilate the area or the room when operating the lamp in an oxygen atmosphere (in the air). If ozone is inhaled, it could cause headaches, nausea, dizziness, and other symptoms.*
- *The inorganic mercury is involved in the lamp. If the lamp bursts, the mercury inside the lamp will be exposed. Leave the area immediately if the lamp shatters while being operated and ventilate the area for at least 30 minutes in order to avoid the inhalation of mercury fumes. Otherwise it could be harmful to user's health.*

1. Turn off the projector.
2. Unplug the power cord.
3. Open the top cover, by sliding the top cover forward, and lifting the top cover off.1
4. Remove the screw on the lamp cover and then open it up. 2 & 3
5. Loosen the screws from the lamp module. 4
6. Raise the handle and pull out the lamp module slowly and carefully. 5
7. Insert the new lamp module into the projector and tighten the screws.
8. Replace the lamp cover and tighten the screw.
9. Replace the top cover by (a) aligning the cover (b) sliding it toward the back and (c) locking it back into place.
10. Turn on the projector. If the lamp does not turn on after the warm-up period, try reinstalling the lamp.
11. Reset the lamp hour. Refer to the “**OPTIONS > Lamp Settings**” menu.

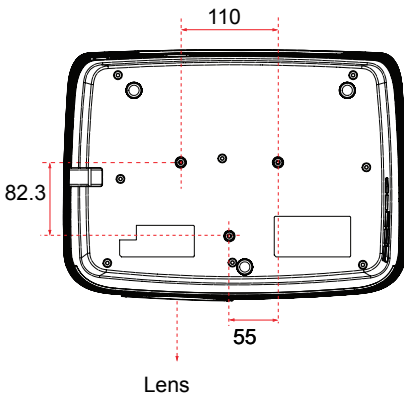


Note

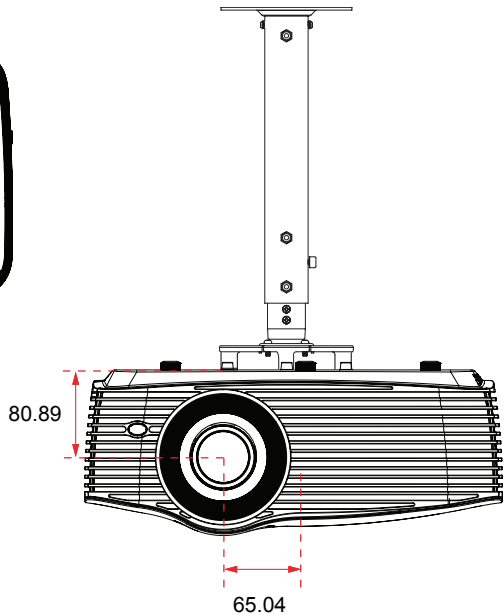
- *Dispose the used lamp according to local regulations.*
- *Ensure that screws are tightened properly. Screws not tightened fully may result in injury or accidents.*
- *Since the lamp is made of glass, do not drop the unit and do not scratch the glass.*
- *Do not reuse the old lamp. This could cause the lamp to explode.*
- *Be sure to turn off the projector and unplug the AC power cord before replacing the lamp.*
- *Do not use the projector with the lamp cover removed.*

Ceiling mount installation

1. To prevent damage to your projector, please use the Optoma ceiling mount.
2. If you wish to use a third party ceiling mount kit, please ensure the screws used to attach a mount to the projector meet the following specifications:
 - Screw type: M4*3
 - Maximum screw length: 10mm
 - Minimum screw length: 8mm



Unit: mm



Note

- **Please note that damage resulting from incorrect installation will void the warranty.**



Warning

1. If you buy a ceiling mount from another company, please be sure to use the correct screw size. Screw length will vary depending on the thickness of the mounting plate.
2. Be sure to keep at least 10 cm gap between the ceiling and the bottom of the projector.
3. Avoid installing the projector near a heat source.

Compatibility Modes

Computer Compatibility

| Signal | Resolution | Refresh Rate(Hz) | Notes for Mac |
|-------------|----------------|-----------------------------|-----------------|
| VGA | 640 X 480 | 60/67/72/85 | Mac 60/72/85 |
| SVGA | 800 X 600 | 60(**)/72/85/120(**) | Mac 60/72/85 |
| XGA | 1024 X 768 | 60(**)/70/75/85/ 120(**) | Mac 60/70/75/85 |
| HDTV(720P) | 1280 X 720 | 50/60(**)/120(**) | Mac 60 |
| WXGA | 1280 X 768 | 60/75/85 | Mac 60/75/85 |
| | 1280 X 800 | 60(**)/120(**) | Mac 60 |
| | 1366 X 768 | 60 | Mac 60 |
| WXGA+ | 1440 X 900 | 60 | Mac 60 |
| SXGA | 1280 X 1024 | 60 | Mac 60/75 |
| SXGA+ | 1400 X 1050 | 60 | |
| UXGA | 1600 X 1200 | 60 | |
| HDTV(1080p) | 1920 X 1080 | 60 | Mac 60 |
| WUXGA | 1920 X 1200(*) | 60 | Mac 60 |

