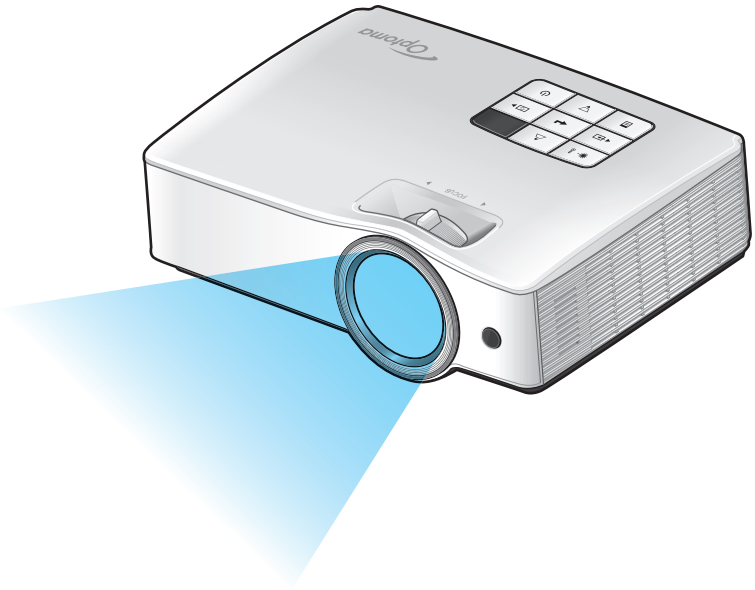
Optoma®



Data Projector
User's Manual

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Safety Information

	The lightning flash with arrow head within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) 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

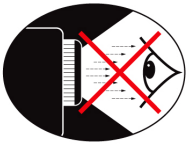
This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

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 moisture.
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.
10. The product is not suitable for use at visual display workplaces.
11. This device must not be placed in direct view.

Eye Safety Warnings



- 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.

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 powered on. The bright light may hurt and damage 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- Do not use lens cap when projector is in operation.
- Warning- When the light is approaching the end of its lifetime, the message "Light Warning: Light life exceeded." will show on the screen. Please contact your local reseller or service center to change the light as soon as possible.
- Warning- Do not look into or point the laser pointer on your remote control into your or someone's eyes. Laser pointer can cause permanent damage to eyesight.

NOTE

- When the light reaches the end of its life, the projector will not turn back on until the light module has been replaced.

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 - 40°C.
    - Relative Humidity is 5 - 40°C, 80% (Max.), non-condensing.
  - In areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - In direct sunlight.

Product Features

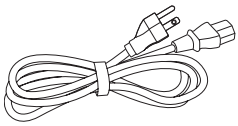
- XGA (1024x768) Native resolution / WXGA (1280x800) Native resolution
- HD compatible – 1080p supported
- VGA monitor loop through (works on standby mode > 0.5W)
- BrilliantColor™ Technology
- Security Bar and Kensington Lock
- RS232 control
- Rapid shutdown
- Built-in speakers
- Network support
- Instant On/Off
- 3D Image Projection support
- Mercury-free Hybrid Light Source
- USB Memory or Memory Card Reader Without Computer
- Wireless Projection Support from MobiShow
- Network Control (via wired or wireless LAN)
- Network Display (via wired or wireless LAN)

- Monitor loop through only support in VGA1-In.

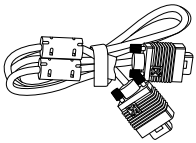
Package Overview

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

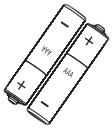
Projector



Power Cord

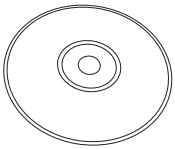


VGA Cable



2 × AAA Batteries

IR Remote Control



CD with User Manual

NOTE

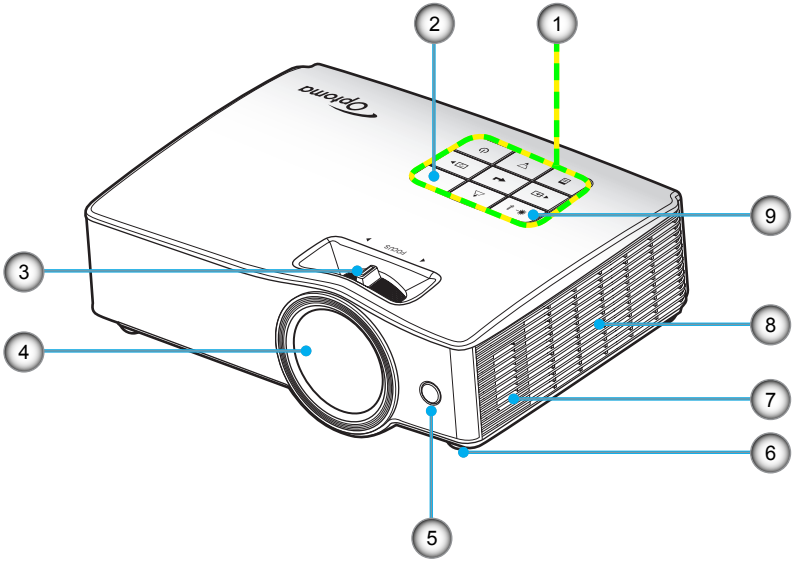
- Due to different applications in each Country, some regions may have different accessories.

Documentation :

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

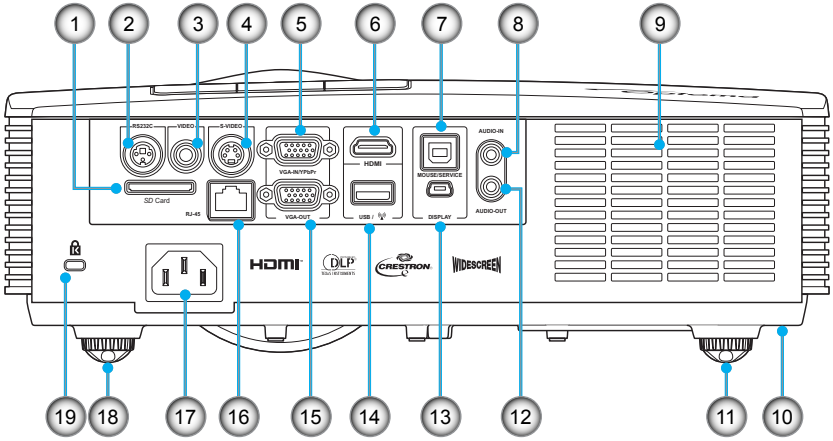
Product Overview

Main Unit



1. Control Panel
2. IR Receiver
3. Focus Ring
4. Lens
5. IR Receiver
6. Tilt-Adjustment Feet
7. Speaker
8. Ventilation
9. LED Indicator

Connectors View

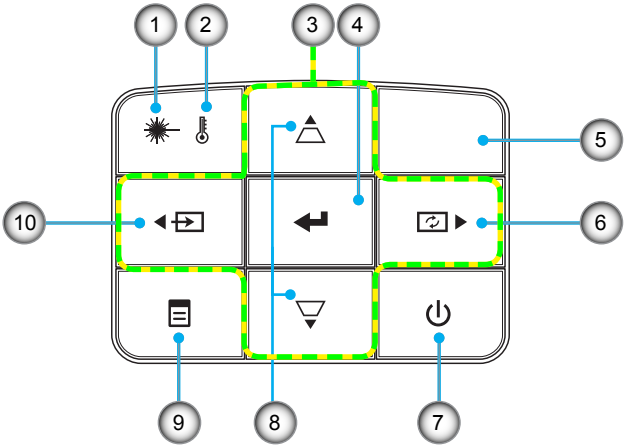


1. SD Card Slot
2. RS-232 Connector (3-pin DIN Type)
3. Composite Video Input Connector
4. S-Video Input Connector
5. VGA-In/YPbPr Connector
   (PC Analog Signal/Component Video Input/HDTV/YPbPr)
6. HDMI Connector
7. USB Type B Port for interactive function and firmware upgrade
8. Audio Input Connector (3.5mm mini jack)
9. Ventilator
10. Security Bar
11. Tilt-Adjustment Feet
12. Audio Output Connector (3.5mm mini jack)
13. Mini USB Port
14. USB for Wireless Dongle & Thumb Drive
15. VGA-Out Connector (Monitor Loop-through Output)
16. RJ-45 Network Connector
17. Power Socket
18. Tilt-Adjustment Feet
19. Kensington™ Lock Port

NOTE

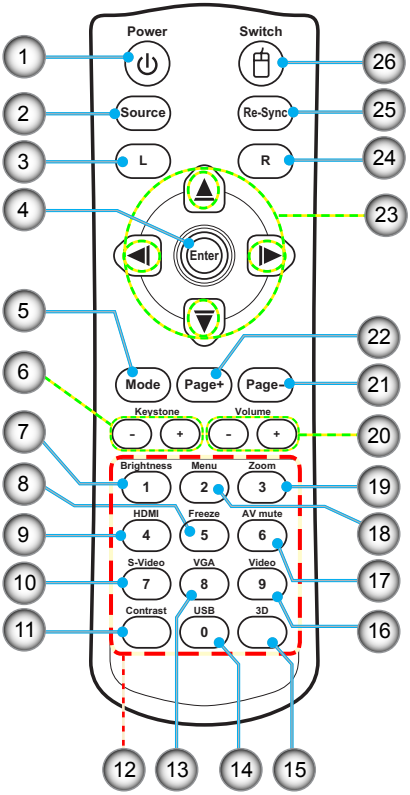
- Monitor loop through only support in VGA-In.

Control Panel



Using the Control Panel			
1	**Light LED**		Indicate the projector light status.
2	**Temp LED**		Indicate the projector temperature status.
3	**Four Directional Select Keys**		Use ▲ ▼ ◀ ▶ to select items or make adjustments to your selection.
4	**Enter**		Confirm your item selection.
5	**IR Receiver**		Receive the remote control signal.
6	**Re-Sync**		Automatically synchronize the projector to the input source.
7	**Power / Standy LED**		Press to turn the projector on or off (see “Power On/Off the Projector” section on pages 14-15). Indicate the projector power status.
8	**Keystone**		Use ▽ △ to adjust image distortion caused by tilting the projector. (±40 degrees)
9	**Menu**		Press to launch the on-screen display (OSD) menu. To exit OSD, press the key again.
10	**Source**		Press to select an input signal.

Remote Control

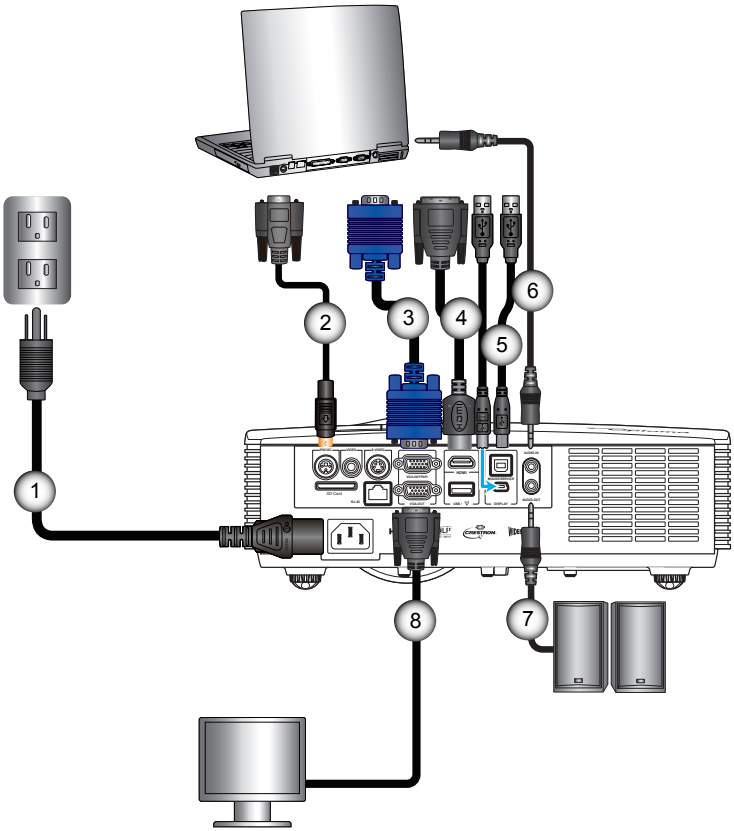


Using the Remote Control

1	**Power**	Refer to the “Power On/Off the Projector” section on pages 14-15.
2	**Source**	Press **Source** to select an input signal.
3	**L Button**	Mouse left click.
4	**Enter**	Confirm your item selection.

5	**Mode or Laser** (Button varies on model)	With Laser version: Press to use the laser pointer. Without Laser version: Press **Mode** to change modes.
6	**Keystone +/-**	Adjust image distortion caused by tilting the projector.
7	**Brightness**	Adjust the brightness of the image.
8	**Freeze**	Pause the screen image. Press this button again to unlock.
9	**HDMI**	Choose HDMI as the source.
10	**S-Video**	Choose S-Video as the source.
11	**Contrast**	Adjust image contrast.
12	**Number Keys**	Press the keys to enter numbers.
13	**VGA**	Choose VGA as the source.
14	**USB**	Choose USB flash drive as the source.
15	**3D**	Turn the 3D OSD menu on/off.
16	**Video**	Choose Composite video as the source.
17	**AV mute**	Momentarily turns off/on the audio and video.
18	**Menu**	Launch the on-screen display (OSD) menu. To exit OSD, press “Menu” again.
19	**Zoom**	To magnify or reduce the size of the projected screen.
20	**Volume +/-**	Adjust to increase / decrease the volume.
21	**Page -**	Use this button to page down.
22	**Page +**	Use this button to page up.
23	**Four Directional Keys**	Use ▲ ▼ ◀ ▶ to select items, make adjustments to your selection, or mouse emulation via USB.
24	**R Button**	Mouse right click.
25	**Re-Sync**	Automatically synchronizes the projector to the input source.
26	**Switch**	Switch the function of the four directional keys.

