PowerLite® Pro G5150NL/G5350NL/G5200WNL Multimedia Projector

User's Guide

Important Safety Information

WARNING: Never look into the projector lens when the lamp is turned on; the bright light can damage your eyes. Never let children look into the lens when it is on. Never open any cover on the projector, except the lamp and filter covers. Dangerous electrical voltages inside the projector can severely injure you. Except as specifically explained in this *User's Guide*, do not attempt to service this product yourself. Refer all servicing to qualified service personnel.

WARNING: The projector and its accessories come packaged in plastic bags. Keep plastic bags away from small children to avoid any risk of suffocation.

Caution: When you replace the lamp, never touch the new lamp with your bare hands; the invisible residue left by the oil on your hands may shorten the lamp life. Use a cloth or glove to handle the new lamp.

Copyright Notice

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Seiko Epson Corporation. The information contained herein is designed only for use with this Epson product. Epson is not responsible for any use of this information as applied to other products.

Neither Seiko Epson Corporation nor its affiliates shall be liable to the purchaser of this product or third parties for damages, losses, costs, or expenses incurred by purchaser or third parties as a result of: accident, misuse, or abuse of this product or unauthorized modifications, repairs, or alterations to this product, or (excluding the U.S.) failure to strictly comply with Seiko Epson Corporation's operating and maintenance instructions.

Seiko Epson Corporation shall not be liable for any damages or problems arising from the use of any options or any consumable products other than those designated as Original Epson Products or Epson Approved Products by Seiko Epson Corporation.

Trademarks

Epson, Quick Corner, EasyMP, and Instant Off are registered trademarks, and Epson Exceed Your Vision is a logomark of Seiko Epson Corporation.

PowerLite and PrivateLine are registered trademarks; SizeWise is a trademark; and Extra Care is a service mark of Epson America, Inc.

Pixelworks, DNX, and the DNX logo are trademarks of Pixelworks, Inc.

HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC.

General Notice: Other product names used herein are for identification purposes only and may be trademarks of their respective owners. Epson disclaims any and all rights in those marks.

This information is subject to change without notice.

© 2008 Epson America, Inc. 4/08

Contents

Welcome 9
Using Your Documentation 10
Getting More Information 11
Registration and Warranty 12
Optional Accessories 12

1 *Setting Up the Projector* 15
Unpacking the Projector 16
Additional Components 17
Positioning the Projector 17
Connecting to a Computer 19
Connecting to the Computer Port 20
Connecting to the USB Port 21
Connecting to the BNC Connectors 22
Connecting to Video Equipment 24
Connecting an HDMI Video Source 25
Connecting a Composite Video Source 26
Connecting an S-Video Source 27
Connecting a Component Video Source 28
Connecting an RGB Video Source 29
Connecting an External Monitor 31
Playing Sound Through the Projector 32
Connecting External Speakers 34
Connecting to a Digital Camera or Other USB Device 35
Removing the USB Cable 36
Inserting an SD Card 36
Connecting a Network Cable 37

Turning the Projector On and Off 37
Using the Direct Power On Function 39
Shutting Down the Projector 40

2 *Displaying and Adjusting the Image* 41
Displaying an Image 42
Troubleshooting Display Problems 42
You Can't Project an Image 42
The Projector and Notebook Don't Display the Same Image 43
Adjusting the Image 44
Adjusting the Position of the Image 45
Focusing and Zooming the Image 46
Adjusting the Image Shape 47
Selecting the Color Mode 49
Resizing Video Images 50

3 *Presenting With the Remote Control* 51
Using the Remote Control 52
Controlling the Picture and Sound 52
Switching Between Picture Sources 52
Turning Off the Picture and Sound 53
Stopping Action 53
Zooming Part of Your Image 54
Controlling the Volume 54
Highlighting Your Presentation 55
Using the Pointer Tool 55
Choosing a Different Pointer Shape 55
Operating Your Computer With the Remote Control 56
Operating Two or More Projectors With the Remote Control 57
Setting the Projector ID 57
Checking the Projector ID 58
Setting the Remote Control ID 58

4 *Preparing the Projector to Present Through a Network* 59
Configuring Basic Settings 60
Configuring a Wireless Connection 62
Using Ad Hoc Mode 62
Using Access Point Mode. 69
Making a WPS (Wi-Fi Protected Setup) Connection . . . 79
Using Wireless Security Options. 85
Enabling WEP Encryption. 85
Enabling WPA Security 87
Enabling EAP, LEAP, or PEAP Authentication 88
Enabling EAP-TLS Certificate Validation 89
Projecting Over a Network. 90
Connecting With Windows Vista. 90
Vista Network Projector Limitations 92

5 *Fine-Tuning the Projector*. 93
Using the Menu System 94
Restoring the Default Settings 95
Adjusting the Image 96
Six-Axis Color Adjustment. 97
Adjusting Signal Settings 98
Customizing Projector Features 100
Using the Projector Security Features 102
Enabling Password Protection 102
Creating Your Own Startup Screen 104
Disabling the Projector's Buttons. 106
Customizing Power and Operation. 107
Multi-screen Color Adjustment 109
Projector Menu and Options List. 110

6 *Managing Projectors* 113
Connecting to a Wired Network 114
PowerLite Pro G5150NL and G5350NL 114
PowerLite Pro G5200WNL 115
Using Projector E-mail Alerts 116
PowerLite Pro G5150NL and G5350NL 116
PowerLite Pro G5200WNL 118

7 *Maintaining the Projector* 121
Cleaning the Lens 122
Cleaning the Projector Case 122
Cleaning the Air Filter 122
Replacing the Air Filter 125
Replacing the Lamp 126
Resetting the Lamp Timer 129
Checking Lamp Usage 130
Replacing the Batteries 130
Transporting the Projector 131

8 *Solving Problems* 133
Using On-Screen Help 134
Checking Projector Status 135
What To Do When the Lights Flash 135
Solving Projector Operation Problems 137
Solving Problems With the Image or Sound 137
Solving Network Problems 143
Solving Problems With the Remote Control 145
Where To Get Help 146
Speak to a Support Representative 146

A *Projector Installation* 149
Installation Guidelines 149
Security Features 150
Installing the Cable Cover 151
Installing and Removing the Lens 152
Installing the Lens 152
Removing the Lens 153

B *Technical Specifications* 155

C *Notices* 165
Important Safety Instructions 165
FCC Compliance Statement 168

Index 171

Welcome

The PowerLite® Pro G5150NL/G5350NL/G5200WNL is an easy-to-use, lightweight projector. It offers up to 4000 lumens (G5150NL), 4200 lumens (G5200WNL), or 5000 lumens (G5350NL) of brightness, and provides a native XGA (G5150NL and G5350NL) or WXGA (G5200WNL) resolution. You can connect it to a wide range of computers and video sources. You can project from a USB or SD™ storage device, or over a wired network (G5150NL and G5350NL only). With the optional wireless LAN module, you can also project over an 802.11g, 802.11b, or 802.11a wireless network (G5150NL and G5350NL only).

Your projector offers these easy setup, control, and security features:

- Manual horizontal and vertical lens shift
- Centered lens design
- Instant Off ® feature for fast setup and shut down
- Quick Corner® for easy image shape/size adjustment
- 1.8x optical zoom lens for flexible placement and positioning (lens not included)
- 5 optional bayonet lenses
- One-touch filter replacement
- Side-loading easy lamp access
- Security features include password, user's logo, the ability to lock the projector buttons, a security cable attachment (cable not included), a slot for an optional Kensington® security lock, and a lens theft deterrent screw

Additional enhancements:

- Closed captioning for the hearing impaired
- HDMI for digital connectivity
- 1000:1 (G5150NL and G5350NL) or 800:1 (G5200WNL) contrast ratio
- With Windows Vista®, you can use the wireless Network Projector feature to quickly connect to the projector without installing any additional software (G5150NL and G5350NL only)
- Color match images from up to four projectors for a uniform, wide-screen view
- When you present with PowerPoint®, project only the slide images while viewing handout notes and controls on the computer screen
- Perform six-axis color adjustment for fine art and photography

Using Your Documentation

This book contains all the information you need to set up and use your projector. Please follow these guidelines as you read through it:

- Warnings must be followed carefully to avoid bodily injury.
- Cautions must be observed to avoid damage to your equipment.
- Notes contain important information about your projector.
- Tips contain additional projection hints.

note

The illustrations in this User's Guide *show the PowerLite Pro G5150NL and G5350NL. If you are using the G5200WNL, the appearance and interfaces are slightly different.*

Getting More Information

Need tips on giving presentations? Quick steps for setting up your projector? Here's where you can look for help:

- *Quick Reference* sheet
  Provides information for connecting the projector to your equipment, displaying and adjusting the image, using the remote control, and solving display problems.
- Projector kit
  Includes this *User's Guide*, the *EasyMP® Operation Guide*, the *EMP Monitor Operation Guide*, your *Quick Reference* sheet, warranty brochures, and Epson PrivateLine® Support card. Keep the kit with your projector at all times.
- Built-in help system
  Provides assistance for common problems. Available from the Help button on the projector or the remote control. See page 134 for details.
- epson.com/support
  Download FAQs and e-mail your questions to Epson support.
- If you still need help after checking this *User's Guide* and the sources listed in this section, you can use the Epson PrivateLine Support service to get help fast. Call (800) 637-7661 and enter the PIN on the PrivateLine card. Or take advantage of Epson's automated support services 24 hours a day. See page 146 for more information.
- presentersonline.com
  Includes a library of articles covering presentation tips, tricks, and technology. The site provides templates, clip art, and sound clips, as well as Presenters Services to use on the road. Even more resources and services are available if you register to join the Presenters Club—and it's free.

Registration and Warranty

Your projector comes with a basic warranty that lets you project with confidence. For details, see the warranty brochure included with your projector.

In addition, for customers who register their projector, Epson offers free Extra Care℠ Road Service. In the unlikely event of an equipment failure, you won't have to wait for your unit to be repaired. Instead, Epson will ship you a replacement unit anywhere in the United States or Canada, usually via overnight delivery. See the brochure included with your projector for details.

To register, simply fill out the registration card and mail it to Epson. Or you can register online at epson.com/webreg. Registering also lets you receive special updates on new accessories, products, and service.

Optional Accessories

To enhance your use of the projector, Epson offers the following optional accessories:

Product	**Part number**
Replacement lamp for PowerLite Pro G5150NL	V13H010L47
Replacement lamp for PowerLite Pro G5350NL and G5200WNL	V13H010L46
Replacement air filter	V13H134A17
Standard Zoom Lens <1.64 - 2.5> Middle Throw Zoom Lens 1 <1.83 - 2.45> Middle Throw Zoom Lens 2 <1.83 - 2.53> Long Throw Zoom Lens <1.84 - 2.32> Rear Projection Wide Lens <2.03>	V12H004S03 V12H004M04 V12H004M05 V12H004L06 V12H004R03
Wireless 802.11 g/b/a Module (PowerLite Pro G5150NL and G5350NL only)	V12H306P11
Wireless IR Mouse Receiver for Remote Control	V12H007T16
Hardware Remote Control Cable Set	V12H005C28
Replacement remote control	1485872

Product	Part number
Advanced projector ceiling mount with precision gear High security projector ceiling mount Adjustable suspended ceiling channel kit False ceiling plate kit Structural round ceiling plate Adjustable extension column (pipe) 6″–9″	ELPMBPRG ELPMBATA ELPMBP01 ELPMBP02 ELPMBP03 ELPMBC01
Kensington security lock	ELPSL01
50-inch portable screen (4:3 aspect ratio) 60-inch portable pop-up screen (4:3 aspect ratio) 80-inch portable pop-up screen (4:3 aspect ratio) DUET Portable Projector Screen (4:3/16:9 combination)	ELPSC06 ELPSC07 ELPSC08 ELPSC80
Component to VGA video cable S-video cable	ELPKC19 ELPSV01
Distribution amplifier	ELPDA01
Image presentation camera (ELPDC05)	V12H162020

You can purchase screens or other accessories from an Epson authorized reseller. To find the nearest reseller, call 800-GO-EPSON (800-463-7766). Or you can purchase online at www.epsonstore.com (U.S. sales) or www.epson.ca (Canadian sales).

1 Setting Up the Projector

This chapter tells you how to unpack the projector and connect it to a notebook or desktop computer, to video equipment, such as a VCR, DVD player, or video camera, and/or to your local area network.

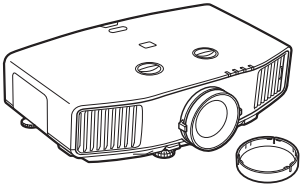
You can also connect the projector to a USB storage device or digital camera, or use it with an SD card (G5150NL and G5350NL only).

Follow the instructions in this chapter on:

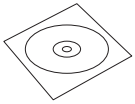
- Unpacking the projector
- Positioning the projector
- Connecting to a computer
- Connecting to video equipment
- Connecting an external monitor
- Playing sound through the projector
- Connecting to a digital camera or other USB device
- Inserting an SD card
- Connecting a network cable
- Turning the Projector On and Off

Unpacking the Projector

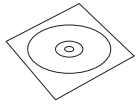
After unpacking the projector, make sure you have all these parts:



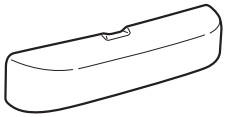
Projector and lens cap



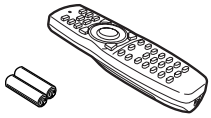
PDF manuals and registration CD-ROM



Projector software CD-ROM

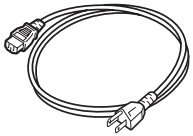


Cable cover

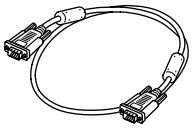


Remote control and 2 AA batteries

Password Protected sticker



Power cord

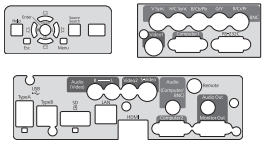


VGA computer cable

Lens theft deterrent screw

note

If you mount the projector on the ceiling, the interface and button names on the projector will appear upside down. Attach the interface label stickers so that you can more easily read the names.



Interface label stickers

Save all packaging in case you need to ship the projector. Always use the original packaging (or the equivalent) when you need to send the projector to another location. If you are moving the projector by hand, use the projector handle. See page 131 for transportation instructions.

Additional Components

Depending on how you plan to use the projector, you may need additional components:

- To receive an HDMI signal from your video device, you'll need an HDMI cable. One may be provided with your video equipment.
- To receive a component video signal from a VCR or other video device, you'll need a component video cable. One may be provided with your video equipment.
- To receive an RGB or component video signal from a video device that has RGB or component (PrPbY or CrCbY) connectors, you'll need a BNC-type video cable. One may be included with your video equipment.
- To receive an S-video signal, you'll need an S-video cable. One may be included with your video equipment, or you can purchase one from Epson. See "Optional Accessories" on page 12.
- To receive a signal from your computer's USB port, you'll need a USB cable. You can purchase one from Epson. See "Optional Accessories" on page 12.

Positioning the Projector

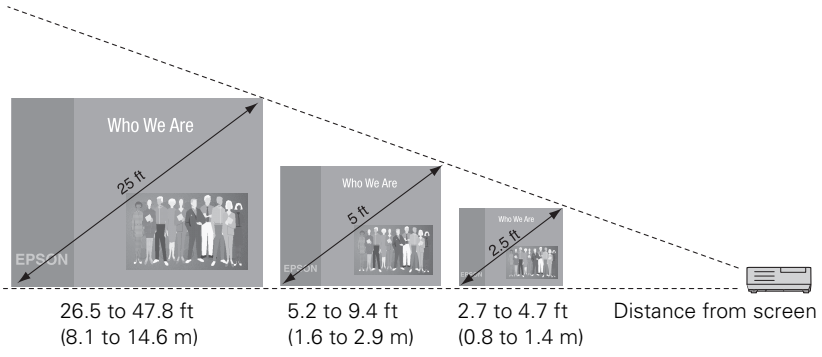
If the projector isn't already installed in the room you're using, you'll probably want to place it on a table in front of the screen. This lets you stand in the front of the room, face the audience, and remain close enough to the equipment to be able to control it. Try to leave as much space as possible between the projector and the screen to get a good-size image.

Use the illustrations on page 18 to help you determine placement. Image size increases with distance, but can vary depending on how you position the zoom ring and whether you've adjusted the image with other settings.

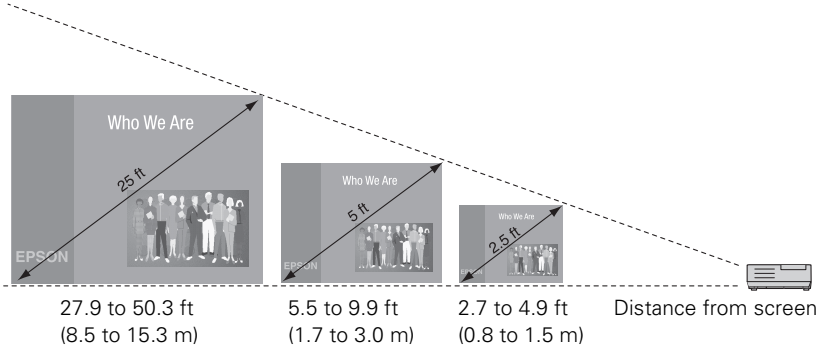
note

You can mount the projector on the ceiling, or place it behind a translucent screen for rear projection. See page 149 for details.

PowerLite Pro G5150NL/G5350NL (4:3 image)



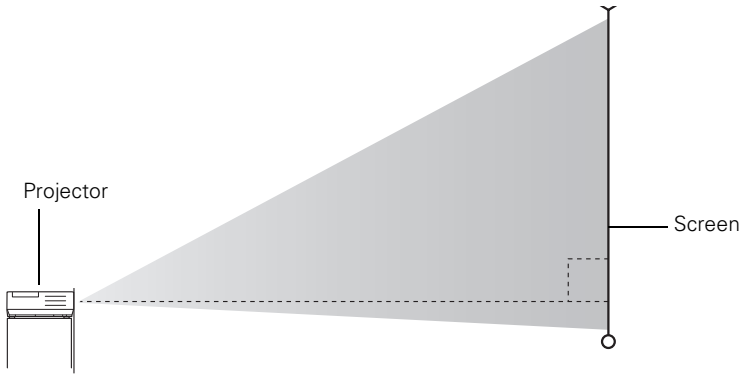
PowerLite Pro G5200WNL (16:10 image)



Also keep these considerations in mind:

- Place the projector on a sturdy, level surface.
- Make sure there is plenty of space for ventilation around and under the projector.
- Make sure the projector is within 10 feet (3 meters) of a grounded electrical outlet or extension cord.

Ideally, you should place the projector directly in front of the center of the screen, facing it toward the screen squarely. The base of the lens should be about level with the bottom of the screen.



If you place the projector below screen level, you can use the vertical lens shift dial to raise the lens (see page 46). You can also tilt the projector up by extending the front adjustable foot. Tilting the projector causes the image to become "keystone" shaped, but you can correct the distortion (see page 47).

For instructions on installing the projector in a permanent location, such as a theater or conference room, see page 149.

note

After positioning the projector, you may want to connect a Kensington MicroSaver® anti-theft device to the lock port on the projector. You can purchase this from Epson; see page 12.

Connecting to a Computer

You can connect the projector to any computer that has a standard video output (monitor) port, including desktop models, PC notebook computers, MacBook, PowerBook, and iBook computers, and hand-held devices.

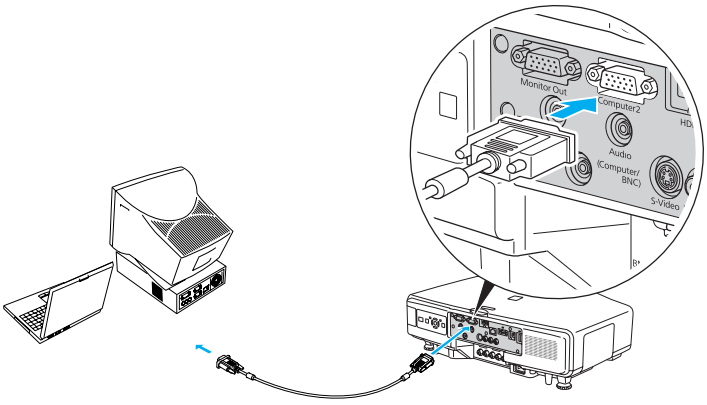
You can also connect a Windows® computer to the Type B USB port on the projector (see page 21). This allows you to connect an additional computer to the projector.

If you have the optional wireless mouse receiver, you can use your remote control as a wireless mouse when projecting from a computer (page 56).

Connecting to the Computer Port

You can connect to the projector using the VGA computer cable that came with it (the monitor port on your computer must be a mini D-sub 15-pin port).

1. If you're using the VGA computer cable, connect one end to the projector's Computer1 or Computer 2 port, and the other end to your computer's monitor port.



caution

Don't try to force a connector to fit a port with a different shape or number of pins. You may damage the port or connector.

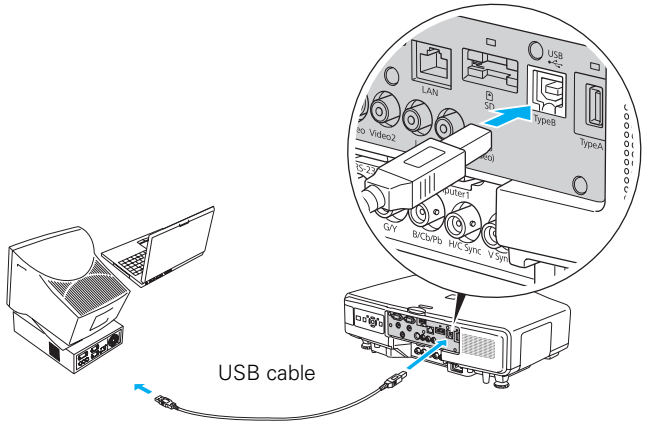
2. You may need to change the Input Signal setting in the projector's Signal menu to RGB (see page 99).
3. You can connect an optional stereo mini-jack audio cable to play sound through the projector (see page 32). With the optional wireless mouse receiver (see page 56), you can use the remote control as a mouse.
4. When you've finished making any connections, see page 37 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

Connecting to the USB Port

You can connect a Windows Vista, XP, or Windows 2000 (SP4) computer to the projector's Type B (square) USB port and project your computer's display (G5150NL and G5350NL only). A USB 2.0 connection provides better picture quality and response than USB 1.1.

The first time you connect a computer to the projector's USB port, software from the projector is installed on your computer.

1. Follow the instructions beginning on page 37 to turn on the projector.
2. Turn on your computer.
3. Connect the square end of your USB cable (not included) to the projector's Type B (square) USB port.



4. Connect the flat end of the cable to any available USB port on your notebook or desktop computer.

   Messages appear as the projector is recognized and the software is installed.

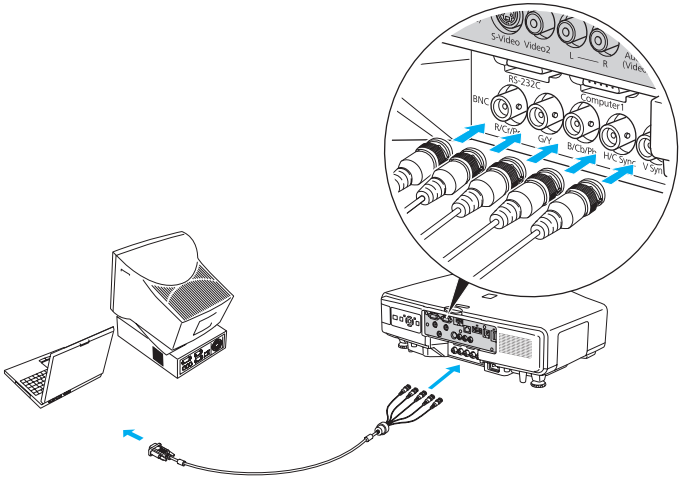
5. Follow the instructions on your computer screen to install the Epson USB Display software. If you see a "Digital Signature Warning," select Continue. You will need to install the software only the first time you connect.

After the software has been installed, you see your computer's desktop displayed by the projector. You can switch the projector to other image sources using the Source buttons on the remote control, and then switch back to your desktop display by pressing EasyMP.

6. See Chapter 2 for instructions on displaying and adjusting the image.
7. When you're done projecting from your computer, disconnect the USB cable.

Connecting to the BNC Connectors

1. Obtain a commercially available standard BNC to VGA video cable.
2. Plug the BNC connectors into the projector's B/Cb/Pb, G/Y, and R/Cr/Pr connectors as shown below. Depending on your computer's video card, you may have to connect to the projector's V Sync and H/C Sync connectors too. (See your computer documentation for more information.)



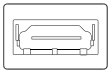
3. Plug the VGA connector on the other end of the cable into your computer's monitor port.

4. You may need to change the Input Signal setting in the projector's Signal menu to RGB (see page 99).
5. You can connect an optional stereo mini-jack audio cable to play sound through the projector (see page 32). With the optional wireless mouse receiver (see page 56), you can use the remote control as a mouse.
6. When you've finished making any connections, see page 37 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

Connecting to Video Equipment

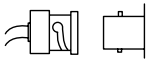
You can connect several video sources to the projector at the same time. Before starting, look at your video equipment to determine its available video output connections:

- If your video player has an HDMI connector, see "Connecting an HDMI Video Source" on page 25.



HDMI connector

- If your video player has a component video port (three connectors labeled either Y/Cb/Cr or Y/Pb/Pr), see "Connecting a Component Video Source" on page 28.
- If your video player has a yellow RCA video output connector, or if you're using a composite cable with a BNC connector, see "Connecting a Composite Video Source" on page 26.



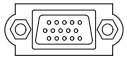
BNC connector (component or composite video)

RCA connector (composite video)

- If your video player has an S-video connector, see "Connecting an S-Video Source" on page 27.

S-video connector

- If your video player has an RGB video port (either a single connector for a VGA monitor cable or three connectors labeled R/G/B), see "Connecting an RGB Video Source" on page 29.



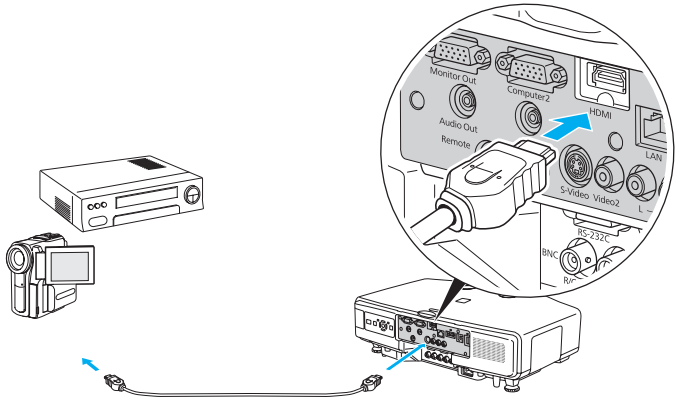
VGA connector (RGB video)

After connecting video cables, you may also want to connect an audio cable to play sound through the projector; see page 32. If you connect using an HDMI cable, the video and sound are both transferred and you won't need to connect any additional cables for audio.

Connecting an HDMI Video Source

For best image quality, connect your video equipment to the HDMI (High-Definition Multimedia Interface) port, if possible.

1. Locate an HDMI cable.
2. Connect the cable to the HDMI connector on your player and the HDMI connector on the projector.

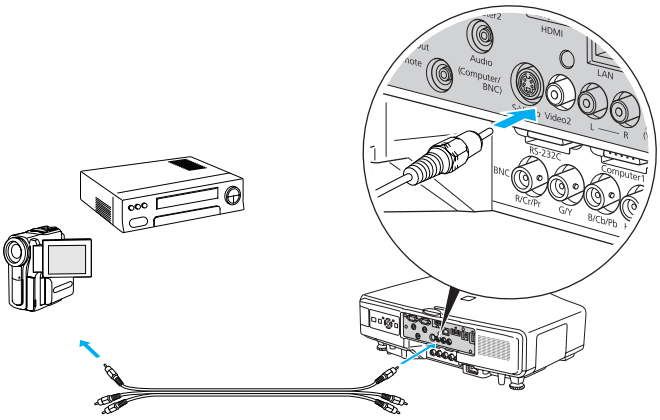


3. See page 37 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

Connecting a Composite Video Source

note
If the video cable was not provided with your video device, you can purchase one from an electronics dealer.

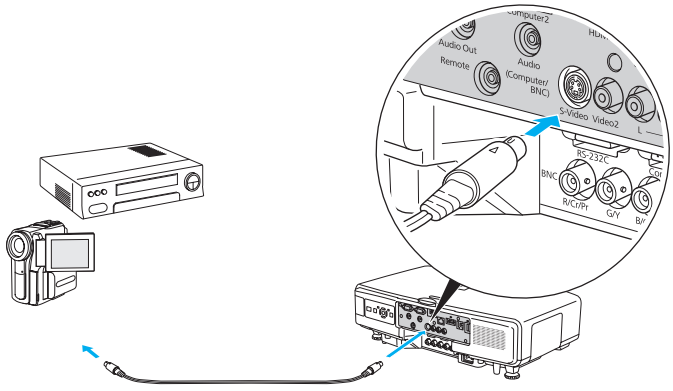
1. If your video cable has an RCA connector, connect it to the yellow video output connector on your player and the yellow Video2 connector on the projector (as shown below). Or if your cable has a bayonet connector (BNC), connect it to the Video1 connector on the projector.



2. If you want to play sound through the projector, see page 32 for instructions on connecting audio cables.
3. If you don't need to make any other connections, see page 37 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

Connecting an S-Video Source

1. Connect the S-video cable to the S-video connector on your player and the S-Video connector on the projector.



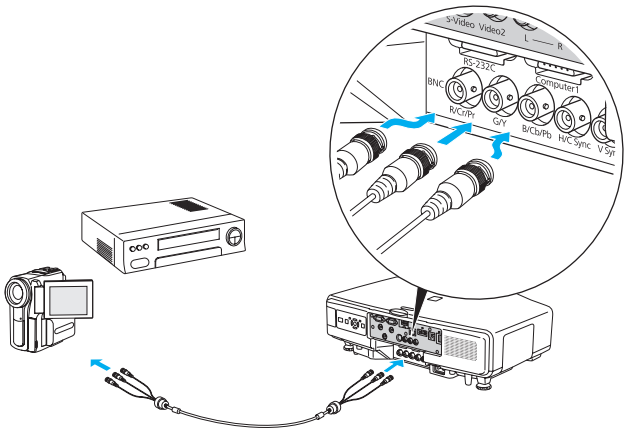
2. If you want to play sound through the projector, see page 32 for instructions on connecting audio cables.
3. If you don't need to make any other connections, see page 37 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

note

If the S-video cable was not provided with your video device, you can purchase one from Epson; see page 12.

Connecting a Component Video Source

1. Look at the connectors at one end of your component video cable. If they are bayonet (BNC) connectors, go on to step 2. If they are RCA connectors, you'll need to attach commercially available BNC adapters to plug the cable into your projector, then continue with step 2.
2. Connect the cable to your player and the BNC connectors on the projector. Match the Y/Cb/Cr (or Y/Pb/Pr) connectors on your player to the corresponding connectors on the projector.



3. You may need to change the Input Signal setting in the projector's Signal menu to Component (see page 99).
4. If you want to play sound through the projector, see page 32 for instructions on connecting audio cables.
5. If you don't need to make any other connections, see page 37 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

note

If the component video cable was not provided with your video device, you can purchase one from an electronics dealer.

note

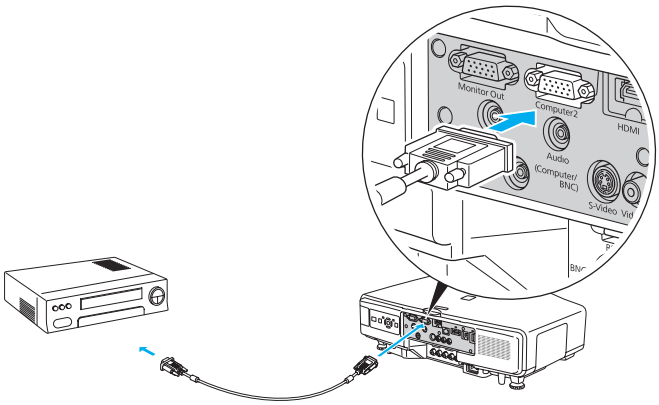
Be sure your video player is not an RGB video source. If you select the wrong source, image quality may suffer. Check your video player's documentation.

Also, make sure the Input Signal setting in the Signal menu is set to Auto *or* Component Video *(see page 99).*

Connecting an RGB Video Source

Connecting Using a VGA Computer Cable

1. Locate the VGA computer cable provided with the projector.
2. Connect the cable to the video port on your player and the Computer1 or Computer2 port on the projector.



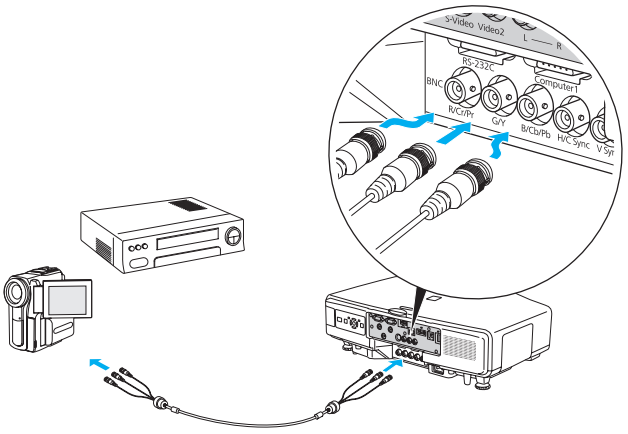
3. You may need to change the Input Signal setting in the projector's Signal menu to RGB (see page 99).
4. If you want to play sound through the projector, see page 32 for instructions on connecting audio cables.
5. If you don't need to make any other connections, see page 37 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

note

Be sure your video player is not a component video source. If you select the wrong source, image quality may suffer. Check your video player's documentation.

Connecting Using a BNC Cable

1. Locate a BNC video cable (one may be included with your video equipment).
2. Connect the cable between your player and the corresponding R/G/B connectors on the projector.

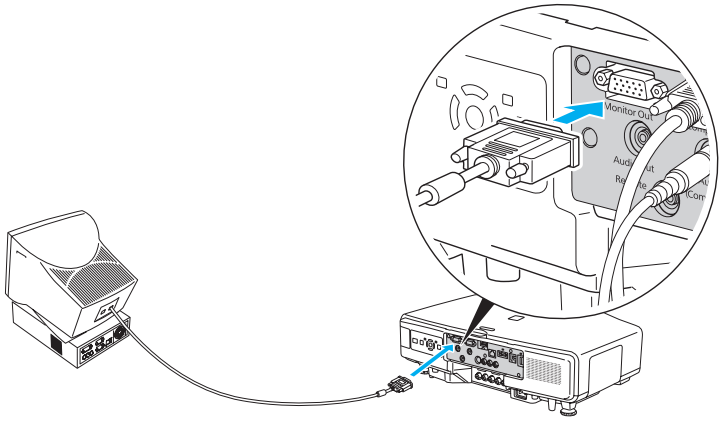


3. You may need to change the Input Signal setting in the projector's Signal menu to RGB (see page 99).
4. If you want to play sound through the projector, see page 32 for instructions on connecting audio cables.
5. If you don't need to make any other connections, see page 37 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

Connecting an External Monitor

If you want to monitor your computer presentation close-up (on a monitor placed beside the projector) as well as on the screen, you can connect an external monitor. You can use it to check on your presentation even if you've pressed the A/V Mute button or switched to a different picture source.

First make sure your computer's VGA cable is connected to the projector's Computer1, Computer2, or BNC ports (see page 20). Then connect your monitor to the projector's Monitor Out port, as shown:



note

The monitor cannot display component video, nor signals connected via the Video1, Video2, S-Video, or HDMI ports.

Some LCD monitors may not be able to display the image correctly. If you have trouble displaying the image, connect a multiscan monitor. If you're projecting computer images, make sure the computer's refresh rate is set to 65 Hz or greater.

The projector must be turned on in order for the Monitor Out port to send a signal to the monitor.

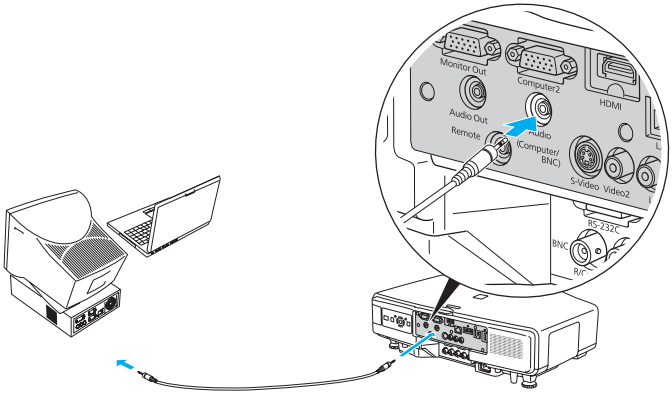
Playing Sound Through the Projector

You can play sound through the projector's speaker system or attach an external speaker system.

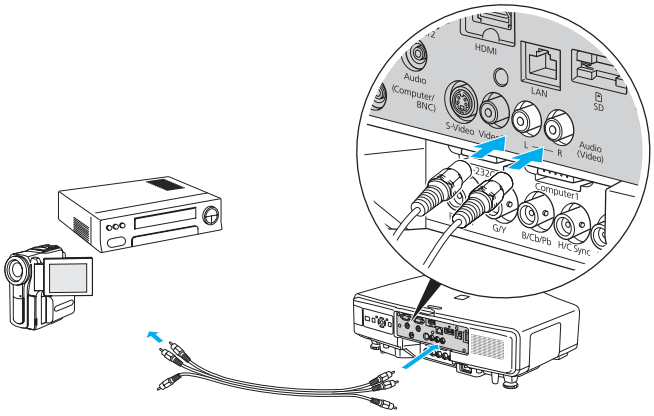
To play sound through the projector, follow these steps:

1. Locate the appropriate cable and connect it to the Audio jack on the projector.

   - If you have equipment connected to the Computer1, Computer2, or BNC ports, use a stereo mini-jack cable. Connect the cable to the Audio port beneath the Computer2 port.



- If you have equipment connected to the Video1, Video2, or S-Video ports, connect an RCA audio cable to the L and R Audio (Video) ports.



2. Connect the other end of the cable to the audio output connector(s) on your computer or video equipment.

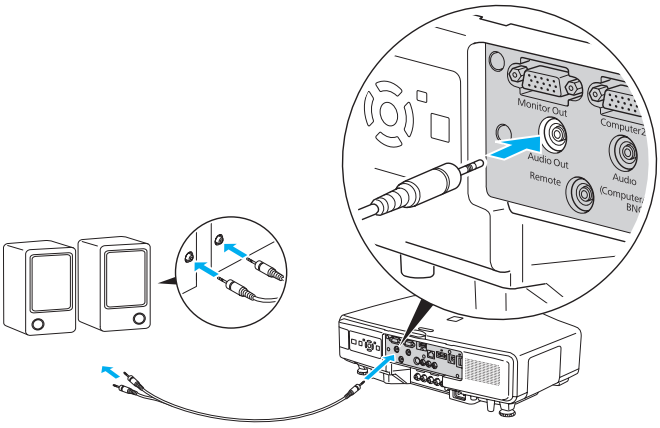
Connecting External Speakers

You can output sound to external speakers with built-in amplifiers. When you play sound through external speakers, the projector's built-in speaker system is disabled.

1. Locate the appropriate cable to connect your speakers.

   Depending on your speakers, you may be able to use a commercially available audio cable with a stereo mini-jack connector on one end and pin jacks on the other end. For some speakers, you may have to purchase a special cable or use an adapter.

2. Connect the stereo mini-jack end of the audio cable to the Audio Out port on the projector.



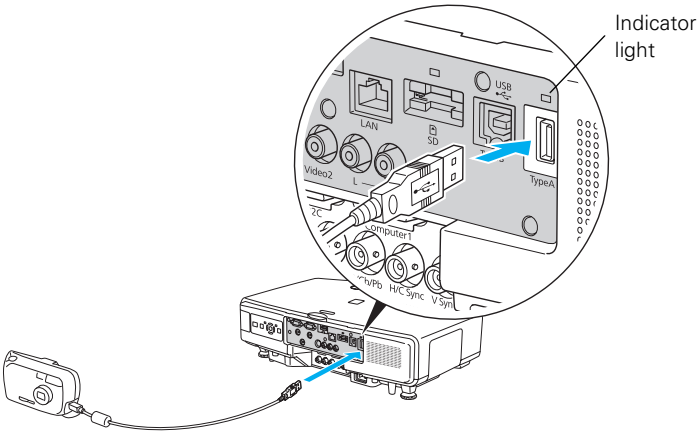
3. Connect the other end of the cable to your speakers.

You can use the remote control to adjust the volume. The projector's internal speaker system is disabled while sound is output to external speakers.

Connecting to a Digital Camera or Other USB Device

You can connect your digital camera, USB flash memory drive, USB hard drive, or multimedia storage viewer, such as the Epson P-5000 or Apple® iPod® to the PowerLite Pro G5150NL or G5350NL. Use the USB cable specified for your device. Then you can use your device's slideshow function or the projector's EasyMP (PC Free) feature. See the *EasyMP Operation Guide* for more information.

1. Follow the instructions beginning on page 37 to turn on the projector.
2. Connect the USB drive or the flat end of the USB cable to the USB port on the projector, as shown.



3. Connect the other end of the cable to your camera or other device, if necessary.

The indicator light turns orange when a USB device is connected and green when PC Free is running.

note

Use a cable less than 10 feet (3 meters) long and connect the camera or other device directly to the projector. Your projector may not function correctly if you use a longer cable or connect your camera to a USB hub.

If you connect a USB hard drive, make sure you use the AC adapter to power the hard drive.

The slideshow function on some devices may not work with the USB connection.

Removing the USB Cable

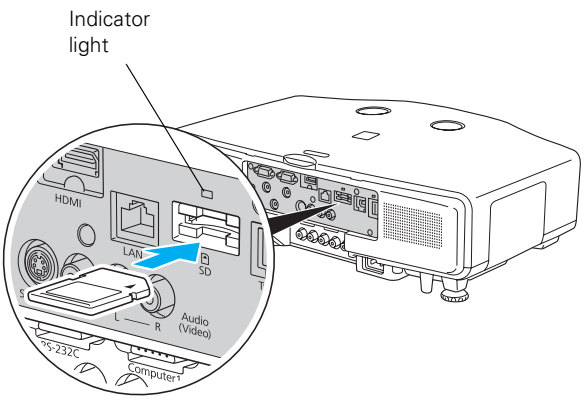
If you're using PC Free mode to project your images, exit PC Free mode before you remove the USB device or cable from the projector.

1. Position the cursor over the Exit button in the upper right corner of the PC Free screen.
2. Press the Enter button on the remote control to close PC Free mode.
3. Turn off your digital camera or other device.
4. Disconnect the USB cable.

Inserting an SD Card

You can use an SD or SDHC (SD High Capacity) card to store images, movies, and Scenario files. This lets you project your files without connecting to a laptop or PC (G5150NL and G5350NL only, see the *EasyMP Operation Guide*). To place your files on the card, copy them from your computer to the card using a card reader.

1. Follow the instructions beginning on page 37 to turn on the projector.
2. Insert the SD card face-up into the slot as shown:



The indicator light above the slot comes on or flashes when the SD card is in use. Do not remove the card when the light is flashing.

To remove the card, gently press the inserted SD card. The card springs out, and you can then remove the card by pulling it straight out.

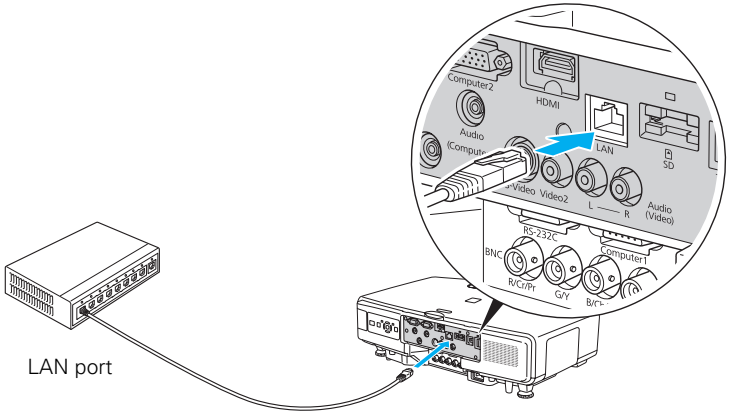
caution

Do not remove the card when the indicator light is flashing, or you may damage the card or projector.

Connecting a Network Cable

To connect the projector to your local area network (LAN), use a commercially available 100BaseTX or 10BaseT network cable. To ensure proper data transmission, use a Category 5 shielded cable or better.

Connect the cable to the projector and your network port as shown:

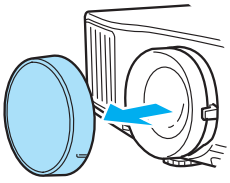


Turning the Projector On and Off

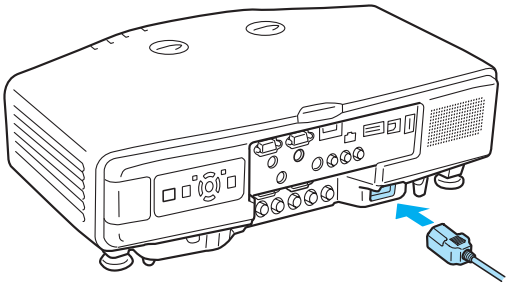
Turn on any connected computer or video equipment before starting the projector so it can automatically detect and display the image source. If you turn on the projector first, or have multiple pieces of connected equipment, you may have to select the image source manually (see page 42).

Follow these steps to turn on the projector:

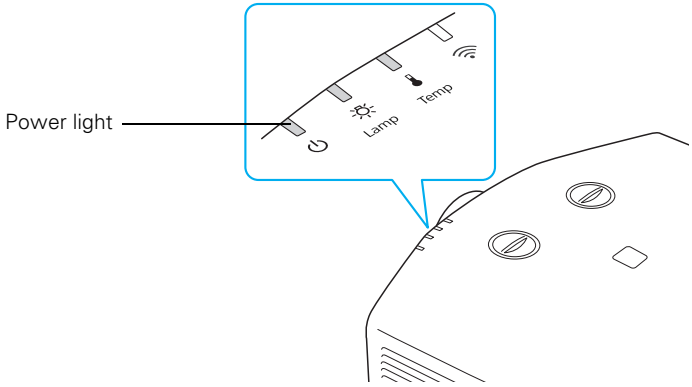
1. Remove the lens cover.



2. Plug one end of the power cord into the projector, and the other end into an electrical outlet.



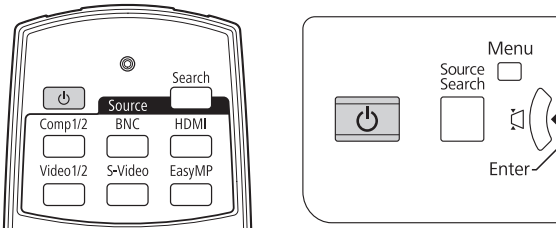
The ⏻ power light turns orange.



note

You can set the projector to automatically turn off the lamp and enter "sleep mode" when it has not received any signals for 10 minutes (see page 107 to enable, disable, or adjust this setting). This conserves electricity, cools the projector, and extends the life of the lamp. If you want to start projecting again, press the ⏻ power button. If you are done using the projector, unplug the power cord.

3. Press the ⏻ power button on the remote control or on the back of the projector.



The projector beeps once and the ⏻ power light flashes green as the projector warms up, then an image begins to appear. When the ⏻ power light stops flashing and remains green, the projector is ready for use.

4. If you are prompted to enter a password, see page 103.

warning

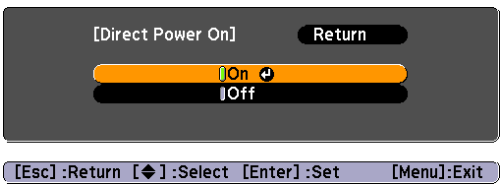
Never look into the lens when the lamp is on. This can damage your eyes, and is especially dangerous for children.

Using the Direct Power On Function

The Direct Power On function enables faster setup. The projector starts up automatically when you plug it in or turn it on with a wall switch. You don't have to press the ⏻ power button.

Follow these steps to enable Direct Power On:

1. Press the Menu button on the remote control or projector, then select the Extended menu and press Enter.
2. Choose Operation and press Enter.
3. Choose Direct Power On and press Enter.



4. Highlight On and press Enter.
5. Press Menu to exit. The setting will take effect the next time you plug in the projector.

note

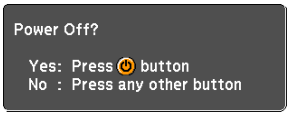
If a power outage occurs when Direct Power On is enabled and the projector is plugged in, the projector will restart when the power is restored.

Shutting Down the Projector

This projector incorporates Instant Off technology. To turn it off, you can press its ⏻ power button as described below, unplug it, or turn off a power switch that supplies power to the projector. You don't have to wait for the projector to cool down first.

1. To turn off the projector, press the ⏻ power button on the remote control or projector.

   You see a confirmation message. (If you don't want to turn it off, press any other button.)



2. Press the ⏻ power button again. The projection lamp turns off and the projector beeps twice, and you can unplug the power cord.

   If you want to turn the projector on again, make sure the orange Power light is not flashing, then press the ⏻ power button.

note

Lamp life results depend upon the Brightness Control setting you've selected, environmental conditions, and usage.

Turn off this product when not in use to prolong the life of the projector.

2 *Displaying and Adjusting the Image*

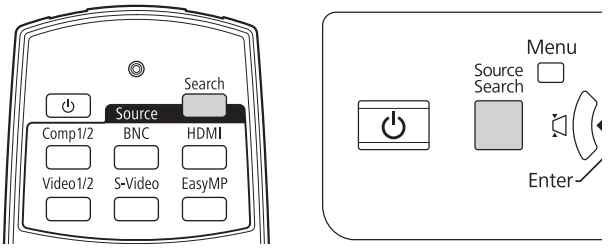
Follow the guidelines in this chapter for:

- Displaying an image
- Troubleshooting display problems
- Adjusting the image

Displaying an Image

You may need to select the image source if you have multiple video sources connected to the projector (such as a computer or DVD player). Selecting the image source lets you switch between images input from different pieces of connected equipment.

If you don't see the image you want, press the Search button or one of the Source buttons on the remote control, or the Source Search button on the projector until you see the image you want to project.



You can also use the Source buttons on the remote control to switch between devices connected to the ports identified on each button.

Or you can select EasyMP to project wirelessly or from a USB drive or SD card (G5150NL and G5350NL only).

Troubleshooting Display Problems

Follow these guidelines if you're having trouble displaying an image.

You Can't Project an Image

If you don't see the image you are trying to project, try the following:

- Make sure the cables are connected correctly, as described beginning on page 15.
- Make sure the ⏻ power light is green and not flashing and the lens cover is removed.

- If you've connected more than one computer and/or video source, you may need to press the Source Search button on the projector's control panel, or the Search button or one of the Source buttons on the remote control to select the correct source. (Allow a few seconds for the projector to sync up after pressing the button.)
- If you're using a PC notebook, press the function key on your keyboard that lets you display on an external monitor. It may be labeled CRT/LCD or have an icon such as . You may have to hold down the Fn key while pressing it. Allow a few seconds for the projector to sync up after changing the setting.

The Projector and Notebook Don't Display the Same Image

If you're projecting from a notebook, and you can't see your image on the projection screen and on your computer at the same time, follow these guidelines.

If you're using a PC notebook:

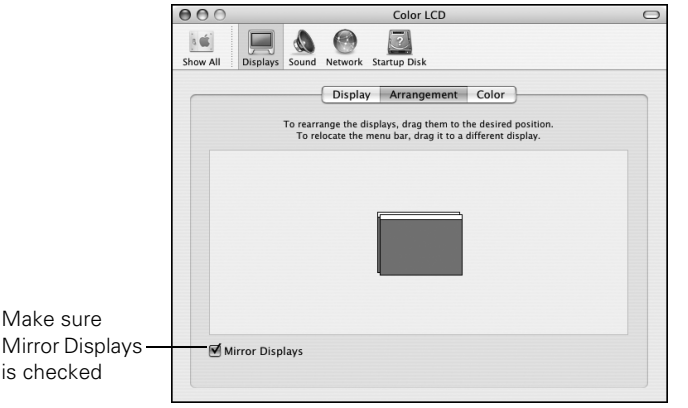
- On most systems, there's a function key that lets you toggle between the LCD screen and the projector, or display on both at the same time. It may be labeled CRT/LCD or have an icon such as . You may have to hold down the Fn key while pressing it. Allow a few seconds for the projector to sync up after changing the setting.
- If the function key doesn't permit you to display simultaneously on both screens, you should check your monitor settings to make sure both the LCD screen and the external monitor port are enabled.

  From the Control Panel, open the Display utility. In the Display Properties dialog box, click the Settings tab, then click Advanced. The method for adjusting the settings varies by brand; you may need to click a Monitor tab, then make sure the external Monitor port is set as your primary display and/or enabled. See your computer's documentation or online help for details.

If you're using Mac OS X:

You may need to set up your system to display on the projector screen as well as the LCD screen. Follow these steps:

1. From the Apple® menu, select System Preferences, then select Displays.
2. Make sure the VGA Display or Color LCD dialog box is selected.
3. Click the Arrangement (or Arrange) tab.



4. Make sure the Mirror Displays checkbox is selected.

Adjusting the Image

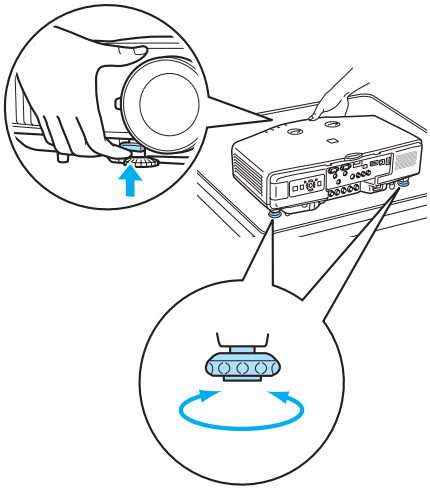
Once you see your image, you need to make certain adjustments:

- If the image is too high or too low, reposition it as described on page 45.
- To focus or zoom your image, see page 46.
- If the image isn't square, see page 47.
- To quickly adjust the color, brightness, or contrast, see page 49.
- To change the image aspect ratio, see page 50.
- If you need to fine-tune the image and/or sound, see Chapter 5.

Adjusting the Position of the Image

If the image is too low on the screen, you can use the front adjustable foot to raise it.

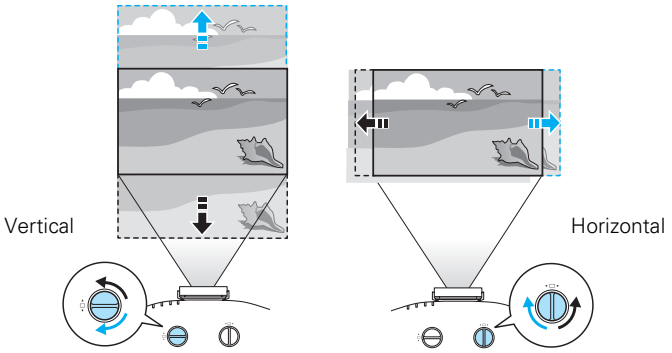
1. Stand behind the projector. Press the foot release lever up and lift the front of the projector.



2. Once the image is positioned where you want it, release the lever to lock the foot in position.
3. If necessary, you can fine-tune the height or level the image by turning any of the projector's adjustable feet.

Raising the projector causes the image shape to distort or "keystone," but you can correct the shape as described on page 47.

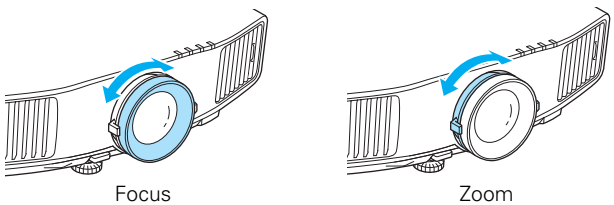
Additionally, you can use the vertical lens shift dial on the top of the projector to move your image up or down, or you can use the horizontal lens shift dial to move your image left or right.



Focusing and Zooming the Image

Turn the focus ring on the projector to sharpen the image.

Turn the zoom ring (using the knobs on the ring) to reduce or enlarge the image.



If the image still isn't large enough, you may need to move the projector farther away from the screen. You can also use the E-Zoom buttons on the remote control to zoom in on a portion of the image. See page 54 for instructions.

Adjusting the Image Shape

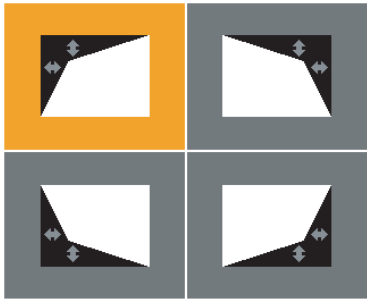
You can maintain a square or rectangular image by placing the projector directly in front of the screen and keeping it level. This also produces the best picture quality. If the projector is tilted up or placed at an angle, you'll need to correct the image shape by using one of the functions described below.

Using Quick Corner

Use Quick Corner to adjust the shape and size of the image when it's uneven on all sides. Follow these steps to select Quick Corner:

1. Press the Menu button on the remote control or the projector.
2. Select the Settings menu and press Enter.
3. From the Settings menu, select Keystone and press Enter.
4. Select Quick Corner and press Enter twice.

   You see this screen:



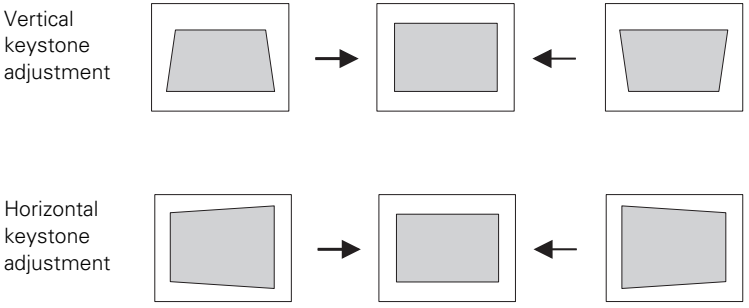
5. Use the pointer button on the remote control (or the arrow buttons on the projector) to select the corner you want to adjust, and press Enter.
6. Use the pointer button on the remote control (or the arrow buttons on the projector) to adjust the shape, then press Esc when you are finished.
7. Repeat steps 5 and 6 as needed to adjust the other corners.
8. When you're done, press Menu to exit.

Using Keystone Correction

You can manually adjust the shape of the image to compensate for vertical and horizontal keystone distortion. First make sure the Keystone setting in the projector's menu system is set to H-Keystone or V-Keystone:

1. Press the Menu button on the remote control or projector.
2. Select the Settings menu and press Enter.
3. From the Settings menu, select Keystone and press Enter.
4. Select H/V-Keystone and press Enter.
5. Select H-Keystone (for horizontal adjustment) or V-Keystone (for vertical adjustment) and use the ⊙ pointer button on the remote control to adjust the shape of the image.

note
Use can also use the projector's arrow buttons to perform keystone correction as long as the projector's Keystone setting is set to H/V-Keystone.

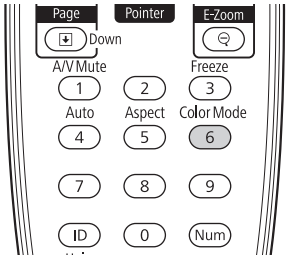


If the image becomes smaller, use the zoom ring to enlarge the image so it fits the screen. If the image contains faint lines or a gridlike pattern, decrease the sharpness setting (see page 97).

6. When you're done, press Menu to exit.

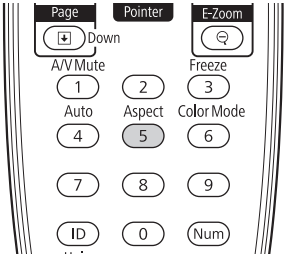
Selecting the Color Mode

The Color Mode adjusts the brightness, contrast, and color for various common viewing environments. Use this setting to quickly obtain a good picture.



Press the Color Mode button on the remote control, and then select from one of these options:

- Presentation: For making color presentations in a bright room.
- Text: For making black-and-white presentations in a bright room.
- Theatre: For watching movies in a darkened room; gives images a natural tone.
- Photo: For vivid, high-contrast still images in a bright room (only available when the source is set to Computer1, Computer2, or EasyMP).
- Sports: For vivid TV images projected in a bright room (component video, S-video, or composite video only).
- sRGB: Matches the color palette of standard sRGB computer displays.
- Blackboard: Projects accurate colors on a green chalkboard (adjusts the white point).
- Customized: For manual color adjustment (see page 97).
- Game: Increases brightness when playing video games or watching TV in a bright room. Emphasizes dark gradations.



Resizing Video Images

You can use the Aspect button on the remote control to change the aspect (width to height) ratio, depending on the input signal.

- Auto (HDMI images only): Automatically sets the aspect ratio according to the input signal. Choose this setting to project an HDMI image in the best aspect ratio.
- Normal (for images sent through the Computer1, Computer2, or BNC ports only): Displays images using the full projection area and maintains the aspect ratio of the image. Choose this setting to automatically resize the image and make the best use of the display area.
- 4:3 (G5150NL and G5350NL only): Displays images using the full projection area at an aspect ratio of 4:3.
- 16:9: Converts the aspect ratio of the image to 16:9. 4:3 ratio images are elongated horizontally to fit.
- Zoom (G5200WNL only): Displays images using the full width of the projection area and maintains the aspect ratio of the image. The image may be cut off on the top and bottom depending on its aspect ratio.
- Full (G5200WNL only): Displays images using the full width of the projection area, but does not retain the aspect ratio. 4:3 ratio images are elongated horizontally.
- Through: Displays images as is (aspect ratio and resolution are maintained). Black bands appear if the resolution is less than 1024 × 768 (G5150NL and G5350NL only), or less than 1280 × 800 (G5200WNL only); images are cut off if the resolution is over 1024 × 768 (G5150NL and G5350NL only) or 1280 × 800 (G5200WNL only).

Press the Aspect button repeatedly to cycle through the available options.

You can also change the aspect ratio using the projector's Signal menu. See page 98 for details.

3 Presenting With the Remote Control

The projector includes a number of tools to enhance your presentation. All of them can be accessed using the remote control, which lets you operate the projector from anywhere in the room—up to 49 feet (15 meters) away.

You can use the remote control to adjust the picture and sound (page 52), as a pointer to highlight your presentation (page 55), or to control two or more projectors at the same time (page 57). If you have the optional wireless mouse receiver, you can also use your remote control as a wireless mouse when projecting from a computer (page 56).

This chapter covers:

- Using the remote control
- Controlling the picture and sound
- Highlighting your presentation
- Operating your computer with the remote control
- Operating two or more projectors with the remote control

note
If a button is pressed longer than 30 seconds, the remote control stops operating to conserve battery power. When you release the button, normal operation resumes.

Using the Remote Control

Make sure batteries are installed as described on page 130. Follow these tips for using the remote control:

- Point the remote control at the front of the projector or at the screen.
- Stand within 49 feet (15 meters) of the projector.

note
Using the remote under bright fluorescent lamps or in direct sunlight may affect projector response.

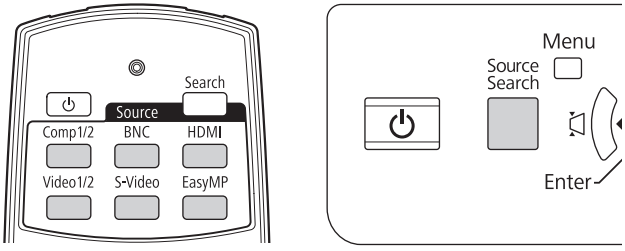
Controlling the Picture and Sound

You can use the remote control to preview and select your picture sources, temporarily turn off the picture and sound, freeze the action, zoom in on the picture, and adjust the volume.

Switching Between Picture Sources

If your projector is connected to more than one computer and/or video source, you can switch between the different sources:

- The easiest way to select your source is to press the Search button on the remote control (or the Source Search button on the projector) repeatedly until you see the image you want on the screen.

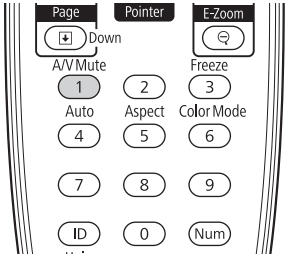


- On the remote control, you can press one of the Source buttons to select the connected device you need.

After you select a source, the screen goes dark for a moment before the image appears.

Turning Off the Picture and Sound

You can temporarily turn off the image and sound by pressing the A/V Mute button on the remote control. This turns the image black and stops the sound. To turn the image and sound back on, press the button again.

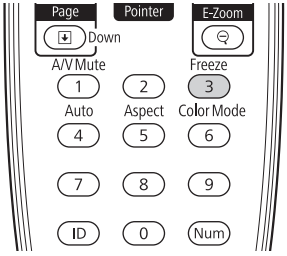


You can have the screen turn blue (using the Display setting as described on page 107) or display an image such as a company logo when you press the A/V Mute button. (See page 104 for more information on displaying an image.)

Stopping Action

Press the Freeze button on the remote control to stop the action in your video or computer image. The image freezes but the sound continues.

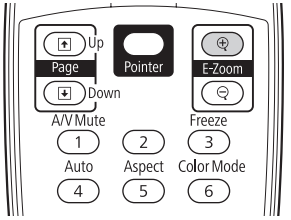
To restart the action, press the Freeze button again.



note

This function pauses the image, not the sound. Because the source continues to transmit signals, when you resume the action, it won't be at the point you stopped it.

Zooming Part of Your Image



You can zoom in on a portion of the image using the E-Zoom buttons on the remote control.

1. Press the E-Zoom ⊕ button on the remote control.

   You see a crosshair indicating the center of the zoom-in area.

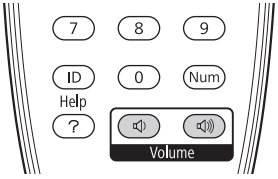
2. Use the ⊙ pointer button to position the crosshair.
3. Continue pressing the E-Zoom ⊕ button to enlarge the selected area up to 4 times.
4. While the image is enlarged, you can:
   - Use the ⊙ pointer button to move around the screen.
   - Press the E-Zoom ⊖ button to zoom out.
5. When done, press the Esc button to return the image to its original size.

note

You cannot use the Progressive or Noise Reduction features (see page 98) while you are using E-Zoom.

Controlling the Volume

To change the volume, press the 🔈 or 🔊 button on the remote control.



You can also adjust the volume using the projector's menu system. See page 101.

note

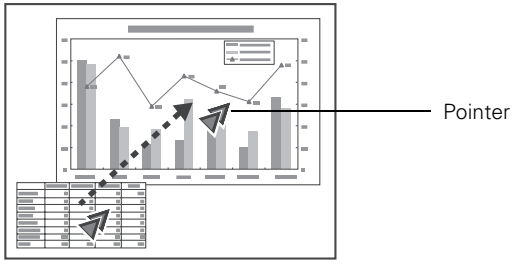
To temporarily shut off the sound and picture, press the A/V Mute *button.*

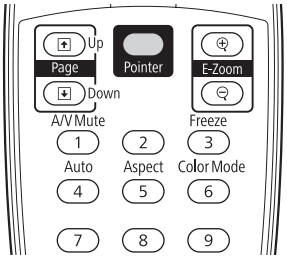
Highlighting Your Presentation

You can display a pointer to call out important information on the screen, and you can choose from three shapes for the pointer.

Using the Pointer Tool

1. To activate the pointer tool, press the Pointer button on the remote control. A pointer appears on the screen.





   If you prefer to use a different style of pointer, see the instructions in the next section.

2. Use the pointer button on the remote control to position the pointer on the screen.
3. When you're done using the pointer, press the pointer button to clear the screen.

Choosing a Different Pointer Shape

Follow these steps to select a different pointer shape:

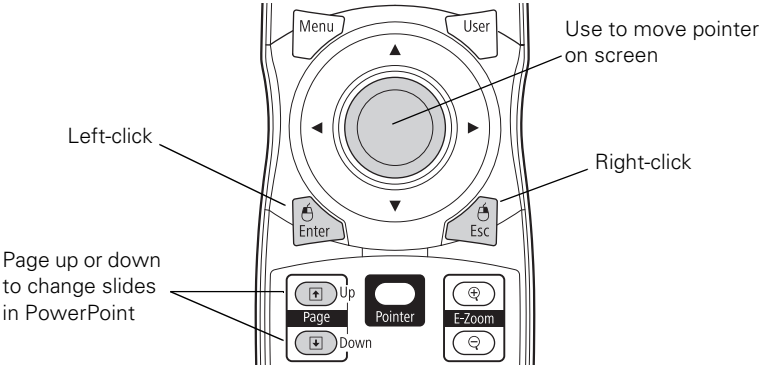
1. Press the Menu button on the remote control, highlight the Settings menu, highlight Pointer Shape, and press Enter. You can select one of the pointer shapes shown at the right.

2. Select the shape you want and press Enter.
3. Press Menu to exit.

Operating Your Computer With the Remote Control

With the optional wireless mouse receiver (see page 12), you can use the remote control in place of your computer's mouse. This gives you more flexibility when delivering slideshow-style presentations, since you won't have to stand next to the computer to change slides.

- Use the Up and Down buttons to move through a Microsoft® PowerPoint slideshow.



- Use the pointer button to move the pointer on the screen.
- Press the Enter button once to left-click, or twice to double-click. Press the Esc button to right-click.
- To drag-and-drop, hold down the Enter button. Then use the pointer button to drag the object. When it's where you want it, release the Enter button.

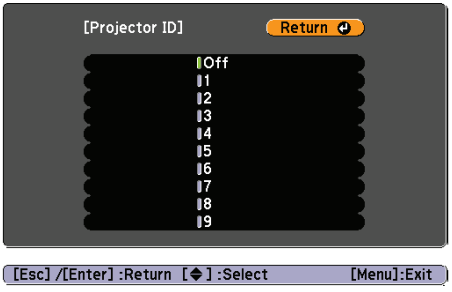
Operating Two or More Projectors With the Remote Control

If you're using more than one projector, you can control all the projectors—or just selected ones—by using the projector ID system. To operate a projector, set the remote control's ID to match that of the projector. Or you can control all the projectors at once by setting the remote control's ID to zero.

Setting the Projector ID

The projector's default ID is set to Off. This lets it respond to commands from any remote control. To change the ID, follow these steps:

1. Press the Menu button on the remote control. You see the projector's menu screen.
2. Select Extended, then Projector ID.



3. Use the pointer button to highlight the new ID, and press Enter to select it.
4. When you're done, press Menu to exit.

Checking the Projector ID

You can check the projector's ID by following these steps:

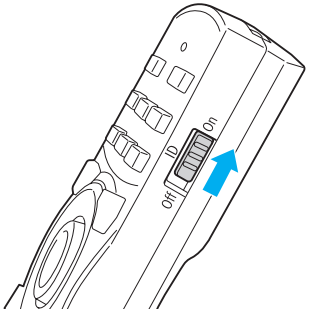
1. Point the remote control at the projector you want to check.
2. While holding the ID button, press the Help button. You see a message on the screen like this:

Setting the Remote Control ID

note
If you're using a remote control ID other than the default ID of zero, you have to set the ID each time you turn on the projector.

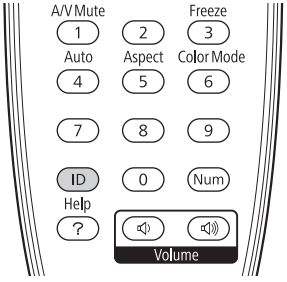
The remote control's default ID is zero. This lets you operate any projector. To set it to operate a specific projector, follow these steps:

1. Move the remote control ID switch to the On position.



note
When the remote control ID switch is in the Off position, you can control any projector regardless of the projector or remote control ID settings.

2. Press and hold the ID button on the remote control.



3. While holding the ID button, press a numbered button on the remote control (0 through 9) to select the desired ID. Select zero to control all projectors, or select a number to match the ID of the projector(s) you want to operate.

4 Preparing the Projector to Present Through a Network

This chapter tells you how to prepare your projector so that you can send pictures to it through a network (G5150NL and G5350NL only). Using EMP NS Connection, you can project images shown on your computer screen—including text, graphics, and video—directly to your audience. If you have Windows Vista, you can also use the Network Projector feature to communicate with your network-connected projector without installing any software.

You'll find instructions and information in this chapter on:

- Configuring basic settings
- Connecting wirelessly to the projector in Ad Hoc (computer-to-computer) mode or Access Point (infrastructure) mode
- Using wireless security options
- Projecting Over a Network
- Using Windows Vista to connect to the projector

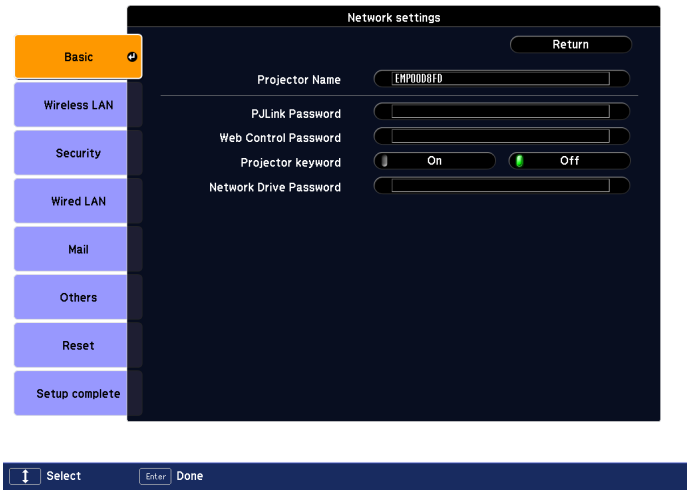
Before starting, make sure you've installed the optional wireless network module if you plan to project wirelessly (G5150NL or G5350NL only). You must also install the EMP NS Connection software as described in the *EasyMP Operation Guide* for each computer you connect to the projector. Then follow the steps in this chapter to configure your projector and computer.

Configuring Basic Settings

You can give your projector a unique name, enable a projector keyword, or create a password for controlling the projector using your computer's Web browser.

1. Press the Menu button, then choose Network and press Enter.
2. Choose Network Configuration and press Enter.

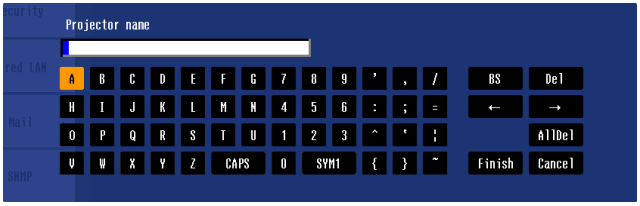
   You see the following screen:



3. Choose Basic and press Enter.
4. Make sure the projector has a unique name, so you can identify it when connecting to it from your computer.

   If you need to rename it, highlight the Projector Name text box then press Enter.

5. Press the pointer button to select individual letters; then press Enter to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press Enter. To toggle symbol settings or capital letters, highlight the option and press Enter. When you're done, highlight Finish and press Enter.



6. If you want to create a password for remote access to the projector, highlight Web Control Password, press Enter, and enter a password of up to 8 alphanumeric characters. When you're done, highlight Finish and press Enter.
7. If you want to set up a security keyword so that only people who are in the same room as the projector can access it, turn on Projector keyword. When you connect to the projector, a randomized four-digit number or "keyword" is displayed on the screen. When prompted by NS Connection, enter the keyword on your computer to connect to the projector.
8. If you want to prevent others from overwriting or deleting files on an SD card without permission, enter a password of up to 16 characters for the Network Drive Password.
9. When you're done making these settings, select Return, Setup complete, and then Yes to confirm that you want to save the changes.
10. Press Menu to exit.

note

You can interrupt projection even when a keyword is used. Press the Esc *button on the remote control and select the* Close *option.*

Configuring a Wireless Connection

If you have installed the optional wireless LAN module (G5150NL and G5350NL only), you can use NS Connection to connect to the projector and send images wirelessly in two modes: Ad Hoc mode or Access Point mode.

- **Ad Hoc mode** (computer-to-computer mode) lets you connect just one computer to the projector at a time; it's easy to set up, and the only equipment you need is a computer with a wireless (802.11g, 802.11b, or 802.11a) network card or adapter, or a Macintosh® with an AirPort® or AirPort Extreme card. When you connect to the projector in this mode, you cannot connect to other wireless networks or devices; you can connect to the projector only.
- **Access Point mode** (infrastructure mode) lets multiple computers access the projector at the same time and easily trade off control over the projector. To use Access Point mode, you need a wireless (802.11a, 802.11b, or 802.11g) access point or an AirPort Extreme (or AirPort) base station, and one or more computers with wireless network cards or adapters.

Follow the instructions below for the mode you want to use.

note

Make sure you've installed the NS Connection software as described in the EasyMP Operation Guide.

To connect to the projector over a wireless network, your computer must be running Windows 2000, XP, or Vista. Your Mac® must be running Mac OS X 10.3 or later. See the EasyMP Operation Guide *for complete system requirements for projecting wirelessly.*

Access Point mode (infrastructure mode) is required to achieve transfer speeds up to 54MB/sec on an 802.11g network. Ad Hoc mode (computer-to-computer mode) limits network connections to 11MB/sec. This is a standard specification of 802.11g networking.

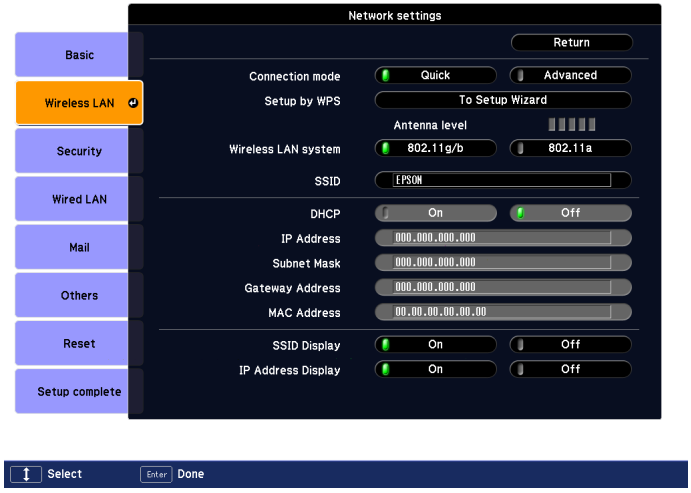
Using Ad Hoc Mode

To use Ad Hoc (computer-to-computer) mode, adjust your projector and wireless card or adapter settings as described in this section.

Configuring the Projector

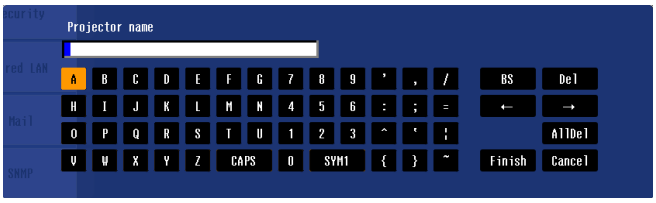
1. Press the Menu button, then choose Network and press Enter.
2. Choose Network Configuration and press Enter.
3. Choose Wireless LAN and press Enter.

You see this screen:



4. Make sure **Quick** is selected for the Connection mode. If not, use the pointer button on the remote control to highlight **Quick**, then press **Enter** to select it.
5. If your network is using 802.11a, use the pointer button on the remote control to highlight **802.11a**, then press **Enter** to select it.
6. If your computer's network card supports an SSID (or ESSID) name (see page 67), highlight the **SSID** text box, press **Enter**, and enter a name.

   Press the pointer button to select individual letters; then press **Enter** to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press **Enter**. To toggle symbol settings or capital letters, highlight the option and press **Enter**. When you're done, highlight **Finish** and press **Enter**.



note

If you are using a WPS-compatible access point, see page 79 for connection information.

Note that the SSID is case-sensitive (if you enter the name in uppercase on the projector, you must type it the same way on the computer connecting to the projector).

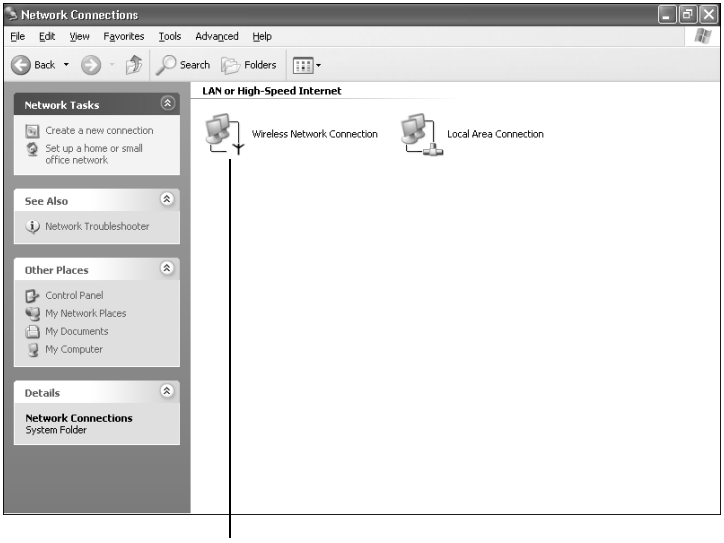
7. If you want to prevent the SSID from being displayed on the standby screen, set the SSID Display option to Off.
8. To prevent the IP address from appearing on the standby screen, set the IP Address Display setting to Off.
9. When you're done making these settings, select Return, Setup complete, and then Yes to confirm that you want to save the changes.
10. Press Menu to exit.

Now you're ready to set up your computer to project wirelessly. Go to "Configuring the Network Settings for Windows" on page 65, or "Setting Up Your Mac for Ad Hoc Mode" on page 67.

Configuring the Network Settings for Windows

Before connecting to the projector, you need to make sure the settings for your notebook's or PC's network card match the settings you entered for the projector.

1. Access your wireless network Properties window. For example, in Windows XP you would click Start > Control Panel > Network and Internet Connections. Then click the Network Connections icon. You see a screen similar to this:



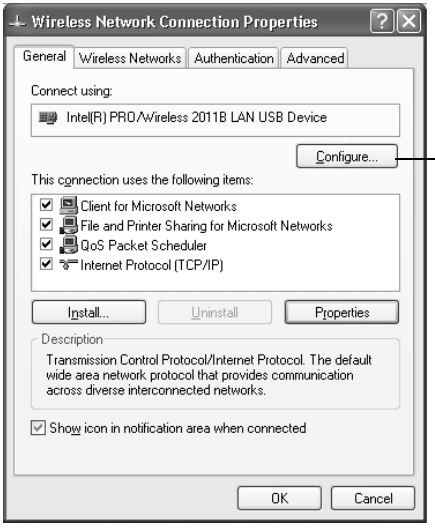
Right-click and select Properties

note

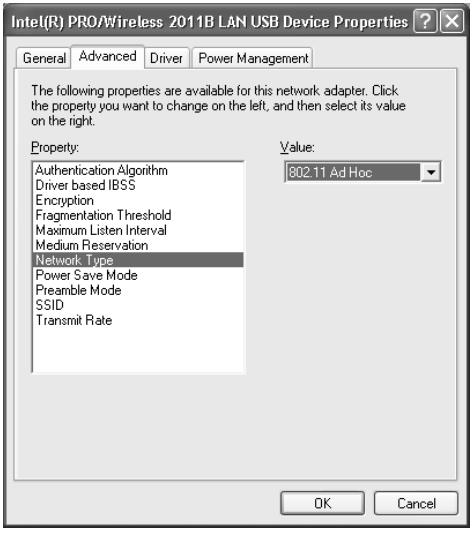
On some Windows systems, you can right-click My Network Places *or* Network Neighborhood *on the desktop and select* Properties.

Settings may vary, depending on your wireless network adapter. See the documentation for your adapter for more information.

2. Right-click the **Wireless Network Connection** icon and select **Properties**. You see a screen similar to this:



3. Click the **Configure** button.
4. Click the **Advanced** tab. You see a screen similar to this:



5. Check your wireless card or adapter device settings. (Depending on the type of card or adapter you're using, some of the settings may be different than those listed here.)
   - Set the Network Type to 802.11 Ad Hoc.
   - Set the SSID to match the name you assigned to the projector's SSID.
   - Make sure Encryption is Disabled.
6. Click the General tab and make sure that your wireless card or adapter is enabled.
7. When you're done, click OK to close the Properties dialog box.

Now you're ready to connect to the projector. See "Projecting Over a Network" on page 90.

Setting Up Your Mac for Ad Hoc Mode

Your AirPort software is automatically configured to allow your Mac to detect both computer-to-computer (Ad Hoc) and Access Point networks.

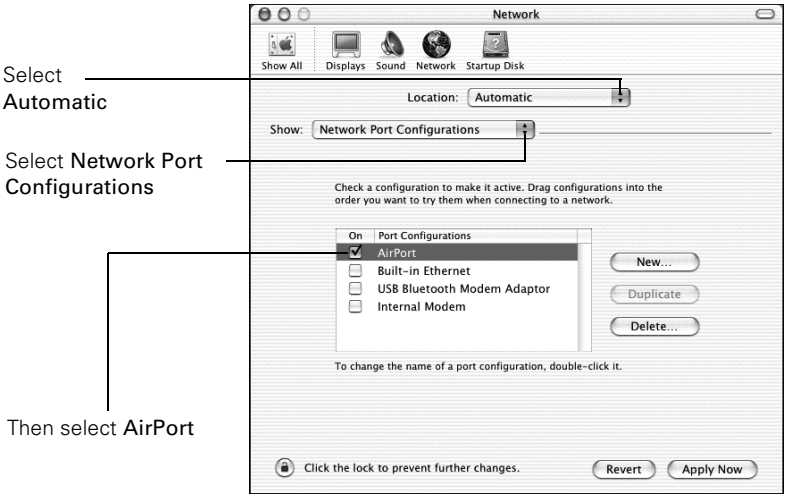
Typically, you only need to select your projector's ESSID from the AirPort status menu on the Mac menu bar. If you're having problems detecting the projector, follow these steps:

1. From the Apple pull-down menu, select System Preferences.
2. Double-click the Network icon. You see the Network settings window.

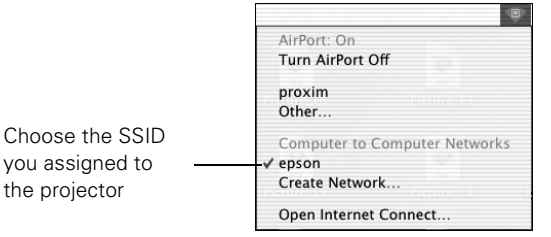
note

When you connect in Ad Hoc mode, your connection to other wireless networks or devices is broken. If you need to remain connected to your wireless network, use Access Point mode, as described on page 69. Also, make sure you reconnect to your original wireless network when you are done using the projector.

3. Make sure Location is set to **Automatic**.



4. Select **Network Port Configurations** in the Show pull-down menu.
5. Under Port Configurations, select **AirPort**.
6. Click **Apply Now**. Then close the window.
7. Click the AirPort icon on the menu bar at the top of the Mac desktop. You see the AirPort status menu:



8. Check to make sure AirPort is turned on.
9. Select your projector's SSID.

note

If you don't need the other network port configurations, disable them by deselecting their checkboxes.

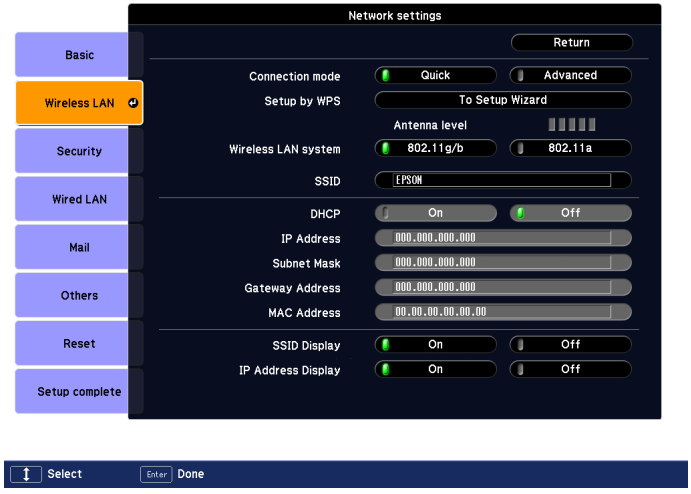
When you connect in Ad Hoc mode, your connection to other wireless networks or devices is broken. If you need to remain connected to your wireless network, use Access Point mode, as described on page 69. Also, make sure you reconnect to your original wireless network when you are done using the projector.

Using Access Point Mode

To use Access Point (infrastructure) mode, first adjust your projector and wireless access point or AirPort base station settings as described in this section.

Configuring the Projector

1. Press the Menu button, then choose Network and press Enter.
2. Choose Network Configuration and press Enter.
3. Choose Wireless LAN and press Enter. You see this screen:



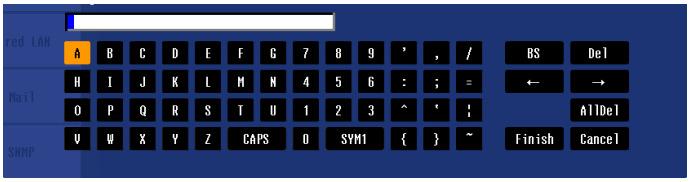
4. Make sure Advanced is selected for the Connection mode. If not, use the pointer button on the remote control to highlight Advanced, then press Enter to select it.
5. If your network is using 802.11a, use the pointer button on the remote control to highlight 802.11a, then press Enter to select it.
6. To enable your computer to find the projector on the network, you need to enter the SSID name of your access point or AirPort network in the SSID text box. (The name of your AirPort network may be different from that of your AirPort base station; select your base station in the AirPort Admin utility and click Configure to check the name of your network.)

note

If you are using a WPS-compatible access point, see page 79 for connection information.

Highlight the SSID text box, press Enter, and enter a name as follows:

Press the pointer button to select individual letters; then press Enter to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press Enter. To toggle symbol settings or capital letters, highlight the option and press Enter. When you're done, highlight Finish and press Enter.



Note that the SSID is case-sensitive (if you enter the name in uppercase on the projector, you must type it the same way on the computer connecting to the projector).

7. If your access point assigns IP addresses automatically, turn on DHCP. Otherwise, turn off DHCP and enter the following information:
   - IP address: Enter the IP address you want to assign to the projector. It must be formatted like other addresses on the network. The last section/octet should be unique.
   - Subnet mask: For example: 255.255.255.000, but this depends on how your network is set up.
   - Gateway address: Enter the IP address that was assigned to the access point or AirPort base station when it was set up.
8. If you want to prevent the SSID from being displayed on the standby screen, set the SSID Display option to Off.
9. To prevent the IP address from appearing on the standby screen, set the IP Address Display setting to Off.

note

For specific details about your network, please consult your network administrator.

If you don't know your gateway or access point address, see page 76. If you're using AirPort, start the AirPort Admin utility, select your base station and click Configure. *Then click the* Network *tab to see your base station's IP address.*

10. When you're done making these settings, select Return, Setup complete, and then Yes to confirm that you want to save the changes.

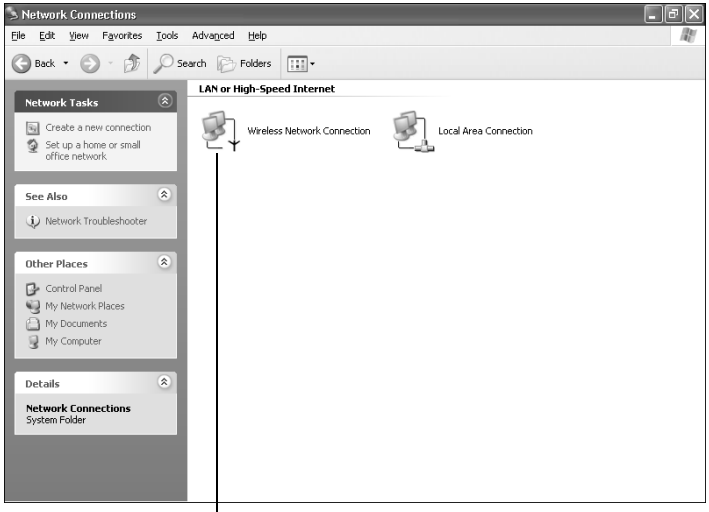
11. Press Menu to exit.

Now you're ready to set up your computer for wireless projecting. Go to "Configuring the Network Settings for Windows" below, or go to "Setting Up Your Mac for Access Point Mode" on page 77. If you want to enable security options for your network, see page 85 to set up the option that your network uses on the projector.

Configuring the Network Settings for Windows

Before connecting to the projector, you need to make sure the settings for your computer's wireless card or adapter match the settings you entered for the projector.

1. Access your wireless network Properties window. For example, in Windows XP you would click Start > Control Panel > Network and Internet Connections. Then click the Network Connections icon. You see a screen similar to this:



Right-click and select Properties

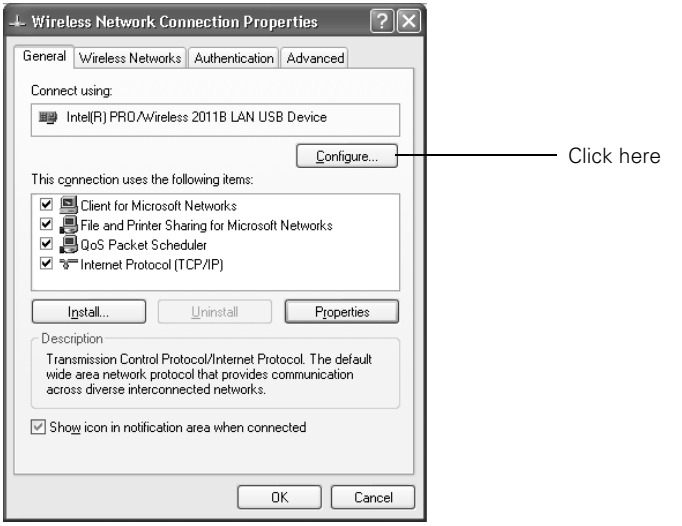
2. Right-click the Wireless Network Connection icon and select Properties.

note

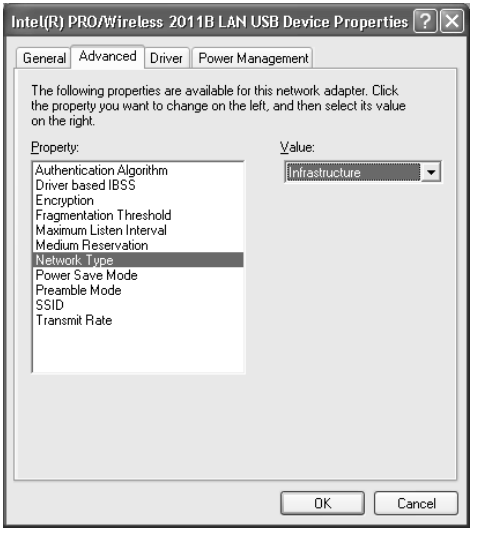
On some Windows systems, you can right-click My Network Places *or* Network Neighborhood *on the desktop and select* Properties.

Settings may vary, depending on your wireless network adapter. See the documentation for your adapter for more information.

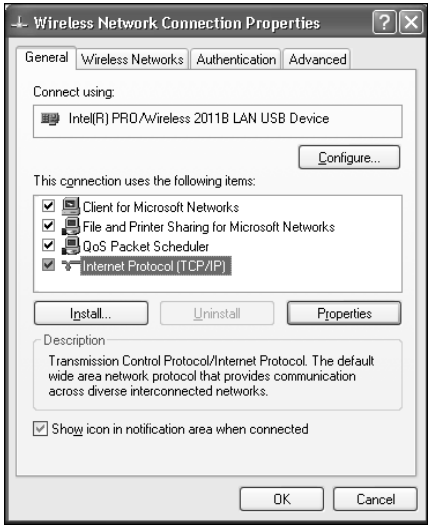
You see a screen similar to this:



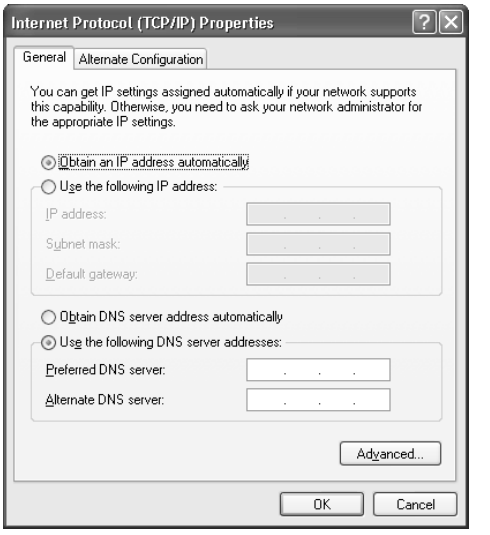
3. Click the **Configure** button.
4. Click the **Advanced** tab. You see a screen like this:



5. Check your wireless card's or adapter's device settings. (Depending on the type of card or adapter you're using, some of the settings may be different than those listed here.)
   - Set the Network Type to Infrastructure.
   - Set the SSID to match the name assigned to the access point (which should also match the projector's SSID).
   - Make sure Encryption is Disabled if you have not set up encryption on the projector.
6. Click the General tab and make sure that your wireless card or adapter is enabled.
7. When you're done, click OK to close the wireless properties dialog box.
8. Right-click the Wireless Network Connection icon again and select Properties. You see this screen:



9. Select Internet Protocol and click the Properties button. You see this screen:



10. If your access point uses DHCP, select Obtain an IP address automatically. Otherwise select Use the following IP address and Use the following DNS server addresses, then enter the required information:

    - IP address: Type in the IP address you want to assign to the computer. It must be formatted like other addresses on the network. The last section/octet must be unique.
    - Subnet mask: For example: 255.255.255.000, but this depends on how your network is set up.
    - Default gateway: Enter the IP address that was assigned to the access point when it was set up.
    - Preferred DNS server/Alternate DNS server: Enter the IP address of the DNS server(s) for your network.

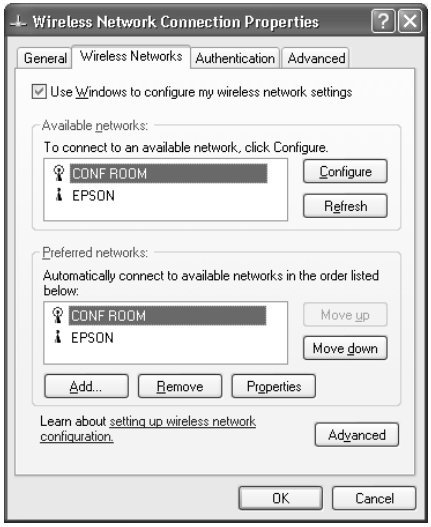
11. When you're done, click OK.

note
For specific details about your network, please consult your network administrator.

note
If you don't know your gateway or access point address, see page 76.

12. Click the **Wireless Networks** tab. (If you don't see this tab, you may need to enable your wireless card or adapter by clicking **Configure** to access the device settings; then follow any instructions on the screen to enable the device.)

    You see a screen like this:



13. Verify that you've enabled your computer's connection to the access point. It should be listed with the small icon next to it, indicating a connection.

    If it's not listed, click **Configure** and type the name of your access point.

14. When you're done making settings, click **OK** to close the dialog box.

Now you're ready to connect to the projector. See "Projecting Over a Network" on page 90.

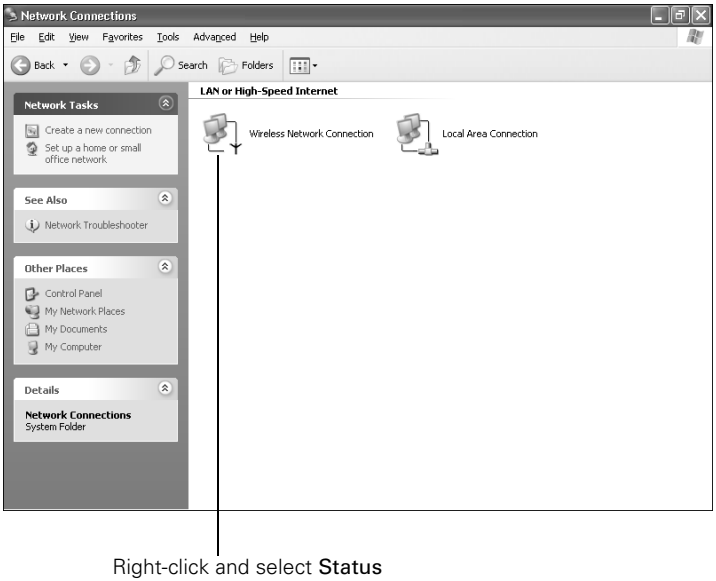
Checking the Gateway IP Address on Windows

note

If you cannot identify the gateway address using this Windows utility, use the administrator's utility software that came with your access point.

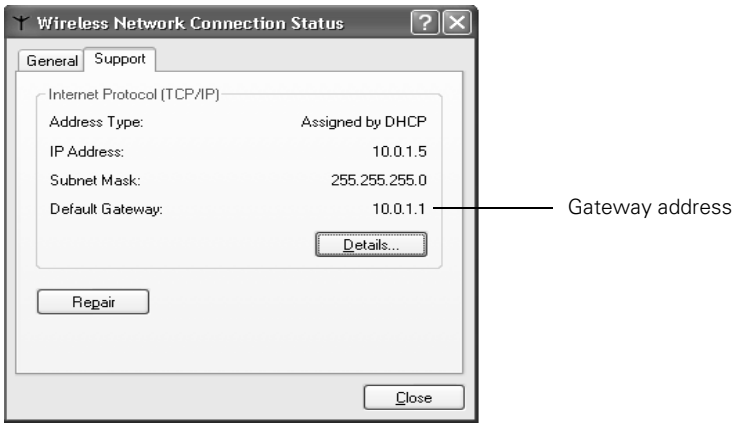
If you're entering IP addresses manually and need to find out the gateway IP address (the IP address of your access point), make sure the wireless connection to the access point is currently active, as described in the previous section. Then follow these steps:

1. Access your wireless network Properties window. For example, in Windows XP you would click **Start > Control Panel > Network and Internet Connections**. Then click the **Network Connections** icon. You see a screen similar to this:



2. Right-click the **Wireless Network Connection** icon and select **Status**.

3. Click the Support tab. The gateway's IP address is listed as shown:



Setting Up Your Mac for Access Point Mode

Your AirPort software is automatically configured to allow your Mac to detect Access Point networks.

Typically, you only need to select your AirPort network name from the AirPort status menu on the Mac menu bar. If you're having problems connecting to the projector, follow these steps:

1. From the Apple pull-down menu, select System Preferences.
2. Click the Network icon. You see the Network settings window.

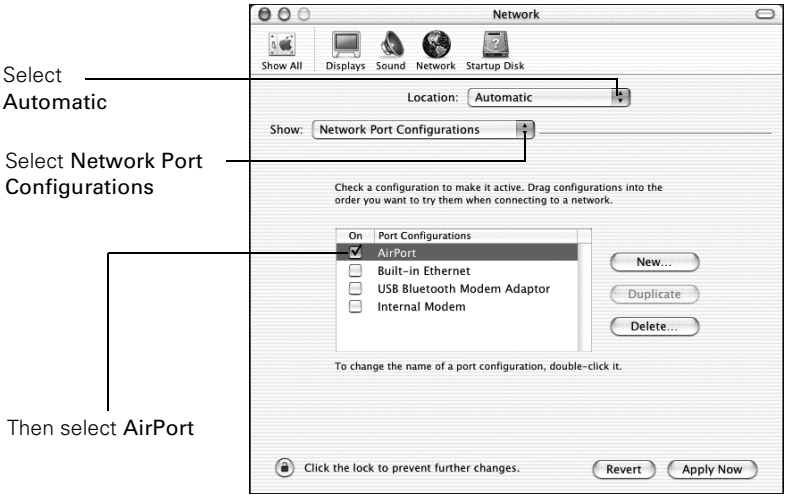
note

If you don't need the other network ports, disable them by deselecting their checkboxes. If more than one network port is enabled, the projector software warns you to turn off AirPort when you first connect the projector. Disregard this message.

Your AirPort network and base station names may be different. To check or change your AirPort network name, start the AirPort Admin utility, select your base station, and click Configure. *Click* Show All Settings, *then make any changes you want on the AirPort tab.*

If you're connecting to your projector in static IP mode, deselect the Distribute IP addresses *checkbox. Make sure your projector's gateway address is identical to the base station's IP address, and the first three segments of the projector's IP address are identical to the first three segments of the base station's IP address.*

3. Make sure Location is set to Automatic.



4. Select Network Port Configurations in the Show pull-down menu.
5. Under Port Configurations, select AirPort.
6. Click Apply Now. Then close the window.
7. Start the AirPort Admin utility. Select your base station, then click Configure.
8. On the AirPort tab, make sure your AirPort network name matches your projector's SSID. If not, enter the projector's SSID in the AirPort Network text box and click Update.
9. If you turned DHCP on in your projector's advanced menu, click the Network tab and make sure the Distribute IP addresses checkbox is selected. If you need to select it, click Update.

10. Click the AirPort icon on the menu bar at the top of the Macintosh desktop. You see the AirPort status menu:

11. Check to make sure AirPort is turned on.
12. Select the name of your AirPort network.

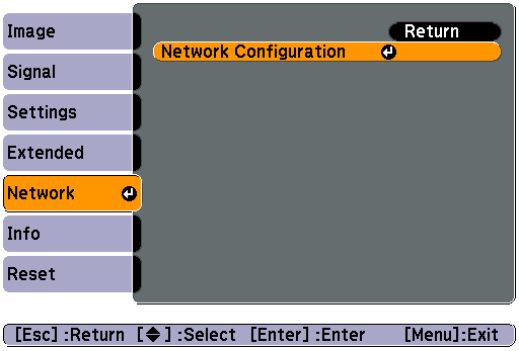
Making a WPS (Wi-Fi Protected Setup) Connection

If you are using a WPS-compatible access point, you can configure the settings for the connection between the projector and the access point from the projector's Configuration menu using one of these methods:

- Push Button Method
  Press both the Enter button on the projector and the button on the access point to make the SSID and security settings. This method is recommended when the projector and access point are close together.
- PIN Code Method
  With the PIN code method, you enter an 8-digit code from the computer to enable the SSID and security settings. The connection between the computer and the access point must have already been established. (For connection instructions, refer to the manual provided with the access point.) This method lets you make the settings without having to press any buttons on the projector, and is recommended when the projector is mounted on the ceiling.

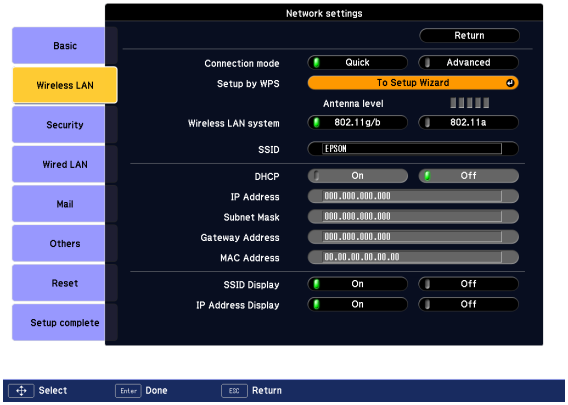
Follow these steps to open the WPS connection screen:

1. Press the **Menu** button to open the projector menu.
2. Select **Network**, then **Network Configuration**, and press **Enter**.

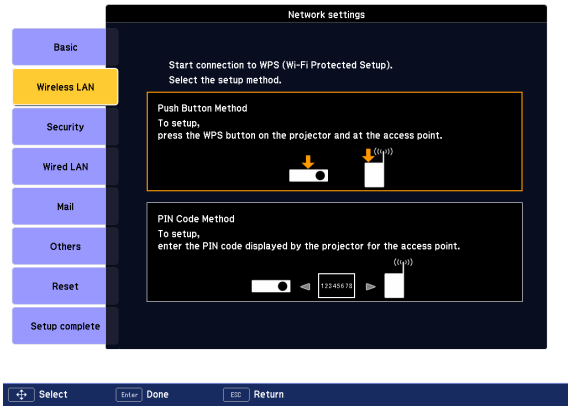


The Network Configuration screen is displayed.

3. Select **Wireless LAN** and press **Enter**.



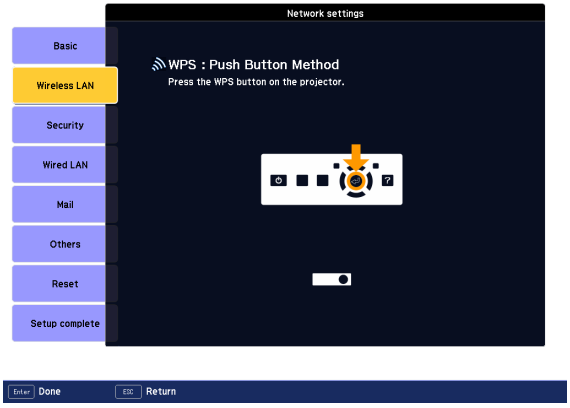
4. Select **To Setup Wizard**, then press **Enter**. You see the WPS (Wi-Fi Protected Setup) connection screen:



5. For the Push Button Method, follow the instructions below. For the PIN Code Method, follow the instructions on page 83.

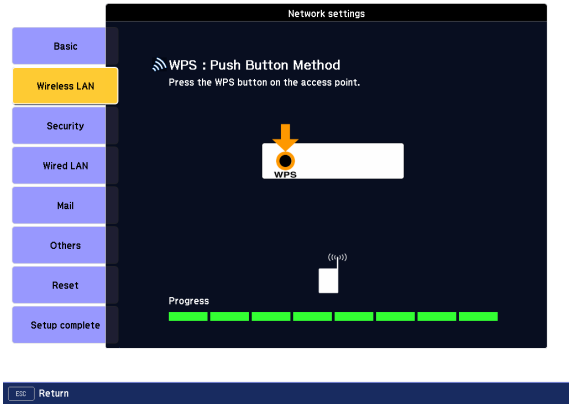
Using the Push Button Method

1. Select **Push Button Method** and press **Enter**. You see this screen:



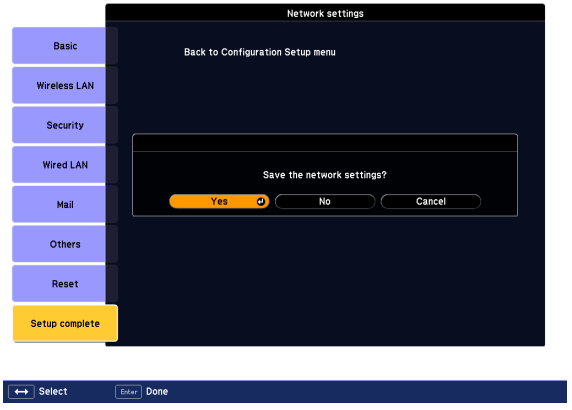
2. Press the **Enter** button on the projector.

3. When prompted by the screen, press the **WPS** button on the access point.



You see a message that WPS setup is complete.

4. Press the **Enter** button or the **Esc** button to return to the wireless LAN setting page.
5. Select **Setup Complete** and press **Enter**.

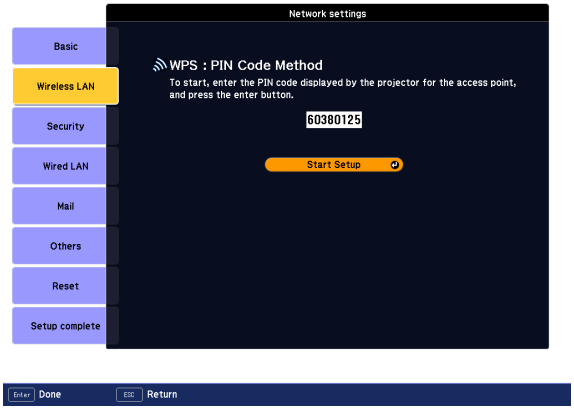


6. Make sure **Yes** is selected and press **Enter**.
7. Press the **Menu** button.

Using the PIN Code Method

Before you can make a connection using the PIN Code Method, a connection must have already been established between the computer and the access point. For details on how to make this connection, refer to the manual provided with the access point.

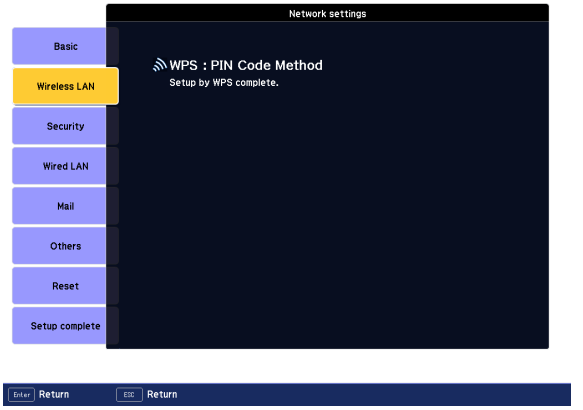
1. Follow steps 1 through 4 on page 80 to access the WPS Connection Screen.
2. Select PIN Code Method and press Enter. You see this screen:



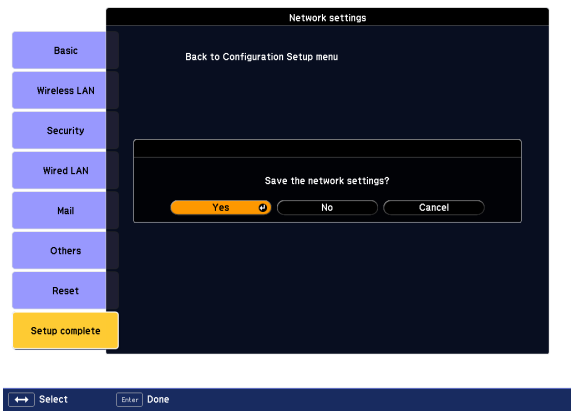
3. From the computer, enter the displayed PIN code for the access point, select Start Setup and then press Enter.

   You see a progress meter on the screen.

4. When you see a message that WPS Setup is complete, press the Enter or Esc button.



5. When you see the wireless LAN setting page, select Setup Complete and press Enter. You see this screen:



6. Select Yes and press Enter to save the settings.
7. Press the Menu button and then close the configuration menu to exit.

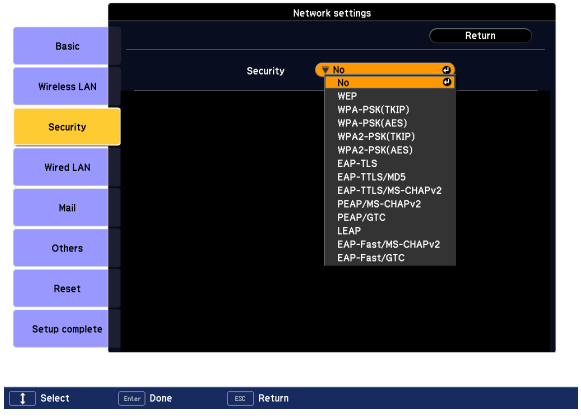
Using Wireless Security Options

If you have installed the optional wireless LAN module (G5150NL and G5350NL only), you can use the following security options when connecting to the projector wirelessly: WEP encryption, WPA security, EAP-TLS certificate validation, or LEAP, EAP, or PEAP authentication. To set these security features on your wireless network, see your documentation or get help from your network administrator. See the following sections to enable the security option on your projector:

- "Enabling WEP Encryption" below
- "Enabling WPA Security" on page 87
- "Enabling EAP, LEAP, or PEAP Authentication" on page 88
- "Enabling EAP-TLS Certificate Validation" on page 89

Enabling WEP Encryption

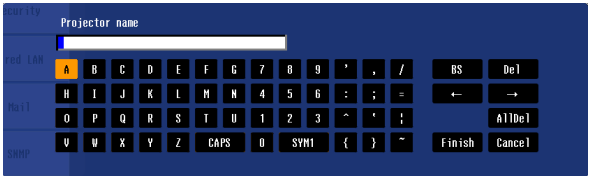
1. Press Menu on the remote control, then highlight Network and press Enter.
2. Choose Network Configuration and press Enter.
3. Highlight Security and press Enter. Then press Enter again to display the security options:



4. Highlight WEP and press Enter.

5. For the WEP encryption setting, highlight 128Bit or 64Bit and press Enter.
6. For Format, highlight ASCII to enable text input or HEX to enable hexadecimal input. Then press Enter.
7. If you chose 64Bit, choose Key ID 1, 2, 3, or 4.

   Highlight the Encryption key text box that corresponds to the Key ID you selected, then press Enter. Press the ⊙ pointer button to select individual letters; then press Enter to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press Enter. To toggle symbol settings or capital letters, highlight the option and press Enter. When you're done, highlight Finish and press Enter.



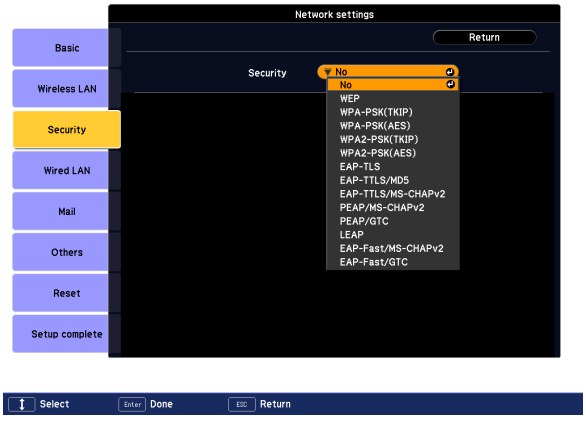
8. Check with your network administrator for directions on entering a key for your network, and follow these general guidelines:
   - For 128 bit WEP encryption with hexadecimal input, enter 26 characters, from 0 to 9 and from A to F.
   - For 64 bit WEP encryption with hexadecimal input, enter 10 characters, from 0 to 9 and from A to F.
   - For 128 bit WEP encryption with ASCII or text input, enter 13 alphanumeric characters.
   - For 64 bit WEP encryption with ASCII or text input, enter 5 alphanumeric characters.
9. When you're done making these settings, select Return, Setup complete, and then Yes to confirm that you want to save the changes.
10. Press Menu to exit.

note

Text input for WEP encryption varies with different access points; check with your network administrator. Try ASCII *first. If that doesn't work, try* Text2 *and then* Text3.

Enabling WPA Security

1. Press Menu. Highlight Network and then press Enter.
2. Choose Network Configuration and press Enter.
3. Highlight Security and press Enter. Then press Enter again to display the security options:



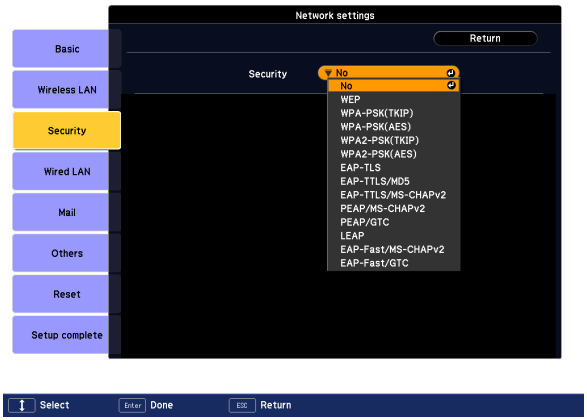
4. Choose WPA-PSK(TKIP), WPA-PSK(AES), WPA2-PSK(TKIP), or WPA2-PSK(AES) and press Enter.

   Highlight the PSK (pre-shared key) text box and press Enter. Press the pointer button to select individual letters; then press Enter to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press Enter. To toggle symbol settings or capital letters, highlight the option and press Enter. When you're done, highlight Finish and press Enter.

5. When you're done making these settings, select Return, Setup complete, and then Yes to confirm that you want to save the changes. Press Menu to exit.

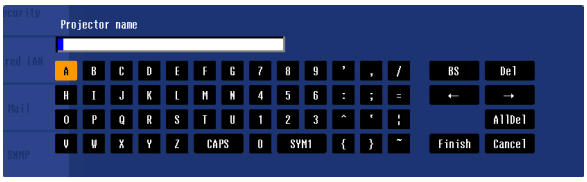
Enabling EAP, LEAP, or PEAP Authentication

1. Press Menu. Highlight Network and then press Enter.
2. Choose Network Configuration and press Enter.
3. Highlight Security and press Enter. Then press Enter again to display the security options:



4. Choose EAP-TTLS/MD5, EAP-TTLS/MS-CHAPv2, PEAP/MS-CHAPv2, PEAP/GTC, LEAP, EAP-Fast/MS-CHAPv2, or EAP-FAST/GTC. Then press Enter.
5. Enter the user name and password that match the settings on your authentication server.

   Highlight the User name text box and press Enter. Press the pointer button to select individual letters; then press Enter to input a character. To add a blank space or to navigate backward and forward through the input text, highlight the arrows and press Enter. To toggle symbol settings or capital letters, highlight the option and press Enter. When you're done, highlight Finish and press Enter.



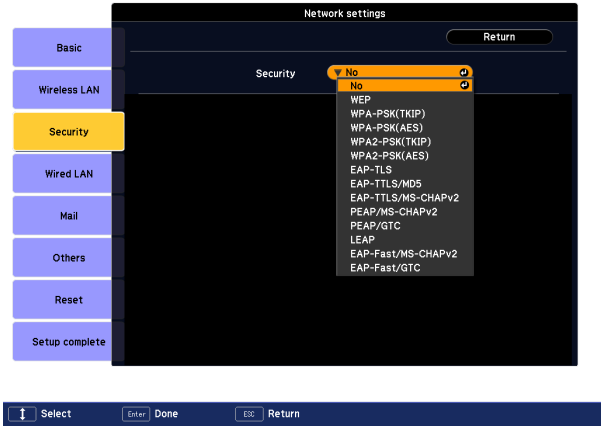
Highlight the Password text box and press Enter. Enter the password as you entered the User name.

6. When you're done making these settings, select Return, Setup complete, and then Yes to confirm that you want to save the changes.
7. Press Menu to exit.

Enabling EAP-TLS Certificate Validation

Once you have created an EAP-TLS certificate, follow the steps below to enable it. (Contact your Network Administrator for more information on obtaining or creating the certificate.)

1. Press Menu. Highlight Network and then press Enter.
2. Choose Network Configuration and press Enter.
3. Highlight Security and press Enter. Then press Enter again to display the security options:



4. Choose EAP-TLS and press Enter. The certificate information appears on the screen.
5. When you're done, select Return, Setup complete, and then Yes to confirm that you want to save the changes.
6. Press Menu to exit.

Projecting Over a Network

Once you've set up your projector and computer in either Ad Hoc (Quick) mode or Access Point (Advanced) mode (or in the optional wired LAN mode, as described on page 114), see the *EasyMP Operation Guide* for instructions on the following EasyMP features (G5150NL and G5350NL only):

- Starting NS Connection
- Projecting over the network
- Multi-screen projection
- Projecting video clips (Movie Sending Mode)
- Using Presentation Mode
- Using Virtual Displays

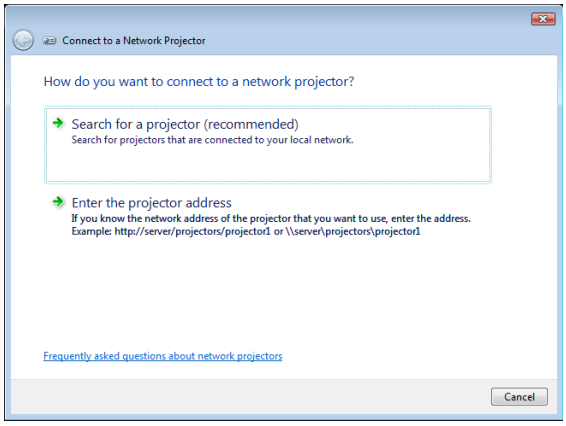
Connecting With Windows Vista

If you have Windows Vista, you can use the Network Projector function to connect to the projector without installing the EasyMP software. This provides a quick, easy way to connect wirelessly, though with limited capabilities. Not all the features available with EMP NS Connection are possible when connecting using the Vista network projector function. All performances are enhanced when you use EMP NS Connection.

Follow these steps:

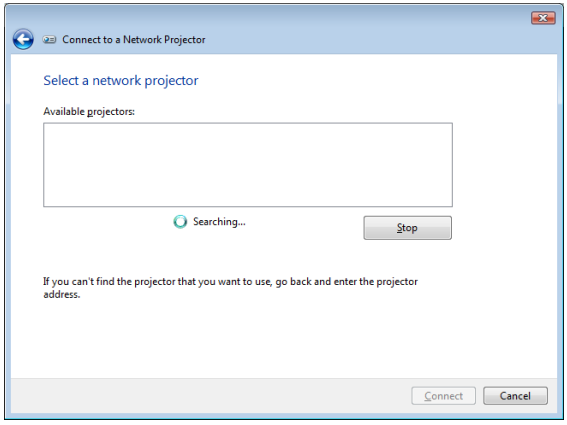
1. Turn on the projector.
2. Press the EasyMP button on the remote control. The standby screen appears.

3. From the Start menu on your computer, select **All Programs**, **Accessories**, then **Connect to a Network Projector**. You see this screen:



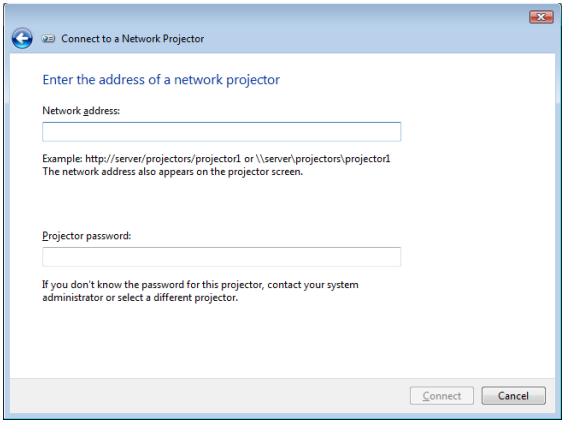
4. You can select the projector automatically or manually:

   - To let your computer search automatically for the projector, select **Search for a projector**. You see this screen:



   After locating the connected projectors, your computer lists them on the screen. Select the one you want and then click **Connect**.

- To locate the projector by IP address, select Enter the projector address. You see this screen:



  Enter the IP address for the projector in the format shown. Enter a password for the projector if one has been set. Then click Connect.

5. If you need to pause your presentation, press the Pause button. Click Resume when you are ready to continue.
6. When you want to disconnect from the projector, click the Disconnect button.

Vista Network Projector Limitations

When you connect wirelessly to the projector using Windows Vista, be aware of the following limitations:

- You can connect to only one projector at a time.
- You cannot connect the projector to a PC with a video output resolution in excess of 1024 × 768 (XGA).
- You cannot project a Windows Photo Gallery slideshow in full-screen mode.
- When using the optional network projector feature of the Meeting Space function, set the display color quality on your PC to Highest (32-bit).
- Network presentation via wireless ad-hoc is not supported.

5 *Fine-Tuning the Projector*

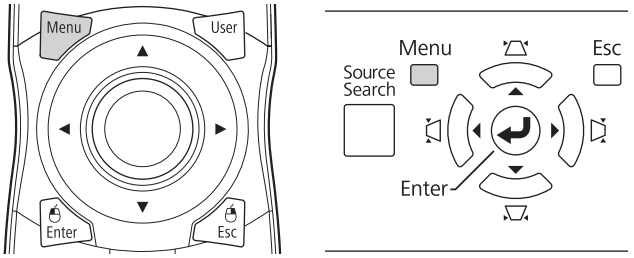
You can use the projector's on-screen menus to adjust the image, sound, and other features. This chapter covers the following information:

- Using the menu system
- Adjusting the image
- Adjusting signal settings
- Customizing projector features
- Using the projector security features
- Customizing power and operation
- Multi-screen color adjustment
- Projector Menu and Options List

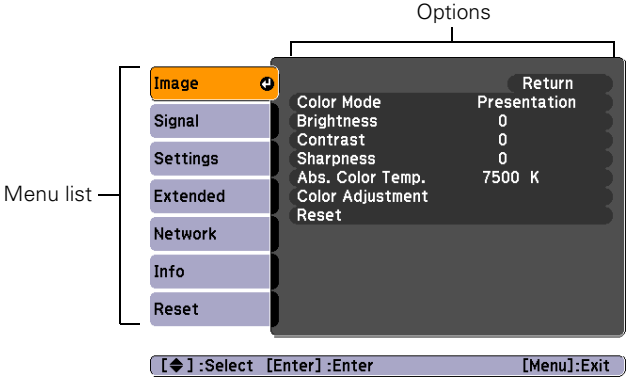
Using the Menu System

You can use the remote control or the projector's control panel to access the menus and change settings. Follow these steps:

1. To display the menu screen, press the **Menu** button on the remote control or on the projector.



You see a menu screen similar to the one below:



The menus are listed on the left and the options available for the highlighted menu are shown on the right.

2. Use the pointer button on the remote control (or the navigational buttons on the projector) to scroll through the menu list. When you've highlighted the desired menu, press the **Enter** button to select it.

3. Once you've selected the menu, use the pointer button to scroll through the list of options. (Some of the options may be grayed out or unavailable, depending on the selected source.)

note

For a complete list of menus and options, see page 110. For more information on these menus and options, continue reading this chapter.

4. After highlighting the option you want to adjust, use the pointer button to change the setting. In some cases, you may have to press the Enter button to view a sub-screen for changing the setting.

   - Press the left or right side of the pointer button to adjust a slider bar.

   - To select from two or more settings, use the pointer button to highlight the desired setting and press Enter.

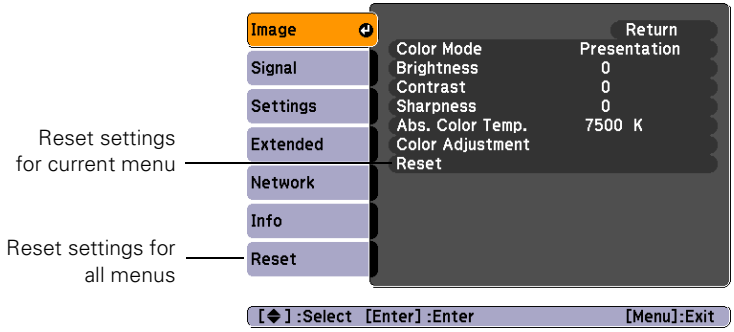
5. After changing the settings, press the Esc button to save your changes and return to the previous menu (or press it repeatedly to exit the menu system).

   You can also press the Menu button to exit.

Restoring the Default Settings

You can use the menu system's Reset options to restore the factory-default settings for all the settings listed in a specific menu, or all the settings in all menus.

To restore the settings in a specific menu, enter the menu whose settings you want to change, select Reset, and confirm as needed. (The example below shows how to reset the Image menu.)



To restore all the projector settings to their factory-default values, select the Reset menu, highlight Reset All, and press Enter.

note

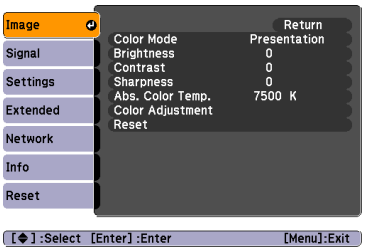
When you select Reset All *in the Reset menu, it does not reset the Input Signal, User's Logo, Multi-screen, Language, Lamp Hours, or Network settings.*

Adjusting the Image

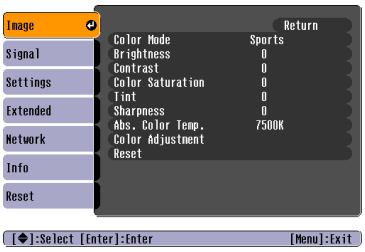
You can use the Image menu to adjust the brightness, sharpness, color, tint, and contrast.

1. Press the Menu button on the projector or remote control and select the Image menu.

   You see a screen similar to one of those below. (The settings will be different depending on the source you are projecting from.)



Computer/RGB Video



Component Video/
Composite Video/
S-Video

note
The available settings vary depending on the input source selected.

2. Use the pointer button to highlight the desired option, then adjust it as needed:

   - Color Mode
     Lets you quickly adjust the color and brightness for various environments. Use either the remote control or the Color Mode setting in the Image menu. You can save a different setting for each source. See page 49 for more information on each color mode.
   - Brightness
     Lightens or darkens the overall image.
   - Contrast
     Adjusts the difference between light and dark areas.
   - Color Saturation
     Adjusts the color depth of the image.
   - Tint
     Adjusts the balance of green to magenta in the image.

note
The Brightness *setting changes the opacity of the projector's LCD panels. You can also change the lamp's brightness. Select* Brightness Control *in the Settings menu, then choose* High *or* Low *(the default setting is* High*).*

- Sharpness
  Adjusts the sharpness of the image.
- Abs. Color Temp.
  Sets a color temperature between 5000 and 10000 °K. (Not available if sRGB is selected as the Color Mode setting.)
- Color Adjustment
  Adjusts the color values. For Customized color mode, select R, G, B, C, M, Y to adjust individual red, green, blue, cyan, magenta, and yellow hue and saturation values. For other color modes, RGB may be selected to adjust red, green, and blue hue and saturation values. (Not available if sRGB is selected as the Color Mode setting.)

Six-Axis Color Adjustment

For special projection material, such as high-quality photographs or artwork, you can adjust the hue and saturation for six different color axes.

1. Follow the instructions on page 96 to open the Image menu and select Color Mode.
2. Press the Enter button to select Customized, then press Esc to return to the Image menu.
3. Select Color Adjustment and press Enter. You see hue and saturation controls on the screen for six colors: R, G, B, C, M, Y (red, green, blue, cyan, magenta, and yellow).
4. Select the color axis you want to adjust and press Enter. You see color controls for hue and saturation.

   Hue changes the balance of color, and saturation changes the strength of the color.
5. Use the ◎ pointer button to adjust the hue and saturation. You see the adjustments reflected on the screen. When you are satisfied with the color, press Esc.
6. Repeat steps 4 and 5 for each color axis you want to adjust.

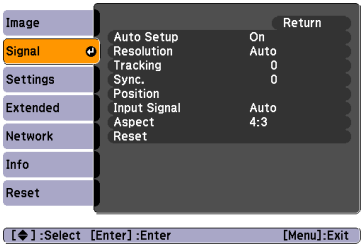
You may need to readjust the color as the lamp in your projector changes over time.

Adjusting Signal Settings

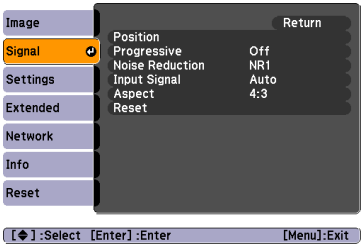
Although the projector normally detects and optimizes the input signal automatically, you can use the Signal menu to make manual adjustments. In addition to changing the position of the projected image, you can correct tracking and sync for computer images, or change the aspect ratio to widescreen format for video images.

1. Press the Menu button and select the Signal menu.

   You see a screen similar to one of those below. (The settings will be different depending on the source you are projecting from.)



Computer/RGB Video



Component Video/S-Video

2. Use the pointer button to highlight the desired option, then adjust it as needed:

   - Auto Setup
     Leave this setting On to automatically optimize computer images. Turn it off if you want to save adjustments you have made to the Tracking, Sync, and Position settings.
   - Resolution
     Set to Auto to have the projector automatically identify the resolution of the input signal. If necessary (because some of the image is missing, for example), adjust to Wide or Normal. You can also select Manual and specify a resolution.

- Tracking
  Adjust this value to eliminate vertical stripes in computer images.
- Sync
  Adjust this value if computer images appear blurry or flicker.
- Position
  If the image is slightly cut off on one or more sides, it may not be centered exactly. Select this setting and use the pointer button to center it.
- Progressive
  For composite video, S-video, component video, and signals from the HDMI port only. Turn this setting on to convert interlaced signals into progressive signals (best for still images). Select Video for viewing general video images. Select Film/Auto for movie images, CG, and animated images. Leave the setting Off for moving images.
- Noise Reduction
  Smooths out rough images. Select your favorite setting. Epson recommends that you select Off when viewing image sources with very low noise, such as DVDs.
- HDMI Video Range
  When you connect to the HDMI input port, set the projector's video range to match the video range setting of your device.
- Input Signal
  If the colors don't look right on the Auto setting, select the setting for the type of equipment you've connected to the Computer1, Computer2, or BNC ports. Choose RGB for a computer or RGB-video connection, and Component for a video player that outputs a component video signal (with connectors labeled Y/Cb/Cr or Y/Pb/Pr).

note

You can also use the remote control's Auto *button to automatically reset the projector's Tracking, Sync, and Position settings. See page 141 for details.*

note

The Progressive setting for signals from the HDMI input port (excluding digital RGB) or component video can only be adjusted when 480i/576i/1080i signals are being input.).

note

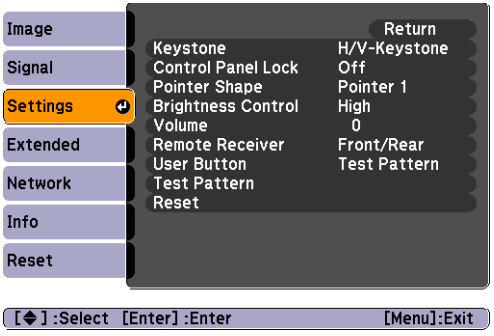
The Noise Reduction and HDMI Video Range settings cannot be set for digital RGB signals.

- Video Signal
  Select the setting for the type of equipment you've connected to the Video1 or Video2 ports. Leave this setting at Auto unless you are using a 60-Hz PAL system (then select PAL60).

- Aspect
  Sets the image's aspect ratio (ratio of width to height). Depending on your projector model and input source, you can select Auto, Normal, 4:3, 16:9, Full, Zoom, or Through; see page 50 for more information.

Customizing Projector Features

You can use the Settings menu to lock the buttons on the projector, adjust audio volume, and customize several other features.



- Keystone
  Adjusts the shape of the image if the projector has been tilted upward or placed at an angle to the screen.

  Select H/V-Keystone to correct horizontal and vertical keystone distortion.

  Select Quick Corner to adjust the shape and position of the projected image.

- Control Panel Lock
  Lets you disable all of the buttons on the projector, or all of the buttons except the ⏻ power button. See page 106 for more information.
- Pointer Shape
  Lets you choose from three pointer shapes. See page 55 for more information.
- Brightness Control
  Lets you select from two levels of brightness. The Low setting reduces power consumption and noise, and extends the lamp's operating life.
- Volume
  Raises or lowers the volume of the projector's speaker.
- Remote Receiver
  Deactivates the projector's front and/or back sensors that detect signals from the remote control. Use this setting to prevent use of the remote control or to stop interference from bright fluorescent lights.
- User Button
  You can assign one of the following six menus to the User button: Brightness Control, Info, Progressive, Test Pattern, Multi-screen, or Resolution. By pressing the button, the assigned menu item selection/adjustment screen is displayed, allowing you to make one-touch settings/adjustments.
- Test Pattern
  Displays a test pattern for use when adjusting the zoom and focus, and when performing keystone correction.

note

You can also adjust the volume using the remote control.

Using the Projector Security Features

note
You can also attach a security cable to the projector to prevent theft (see page 150).

To prevent unauthorized use of the projector, you can do the following:

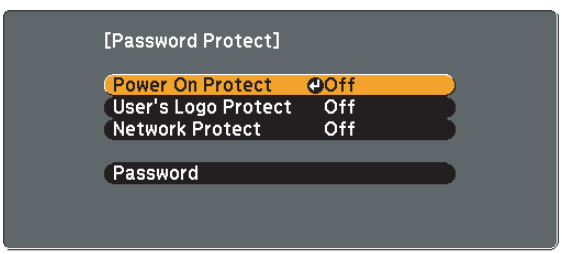
- Assign a password. You can use the password to prevent the projector from being turned on, prevent your custom startup screen from being changed, and lock network settings.
- Create a custom screen that is displayed at startup and/or when the A/V Mute button is pressed. The screen can be locked with a password to discourage theft and provides a way to identify the projector should it be stolen. See page 104.
- Disable the projector's buttons; this is useful, for example, if you're projecting in a classroom and you want to ensure that no one touches the projector's buttons while you're using the remote control. See page 106.

caution
If you lose the remote control, you will not be able to enter the password. Keep the remote control in a safe place at all times. Also, it's a good idea to write down your password.

Enabling Password Protection

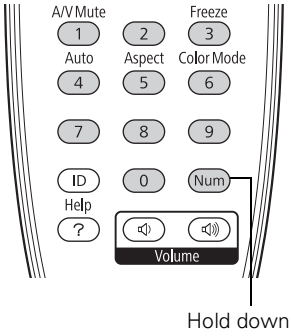
The default setting for the password is 0000. Follow these steps to create a new password:

1. Press the Freeze button on the remote control for about five seconds. You see this screen:



2. Use the ◎ pointer button to select Password and press Enter.
3. When you see a message asking if you want to change the password, select Yes and press Enter.

4. Hold down the Num button on the remote control and use the numeric keypad to enter a four digit password. (The default setting is 0000.)
5. When you see a confirmation message, reenter the password. Then press the Menu button to exit the screen.



To set security options, access the Password Protect screen as described on page 102, and then turn on any of the following options:

- Power On Protect to prevent unauthorized use of the projector. After the projector is plugged in and turned on, you must enter a password to use the projector. For details, see "Starting the Projector with a Password" below.
- User's Logo Protect to prevent your custom screen and display settings from being changed. None of the User's Logo features in the Extended menu can be changed when the User's Logo Protect function is enabled. For details on creating a custom screen, see page 104.
- Network Protect to lock the Network settings in the menu system.

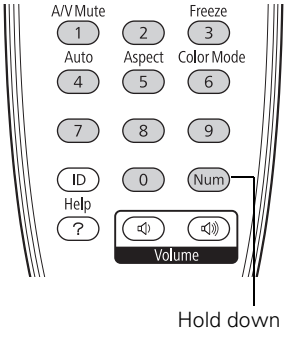
Starting the Projector with a Password

When the password function is enabled, you see this screen when you plug in and turn on the projector:

Hold down the Num button on the remote control and use the numeric keypad to enter the four digit password. The password screen closes and projection begins.

note

If you leave the projector plugged in, the Password Protect Release screen will not appear. It appears only if you unplug and reconnect the power cord.



If the password is not correct, you see a message prompting you to re-enter the password. If you enter an incorrect password three times in succession, you see the message The projector's operation will be locked and the projector switches to standby mode. Disconnect the projector's power cord from the electrical outlet, reconnect it, and turn the projector back on.

When you see the Password screen again, you can try to enter the correct password.

If you enter an incorrect password 30 times in succession, the projector remains locked and you must contact Epson to unlock it.

If you have forgotten the password, contact Epson with the request code number that appears in the Password screen for assistance. See "Where To Get Help" on page 146.

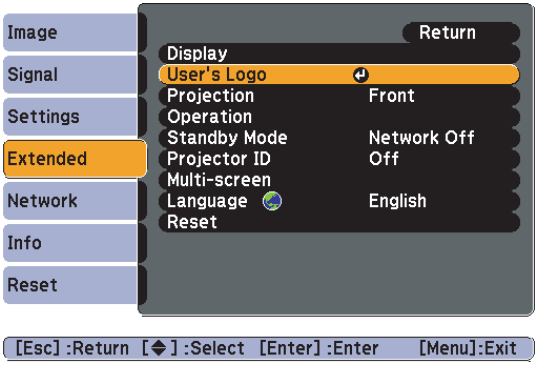
Creating Your Own Startup Screen

You can transfer any image from your computer or video source to the projector and then use it as your startup screen. You can also use it as the screen displayed when the projector is not receiving a signal or when you press the A/V Mute button. The image can be a company logo, slogan, photograph, or any other image you want to use.

Capturing the Image

Start by displaying the image you want to use from either a computer or video source, such as a DVD player or digital camera. Then follow these steps to capture the image and transfer it to the projector:

1. Press the Menu button on the remote control, highlight the Extended menu, and press Enter.
2. Highlight User's Logo and press Enter.



3. When you see a message asking Choose this image as the User's Logo?, select Yes and press Enter. A selection box displays over the image.
4. Use the pointer button to select the area of the image you want to use. Then press Enter.
5. When you see the message Select this image?, highlight Yes and press Enter.
6. Use the arrow buttons to select a zoom factor (display size) and press Enter.
7. When the message Save this image as the User's Logo? appears, select Yes and press Enter. Saving the logo may take a few moments. Do not use your projector, remote control, or video source while the logo is being saved.
8. When you see the message Completed, press Menu to exit.

note

When you choose an image for the user's logo, it erases any previously used image. You can save an image up to 300 × 400 pixels in size. Once you have saved a new user's logo, you cannot return to the factory default logo.

Choosing When to Display the Image

After your image is saved, you can set it to display as the startup screen, the screen you see when there's no signal, or the screen you see when you press the A/V Mute button (see page 53).

1. Press the Menu button, highlight the Extended menu, and press Enter.
2. Select Display and press Enter.
3. Choose from these display options:
   - Set Display Background to Logo to display your image when there is no signal.
   - Set Startup Screen to On to display your image when the projector is warming up.
   - Set A/V Mute to Logo to display your image when you press the A/V Mute button.
4. When you're finished, press Menu to exit.

note
You can lock these settings to prevent them from being changed without a password (see page 102).

Disabling the Projector's Buttons

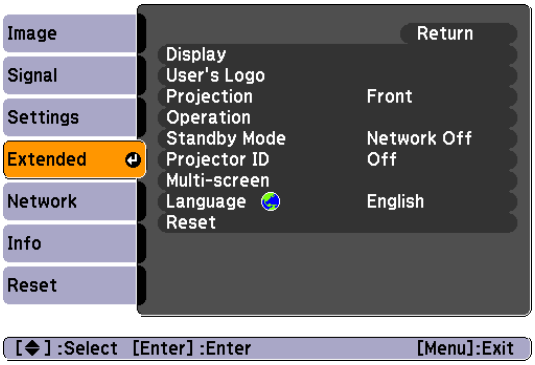
When you enable the Control Panel Lock function, you can lock all of the projector's buttons, or all of the buttons except the ⏻ power button. The remote control can still be used to operate the projector.

1. Press the Menu button, highlight the Settings menu, and press Enter.
2. Select Control Panel Lock and press the Enter button.
3. Select Full Lock (to lock all projector buttons) or Partial Lock (to lock all buttons except the Power button) and press Enter.
4. Select Yes and press Enter to confirm the setting.
5. Press the Menu button to exit.

To disable the Control Panel Lock function, select Off in the Control Panel Lock menu. Or press and hold the Enter button on the projector's control panel for 7 seconds. A message is displayed and the lock is released.

Customizing Power and Operation

You can use the Extended menu to customize the way the projector displays images, enable quick startup, turn sleep mode on or off, and customize other projector operations.



- Display
  Use this setting to turn off the display of messages, change the background color, enable logo display, or turn off the startup screen display.
- Closed Caption
  Enables or disables closed captions. Select CC1, CC2, or OFF. The captions are not visible when the menu is displayed or when you use EMP Monitor to access the projector through your network.
- User's Logo
  Create a custom startup screen, as described on page 104.
- Projection
  Select Front (to project from the front of a screen and right side up), Front/Ceiling (when the projector is mounted upside-down from the ceiling), Rear (to project from behind onto a transparent screen), or Rear/Ceiling (to project from behind onto a transparent screen when the projector is mounted upside-down from the ceiling).
- Operation
  Enable Direct Power On if you want to be able to start the projector when you connect the power cord (without pressing the

note

If you hold down the A/V Mute *button on the remote control for about five seconds, you switch between* Front *and* Front/Ceiling *or* Rear *and* Rear/Ceiling.

note

If Direct Power On is enabled, the power cord is connected, and a power outage occurs, the projector will start when the power is restored.

Do not use the projector at altitudes above 7,500 feet (2,286 meters).

⏻ power button). Enable Sleep Mode if you want the projector to turn off automatically if it is idle (and no signal is received) for 10 minutes (you can adjust the amount of time using the Sleep Mode Timer setting). Enable High Altitude Mode when you are using the projector above 4,900 feet (1,500 meters). Enable BNC Sync Termination when analog (75Ω) termination (such as for switchers) is necessary.

- Standby Mode
  Select Network On to enable the projector to be monitored over a network when it is in standby mode (the power light is orange).
- Projector ID
  Lets you assign a numeric ID to each projector. When you are using multiple projectors, you can use the ID to select the one you want to operate with the remote control. See page 57 for instructions.
- Multi-screen
  Use this option if you want to color-match two or more projectors that are being used to display images near each other, or you are using the multi-screen feature to project from one source (one image) with multiple projectors (see the *EasyMP Operation Guide*). You can make image adjustments at each of five adjustment levels. First choose an Adjustment Level and then adjust the settings for each level: Brightness Correct to adjust the brightness, and Color Correct to adjust the balance between red and green, or blue and yellow. See page 109 for more information about multi-screen color adjustment.
- Language
  Select from 20 languages to be used for the projector menus.

Multi-screen Color Adjustment

You can match the color of projected images when two or more projectors are being used to display images near each other, or when you use the multi-screen feature to project from one source (one image) as described in the *EasyMP Operation Guide*. For each screen, you can set five levels of brightness and color correction.

note

If you use two or more projectors side-by-side, exhaust from adjacent projectors might cause overheating. Leave at least 2 feet (60 centimeters) of space between projectors.

1. Before starting, you may want to assign a numeric ID to each projector. This lets you use the remote control to select the projector you want to adjust. See page 57 for instructions.

   To match the display colors as closely as possible, make sure that all the projectors are set to the same color mode before starting. See page 96 for instructions.

2. Press the Menu button on the remote control. You see the projector's menu screen.
3. Press the Menu button, highlight the Extended menu, and press Enter.
4. Select Multi-screen and press Enter.
5. Start by setting the Adjustment Level to 1 for two projectors. Then use Brightness Correct to match the darker projector to the lighter one. Press Enter to see the effects of your adjustments.
6. Next, adjust the brightness of Level 5 for the same two projectors. Match the brighter projector to the darker one.
7. Adjust and match the brightness of Levels 2, 3, and 4.
8. Adjust and match the G/R color correction for all levels. Then adjust and match the B/Y correction for all levels.
9. If you are using three or more projectors, repeat steps 5 through 8 to match projector 3 to projector 2, then match projector 4 to projector 3, and so on.

Projector Menu and Options List

The table below shows the options you can select based on the projector menu you are viewing. Some options may not be available depending on the projector model and input source you are using.

For more information on these menus and options, read this chapter.

Menu	**Options**
Image	Color Mode Brightness Contrast Color Saturation Tint Sharpness Abs. Color Temp. Color Adjustment Reset
Signal	Auto Setup Resolution Tracking Sync. Position Progressive Noise Reduction HDMI Video Range Input Signal Video Signal Aspect Reset
Settings	Keystone Control Panel Lock Pointer Shape Brightness Control Volume Remote Receiver User Button Test Pattern Reset

Menu	Options
Extended	Display Closed Caption User's Logo Projection Operation Standby Mode Projector ID Multi-screen Language Reset
Network	Basic Wireless LAN (G5150NL and G5350NL only) Security Wired LAN PJLink Password Web Control Password SNMP Mail AMX Device Discovery Projector Name Others Reset
Info	Lamp Hours Source Input Signal Resolution Video Signal Refresh Rate Sync Info Status
Reset	Reset All Reset Lamp Hours

6 Managing Projectors

The software included with your projector lets you monitor and control your projectors from a remote computer.

First connect and configure each projector you want to monitor. You can connect the projector wirelessly in Access Point mode (G5150NL and G5350NL only, as described on page 69) or over a wired network as described in this chapter.

Once you've connected the projectors to the network, you can use any of these tools to manage your projectors:

- Use EMP Monitor (available for Windows only) to see your projectors' status, switch image sources, turn projectors on and off, control basic settings, and register projectors and projector groups. See the *EMP Monitor Operation Guide* for more information.
- Use the mail notification function to receive e-mail alerts about possible problems. See page 116 for more information.
- Use a web browser to monitor the projector. See the *EasyMP Operation Guide* for more information.

This chapter covers the following information:

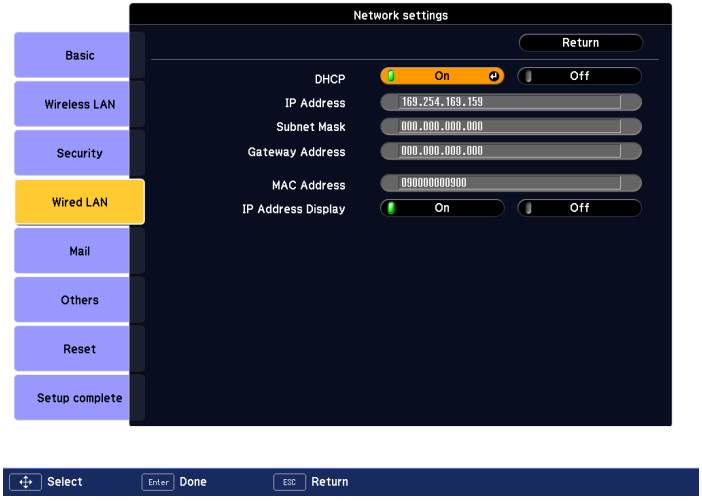
- Connecting your projector to a wired network
- Using e-mail alerts to warn you of problems

Connecting to a Wired Network

Follow these steps to connect the projector to your network and configure it with an IP address:

PowerLite Pro G5150NL and G5350NL

1. Connect the projector to your network using a commercially available 100BaseTX or 10BaseT network cable. Connect the cable to the LAN port on the projector. See page 37.
2. Turn on the projector.
3. Press the Menu button on the remote control, select the Network menu, then press Enter.
4. Choose Network Configuration and press Enter.
5. Choose Wired LAN and press Enter. You see the following screen:



6. Do one of the following:

   - If your network assigns addresses automatically, turn on the DHCP setting.
   - If your network does not assign addresses automatically, turn off DHCP and enter the projector's IP Address, Subnet Mask, and Gateway Address.

     To enter numbers, use the pointer button on the remote control to highlight the number you want to input, then press the Enter button.

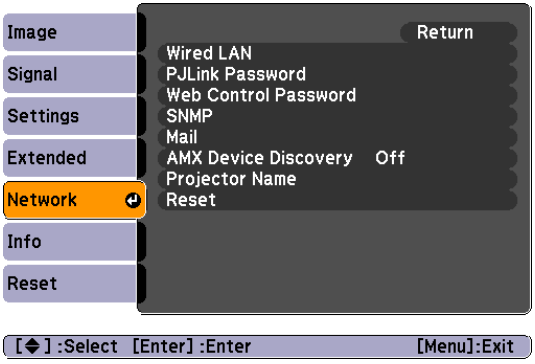
7. When you're done making all necessary changes, select Return, select Setup complete, and then select Yes to confirm that you want to save the changes. Press Menu to exit.

note

If you're a network administrator, you can use the SNMP option to enter a trap IP address. This lets you receive trap alerts for the projectors you're monitoring.

PowerLite Pro G5200WNL

1. Connect the projector to your network using a commercially available 100BaseTX or 10BaseT network cable. Connect the cable to the LAN port on the projector. See page 37.
2. Turn on the projector.
3. Press the Menu button on the remote control, select the Network menu, then press Enter. You see the following screen:



4. Choose Wired LAN and press Enter.

note
If you're a network administrator, you can use the SNMP option to enter a trap IP address. This lets you receive trap alerts for the projectors you're monitoring.

5. Do one of the following:
   - If your network assigns addresses automatically, turn on the DHCP setting.
   - If your network does not assign addresses automatically, turn off DHCP and enter the projector's IP Address, Subnet Mask, and Gateway Address.

     To enter numbers, use the pointer button on the remote control to highlight the number you want to input, then press Enter.
6. When you're done making all necessary changes, select Return, Setup complete, and then Yes to confirm that you want to save the changes. Press Menu to exit.

Using Projector E-mail Alerts

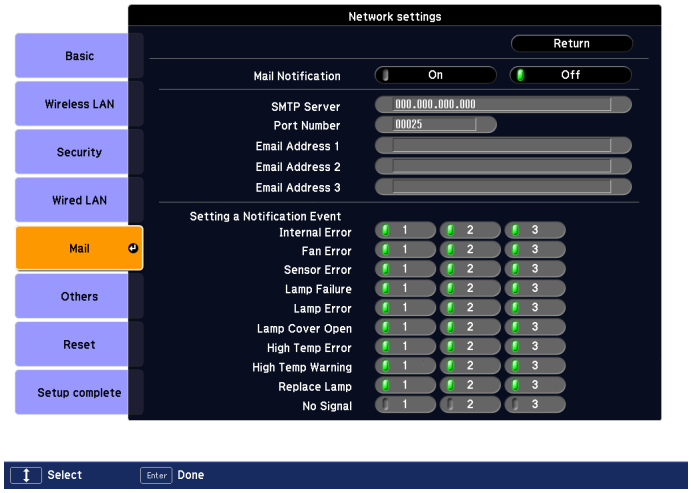
When this feature is enabled, the projector sends you an e-mail alert if it has any problems.

note
You can also set e-mail alerts from EMP Monitor (see the EMP Monitor Operation Guide *for more information).*

PowerLite Pro G5150NL and G5350NL

1. Press the Menu button on the remote control, select the Network menu, then press Enter.
2. Choose Network Configuration and press Enter.

3. Choose Mail, then press Enter. You see a screen like this:



4. Highlight On to receive e-mail notifications, then press Enter.
5. Enter the IP address for the SMTP server for the projector.

   You can enter a number from 0 to 255 in each field of the address. However, the following IP addresses cannot be used: 127.x.x.x, 224.0.0.0 to 255.255.255.255 (where x is a number from 0 to 255).
6. Enter the SMTP server's port number. The default value is 25. You can enter a numeric value from 1 to 65535.
7. Choose one of the Email Address fields, then enter the e-mail address where you want to receive a message when a problem occurs. You can register up to three addresses. You can enter up to 32 alphanumeric characters for the e-mail address.
8. Select problems or warnings to be notified about by e-mail using the Setting a Notification Event section. (Numbers 1 through 3 in this section correspond to the e-mail addresses you entered.)
9. When you're done making all necessary changes, select Return, select Setup complete, and then select Yes to confirm that you want to save the changes. Press Menu to exit the menu system.

note

If a critical problem develops with a projector which causes it to suddenly stop working, it may not be possible for the projector to send a message.

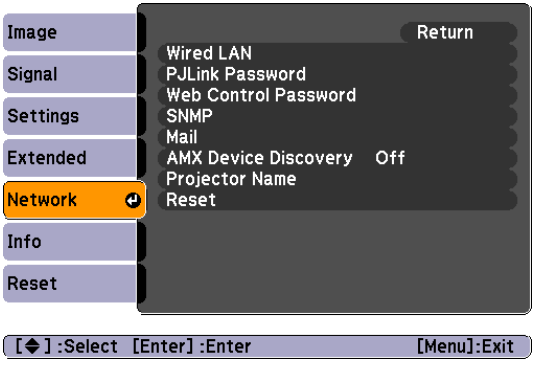
If Standby Mode is set to Network On in the Extended menu, the projector can still be monitored even if the projector is in standby mode (when the power is off).

When the selected problem or warning occurs, an e-mail message is sent to the specified notification addresses. The subject line of the e-mail is EPSON Projector. The e-mail includes the following information:

- Line 1: The name of the projector where the problem has occurred
- Line 2: The IP address of the projector where the problem has occurred
- Line 3: Details of the problem

PowerLite Pro G5200WNL

1. Press the Menu button on the remote control, select the Network menu, then press Enter. You see the following screen:



2. Choose Mail, then press Enter.
3. Highlight On to receive e-mail notifications, then press Enter.
4. Enter the IP address for the SMTP server for the projector.

   You can enter a number from 0 to 255 in each field of the address. However, the following IP addresses cannot be used: 127.x.x.x, 224.0.0.0 to 255.255.255.255 (where x is a number from 0 to 255).

5. Enter the SMTP server's port number. The default value is 25. You can enter a numeric value from 1 to 65535.

6. Choose one of the Email Address fields, then enter the e-mail address where you want to receive a message when a problem occurs. You can register up to three addresses. You can enter up to 32 alphanumeric characters for the e-mail address.
7. Select problems or warnings to be notified about by e-mail. (Numbers 1 through 3 in this section correspond to the e-mail addresses you entered.)
8. When you're done making all necessary changes, select Return, select Setup complete, and then select Yes to confirm that you want to save the changes. Press Menu to exit the menu system.

When the selected problem or warning occurs, an e-mail message is sent to the specified notification addresses. The subject line of the e-mail is EPSON Projector. The e-mail includes the following information:

- Line 1: The name of the projector where the problem has occurred
- Line 2: The IP address of the projector where the problem has occurred
- Line 3: Details of the problem

note

If a critical problem develops with a projector which causes it to suddenly stop working, it may not be possible for the projector to send a message.

If Standby Mode is set to Network On *in the Extended menu, the projector can still be monitored even if the projector is in standby mode (when the power is off).*

7 Maintaining the Projector

Your projector needs little maintenance. All you have to do is keep the lens clean. You may also need to clean the air filter and vent. A clogged air filter or vent can block ventilation needed to cool the projector.

The only parts you should replace are the lamp and air filter. If any other part needs replacing, contact your dealer or a qualified servicer.

This chapter covers the following:

- Cleaning the lens
- Cleaning the projector case
- Cleaning the air filter
- Replacing the air filter
- Replacing the lamp
- Replacing the remote control batteries
- Transporting the projector

warning

Before you clean any part of the projector, turn it off and unplug the power cord. Never open any cover on the projector, except the lamp cover. Dangerous electrical voltages in the projector can injure you severely. Do not try to service this product yourself, except as specifically explained in this User's Guide. *Refer all other servicing to qualified service personnel.*

Cleaning the Lens

caution
Do not rub the lens with harsh materials or subject the lens to shocks, as it can easily become damaged.

Clean the lens whenever you notice dirt or dust on the surface.

To remove dirt or smears on the lens, use a commercially available cloth for cleaning glasses.

Cleaning the Projector Case

caution
Do not use wax, alcohol, benzene, paint thinner, or other chemical detergents. These can damage the case.

Before you clean the case, turn off the projector and unplug the power cord.

- To remove dirt or dust, wipe the case with a soft, dry, lint-free cloth.
- To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral detergent and firmly wring the cloth dry. Then wipe the case.

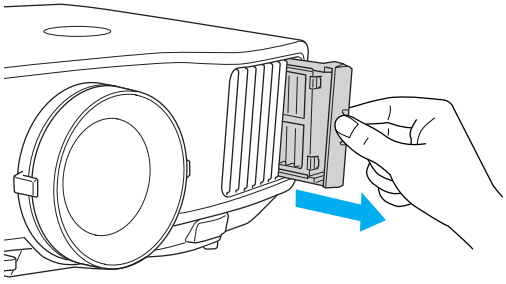
Cleaning the Air Filter

note
To order replacement air filters, request part number V13H134A17. See page 12 for ordering information.

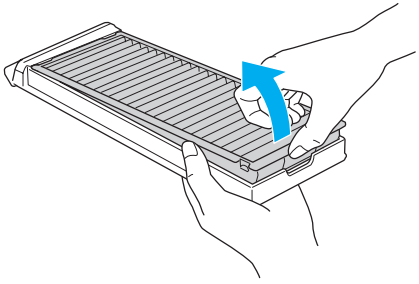
Your projector includes an air filter to ensure the best performance. If dust collects on the air filter (on the side of the projector), clean it as described on page 123. Dust clogs prevent proper ventilation and can cause overheating, which can damage the projector.

Follow these steps:

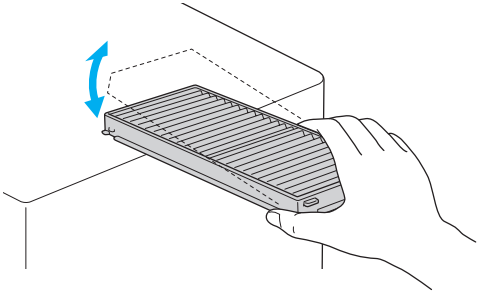
1. Turn off the projector and unplug the power cord.
2. Grip the air filter cover tab and remove the air filter cover as shown.



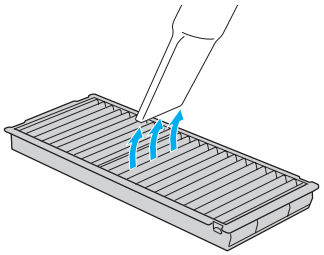
3. Place your finger into the groove and remove the air filter as shown.



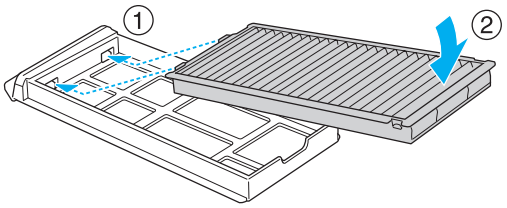
4. With the front of the air filter facing down, tap it four or five times to shake off the dust. Turn it over and tap the other side in the same way to shake off the dust.



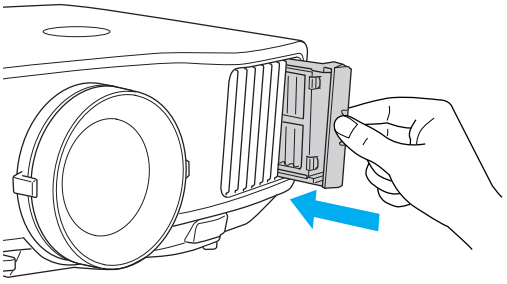
5. To clean any dust remaining on the air filter, use a small vacuum cleaner designed for computer and other office equipment to clean the front. If you don't have one, gently clean the vent with a soft brush (such as an artist's paintbrush).



6. Insert the air filter back into the holes in the cover, then press it firmly into place.



7. Slide the air filter cover in until you feel resistance.

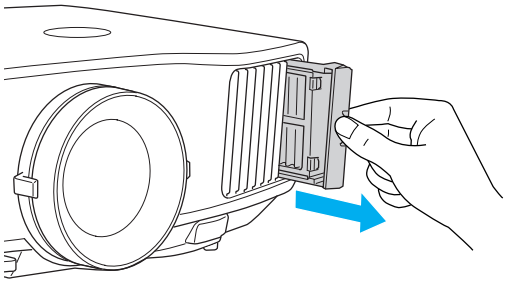


8. If the dirt is difficult to remove or the filter is broken, replace the filter as described on page 125. Contact your dealer or call Epson at 800-GO-EPSON (800-463-7766) to obtain a new filter.

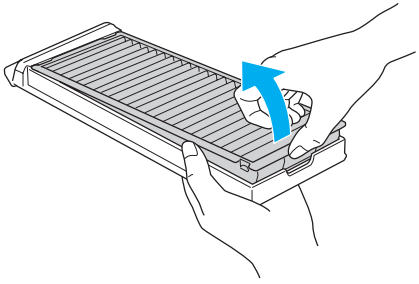
Replacing the Air Filter

Follow these steps to replace the air filter:

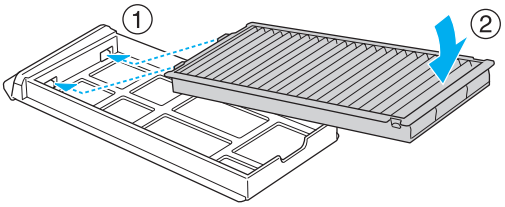
1. Grip the air filter cover tab and remove the air filter cover as shown.



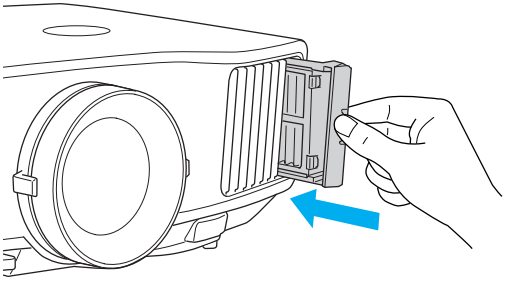
2. Place your finger into the groove and remove the air filter as shown.



3. Insert the new air filter into the holes in the cover, then press it firmly into place.



4. Slide the air filter cover in until you feel resistance.



note

Turn off this product when not in use to prolong the life of the projector.

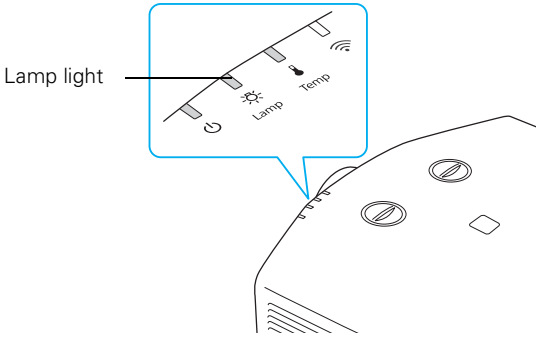
Replacing the Lamp

The life span of the projection lamp is about 2000 hours if Brightness Control in the Settings menu is set to High (default), and 3000 hours if Brightness Control is set to Low.
See page 130 to check the lamp usage.

It is time to replace the lamp when:

- The projected image gets darker or starts to deteriorate.
- The message Replace the lamp appears on the screen when the lamp comes on and the Lamp light flashes orange. To maintain projector brightness and image quality, replace the lamp as soon as possible.

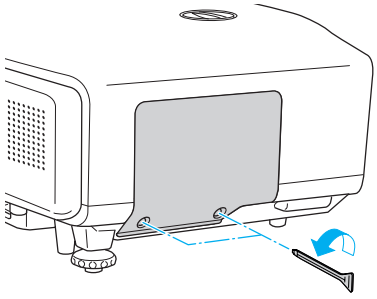
You may also need to replace the lamp if the Lamp light flashes red. See page 135.



Contact your dealer or call Epson at 800-GO-EPSON (800-463-7766). Request part number V13H010L47 (G5150NL) or V13H010L46 (G5350NL and G5200WNL).

Follow these steps to replace the lamp:

1. Turn off the projector and, after the projector beeps twice, unplug the power cord.
2. Let the projector cool for at least an hour (if it has been on). The lamp is extremely hot immediately after use.
3. Loosen the lamp cover screws (you don't need to remove them). Then remove the lamp cover.



warning

Let the lamp cool fully before replacing it.

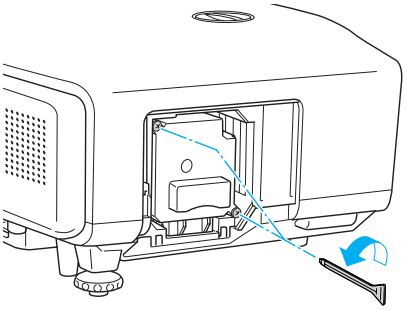
In the unlikely event that the lamp has broken, small glass fragments may be present and should be removed carefully to avoid injury. If the projector has been installed on the ceiling, you should stand to the side of the lamp cover, not underneath it.

If the lamp is used after the replacement period has passed, the possibility that the lamp may break increases. When a lamp replacement message appears, replace the lamp with a new one as soon as possible, even if it is still working.

note

Even when the lamp cover is removed, it is still attached to the projector to prevent it from falling when the projector is mounted on the ceiling.

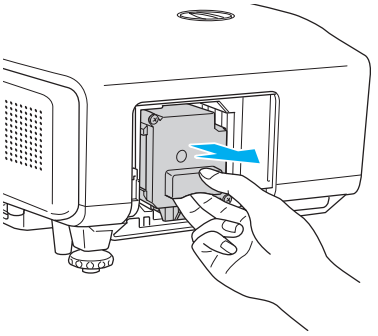
4. Loosen the two screws holding the lamp in place (you can't remove them).



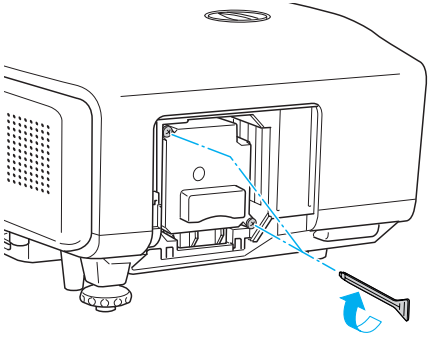
note

Hg The lamp(s) in this product contain mercury. Please consult your state and local regulations regarding disposal or recycling. Do not put in the trash.

5. Hold the lamp as shown and pull it straight out.



6. Gently insert the new lamp. (If it doesn't fit easily, make sure it is facing the right way.)
7. Once the lamp is fully inserted, tighten its screws.



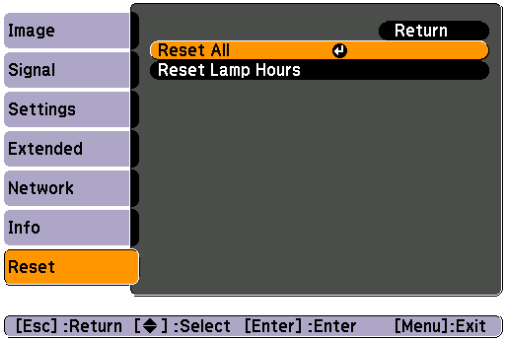
8. Replace the lamp cover, then tighten its screws.
9. Reset the lamp timer as described in the next section.

Resetting the Lamp Timer

After you replace the lamp, you need to reset the lamp timer using the projector's menu.

1. Press the Menu button on the remote control or on the projector's control panel. You see the main menu.
2. Use the ⊙ pointer button on the remote control (or the arrow buttons on the projector) to highlight Reset, then press Enter.

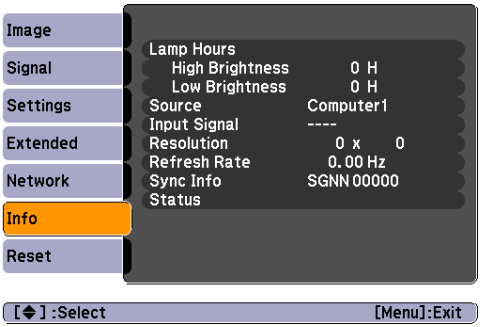
   You see this screen:



3. Select Reset Lamp Hours and press Enter.
4. When you see the prompt, select Yes and press Enter.
5. When you're finished, press Menu to exit.

Checking Lamp Usage

To check the number of hours the lamp has been used, press the Menu button and highlight the Info menu. You see a screen like this:



note

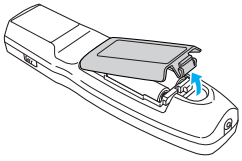
The information displayed depends on the input signal currently selected.

The life span of the lamp is about 2000 hours if the Brightness Control setting in the Settings menu is set to High (default), and 3000 hours if the Brightness Control setting is set to Low. Make sure you have a spare lamp handy if the usage hours on this menu are close to the life span of your lamp.

Replacing the Batteries

Replace the batteries in the remote control as described below:

1. Turn the remote control over.
2. Press down on the tab on the battery cover as you lift the cover off.

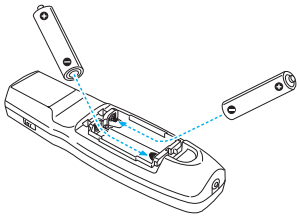


caution

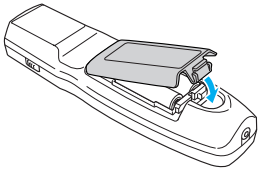
When replacing batteries, take the following precautions:

- *Replace the batteries as soon as they run out. If the batteries leak, wipe away battery fluid with a soft cloth. If fluid gets on your hands, wash immediately.*
- *Do not expose batteries to heat or flame.*
- *Dispose of used batteries according to local regulations.*
- *Do not use batteries other than those specified in this* User's Guide *and do not use batteries of different types or mix old and new batteries.*
- *Keep these batteries out of the reach of children. Batteries are choking hazards and are very dangerous if swallowed.*

3. Install two AA alkaline batteries, inserting the + and – ends as shown.



4. Position the cover as shown, then press down until it snaps into place.



Transporting the Projector

The projector contains many glass and precision parts. Follow these guidelines to prevent damage:

- When shipping the projector for repairs, use the original packaging material if possible, including the protective lens pads. If you do not have the original packaging, use equivalent materials, placing plenty of cushioning around the projector.
- When transporting the projector a long distance, first place it in a hard-shell shipping case, then pack it in a firm box with cushioning around the case.
- Attach the lens cover to the lens.
- If an SD card is installed, remove it from the projector.
- Return the projector feet to their stored (highest) positions.
- Turn the vertical lens shift dial so that the lens is in its lowest position.

note

Epson shall not be liable for any damages incurred during transportation.

8 *Solving Problems*

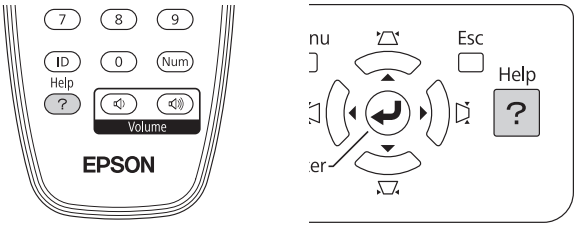
This chapter helps you solve problems with your projector, and tells you how to contact technical support for problems you can't solve yourself. The following information is included:

- Using the projector's on-screen help system
- What to do when the projector's status lights flash
- Solving projector operation problems
- Solving problems with the image or sound
- Solving network problems
- Solving problems with the remote control
- Contacting technical support

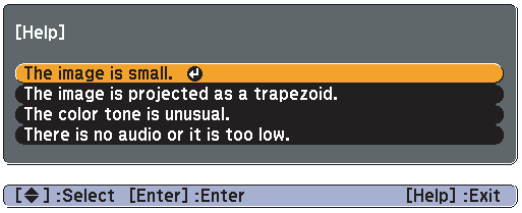
Using On-Screen Help

If the image doesn't look right or your audio isn't working, you can get help by pressing the ? Help button on the back of the projector or on the remote control.

1. Press the ? Help button on the remote control or on the projector.



You see the Help menu:



2. Use the pointer button on the remote control or the navigational buttons on the projector to highlight menu items.
3. Press the Enter button on the remote control or on the projector to select the menu item.
4. To exit the help system, press the ? Help button.

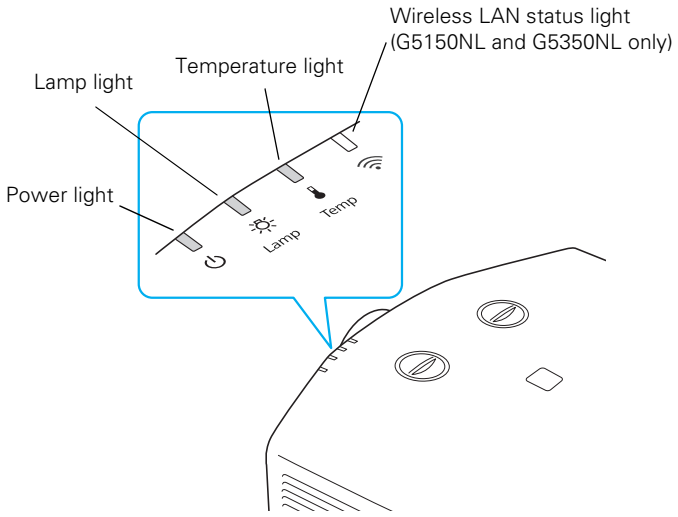
If none of the suggestions solve your problem, see additional solutions to problems in the following sections.

Checking Projector Status

If your projector isn't working correctly, first turn it off and unplug it. Then plug the power cord back in and turn on the projector. If this doesn't solve the problem, check the lights on top of the projector.

What To Do When the Lights Flash

The lights on top of the projector indicate the projector's status.



Refer to the following table for a complete description of the projector's status lights:

Status lights

Light	Status	Description
⏻	Orange	The projector is in sleep or standby mode. You can unplug it or press the ⏻ power button to turn it on.
⏻	Flashing green	The projector is warming up. Wait for the image to appear.
⏻	Green	The projector is operating normally.
⏻	Red or flashing red	There is a problem with the projector. Check the other two lights and the information on page 136 to diagnose the problem.

Status lights (continued)

Light	Status	Description
	Flashing orange	It's time to replace the lamp. See page 126 for instructions. If you continue to use the lamp after the replacement warning, there is an increased possibility that the lamp may break.
	Flashing orange	Rapid cooling is in progress. Although this is not an abnormal condition, projection will stop automatically if the temperature rises higher. Make sure there is plenty of space around and under the projector for ventilation, and that the air filter and vents are clear.
	Red	The projector is overheating, which turns the lamp off automatically. Wait until the projector switches to standby mode (about 5 minutes). Make sure the room temperature is not above 95 °F (35 °C), and there is plenty of space around and under the projector for ventilation. The air filter may be clogged. Clean or replace the air filter as described on pages 122 to 126. If you're using the projector above an altitude of 4,900 feet (1,500 meters), turn on **High Altitude Mode** in the Operation menu (see page 107). If the projector continues to overheat after you clean the air filter, the problem may be caused by damage to the cooling fan or temperature sensor. Contact Epson for help as described on page 146. **Warning:** Except as specifically explained in this *User's Guide*, do not attempt to service this product yourself.
	Flashing red	Power is cut off because of an internal problem. Unplug the power cord and contact Epson for help, as described on page 146.
	Flashing red	There is a problem with the fan or temperature sensor. Stop using the projector, disconnect the power cord, and contact Epson as described on page 146.
	Flashing red	The lamp may be burnt out. First make sure the lamp cover is securely installed. If that's not the problem, the air filter may be clogged. Clean or replace the air filter as described on pages 122 to 126. If this does not resolve the problem, let the lamp cool and then remove it. If the lamp is cracked, replace it as described on page 126. If the lamp is not cracked, reinstall it. If reinstalling doesn't work, replace the lamp. If you're using the projector above an altitude of 4,900 feet (1,500 meters), turn on **High Altitude Mode** in the Operation menu (see page 107). If none of these suggestions resolves the problem, contact Epson as described on page 146.

Solving Projector Operation Problems

The power doesn't turn on.

- If the projector doesn't turn on when you press the ⏻ power button, make sure the power cord is connected to the projector and plugged into a working electrical outlet.
- The power cord may be defective. Disconnect the cord from the outlet and contact Epson as described on page 146.
- If you're using the Direct Power On function and you immediately plug the power cord back in after unplugging it, the power may not turn back on. Press the ⏻ power button to turn the projector back on.

The buttons on the projector don't work.

If the Control Panel Lock function has been enabled, you can't use the buttons on the projector. Try using the remote control instead (make sure it is set to the correct ID). See page 106 for information about the Control Panel Lock function.

Solving Problems With the Image or Sound

No image appears on the screen.

- Check that the ⏻ power light is green, not flashing.
- The projector may be in standby or sleep mode. If the ⏻ power light is orange, press the ⏻ power button to turn the projector on.
- If the power was switched off and then on again, the projector may be cooling down. Wait until the ⏻ power light stops flashing and remains orange; then press the ⏻ power button again.
- Press the A/V Mute button on the remote control to make sure the picture has not been turned off temporarily.

- The attached computer may be in sleep mode or displaying a black screen saver. Try pressing a key on the computer.
- If you are projecting from a DVD player or other video source, make sure you turn it on and press its Play button.
- If you are projecting from a video source, make sure the Video Signal setting is correct (see page 98).
- You can also try resetting all of the configuration menu settings. See page 95.

You've connected a computer and see a blue screen with the message No Signal displayed.

- Make sure the cables are connected correctly, as described on page 19.
- If you've connected a computer and one or more video sources, you may need to press the Source Search button on the projector or one of the source buttons on the remote control to select the correct source. Allow a few seconds for the projector to sync up after pressing the button.
- Make sure the power for your connected equipment is turned on.

If you're using a PC notebook:

- Hold down the Fn key on the keyboard and press the function key that lets you display on an external monitor. It may have an icon such as , or it may be labelled CRT/LCD. Allow a few seconds for the projector to sync up after pressing it. Check your notebook's manual or online help for details.

  On most systems, the key lets you toggle between the LCD screen and the projector, or display on both at the same time.

  If you connect the notebook while the projector or computer are already turned on, the function Fn key that changes the computer's image signal to external output may not work. Turn the computer and the projector off and then back on again.

- Depending on your computer's video card, you might need to use the Display utility in the Control Panel to make sure that both the LCD screen and external monitor port are enabled. See your computer's documentation or online help for details.

If you're using Mac OS X:

1. Open System Preferences.
2. Click Displays.
3. Click Detect Displays.
4. Make sure the VGA Display or Color LCD dialog box is selected.
5. Click the Arrangement or Arrange tab.
6. Make sure the Mirror Displays checkbox is selected.

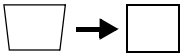
The message Not Supported is displayed.

- Make sure the correct input signal is selected in the Signal menu (see page 98).
- Make sure your computer's resolution and frequency or refresh rate is supported by the projector (see page 159). If necessary, change your computer's settings.

Only part of the computer image is displayed.

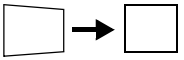
- Press the Auto button on the remote control or the Enter button on the projector.
- Make sure the image Position setting is correct in the Signal menu. See page 99 for more information.
- Press the Aspect button on the remote control.
- Press the Esc button on the remote control to cancel the E-Zoom function.
- Make sure your computer's resolution setting is correct. See the compatible video formats listed on page 159.

- You also may need to modify existing presentation files if you created them for a different resolution. See your software documentation for specific information.
- If you're projecting a wide panel computer image, adjust the Resolution setting (see page 98).
- If you're projecting an image from a computer with dual display activated, turn dual display off.



The image isn't square, but keystone-shaped.

If the image isn't square or rectangular, adjust its shape as described on page 47.



The image contains static or noise.

- If you're using a computer cable longer than 6 feet (1.8 meters), or an extension cable, the image quality may be reduced.
- Keep your computer and video cables away from the power cord as much as possible to prevent interference.
- The video signal may be split between the computer and the projector. If you notice a decline in the projected image quality when the image is displayed simultaneously on your notebook computer and the projector, turn off the notebook's LCD display.
- Make sure the correct input signal is selected in the Signal menu (see page 99).
- If you've used the Quick Corner or Keystone adjustment, you may need to decrease the Sharpness setting in the Image menu (see page 97).
- If you're projecting from a computer, make sure its signal is compatible with the projector. See page 159.

The image is blurry.

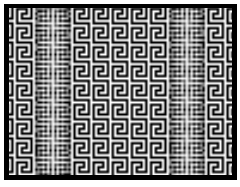
- There may be dirt or smears on the lens. Clean the lens as described on page 122.
- Adjust the focus using the focus ring (see page 46).

- If the projector is angled sharply toward the screen, it may not be possible to focus the entire image. Move the projector to position it more directly in front of the screen.
- Lower the projection angle to reduce the amount of keystone correction required.
- Make sure the projector is within the proper range (projection distance) from the screen (see page 156).
- Make sure the lens is not fogged by condensation. You may need to wait before using the projector after moving it from a cold environment to a warm environment.
- If you're projecting from a computer, you may need to adjust the tracking and sync settings as described in the next section.

You see vertical bands or the image still looks blurry after trying the solutions in the previous section.

- If you're projecting from a computer and displaying an image that contains a lot of fine detail, you may notice vertical bands or some of the characters may look heavy or blurred. Press the Auto button on the remote control or the Enter button on the projector to reset the projector's Tracking, Sync, and Position settings.
- If further adjustment is needed, you can fine-tune the Tracking and Sync settings manually using the Signal menu, as described on page 99.

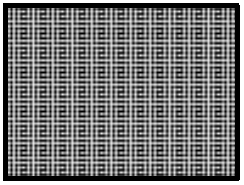
    1. Fill the screen with an image containing fine detail, such as a pattern to appear as your desktop background, or try projecting black text on a white background.
    2. Adjust the Tracking to eliminate vertical bands.



note

You must be projecting an image for the Auto *button to have any effect. It works only with computer images projected through the VGA port.*

3. Adjust the Sync setting to increase the image sharpness.



note

Because of the different technologies used, your projected image may not exactly match the colors on your notebook or computer monitor.

The image is too light or dark, or colors are incorrect.

- Use the Color Mode option in the projector's Image menu to adjust the color (see page 96).
- If you're displaying video, adjust the Color Adjustment and Color Mode settings on the Image menu. You can also try adjusting the Color Saturation, ABS Color Temp, and Tint settings on the Image menu.
- Try adjusting the Brightness and Contrast settings on the Image menu.
- Try adjusting the Brightness Control setting (see page 100).
- Check your computer display settings to correct the color balance.
- The projector's lamp may need to be replaced. See page 126 for instructions.
- Make sure the correct input signal is selected in the Signal menu (see page 99).
- Make sure that all cables are connected to the proper ports and connected securely.

There is no sound, or the sound is not loud enough.

- Use the Volume buttons on the remote control to adjust the volume, or adjust the Volume setting in the Settings menu (see page 101).
- Make sure A/V Mute is not enabled. (The A/V Mute button may have been pressed.)

- If your presentation includes computer audio, make sure the volume control on your computer is not turned all the way down or muted. In Windows, you may be able to check this by clicking the volume control in your Windows system tray (lower right corner of the screen). On a Mac, you may be able to adjust the volume from your menu bar (top right corner of the screen) or via the volume control function keys.
- If you're using a DVD player or other video source, make sure the cables are connected correctly, as described on page 32.
- If you're using a computer audio cable, make sure it is connected to your computer's headphone jack or audio out jack. Connect the other end to the projector's Audio port (beneath the Computer2 port) when the computer's video cable is connected to the Computer1, Computer2, or BNC ports.

Nothing Appears on an External Monitor

The only images that can be displayed on an external monitor are computer images connected through the Computer1, Computer2 or BNC input ports. See page 31.

Solving Network Problems

The projector does not send e-mail alerts even though the e-mail notification function has been turned on.

- Make sure the mail notification function is set correctly in the configuration menu. See page 116.
- Set Standby Mode to Network On in the Extended menu. Otherwise, the projector cannot send e-mails when it is in Standby mode (when the power is off).
- If a critical problem develops with a projector which causes it to suddenly stop working, it may not be possible for the projector to send a message.

- Make sure the projector is plugged in.
- Make sure the LAN cable is connected correctly. Reconnect it if it is not connected or it is not connected correctly (see page 37).

For problems with EasyMP or the EMP NS Connection software, see the *EasyMP Operation Guide*.

For problems with EMP Monitor, see the *EMP Monitor Operation Guide.*

Solving Problems With the Remote Control

The projector doesn't respond to remote control commands.

- Point the remote control towards the receiver.
- Make sure the projector and remote control IDs match. To operate all projectors by remote control regardless of ID settings, set the ID switch on the side of the remote control to Off.
- The remote control's batteries may not be installed correctly or may be low on power. To change the batteries, see page 130.
- Make sure you are within about 49 feet (15 meters) of the projector and within range of the projector's front or back sensor.
- Dim the room lights and turn off any fluorescent lights. Make sure the projector is not in direct sunlight. Strong lighting, especially fluorescent lights, may affect the projector's infrared receivers. Also, turn off any nearby equipment that emits infrared energy, such as a radiant room heater. If necessary, use the Remote Receiver setting to disable the projector's front or back sensor if it continues to pick up interference (see page 101).
- Make sure the Remote Receiver setting isn't disabling both of the projector's sensors (see page 101).
- If any buttons are held for longer than 30 seconds, the remote enters sleep mode. Release any button that is held to wake the remote.
- When the optional remote control cable is connected, the remote control light-emitting area and the projector's remote receiver are disabled. If you're not using the cable, make sure it is disconnected from both the remote control and the projector.

Where To Get Help

Epson provides these technical support services:

Internet Support

Visit Epson's support website for solutions to common problems with the **PowerLite Pro G5150NL**, **PowerLite Pro G5350NL**, or **PowerLite Pro 5200WNL**. You can download utilities and documentation, get FAQs and troubleshooting advice, or e-mail Epson with your questions.

Visit **Presenters Online** to access tips, templates, and training for developing successful presentations.

Speak to a Support Representative

To use the Epson PrivateLine Support service, call (800) 637-7661 and enter the PIN on the included Epson PrivateLine Support card. This is the fastest way of speaking to a live representative, and it's free. This service is available 6 AM to 6 PM, Pacific Time, Monday through Friday, for the duration of your warranty period.

You may also speak with a projector support specialist by dialing one of these numbers:

- U.S.: (562) 276-4394, 6 AM to 6 PM, Pacific Time, Monday through Friday.
- Canada: (905) 709-3839, 6 AM to 6 PM, Pacific Time, Monday through Friday.

Days and hours of support are subject to change without notice. Toll or long distance charges may apply.

Before you call for support, please have the following information ready:

- