Table of contents

English

Safety Information

⚡ (lightning flash symbol in triangle)	The lightning flash with arrow head within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous volt-age" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
! (exclamation point symbol in triangle)	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servic-ing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

Class B emissions limits

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Important Safety Instruction

1. Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from over heating, it is recommended to install the projector in a location that does not block ventilation. As an example, do not place the projector on a crowded coffee table, sofa, bed, etc. Do not put the projector in an enclosure such as a book case or a cabinet that restricts air flow.
2. Do not use the projector near water or moisture. To reduce the risk of fire and/or electric shock, do not expose the projector to rain or mois-ture.
3. Do not install near heat sources such as radiators, heaters, stoves or any other apparatus such as amplifiers that emits heat.
4. Clean only with dry cloth.
5. Only use attachments/accessories specified by the manufacturer.
6. Do not use the unit if it has been physically damaged or abused. Physical damage/abuse would be (but not limited to):
   ■ Unit has been dropped.
   ■ Power supply cord or plug has been damaged.
   ■ Liquid has been spilled on to the projector.
   ■ Projector has been exposed to rain or moisture.
   ■ Something has fallen in the projector or something is loose inside. Do not attempt to service the unit yourself. Opening or removing covers may expose you to dangerous voltages or other hazards. Please call Optoma before you send the unit for repair.
7. Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.
8. See projector enclosure for safety related markings.
9. The unit should only be repaired by appropriate service personnel.

Precautions

⚠️ *Please follow all warnings, precautions and maintenance as recommended in this user's guide.*

■ Warning- Do not look into the projector's lens when the lamp is on. The bright light may hurt your eyes.

■ Warning- To reduce the risk of fire or electric shock, do not expose this projector to rain or moisture.

■ Warning- Please do not open or disassemble the projector as this may cause electric shock.

■ Warning- When replacing the lamp, please allow the unit to cool down. Follow instructions as described on page 42.

■ Warning- This projector will detect the life of the lamp itself. Please be sure to change the lamp when it shows warning messages.

■ Warning- Reset the "Lamp Reset" function from the on-screen display "System|Lamp Setting" menu after replacing the lamp module (refer to page 34).

■ Warning- When switching the projector off, please ensure the cooling cycle has been completed before disconnecting power. Allow 90 seconds for the projector to cool down.

■ Warning- Do not use lens cap when projector is in operation.

■ Warning- When the lamp is approaching to the end of its life time, the message "Replacement suggested" will show on the screen. Please contact your local reseller or service center to change the lamp as soon as possible.

Note

When the lamp reaches the end of its life, the projector will not turn back on until the lamp module has been replaced. To replace the lamp, follow the procedures listed under "Replacing the Lamp" section on page 42.

Usage Notice

Do:

- Turn off and unplug the power plug from the AC outlet before cleaning the product.
- Use a soft dry cloth with mild detergent to clean the display housing.
- Disconnect the power plug from AC outlet if the product is not being used for a long period of time.

Do not:

- Block the slots and openings on the unit provided for ventilation.
- Use abrasive cleaners, waxes or solvents to clean the unit.
- Use under the following conditions:
  - In extremely hot, cold or humid environments.
    - ▸ Ensure that the ambient room temperature is within 5 - 35°C
    - ▸ Relative Humidity is 5 - 35°C, 80% (Max.), non-condensing
  - In areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - In direct sunlight.

Usage Notice

Eye Safety Warnings

English

- ■ Avoid staring/facing directly into the projector beam at all times. Keep your back to the beam as much as possible.

- ■ When projector is used in a classroom, adequately supervise students when they are asked to point out something on the screen.

- ■ In order to minimize the lamp power, use room blinds to reduce ambient light levels.

Introduction

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.

Projector with lens cap
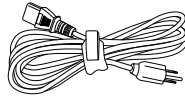
Power Cord 1.8m
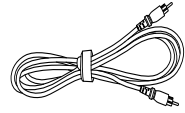
Composite Video Cable 1.8m
(Not Available in European Version)

Note

Due to different applications in each Country, some regions may have different accessories.
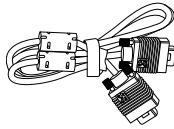
VGA Cable 2.0m
(Europe Only)
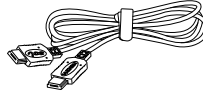
HDMI Cable 2.0m
(Europe Only)
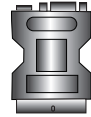
SCART RGB/S-Video Adapter
(Europe Only)

Remote Control
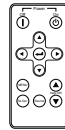
Backup Remote Control

2 x AA Batteries

CR2025
3V

Backup Remote Battery

12V Trigger Connector
(EMEA/USA*2, ASIA*1)

Documentation :

☑ User's Manual
☑ Warranty Card
☑ Quick Start Card
☑ WEEE Card

Introduction

Product Overview

Main Unit

English
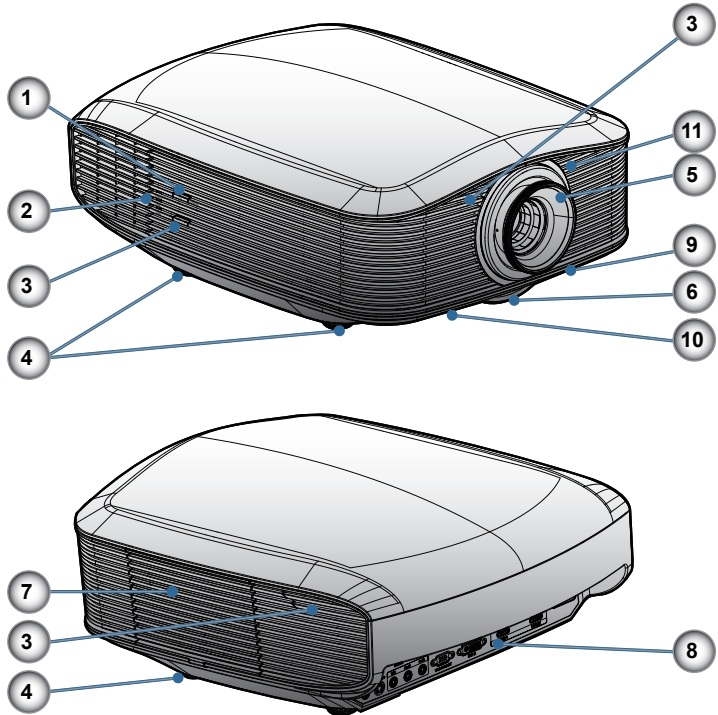
1. Power Button
2. LED Indicators
3. IR Receivers
4. Tilt-Adjustment Feet
5. Focus
6. Zoom
7. Lamp Replacement Cover
8. Connection Ports
9. Vertical Lens Shift Adjustment
10. Horizontal Lens Shift Adjustment
11. IR Transmitter for Use with Panoview Motorised Screens

Introduction

Connection Ports
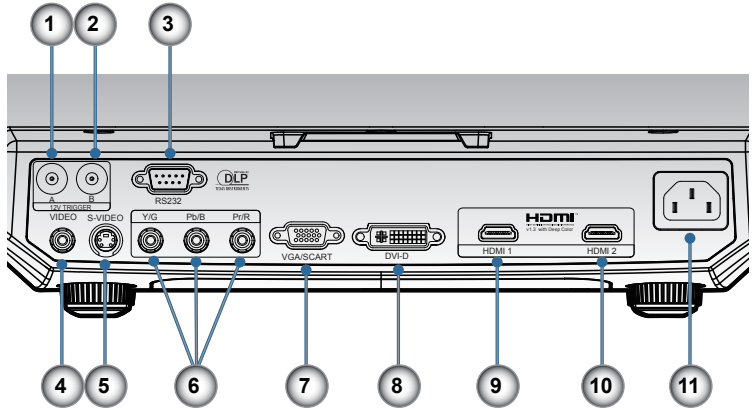
1. 12V Trigger A
2. 12V Trigger B
3. RS232
4. Composite Video
5. S-Video
6. Component Video
7. VGA Input
8. DVI-D Input (PC Digital and DVI-HDCP)
9. HDMI 1
10. HDMI 2
11. Power Socket

Introduction

Remote Control

1. Power On
2. Power Off
3. PureEngine
4. Brite Mode
5. Image Shift
6. Four Directional Select Keys
7. Mode
8. Edge Mask
9. Screen Up/Down
10. Re-Sync
11. VGA
12. DVI
13. Video
14. HDMI 2
15. S-Video
16. Native
17. YPbPr
18. HDMI 1
19. 16:9
20. 4:3
21. Letter-Box
22. Overscan
23. Menu
24. Enter
25. DynamicBlack
26. Contrast
27. Brightness
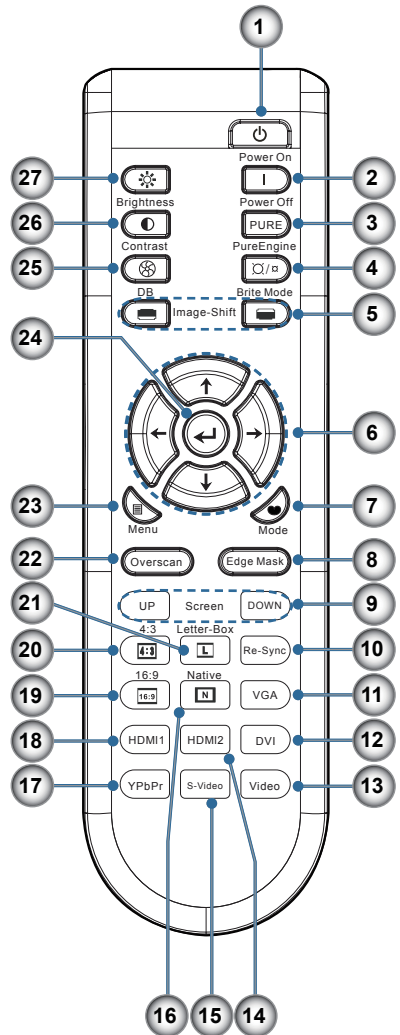
Introduction
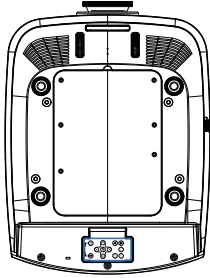
Backup Remote Control