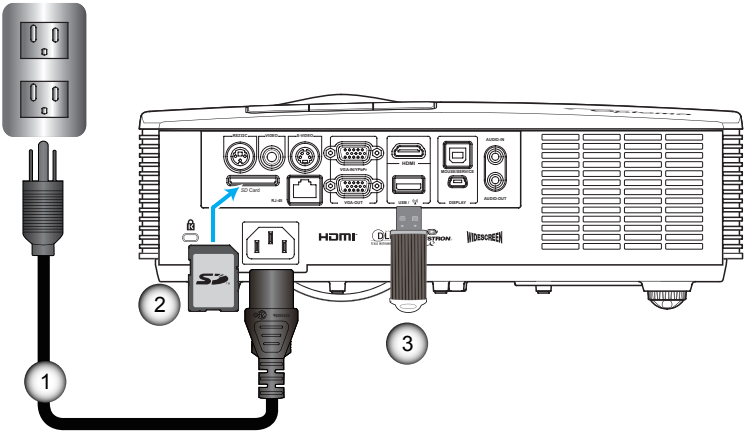
Connect to Computer/Notebook



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

1. Power Cord
2. RS-232 Cable*
3. VGA Cable
4. HDMI Cable*
5. USB Type B Cable*
6. Audio Input Cable*
7. Audio Output Cable*
8. VGA Output Cable*

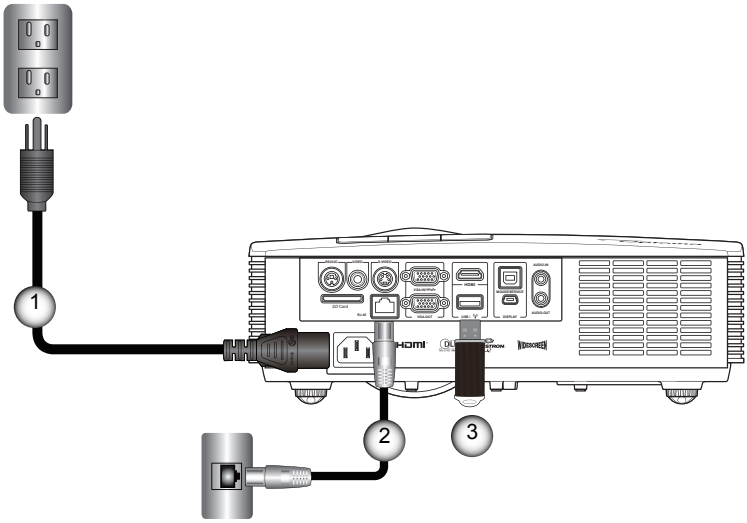
Connect to Memory Drive



❖ (*) Optional accessory

1. Power Cord
2. SD Card*
3. USB flash drive*

Connect to Network

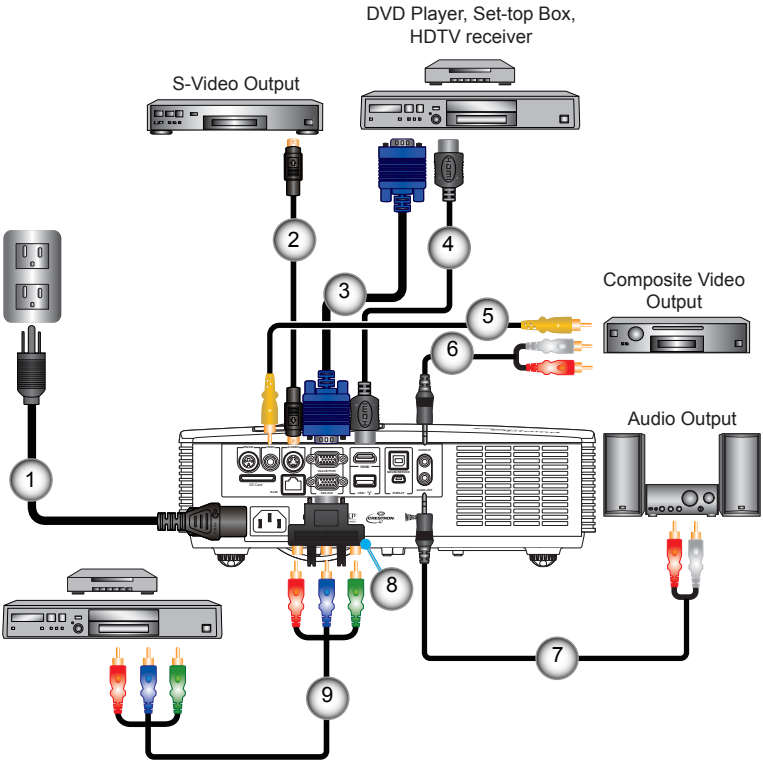


1. Power Cord
2. Network Cable*
3. Wi-Fi Dongle* (for wireless network functionality)

NOTE

❖ (*) Optional accessory

Connect to Video Sources



Note

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

1. Power Cord
2. S-Video Cable*
3. VGA Cable
4. HDMI Cable
5. Composite Video Cable*
6. Audio Cable/RCA*
7. Audio Cable/RCA*
8. 15-Pin to 3 RCA Component/ HDTV Adaptor*
9. 3 RCA Component Cable*

Powering the projector On / Off

Powering On the Projector

1. Connect the power cord to the projector and to the power source. When connected, the POWER/STANDBY LED lights Amber.
2. Press ⏻ on the control panel or on the remote control. The POWER/STANDBY LED lights Blue.

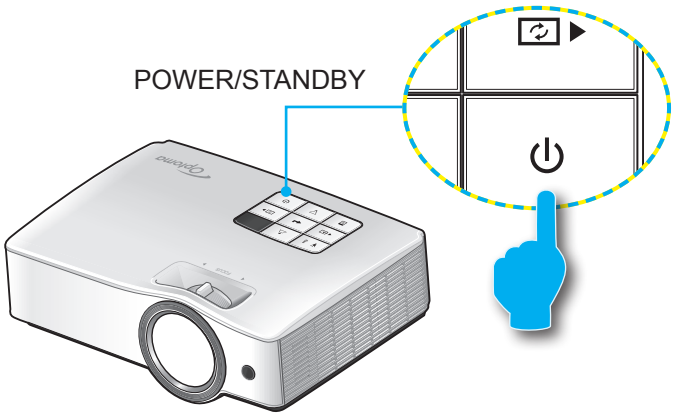
   The startup screen displays in approximately 3 seconds. The first time you use the projector, you may be asked to select the preferred language and power saving mode.
3. Turn on and connect the source signal that you want to display on the screen (computer, notebook, video player, etc). The projector detects the source automatically.
4. If you connect multiple sources at the same time, press ◄ on the control panel or the direct source key on the remote control to switch between inputs.

NOTE

- When Power mode (Standby) is set to Eco (> 0.5W) and the projector is in standby mode, VGA output, Audio pass-through and RJ45 are deactivated.

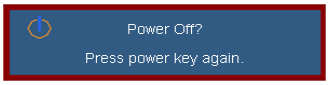
NOTE

- If the projector does not automatically search for source, press ☰ on the control panel or the **Menu** button on the remote control. Go to “OPTIONS” and set “Source Lock” to “Off”. See page 42.



Powering Off the Projector

1. Press ⏻ on the control panel or the remote control to turn off the projector. The following message is displayed on the screen.



2. Press ⏻ again to confirm. The projector goes to standby mode and the POWER/STANDBY LED lights Amber.

   If you wish to turn the projector on, press ⏻ to restart the projector.

3. To completely turn the projector off, disconnect the power cord from the electrical outlet.

NOTE

- The “Power Off” message disappears if no button is pressed after 15 seconds.

Warning Indicator

Warning indicators light up and the projector automatically shuts down in the following conditions:

- “Light” LED indicator is lit amber and the “POWER/STANDBY” indicator flashes red.
- “TEMP” LED indicator is lit yellow green and the “POWER/STANDBY” indicator flashes red. This indicates the projector has overheated. Under normal conditions, the projector can be switched back on.
- “TEMP” LED indicator flashes yellow green and the “POWER/STANDBY” indicator flashes red.

Unplug the power cord from the projector, wait for 30 seconds and try again. If the warning indicator lights up again, contact your nearest service center for assistance.

NOTE

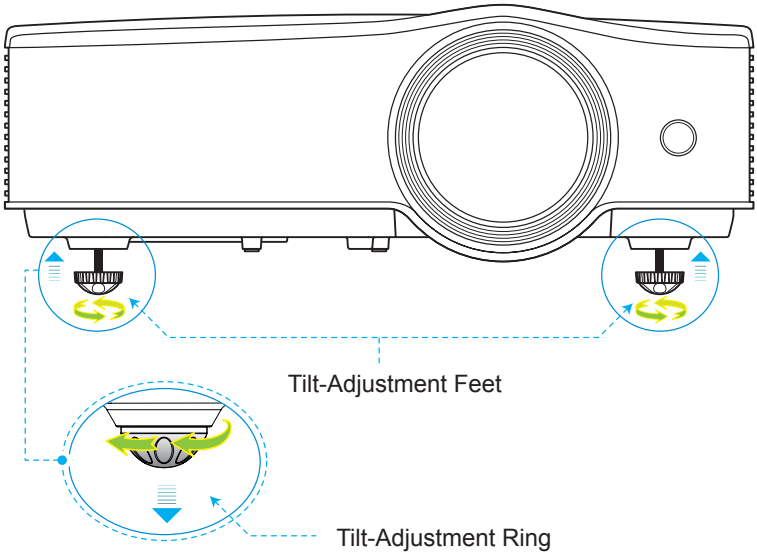
- Contact the nearest service center if the projector displays these symptoms. See pages 68-69 for more information.

Adjusting the Projected Image

Adjusting the Projector's Height

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

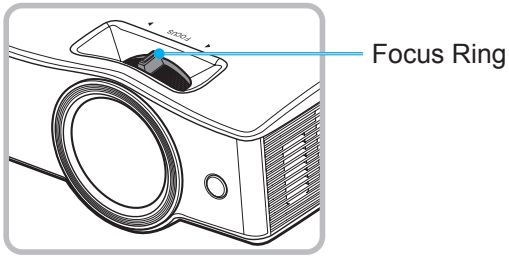
1. Locate the adjustable foot you wish to modify on the underside of the projector.
2. Rotate the adjustable ring clockwise to raise the projector or counter clockwise to lower it. Repeat with the remaining feet as needed.



Adjusting the Projector's Focus

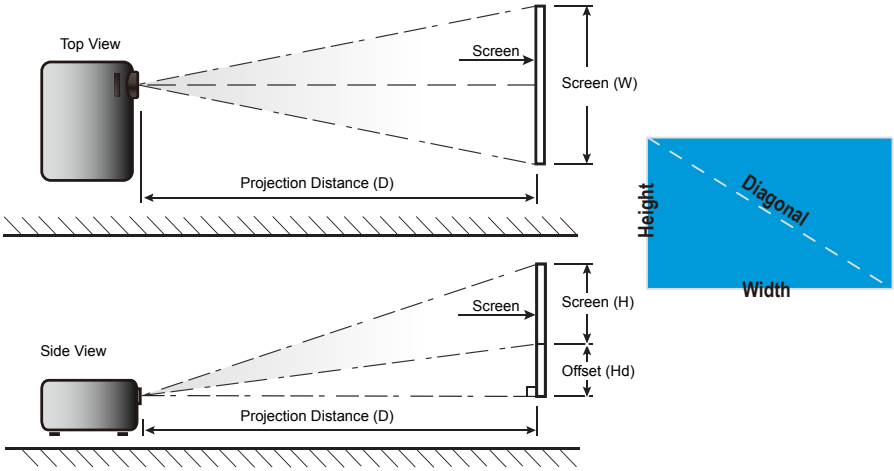
To focus the image, rotate the focus ring until the image is clear.

- XGA series: The projector will focus at distances from 1.64 to 8.2 feet (0.5 to 2.5 meters).
- WXGA series: The projector will focus at distances from 1.64 to 8.2 feet (0.5 to 2.5 meters).



Adjusting Projection Image Size

- XGA series: Projection Image Size from 39.3" to 196.5" (1.0 to 4.99 meters).
- WXGA series: Projection Image Size from 44.6" to 222.8" (1.1 to meters).



XGA

Diagonal length (inch) size of 4:3 Screen	Screen Size W x H				Projection Distance (D)				Offset (Hd)	
	(m)		(inch)		(m)		(feet)			
	Width	Height	Width	Height	wide	tele	wide	tele	(m)	(feet)
40.00	0.81	0.61	31.89	24.02	0.50	0.50	1.64	1.64	0.09	0.30
60.00	1.22	0.91	48.03	35.83	0.80	0.80	2.62	2.62	0.14	0.45
70.00	1.42	1.07	55.91	42.13	0.90	0.90	2.95	2.95	0.16	0.53
80.00	1.63	1.22	64.17	48.03	1.00	1.00	3.28	3.28	0.18	0.60
90.00	1.83	1.37	72.05	53.94	1.10	1.10	3.61	3.61	0.21	0.67
100.00	2.03	1.52	79.92	59.84	1.30	1.30	4.26	4.26	0.23	0.75
120.00	2.44	1.83	96.06	72.05	1.50	1.50	4.92	4.92	0.27	0.90
150.00	3.05	2.29	120.08	90.16	1.90	1.90	6.23	6.23	0.34	1.13
180.00	3.66	2.74	144.09	107.87	2.30	2.30	7.54	7.54	0.41	1.35
250.00	5.08	3.81	200.00	150.00	3.20	3.20	10.50	10.50	0.57	1.87
300.00	6.10	4.57	240.16	179.92	3.66	3.66	12.01	12.01	0.69	2.25

❖ This table is for user's reference only.

WXGA

Diagonal length (inch) size of 16:10 Screen	Screen Size W x H				Projection Distance (D)				Offset (Hd)	
	(m)		(inch)		(m)		(feet)			
	Width	Height	Width	Height	wide	tele	wide	tele	(m)	(feet)
40.00	0.86	0.54	33.86	21.26	0.40	0.40	1.31	1.31	0.07	0.22
60.00	1.29	0.81	50.79	31.89	0.70	0.70	2.30	2.30	0.10	0.33
70.00	1.51	0.94	59.45	37.01	0.80	0.80	2.62	2.62	0.12	0.38
80.00	1.72	1.08	67.72	42.52	0.90	0.90	2.95	2.95	0.13	0.44
90.00	1.94	1.21	76.38	47.64	1.00	1.00	3.28	3.28	0.15	0.49
100.00	2.15	1.35	84.65	53.15	1.10	1.10	3.61	3.61	0.17	0.55
120.00	2.58	1.62	101.57	63.78	1.30	1.30	4.26	4.26	0.20	0.66
150.00	3.23	2.02	127.17	79.53	1.70	1.70	5.58	5.58	0.25	0.82
180.00	3.88	2.42	152.76	95.28	2.00	2.00	6.56	6.56	0.30	0.98
250.00	5.38	3.37	211.81	132.68	2.80	2.80	9.18	9.18	0.42	1.37
300.00	6.46	4.04	254.33	159.05	3.36	3.36	11.03	11.03	0.50	1.64

❖ This table is for user's reference only.

Projecting Image

When the projector is turned on, it automatically searches for connected devices.

Once a device is detected, the projector projects the image or the menu of the input source, such as in:

- **Network Display**: When a local area network or wireless network is detected (see "Connect to Network" on page 16).
- **USB Display**: When a computer is connected through the mini USB port of the projector (see "USB Display mode" on page 62).
- **Memory Drive Display**: When a flash drive or SD card is detected (see "Memory Drive Display" on page 47).

NOTE

- Only input sources selected in the Input Source menu (see *) will be auto searched by the projector.
- The number of input sources to auto search may affect the length of time for the projector to finish the search.

Switch Input Source

If the desired input source is not included in the auto search function (see Input Source menu) or more than one input source devices are connected, you can switch the input source manually by doing one of the following:

- Press the direct input source key on the remote control.
- Press ◄ on the control panel repeatedly to scroll through the options.
- Press the **Source** key on the remote control repeatedly to scroll through the options.

Refresh Input Source

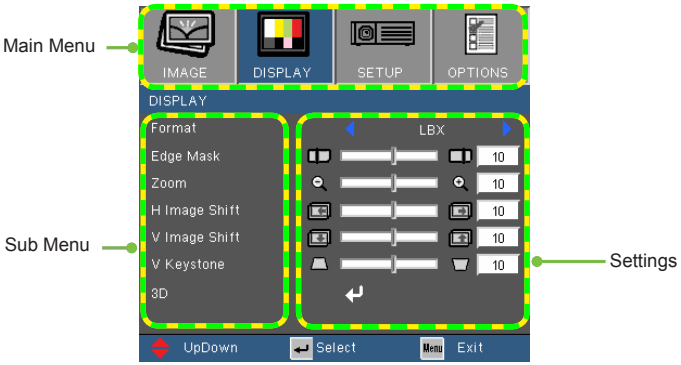
While the projector is operating and a new input source device is connected, press ► on the control panel or the **Re-Sync** key on the remote control to refresh and synchronize the projector with the input sources.

On-screen Display Menu

The Projector has a multilingual On-screen Display menu that allows you to make image adjustments and change your projector settings.

How to operate

1. To open the OSD menu, press ☰ on the control panel or **Menu** on the remote control.
2. When the OSD menu is displayed, use ◀▶ keys to select an item on the main menu.
3. While a menu item is highlighted, press ↵ or **Enter** to enter the sub menu.
4. Use the ▲ ▼ keys to select the desired item and adjust the settings using the ◀▶ keys.
5. Press ↵ or **Enter** to confirm. The screen returns to the main menu.
6. To exit, press ☰ or **Menu** again. The OSD menu closes and the projector automatically saves the new settings.



Menu Tree

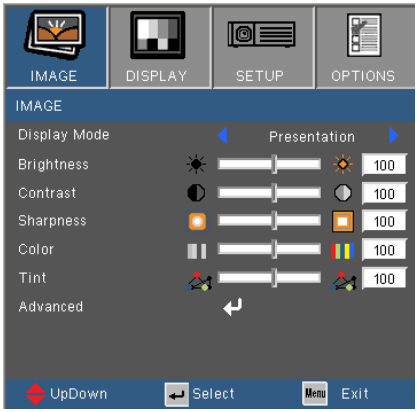
Main Menu	Sub Menu		Settings
Image	Display Mode		Presentation / Bright / Movie / sRGB / Blackboard / Classroom / User / 3D
	Brightness		-50 ~ 50
	Contrast		-50 ~ 50
	Sharpness		1 ~ 15
	[1]Color		-50 ~ 50
	[1]Tint		-50 ~ 50
	Advanced	Gamma	Film / Video / Graphics / PC
		BrilliantColor™	0 ~ 10
		Color	Red Gain / Green Gain / Blue Gain / Red Bias / Green Bias / Blue Bias / Cyan / Magenta / Yellow / Reset
		Color Space	Auto / RGB / YUV
			Auto / RGB (0~255) / RGB (16~235) / YUV
		Input Source	VGA / S-Video / Video / HDMI / Flash Drive / Network Display / USB Display
		Exit	
Display	Format		4:3 / 16:9-I / 16:9-II or 16:10 (ZW210ST) / LBX (ZW210ST) / Native / Auto
	Edge Mask		0~10
	Zoom		-5~25
	H Image Shift		-50~50
	V Image Shift		-50~50
	V Keystone		-40~40
	3D	3D Mode	Off / DLP-Link / IR
		[3]3D Sync Invert	On / Off

Main Menu	Sub Menu		Settings
Setup	Language		English / Deutsch / Français / Italiano / Español / Português / Svenska / Nederlands / Norsk/Dansk / Polski / Русский / Suomi / ελληνικά / Magyar / Čeština / عربي / 繁體中文 / 簡体中文 / 日本語 / 한국어 / ไทย / Türkçe / Farsi
	Projection		Front / Front-Ceiling / Rear / Rear-Ceiling
	Menu Location		Top-Left / Top-Right / Center / Bottom-Left / Bottom-Right
	[2]Screen Type		16:10 / 16:9 (WXGA only)
	Network	Network State	Read-Only
		DHCP	Read-Only
		IP Address	Read-Only
		Subnet Mask	Read-Only
		Gateway	Read-Only
		DNS	Read-Only
		Apply	Yes / No
		Exit	
	[4]Signal	Automatic	On / Off
		Phase	0~31
		Frequency	-5~5
		H. Position	-5~5
		V. Position	-5~5
		Exit	
	Security	Security	On / Off
		Change Password	
		Exit	
	Projector ID		0~99
	Mute		On / Off

Main Menu	Sub Menu		Settings
Setup	Volume		0~100
	Advanced	Logo	Optoma / Neutral / User
		Logo Capture	
		Closed Captioning	Off / CC1 / CC2
Options	Source Lock		On / Off
	High Altitude		On / Off
	Information Hide		On / Off
	Keypad Lock		On / Off
	Background Color		Red / Blue / Green / Cyan
	Test Pattern		None / Grid / White Pattern
	Advanced	Direct Power On	On / Off
		Auto Power Off	0 ~ 100
		Sleep Timer	0 ~ 100
		Power Mode	ECO / Active
		Brightness Mode	Bright / ECO / Image AI
	Exit		
	Reset		

- Please note that the on-screen display (OSD) menus vary according to the signal type selected and the projector model you are using.
- (1) “Color” and “Tint” are only supported in Video mode.
- (2) 16:9 or 16:10 depend on “Screen Type” setting (Available only in WXGA model).
- (3) “3D Sync Invert” is only available when 3D is enabled.
- (4) “Signal” is only supported in Analog VGA (RGB) signal.

IMAGE



Display Mode

The projector comes with factory presets designed for various types of images. Select an appropriate display mode for your source.

- Presentation: Good color and brightness suitable for PC input.
- Bright: Maximum brightness suitable for PC input.
- Movie: For home theater.
- sRGB: Standardised accurate color.
- Blackboard: Select this mode to achieve optimum color settings when projecting onto a green blackboard.
- Classroom: This mode is recommended for projecting in a classroom.
- User: User's settings.
- 3D: Recommended setting if 3D mode is enabled. Adjustments made by the user in 3D will be saved in this mode for further use.

Brightness

Adjust the brightness of the image.

- Press the ◀ to darken image.
- Press the ▶ to lighten the image.

❖ "Saturation" and "Tint" functions are only supported under Video mode.

Contrast

Contrast controls the degree of difference between the lightest and darkest parts of the picture.

- Press the ◀ to decrease the contrast.
- Press the ▶ to increase the contrast.

Sharpness

Adjust the sharpness of the image.

- Press the ◀ to decrease the sharpness.
- Press the ▶ to increase the sharpness.

Color

Adjust the image color.

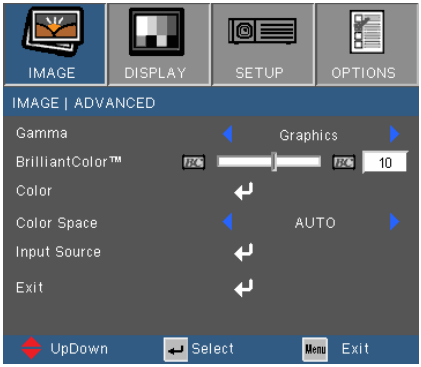
- Press the ◀ to decrease the color of the image.
- Press the ▶ to increase the color of the image.

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.

IMAGE | Advanced



Gamma

This allows you to choose a gamma 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.
- PC: for PC or computer source.

BrilliantColor™

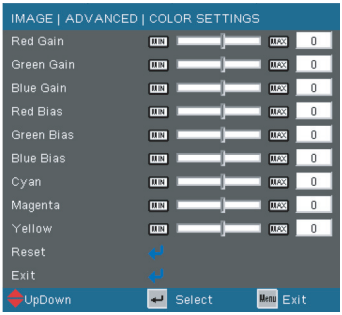
This adjustable item utilizes a new color-processing algorithm and system level enhancements to enable higher brightness while providing true, more vibrant colors in picture. The range is from “0” to “10”. If you prefer a stronger enhanced image, adjust toward the maximum setting. For a smoother, more natural image, adjust toward the minimum setting.

Color

Select ↵ to go to the Color Settings menu and then use ▲ or ▼ to select an item.

- Red/Green/Blue/Cyan/Magenta/Yellow: Use ◀ or ▶ to select Red, Green, Blue, Cyan, Magenta and Yellow Colors.

- Reset: Choose ↵ to return the factory default settings for color adjustments.



Color Space

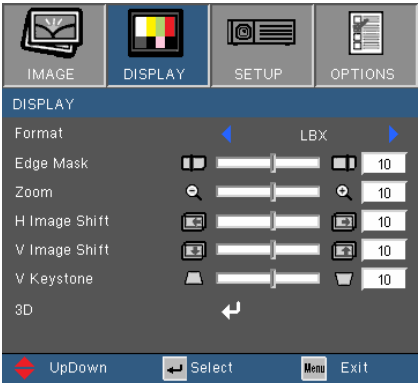
Select an appropriate color matrix type:

- AUTO: Automatically selects the color matrix.
- RGB: Sets the color matrix to RGB.
- YUV: Sets the color matrix to YCbCr or YPbPr.

Input Source

Use this option to enable / disable input sources. Press ↵ 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.

DISPLAY



Format

Use this function to choose your desired aspect ratio.

XGA

- 4:3: This format is for 4×3 input sources.
- 16:9-I: This format is for 16×9 input sources, like HDTV and DVD enhanced for Wide screen TV. (576i/p)
- 16:9-II: This format is for 16×9 input sources, like HDTV and DVD enhanced for Wide screen TV. (480i/p)
- Native: This format displays the original image without any scaling.
- AUTO: Automatically selects the appropriate display format. When input is 4:3, the image is displayed as 4:3. When input is 16:9 above, the image is displayed as 16:9- I

WXGA

- 4:3: This format is for 4×3 input sources.
- 16:9: This format is for 16×9 input sources, like HDTV and DVD enhanced for Wide screen TV.
- 16:10: This format is for 16×10 input sources, like

widescreen laptops.

- LBX: This format is for non-16x9, letterbox source and for users who use external 16x9 lens to display 2.35:1 aspect ratio using full resolution.
- Native: This format displays the original image without any scaling.
- AUTO: Automatically selects the appropriate display format.

❖ 16:9 or 16:10 depend on "Screen Type" setting. The adjustment is only for WXGA model.

16:10 Screen	480i/p	576i/p	1080i/p	720p	PC
4:3	1066 x 800 center				
16:10	1280 x 800 center				
LBX	Scale to 1280 x 960, then get the central 1280 x 800 image to display				
Native	1:1 mapping centered.		1:1 mapping display 1280 x 800	1280 x 720 centered	1:1 mapping centered

16:9 Screen	480i/p	576i/p	1080i/p	720p	PC
4:3	960 x 720 center				
16:9	1280 x 720 center				
LBX	Scale to 1280 x 960, then get the central 1280 x 720 image to display				
Native	1:1 mapping centered		1:1 mapping display 1280 x 720	1280 x 720 centered	1:1 mapping centered

Edge Mask

- Press the ◀ to reduce the edge mask of an image.
- Press the ▶ to increase the edge mask of an image.

Zoom

- Press the ◀ to reduce the size of an image.
- Press the ▶ to magnify an image on the projection screen.

H Image Shift

Shift the projected image position horizontally.

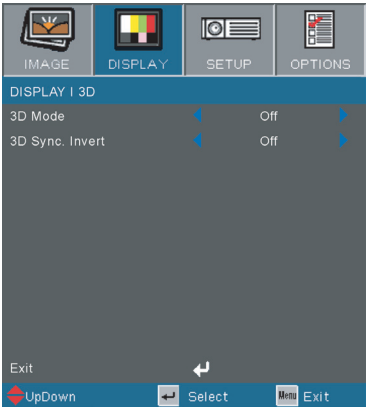
V Image Shift

Shift the projected image position vertically.

V Keystone

Press ◀ or ▶ to adjust image distortion vertically. If the image looks trapezoidal, this option can help make the image rectangular.

DISPLAY | 3D



NOTE

- 3D Mode is automatically enabled when the input source is 120Hz.
- "3D Sync Invert" only available when 3D is enabled.
- Compatible 3D source, 3D content and active shutter glasses are required for 3D viewing.

3D

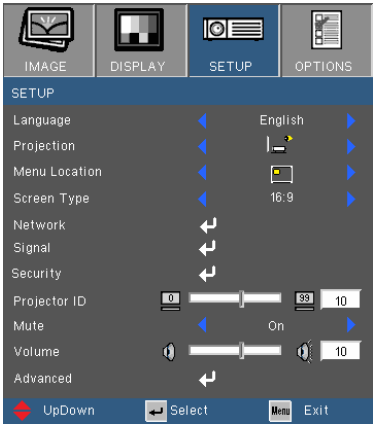
Use this function to enable 3D display.

- Off: Disable 3D display.
- DLP-Link: Enables 3D display in DLP mode.
- IR: Select "IR" to use optimized settings for IR-based 3D images.

3D Sync. Invert

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

SETUP



Language

Choose the OSD menu language. Press ◀ or ▶ to enter the sub menu and then press ▲ or ▼ to select your preferred language. Press “Enter” to finalize the selection.

NOTE

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

Projection

► Front-Desktop

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.

❖ "Screen Type" is for WXGA only.

Menu Location

Choose the menu location on the display screen.

Screen Type

Choose the screen type: 16:10 or 16:9.

Network

See page 40.

Signal

See page 37.

Security

See page 38.

Projector ID

Use this function to set the ID definition of the projector. This ID is used to identify and control an individual projector when more than one projectors are connected via RS-232. The projector ID may range from 0 to 99. Refer to page 72~76 for the complete list of RS232 commands.

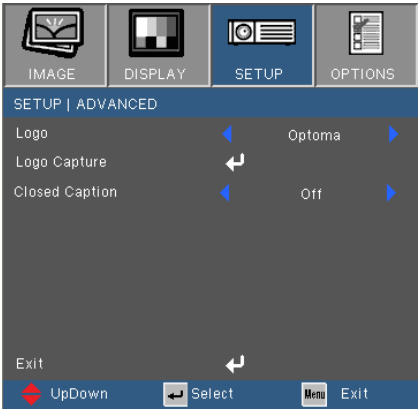
Mute

- ► Choose "On" to turn mute on.
- ► Choose "Off" to turn mute off.

Volume

- ► Press the ◀ to decrease the volume.
- ► Press the ▶ to increase the volume.

SETUP | Advanced



Logo

Use this function to set the desired startup screen. If changes are made, the setting takes effect the next time the projector is turned on.

- Optoma: The default startup screen.
- User: Use the saved picture from “Logo Capture” function.

❖ For a successful logo capture, ensure that the on-screen image does not exceed the projector native resolution. (XGA:1024x768 or WXGA:1280x800).

Logo Capture

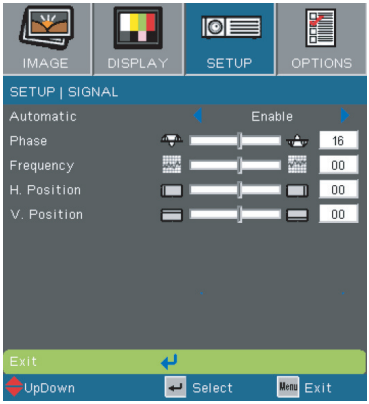
Choose ↵ to capture the image currently displayed on the screen and save the image to “User” logo.

Closed Caption

Use this function to enable or disable closed captions. The connected source must support closed caption to use this feature.

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

SETUP | Signal



Note

❖ "Signal" is only supported in Analog VGA (RGB) signal.

Automatic

Automatically selects the signal. If you use this function, Phase and the frequency items are grayed out. If Signal is not automatic, Phase and the frequency items are enabled for user to manually set the settings. Signal settings will take effect the next time the projector is powered on.

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

- Press the ◀ to move the image left.
- Press the ▶ to move the image right.

V. Position

- Press the ◀ to move the image down.
- Press the ▶ to move the image up.

SETUP | Security

Security

- On: Choose “On” to prompt for security verification when the projector is turned on.
- Off: Choose “Off” to turn on the projector without password verification.

NOTE

❖ The password must be 4 digits.

Security Timer

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

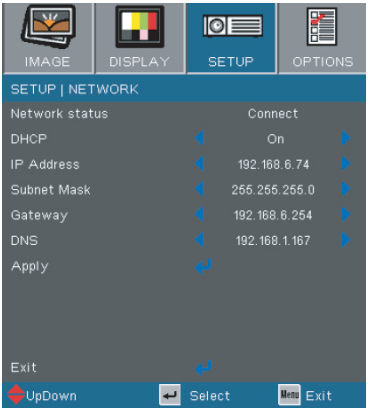
Change Password

The default password is “1234”. To change the password, choose ↵ to display the “Enter Security Code” screen.

1. Use the number buttons on the remote control to enter the current password, and then press **Enter**.
2. Enter the desired password, and then press **Enter**.
3. Re-enter the password to confirm.
4. Press **Enter**. A message “Security code successfully change” appears. The “Security Code” screen disappears automatically after a few seconds.

- If the incorrect password is entered 3 times, the projector automatically shuts down.
- If you have forgotten your password, please contact your local office for support.

SETUP | Network



Network State

Display the network connection status. When connected, you can access and control the projector through a web browser.

DHCP

Use this function to set the projector network connection.

- On: Automatically assign an IP address to the projector from a DHCP server.
- Off: Assign an IP address manually.

IP Address

If DHCP is “Off”, use this function to enter an IP address. Press ◀ or ▶ to move between fields and press ▲ or ▼ to adjust the value.

Subnet Mask

If DHCP is “Off”, enter the subnet mask number. Press ◀ or ▶ to move between fields and press ▲ or ▼ to adjust the value.

Gateway

If DHCP is “Off”, enter the default gateway of the network connection. Press ◀ or ▶ to move between fields and press ▲ or ▼ to adjust the value.

NOTE

- When IP settings are changed, multimedia modules (including USB Display, Network Display and Flash Drive functions) will restart, and the process will take 60~90 seconds.

DNS

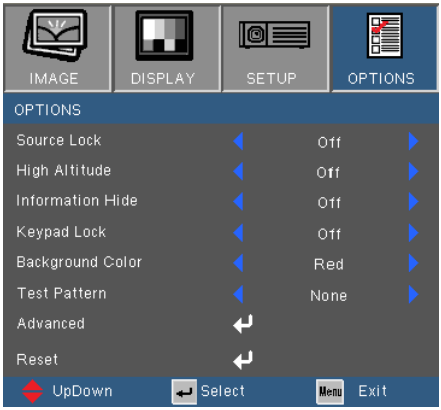
If DHCP is “Off”, enter a DNS number. Press ◀ or ▶ to move between fields and press ▲ or ▼ to adjust the value.

Apply

Press “↵” and then choose “Yes” to apply the selection.

❖ See “How to use web browser to control your projector” on page 61.

OPTIONS



Source Lock

- On: The projector is locked to the current source. When the projector is turned on, the projector will not automatically search for other input sources even if the current source is disconnected.
- Off: When turned on, the projector automatically searches for connected signals.

NOTE

❖ With dust filter installed, High Altitude mode must be turned on. Dust filter is Optional and may not be required in some regions.

High Altitude

When High Altitude is “On”, the fans spin faster. This feature is useful in high altitude areas where air is thinner.

NOTE

❖ To turn off the keypad lock, press and hold ↵ on the control panel for 5 seconds.

Information Hide

- On: Choose “On” to hide status messages.
- Off: Choose “Off” to display status messages.

Keypad Lock

When the keypad lock function is “On”, the control panel is locked. However, the projector can still be operated by the remote control. To use the control panel, set Keypad Lock to "Off”.

Background Color

Use this feature to select a background color to display

when no signal is available.

Test Pattern

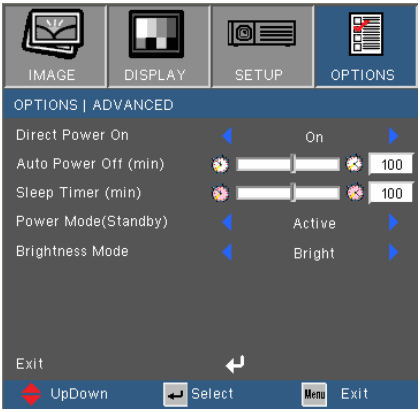
Use this function to run a test pattern.

- None: Disable test pattern.
- Grid: To run a grid test pattern.
- White Pattern: To run a test pattern wherein the screen turns white.

Reset

Use this function to reset the projector settings to factory default settings.

OPTIONS | Advanced



Direct Power On

Choose “On” to activate Direct Power mode. The projector automatically turns on once the AC power is connected to the power source even without pressing the “⏻” key.

Auto Power Off (min)

Use this function to set the countdown timer (in minutes) to automatically turn off the projector when no source signal is received.

Sleep Timer (min)

Use this function to set the countdown timer to automatically turn off the projector. When the timer elapsed, the projector automatically turns off regardless of receiving or not receiving any signal.

Power Mode (Standby)

- ECO: Choose “ECO” to save power dissipation > 0.5W.
- Active: Choose “Active” to return to normal standby mode.

Brightness Mode

- BRIGHT: Choose “BRIGHT” to increase brightness.
- ECO: Choose “ECO” to dim the projector light which in turn lowers power consumption with lower noise level.
- Image AI: Choose "Image AI" to automatically detect the contrast ratio of the displayed image.

NOTE

- When Power mode (Standby) is set to Eco (> 0.5W), the VGA output, Audio pass-through and RJ45 are deactivated.

Multimedia Menu

The projector displays files saved in memory devices such as SD cards and USB flash drives.

When the projector detects the memory device as its current source, the multimedia home menu is displayed.

NOTE

- When you select **Quit** to exit the multimedia home menu, source searching will start from VGA signal.

How to operate

1. Press ▲ ▼ ◀ or ▶ to select items on the multimedia home menu.
2. Press ↵ on the control panel or **Enter** on the remote control to enter a sub menu.
3. Press ▲ ▼ ◀ or ▶ to highlight items on the sub menu.
4. Press ↵ on the control panel or **Enter** on the remote control to confirm a selection.
5. Press ☰ on the control panel or **Menu** on the remote control to return to the multimedia home menu.

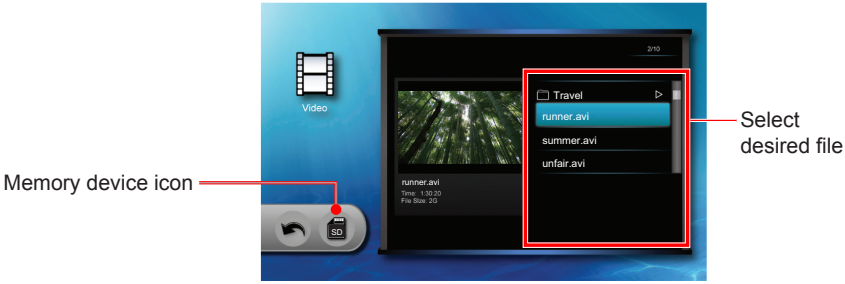
How to exit the Multimedia menu

1. Press ▲ ▼ ◀ or ▶ to highlight **Quit** on the multimedia home menu.
2. Press ↵ on the control panel or **Enter** on the remote control. The projector starts searching for connected input source.

How to play videos

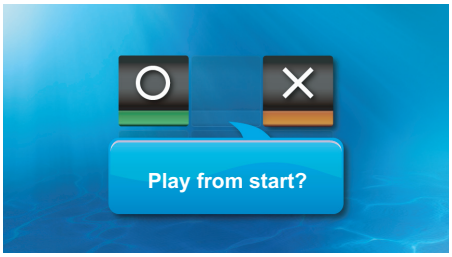
1. Press ▲ ▼ ◀ or ▶ to highlight **Video** on the multimedia home menu.

2. Press ↵ on the control panel or **Enter** on the remote control to enter the Video sub menu.
3. If an SD card and a USB flash drive are connected to the projector at the same time, press ◀ or ▶ to highlight the memory device icon and press ↵ on the control panel or **Enter** on the remote control to switch between devices.
   - ► : Indicates that the current memory device source is SD card.
   - ► : Indicates that the current memory device source is USB flash drive.



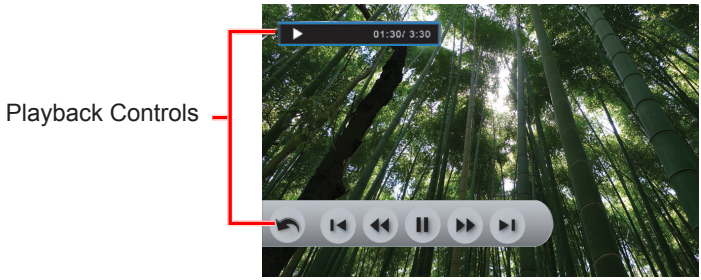
4. Press ▲ ▼ to highlight the file that you want to play.
5. Press ↵ on the control panel or **Enter** on the remote control to play the file.

6. If the selected file is unfinished from a previous playback, the screen below appears. Otherwise, skip to step 7.



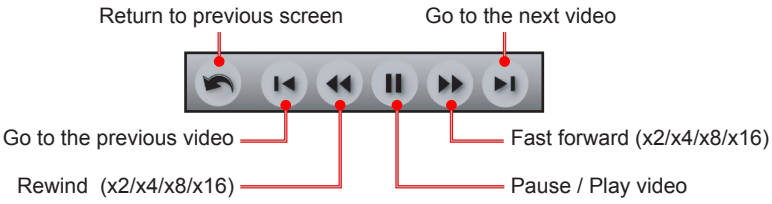
- Select "O" to play the file from the start.
- Select "X" to play the file from where it stopped playing during the last playback.

7. The Playback screen appears.



The playback controls disappear when no key is pressed for 3 seconds. Press any key on the control panel or the remote control to display the playback controls.

8. Press ◀ or ▶ to highlight the icons on the playback control and press ↵ on the control panel or **Enter** on the remote control to perform the operation.



9. Press ▲ or ▼ to adjust the playback volume.

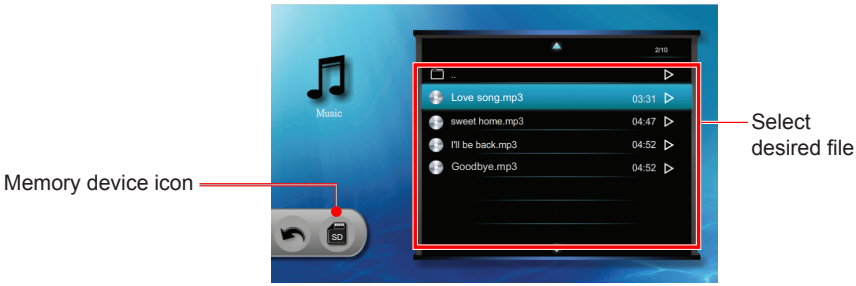
NOTE

- The Play from Start option can be enabled or disabled in the Video settings, see page 56.

How to play music

1. Press ▲ ▼ ◀ or ▶ to highlight **Music** on the multimedia home menu.

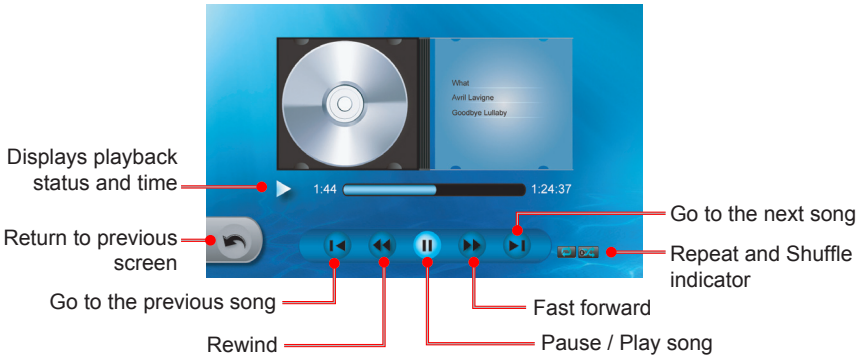
2. Press ↵ on the control panel or **Enter** on the remote control to enter the Music sub menu.
3. If an SD card and a USB flash drive are connected to the projector at the same time, press ◀ or ▶ to highlight the memory device icon and press ↵ on the control panel or **Enter** on the remote control to switch between devices.
   - ► : Indicates that the current memory device source is SD card.
   - ► : Indicates that the current memory device source is USB flash drive.



4. Press ▲ or ▼ to highlight the file that you want to play.
5. Press ↵ on the control panel or **Enter** on the remote control to play the file.

6. The Music Playback screen appears.

   Press ◀ or ▶ to highlight the icons on the playback control and press ↵ on the control panel or **Enter** on the remote control to perform the operation.



7. Press ▲ or ▼ to adjust the playback volume.

NOTE

- Repeat and shuffle properties can be changed in the Music settings, see page 57.

Memory Drive Display

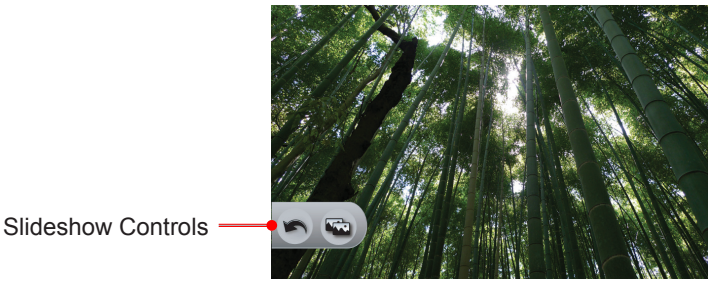
How to play a slideshow

1. Press ▲ ▼ ◀ or ▶ to highlight **Photo** on the multimedia home menu.

2. Press ↵ on the control panel or **Enter** on the remote control to enter the Photo sub menu.
3. If an SD card and a USB flash drive are connected to the projector at the same time, press ◀ or ▶ to highlight the memory device icon and press ↵ on the control panel or **Enter** on the remote control to switch between devices.
   - ► : Indicates that the current memory device source is SD card.
   - ► : Indicates that the current memory device source is USB flash drive.

4. Press ▲ ▼ ◀ or ▶ to highlight the file that you want to view first.

5. Press ↵ on the control panel or **Enter** on the remote control to start slideshow.
6. The Slideshow screen appears.



The slideshow controls disappear when no key is pressed for 3 seconds. Press any key on the control panel or the remote control to display the slideshow controls.

7. Press ◀ or ▶ to highlight the slideshow icon and press ↵ on the control panel or **Enter** on the remote control to toggle slideshow on or off:
   - ► : Slideshow On
   - ► : Slideshow Off
8. Press ▲ or ▼ to adjust the playback volume.

NOTE

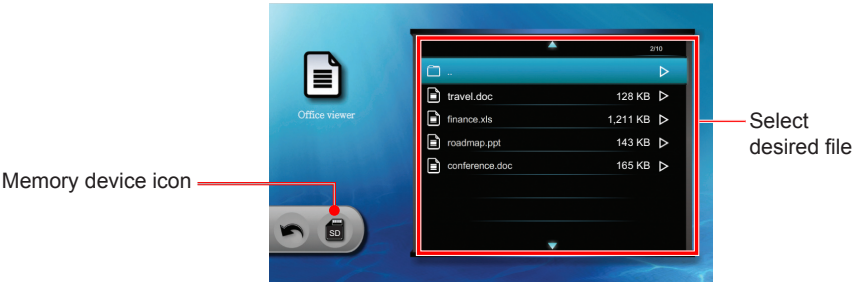
❖ The slideshow interval can be changed in the Slideshow settings page. See page *.

How to view documents

The projector supports viewing of Word documents (*.doc) and PDF files saved in a memory device.

1. Press ▲ ▼ ◀ or ▶ to highlight **Office Viewer** on the multimedia home menu.

2. Press ↵ on the control panel or **Enter** on the remote control to enter the Office Viewer sub menu.
3. If an SD card and a USB flash drive are connected to the projector at the same time, press ◀ or ▶ to highlight the memory device icon and press ↵ on the control panel or **Enter** on the remote control to switch between devices.
   - ► : Indicates that the current memory device source is SD card.
   - ► : Indicates that the current memory device source is USB flash drive.



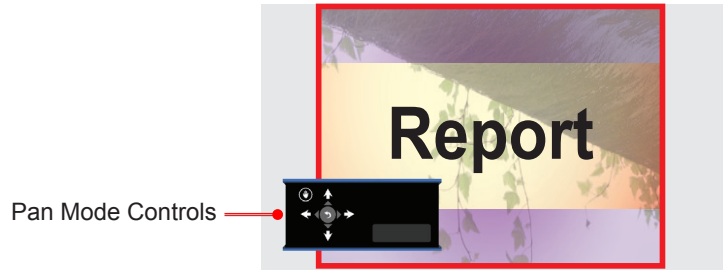
4. Press ▲ or ▼ to highlight the file that you want to view.

5. Press ↵ on the control panel or **Enter** on the remote control to open the file.
6. The Office Viewer screen appears.

The viewing controls disappear when no key is pressed for 3 seconds. Press any key on the control panel or the remote control to display the viewing controls.

How to use the viewing controls

- Press ▲ to go to the previous page.
- Press ▼ to go to the next page.
- Press ◀ to return to the document list screen.
- Press ▶ to zoom the image.
- Press ↵ on the control panel or **Enter** on the remote control to enter pan mode. In pan mode, press ▲ ▼ ◀ or ▶ to pan the document.



- To exit pan mode, press ↵ on the control panel or **Enter** on the remote control.

Multimedia Setup Menu

Use the Multimedia Setup menu to adjust the multimedia settings.

1. Press ▲ ▼ ◀ or ▶ to highlight **Setup** on the multimedia home menu.

2. Press ↵ on the control panel or **Enter** on the remote control to enter **Setup**.
3. Press ▲ ▼ ◀ or ▶ to select a sub menu, and then press ↵ on the control panel or **Enter** on the remote control.

4. To adjust a setting, use ▲ ▼ ◀ or ▶ to highlight an item and then press ↵ on the control panel or **Enter** on the remote control to toggle the settings.
5. Press ☰ on the control panel or **Menu** on the remote control to return to the Multimedia home menu.

Multimedia Setup Menu Tree

Setup Menu	Sub Menu	Settings
Video Setting	Repeat	Repeat All / Repeat One / Repeat Off
	Browsing Type	Thumbnail / List
	Timer	On / Off
Music Setting	Repeat	Repeat All / Repeat One / Repeat Off
	Shuffle	On / Off
Slideshow	Timer	-50 ~ 50
Information	Displays projector information	

Video Setting

Repeat

Use this function to enable continuous video playback.