(*)1920 x 1200 @60hz only support reduced blanking

(**) 3D timing for True 3D projector

Input Signal for HDMI

| Signal | Resolution | Refresh Rate(Hz) | Notes for Mac |
|-----------------|---------------|-----------------------------|-----------------|
| VGA | 640 X 480 | 60 | Mac 60/72/85 |
| SVGA | 800 X 600 | 60(**)/72/85/120(**) | Mac 60/72/85 |
| XGA | 1024 X 768 | 60(**)/70/75/85/ 120(**) | Mac 60/70/75/85 |
| SDTV(480I) | 640 X 480 | 60 | |
| SDTV(480P) | 640 X 480 | 60 | |
| SDTV(576I) | 720 X 576 | 50 | |
| SDTV(576P) | 720 X 576 | 50 | |
| WSVGA(1024X600) | 1024 X 600 | 60 | |
| HDTV(720p) | 1280 X 720 | 50(**)/60/120(**) | Mac 60 |
| WXGA | 1280 X768 | 60/75/85 | Mac 75 |
| | 1280 X800 | 60(**)/120(**) | Mac 60 |
| | 1366 x 768 | 60 | Mac 60 |
| WXGA+ | 1440 x 900 | 60 | Mac 60 |
| SXGA | 1280 X1024 | 60/75/85 | Mac 60/75 |
| SXGA+ | 1400 X1050 | 60 | |
| UXGA | 1600 X 1200 | 60 | |
| HDTV(1080I) | 1920 X1080 | 50/60 | |
| HDTV(1080p) | 1920 X1080 | 24/30/50/60 | Mac 60 |
| WUXGA | 1920 X1200(*) | 60 | Mac 60 |

(*)1920 x 1200 @60hz only support reduced blanking

(**)3D timing for True 3D projector

True 3D Video Compatibility table

| | | | | |
|-------------------|-----------------------|--|----------------------|-------------------------------|
| Input Resolutions | HDMI 1.4a 3D Input | Input timing | | |
| | | 1280 X 720P @ 50Hz | Top - and - Bottom | |
| | | 1280 X 720P @ 60Hz | Top - and - Bottom | |
| | | 1280 X 720P @ 50Hz | Frame packing | |
| | | 1280 X 720P @ 60Hz | Frame packing | |
| | | 1920 X 1080i @50 Hz | Side- by-Side (Half) | |
| | | 1920 X 1080i @60 Hz | Side- by-Side (Half) | |
| | | 1920 X 1080P @24 Hz | Top - and - Bottom | |
| | 1920 X 1080P @24 Hz | Frame packing | | |
| | HDMI 1.3 | 1920 x 1080i @ 50Hz 1920 x1080i @ 60Hz 1280 x 720P @ 50Hz 1280 x 720P @60Hz | Side-by-Side(Half) | SBS mode is on |
| | | 1920 x 1080i @ 50Hz 1920 x1080i @ 60Hz 1280 x 720P @ 50Hz 1280 x 720P @60Hz | Top-and-Bottom | TAB mode is on |
| | | 480i | HQFS | 3D format is Frame sequential |

- *If 3D input is 1080p@24hz, the DMD should replay with integral multiple with 3D mode*
- *Support NVIDIA 3DTV Play if there is no patent fee from Optoma*
- *1080i@25hz and 720p@50hz will run in 100hz; other 3D timing will run in 120hz.*
- *1080P@24hz will run 144Hz.*

Video Compatibility

| | |
|-------|---|
| NTSC | NTSC M/J, 3.58MHz, 4.43MHz |
| PAL | PAL B/D/G/H/I/M/N, 4.43MHz |
| SECAM | SECAM B/D/G/K/K1/L, 4.25/4.4 MHz |
| SDTV | 480i/p, 576i/p |
| HDTV | 720p(50/60Hz), 1080i(50/60Hz), 1080P(50/60Hz) |

IR Code

| Key Legend | Key position | NEC format | Customer code | | Key code | |
|--------------|--------------|------------|---------------|--------|----------|--------|
| | | | Byte 1 | Byte 2 | Byte 3 | Byte 4 |
| ON (Power) | 1 | Format 1 | 32 | CD | 02 | FD |
| -- | 2 | -- | -- | -- | -- | -- |
| -- | 3 | -- | -- | -- | -- | -- |
| OFF(Power) | 4 | Format 1 | 32 | CD | 2E | D1 |
| User1 | 5 | Format 1 | 32 | CD | 36 | C9 |
| User2 | 6 | Format 1 | 32 | CD | 65 | 9A |
| User3 | 7 | Format 1 | 32 | CD | 66 | 99 |
| Brightness | 8 | Format 1 | 32 | CD | 41 | BE |
| Contrast | 9 | Format 1 | 32 | CD | 42 | BD |
| Mode | 10 | Format 1 | 32 | CD | 05 | FA |
| Keystone | 11 | Format 1 | 32 | CD | 07 | F8 |
| Aspect ratio | 12 | Format 1 | 32 | CD | 64 | 9B |
| 3D | 13 | Format 1 | 32 | CD | 89 | 76 |
| Mute | 14 | Format 1 | 32 | CD | 52 | AD |
| DB | 15 | Format 1 | 32 | CD | 44 | BB |
| Sleep Timer | 16 | Format 1 | 32 | CD | 63 | 9C |
| Vol + ▲ | 17 | Format 2 | 32 | CD | 11 | EE |
| Source ◀ | 18 | Format 2 | 32 | CD | 10 | EF |
| ENTER | 19 | Format 1 | 32 | CD | 0F | F0 |
| Re-sync ▶ | 20 | Format 2 | 32 | CD | 12 | ED |
| Vol - ▼ | 21 | Format 2 | 32 | CD | 14 | EB |
| Menu | 22 | Format 1 | 32 | CD | 0E | F1 |
| -- | 23 | -- | -- | -- | -- | -- |
| -- | 24 | -- | -- | -- | -- | -- |
| -- | 25 | -- | -- | -- | -- | -- |
| HDMI1 | 26 | Format 1 | 32 | CD | 16 | E9 |
| HDMI2 | 27 | Format 1 | 32 | CD | 30 | CF |
| -- | 28 | -- | -- | -- | -- | -- |
| VGA1 | 29 | Format 1 | 32 | CD | 1B | E4 |
| VGA2 | 30 | Format 1 | 32 | CD | 1E | E1 |
| Video | 31 | Format 1 | 32 | CD | 1C | E3 |
| YPbPr | 32 | Format 1 | 32 | CD | 17 | E8 |