1. Power Off
2. Power On
3. Enter
4. Four Directional Select Keys
5. Image Shift
6. Source
7. Re-Sync
8. Menu
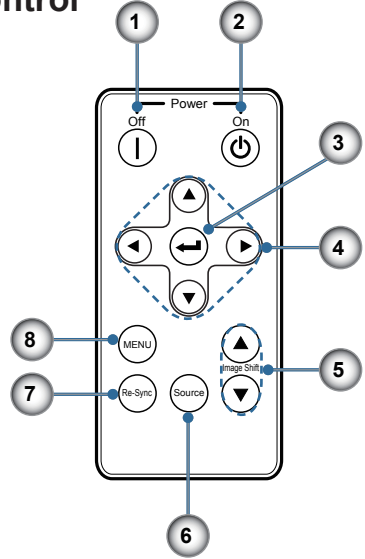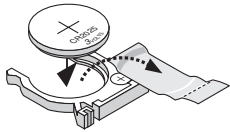
Coin Cell Battery Replacement
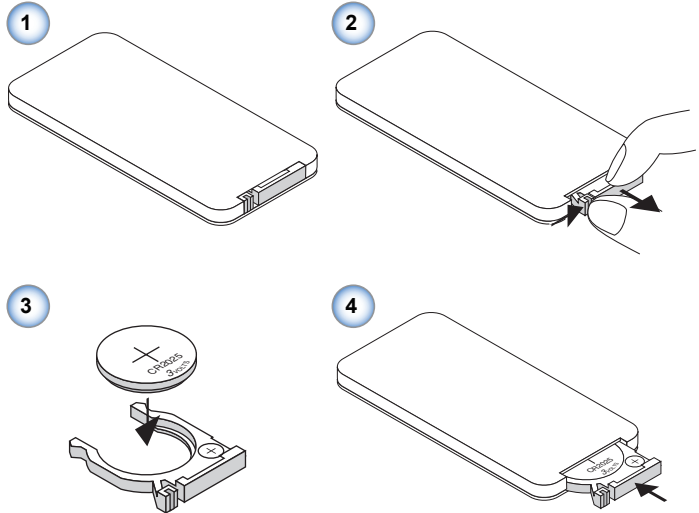
Connecting the Projector

Connect to Notebook/DVI/VGA-In
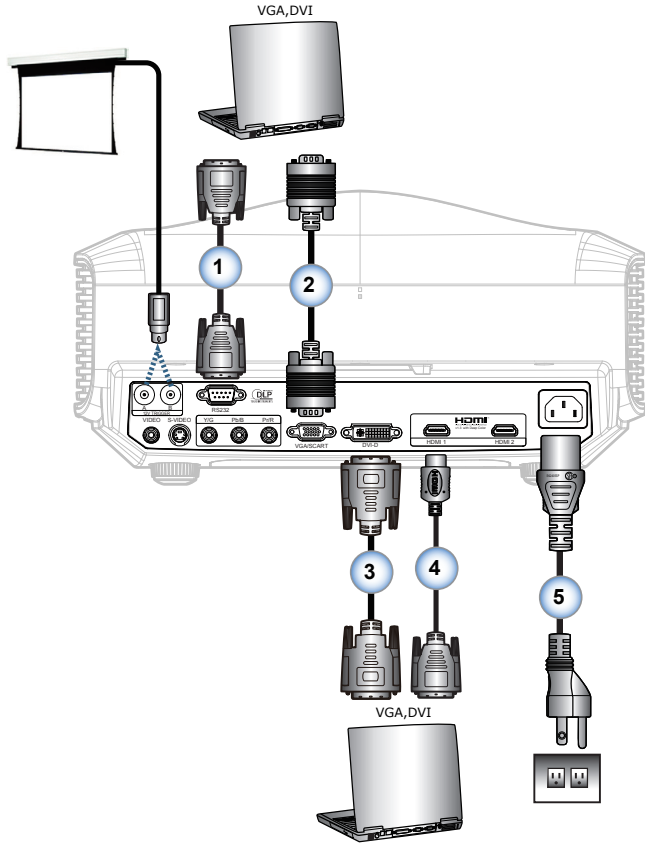
Note

Due to the difference in applications for each country, some regions may have different accessories.

1...RS232 Cable (Optional Accessory)
2... VGA Input Cable (Europe Only)
3.. DVI Cable (Optional Accessory)
4...DVI/HDMI Cable (Optional Accessory)
5..Power Cord

Installation

Connecting the Projector

Connect to Video/SCART

DVD player, Set-top Box
HDTV receiver

Video Output

S-Video Output

DVD player, Set-top Box
HDTV receiver

Note

Due to the difference in applications for each country, some regions may have different accessories.

Note

12V Trigger B is programmable trigger.
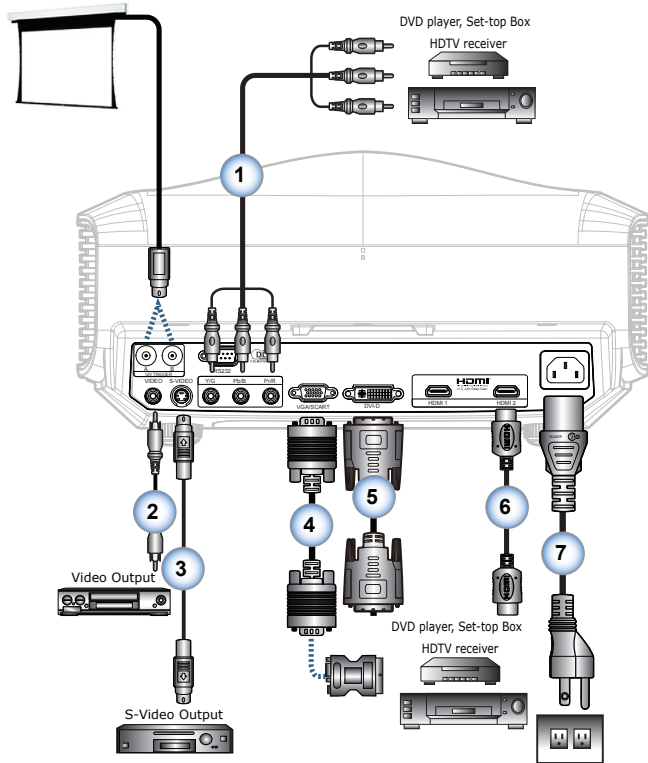
1.................................RCA Component Cable for YPbPr (Optional Accessory)
2....................... Composite Video Cable (Not Available in European Version)
3.. S-Video Cable (Optional Accessory)
4... SCART RGB/S-Video Adapter (Europe Only)
5.. DVI Cable (Optional Accessory)
6..HDMI Cable (Europe Only)
7...Power Cord

Installation

Powering On/Off the Projector

Powering On the Projector

1. Remove the lens cap. ❶

2. Securely connect the power cord and signal cable. When connected, the power led will turn red.

3. Turn on the lamp by pressing "⏻" button on the side of the projector or on the remote control. The power led will now flash blue.❷

   The startup screen will display in approximately 30 seconds. The first time you use the projector, you can select your preferred language from quick menu after the startup screen display.

4. Turn on your source that you want to display on the screen (computer, notebook, video player, etc). The projector will detect the source automatically and will display on the screen. If not, push menu button and go to "SETUP". Make sure that the "Source Lock" has been set to "Off".

▪️ If you connected multiple sources at the same time, press the "Source" key on the remote control to switch between inputs.

Note

Turn on the projector first and then select the signal sources.

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Installation
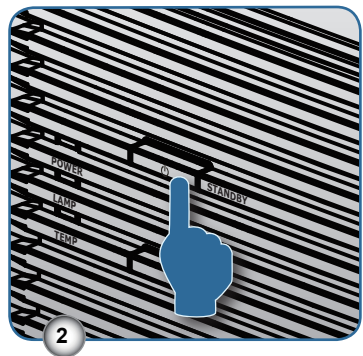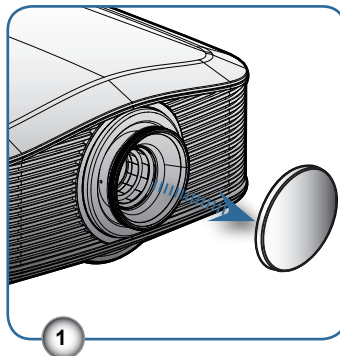
Powering Off the Projector

1. Press the " | " button on the remote control or " ⏻ " button on the side of the projector two times with one second interval in between to turn off the projector. First push of button will display the following message on the screen.
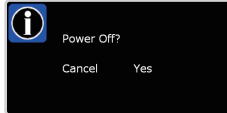
Press the button again to confirm the shut down. If the button is not pressed, the message will disappear in 5 seconds.

2. The cooling fans continue to operate for about 60 seconds for cooling cycle and the Power LED will turn blue. When the lights solid red, the projector has entered standby mode.

   If you wish to turn the projector back on, you must wait until the projector has completed the cooling cycle and has entered standby mode. Once in standby mode, simply press " ⏻ " button to restart the projector.

3. Disconnect the power cord from the electrical outlet and the projector.

4. Do not turn on the projector immediately following a power off procedure.

Warning Indicator

■ When the "LAMP" indicator led is lit orange, the projector will automatically shut down. Please call the nearest Optoma facility for assistance.

■ When the "TEMP" indicator turns red, it indicates the projector has overheated. The projector will shut down automatically.
Under normal conditions, the projector can be switched on again after it has cooled down.

■ When the "TEMP" indicator flashes red, it indicates the fan has failed.

Installation

Adjusting the Projected Image

Adjusting the Projector's Height

The projector is equipped with elevator feet for adjusting the image height.

To raise the image:

Use screw in foot to raise the image to the desired height angle and ine-tune the display angle ❶.

To lower the image:

Use screw in foot to lower the image to the desired height angle and ine-tune the display angle ❶.