- : Repeat all video files.
- : Repeat one video file.
- : Repeat off.

Browsing Type

- : Display files as thumbnails.
- : Display files on a list.

Timer

- : Display the "Play from start?" message before playing a video that is unfinished from a previous playback.
- : Disable the "Play from start?" message.

Music Setting

Repeat

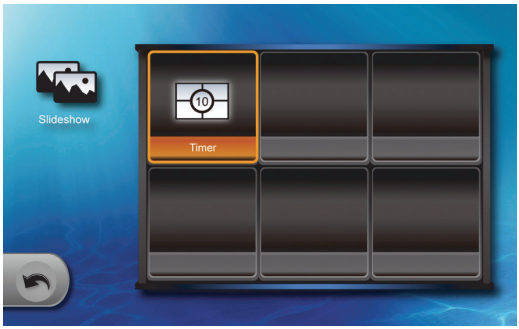
Use this function to enable continuous music playback.

- : Repeat all music files.
- : Repeat one music file.
- : Repeat off.

Shuffle

- : Shuffle on.
- : Shuffle off.

Slideshow Setting

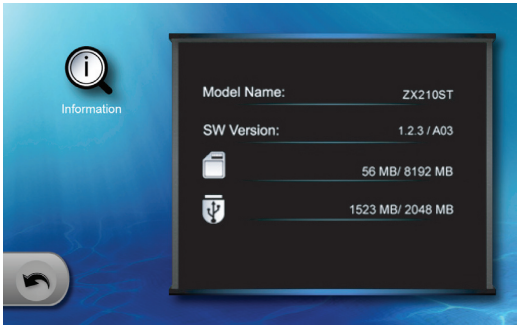


Timer

Use this function to set the slideshow interval.

- 2 : 2-second interval between slides.
- 5 : 5-second interval between slides.
- 10 : 10-second interval between slides.

Information

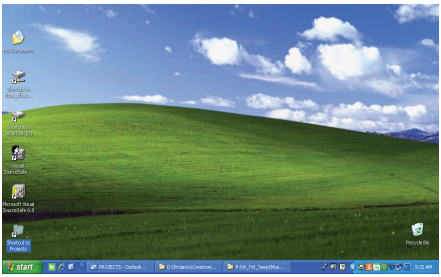


Displays the projector model name, software version, and the memory device information.

USB Display mode

When the projector detects that a computer is connected through the mini USB port, the projector enters USB display mode and displays the following screen:

Follow the instructions on the screen to establish the USB connection and project the computer screen through the projector.



- To change the source signal, press ◄ on the control panel or the direct source signal key on the remote control.

Minimum System Requirements

System Requirements

- CPU: Intel Dual Core 1.4GHz or better
- Memory: 1GB of RAM
- Disk: 10MB of free disk space
- Graphic Card: nVIDIA or ATI graphic card with 64MB VRAM or above

1. While the DSCP engine is active, the hardware acceleration level of the PC's display card will be turned to "None" temporarily for best performance.
2. If the Auto Play has been disabled on the current PC/Laptop, users need to find the CD-ROM and execute the DLUSB application manually.
3. The administrator right is required to execute the DLUSB through USB.
4. If the PC/Laptop is entering sleep or hibernation status (S3/S4/S5), users have to run the DLUSB application again from the CD-ROM to resume the Display over USB.
5. The screen projection performance varies depending on the PC computing power and could be up to 30FPS at SVGA resolution, 20FPS at XGA resolution and 15FPS at WXGA(800) resolution.
6. Need to enable EmulationOnly=1 to solve the overlay problem.
7. Known issue:
   - Can't capture DirectDraw/Direct3D overlay.
   - Can't capture OpenGL/DirectDraw Full Screen
   - Can't capture Windows login window, UAC secure desktop
   - Will cause Media Player black screen due to enable the EmulationOnly=1

For Windows Systems

Features

1. Support Driverless Screen Capture
2. Support Screen Monitoring feature
3. Support Windows XP, Vista, 7 (32 bits, 64 bits)
4. Support Audio Projection feature
5. Support remote desktop feature

System Requirements

- CPU: Intel Dual Core 1.4GHz or better (PowerPC not supported)
- Memory: 1GB of RAM
- Disk: 10MB of free disk space
- Graphic Adaptor: nVIDIA or ATI graphic card with 64MB VRAM or above
- Operating System: Windows XP SP2/SP3 (32 and 64-bit) / Vista (32 and 64-bit) / Windows 7 (32 and 64-bit)
- WiFi: 802.11n

For MAC-OS Systems

Features

1. Support Screen Mirroring
2. Support MAC OS 10.5, 10.6, 10.7
3. Support Audio Projection
   (Optional, if connected receiver supported)
4. Support remote desktop feature
   (Optional, if connected receiver supported)

System Requirements

- CPU: Intel Dual Core 1.4GHz or better
  (PowerPC not supported)
- Memory: 1GB of RAM
- Disk: 10MB of free disk space
- Graphic Card: nVIDIA or ATI graphic card with 64MB VRAM or above
- Operating System: MAC OS X 10.5, 10.6
  (Not including 10.7)
- WiFi: 802.11n
- Recommended Models: MacBook after 2009-01-21
  All series of MacBook Pro
  Mac Book Air after 2010-06-08

Network Display mode

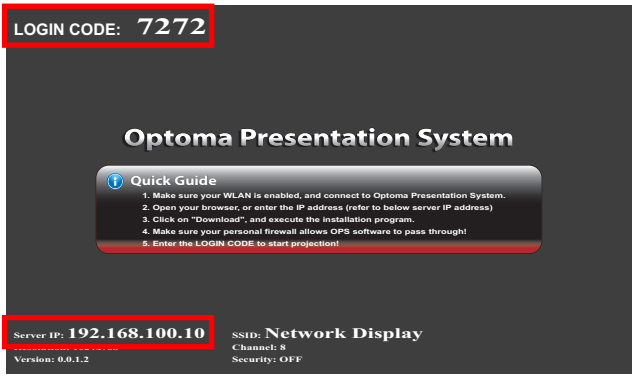
In Network Display mode, the projector supports remote projection from computers, tablets, and mobile phones when connected to an Ethernet or wireless network. Alternatively, you can control the computer remotely through the projector.

You can connect to the Optoma Web Utility page for conference projection using a web browser or download the Optoma Presenter Software for wireless projection right on your computer desktop.

You can also control and adjust the projection settings using the Crestron RoomView.

Activating Network Display Mode

1. Connect to the network (see “Connect to Network” on page 16).
2. The projector automatically detects the connection. If not, repeatedly press ◀ on the control panel or the **Source** key on the remote control to switch the input source.
3. Once the projector detects the connection, the Network Display screen appears.



4. Take note of the **Login Code** and **IP Address**. You will need them to connect to Optoma Web Utility page (see “Open Optoma Web Utility” on page 67).

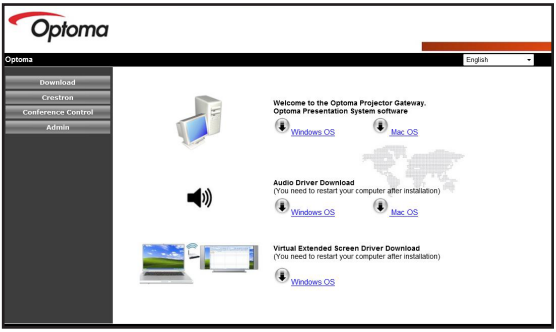
NOTE

- The IP address generated by the projector varies depending on your local area network connection settings.

Open Optoma Web Utility

1. Connect your computer to the same network where the projector is connected.
2. Launch your web browser application (e.g. Internet Explorer, Safari, Firefox, etc).
3. On the address bar, type the IP address noted from the Network Display screen.

4. The Optoma Web Utility screen opens.



- To use Optoma Presentation Software, click the operating system of your computer to download the software (see "Downloading the Software" on page 68).
- To use Crestron RoomView, click **Crestron** on the left panel menu (see "Crestron RoomView" on page 74).
- To project images from up to four computer simultaneously, click **Conference Control** on the left panel menu (see "Web Utility: Conference Control" on page 76).
- To change the projector settings by web utility, click **Admin** on the left panel menu. See "Web Utility: Admin Settings" on page 78 for more instructions.

Optoma Presentation Software

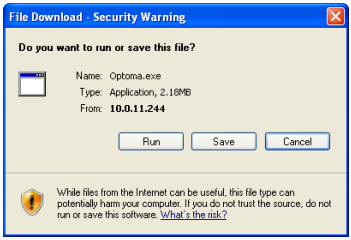
The Optoma Presentation Software (OPS) supports remote projection from up to four computers simultaneously. The computer must be connected in the same local area network as the projector and have OPS installed. You can also control the connected computer remotely using the projector.

For first time use, download OPS from the Optoma web utility.

Downloading the Software

1. Activate Network Display and open Optoma Web Utility (see “Network Display mode” on page 66).
2. On the Optoma Web Utility screen, click the operating system of your computer to start the download.

3. Click **Run**.

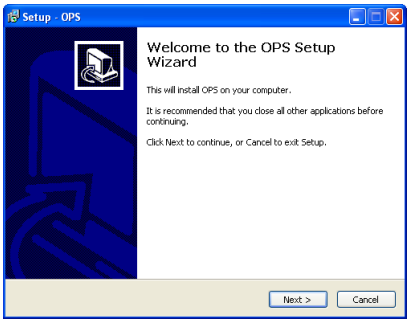


NOTE

- Depending on your computer system, you may need to download the audio driver. Click the operating system of your computer and follow instructions on the screen.
- The audio driver applies only if “Projection Quality” is “Normal”.
- The following download procedures are based on Windows XP, similar steps apply to other operating systems.

4. The following message may appear, click **Run** to continue.

5. Click **Next** to continue.



6. Follow the on-screen instructions to complete the setup.

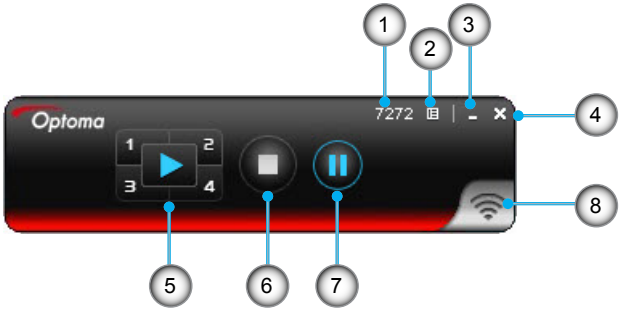
Once the installation is complete, the Optoma Presentation Software (OPS) automatically launches and searches for the projector. After the projector is detected, the login screen appears.

Login

- The Server IP and User Name are automatically detected by the software.

1. On your computer, click **Start** > **Programs** > **Optoma** > **OPS**. Or, double-click the OPS icon on your desktop to launch the application.
2. Enter the **Login Code** provided for in the Network Display screen (see step 3 of “Activating Network Display Mode” on page 66).
3. Click **OK**.

How to Project Image?



Using OPS			
1	**Login Code**		Displays the login code.
2	**Menu**		Click to display the application menu.
3	**Minimize**		Click to minimize the application screen.
4	**Close**		Click to close the application.
5	**Control Panel**		
	Full Screen		Click to project the image in full screen.
	Window 1		Click to project the image in the upper left corner of the screen.
	Window 2		Click to project the image in the upper right corner of the screen.
	Window 3		Click to project the image in the lower left corner of the screen.
	Window 4		Click to project the image in the lower right corner of the screen.
6	**Stop**		Click to stop projection.
7	**Pause**		Click to pause projection.
8	**Signal**		Blinks when projection is in progress.

Network Display

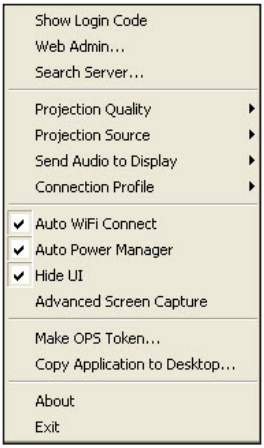
On using the 4-to-1 split screen projection:

- Support Windows XP/Vista/7 and MacBook OS 10.5 and above.
- While using the 4-to-1 split screen projection function, the CPU consumption will be higher than the Full screen mode.
- Does not support audio projection and remote desktop feature on 4-to-1 split screen projection mode.

Resolution	Target Updated Frame Rate (FPS)
800 * 600	30 FPS
1024 * 768	20~30 FPS // depending on SoC's capability
1280 * 720	20~30 FPS // depending on SoC's capability
1280 * 800	20~30 FPS // depending on SoC's capability

Using the OPS Menu

Click to display the application menu.

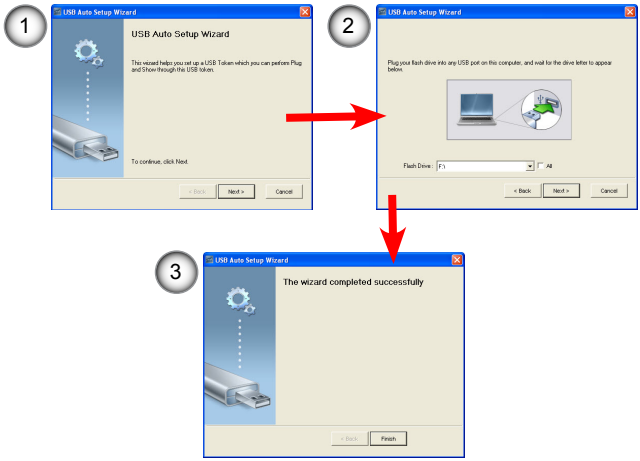


- **Show Login Code**: Click to display the login code of the projector on the upper left corner of the screen for 10 seconds.
- **Web Admin**: Opens Optoma web utility (see "Open Optoma Web Utility" on page 67.
- **Search Server**: Click to search and connect to the projector.
- **Projection Quality**: Select the projection quality: "Normal" for faster projection or "Best" for better quality but slower speed.
- **Projection Source**: Select "Main Screen" to project the computer desktop or the "Virtual Extended Screen".
- **Send Audio to Display**: Select "Yes" to route the audio output to the projetor. The audio driver must be installed to use this feature.
- **Connection Profile**: Select "Save current as" to save the current connection settings as a profile for later use or select "Manage profile" to use or edit an existing profile.
- **Auto WiFi Connect**: Check to enable auto WiFi discovery and connection to the projector.

NOTE

- To use the “Virtual Extended Screen”, download the driver first from open the Optoma Web Utility page. Click your computer operating system to start the download.

- **Auto Power Manager**: Check to allow the projector to change your computer power scheme to the "highest performance" for better projection quality.
- **Hide UI**: Check to hide the OPS control panel on the projected screen.
- **Advanced Screen Capture**: Check to display the operating system tip or pop-up windows on the projected screen.
- **Make OPS Token**: Click to make an OPS application token. A setup wizard appears, follow the instructions on the screen to make the OPS token.



- **Copy Application to Desktop**: Click to create an OPS shortcut icon on your desktop.
- **About**: Click to display the software and network information.
- **Exit**: Click to stop the connection and close the application.

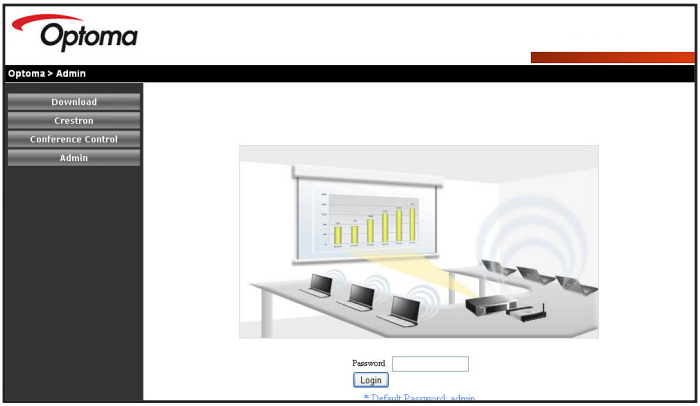
Using Remote Desktop

When the projector and the computer are connected through OPS, plug a standard USB keyboard or USB mouse into the USB port of the projector and remotely control the computer.