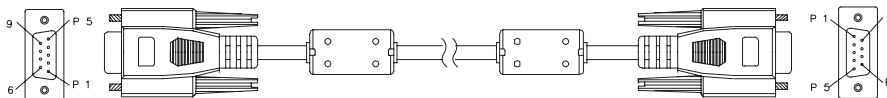


Note

- When AV Mute is pressed, the power consumption of lamp should become 30% if projector supports Dynamic Eco / Image Care.
- HDMI1 button should switch HDMI and DVI-D input source; Video button should switch Composite and S-Video input source.
- Since HD36 doesn't have HDMI2 and YPbPr; HDMI2 button will be no function and YPbPr button will be no function.
- Please see OSD for User1/User2/User3 definition.
- Security password should be set through arrows/enter button to choose number key in OSD menu.

RS232 Commands and Protocol Function List

RS232 Pin Assignments



D-Sub 9 pin

(from the projector side)

| | |
|---|------|
| 1 | 1 CD |
| 2 | RXD |
| 3 | TXD |
| 4 | DTR |
| 5 | GND |
| 6 | DSR |
| 7 | RTS |
| 8 | CTS |
| 9 | RI |

(from the cable side)

| C1 | COLOR | C2 |
|-------|--------|-------|
| 1 | Black | 1 |
| 2 | Brown | 3 |
| 3 | Red | 2 |
| 4 | Orange | 6 |
| 5 | Yellow | 5 |
| 6 | Green | 4 |
| 7 | Blue | 8 |
| 8 | Purple | 7 |
| 9 | White | 9 |
| SHELL | DW | SHELL |

RS232 Protocol Function List

| | |
|-------------------------|---------|
| Baud Rate | 9600 |
| Data Bits | 8 |
| Parity | None |
| Stop Bits | 1 |
| Flow Control | None |
| UART16550 FIFO | Disable |
| Projector Return (Pass) | P |
| Projector Return (Fail) | F |

| Lead Code | Projector ID | | Command ID | | | space | variable | carriage return |
|-----------------------|----------------------------------|---|---|---|---|-----------|------------------------|-----------------------|
| ~ | X | X | X | X | X | | n | CR |
| Fix code One Digit | Set in OSD 00~99 Two Digit | | Defined by Optoma 2 or 3 Digit See the Follow content | | | One Digit | Per item Definition | Fix code One digit |

Note

- *To also include AMX beacon signal in RS232 protocol*
- *In basic terms, AMX controllers will issue a poll periodically to detect 3rd party devices connected to the RS232 port (in this case Optoma). The poll is "AMX" in ASCII followed by a carriage return 'r'.*
- *There is a <CR> after all ASCII commands.*
- *0D is the HEX code for <CR> in ASCII code*