Tilt-Adjustment Feet

Installation
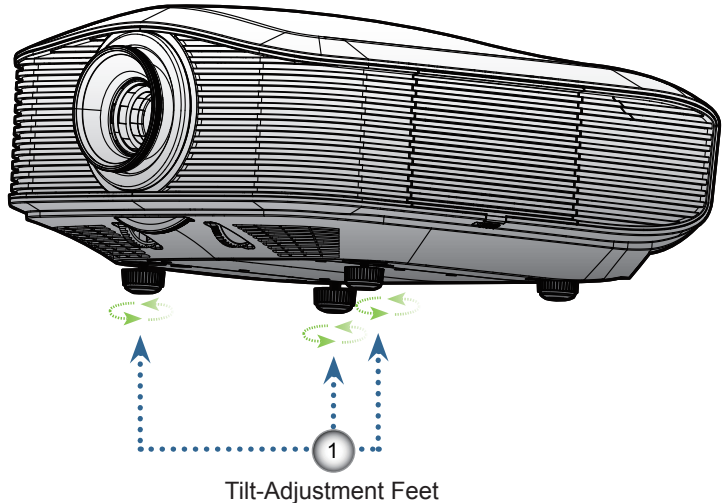
Adjusting Projected Image Position Using PureShift

Horizontal Lens Shift Lever

Vertical Lens Shift Lever
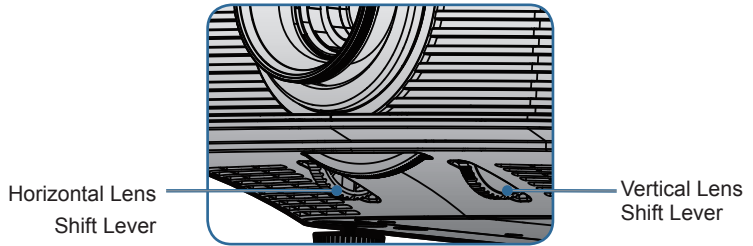
The PureShift feature provides a lens shift function that can be used to adjust the position of the projected image either horizontally or vertically within the range detailed below. PureShift is a unique system that provides lens shift while maintaining a much higher ANSI contrast ratio than traditional lens shift system.

■ Adjusting the vertical image position

The minimum vertical image offset is fixed at 5% of the image height above the centre of the projector lens. This can not be changed. The vertical image height can be adjusted between 5% and 30% of the image height. Note that the maximum vertical image height adjustment can be limited by the horizontal image position. For example it is not possible to achieve the maximum vertical image position height detailed above if the horizontal image position is at maximum. Please consult the PureShift Range diagram below for further clarification.
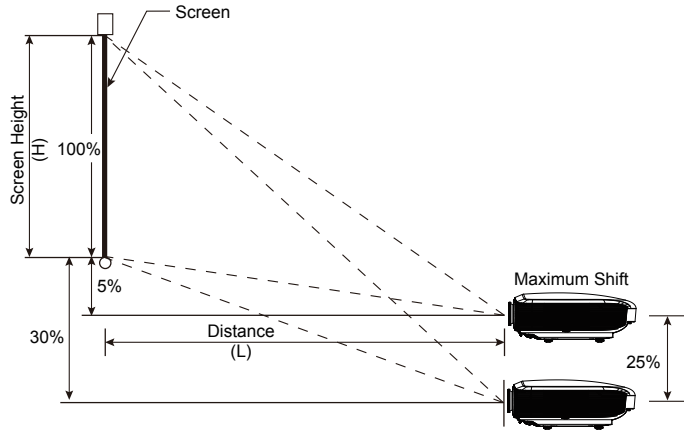
■■ Adjusting the horizontal image position

With the lens in the centre position the horizontal image position can be adjusted to the left or right by up to a maximum of 15% of the image width. Note that the maximum horizontal image height adjustment can be limited by the vertical image position. For example it is not possible to achieve the maximum horizontal image position if the vertical image position is at maximum. Please consult the PureShift Range diagram below for further clarification.
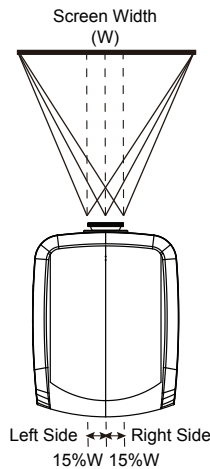
■ PureShift Range Diagram
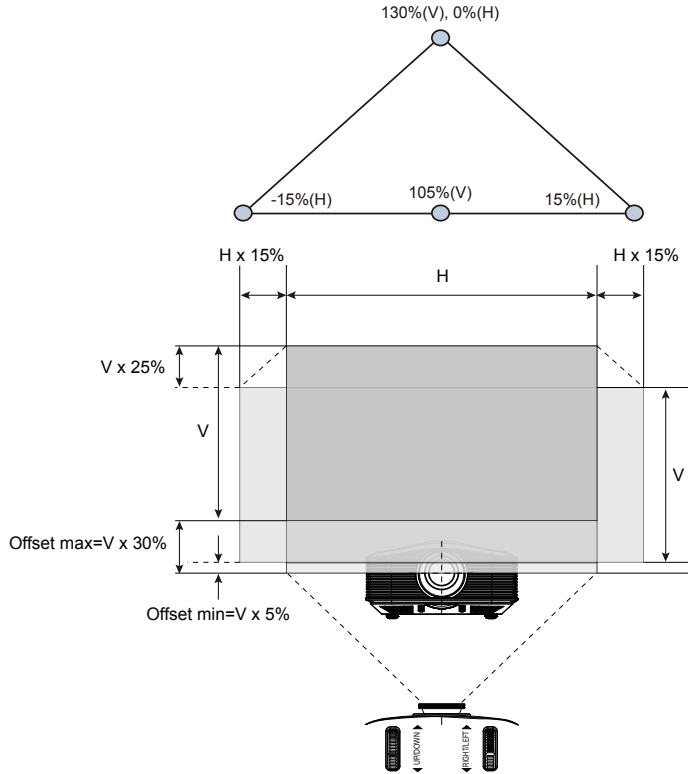
Adjusting Projection Image Size

Diagonal length (inch) size of 16:9 Screen	Screen Size W X H (16:9)				Projection distance (D)				Offset (Hd)	
	(m)		(feet)		(m)		(feet)		(m)	(feet)
	Width	Height	Width	Height	wide	tele	wide	tele	(m)	(feet)
30	0.66	0.37	2.18	1.23	-	1.51	-	4.97	0.11	0.37
45	1.00	0.56	3.27	1.84	1.49	2.27	4.88	7.45	0.17	0.55
50	1.11	0.62	3.63	2.04	1.65	2.52	5.43	8.28	0.19	0.61
60	1.33	0.75	4.36	2.45	1.98	3.03	6.51	9.93	0.22	0.74
70	1.55	0.87	5.08	2.86	2.32	3.53	7.60	11.59	0.26	0.86
80	1.77	1.00	5.81	3.27	2.65	4.04	8.68	13.24	0.30	0.98
90	1.99	1.12	6.54	3.68	2.98	4.54	9.77	14.90	0.34	1.10
100	2.21	1.25	7.26	4.09	3.31	5.05	10.85	16.55	0.37	1.23
120	2.66	1.49	8.72	4.90	3.97	6.05	13.02	19.86	0.45	1.47
150	3.32	1.87	10.89	6.13	4.96	7.57	16.28	24.83	0.56	1.84
200	4.43	2.49	14.53	8.17	6.61	10.09	21.70	33.11	0.75	2.45
300	6.64	3.74	21.79	12.26	9.92	15.14	32.55	49.66	1.12	3.68

❖ This graph is for user's reference only.
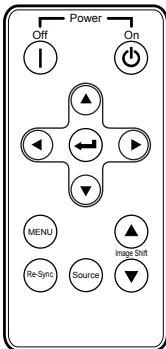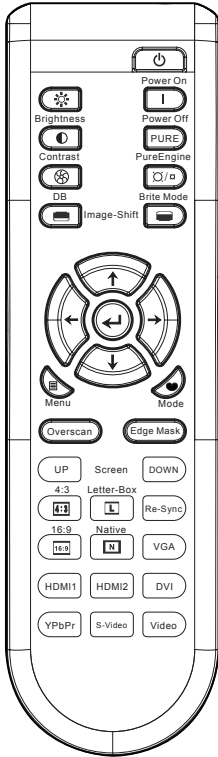
Remote Control

Using the Remote Control

⏻ **Power On**	Refer to the "Power On the Projector" section on page 13.	
☼ **Brightness**	Adjust the brightness of the image.	
Power Off	Refer to the "Power Off the Projector" section on page 14.	
◑ **Contrast**	Control the degree of difference between the lightest and darkest parts of the picture.	
PureEngine	The PureEngine is a collection of advanced image processing technologies that enhances the quality of the displayed image.	
✺ **DynamicBlack**	Enable the projector to automatically optimize the display of dark movie scenes enabling them to be shown in incredible detail. (refer to page 26)	
◐/○ **Brite Mode**	Increase the brightness of the image. (refer to page 34)	
▬ ▬ **Image-Shift**	Shift the projected image position vertically.	
Enter	Confirm your item selection.	
Four Directional Select Keys	Use directional select keys to select items or make adjustments to your selection.	
☰ **Menu**	Display or exit the on-screen display menus for projector.	
♥ **Mode**	Select the display mode from Cinema, Bright, Photo, Reference and User.	
Overscan	Mask off a few pixels on each edge of the image to be displayed. Use the function to adjust if image source happens to have noise near any edge of the display image.	

