

Specktron WDL 3500i

Laser Ultra Short-Throw Projector
User's Manual

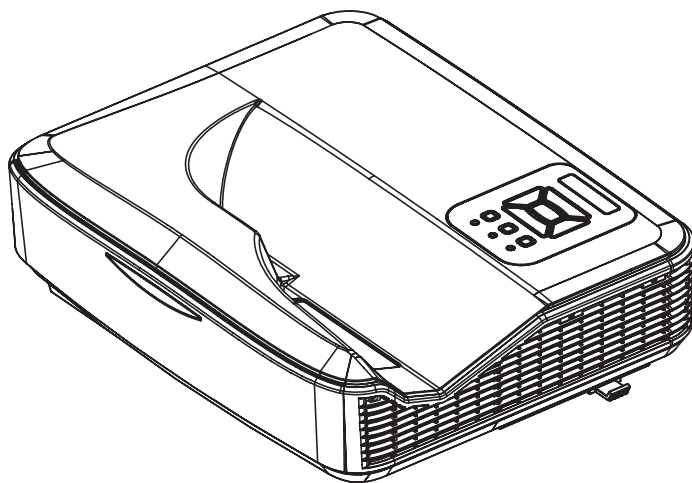




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Usage Notice

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.
7. Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.
8. See projector enclosure for safety related markings.
9. The unit should only be repaired by appropriate service personnel.

Precautions



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

- Warning- Do not look into the projector's lens when the laser is 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.

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.

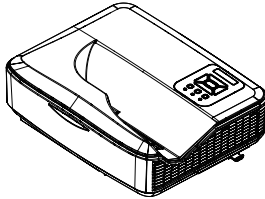
Do not:

- ❖ 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.
 - ▶ Sea level to 6000 feet
Extremely hot: > 35°C
Extremely cool: < 5°C
 - ▶ 6000 feet above
Extremely hot: > 30°C
Extremely cool: < 5°C
 - ▶ Extremely humid: > 70% R.H. (Relative Humidity)
 - In areas susceptible to excessive dust and dirt.
 - Near any appliance generating a strong magnetic field.
 - In direct sunlight.

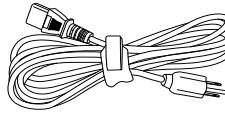
Introduction

Package Overview

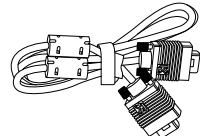
Unpack and inspect the box contents to ensure all parts listed below are in the box. If something is missing, please contact your nearest customer service center.



Projector



Power Cord



VGA Cable



2 × AAA Batteries



IR Remote Control



CD-ROM
(User's Manual)



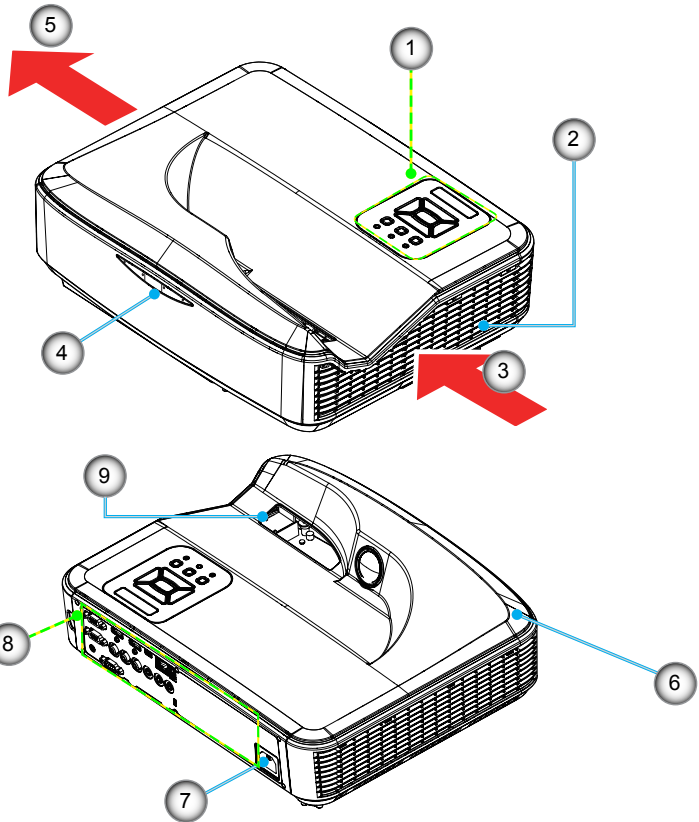
❖ Due to different applications in each country, some regions may have different accessories.

Documentation :

User's Manual

Product Overview

Main Unit

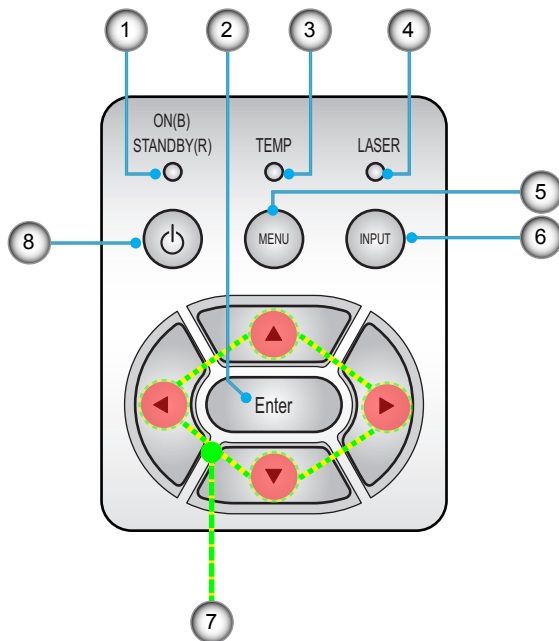


❖ The interface is subject to model's specifications

- | | |
|-------------------------|-------------------------------|
| 1. Control Panel | 6. Speaker |
| 2. Focus Switch | 7. Power Socket |
| 3. Ventilation (inlet) | 8. Input / Output Connections |
| 4. IR Receiver | 9. Lens |
| 5. Ventilation (outlet) | |

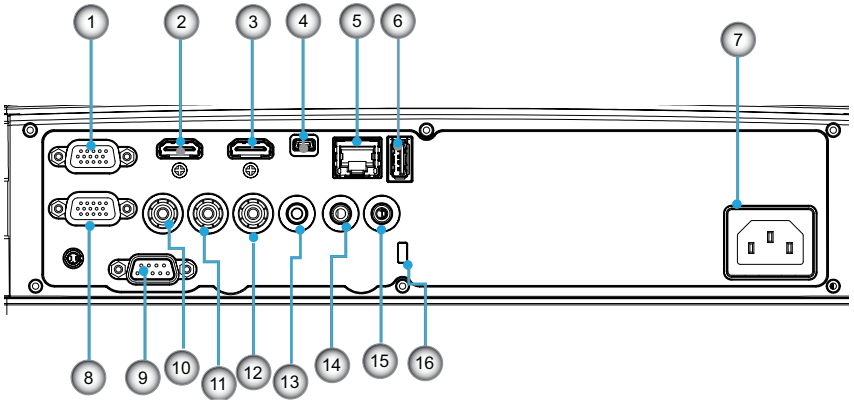
Introduction

Control Panel



1. Power LED
2. Enter
3. Temp LED
4. Laser LED
5. Menu
6. Input
7. Four Directional Select Keys
8. Power/Standby button

Input/Output Connections



NOTE

- ❖ The interface is subject to model's specifications.

NOTE

- ❖ Monitor loop through only support in VGA1-In/YPbPr.

1. VGA1-In/YPbPr Connector
(PC Analog Signal/Component Video Input/HDTV/YPbPr)
2. HDMI2 Input Connector
3. HDMI1 Input Connector
4. USB Connector (Connect to PC for firmware upgrade)
5. RJ45 Connector
6. USB Type A Connector
7. Power Socket
8. VGA-Out/VGA2-In Connector
9. RS-232 Connector (9-pin DIN Type)
10. Composite Video Input Connector
11. Composite Audio Input (right) Connector
12. Composite Audio Input (left) Connector
13. Audio Output Connector (3.5mm mini Jack)
14. Audio Input Connector (3.5mm mini jack)
15. Audio Input Connector (microphone)
16. Kensington™ Lock Port

Introduction

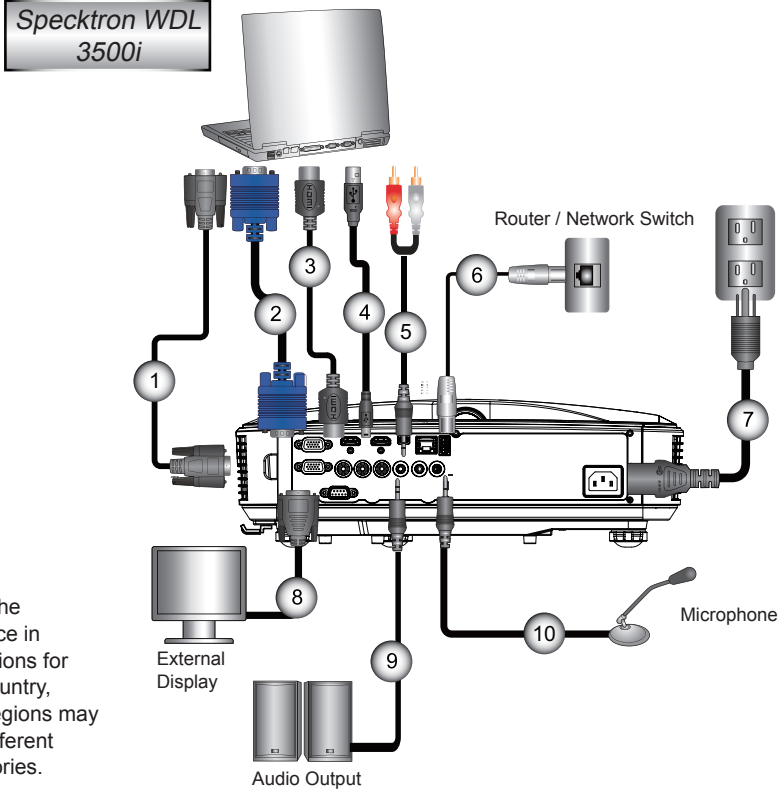
Remote Control



1. Infrared transmitter
2. LED Indicator
3. Power On/Off
4. Enter
5. Four Directional Select Keys
6. Menu
7. Exit
8. Zoom +
9. Reset
10. Auto
11. input
12. Zoom -
13. Volume +/-
14. Keystone +/-
15. Image
16. Blank
17. Aspect
18. VGA1
19. HDMI1
20. VGA2
21. HDMI2
22. Video
23. Freeze
24. Numbered keypad