SEND to projector

| 232 ASCII Code | HEX Code | Function | Description |
|----------------|------------------------------|------------------------|--|
| --XX00 1 | 7E 30 30 30 30 20 31 0D | Power ON | |
| --XX00 0 | 7E 30 30 30 30 20 30 0D | Power OFF | (0/2 for backward compatible) |
| --XX00 1 ~nnnn | 7E 30 30 30 30 20 31 20 a 0D | Power ON with Password | ~nnnn = -0000 (a=7E 30 30 30 30) ~9999 (a=7E 39 39 39 39) |
| --XX01 1 | 7E 30 30 30 31 20 31 0D | Resync | |
| --XX02 1 | 7E 30 30 30 32 20 31 0D | AV Mute | On |
| --XX02 0 | 7E 30 30 30 32 20 30 0D | | Off (0/2 for backward compatible) |
| --XX03 1 | 7E 30 30 30 33 20 31 0D | Mute | On |
| --XX03 0 | 7E 30 30 30 33 20 30 0D | | Off (0/2 for backward compatible) |
| --XX04 1 | 7E 30 30 30 34 20 31 0D | Freeze | |
| --XX04 0 | 7E 30 30 30 34 20 30 0D | Unfreeze | (0/2 for backward compatible) |
| --XX05 1 | 7E 30 30 30 35 20 31 0D | Zoom Plus | |
| --XX06 1 | 7E 30 30 30 36 20 31 0D | Zoom Minus | |
| --XX12 1 | 7E 30 30 31 32 20 31 0D | Direct Source Commands | HDMI |
| --XX12 3 | 7E 30 30 31 32 20 33 0D | | DVI-I |
| --XX12 5 | 7E 30 30 31 32 20 35 0D | | VGA1 |
| --XX12 6 | 7E 30 30 31 32 20 36 0D | | VGA 2 |
| --XX12 8 | 7E 30 30 31 32 20 38 0D | | VGA1 Component |
| --XX12 9 | 7E 30 30 31 32 20 39 0D | | S-Video |
| --XX12 10 | 7E 30 30 31 32 20 31 30 0D | | Video |
| --XX12 13 | 7E 30 30 31 32 20 31 33 0D | | VGA 2 Component |
| --XX20 1 | 7E 30 30 32 30 20 31 0D | Display Mode | Cinema |
| --XX20 4 | 7E 30 30 32 30 20 34 0D | | Reference |
| --XX20 3 | 7E 30 30 32 30 20 33 0D | | Vivid |
| --XX20 2 | 7E 30 30 32 30 20 32 0D | | Bright |
| --XX20 9 | 7E 30 30 32 30 20 39 0D | | 3D |
| --XX20 10 | 7E 30 30 32 30 20 31 30 0D | | Game |
| --XX20 5 | 7E 30 30 32 30 20 35 0D | | User |
| --XX20 14 | 7E 30 30 32 30 20 31 34 0D | | ISF Day |
| --XX20 15 | 7E 30 30 32 30 20 31 35 0D | | ISF Night |
| --XX21 n | 7E 30 30 32 31 20 a 0D | Brightness | n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| --XX22 n | 7E 30 30 32 32 20 a 0D | Contrast | n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| --XX23 n | 7E 30 30 32 33 20 a 0D | Sharpness | n = 1 (a=31) ~ 15 (a=31 35) |
| --XX24 n | 7E 30 30 32 34 20 a 0D | Color Settings/White | Red n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| --XX25 n | 7E 30 30 32 35 20 a 0D | | Green n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| --XX26 n | 7E 30 30 32 36 20 a 0D | | Blue n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| --XX33 1 | 7E 30 30 33 33 20 31 0D | | Reset |
| --XX34 n | 7E 30 30 33 34 20 a 0D | BrilliantColor™ | n = 1 (a=31) ~ 10 (a=31 30) |
| --XX191 0 | 7E 30 30 31 39 31 20 30 0D | DynamicBlack | Off |
| --XX191 1 | 7E 30 30 31 39 31 20 31 0D | | On |
| --XX196 n | 7E 30 30 31 39 36 20 a 0D | Noise Reduction | n = 0 (a=30) ~ 10 (a=31 30) |
| --XX35 1 | 7E 30 30 33 35 20 31 0D | Gamma | Film |
| --XX35 2 | 7E 30 30 33 35 20 32 0D | | Video |
| --XX35 3 | 7E 30 30 33 35 20 33 0D | | Graphics |
| --XX35 4 | 7E 30 30 33 35 20 34 0D | | 2.2 |
| --XX35 5 | 7E 30 30 33 35 20 35 0D | | 1.8 |
| --XX35 6 | 7E 30 30 33 35 20 36 0D | | 2.0 |
| --XX35 7 | 7E 30 30 33 35 20 37 0D | | 2.6 |
| --XX36 4 | 7E 30 30 33 36 20 34 0D | Color Temp. | Warm(D55) |
| --XX36 1 | 7E 30 30 33 36 20 31 0D | | Standard(D65) |
| --XX36 2 | 7E 30 30 33 36 20 32 0D | | Cool(D75) |
| --XX36 3 | 7E 30 30 33 36 20 33 0D | | Cold(D83) |
| --XX37 1 | 7E 30 30 33 37 20 31 0D | Color Space | Auto |
| --XX37 2 | 7E 30 30 33 37 20 32 0D | | RGB\ RGB(0-255) |
| --XX37 3 | 7E 30 30 33 37 20 33 0D | | YUV |
| --XX37 4 | 7E 30 30 33 37 20 34 0D | | RGB(16 - 235) |
| --XX73 n | 7E 30 30 37 33 20 a 0D | Signal | Frequency n = -5 (a=2D 35) ~ 5 (a=35) By signal |
| --XX91 1 | 7E 30 30 39 31 20 31 0D | | Automatic On |
| --XX91 0 | 7E 30 30 39 31 20 30 0D | | Off |
| --XX74 n | 7E 30 30 37 34 20 a 0D | | Phase n = 0 (a=30) ~ 31 (a=33 31) By signal |
| --XX75 n | 7E 30 30 37 35 20 a 0D | | H. Position n = -5 (a=2D 35) ~ 5 (a=35) By timing |
| --XX76 n | 7E 30 30 37 36 20 a 0D | | V. Position n = -5 (a=2D 35) ~ 5 (a=35) By timing |
| --XX45 n | 7E 30 30 34 34 20 a 0D | Color (Saturation) | n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| --XX44 n | 7E 30 30 34 35 20 a 0D | Tint | n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| --XX60 1 | 7E 30 30 36 30 20 31 0D | Format | 4:3 |
| --XX60 2 | 7E 30 30 36 30 20 32 0D | | 16:9 |
| --XX60 5 | 7E 30 30 36 30 20 35 0D | | LBX |
| --XX60 6 | 7E 30 30 36 30 20 36 0D | | Native |
| --XX60 7 | 7E 30 30 36 30 20 37 0D | | Auto |
| --XX60 9 | 7E 30 30 36 30 20 39 0D | | Superwide |
| --XX61 n | 7E 30 30 36 31 20 a 0D | Edge mask | n = 0 (a=30) ~ 10 (a=31 30) |
| --XX62 n | 7E 30 30 36 32 20 a 0D | Zoom | n = -5 (a=2D 35) ~ 25 (a=32 35) |
| --XX63 n | 7E 30 30 36 33 20 a 0D | H Image Shift | n = -100 (a=2D 31 30 30) ~ 100 (a=31 30 30) |
| --XX64 n | 7E 30 30 36 34 20 a 0D | V Image Shift | n = -100 (a=2D 31 30 30) ~ 100 (a=31 30 30) |
| --XX66 n | 7E 30 30 36 36 20 a 0D | V Keystone | n = -40 (a=2D 34 30) ~ 40 (a=34 30) |
| --XX69 1 | 7E 30 30 36 39 20 31 0D | Auto Keystone | On |