English

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User Controls
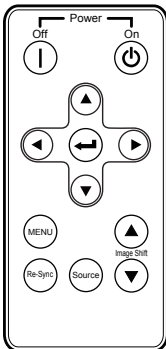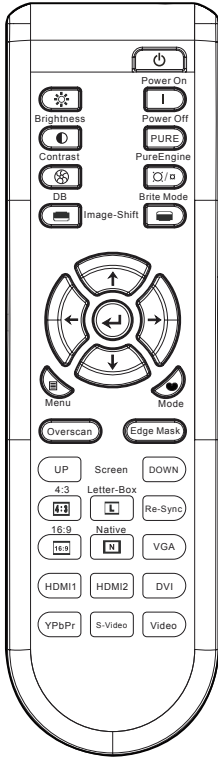
Edge Mask	Choose "On" to mask off a few pixels on each edge of the image to be displayed. Use Edge Mask "On" if image source happens to have encoding error near any edge of the displayable image.
Up	Use this button to screen up.
Down	Use this button to screen down.
4:3 **4:3**	Scale the image at a 4:3 aspect ratio.
L **Letter Box**	Enable the viewing of the letterboxed nonanamorphically enhanced movie at full screen width. Part of the original image will be lost if the image aspect ratio is less than 2.35:1..
Re-Sync	Automatically synchronize the projector to the input source.
16:9 **16:9**	Scale the image at a 16:9 aspect ratio.
N **Native**	The input source will be displayed without scaling.
VGA	Press "VGA" to choose source from VGA connector.
HDMI 1	Press "HDMI 1" to choose source from HDMI 1 connector.
HDMI 2	Press "HDMI 2" to choose source from HDMI 2 connector.
DVI	Press "DVI" to choose Analog and Digital signal source from DVI connector.
YPbPr	Press "YPbPr" to choose Component Video source.
S-Video	Press "S-Video" to choose S-video source.
Video	Press "Video" to choose Composite Video source.
Source	Press "Source" to choose DVI, RGB, Component, S-Video, Composite Video, and HDMI source.

On-screen Display Menus

The Projector has multilingual On-screen Display menus that allow you to make image adjustments and change a variety of settings. The projector will automatically detect the source.

English

How to operate

1. To open the OSD menu, press "Menu" on the Remote Control or Control Panel.

2. When OSD is displayed, use ▲ ▼ keys 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 ▲ ▼ keys to select the desired item and adjust the settings by ◀ ▶ key.

4. Select the next item to be adjusted in the sub menu and adjust as described above.

5. Press "Enter" or "Menu" to confirm, and the screen will return to the main menu.

6. To exit, press "Menu" again. The OSD menu will close and the projector will automatically save the new settings.

Main Menu

Setting

	IMAGE	
IMAGE	Mode	Cinema ▶
	Contrast	50 ▶
	Brightness	50 ▶
	Color	50 ▶
DISPLAY	Tint	50 ▶
	Sharpness	50 ▶
	Advanced	▶
SYSTEM		
SETUP		

▲▼ Up/Down ◀▶ Select MENU Back

Sub Menu
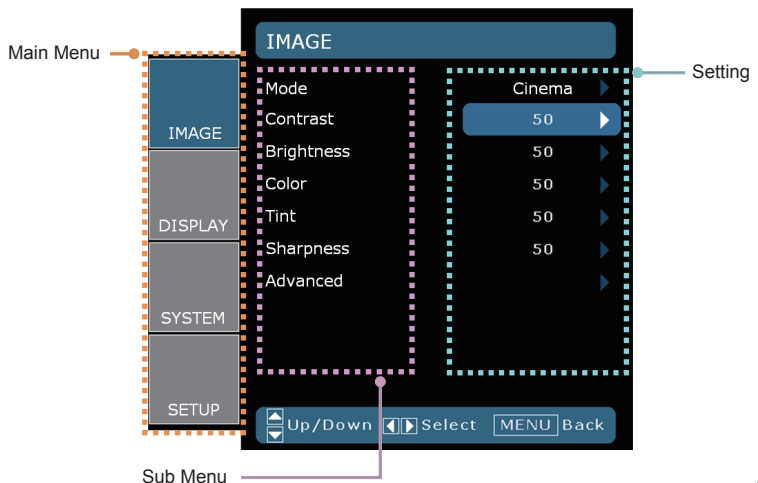
User Controls

Menu Tree

IMAGE		
	Mode	Cinema/Bright/Photo/Reference/User
	Contrast	
	Brightness	
	Color	
	Tint	
	Sharpness	
	Advanced	
IMAGE | ADVANCED	Noise Reduction	
	Gamma	Film/Video/Graphics/Standard
	B/W Extension	On/Off
	Color Temp	Warm/Medium/Cold
	PureEngine	
	DynamicBlack	Off/Cinema 1/Cinema 2
	RGB Gain/Bias	Red Gain/Green Gain/Blue Gain/Red Bias/Green Bias/Blue Bias/Reset
IMAGE | ADVANCED | PureEngine	PureDetail	
	PureColor	
	PureMotion	
	PureEngine Demo	
DISPLAY		
	Format	4:3/16:9/LBX/Native
	Overscan	
	Edge Mask	
	V Image Shift	
	V Keystone	
	SuperWide	On/Off/AUTO
SYSTEM		
	Menu Location	
	Lamp Settings	
	Projection	
	Image AI	On/Off
	Test Pattern	None/Grid/White Pattern
	Background Color	Dark Blue/Black/Gray
	12V Trigger A	On/Off
	12V Trigger B	On(4:3/16:9/LBX/Native),Off,Auto235
SYSTEM | LAMP SETTINGS	Lamp Hours	
	Lamp Reminder	On/Off
	Bright Mode	On/Off
	Lamp Reset	No/Yes
SETUP		
	Language	English/Deutsch/Français/Italiano/Español/Português/ Polski/Nederlands/Русский/Suomi/Svenska/ Norsk/Dansk/ελληνικά/Magyar/ Čeština/ 中文(繁體)/ 中文(简体)/日本語/한국어/عربي/Türkçe
	Input Source	HDMI 1/HDMI 2/DVI-D/VGA/Component/S-Video/Video
	Source Lock	On/Off
	High Altitude	On/Off
	Auto Power Off (min)	
	Signal	Phase/Tracking/H. Position/V. Position
		White Level/Black Level/Saturation/Hue/IRE
	Color Space	RGB/YCbCr
	Reset	Current/All

IMAGE

IMAGE		
Mode	Cinema	▶
Contrast	50	▶
Brightness	50	▶
Color	50	▶
Tint	50	▶
Sharpness	50	▶
Advanced		▶

Up/Down ◀▶ Select MENU Back

English

Image

Mode

There are many factory presets optimized for various types of im-ages.

- ▶ Cinema: For home theater.

- ▶ Bright: Maximum brightness input.

- ▶ Photo: Optimized for displaying photographic images.

- ▶ 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.

- ▶ User: User's settings.

Contrast

The contrast controls the degree of difference between the lightest and darkest parts of the picture. Adjusting the contrast changes the amount of black and white in the image.

- ▶ Press the ◀ to decrease the contrast.

- ▶ Press the ▶ to increase the contrast.

Brightness

Adjust the brightness of the image.

- ▶ Press the ◀ to darken image.

- ▶ Press the ▶ to lighten the image.

User Controls

Color

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

▸ Press the ◂ to decrease the color saturation in the image.

▸ Press the ▸ to increase the color saturation in the image.

Tint

Adjust the color balance of red and green.

▸ Press the ◂ to increase the amount of green in the image.

▸ Press the ▸ to increase the amount of red in the image.

Sharpness

Adjust the sharpness of the image.

▸ Press the ◂ to decrease the sharpness.

▸ Press the ▸ to increase the sharpness.

IMAGE | ADVANCED

IMAGE		
Noise Reduction	2	▶
Gamma	Film	▶
B/W Extension	On	▶
Color Temp	Warm	▶
PureEngine		▶
DynamicBlack	On	▶
RGB Gain/Bias		▶
Exit		

IMAGE

DISPLAY

SYSTEM

SETUP

▲▼ Up/Down ◀▶ Select MENU Back
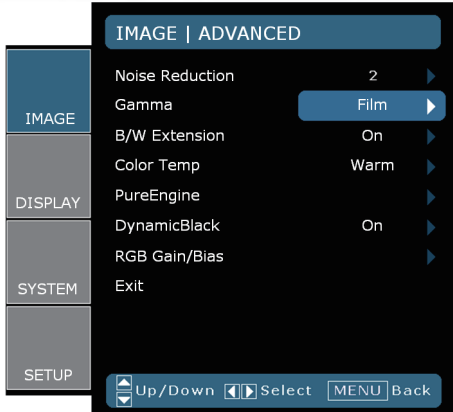
Image | Advanced

Noise Reduction

The motion Adaptive Noise Reduction reduces the amount of visible noise interlaced signals. The range is from "0" to "10". (0:Off)

Gamma

This allows you to set up gamma curve type. After the initial setup and fine tuning is completed, utilize the Gamma Adjustment steps to optimize your image output.

▶ Film: for home theater.

▶ Video: for video or TV source.

▶ Graphics: for image source.

▶ Standard: for standardized setting.

B/W Extension

Black and White Extension can stretch the black and white levels to automatically increase the contrast of input image. This unit has 2 pre-set modes that allow the user to switch among the pre-sets to obtain different image effects. (Off/On)

Color Temp

If set to cold temperature, the image looks bluish (cold image). If set to warm temperature, the image tends to looks reddish (warm image).

PureEngine

The PureEngine is a collection of advanced image processing technologies that enhances the quality of the displayed image.

DynamicBlack

DynamicBlack enables the projector to automatically optimize the display of dark movie scenes enabling them to be shown in incredible detail.

RGB Gain/Bias

Press ▶ into the next menu as below and then use ▲ or ▼ to select item. Use ◀ or ▶ to select Red, Green, or Blue for brightness (Gain) and contrast (Bias).

IMAGE | ADVANCED | PureEngine

PureDetail	Off ▶
PureColor	Off ▶
PureMotion	Off ▶
PureEngine Demo	Off ▶
Exit	▶

IMAGE

DISPLAY

SYSTEM

SETUP

▲▼ Up/Down ◀▶ Select MENU Back
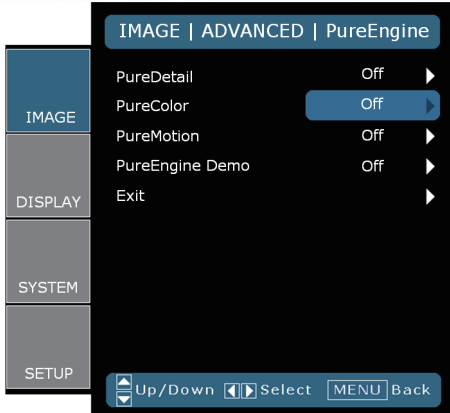
Image | Advanced | PureEngine

PureDetail

PureDetail is an edge enhancement tool that enables the edges in the projected image is be enhanced thus providing more perceived detail.

PureColor

This adjustable item utilizes a new color-processing algorithm and enhancements to enable the picture's vividness to be significantly increased. The range is from "0" to "5".

PureMotion

PureMotion uses sophisticated algorithms to ensure that the natural motion in the image is preserved.

PureEngine Demo

This feature enables you to see the difference in the image quality between the raw unprocessed image and the image processed as processed by the PureEngine. Use this mode to check the adjustments that you make to the PureEngine settings.

DISPLAY	
Format	16:9 ▶
Overscan	0 ▶
Edge Mask	0 ▶
V Image Shift	0 ▶
V Keystone	0 ▶
SuperWide	On ▶

IMAGE
DISPLAY
SYSTEM
SETUP

▲▼ Up/Down ◀▶ Select MENU Back
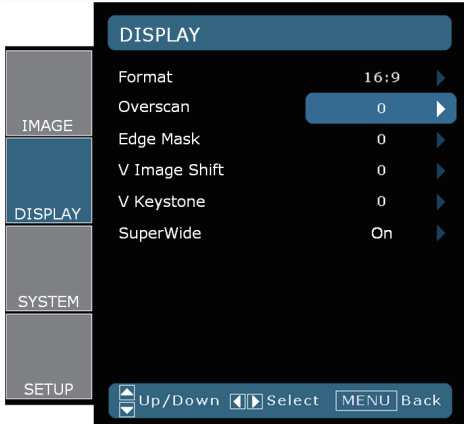
Display

Format

Use this function to choose your desired aspect ratio.

▶ 4:3: This format is for 4x3 input sources.

▶ 16:9: This format is for 16x9 input sources, like HDTV and DVD enhanced for Widescreen TV.

▶ Native: This format displays the original image without any scaling.

▢ :Display area
▢ :Picture area

Input Signal   Display on Screen

4 : 3 format

Or   16 : 9 format

LBX format
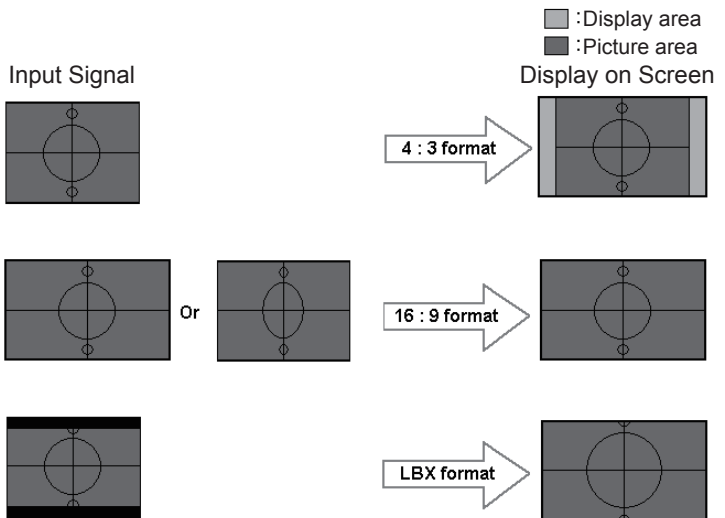
▶ LBX: This format is for non-16x9, letterbox source and for users who use external anamorphic lens to display 2.35:1 aspect ratio using full resolution.

Detail informations about LBX mode :

1. Some Letter-Box DVDs are not enhanced for 16x9 TVs. In this situation, the image will not look right when displayed in 16:9 mode.

   In this situation, please try to using the 4:3 mode to view the DVD.

   If the content is not 4:3, there will be black bars around the image in 16:9 display. For this type of content, you can use LBX mode to fill the image on the 16:9 display.

2. If you use an external anamorphic lens, this LBX mode also allows you to watch a 2.35:1 content (include Anamorphic DVD and HDTV film source) that support anamorphic wide is enhanced for 16x9 Display in a wide 2.35:1 image.

   In this case, there are no black bars. Lamp power and vertical resolution are fully utilized.

Note

▶ Each I/O has different setting of "Overscan".

Overscan

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

Edge Mask

▶ Press the ◀ to reduce the size of an image.

▶ Press the ▶ to magnify an image on the projection screen.

V Image Shift

Shift the projected image position vertically.

V Keystone

Press the ◀ or ▶ to adjust image distortion vertically and make a squarer image.

User Controls

SuperWide

SuperWide is a feature that uses a special 2.0:1 aspect ratio screen enabling both 16:9 and 2.35:1 aspect ratio movies to be shown without black bars at the top and bottom of the screen

▶ Off: Your desired aspect ratio can be selected - 4:3, 16:9, LBX and Native.

▶ On: Only formats 4:3 and 16:9 can be selected.

▶ Auto: To solve the differences of the film formats, the option can keep the format in the same ratio.

SYSTEM

Menu Location	▣ ▶
Lamp Settings	▶
Projection	▶
Image AI	On ▶
Test Pattern	▶
Background Color	Dark Blue ▶
12V Trigger A	Off ▶
12V Trigger B	Off ▶

Up/Down ◀▶ Select MENU Back

IMAGE
DISPLAY
SYSTEM
SETUP

System
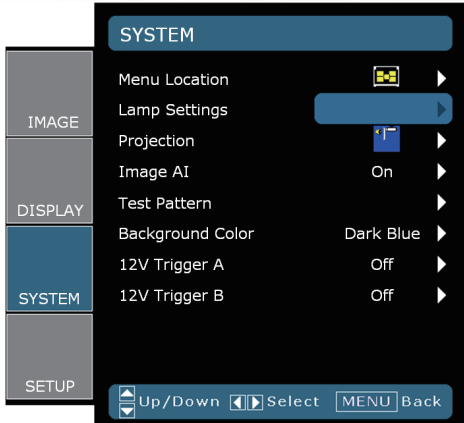
Menu Location

Choose the menu location on the display screen.

Projection

▶ Front-Projection

This is the default selection. The image is projected straight on the screen.

▶ Rear-Desktop

When selected, the image will appear reversed.

▶ Front-Ceiling

When selected, the image will turn upside down.

▶ Rear-Ceiling

When selected, the image will appear reversed in upside down position.

Image AI

Image AI improves the contrast of the picture by optimizing the brightness of the lamp according to the picture content.

Note

Rear-Desktop and Rear-Ceiling are to be used with a translucent screen.

▷ On: The dynamic image performance manager is active in making sure your greatest pleasure from seeing a movie dynamically with the most dark details revealed, vivid and bright image performed all the way.

▷ Off: The dynamic image performance manager is on standby.
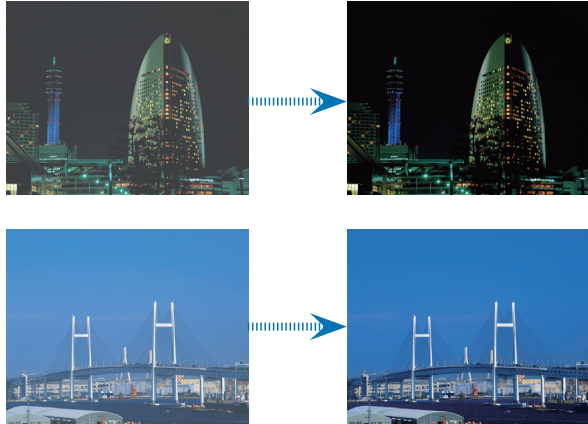
Test Pattern

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

Background Color

Use this feature to display a "Dark Blue", "Black", or "Gray" screen when no signal is available.

12V Trigger A

12V trigger A provides a standard trigger for motorized screens.

12V Trigger B
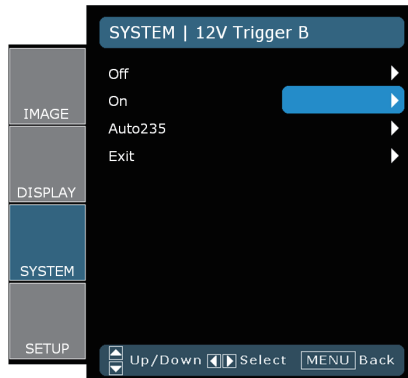
▶ Off: disables the trigger.

▶ On: enables the trigger and the programmable sub-menu. The sub-menu is accessed by selecting the ON option then pressing the ENTER button on the remote control. Checking an option in the sub-menu will activate the trigger when the selected display mode is selected. In the example below 16:9 has been selected – this means that Trigger B will be active when the projector display mode is set to 16:9. The trigger will be inactive for all the other display mode options.

SYSTEM | 12V Trigger B

IMAGE

4x3
16x9 ☑
LBX
Native
Exit

DISPLAY

SYSTEM

SETUP

▲ Up/Down ◀▶ Select   MENU Back
▼
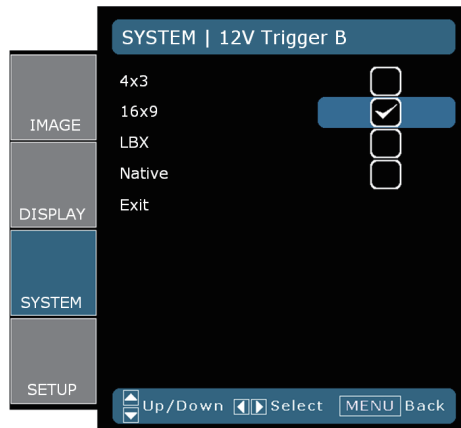
▶ Auto235: When AUTO235 is enabled the projector will automatically detect when a 2.35:1 ratio presentation is being shown and will activate the trigger on this port which, in turn, can be used to activate a motorised anamorphic lens assembly. The AUTO235 setting and a motorised anamorphic lens assembly can be used in this way to provide a fully automated "Constant Height" projection system

SYSTEM | LAMP SETTINGS

Lamp Hours	▶ 2000 ▶
Lamp Reminder	On ▶
Bright Mode	Off ▶
Lamp Reset	▶
Exit	▶

Up/Down ◀▶ Select MENU Back
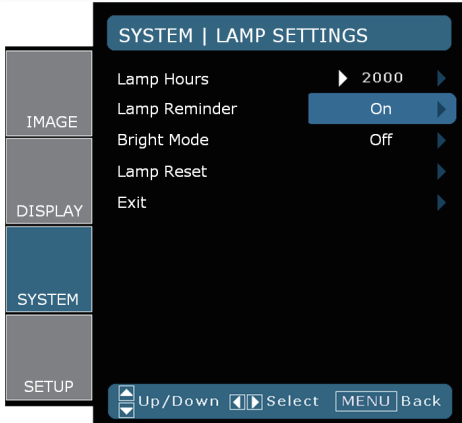
System | Lamp Settings

Lamp Hour

Display the cumulative lamp operating time.

Lamp Reminder

Choose this function to show or to hide the warning message when the changing lamp message is displayed. The message will appear up 30 hours before suggested replacement of lamp.

Bright Mode

Choose "On" to increase the brightness. Choose "Off" to return normal mode.

Lamp Reset

Reset the lamp life hour after replacing the lamp.

SETUP

Language	English
Input Source	
Source Lock	On
High Altitude	Off
Auto Power Off (min)	15
Signal	
Color Space	YCbCr
Reset	

Up/Down ◄► Select MENU Back

Setup
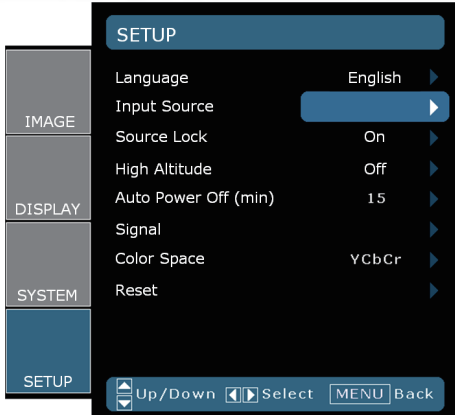
Language

Choose the multilingual OSD menu. Press ◄ or ► into the sub menu and then use the ▲ or ▼ key to select your preferred language. Press "Select (Enter)" to finalize the selection.

Input Source

Enable input sources. Press ◄ or ► into the next menu as below and then use ▲ or ▼ to select. Press "Select (Enter)" to finalize the selection. The projector will not search inputs that are de-selected.

SETUP | INPUT SOURCE

HDMI 1	☑
HDMI 2	☐
DVI-D	☐
VGA	☐
Component	☐
S-Video	☐
Video	☐
Exit	

Up/Down ◄► Select MENU Back
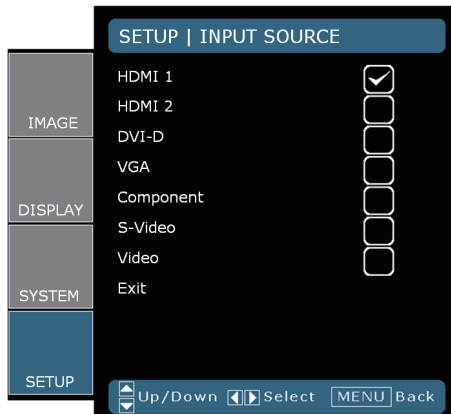
Source Lock

When this function is turned off, the projector will search for other signals if the current input signal is lost. When this function is turned on, it will search for a specified connection port.

High Altitude

Choose "On" to turn on High Altitude mode. Operates the fans at full speed continuously to allow for proper high altitude cooling of the projector.

Auto Power Off

Set the interval of power-off of the system, if there is no signal input. (In minutes).

Signal

RGB/HDTV Source   Video Source

SETUP	SIGNAL	
Phase	100
Tracking	100
H. Position	50
V. Position	50
Exit	

IMAGE
DISPLAY
SYSTEM
SETUP

Up/Down ◀▶ Select | MENU | Back

SETUP	SIGNAL	
White Level	100
Black Level	100
Saturation	50
Hue	50
IRE	0
Exit	

IMAGE
DISPLAY
SYSTEM
SETUP

Up/Down ◀▶ Select | MENU | Back
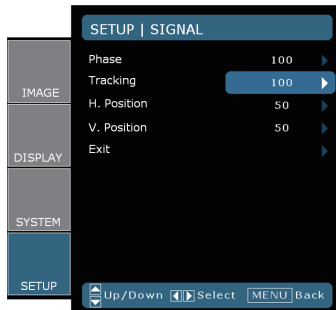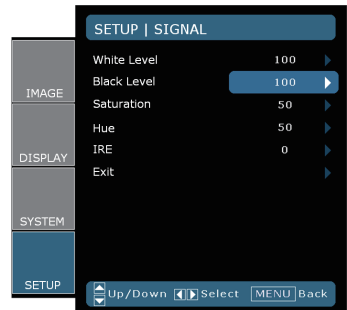
Note

"Signal" is not supported when the source is HDMI or DVI-D.

▷ Phase: Change the display data frequency to match the frequency of your computer's graphic card. When you experience a vertical flickering bar, use this function to make an adjustment.

▷ Tracking : Synchronize the signal timing of the display with the graphics card. If you experience an unstable or flickering image, use this function to correct it.

▷ H Position: Adjust the horizontal position.

▷ V Position: Adjust the vertical position.

▶ White Level : Allow user adjust White Level when inputting SVideo or Video/CVBS signals.

▶ Black Level : Allow user adjust Black Level when inputting SVideo or Video/CVBS signals.

▶ Saturation : Adjust a video image from black and white to fully saturated color. Press the ◀ to decrease the amount of color in the image. Press the ▶ to increase the amount of color in the image.

▶ Hue : Adjust the color balance of red and green. Press the ◀ to increase the amount of green in the image. Press the ▶ to increase the amount of red in the image.

▶ IRE : Adjust measurement of composite video signals.

Note

"IRE" is only supported on NTSC signal.

Color Space

Select an appropriate color matrix type from RGB or YCbCr.

Reset

Return the adjustments and settings to factory default values.

▶ Current : Return the current menu's settings to factory default.

▶ All : Return the settings for all menus to factory default values.

Appendices

Troubleshooting

If you experience a problem with your projector, please refer to the following information. If a problem persists, please contact your local reseller or service center.

Image Problems

❓ No image appears on-screen

▸ Ensure all the cables and power connections are correctly and securely connected as described in the "Installation" section.

▸ Ensure the pins of connectors are not crooked or broken.

▸ Check if the projection lamp has been securely installed. Please refer to the "Replacing the Lamp" section.

▸ Make sure you have removed the lens cap and the projector is switched on.

❓ Image is out of focus

▸ Make sure the Lens cap is removed.

▸ Adjust the Focus Ring on the projector lens.

▸ Make sure the projection screen is between the required distance 4.9 to 32.8 feet (1.5 to 10.0 meters) from the projector. See page 18.

❓ The image is stretched when displaying 16:9 DVD title

▸ When you play anamorphic DVD or 16:9 DVD, the projector will show the best image in 16: 9 format on projector side.

▸ If you play the LBX format DVD title, please change the format as LBX in projector OSD.

▸ If you play 4:3 format DVD title, please change the format as 4:3 in projector OSD.

▸ If the image is still stretched, you will also need to adjust the aspect ratio by referring to the following:

▸ Please setup the display format as 16:9 (wide) aspect ratio type on your DVD player.

? Image is too small or too large

▶ Adjust the zoom lever on the top of the projector.

▶ Move the projector closer to or further from the screen.

▶ Press [Menu] on the projector panel, go to "Display-->Format". Try the different settings.

? Image has slanted sides:

▶ If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.

▶ Use "Display-->V Keystone" from the OSD to make an adjustment.

? Image is reversed

▶ Select "System-->Projection" from the OSD and adjust the projection direction.

Other Problems

? The projector stops responding to all controls

▶ If possible, turn off the projector, then unplug the power cord and wait at least 20 seconds before reconnecting power.

? Lamp burns out or makes a popping sound

▶ When the lamp reaches its end of life, it will burn out and may make a loud popping sound. If this happens, the projector will not turn on until the lamp module has been replaced. To replace the lamp, follow the procedures in the "Replacing the Lamp" section on page 42.

Projector Status Indication

❓ LED states

Message	Power LED (Red)	Power LED (Blue)	Temp-LED (Red)	Lamp-LED (Orange)
Standby State (Input power cord)	☀	○	○	○
Standby State (Burn in mode)	○	Flashing	☀	☀
Power on and Lamp lighting	○	* ☀	○	○
Power off (Cooling)	○	☀	○	○
Error (Lamp fail)	○	☀	○	☀
Error (Thermal fail)	○	☀	☀	○
Error (Fan fail)	○	☀	Flashing	○
Error (Over Temp.)	○	☀	☀	○

* Power LED be ON when OSD appears, be OFF when OSD disappears.

Note

Steady light => ☀
No light => ○

Appendices

English
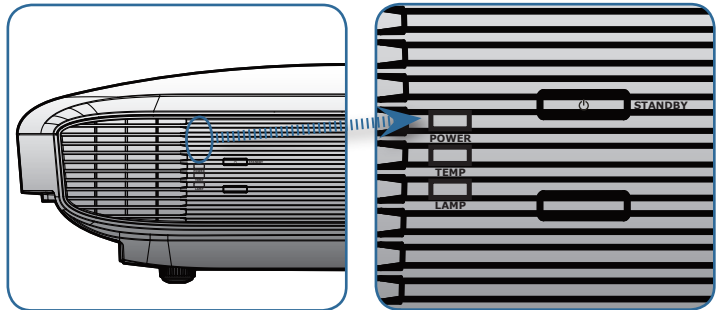
? On Screen Messages

▶ Fan failed:

The projector will switch off automatically.
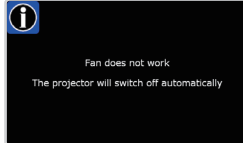
▶ Over temperature:

The projector will switch off automatically.
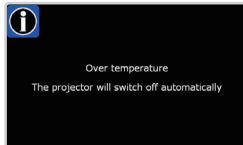
▶ Replacing the lamp:

Lamp is approaching the end of it's rated life.
Replcement suggested.
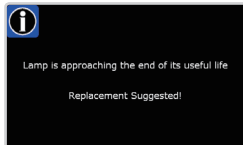
Remote Control Problems

? If the remote control does not work

▶ Check the operating angle of the remote control is within ±25° both horizontally and vertically of on of the IR receivers on the projector.