Web Utility: Conference Control

The Conference Control function allows you to control how you want to project images from up to four computers using the Optoma Web Utility.

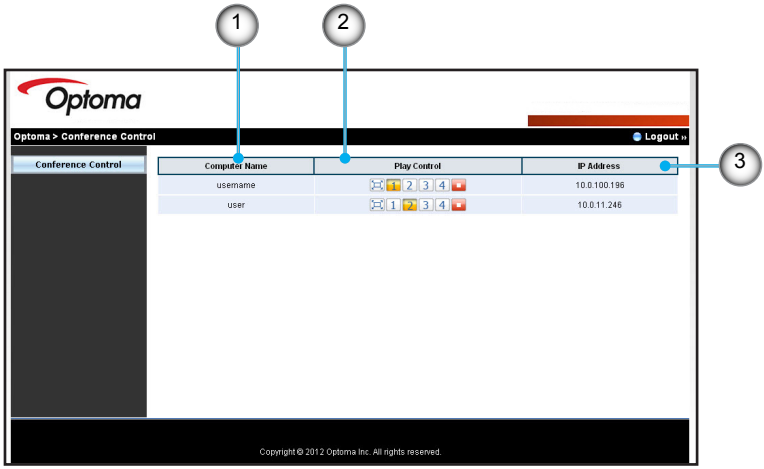
1. Activate Network Display and open the Optoma Web Utility page (see “Network Display mode” on page 66).
2. On the left panel menu, click **Conference Control**. The Conference screen appears.



3. Enter the password (default=”admin”).
4. Click **Login**.

- Supports up to 32 users connected to the system at the same time.
- To manage the conference, users need to login to the conference control page.
- If there is a proxy server being configured in the Internet setting of the client PC, users may not be able to access the web server.

The Conference Control screen appears.



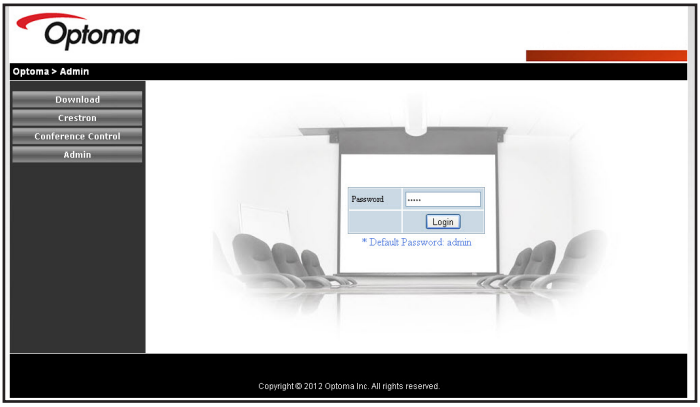
Using Conference Control

1	**Computer Name**		Lists the network computers connected through the Optoma Presentation Software (OPS).
2	**Play Controls**		
	Full Screen		Click to project the image in full screen.
	Window 1	1	Click to project the image in the upper left corner of the screen. **Note:** A highlighted button indicates the current window position of the projected image.
	Window 2	2	Click to project the image in the upper right corner of the screen.
	Window 3	3	Click to project the image in the lower left corner of the screen.
	Window 4	4	Click to project the image in the lower right corner of the screen.
3	**Stop**		Click to stop projection.
4	**IP Address**		Displays the IP address of the connected computer.

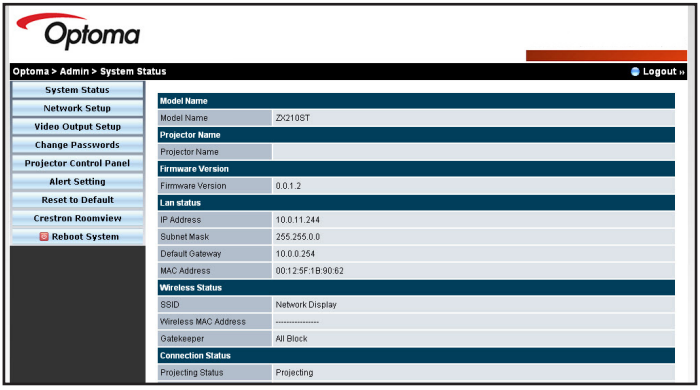
Web Utility: Admin Settings

Use the Admin function of the Optoma Web Utility to remotely view and modify the projector settings. An administrator password is required to login.

1. Activate Network Display and open the Optoma Web Utility page (see “Network Display mode” on page 66).
2. On the left panel menu, click **Admin**.

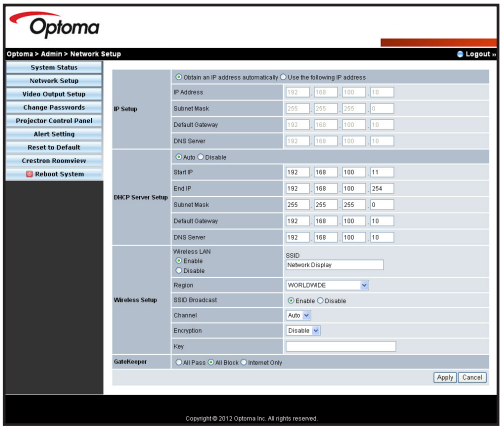


3. Enter the administrator login password (default=”admin”).
4. Click **Login**. The System Status screen appears.



5. Click a menu on the left panel to display the screen.

ADMIN | Config

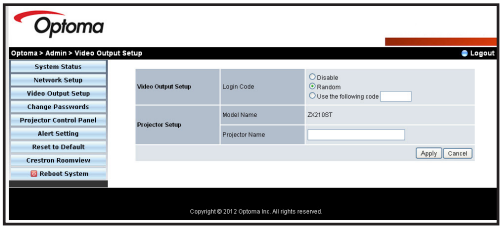


- See “SETUP | Network” on page 42.
- When IP settings are changed, multimedia modules (including USB Display, Network Display and Flash Drive functions) will restart, and the process will take 60~90 seconds.

The **Network Setup** screen displays and allows you to change the network settings of the projector, such as the **IP Setup**, **DHCP Server Setup**, **Wireless Setup**, and **GateKeeper**.

When changes are made, click **Apply** to save and apply the settings.

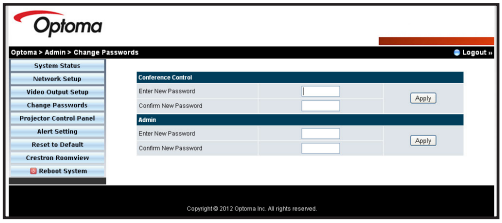
ADMIN | Video Output Setup



Use the **Video Ouput Setup** screen to select the **Login Code** option and configure the **Projector Name**.

When changes are made, click **Apply** to save and apply the settings.

ADMIN | Change Passwords

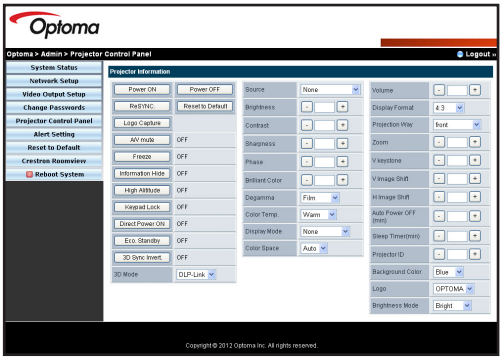


Use the **Change Passwords** screen to change the login password for **Conference Control** and **Admin** access. Only one type of password can be changed at a time.

1. Type the password in **Enter New Password**.
2. Re-type the same password in **Confirm New Password**.
3. Click **Apply** to save the apply the changes.
4. A “Password has been changed” message appears, click **OK** to close the message.

To change the other type of password, access the **Change Passwords** screen again and perform the above steps.

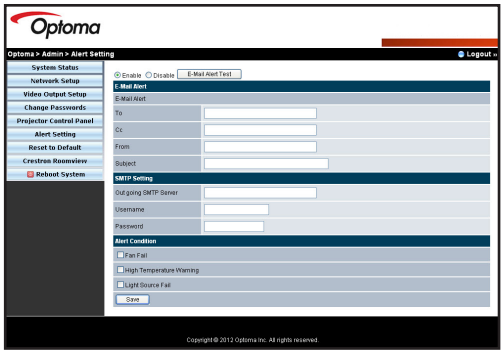
ADMIN | Projector Control Panel



Use the **Projector Control Panel** screen to remotely modify the projector settings, such as **Brightness**, **Keystone**, **Display Mode**, **Background Color**, and others.

See “On-screen Display Menu” on page 24 for more information.

ADMIN | Alert Setting



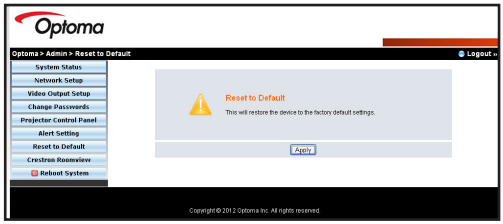
Use the **Alert Setting** screen to configure the projector to send out email alerts when errors occur, such as fan failure, high temperature, or light source failure.

1. Select **Enable** to enable the email alert feature.
2. In the **Email Alert** section, enter the following information:
   - **To**: Email address where you want to send the email alert.
   - **Cc**: Second email address where you want to send the email alert.
   - **From**: Email address from where the email alert is sent.
   - **Subject**: Subject title of the email alerts.
3. In the **SMTP Setting** section, enter the following information:
   - **Outgoing SMTP Server**: The SMTP server of the email address from where email alerts are sent.
   - **Username**: User name of the SMTP server.
   - **Password**: Password of the SMTP server.
4. In the **Alert Condition** section, check the type of email notification that you want to receive. You may select more than one condition.
5. When done, click **Save** to save and apply the settings.

NOTE

- Obtain the SMTP information from your network administrator.
- Click the **Email Alert Test** button to test the email alert settings.

ADMIN | Reset to Default



Use the **Reset to Default** screen to restore the network settings to its default factory settings. Click **Apply** to proceed with the reset.

ADMIN | Crestron RoomView

Click **Crestron RoomView** to access Crestron from the Admin settings screen (see “Crestron RoomView” on page 84 for more information).

ADMIN | Reboot System

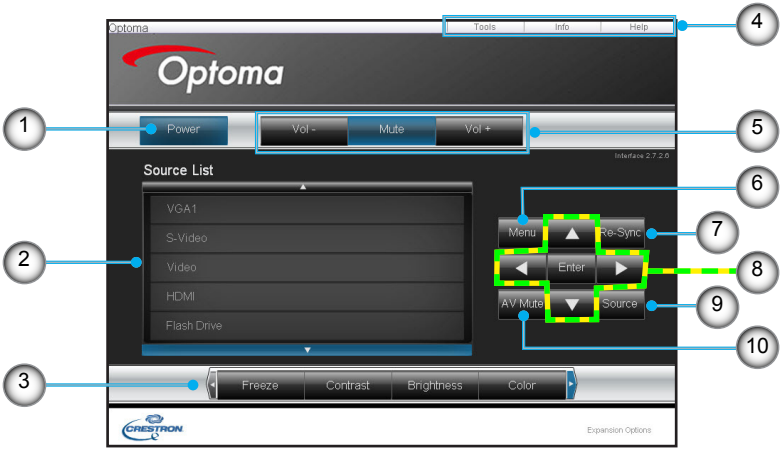
Click **Reboot System** to logout and reboot the Optoma Web Utility page.

Crestron RoomView

Crestron RoomView works as a remote control station of your projector when connected over a network. Crestron allows you to change and re-sync input sources, show the on-screen display menu, and adjust the projector settings right on your computer.

Using Crestron RoomView

1. Activate Network Display and open the Optoma Web Utility page (see “Network Display mode” on page 66).
2. On the left panel menu, click **Crestron**. The Crestron RoomView screen appears.



Using Crestron RoomView		
1	**Login Code**	Click to turn on or turn off Crestron.
2	**Source List**	Displays the input sources connected to the projector.
3	**Freeze / Contrast / Brightness / Color**	Click a setting button and drag the slider to adjust the setting.

4	**Menu**	
	Tools	Click to customize the projector settings.
	Info	Click to view the projector information.
	Help	Click to view help.
5	**Volume Controls**	► Click “Mute” to mute the audio. ► Click “Vol+” or “Vol-” to adjust the volume.
6	**Menu**	Click to project the projector main menu.
7	**Re-Sync**	Click to re-sync the input sources on the projector.
8	**Arrow Keys and Enter**	► Click the arrow keys to move in the main menu, adjust the settings or make selections. ► Click “Enter” to confirm a selection.
9	**Source**	Click to switch the input source.
10	**A/V Mute**	Click to mute the source device audio.

NOTE

❖ When IP settings are changed, multimedia modules (including USB Display, Network Display and Flash Drive functions) will restart, and the process will take 60~90 seconds.

Smart Phone Display

- MobiShow supports iOS, Android, and Blackberry phones.

You can project multimedia files, documents and presentations from your iPhone or Android phones.

Use MobiShow to play video and audio files, Presentation-to-Go documents, and play slideshow of photos stored in your phone.,

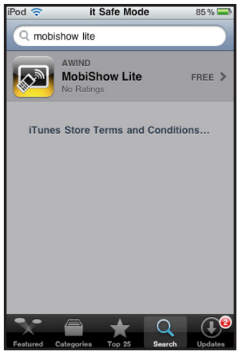
Use WiFiDoc to view project documents such as Word, PDF, Excel, and PowerPoint files from your phone.

MobiShow

Download MobiShow in iPhone

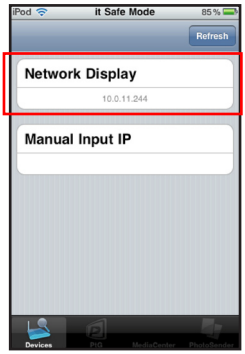
- Alternatively, you can download MobiShow using iTunes. See iTunes user manual for download and sync instructions.

1. Turn on WiFi on your phone.
2. Connect your phone to the Internet.
3. Open App Store and search for “mobishow”.
4. Follow the instructions to finish the installation.



Using MobiShow in iPhone

1. On your projector, activate Network Display mode (see “Network Display mode” on page 66).
2. On iPhone, turn on WiFi and connect to the network or access point where your projector is connected.
3. Touch to launch MobiShow. MobiShow searches for compatible devices.
4. Touch **Network Display** to connect to the projector.



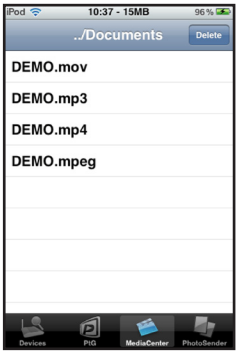
5. When the Login screen appears, type the login code from the Network Display screen of your projector. Then, click **Login**.

- A tab is disabled if no related file is stored in your phone.
- To use PtG, convert your Powerpoint presentations to PtG file format first (see “PtG2 Converter” on page 98).

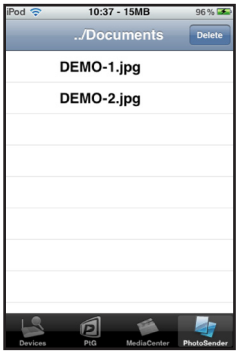
6. Touch one of the following tabs:
   - **PtG**: To display Presentation-to-Go files.
   - **MediaCenter**: To play video or audio files.
   - **PhotoSender**: To dislay photo files.

7. Select the file you want to display.

or

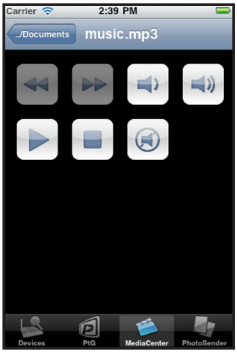


or

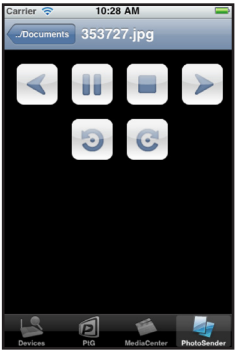


8. Touch the playback buttons to control or adjust the projection options.

or



or

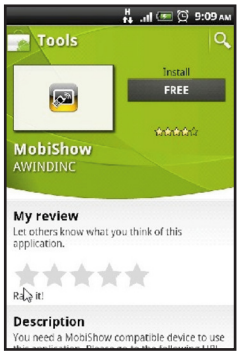


NOTE

- Displayed playback control buttons vary depending on the type of files that you want to project.
- For multimedia format compatibility, see “Supported Multimedia Format” on page 107.