| | | | |
|---------------|--------------------------------------|-------------------|--|
| -XX69 0 | 7E 30 30 36 39 20 30 0D | Auto Keystone | Off |
| -XX230 0 | 7E 30 30 32 33 30 20 30 0D | 3D Mode | Off |
| -XX230 1 | 7E 30 30 32 33 30 20 31 0D | 3D Mode | DLP-Link |
| -XX230 2 | 7E 30 30 32 33 30 20 32 0D | 3D Mode | VESA 3D |
| -XX400 0 | 7E 30 30 34 30 20 30 0D | 3D--2D | 3D |
| -XX400 1 | 7E 30 30 34 30 20 31 0D | | L |
| -XX400 2 | 7E 30 30 34 30 20 32 0D | | R |
| -XX405 0 | 7E 30 30 34 30 35 20 30 0D | 3D Format | Auto |
| -XX405 1 | 7E 30 30 34 30 35 20 31 0D | | SBS |
| -XX405 2 | 7E 30 30 34 30 35 20 32 0D | | Top and Bottom |
| -XX405 3 | 7E 30 30 34 30 35 20 33 0D | | Frame sequential |
| -XX231 0 | 7E 30 30 32 33 31 20 30 0D | 3D Sync Invert | On |
| -XX231 1 | 7E 30 30 32 33 31 20 31 0D | 3D Sync Invert | Off |
| <hr/> | | | |
| -XX70 1 | 7E 30 30 37 30 20 31 0D | Language | English |
| -XX70 2 | 7E 30 30 37 30 20 32 0D | | German |
| -XX70 3 | 7E 30 30 37 30 20 33 0D | | French |
| -XX70 4 | 7E 30 30 37 30 20 34 0D | | Italian |
| -XX70 5 | 7E 30 30 37 30 20 35 0D | | Spanish |
| -XX70 6 | 7E 30 30 37 30 20 36 0D | | Portuguese |
| -XX70 7 | 7E 30 30 37 30 20 37 0D | | Polish |
| -XX70 8 | 7E 30 30 37 30 20 38 0D | | Dutch |
| -XX70 9 | 7E 30 30 37 30 20 39 0D | | Swedish |
| -XX70 10 | 7E 30 30 37 30 20 31 30 0D | | Norwegian/Danish |
| -XX70 11 | 7E 30 30 37 30 20 31 31 0D | | Finnish |
| -XX70 12 | 7E 30 30 37 30 20 31 32 0D | | Greek |
| -XX70 13 | 7E 30 30 37 30 20 31 33 0D | | Traditional Chinese |
| -XX70 14 | 7E 30 30 37 30 20 31 34 0D | | Simplified Chinese |
| -XX70 15 | 7E 30 30 37 30 20 31 35 0D | | Japanese |
| -XX70 16 | 7E 30 30 37 30 20 31 36 0D | | Korean |
| -XX70 17 | 7E 30 30 37 30 20 31 37 0D | | Russian |
| -XX70 18 | 7E 30 30 37 30 20 31 38 0D | | Hungarian |
| -XX70 19 | 7E 30 30 37 30 20 31 39 0D | | Czechoslovak |
| -XX70 20 | 7E 30 30 37 30 20 32 30 0D | | Arabic |
| -XX70 21 | 7E 30 30 37 30 20 32 31 0D | | Thai |
| -XX70 22 | 7E 30 30 37 30 20 32 32 0D | | Turkish |
| -XX70 23 | 7E 30 30 37 30 20 32 33 0D | | Farsi |
| -XX70 25 | 7E 30 30 37 30 20 32 33 0D | | Vietnamese |
| -XX70 26 | 7E 30 30 37 30 20 32 33 0D | | Indonesian |
| -XX70 27 | 7E 30 30 37 30 20 32 33 0D | | Romanian |
| <hr/> | | | |
| -XX71 1 | 7E 30 30 37 31 20 31 0D | Projection | Front-Desktop |
| -XX71 2 | 7E 30 30 37 31 20 32 0D | | Rear-Desktop |
| -XX71 3 | 7E 30 30 37 31 20 33 0D | | Front-Ceiling |
| -XX71 4 | 7E 30 30 37 31 20 34 0D | | Rear-Ceiling |
| <hr/> | | | |
| -XX72 1 | 7E 30 30 37 32 20 31 0D | Menu Location | Top Left |
| -XX72 2 | 7E 30 30 37 32 20 32 0D | | Top Right |
| -XX72 3 | 7E 30 30 37 32 20 33 0D | | Centre |
| -XX72 4 | 7E 30 30 37 32 20 34 0D | | Bottom Left |
| -XX72 5 | 7E 30 30 37 32 20 35 0D | | Bottom Right |
| -XX77 n | 7E 30 30 37 37 20 aabccc 0D Security | Security Timer | Month/Day/Hour n = mm/dd/hhmm = 00 (aa=30 30) ~ 12 dd = 00 (bb=30 30) ~ 30 (bb=33 30) hh = 00 (cc=30 30) ~ 24 (cc=32 34) |
| (aa=31 32) | | | |
| -XX78 1 | 7E 30 30 37 38 20 31 0D | Security Settings | Enable |
| -XX78 0 ~nnnn | 7E 30 30 37 38 20 32 20 a 0D | | Disable(0/2 for backward compatible) ~nnnn = ~0000 (a=7E 30 30 30 30) |
| | | | ~9999 (a=7E 39 39 39 39) |
| <hr/> | | | |
| -XX79 n | 7E 30 30 37 39 20 a 0D | Projector ID | n = 00 (a=30 30) ~ 99 (a=39 39) |
| <hr/> | | | |
| -XX80 1 | 7E 30 30 38 30 20 31 0D | Mute | On |
| -XX80 0 | 7E 30 30 38 30 20 30 0D | | Off (0/2 for backward compatible) |
| -XX310 0 | 7E 30 33 31 30 20 30 0D | Internal Speaker | Off |
| -XX310 1 | 7E 30 33 31 30 20 31 0D | | On |
| -XX81 n | 7E 30 30 38 31 20 a 0D | Volume(Audio) | n = 0 (a=30) ~ 10 (a=31 30) |
| -XX83 n | 7E 30 30 39 33 20 a 0D | Volume(Mic) | n = 0 (a=30) ~ 10 (a=31 30) |
| -XX89 0 | 7E 30 30 38 39 20 30 0D | Audio Input | Default |
| -XX89 1 | 7E 30 30 38 39 20 31 0D | | Audio1 |
| -XX89 3 | 7E 30 30 38 39 20 33 0D | | Audio2 |
| -XX89 4 | 7E 30 30 38 39 20 34 0D | | Audio3 |
| <hr/> | | | |
| -XX82 1 | 7E 30 30 38 32 20 31 0D | Logo | Default |
| -XX82 2 | 7E 30 30 38 32 20 32 0D | | User |
| -XX82 3 | 7E 30 30 38 32 20 33 0D | | Neutral |
| -XX83 1 | 7E 30 30 38 33 20 31 0D | Logo Capture | |
| -XX88 0 | 7E 30 30 38 38 20 30 0D | Closed Captioning | Off |
| -XX88 1 | 7E 30 30 38 38 20 31 0D | | cc1 |
| -XX88 2 | 7E 30 30 38 38 20 32 0D | | cc2 |
| <hr/> | | | |
| -XX100 1 | 7E 30 30 31 30 20 31 0D | Source Lock | On |
| -XX100 0 | 7E 30 30 31 30 20 30 0D | | Off (0/2 for backward compatible) |
| -XX101 1 | 7E 30 30 31 30 21 30 0D | High Altitude | On |
| -XX101 0 | 7E 30 30 31 30 21 30 0D | | Off (0/2 for backward compatible) |
| -XX102 1 | 7E 30 30 31 30 32 20 31 0D | Information Hide | On |
| -XX102 0 | 7E 30 30 31 30 32 20 30 0D | | Off (0/2 for backward compatible) |
| -XX103 1 | 7E 30 30 31 30 33 20 31 0D | Keypad Lock | On |
| -XX103 0 | 7E 30 30 31 30 33 20 30 0D | | Off (0/2 for backward compatible) |