▶ Make sure there are not any obstructions between the remote control and the projector. Move to within 6 m (20 ft) of the projector.

▶ Make sure batteries are inserted correctly.

▶ Replace batteries if they are exhausted.

Replacing the Lamp

The projector automatically detects the lamp life. When the lamp life is nearing the end of use, you will receive a warning message.
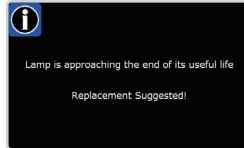
When you see this message, please contact your local reseller or service center to change the lamp as soon as possible. Make sure the projector has been cooled down for at least 30 minutes before changing the lamp.

Warning: Lamp compartment is hot! Allow it to cool down before changing lamp!

Warning: To reduce the risk of personal injury, do not drop the lamp module or touch the lamp bulb. The bulb may shatter and cause injury if it is dropped.
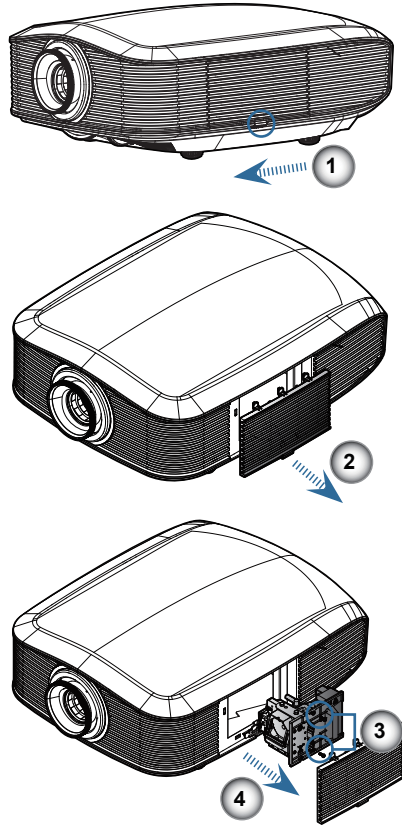
Lamp Replacing Procedure:

1. Switch off the power to the projector by pressing the Power button.
2. Allow the projector to cool down at least 30 minutes.
3. Disconnect the power cord.
4. Unlock the lamp cover.❶
5. Push up and remove the cover.❷
6. Use a screwdriver to remove the screw from the lamp module.❸
7. Pull out the lamp module. ❹

To replace the lamp module, reverse the previous steps.

8. Turn on the projector and do "Lamp Reset" after the lamp module is replaced.

   Lamp Reset: (i)Press "Menu" -> (ii)Select "System" -> (iii)Select "Lamp Settings" ->(iv)Select "Lamp Reset" -> (v)Select "Yes".

Appendices

Compatibility Modes

Mode	Resolution	V.Frequency (Hz)	Analog	Digital
SVGA	800 x 600	56	✓	✗
	800 x 600	60	✓	✓
	800 x 600	72	✓	✓
	800 x 600	75	✓	✓
	800 x 600	85	✓	✓
XGA	1024 x 768	60	✓	✓
	1024 x 768	70	✓	✓
	1024 x 768	75	✓	✓
	1024 x 768	85	✓	✗
WXGA	1280 x 768	60	✓	✓
	1280 x 800	60	✓	✗
HD	1280 x 720	60	✓	✓
	1280 x 1024	60	✓	✓
	1280 x 1024	75	✓	✓
	1920 x 1080	24	✗	✓
	1920 x 1080	60	✗	✓
SXGA+	1400 x 1050	60	✓	✓
UXGA	1600 x 1200	60	✓	✓
Power Book G4				
SVGA	800 x 600	60	✓	✗
	800 x 600	75	✓	✗
	800 x 600	85	✓	✗
XGA	1024 x 768	60	✓	✗
	1024 x 768	70	✓	✗
	1024 x 768	75	✓	✗
	1024 x 768	85	✓	✗
WXGA	1280 x 768	60	✓	✗
HD	1280 x 720	60	✓	✗
	1280 x 1024	60	✓	✗
	1280 x 1024	75	✓	✗
SXGA+	1400 x 1050	60	✓	✗
UXGA	1600 x 1200	60	✓	✗
iMAC				
XGA	1024 x 768	60	✓	✗

RS232 Commands and Protocol Function List

RS232 Pin Assignments
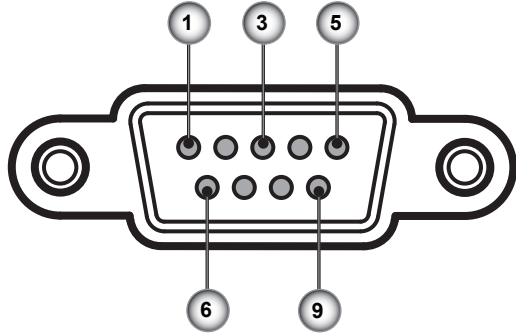
Pin no.	Name	I/O (From Projector Side)
1	NC	—
2	RXD	IN
3	TXD	OUT
4	NC	—
5	NC	—
6	NC	—
7	RS232	RTS
8	RS232	CTS
9	NC	—

Appendices

RS232 Protocol Function List

RS232 Command Table.

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   XX=01-99, projector's ID, XX=00 is for all projectors

SEND to projector   Note : There is a <CR> after all ASCII commands
0D is the HEX code for <CR> in ASCII code

232 ASCII Code	HEX Code	Function		Description
~XX00 1	7E 30 30 30 30 20 31 0D	Power ON		
~XX00 2	7E 30 30 30 30 20 32 0D	Power OFF		
~XX01 1	7E 30 30 30 31 20 31 0D	Resync		
~XX12 1	7E 30 30 31 32 20 31 0D		HDMI 1	
~XX12 15	7E 30 30 31 32 20 31 35 0D		HDMI 2	
~XX12 2	7E 30 30 31 32 20 32 0D		DVI	
~XX12 14			Component YPbPr	
~XX12 5	7E 30 30 31 32 20 35 0D		VGA	
~XX12 7	7E 30 30 31 32 20 37 0D	Direct Source Selection	VGA SCART	
~XX12 8	7E 30 30 31 32 20 38 0D		VGA 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	
~XX20 1	7E 30 30 32 30 20 31 0D	Display Mode	Cinema	
~XX20 2	7E 30 30 32 30 20 32 0D		Bright	
~XX20 3	7E 30 30 32 30 20 33 0D		Photo	
~XX20 4	7E 30 30 32 30 20 34 0D		Reference	
~XX20 5	7E 30 30 32 30 20 35 0D		User	
~XX21 n	7E 30 30 32 31 20 a 0D	Brightness		n= 0 (a=30) - +100 (a=31 30 30)
~XX22 n	7E 30 30 32 32 20 a 0D	Contrast		n= 0 (a=30) - +100 (a=31 30 30)
~XX23 n	7E 30 30 32 33 20 a 0D	Sharpness		n= 1 (a=31) - +15 (a=31 35)
~XX44 n	7E 30 30 34 34 20 a 0D	Color		n= 0 (a=30) - +100 (a=31 30 30)
~XX45 n	7E 30 30 34 35 20 a 0D	Tint		n= 0 (a=30) - +100 (a=31 30 30)
~XX196 n	7E 30 30 31 39 36 20 a 0D	Image/Advanced	Noise Reduction	n= 0 (a=30) - 10 (a=31 30)
~XX35 1	7E 30 30 33 35 20 31 0D	Image/Advanced/Gamma	Film	
~XX182 n	7E 30 30 31 38 32 20 a 0D		Curve Type	n=-7 (a=2D 37) - +7 (a=37)
~XX183 n	7E 30 30 31 38 33 20 a 0D		Offset	n=-5 (a=2D 35) - +5 (a=35)
~XX35 2	7E 30 30 33 35 20 32 0D		Video	
~XX184 n	7E 30 30 31 38 34 20 a 0D		Curve Type	n=-7 (a=2D 37) - +7 (a=37)
~XX185 n	7E 30 30 31 38 35 20 a 0D		Offset	n=-5 (a=2D 35) - +5 (a=35)
~XX35 3	7E 30 30 33 35 20 33 0D		Graphics	
~XX186 n	7E 30 30 31 38 36 20 a 0D		Curve Type	n=-7 (a=2D 37) - +7 (a=37)
~XX187 n	7E 30 30 31 38 37 20 a 0D		Offset	n=-5 (a=2D 35) - +5 (a=35)
~XX35 4	7E 30 30 33 35 20 34 0D		Standard	
~XX188 n	7E 30 30 31 38 38 20 a 0D		Curve Type	n=-7 (a=2D 37) - +7 (a=37)
~XX189 n	7E 30 30 31 38 39 20 a 0D		Offset	n=-5 (a=2D 35) - +5 (a=35)
~XX43 n	7E 30 30 34 33 20 a 0D	B/W Extension		n= Off /On (a=30/31)
~XX36 1	7E 30 30 33 36 20 31 0D	Color Temp.	Warm	
~XX36 2	7E 30 30 33 36 20 32 0D		Medium	
~XX36 3	7E 30 30 33 36 20 33 0D		Cold	
~XX24 n	7E 30 30 32 34 20 a 0D	RGB Gain\Bias	Red Gain	n= -50 (a=2D 35 30) - +50 (a=35 30)
~XX25 n	7E 30 30 32 35 20 a 0D		Green Gain	n= -50 (a=2D 35 30) - +50 (a=35 30)
~XX26 n	7E 30 30 32 36 20 a 0D		Blue Gain	n= -50 (a=2D 35 30) - +50 (a=35 30)
~XX27 n	7E 30 30 32 37 20 a 0D		Red Bias	n= -50 (a=2D 35 30) - +50 (a=35 30)
~XX28 n	7E 30 30 32 38 20 a 0D		Green Bias	n= -50 (a=2D 35 30) - +50 (a=35 30)
~XX29 n	7E 30 30 32 39 20 a 0D		Blue Bias	n= -50 (a=2D 35 30) - +50 (a=35 30)
~XX33 1	7E 30 30 33 33 20 31 0D		Reset	
~XX41 n	7E 30 30 34 31 20 a 0D	Image/Advanced/PureEngine	PureDetail	n=Off/1/2/3 (a=30/31/32/33)
~XX42 n	7E 30 30 34 32 20 a 0D		PureColour	n=Off/1/2/3/4/5 (a=30/31/32/33/34/35)
~XX190 n	7E 30 30 31 39 30 20 a 0D		PureMotion	n=Off/Low/Med/High (a=30/31/32/33/34)
~XX197 n	7E 30 30 31 39 37 20 a 0D		Pure Demo	n=Off/H Spilt/V Spilt=0/1 (a=30/31/32)
~XX39 1	7E 30 30 33 39 20 31 0D	Input Source Filters	HDMI 1	
~XX39 7	7E 30 30 33 39 20 37 0D		HDMI 2	
~XX39 2	7E 30 30 33 39 20 32 0D		DVI-D	
~XX39 8	7E 30 30 33 39 20 38 0D		Component	
~XX39 5	7E 30 30 33 39 20 35 0D		VGA	
~XX39 9	7E 30 30 33 39 20 39 0D		S-Video	
~XX39 10	7E 30 30 33 39 20 31 30 0D		Video	
~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 37 0D		Native	
~XX61 n	7E 30 30 36 31 20 a 0D	Overscan		n= 0 (a=30) – 4 (a=34)
~XX62 n	7E 30 30 36 32 20 a 0D	Edge masking		n=0 (a=30) -5 (a=35)
~XX64 n	7E 30 30 36 34 20 a 0D	V Image Shift		n= -50 (a=2D 35 30) - +50 (a=35 30)
~XX66 n	7E 30 30 36 36 20 a 0D	V Keystone		n= -16 (a=2D 31 36) - +16 (a=31 36)
~XX199 n	7E 30 30 31 39 39 20 a 0D	SuperWide		n=0ff/On/Auto (a=30/31/32)
~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
~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
~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		Center
~XX72 4	7E 30 30 37 32 20 34 0D		Bottom Left
~XX72 5	7E 30 30 37 32 20 35 0D		Bottom Right
~XX106 n	7E 30 30 31 30 36 20 a 0D		Auto Power Off (min) n=0 (a=30)-60 (a=36 30) (multiple of 5)
~XX37 2	7E 30 30 33 37 20 32 0D	Color Space	RGB
~XX37 3	7E 30 30 33 37 20 33 0D		YCbCr
~XX73 n	7E 30 30 37 33 20 a 0D	Signal	Tracking	n = 0 (a=30) –200 (a=32 30 30)
~XX74 n	7E 30 30 37 34 20 a 0D		Phase	n = 0 (a=30) – 100 (a=31 30 30)
~XX75 n	7E 30 30 37 35 20 a 0D		H. Position	n = 0 (a=30) – 100 (a=31 30 30)
~XX76 n	7E 30 30 37 36 20 a 0D		V. Position	n = 0 (a=30) – 100 (a=31 30 30)
~XX200 n	7E 30 30 32 30 30 20 a 0D		Black Level	n=0 (a=30) -100 (a=31 30 30)
~XX201 n	7E 30 30 32 30 31 20 a 0D		White Level	n=0 (a=30) -100 (a=31 30 30)
~XX202 n	7E 30 30 32 30 32 20 a 0D		Saturation	n = 0 (a=30) – 100 (a=31 30 30)
~XX203 n	7E 30 30 32 30 33 20 a 0D		Hue	n = 0 (a=30) – 100 (a=31 30 30)
~XX204 n	7E 30 30 32 30 34 20 a 0D		IRE	n=0/7.5 (a=30/31)
~XX100 1	7E 30 30 31 30 30 20 31 0D	Source Lock	On
~XX100 2	7E 30 30 31 30 30 20 32 0D		Off
~XX191 n	7E 30 30 31 39 31 20 a 0D	DynamicBlack		n=Off/Cinema 1/Cinema 2=1(a=30/31/32)
~XX192 n	7E 30 30 31 39 32 20 a 0D	12V Trigger A		n=On/Off (a=30/31)
~XX193 n	7E 30 30 31 39 33 20 a 0D	12V Trigger B		n=Off/On/AUTO235 (a=30/31/32)
~XX205 n	7E 30 30 32 30 35 20 a 0D	AUTO235		n=4:3/16:9/LBX/ Native (a=31/32/35/36)
~XX104 1	7E 30 30 31 30 34 20 31 0D	Background Color	Dark Blue
~XX104 2	7E 30 30 31 30 34 20 32 0D		Black
~XX104 3	7E 30 30 31 30 34 20 33 0D		Gray
~XX194 n	7E 30 30 31 39 34 20 a 0D	Image AI		n=On/Off (a-31/32)
~XX108 1	7E 30 30 31 30 38 20 31 0D	Lamp Setting	Lamp Hour
~XX109 1	7E 30 30 31 30 39 20 31 0D		Lamp Reminder	On
~XX109 2	7E 30 30 31 30 39 20 32 0D			Off
~XX110 1	7E 30 30 31 31 30 20 31 0D		Brite Mode	On
~XX110 2	7E 30 30 31 31 30 20 32 0D			Off
~XX111 1	7E 30 30 31 31 31 20 31 0D		Lamp Reset	Yes
~XX111 2	7E 30 30 31 31 31 20 32 0D			No
~XX112 1	7E 30 30 31 31 32 20 31 0D	Reset		Yes
~XX112 2	7E 30 30 31 31 32 20 32 0D			No

SEND from projector automatically

232 ASCII Code	HEX Code	Function	Projector Return	Description
when Standby/Warming/Cooling/Out of Range/Lamp fail			INFOn	n : 0/1/2/3/4 = Standby/Warming/Cooling/Lamp fail

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: 0/1/2/3/4/5/6/7/8 = None/HDMI 1/HDMI 2/DVI/Component/VGA/S-Video/Video
~XX122 1	7E 30 30 31 32 32 20 31 0D	Software Version	OKaaaa	
~XX123 1	7E 30 30 31 32 33 20 31 0D	Display Mode	OKn	n: 0/1/2/3/4/5 =Cinema/ Bright/ Photo/ Reference/ User
~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	Aspect Ratio	OKn	n: 0/1/2/3/4 =4x3, 16x9, LBX, Native
~XX128 1	7E 30 30 31 32 38 20 31 0D	Color Temperature	OKn	n: 0/1/2=Warm/Medium/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	OKabbbbcdddde	a : 0/1=Off/On bbbb: Lamp Hour c: source 0/1/2/3/4 = None/HDMI 1/HDMI 2/DVI/Component/VGA/S-Video/Video dddd: FW version e : Display mode 0/1/2/3/4/5 =Cinema/ Bright/ Photo/ Reference/ User
~XX151 1	7E 30 30 31 35 31 20 31 0D	Model Name	OKn	n : 0/1/2=HD82/HD82LV
~XX152 1	7E 30 30 31 35 32 20 31 0D	RS232 Version No	OKn	

Appendices

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 attached a mount to the projector met the following specifications:

   ‣ **Screw type: M6**

   ‣ **Maximum screw length: 12mm**

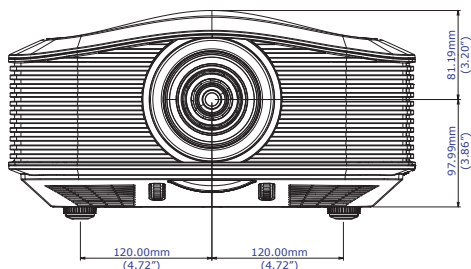   ‣ **Minimum screw length: 10mm**

Note

Please note that damage resulting from incorrect installation will invalidate the warranty.

⚠️ Warning:

1. If you buy ceiling mount from other company, please be sure to use the correct screw size. Screw size will be different on different mounts. It depends on the plate thickness.

2. Be sure to keep at least 10cm gap between the ceiling and the bottom of the projector.

3. Avoid installing the projector near a heat source.

370.90mm (14.60″)
75.34mm (2.97″)
188.10mm (7.40″)
220.00mm (8.66″)
20.00mm (0.79″)
498.57mm (19.63″)
138.50mm (5.45″)
260.00mm (10.23″)

81.19mm (3.20″)
97.99mm (3.86″)
120.00mm (4.72″)
120.00mm (4.72″)

Appendices
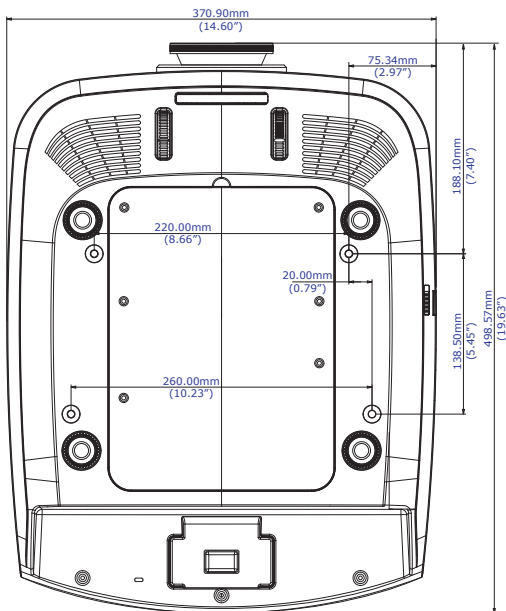
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Appendices

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Regulation & Safety Notices

This appendix lists the general notices of your Projector.

FCC notice

This device 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 device 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 device does cause harmful interference to radio or television reception, which can be determined by turning the device 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 device and receiver.
- ■ Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- ■ Consult the dealer or an experienced radio/television 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.

Appendices

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 numerique de la classe B est conforme a 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.