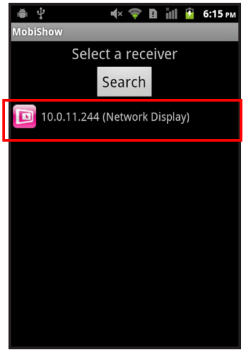
Download MobiShow in Android

1. Turn on WiFi on your phone.
2. Connect your phone to the Internet.
3. Open Market and search for “mobishow”.
4. Follow the instructions to finish the installation.



Using MobiShow in Android

1. On your projector, activate Network Display mode (see “Network Display mode” on page 66).
2. On your Android Phone, turn on WiFi and connect to the network or access point where your projector is connected.
3. Touch to launch MobiShow. MobiShow searches for compatible devices.
4. Touch **Network Display** to connect to the projector.

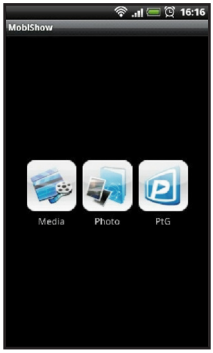


5. When the Login screen appears, type the login code from the Network Display screen of your projector. Then, click **Login**.

NOTE

- A file button is not displayed if no related file is stored in your phone memory.
- To use PtG, convert your Powerpoint presentations to PtG file format first (see “PtG2 Converter” on page 98).

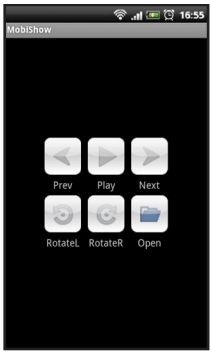
6. Touch one of the following file buttons:
   - **Media**: To play video/audio files.
   - **Photo**: To dislay photo files.
   - **PtG**: To display Presentation-to-Go files



7. Browse for the file that you want to display.

8. Touch the playback buttons to control or adjust the projection options.

or



or

NOTE

- Displayed playback control buttons vary depending on the type of files that you want to project.
- For multimedia format compatibility, see “Supported Multimedia Format” on page 107.

Network Display

Platform		iOS	Android	Blackbery
Client Software		MobiShow Lite	MobiShow	MobiShow
System Requirements (HW)		iPad/iPad2 iPhone 3/4(s) iPod Touch Free Memory: 20MB	Display: 16bpp/32bpp CPU: 600 MHz or higher Free Memory: 20MB	Display: 16bpp/32bpp CPU: 600 MHz or higher Free Memory: 20MB WiFi: 802.11n
System Requirements (SW)		iOS 3.2 or higher	Android 1.5 or higher	BlackBerry OS 5.0/6.0
Functions	PtG	Yes (Only support 800*600, 1024*768 PtG file) * Support PtG2 by 2011 Q4.	Yes (Only support 800*600, 1024*768 PtG file) * Support PtG2 by 2011 Q4.	Yes (Only support 800*600, 1024*768 PtG file) * Support PtG2 by 2011 Q4.
	Photo	No * Plan to add the feature by 2011 Q2	Yes	Yes
	Movie	Yes (Depending on projected device capability)	Yes (Depending on projected device capability)	No
Currently available at		iPhone App Store	Android Market Place	BlackBerry App World

WiFi Doc

WiFi-Doc allows your Android/iOS device to show the native office file to big screens (projectors, TVs, etc.) through Wi-Fi connection. It leverage Picsel's office engine to read the native office files (including word, excel, powerpoint, pdf, txt) then display on local display and big screen.

Features

1. Support word, excel, powerpoint, pdf, txt (Refer to Picsel's specs for details.)
2. Support Play, Pause, Previous/Next Page, Open File
3. Support GoToPage, Thumbnail
4. Support Zoom-in, Zoom-out
5. Support Android (V2.2 and higher), iOS(V3.2 and higher)

Minimum System Requirement

1. iOS: iPad/iPad2, iPhone 3/4, iPod Touch
   - OS: V3.2 and higher
   - Free Memory: 20MB
2. Android: CPU: 600 MHz or higher
   (1G Duo-Core is recommended for best performance)
   - OS:V2.2 and higher
   - Free Memory: 20MB

Network Display

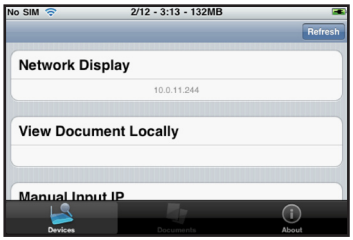
Download WiFi Doc in iPhone

1. Turn on WiFi on your phone.
2. Connect your phone to the Internet.
3. Open App Store and search for “wifi doc”.
4. Follow the instructions to finish the installation.

❖ Alternatively, you can download MobiShow using iTunes. See iTunes user manual for download and sync instructions.

Using WiFi Doc in iPhone

1. On your projector, activate Network Display mode (see “Network Display mode” on page 66).
2. On iPhone, turn on WiFi and connect to the network or access point where your projector is connected.
3. Touch to launch WiFi Doc. WiFi Doc searches for compatible devices.
4. Touch **Network Display** to connect to the projector.



❖ After login, the phone orientation automatically switches to landscape mode.

5. When the Login screen appears, type the login code from the Network Display screen of your projector. Then, click **Login**.

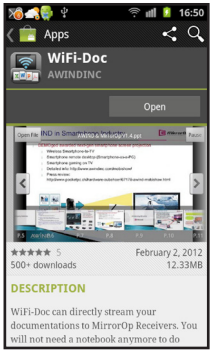
6. Select the file you want to display.

7. The file is displayed on your phone and projected through the projector.

- Touch the on-screen controls to go to the next or previous page.
- To go to a page directly, scroll and touch a page icon at the bottom of the screen.
- To zoom in a page, bring two fingers apart on the phone screen or to zoom out, pinch two fingers together.

Network Display

Download WiFi Doc in Android

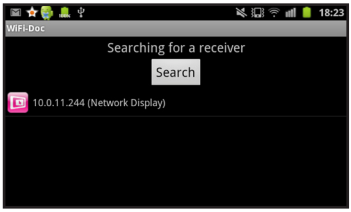


1. Turn on WiFi on your phone.
2. Connect your phone to the Internet.
3. Open App Store and search for “wifi doc”.
4. Follow the instructions to finish the installation.

❖ Alternatively, you can download MobiShow using iTunes. See iTunes user manual for download and sync instructions.

Using WiFi Doc in Android

1. On your projector, activate Network Display mode (see “Network Display mode” on page 66).
2. On your Android phone, turn on WiFi and connect to the network or access point where your projector is connected.
3. Touch to launch WiFi Doc. WiFi Doc searches for compatible devices.
4. Touch **Network Display** to connect to the projector.

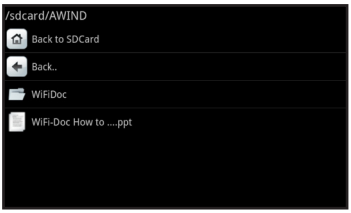


5. When the Login screen appears, type the login code from

❖ After login, the phone orientation automatically switches to landscape mode.

the Network Display screen of your projector. Then, click **Login**.

6. Select the file you want to display.



7. The file is displayed on your phone and projected through the projector.

- Touch the on-screen controls to go to the next or previous page.
- To go to a page directly, scroll and touch a page icon at the bottom of the screen.
- To zoom in a page, bring two fingers apart on the phone screen or to zoom out, pinch two fingers together.

PtG2 Converter

PtG2 Converter is a computer software that allows you to convert PowerPoint (*.ppt) files to PtG2 format playable on PtG supported phones without loss of original slide transitionand animation effects.

Using PtG2 Converter

1. On the supplied User Manual CD, browse and install the PtG Converter file.
2. After installation, go to **Start** > **Programs** > **PtG2 Converter** > **PtG2 Converter**. The PtG panel appears.

- Click to select a PowerPoint file and start conversion. Conversion progress is displayed on the desktop.
- Click to expand or collapse the preview pane.
- Click to playback the PtG2 file.
- Click to open a PtG2 file.

Supported PowerPoint File Format

- *.ppt
- *.pps
- *.pptx
- *.ppsx

System Requirements

- CPU: Pentium P4-M 1.5G and above
- Memory: 256M and above
- OS: Windows 2K SP4, Windows XP SP2 or SP3, Windows Vista or Vista SP1, Windows 7 or 7 SPI
- Office: Office XP, 2003, 2007, 2010

Limitations:

PtG supports all animation effects that can be displayed on the desktop screen. However, PtG CANNOT/DOES NOT support the following conditions:

1. PtG does not support animation effect that is using timer or repeat function to playback automatically.
2. PtG does not support single animation effect that is longer than 60 seconds. If there is a recycling animation effect, PtG will record it for up to 60 second.
3. If the PPT screen stops to change for 3 seconds, the system will distinguish it as the end of the current animation and will prompt for the "Enter" key to ask PPT for next step.
4. PtG does not support embedded VBA object.
5. PtG does not support OLE object.

- Supports USB Flash drive format: FAT32.
- Supports only one logical partition in USB Flash drive.
- Supports USB device: Standard USB mass storage device with power consumption less than 5V / 500ma
- Supports content: PtG / JPG
- JPG previews limitation: Support preview feature with EXIF info.
- JPG file: support file size < 10MB, pixel < 40 megapixel, dimension < 8192*6144

Troubleshooting

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

? No image appears on-screen

- Ensure all the cables and power connections are correctly and securely connected as described in the “Installation” section.
- Ensure all the pins of the connectors are not bent or broken.
- Make sure the projector is turned on.
- Ensure that the “AV mute” feature is not turned on.

? Partial, scrolling or incorrectly displayed image

- Press ▶ on the control panel or Re-Sync on the remote control.
- If you are using a PC:

  For Windows 95, 98, 2000, XP, Windows 7:

  1. Open “My Computer”, the “Control Panel” folder, and then double click on the “Display” icon.
  2. Select the “Settings” tab.
  3. Verify that your display resolution setting is lower than or equal to UXGA (1600 × 1200).
  4. Click on the “Advanced Properties” button.

  If the projector is still not projecting the whole image, you need to change the monitor display you are using. Refer to the following steps.

  1. Verify the resolution setting is lower than or equal to UXGA (1600 × 1200).
  2. Select the “Change” button under the “Monitor” tab.
  3. Click on “Show all devices”. Next, select “Standard monitor types” under the SP box; choose the resolution mode you need under the “Models” box.

4. Verify that the resolution setting of the monitor display is lower than or equal to UXGA (1600 × 1200).

- If you are using a Notebook:
  1. First, follow the steps above to adjust resolution of the computer.
  2. Press the appropriate keys listed below for your notebook manufacturer to send signal out from your notebook to the projector. Example: [Fn]+[F4]

Acer ⇨	[Fn]+[F5]	IBM/Lenovo ⇨	[Fn]+[F7]
Asus ⇨	[Fn]+[F8]	HP/Compaq ⇨	[Fn]+[F4]
Dell ⇨	[Fn]+[F8]	NEC ⇨	[Fn]+[F3]
Gateway ⇨	[Fn]+[F4]	Toshiba ⇨	[Fn]+[F5]

Mac Apple:
System Preference ⇨ Display ⇨ Arrangement ⇨ Mirror display

- If you experience difficulty changing resolutions or your monitor freezes, restart all equipment including the projector.

? The screen of the Notebook or PowerBook computer is not displaying your presentation

If you are using a Notebook PC
Some Notebook PCs may deactivate their own screens when a second display device is in use. Each has a different way to be reactivated. Refer to your computer's manual for detailed information.

? Image is unstable or flickering

- Use "Phase" to correct it. See page 38 for more information.
- Change the monitor color setting on your computer.

? Image has vertical flickering bar

- Use "Frequency" to make an adjustment. See page 38 for more information.
- Check and re-configure the display mode of your graphic card to make it compatible with the projector.

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. See page 16.

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 when the projector display mode is set to 16:9 in the OSD.
- If you play 4:3 format DVD titles, please change the format to 4:3 in the projector OSD.
- If the image is still stretched, adjust the aspect ratio.
- Set the display format of your DVD player to 16:9 (wide) aspect ratio.

Image is too small or too large

- Move the projector closer to or further from the screen.
- Press on the control panel or **Menu** on the remote control. Go to “DISPLAY → Format” and try the different settings.

Image has slanted sides

- If possible, reposition the projector so that it is horizontally centered on the screen and below the bottom of the screen.
- Press “Keystone +/-” button on the remote control or press “ / ” on the control panel, until the sides are vertical.

Image is reversed

- Press on the control panel or Menu on the remote control. Go to “SETUP → Projection” from the OSD and adjust the projection direction.

The projector stops responding to all controls

- Check that “Keypad Lock” is not activated by trying to control the projector with the remote control.

► If possible, turn off the projector, then unplug the power cord and wait at least 60 seconds before reconnecting power.

If the remote control does not work

► Ensure that the operating angle of the remote control is within ±15° horizontally and vertically to one of the IR receivers on the projector.

► Remove any obstructions between the remote control and the projector. Move to within 7 m (±0°) of the projector.

► Make sure the batteries are inserted correctly.

► Replace batteries if they are exhausted.

Steady light ⇨ ☼

No light ⇨ ○

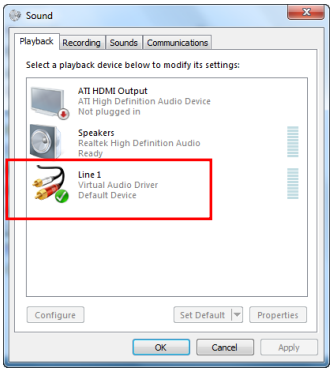
LED lighting message

Message	⏻ ○ POWER/STAND-BY LED	Temp-LED	Light-LED
	(Blue/Red)	(Yellow Green)	(Amber)
Standby State (Input power cord)	Red	○	○
Power on (Warming)	Flashing Blue	○	○
Light lighting	Blue	○	○
Power off (Cooling)	Flashing Blue	○	○
Error (Over Temp.)	Flashing Red	☼	○
Error (Fan fail)	Flashing Red	Flashing	○
Error (Light fail)	Flashing Red	○	☼

＊ POWER/STANDBY LED turns ON when OSD appears, and turns OFF when OSD disappears.

No audio output during Network Display mode.

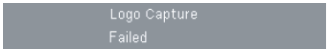
- No audio driver installed on your computer. Download and install the audio driver from the Optoma Web Utility page.
- If Audio driver is already installed, check the computer sound settings in Control Panel and make sure that you select **Line 1 (Virtual Audio Driver)**.



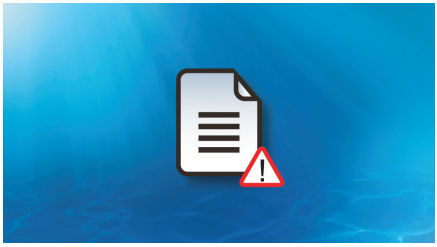
On Screen Messages

- No source found

- Logo capture failed:



- File not supported



Compatibility Modes

Computer Compatibility

Mode	Resolution	V-Sync (Hz)		H-Sync (KHz)	
		Anglog	Digital	Anglog	Digital
VGA	640 × 350	70	70	31.50	31.50
VGA	640 × 350	85	85	37.90	37.90
VGA	640 × 400	85	85	37.90	37.90
VGA	640 × 480	60	60	31.50	31.50
VGA	640 × 480	67	67	-	-
VGA	640 × 480	72	72	37.90	37.90
VGA	640 × 480	75	75	37.50	37.50
VGA	720 × 400	70	70	31.50	31.50
VGA	720 × 400	85	85	37.90	37.90
SVGA	800 × 600	56	56	35.20	35.20
SVGA	800 × 600	60	60	37.90	37.90
SVGA	800 × 600	72	72	48.10	48.10
SVGA	800 × 600	75	75	46.90	46.90
SVGA	800 × 600	120	120	-	-
	832 × 624	75	75	-	-
XGA	1024 × 768	60	60	48.40	48.40
XGA	1024 × 768	70	70	56.50	56.50
XGA	1024 × 768	75	75	60.00	60.00
XGA	1024 × 768	120	120	-	-
	1152 × 870	75	75	-	-
WXGA	1280 × 800	60	60	49.68	49.64
WSXGA+(*)	1680 × 1050	60	60	65.00	65.00
SXGA	1280 × 1024	60	60	63.98	63.98
UXGA	1600 × 1200	60	60	75.00	75.00
HD	1280 × 720	60	60	45.00	45.00
HD	1280 × 720	120	120	-	-
HD	1920 × 1080	30	30	33.80	33.80

NOTE

- For widescreen resolution (WXGA), the compatibility support is dependent on Notebook/PC models.
- 120Hz input signals may be dependent on graphics cards support.
- Please note that using resolutions other than native 1024 x 768 (XGA model), 1280 x 800 (WXGA model) may result in some loss of image clarity.
- For WXGA model only.

Computer Compatibility

Mode	Resolution	V-Sync (Hz)	H-Sync (KHz)
MAC LC 13”	640 × 480	66.66	34.98
MAC II 13”	640 × 480	66.68	35.00
MAC 16”	832 × 624	74.55	49.73
MAC 19”	1024 × 768	75	60.24
MAC	1152 × 870	75.06	68.68
MAC G4	640 × 480	60	31.35
i MAC DV	1024 × 768	75	60.00
i MAC DV	1152 × 870	75	68.49

Video Compatibility

NTSC	M (3.58MHz), 4.43 MHz
PAL	B, D, G, H, I, M, N
SECAM	B, D, G, K, K1, L
SDTV	480i/p, 576i/p,
HDTV	720p@50Hz/60Hz, 1080i@50Hz/60Hz, 1080p@24Hz/50Hz/60Hz

Supported Multimedia Format

Video

File Format	Video Format	Decode Max Resolution	Profiel	Level
AVI,MOV,3GP,MP4	H.263	1920x1080 30fps	P3	70
AVI,MOV,3GP,MP4	H.264	1920x1080 30fps	BP/MP/HP	L4.1
AVI,MOV,3GP,MP4,WMV	MPEG4	1920x1080 30fps	SP/ASP	L5
AVI,MOV,3GP,MP4	Xivd	1920x1080 30fps	HD	
AVI,MOV	MJPEG	8192x8192 30fps	Baseline	YUV444
WMV	VC-1	1920x1080 30fps	SP/MP/AP	L3
FLV	Sorenson Spark	1920x1080 30fps	Spark	L3

Photo

File Format	File extension
BMP	*.bmp
JPG, JPEG	*.jpg, *.jpeg

Audio

AAC, MP3, PCM, ADPCM, WMA

Microsoft Office Viewer

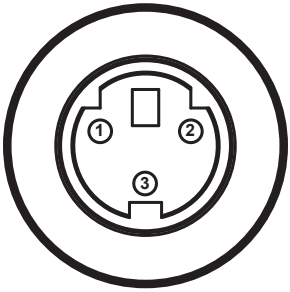
Word document, PDF, Powerpoint, Excel, *.txt

NOTE

- Video format does not support content with B-frame function.

RS232 Commands and Protocol Function List

RS232 Pin Assignments



❖ RS232 shell is grounded.

Pin no.	Spec. (from projector side)
1	TXD
2	RXD
3	GND

RS232 Protocol Function List

1. There is a <CR> after all ASCII commands.
2. 0D is the HEX code for <CR> in ASCII code.

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

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		
~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	
~XX03 1	7E 30 30 30 33 20 31 0D	Mute	On	
~XX03 0	7E 30 30 30 33 20 30 0D		Off	
~XX04 1	7E 30 30 30 34 20 31 0D	Freeze		
~XX04 0	7E 30 30 30 34 20 30 0D	Unfreeze		
~XX05 1	7E 30 30 30 35 20 31 0D	Zoom Plus		
~XX06 1	7E 30 30 30 36 20 31 0D	Zoom Minus		
~XX07 1	7E 30 30 30 37 20 31 0D	Up (Pan under zoom)		
~XX08 1	7E 30 30 30 38 20 31 0D	Down (Pan under zoom)		
~XX09 1	7E 30 30 30 39 20 31 0D	Left (Pan under zoom)		
~XX10 1	7E 30 30 31 30 20 31 0D	Right (Pan under zoom)		
~XX12 1	7E 30 30 31 32 20 31 0D	Direct Source Command	HDMI	
~XX12 5	7E 30 30 31 32 20 35 0D		VGA 1	
~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	Presentation	
~XX20 2	7E 30 30 32 30 20 32 0D		Bright	
~XX20 3	7E 30 30 32 30 20 33 0D		Movie	
~XX20 4	7E 30 30 32 30 20 34 0D		sRGB	
~XX20 5	7E 30 30 32 30 20 35 0D		User	
~XX20 7	7E 30 30 32 30 20 37 0D		Blackboard	
~XX20 8	7E 30 30 32 30 20 38 0D		Classroom	
~XX20 9	7E 30 30 32 30 20 39 0D		3D	
~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 = 0 (a=30) ~ 31 (a=33 31)
~XX24 n	7E 30 30 32 34 20 a 0D	Color	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)
~XX30 n	7E 30 30 33 30 20 a 0D		Cyan	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX31 n	7E 30 30 33 31 20 a 0D		Yellow	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
~XX32 n	7E 30 30 33 32 20 a 0D		Magenta	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 = 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		PC	
~XX37 1	7E 30 30 33 37 20 31 0D	Color Space	Auto	
~XX37 2	7E 30 30 33 37 20 32 0D		RGB	
~XX37 3	7E 30 30 33 37 20 33 0D		YUV	

~XX39 5	7E 30 30 33 39 20 35 0D	Input Source	VGA1	
~XX39 9	7E 30 30 33 39 20 39 0D		S-Video	
~XX39 10	7E 30 30 33 39 20 31 30 0D		Video	
~XX39 1	7E 30 30 33 39 20 31 0D		HDMI	
~XX44 n	7E 30 30 34 34 20 a 0D	Tint		n = 0 (a=30) ~ 100 (a=31 30 30)
~XX45 n	7E 30 30 34 35 20 a 0D	Color (Saturation)		n = 0 (a=30) ~ 100 (a=31 30 30)
(WXGA only)				
~XX60 1	7E 30 30 36 30 20 31 0D	Format	4:3	
~XX60 2	7E 30 30 36 30 20 32 0D		16:9/16:10	
~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	
(XGA only)				
~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-I	
~XX60 3	7E 30 30 36 30 20 35 0D		16:9-II	
~XX60 6	7E 30 30 36 30 20 36 0D		Native	
~XX60 7	7E 30 30 36 30 20 37 0D		AUTO	
~XX61 n	7E 30 30 36 31 20 a 0D	Overscan		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 = -50 (a=2D 35 30) ~ +50 (a=35 30)
~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 = -40 (a=2D 34 30) ~ 40 (a=34 30)
~XX230 1	7E 30 30 32 33 30 20 31 0D	3D Mode	On	
~XX230 0	7E 30 30 32 33 30 20 30 0D	3D Mode	Off	
~XX231 1	7E 30 30 32 33 31 20 31 0D	3D Sync Invert	On	
~XX231 0	7E 30 30 32 33 31 20 30 0D	3D Sync Invert	Off	
~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 35 0D		Vietnamese	
~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		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	
(WXGA only)				
~XX90 1	7E 30 30 39 31 20 31 0D	Screen Type	16:10	
~XX90 0	7E 30 30 39 31 20 30 0D		16:9	
~XX91 1	7E 30 30 39 31 20 31 0D	Signal	Automatic	On
~XX91 0	7E 30 30 39 31 20 30 0D		Automatic	Off
~XX73 n	7E 30 30 37 33 20 a 0D		Frequency	n = -5 (a=2D 35) ~ 5 (a=35) By signal
~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

~XX77 n	7E 30 30 37 37 20 aabbcc 0D	Security	Security Timer	Month/Day/Hour n = mm/dd/hh mm = 00 (aa=30 30) ~ 12 (aa=31 32) dd = 00 (bb=30 30) ~ 30 (bb=33 30) hh = 00 (cc=30 30) ~ 24 (cc=32 34)
~XX78 1	7E 30 30 37 38 20 31 0D		Security	On
~XX78 0	7E 30 30 37 38 20 32 0D			Off (0/2 for backward compatible)
~XX79 n	7E 30 30 37 39 20 a 0D	Projector ID		n = 01 (a=30 31) ~ 99 (a=39 39)
~XX80 1	7E 30 30 38 30 20 31 0D	Mute	On	
~XX80 0	7E 30 30 38 30 20 30 0D		Off	
~XX81 n	7E 30 30 38 31 20 a 0D	Volume		n = 0 (a=30) ~ 10 (a=31 30)
~XX82 1	7E 30 30 38 32 20 31 0D	Logo	Optoma	
~XX82 2	7E 30 30 38 32 20 32 0D		User	
~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	
~XX100 1	7E 30 30 31 30 30 20 31 0D	Source Lock	On	
~XX100 0	7E 30 30 31 30 30 20 30 0D		Off	
~XX100 3	7E 30 30 31 30 30 20 33 0D	Next Source		
~XX101 1	7E 30 30 31 30 31 20 31 0D	High Altitude	On	
~XX101 0	7E 30 30 31 30 31 20 30 0D		Off	
~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	
~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	
~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	
~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
~XX106 n	7E 30 30 31 30 36 20 a 0D		Auto Power Off (min)	n = 0 (a=30) ~ 180 (a=31 38 30) , step=5
~XX107 n	7E 30 30 31 30 37 20 a 0D		Sleep Timer (min)	n = 0 (a=30) ~ 995 (a=39 39 35) , step=5
~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
~XX109 1	7E 30 30 31 30 39 20 31 0D		Light Reminde	On
~XX109 0	7E 30 30 31 30 39 20 30 0D			Off
~XX110 1	7E 30 30 31 31 30 20 31 0D		Brightness Mode	Bright
~XX110 0	7E 30 30 31 31 30 20 30 0D			STD
~XX111 1	7E 30 30 31 31 31 20 31 0D		Light Reset	Yes
~XX111 0	7E 30 30 31 31 31 20 30 0D			No
~XX112 1	7E 30 30 31 31 32 20 31 0D	Reset		Yes
~XX210 n	7E 30 30 32 30 30 20 n 0D	Display message on the OSD		n: 1-30 characters

SEND to emulate Remote

~XX140 1	7E 30 30 31 34 30 20 31 0D	Power
~XX140 3	7E 30 30 31 34 30 20 33 0D	Mouse Up
~XX140 4	7E 30 30 31 34 30 20 34 0D	Mouse Left
~XX140 5	7E 30 30 31 34 30 20 35 0D	Mouse Enter
~XX140 6	7E 30 30 31 34 30 20 36 0D	Mouse Right
~XX140 7	7E 30 30 31 34 30 20 37 0D	Mouse Down
~XX140 8	7E 30 30 31 34 30 20 38 0D	Mouse Left Click
~XX140 9	7E 30 30 31 34 30 20 39 0D	Mouse Right Click
~XX140 10	7E 30 30 31 34 30 20 31 30 0D	Up/Page +
~XX140 11	7E 30 30 31 34 30 20 31 31 0D	Left/Source
~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/Re-SYNC
~XX140 14	7E 30 30 31 34 30 20 31 34 0D	Down/Page -
~XX140 15	7E 30 30 31 34 30 20 31 35 0D	Keystone +
~XX140 16	7E 30 30 31 34 30 20 31 36 0D	Keystone -
~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 (1)
~XX140 20	7E 30 30 31 34 30 20 32 30 0D	Menu (2)
~XX140 21	7E 30 30 31 34 30 20 32 31 0D	3D(3)
~XX140 22	7E 30 30 31 34 30 20 32 32 0D	HDMI (4)
~XX140 23	7E 30 30 31 34 30 20 32 33 0D	Freeze (5)
~XX140 24	7E 30 30 31 34 30 20 32 34 0D	AV Mute (6)
~XX140 25	7E 30 30 31 34 30 20 32 35 0D	S-Video (7)
~XX140 26	7E 30 30 31 34 30 20 32 36 0D	VGA (8)
~XX140 27	7E 30 30 31 34 30 20 32 37 0D	Video (9)

SEND from projector automatically

232 ASCII Code	HEX Code	Function	Projector Return	Description
		System status	INFOn	n : 0/1/2/3/4/6/7/8 = Standby/Warming/Cooling/Out of Range/ Fail/Fan Lock/Over Temperature/Light Hours Running Out

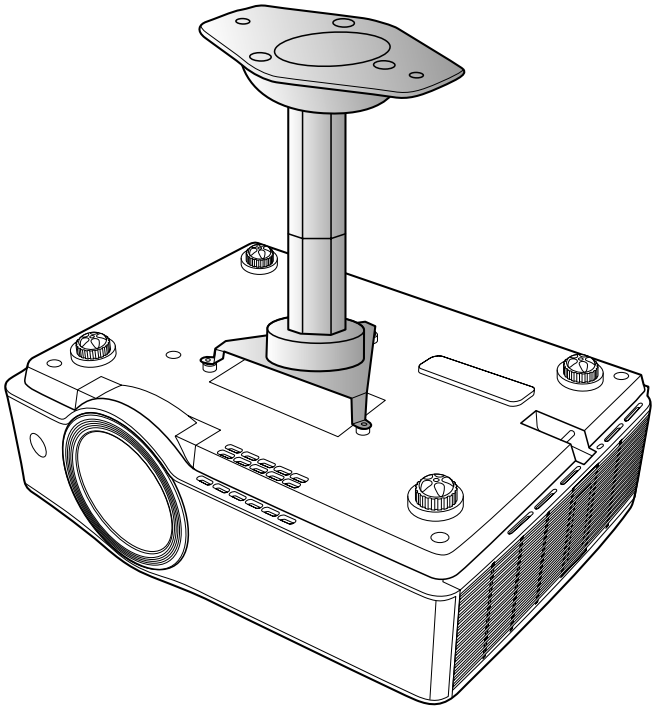
READ from projector

232 ASCII Code	HEX Code	Function	Projector Return	Description
~XX121 1	7E 30 30 31 32 31 20 31 0D	Input Source	OKn	n : 0/1/2/3/4/5 = None/VGA1/VGA2/S-Video/Video/HDMI
~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 = None/Presentation/Bright/Movie/sRGB/ User/Blackboard/Classroom/3D
~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	(EW610ST) n: 0/1/2/3/4 = 4:3/16:9 or 16:10 */LBX/Native/AUTO (EX610ST) n: 0/1/2/3/4 = 4:3/16:9-I/16:9-II/Native/AUTO *16:9 or 16:10 depend on Screen Type setting
~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	OKabbbbccdddde	a : 0/1 = Off/On bbbb: Light Hour cc: source 00/01/02/03/04/05= None/VGA1/VGA2/S-Video/Video/HDMI dddd: FW version e : Display mode 0/1/2/3/4/5/6/7/8= None/Presentation/Bright/Movie/sRGB/User/ Blackboard/Classroom/3D
~XX151 1	7E 30 30 31 35 31 20 31 0D	Model name	OKn	n: 6/7=ZX210ST/ZW210ST
~XX108 1	7E 30 30 31 30 38 20 31 0D	Light Hour	OKbbbb	bbbb: Light Hour
~XX108 2	7E 30 30 31 30 38 20 31 0D	Cumulative Light Hours	OKbbbb	bbbbb: (5 digits) Total Light Hours

Ceiling Mount Installation

1. Place the projector upside down on a flat surface.
2. Line up the three mounting holes and use the three ceiling mount screws to secure the mount to the projector.

Warning:
1. To prevent damage to your projector, use only the Optoma ceiling mount kit or similar kits approved by the manufacturer.
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.



Note

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

Optoma Global Offices

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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.

Class 1 Laser Product

Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

IEC 60825-1:2007

Important!

Laser Precautions

- This projector is a Class 1 laser device that conforms with IEC 60825-1:2007.
- This projector has built-in laser module. Disassembly or modification is very dangerous and should never be attempted.
- Any operation or adjustment not specifically instructed by the user's guide creates a risk of hazardous laser radiation exposure.

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.