Installation

Connecting the Projector Connect to Computer/Notebook



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

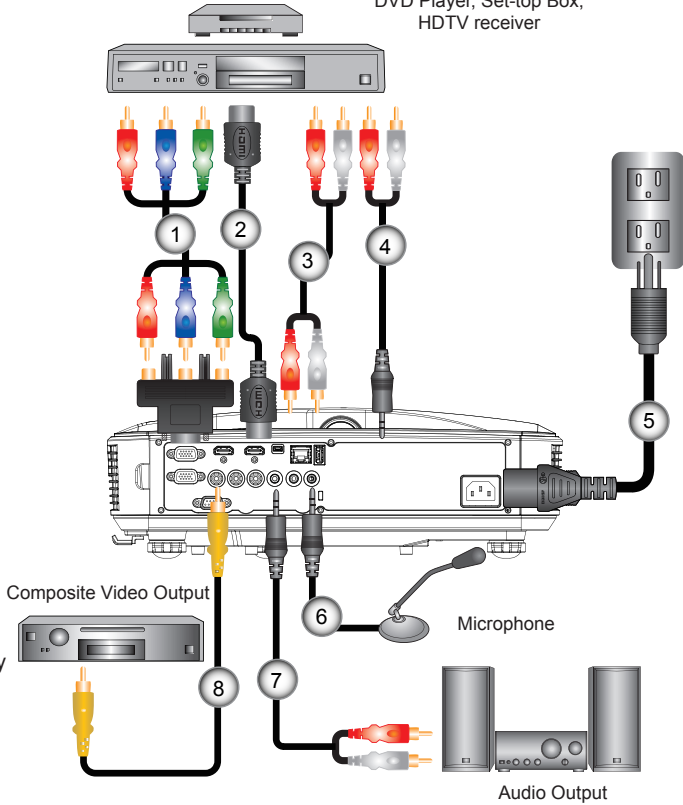
1.....	*RS232 Cable
2.....	VGA Cable
3.....	*HDMI Cable
4.....	*USB Cable
5.....	*Audio Cable/RCA
6.....	*RJ45 Cable
7.....	Power Cord
8.....	*VGA Output Cable
9.....	*Audio Output Cable
10.....	*Audio Input Cable

Installation

Connect to Video Sources

Spektron WDL
3500i

DVD Player, Set-top Box,
HDTV receiver




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

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

Installation

Powering the Projector On / Off

Powering On the Projector

1. Securely connect the power cord and signal cable. When connected, the POWER/STANDBY LED will turn Orange.
2. Turn on the laser by pressing “” button either on the projector or on the remote. At this moment, the POWER/STANDBY LED will now turn Blue. ❶

The startup screen will display in approximately 10 seconds. The first time you use the projector, you will be asked to select the preferred language and power saving mode.

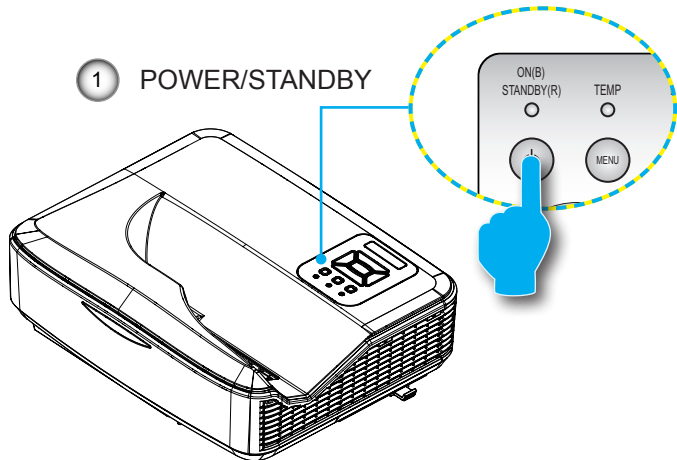
3. Turn on and connect the source that you want to display on the screen (computer, notebook, video player, etc). The projector will detect the source automatically. If not, push menu button and go to “OPTIONS”. Make sure that the “Source Lock” has been set to “Off”.
- ❖ If you connect multiple sources at the same time, press the “INPUT” button on the control panel or direct source keys on the remote control to switch between inputs.




❖ When the power mode is in standby mode (power consumption < 0.5W), the VGA output/ input and audio will be deactivated when the projector is in standby.

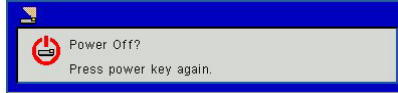




❖ Turn on the projector first and then select the signal sources.




Powering Off the Projector

1. Press the “” button on the remote control or on the control panel to turn off the projector. The following message will be displayed on the screen.



Press the “” button again to confirm otherwise the message will disappear after 10 seconds. When you press the “” button for the second time, the fan will start cooling the system and will shut down.

2. The cooling fans continue to operate for about 4 seconds for cooling cycle and the POWER/STANDBY LED will flash Orange. When the POWER/STANDBY LED lights solid Orange, the projector has entered standby mode.

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

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

Warning Indicator

When the warning indicators (see below) come on, the projector will automatically shutdown:



- ❖ Contact the nearest service center if the projector displays these symptoms.

- ❖ “LASER” LED indicator is lit red and if “POWER/STANDBY” indicator flashes amber.
- ❖ “TEMP” LED indicator is lit red, this indicates the projector has overheated. Under normal conditions, the projector can be switched back on.
- ❖ “TEMP” LED indicator flashes red and if “POWER/STANDBY” indicator flashes amber.

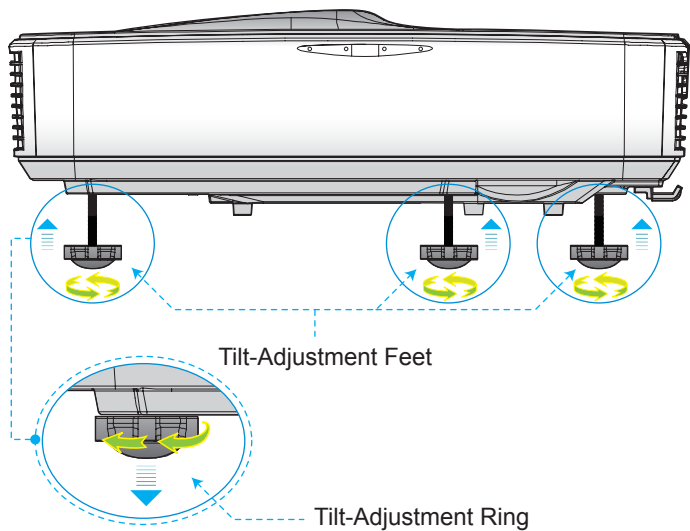
Unplug the power cord from the projector, wait for 30 seconds and try again. If the warning indicator light up again, please contact your nearest service center for assistance.

Adjusting the Projected Image

Adjusting the Projector's Height

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

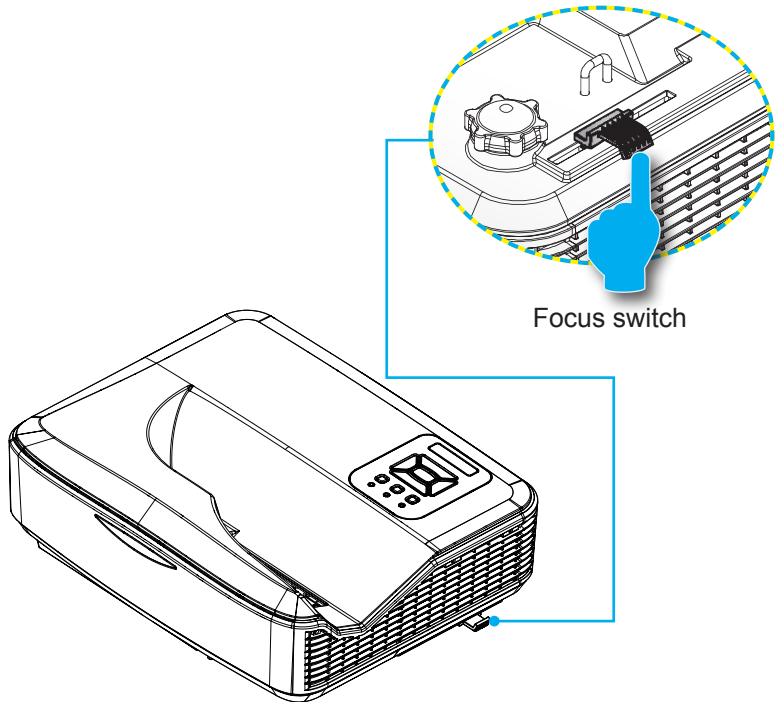
1. Locate the adjustable foot you wish to modify on the underside of the projector.
2. Rotate the adjustable ring clockwise to raise the projector or counter clockwise to lower it. Repeat with the remaining feet as needed.



Adjusting the Projector's Focus

To focus the image, slide the focus switch to left/right until the image is clear.

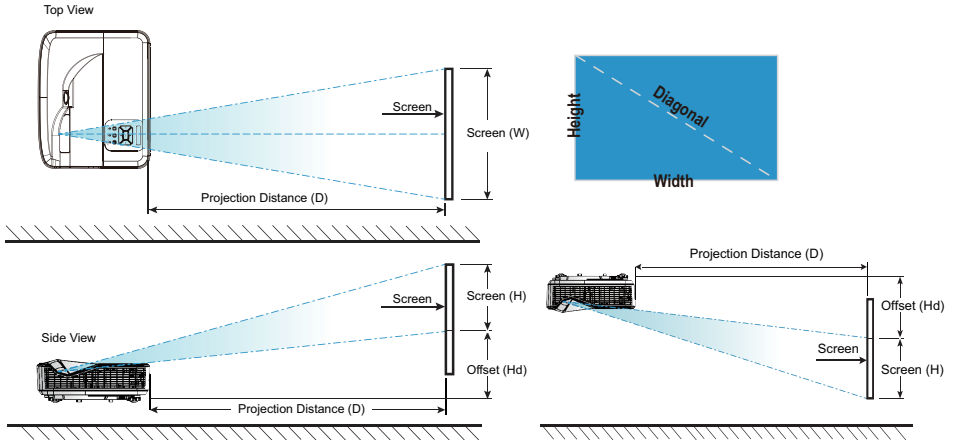
- ▶ WXGA series: The projector will focus at distances from 1.413 to 1.884 feet (0.428 to 0.571 meters).



Installation

Adjusting Projection Image Size (Diagonal)

- ▶ WXGA series: Projection Image Size from 85" to 115" (2.15 to 2.91 meters).



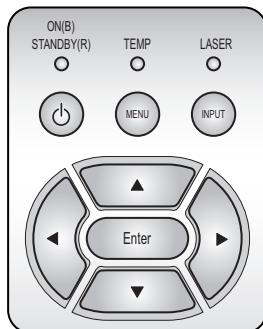
Spektron WDL 3500i

Diagonal length (inch) size of 16:10 Screen	Screen Size W x H				Projection Distance (D)				Offset (Hd)	
	(mm)		(inch)		(mm)		(feet)		(mm)	(inch)
	Width	Height	Width	Height	Wide	Tele	Wide	Tele		
85	1831.0	1144.0	72.1	45.0	232.0	NA	9.1	NA	255.0	10.0
87	1874.0	1171.0	73.8	46.1	244.0	NA	9.6	NA	259.0	10.2
90	1939.0	1212.0	76.3	47.7	261.0	NA	10.3	NA	266.0	10.5
95	2046.0	1279.0	80.6	50.4	290.0	NA	11.4	NA	277.0	10.9
100	2153.0	1346.0	84.8	53.0	318.0	NA	12.5	NA	289.0	11.4
105	2262.0	1414.0	89.1	55.7	347.0	NA	13.7	NA	300.0	11.8
110	2369.0	1481.0	93.3	58.3	375.0	NA	14.8	NA	311.0	12.2
115	2477.0	1548.0	97.5	60.9	403.0	NA	15.9	NA	322.0	12.7



❖ This table is for user's reference only.

Control Panel & Remote Control

Control Panel



Using the Control Panel






POWER		Refer to the “Power On/Off the Projector” section on pages 13-14.
Enter		Press “Enter” to confirm your item selection.
INPUT		Press “INPUT” to select an input signal.
MENU		Press “MENU” to launch the on-screen display (OSD) menu. To exit OSD, press “MENU” again.
Four Directional Select Keys		Use ▲ ▼ ◀ ▶ to select items or make adjustments to your selection.
LASER LED		Refer to the LED indicator of the projector light source status.
TEMP LED		Refer to the LED indicator of the projector temperature status.
ON/STANDBY LED		Refer to the LED indicator of the projector power status.

User Controls

Remote Control



Using the Remote Control

Infrared transmitter	Sends signals to the projector.
LED	LED Indicator.
Power 	Refer to the “Power On/Off the Projector” section on pages 13-14.
Exit	Press “Exit” to close the OSD menu.
Zoom +	Zoom in the projector display.
Reset	Return the adjustments and settings to the factory default values. (except for laser counter)
Zoom -	Zoom out the projector display.
Enter	Confirm your item selection.
Input	Press “Source” to select an input signal.
Auto	Automatically synchronizes the projector to the input source.
Four Directional Select Keys	Use     to select items or make adjustments to your selection.
Keystone +/-	Adjust image distortion caused by tilting the projector.
Volume +/-	Adjust to increase / decrease the volume.
Aspect	Use this function to choose your desired aspect ratio.
Menu	Press “Menu” to launch the on-screen display (OSD) menu. To exit OSD, press “Menu” again.

User Controls



Using the Remote Control

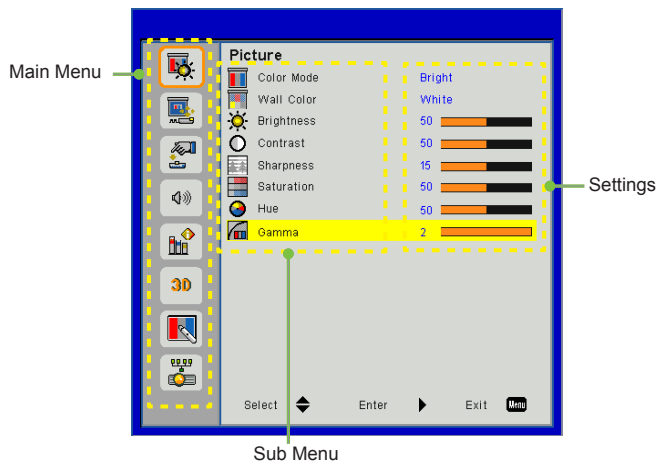
VGA1	Press "VGA1" to choose VGA IN 1 connector.
Blank	Momentarily turns off/on the audio and video.
HDMI1	Press "HDMI1" to choose HDMI IN 1 connector.
HDMI2	Press "HDMI2" to choose HDMI IN 2 connector.
VGA2	Press "VGA2" to choose VGA IN 2 connector.
Video	Press "Video" to choose Composite video source.
Freeze	Pause the screen image. Press again to resume the screen image.
Image	Select the display mode from Presentation, Bright, Eco, sRGB and User .

On-screen Display Menu

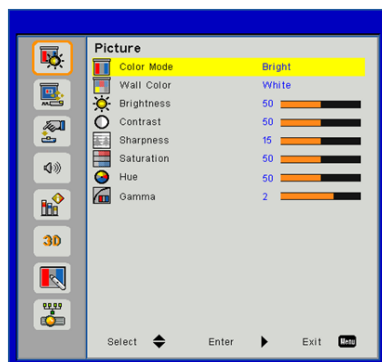
The Projector has multilingual On-screen Display menus that allow you to make image adjustments and change a variety of settings.

How to operate

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



Picture



Color Mode

There are many factory presets optimized for various types of images. Use the ◀ or ▶ button to select the item.

- ▶ Bright: For brightness optimization.
- ▶ PC: For meeting presentation.
- ▶ Movie: For playing video content.
- ▶ Game: For game content.
- ▶ User: Memorize user's settings.

Wall Color

Use this function to choose a proper color according to the wall. It will compensate the color deviation due to the wall color to show the correct image tone.

Brightness

Adjust the brightness of the image.

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

Contrast

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

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

Sharpness

Adjust the sharpness of the image.

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

Saturation

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

- ▶ Press the ◀ button to decrease the amount of saturation in the image.
- ▶ Press the ▶ button to increase the amount of saturation in the image.



- ❖ “Sharpness”, “Saturation” and “Hue” functions are only supported under video mode.

Hue

Adjust the color balance of red and green.

- ▶ Press the ◀ button to increase the amount of green in the image.
- ▶ Press the ▶ button to increase the amount of red in the image.

Gamma

Effects the representation of dark scenery. With greater gamma value, dark scenery will look brighter.

Screen



Aspect Ratio

- ▶ Auto: Keep the image with original width-height ratio and maximize the image to fit native horizontal or vertical pixels.
- ▶ 4:3: The image will be scaled to fit the screen and displayed using a 4:3 ratio.
- ▶ 16:9: The image will be scaled to fit the width of the screen and the height adjusted to display the image using a 16:9 ratio.
- ▶ 16:10: The image will be scaled to fit the width of the screen and the height adjusted to display the image using a 16:10 ratio.

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.

Clock

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



- ❖ “H. Position” and “V. Position” ranges will depend on input source.

V. Position

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

Digital Zoom

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

V. Keystone

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

Ceiling Mount

- ▶ Front: The image is projected straight on the screen.
- ▶ Front Ceiling: This is the default selection. When selected, the image will turn upside down.
- ▶ Rear: When selected, the image will appear reversed.
- ▶ Rear Ceiling: When selected, the image will appear reversed in upside down position.

Setting



Language

Choose the multilingual OSD menu. Press the ◀ or ▶ button into the sub menu and then use the ▲ or ▼ button to select your preferred language. Press ▶ on the remote control to finalize the selection.



Menu Location

Choose the menu location on the display screen.

Closed Caption

Use this function to enable close caption menu. Select an appropriate closed captions option: Off, CC1, CC2, CC3, CC4.

VGA OUT (Standby)

Choose "On" to enable VGA OUT connection.

LAN (Standby)

Choose "On" to enable LAN connection. Choose "Off" to disable LAN connection.

VGA B (Function)

It will be changed to VGA B Port when setting input.

It will be changed to VGA out when setting output.

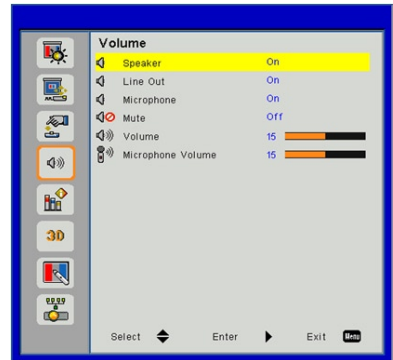
Test Pattern

Display a test pattern.

Reset

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

Volume



Speaker

- ▶ On: Choose "On" to play sound through the built-in speaker.
- ▶ Off: Choose "Off" to disable sound to be played through the built-in speaker.

Line out

- ▶ On: Choose "On" to play sound through the external speakers.
- ▶ Off: Choose "Off" to disable sound to be played through the external speakers.

Microphone

- ▶ On: Choose "On" to enable sound from the microphone.
- ▶ Off: Choose "Off" to disable sound from the microphone.

Mute

- ▶ On: Choose "On" to turn mute on.
- ▶ Off: Choose "Off" to turn mute off.

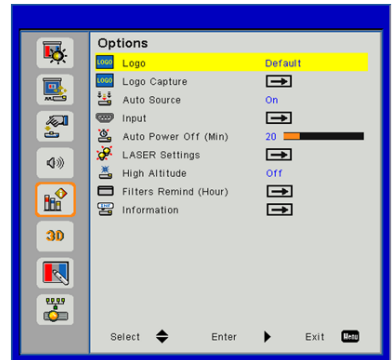
Volume

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

Microphone Volume

- ▶ Press the ◀ button to decrease the microphone Volume.
- ▶ Press the ▶ button to increase the microphone Volume.

Options



- ❖ For successful logo capture, please ensure that the onscreen image does not exceed the projector's native resolution. (WXGA:1280x800).
- ❖ "Logo Capture" is not available when 3D is enabled.
- ❖ Before active this function, it is recommended that "Aspect Ratio" is set to the "Auto".

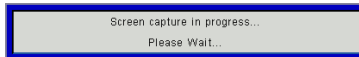
Logo

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

- ▶ Default: The default startup screen.
- ▶ User: Use stored picture from "Logo Capture" function.

Logo Capture

Press ► button to capture an image of the picture currently displayed on screen.

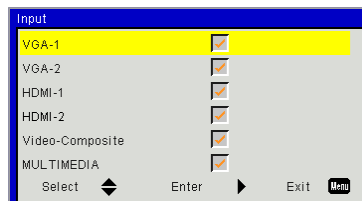


Auto Source

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

Input

Press ► button to enable/disable input sources. The projector will not search for inputs that are not selected.



Auto Power Off (Min)

Sets the countdown timer interval. The default value is 20 minutes. The countdown timer will start, when there is no signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

Laser Setting

Refer to page 32.

High Altitude

- ▶ On: The built-in fans run at high speed. Select this option when using the projector at altitudes above 2500 feet/762 meters or higher.
- ▶ Off: The built-in fans automatically run at a variable speed according to the internal temperature.

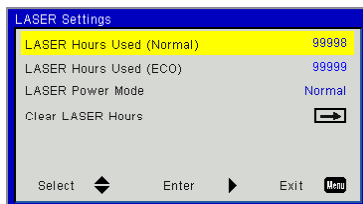
Filters Remind (Hour)

- ▶ Filters Remind (Hour): Set the filter reminder time
- ▶ Cleaning Up Reminder: Select “Yes” to reset the dust filter hour counter after replacing or cleaning the dust filter.

Information

Display the projector information for model name, SNID, source, resolution, software version, color space and aspect ratio on the screen.

Options | Laser Settings



Laser Hours Used (Normal)

Display the projection time of normal mode.

Laser Hours Used (ECO)

Display the projection time of ECO mode.

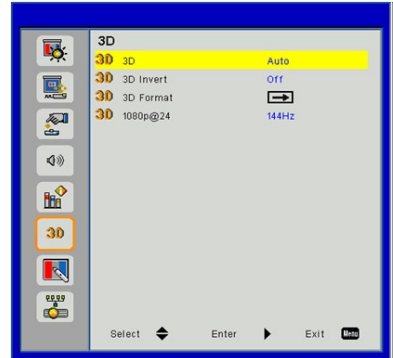
Laser Power Mode

- ▶ Normal: Normal mode.
- ▶ ECO: Use this function to dim the projector laser which will lower power consumption and extend the laser life.

Clear Laser Hours

Choose "Yes" to reset the Laser hour counter.

3D



3D

- ▶ Auto: When a HDMI1.4a 3D timing identification signal is detected, the 3D image is selected automatically.
- ▶ Choose “Off” to disable 3D function.
- ▶ Choose “On” to enable 3D function.



❖ “Frame Sequential” is supported the DLP Link 3D input signals from VGA / HDMI connector.

❖ “Frame Sequential” / “Field Sequential” are supported the HQFS 3D input signals from Composite/ Svideo connector connector.

❖ “Frame Packing” / “Side-by-Side(Half)” / “Top and Bottom” are supported from HDMI 1.4a 3D input signals.

3D Invert

If you see a discrete or overlapping image while wearing DLP 3D glasses, you may need to execute “Invert” to get best match of left/ right image sequence to get the correct image.

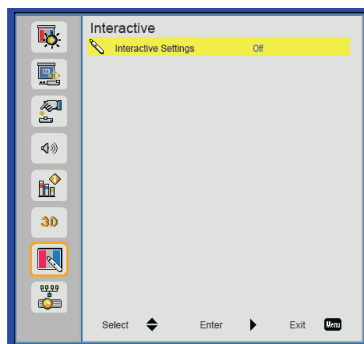
3D Format

Use this feature to select the 3D format. Options are: “Frame Packing”, “Side-by-Side (Half)”, “Top and Bottom”, “Frame Sequential” and “Field Sequential”.

1080p @24

Use this feature to select 96 or 144Hz refresh rate as using 3D glasses in the 1080p @ 24 frame packing.

Interactive



- ❖ The Interactive function is available when displaying graphic source from HDMI/VGA input. Other sources are not supported.
- ❖ If “3D” function is enabling, “Interactive” feature is disabling.
- ❖ Interaction function: Please specify that the Interaction function is only for USTi model. The Interaction function is not available in the UST model.

Interactive Settings

- ▶ Choose “On” to enable Interactive function.
- ▶ Choose “Off” to disable Interactive function.

You need to unplug the Mini USB cable that connects NB/desktop with the projector before using the Interactive function. After you complete the Interactive Settings in OSD, use Mini USB cable to connect NB/desktop with the projector.

LAN



Status

Display the network connection status.

DHCP

Configure the DHCP settings.

- ▶ On: Choose "On" to let the projector to obtain an IP address automatically from your network.
- ▶ Off: Choose "Off" to assign IP, Subnet Mask, Gateway, and DNS configuration manually.

IP Address

Display an IP address.

Subnet Mask

Display the subnet mask number.

Gateway

Display the default gateway of the network connected to the projector.

DNS

Display the DNS number.

MAC Address

Display the MAC address.

User Controls

Group Name

Display the group name.

Projector Name

Display the projector name.

Location

Display the projector location.

Contact

Display the contact information.

User Controls

How to use web browser to control your projector

1. Turn on DHCP to allow a DHCP server to automatically assign an IP, or manually enter the required network information.

Status	Connect
DHCP	Off
IP Address	172.16.1.42
Subnet Mask	255.255.255.0
Gateway	172.16.1.254
DNS	172.16.1.1

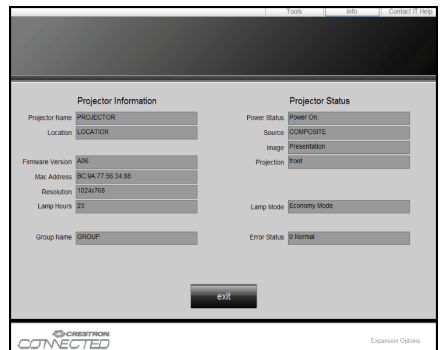
2. Then choose apply and press **OK** button to complete the configuration process.
3. Open your web browser and type in IP Address from the OSD LAN screen then the web page will display as below:



- ❖ When you used the projector IP address, you will not link to your service server.

4. Based on network web-page for the input-string in [tools] tab, the limitation for Input-Length is in the below list ("space" and the other punctuation key included):

Category	Item	Input-Length (characters)
Crestron Control	IP Address	15
	IP ID	2
	Port	5
Projector	Projector Name	10
	Location	9
	Assigned To	9
Network Configuration	DHCP (Enabled)	(N/A)
	IP Address	15
	Subnet Mask	15
	Default Gateway	15
User Password	DNS Server	15
	Enabled	(N/A)
	New Password	15
Admin Password	Confirm	15
	Enabled	(N/A)
	New Password	15
	Confirm	15




User Controls

When making a direct connection from your computer to the projector

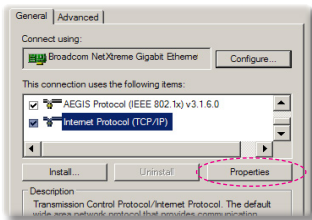
Step 1: Find an IP Address (192.168.0.100) from LAN function of projector.

IP Address	192	168	000	100
------------	-----	-----	-----	-----

Step 2: Select apply and press “Enter” button to submit function or press “menu” key to exit.

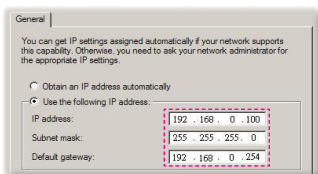
Step 3: To open Network Connections, click **Start**, click **Control Panel**, click **Network and Internet Connections**, and then click **Network Connections**. Click the connection you want to configure, and then, under **Network Tasks** , click **Change settings of this connection**.

Step 4: On the **General** tab, under **This connection uses the following items**, click **Internet Protocol (TCP/IP)**, and then click “Properties.”

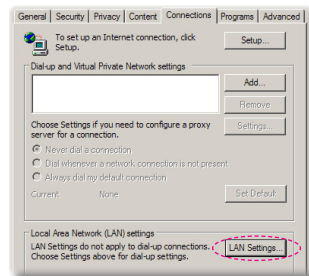


Step 5: Click **Use the following IP address**, and type in as below:

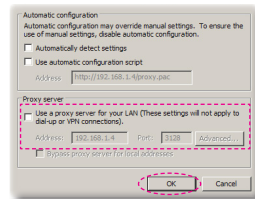
- 1) IP address: 192.168.0.100
- 2) Subnet mask: 255.255.255.0
- 3) Default gateway: 192.168.0.254



Step 6: To open Internet Options, click IE web browser, click Internet Options, click the **Connections** tab and click “LAN Settings...”



Step 7: The **Local Area Network (LAN) Setting** dialog box appears. In the **Proxy Server** area, cancel the **Use a proxy server for your LAN** check box, then click “OK” button twice.



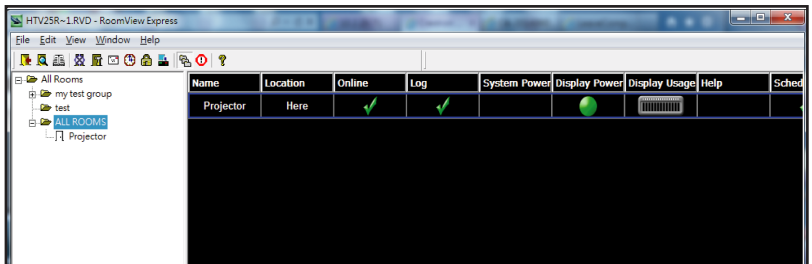
Step 8: Open your IE and type in the IP address of 192.168.0.100 in the URL then press “Enter” key.

User Controls

Crestron RoomView Control Tool

Crestron RoomView™ provides a central monitoring station for 250+ control systems on a single Ethernet network (more are possible, the number depends on the combination of IP ID and IP address). Crestron RoomView monitors each projector, including projector's online status, system power, laser life, network setting and hardware faults, plus any custom attribute as defined by the Administrator. The Administrator can add, delete, or edit room information, contact information and events, which are logged automatically by the software for all users. (Operation UI as following image)

1. Main Screen



2. Edit Room



- ❖ Crestron RoomView's function is set according to the products' models and specifications.

Room Information

Name: crestron room Phone: _____

Location: _____ e-Control Link: _____ Browse...

IP Address: 192.168.0.101 Video Link: _____

IPID/IP Port: 03 | 41794

DHCP Enabled SSL

External Gateway Username: _____

0.0.0.0 Password: _____

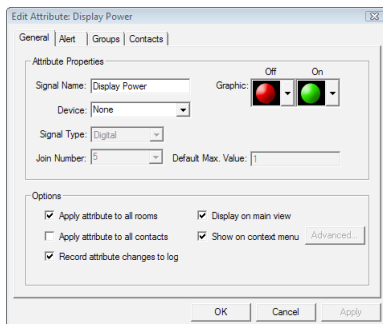
Comment

Save Room Save As Help

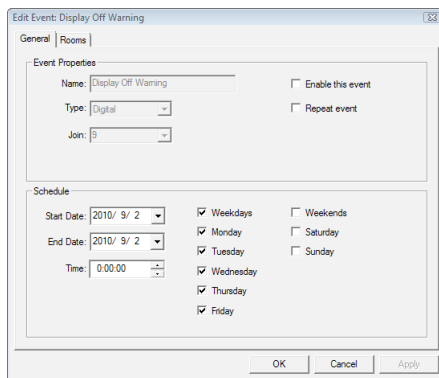
OK Cancel Apply

User Controls

3. Edit Attribute



4. Edit Event



For further information, please visit:

<http://www.crestron.com> & www.crestron.com/getroomview.

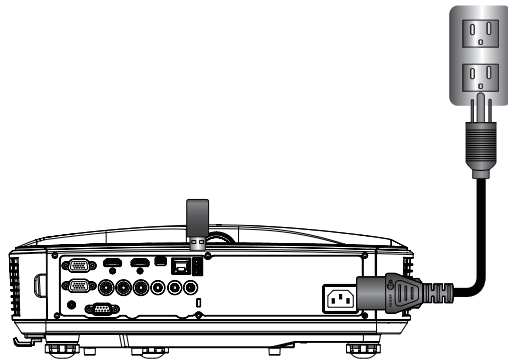
Accessing Multimedia Files

This projector supports two methods to project the media files (photos, videos, music, documents) stored on following devices:

- a. via Wireless dongle (optional) - wirelessly access the media files stored on your mobile phone, tablet PC, notebook, or desktop.
- b. via USB flash drive - directly access the media files stored in the device.

How to access Multimedia mode

1. Plug a wireless dongle or a USB flash drive into the USB connector at the back of projector.

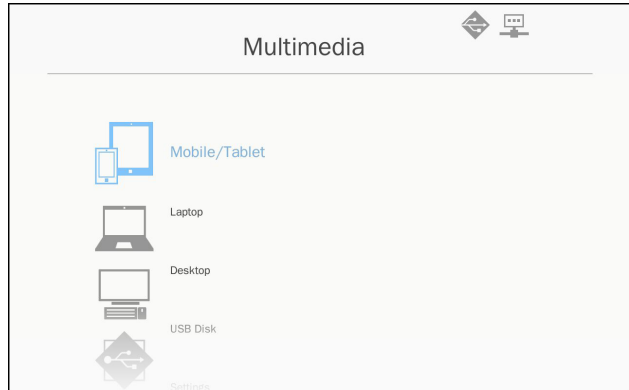


2. Press "INPUT" on the remote control or on the control panel to turn on the projector. When the Input menu appears, press the ▲ ▼ keys to select "Multimedia" and the "Enter" key to confirm.

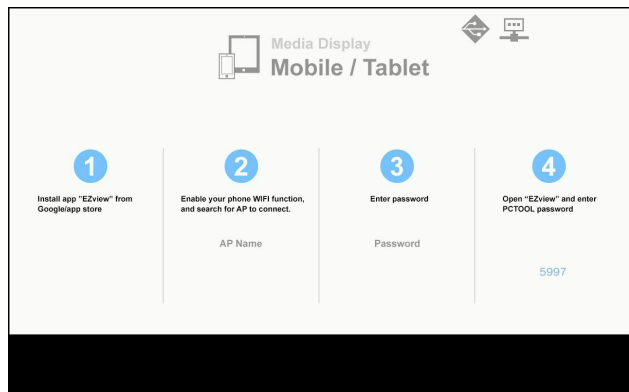
Mobile Display

To access the media files stored on your mobile device or tablet PC, do the following:

1. On **Multimedia** menu, select **Mobile/Tablet**.



2. On your mobile device or tablet PC, download “EZview” application App Store (iOS) or Play Store (Android).

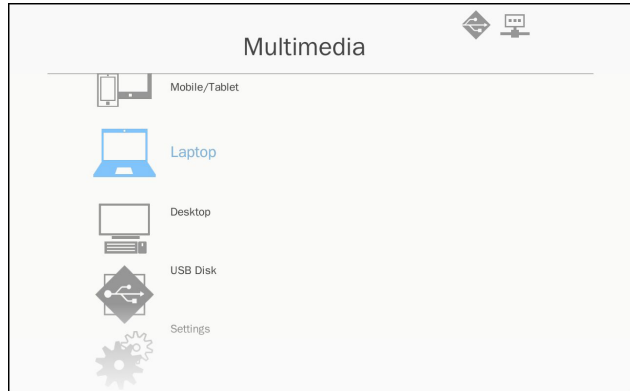


3. Enable your mobile device or tablet PC WiFi function, and search the AP name listed in the Wi-Fi network list.
4. On the initial connection, you will be prompted to enter a password. Enter the password.
5. Launch “EZview” application and enter the PCTOOL password.
6. Wait until the connection is established. The media files on your mobile device or tablet PC can be accessed using the projector.

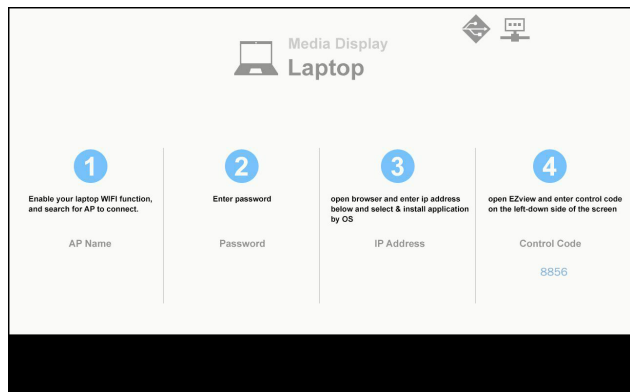
Laptop Display

To access the media files stored on your laptop/notebook, do the following:

1. On **Multimedia** menu, select **Laptop**.



2. Enable your laptop/notebook WiFi function, and search the AP name listed in the Wi-Fi network list.



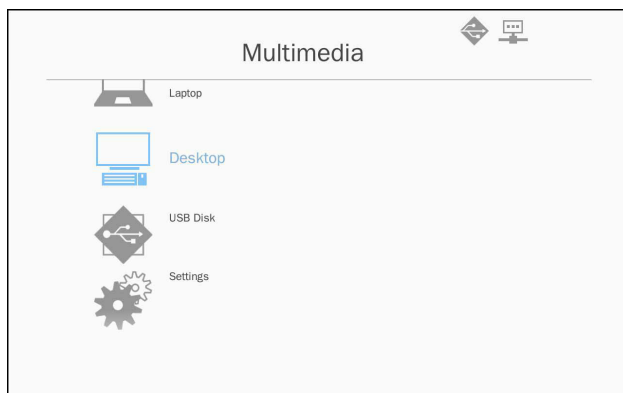
3. On the initial connection, you will be prompted to enter a password. Enter the password.
4. Open your web browser and enter the IP address. Then select "Wifi" on the left side of the screen and install application required by the operation system.
5. Launch "EZview" application and enter the control code shown on the right-bottom side of the screen.

6. Wait until the connection is established. The media files on your laptop/notebook can be accessed using the projector.

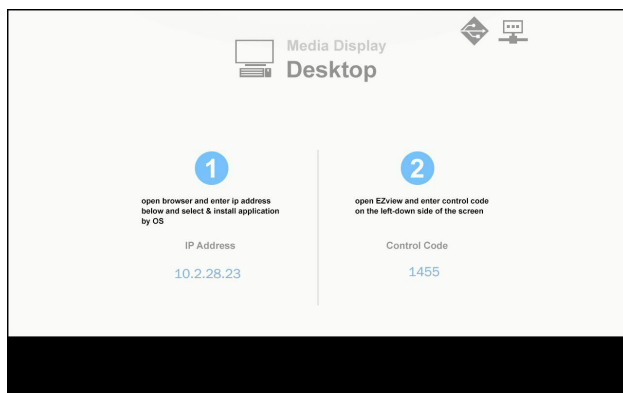
Desktop Display

To access the media files stored on your desktop, do the following:

1. On **Multimedia** menu, select **Desktop**.



2. Open your web browser and enter the IP address. Then select "Wifi" on the left side of the screen and install application required by the operation system.



Multimedia

3. Launch “EZview” application and enter the control code shown on the right-bottom side of the screen.
4. Wait until the connection is established. The media files on your desktop can be accessed using the projector.

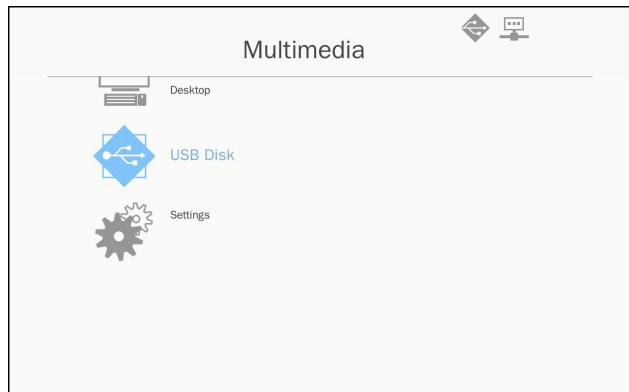
USB Storage Display

To access the media files stored on your USB flash drive, do the following:

Supported File Format

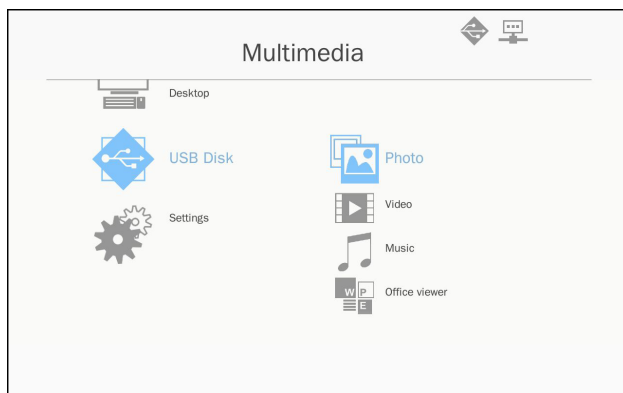
Multimedia Category	File Format
Photo	BMP, JPG, PNG
Music	MP3, WMA
Video	AVI, MOV, MP4, RM, RMVB, DAT, MPG, ISO, TS, MKV, VOB, and WMV
Document	WORD, EXCEL, PPT, PDF

1. On **Multimedia** menu, select **USB Disk**.



2. Use the ▲ ▼ keys to select the file category and press the “Enter” key.

Multimedia

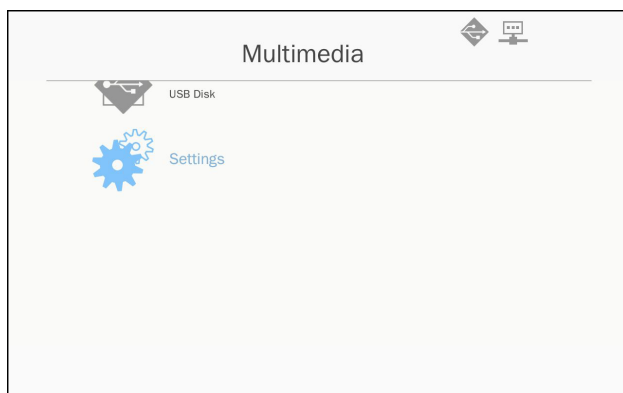


3. Use the ▲ ▼ keys to select the file to view/play and press the “Enter” key to confirm.

Configuring Multimedia Settings

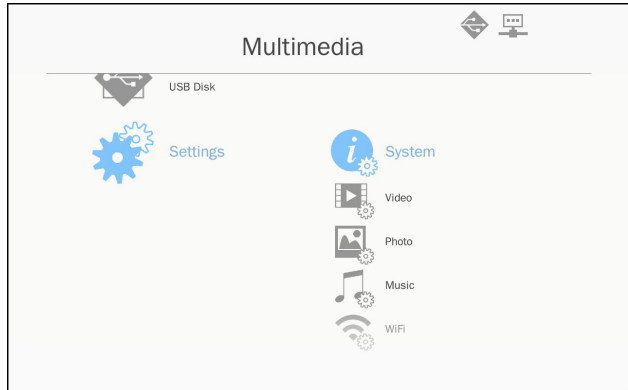
To change the settings, do the following:

1. On **Multimedia** menu, select **Settings**.



Multimedia

2. Use the ▲ ▼ keys to select the desired menu option and press the “Enter” key to enter the submenu.



- ▶ System: Select this option to view the firmware version and update firmware.
 - ▶ Video: Select this option to change the display ratio and set the repeat mode.
 - ▶ Photo: Select this option to change the display ratio, slideshow pattern, and slideshow duration.
 - ▶ Music: Select this option to set the repeat mode.
 - ▶ WiFi: Select this option to configure the Wi-Fi connection.
3. Use the ▲ ▼ keys to select the adjust/select the setting and press the “Enter” key to confirm.

Installing and Cleaning the Optional Dust Filter

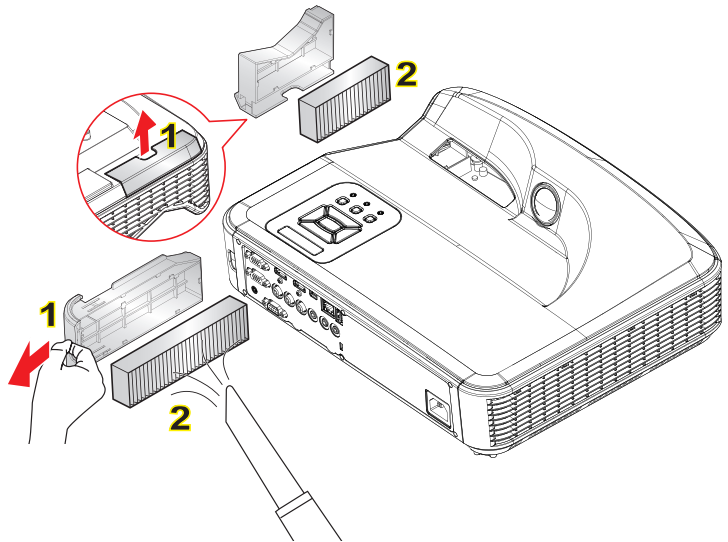
We recommend you clean the dust filter every 500 hours of operation, or more often if you are using the projector in a dusty environment.

When the warning message appears on the screen, do the following to clean the air filter:

The usage time of the dust filter is reached.
Please clean the dust filters for better performance.



- ❖ The optional dust filter should be used in dusty environments.
- ❖ If the dust filter is installed, a proper maintenance will prevent overheating and projector malfunction.
- ❖ The dust filter is optional.
- ❖ The specific interfaces are selected in terms of the specifications of types.



○ Air Filter Cleaning Procedure: ○

1. Switch off the power to the projector by pressing the “**⏻**” button.
2. Disconnect the power cord.
3. Pull out the dust filter, as shown in the illustration. **1**
4. Carefully remove the dust filter. Then clean or change the filter. **2**
To install the filter, reverse the previous steps.
5. Turn on the projector and reset the filter usage counter after the dust filter is replaced.

Compatibility Modes

► VGA Analog

a. PC signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [Hz]
VGA	640x480	60	31.5
	640x480	67	35.0
	640x480	72	37.9
	640x480	75	37.5
	640x480	85	43.3
IBM	720x400	70	31.5
SVGA	800x600	56	35.1
	800x600	60	37.9
	800x600	72	48.1
	800x600	75	46.9
	800x600	85	53.7
Apple, MAC II	832x624	75	49.1
XGA	1024x768	60	48.4
	1024x768	70	56.5
	1024x768	75	60.0
	1024x768	85	68.7
	1024x768	120	99.0
Apple, MAC II	1152x870	75	68.7
SXGA	1280x1024	60	64.0
	1280x1024	72	77.0
	1280x1024	75	80.0
QuadVGA	1280x960	60	60.0
	1280x960	75	75.2
SXGA+	1400x1050	60	65.3
UXGA	1600x1200	60	75.0

Appendices

b. Extended wide timing			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [Hz]
WXGA	1280x720	60	44.8
	1280x800	60	49.6
	1366x768	60	47.7
	1440x900	60	59.9
WSXGA+	1680x1050	60	65.3
c. Component signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [Hz]
480i	720x480 (1440x480)	59.94(29.97)	15.7
576i	720x576 (1440x576)	50(25)	15.6
480p	720x480	59.94	31.5
576p	720x576	50	31.3
720p	1280x720	60	45.0
	1280x720	50	37.5
1080i	1920x1080	60(30)	33.8
	1920x1080	50(25)	28.1
1080p	1920x1080	23.98/24	27.0
	1920x1080	60	67.5
	1920x1080	50	56.3

Appendices

▶ HDMI Digital

a. PC signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [Hz]
VGA	640x480	60	31.5
	640x480	67	35.0
	640x480	72	37.9
	640x480	75	37.5
	640x480	85	43.3
IBM	720x400	70	31.5
SVGA	800x600	56	35.1
	800x600	60	37.9
	800x600	72	48.1
	800x600	75	46.9
	800x600	85	53.7
Apple, MAC II	832x624	75	49.1
XGA	1024x768	60	48.4
	1024x768	70	56.5
	1024x768	75	60.0
	1024x768	85	68.7
	1024x768	120	99.0
Apple, MAC II	1152x870	75	68.7
SXGA	1280x1024	60	64.0
	1280x1024	72	77.0
	1280x1024	75	80.0
QuadVGA	1280x960	60	60.0
	1280x960	75	75.2
SXGA+	1400x1050	60	65.3
UXGA	1600x1200	60	75.0

Appendices

b. Extended wide timing			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [Hz]
WXGA	1280x720	60	44.8
	1280x800	60	49.6
	1366x768	60	47.7
	1440x900	60	59.9
WSXGA+	1680x1050	60	65.3
c. Video signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [Hz]
480p	640x480	59.94/60	31.5
480i	720x480 (1440x480)	59.94(29.97)	15.7
576i	720x576 (1440x576)	50(25)	15.6
480p	720x480	59.94	31.5
576p	720x576	50	31.3
720p	1280x720	60	45.0
	1280x720	50	37.5
1080i	1920x1080	60(30)	33.8
	1920x1080	50(25)	28.1
1080p	1920x1080	23.98/24	27.0
	1920x1080	60	67.5
	1920x1080	50	56.3
d. HDMI 1.4a mandatory 3D timing- Video Signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [Hz]
Frame Packing	720p	50	31.5
	720p	59.94/60	15.7
	1080p	23.98/24	15.6
Side-by-Side(Half)	1080i	50	31.5
	1080i	59.94/60	31.3
Top and Bottom	720p	50	45.0
	720p	59.94/60	37.5
	1080p	23.98/24	33.8

RS232 Commands and Protocol Function List

▶ RS232 Port Setting

Items	Method
Communication Method	Asynchronous Communication
Bits per seconds	19200
Data bits	8 bits
Parity	None
Stop bits	1
Flow control	None

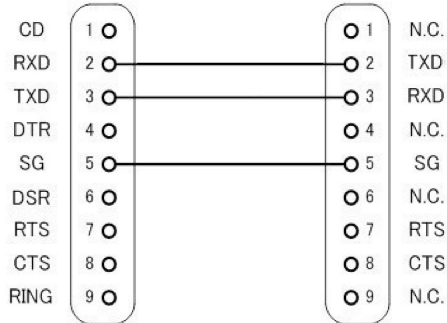


- ❖ RS232 shell is grounded.

▶ RS232 Signals Connection

Computer COM Port
(D-Sub 9pin connector)

Projector COM Port
(D-Sub 9pin connector)



Appendices

▶ Commands Set List

Command Description	ASCII Code	Projector Return	n value	Note
Power	#0000 n		0 : Off 1 : On	
Emulate Remote	#0001 n		1 : Up 2 : Left 3 : Right 4 : Down 5 : Menu 6 : Source 7 : Keystone+ 8 : Keystone- 9 : Volume+ 10 : Volume-	
Resync	#0002 1			VGA only
AV Mute (Blank)	#0003 n		0 : Off 1 : On	
Freeze	#0004 n		0 : Unfreeze 1 : Freeze	
Input Source	#0005 n		1 : VGA 1 2 : VGA 2 3 : HDMI 1 4 : HDMI 2 5 : Video 6 : Multimedia	
Color Mode	#0010 n		1 : Bright 2 : PC 3 : Movie 4 : Game 5 : User	
Brightness	#0011 n		0~100	
Contrast	#0012 n		0~100	
Sharpness	#0013 n		0~31	Video only

Appendices

Aspect Ratio	#0020 n		1 : Auto 2 : 4:3 3 : 16:9 4 : 16:10 / Ultra Wide	
Zoom	#0021 n		0 : Zoom- 1 : Zoom+	
Keystone	#0022 n		-40~40	
Ceiling Mount	#0023 n		1 : Front 2 : Rear 3 : Front Ceiling 4 : Rear Ceiling	
Language	#0030 n		1 : English 2 : German 3 : Swedish 4 : French 5 : Arabic 6 : Dutch 7 : Norwegian 8 : Danish 9 : Simplified Chinese 10 : Polish 11 : Korean 12 : Russian 13 : Spanish 14 : Traditional Chinese 15 : Italian 16 : Portuguese 17 : Turkish 18 : Japanese	
Menu Location	#0031 n		1 : Top Left 2 : Top Right 3 : Center 4 : Bottom Left 5 : Bottom Right	
Reset	#0032 1			
Mute	#0040 n		0 : Off 1 : On	
Volume	#0041 n		0~30	

Appendices

Microphone Volume	#0042 n		0~30	
Auto Power Off (min)	#0050 n		0~120	Step = 5
High Altitude	#0051 n		0 : Off 1 : On	
Color Mode Read	#00110 1	Okn	n : 1/2/3/4/5 = Bright / PC / Movie / Game / User	
Aspect Ratio Read	#00120 1	Okn	n : 1/2/3/4 = Auto / 4:3 / 16:9 / 16:10 (Ultra Wide)	
Input Source (curr. src)	#00160 1	Okn	n : 0/1/2/3/4/5/6 = None / VGA1 / VGA2 / HDMI1 / HDMI2 / Video / Multimedia	
Software Version	#00161 1	Okddd	ddd : FW version	
Information	#00162 1	Okabbbbccdde	a : Power Status / b : LD Hour / c : Input Source / d : Firmware Version / e : Color mode	

Ceiling Mount Installation

1. To prevent damage to your projector, please use the ceiling mount.
2. If you wish to use a third party ceiling mount kit, please ensure the screws used to attach a mount to the projector meet the following specifications:

- ▶ Screw type: M4*4
- ▶ Minimum screw length: 10mm

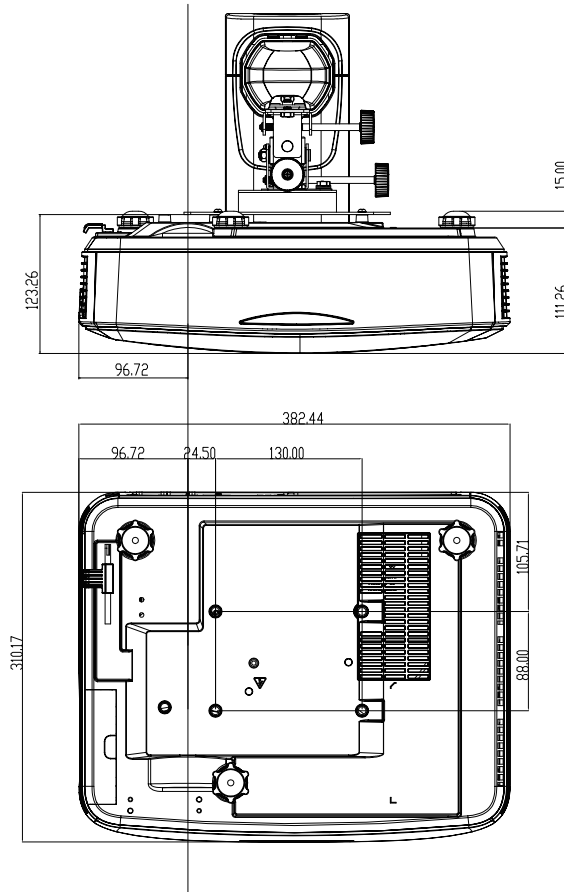


❖ Please note that damage resulting from incorrect installation will void the warranty.

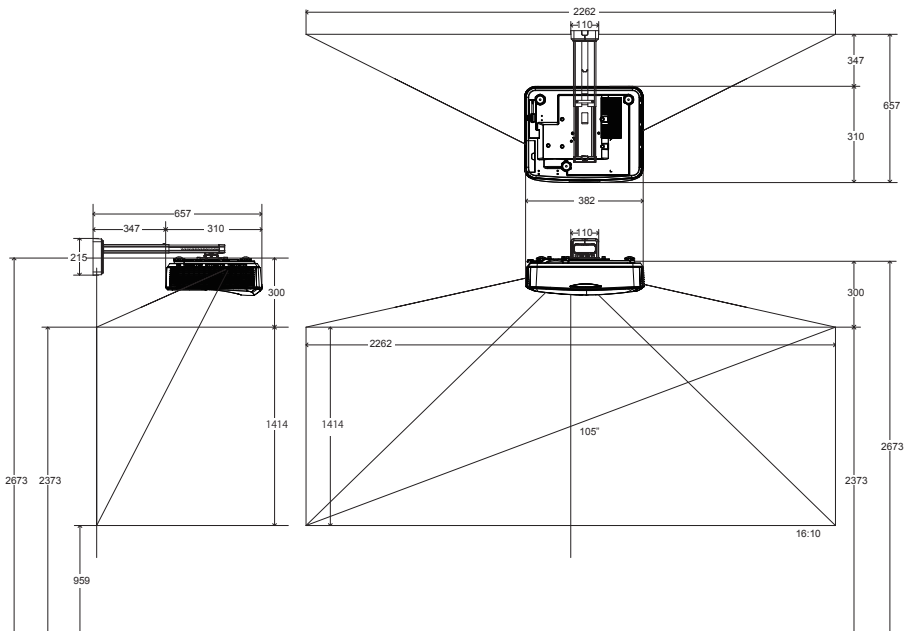
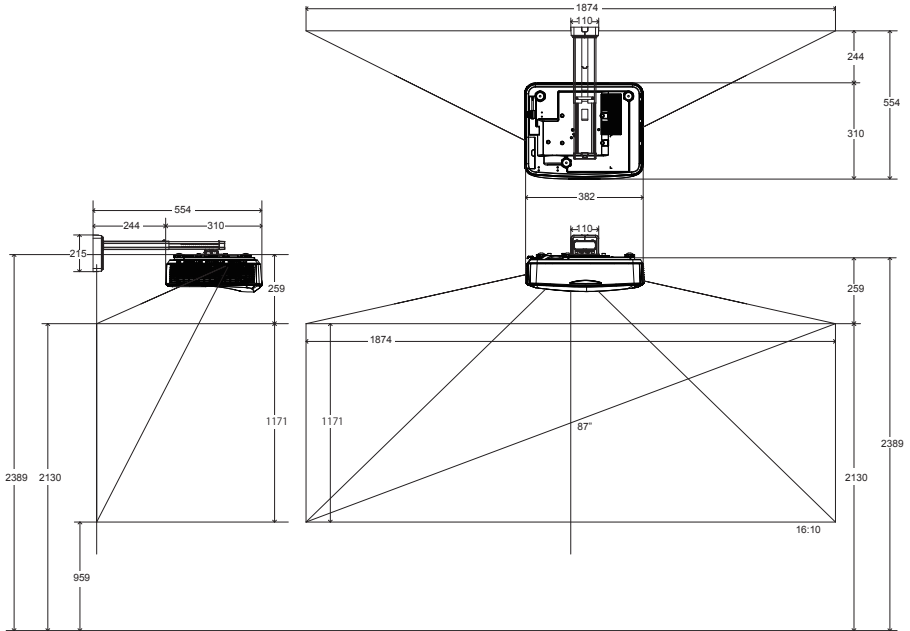


⚠ Warning:

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



Appendices



Regulation & Safety Notices

This appendix lists the general notices of your projector.

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

Notice: Canadian users

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

Remarque à l'intention des utilisateurs canadiens

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

Declaration of Conformity for EU countries

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

Disposal instructions



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

Safety notice



WARNING

- This projector is a Class 2 laser device that conforms with IEC 60825-1:2007 and CFR 1040.10 and 1040.11.
- Class 2 laser product, Do Not Stare Into Beam.
- This projector has built-in Class 4 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 the risk of hazardous laser radiation exposure.
- Do not open or disassemble the projector as this may cause damage by the exposure of laser radiation.
- Do not stare into beam when the projector is on. The bright light may result in permanent eye damage.
- Without following the control, adjustment or operation procedure may cause damage by the exposure of laser radiation.
- Adequate instructions for assembly, operation, and maintenance, including clear warnings concerning precautions to avoid possible exposure to laser and collateral radiation in excess of the accessible emission limits in Class 2.

Troubleshooting

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

Image Problems

? No image appears on-screen

- ▶ Ensure all the cables and power connections are correctly and securely connected as described in the “Installation” section.
- ▶ Ensure the pins of connectors are not crooked or broken.
- ▶ Ensure that the “Blank” feature is not turned on.

? Partial, scrolling or incorrectly displayed image

- ▶ Press “Auto” on the remote control.
 - If you are using a PC:
 - For Windows 95, 98, 2000, XP, Windows 7:
 1. Open the “My Computer” icon, 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 1080p.
 4. Click on the “Advanced Properties”.
 - For Windows Vista:
 1. From the “My Computer” icon, open the “Control Panel” folder, and double click the “Appearance and Personalization”
 2. Select “Personalization”.
 3. Click “Adjust screen resolution” to display “Display Settings”. Click on the “Advanced Settings”.

Appendices

- If the projector is still not projecting the whole image, you will also need to change the monitor display you are using. Refer to the following steps.
 1. Select the “Change” under the “Monitor” tab.
 2. Click on “Show all devices”. Next, select “Standard monitor types” under the SP box; choose the resolution mode you need under the “Models” box.
 3. Verify that the resolution setting of the monitor display is lower than or equal to 1080p.
- If you are using a Notebook:
 - First, follow the steps above to adjust resolution of the computer.
 - Press the toggle output settings. example: [Fn]+[F4]

Notebook Brand	Function Keys
Acer	[Fn]+[F5]
Asus	[Fn]+[F8]
Dell	[Fn]+[F8]
Gateway	[Fn]+[F4]
IBM/Lenovo	[Fn]+[F7]
HP/Compaq	[Fn]+[F4]
NEC	[Fn]+[F3]
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

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 documentation for detailed information.

? Image is unstable or flickering

- ▶ Adjust the “Phase” to correct it. Refer to the “Screen” section for more information (VGA Input).
- ▶ Change the monitor color setting from your computer.

? **Image has vertical flickering bar**

- ▶ Use “Clock” to make an adjustment. Refer to the “Screen” section for more information.
- ▶ Check and reconfigure the display mode of your graphic card to make it compatible with the product.

? **Image is out of focus**

- ▶ Adjust the “Focus Ring” on the projector lens.
- ▶ Make sure the projection screen is within the required distance. Refer to Page 7.

? **The image is stretched when displaying 16:9 DVD title**

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

- ▶ If you play 4:3 format DVD title, please change the format as 4:3 in projector OSD.
- ▶ If the image is still stretched, you will also need to setup the display format as 16:9 (wide) aspect ratio type on your DVD player.

? **Image is too small or too large**

- ▶ Move the projector closer to or further from the screen.
- ▶ Press “Menu” on the remote control or on the control panel. Go to “Screen” --> “Aspect Ratio” and try the different settings.

? **Image has slanted sides:**

- ▶ If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.
- ▶ Use “Screen” --> “V Keystone” from the OSD to make an adjustment.

? **Image is reversed**

- ▶ Select “Screen” --> “Ceiling Mount” from the OSD and adjust the projection direction.

Appendices

Projector Problems

? The projector stops responding to all controls

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

Remote Control Problems

? If the remote control does not work

- ▶ Check the operating angle of the remote control is within $\pm 30^\circ$ both horizontally and vertically of one of the IR receivers on the projector.
- ▶ Make sure there are not any obstructions between the remote control and the projector. Move to within 7 m ($\pm 0^\circ$) of the projector.
- ▶ Make sure the batteries are inserted correctly.
- ▶ Replace batteries if they are exhausted.

Sound Problems

? If no sound from the projector

- ▶ If you are playing an external source, make sure you have an audio cable securely connected between the source device and the projector's audio input.
- ▶ Please make sure the external speakers are not connected.
- ▶ Make sure the volume is not set to minimum.
- ▶ Make sure the "Volume --> Mute" function is set to "Off".

3D Problems

? Blurry double image

- ▶ Select "3D" --> "3D" from OSD and choose "Off" to avoid normal 2D image is blurry double image.

? Two images, Side-by-Side(Half) format

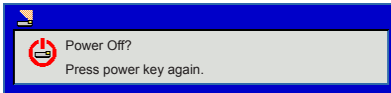
- ▶ Select "3D" --> "3D Format" from OSD and choose "Side-by-Side(Half)" for input signal is HDMI 1.4a 3D. 3D Format is only supported on 3D Timing on page 33.

? Image does not display in 3D

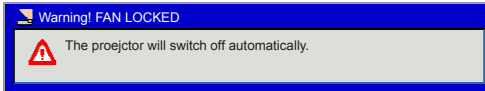
- ▶ Check if the battery of 3D glasses is drained.
- ▶ Check if the 3D glasses is turned on.
- ▶ Select “3D” --> “3D Format” from OSD and choose “Side-by-Side(Half)” for input signal is HDMI 1.4a 3D. 3D Format is only supported on 3D Timing on page 33.

On Screen Messages

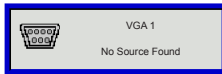
- Power off confirm



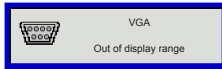
- Fan lock error



- No source found



- Out of display range



- Over temperature