| | | | |
|-------------------------------|-------------------------------|----------------------------|---|
| --XX195 0 | 7E 30 30 31 39 35 20 30 0D | Test Pattern | None |
| --XX195 1 | 7E 30 30 31 39 35 20 31 0D | | Grid |
| --XX195 2 | 7E 30 30 31 39 35 20 32 0D | | White Pattern |
| --XX192 0 | 7E 30 30 31 39 32 20 30 0D | 12V Trigger | Off |
| --XX192 1 | 7E 30 30 31 39 32 20 31 0D | | On |
| --XX192 3 | 7E 30 30 31 39 32 20 33 0D | | Auto 3D |
| --XX11 0 | 7E 30 30 31 31 20 30 0D | IR Function | Off |
| --XX11 1 | 7E 30 30 31 31 20 31 0D | | On |
| --XX11 2 | 7E 30 30 31 31 20 32 0D | | Front |
| --XX11 3 | 7E 30 30 31 31 20 33 0D | | Back |
| <hr/> | | | |
| --XX104 1 | 7E 30 30 31 30 34 20 31 0D | Background Color | Blue |
| --XX104 2 | 7E 30 30 31 30 34 20 32 0D | | Black |
| --XX104 3 | 7E 30 30 31 30 34 20 33 0D | | Red |
| --XX104 4 | 7E 30 30 31 30 34 20 34 0D | | Green |
| --XX104 5 | 7E 30 30 31 30 34 20 35 0D | | White |
| --XX117 1 | 7E 30 30 31 31 37 20 31 0D | Remote Settings/User1 | DVI-D |
| --XX117 2 | 7E 30 30 31 31 37 20 32 0D | | S-VIDEO |
| --XX117 3 | 7E 30 30 31 31 37 20 33 0D | | Color Settings |
| --XX117 4 | 7E 30 30 31 31 37 20 34 0D | | Color Temp. |
| --XX117 5 | 7E 30 30 31 31 37 20 35 0D | | Gamma |
| --XX117 6 | 7E 30 30 31 31 37 20 36 0D | | Test Plan |
| --XX117 7 | 7E 30 30 31 31 37 20 37 0D | | AV Mute |
| --XX118 1 | 7E 30 30 31 31 38 20 31 0D | Remote Settings/User2 | DVI-D |
| --XX118 2 | 7E 30 30 31 31 38 20 32 0D | | S-VIDEO |
| --XX118 3 | 7E 30 30 31 31 38 20 33 0D | | Color Settings |
| --XX118 4 | 7E 30 30 31 31 38 20 34 0D | | Color Temp. |
| --XX118 5 | 7E 30 30 31 31 38 20 35 0D | | Gamma |
| --XX118 6 | 7E 30 30 31 31 38 20 36 0D | | Test Plan |
| --XX118 7 | 7E 30 30 31 31 38 20 37 0D | | AV Mute |
| --XX119 1 | 7E 30 30 31 31 39 20 31 0D | Remote Settings/User3 | DVI-D |
| --XX119 2 | 7E 30 30 31 31 39 20 32 0D | | S-VIDEO |
| --XX119 3 | 7E 30 30 31 31 39 20 33 0D | | Color Settings |
| --XX119 4 | 7E 30 30 31 31 39 20 34 0D | | Color Temp. |
| --XX119 5 | 7E 30 30 31 31 39 20 35 0D | | Gamma |
| --XX119 6 | 7E 30 30 31 31 39 20 36 0D | | Test Plan |
| --XX119 7 | 7E 30 30 31 31 39 20 37 0D | | AV Mute |
| <hr/> | | | |
| --XX105 1 | 7E 30 30 31 30 35 20 31 0D | Advanced | Direct Power On On |
| --XX105 0 | 7E 30 30 31 30 35 20 30 0D | | Off (0/2 for backward compatible) |
| --XX113 0 | 7E 30 30 31 31 33 20 30 0D | | Signal Power On Off |
| --XX113 1 | 7E 30 30 31 31 33 20 31 0D | | On |
| --XX106 n | 7E 30 30 31 30 36 20 a D 30) | | Auto Power Off (min) n = 0 (a=30) ~ 180 (a=31 38) |
| (5 minutes for each step). | | | |
| --XX107 n | 7E 30 30 31 30 37 20 a D 30) | | Sleep Timer (min) n = 0 (a=30) ~ 990 (a=31 39) |
| (30 minutes for each step). | | | |
| --XX115 1 | 7E 30 30 31 31 35 20 31 0D | | Quick Resume On |
| --XX115 0 | 7E 30 30 31 31 35 20 30 0D | | Off (0/2 for backward compatible) |
| --XX114 1 | 7E 30 30 31 31 34 20 31 0D | | Power Mode(Standby) Eco.(≤0.5W) |
| --XX114 0 | 7E 30 30 31 31 34 20 30 0D | | Active (0/2 for backward compatible) |
| <hr/> | | | |
| --XX109 1 | 7E 30 30 31 30 39 20 31 0D | Lamp Reminder | On |
| --XX109 0 | 7E 30 30 31 30 39 20 30 0D | | Off (0/2 for backward compatible) |
| --XX110 1 | 7E 30 30 31 31 30 20 31 0D | Lamp Mode | Bright |
| --XX110 2 | 7E 30 30 31 31 30 20 32 0D | | Eco |
| --XX111 1 | 7E 30 30 31 31 31 20 31 0D | Lamp Reset | Yes |
| --XX111 0 | 7E 30 30 31 31 31 20 30 0D | | No (0/2 for backward compatible) |
| <hr/> | | | |
| --XX320 1 | 7E 30 30 33 32 20 31 0D | Optional Filter Installed | Yes |
| --XX320 0 | 7E 30 30 33 32 20 30 0D | | No (0/2 for backward compatible) |
| --XX322 0 | 7E 30 30 33 32 32 20 30 0D | Filter Reminder | Off |
| --XX322 1 | 7E 30 30 33 32 32 20 31 0D | | 300 hr |
| --XX322 2 | 7E 30 30 33 32 32 20 32 0D | | 500 hr |
| --XX322 3 | 7E 30 30 33 32 32 20 33 0D | | 800 hr |
| --XX322 4 | 7E 30 30 33 32 32 20 34 0D | | 1000 hr |
| --XX323 1 | 7E 30 30 33 32 33 20 31 0D | Filter Reset | Yes |
| --XX323 0 | 7E 30 30 33 32 33 20 30 0D | | No(0/2 for backward compatible) |
| <hr/> | | | |
| --XX112 1 | 7E 30 30 31 31 32 20 31 0D | Reset | Yes |
| <hr/> | | | |
| --XX99 1 | 7E 30 30 39 39 20 31 0D | RS232 Alert Reset | Reset System Alert |
| --XX210 n | 7E 30 30 32 30 30 20 n 0D | Display message on the OSD | n: 1-30 characters |
| <hr/> | | | |
| SEND to emulate Remote | | | |
| --XX140 10 | 7E 30 30 31 34 30 20 31 30 0D | | Up |
| --XX140 11 | 7E 30 30 31 34 30 20 31 31 0D | | Left |
| --XX140 12 | 7E 30 30 31 34 30 20 31 32 0D | | Enter (for projection MENU) |
| --XX140 13 | 7E 30 30 31 34 30 20 31 33 0D | | Right |
| --XX140 14 | 7E 30 30 31 34 30 20 31 34 0D | | Down |
| --XX140 17 | 7E 30 30 31 34 30 20 31 37 0D | | Volume - |

| | | |
|-----------|-------------------------------|------------|
| -XX140 18 | 7E 30 30 31 34 30 20 31 38 0D | Volume + |
| -XX140 19 | 7E 30 30 31 34 30 20 31 39 0D | Brightness |
| -XX140 20 | 7E 30 30 31 34 30 20 32 30 0D | Menu |
| -XX140 47 | 7E 30 30 31 34 30 20 34 37 0D | Source |

SEND from projector automatically

| 232 ASCII Code | HEX Code | Function | Projector Return | Description |
|----------------|----------|----------|------------------|-------------|
|----------------|----------|----------|------------------|-------------|

when Standby/Warming/Cooling/Out of Range/Lamp fail/Fan Lock/Over Temperature/Lamp Hours Running Out/Cover Open

INFO n : 0/1/2/3/4/6/7/8/ = Standby/Warming/Cooling/Out of Range/Lamp fail/Fan Lock/Over Temperature/Lamp Hours Running Out/Cover Open

READ from projector

| 232 ASCII Code | HEX Code | Function | Projector Return | Description |
|----------------|----------|----------|------------------|-------------|
|----------------|----------|----------|------------------|-------------|

| | | | | |
|---|----------------------------|-----------------------|---------------|---|
| -XX121 1 | 7E 30 30 31 32 31 20 31 0D | Input Source Commands | OKn | n : 0/1/2/3/4/5/6/ = None/VGA1/VGA2/Video/S-Video/HDMI/DVI/ |
| -XX122 1 | 7E 30 30 31 32 32 20 31 0D | Software Version | OKdddd | dddd: FW version |
| -XX123 1 | 7E 30 30 31 32 33 20 31 0D | Display Mode | OKn | n : 0/1/2/3/4/5/6/7/8/9 = None/Cinema/Reference/Vivid/ Bright/Game/3D/User/ISF Day/ISF Night |
| -XX124 1 | 7E 30 30 31 32 34 20 31 0D | Power State | OKn | n : 0/1 = Off/On |
| -XX125 1 | 7E 30 30 31 32 35 20 31 0D | Brightness | OKn | |
| -XX126 1 | 7E 30 30 31 32 36 20 31 0D | Contrast | OKn | |
| -XX127 1 | 7E 30 30 31 32 37 20 31 0D | Format | OKn | n : 0/1/2/3/4/5 = 4:3/16:9/LBX/Native/AUTO/Supervide |
| -XX128 1 | 7E 30 30 31 32 38 20 31 0D | Color Temperature | OKn | n : 0/1/2/3 = Warm/Standard/Cool/Cold |
| -XX129 1 | 7E 30 30 31 32 39 20 31 0D | Projection Mode | OKn | n : 0/1/2/3 = Front-Desktop/ Rear-Desktop/ Front-Ceiling/ Rear-Ceiling |
| -XX150 1 | 7E 30 30 31 35 30 20 31 0D | Information | OKabbbccddddd | a : 0/1 = Off/On bbbb: LampHour cc: source 00/01/02/03/04/05/06/07/08/09 = dddd: FW version e : Display mode 0/1/2/3/4/5/6/7/8/9= |
| None/VGA1/VGA2/Video/S-Video/HDMI/DVI | | | | |
| None/Cinema/Reference/Vivid/Bright/Game/3D/User/ISF Day/ISF Night | | | | |
| -XX151 1 | 7E 30 30 31 35 31 20 31 0D | Model name | OKn | n:1= VDHDSDL |
| -XX108 1 | 7E 30 30 31 30 38 20 31 0D | Lamp Hours | OKbbbb | bbbb: LampHour |
| -XX108 2 | 7E 30 30 31 30 38 20 31 0D | Cumulative Lamp Hours | OKbbbbbb | bbbbbb: (5 digits) Total Lamp Hours |
| -XX321 1 | 7E 30 30 33 32 31 20 31 0D | Filter Usage Hours | OKbbbb | bbbb: Filter Usage Hours |

Troubleshooting

Refer to the symptoms and measures listed below before sending the projector for repairs. If the problem persists, contact your local reseller or service center. Please refer to "LED Indicator Messages" as well.

Start-up

If no lights turn on:

- Be sure that the power cord is securely connected to the projector and the other end is plugged into an outlet with power.
- Press the power button again.
- Unplug the power cord and wait for a short while, then plug it in and press the power button again.

Image

If the searching source is displayed:

- Press **SOURCE** on the projector or **Source** on the remote control to select an active input source.
- Be sure the external source is turned on and connected.
- For a computer connection, ensure your notebook computer's external video port is turned on. Refer to the computer manual.

If the image is out of focus:

- While displaying the on-screen menu, adjust the focus ring. (The image size should not change; if it does, you are adjusting the zoom, not the focus.)
- Check the projection lens to see if it needs cleaning.

If the image is flickering or unstable for a computer connection:

- Press "Menu", go to **IMAGE > Advanced > Signal** and adjust **Phase** or **Frequency**.

Remote control

If the remote control does not operate:

- Be sure nothing is blocking the remote control receiver on the front of the projector. Use the remote control within the effective range.
- Aim the remote control at the screen or at the front of the projector.
- Move the remote control so it is more directly in front of the projector and not as far to the side.

LED Indicator Messages



| Message | Power LED (Red) | Power LED (Green) | Temp LED (Red) | Lamp LED (Red) |
|----------------------------------|-----------------|---|----------------|----------------|
| Standby State (Input power cord) | Steady light | | | |
| Power on (Warming) | | Flashing 0.5 sec off 0.5 sec light | | |
| Power on & Lamp lighting | | Steady light | | |
| Power off (Cooling) | | Flashing 0.5 sec off 0.5 sec light Back to Red steady light when cooling fan turns off | | |
| Quick Resume (100 secs) | | Flashing 0.25 sec off 0.25 sec light | | |
| Error (Lamp fail) | Flashing | | | Steady light |
| Error (Fan fail) | Flashing | | Flashing | |
| Error (Over Temp) | Flashing | | Steady light | |
| Standby State (Burn in mode) | | Flashing | | |
| Burnin (Warming) | | Flashing | | |
| Burnin (Cooling) | | Flashing | | |

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Regulation & Safety Notices

This appendix lists the general notices of your projector.

FCC Notice

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 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, detectable by turning the equipment in question 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 distance between the equipment and the receiver
- Connect the equipment to an outlet on a different circuit than that which the receiver is connected to
- Or consult the dealer or an experienced radio/TV technician for help.

Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this projector.

Operation conditions

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian users

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

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Declaration of Conformity for EU countries

- EMC Directive 2004/108/EC (including amendments)
- Low Voltage Directive 2006/95/EC
- R & TTE Directive 1999/5/EC (if product has RF function)

Disposal instructions



Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it.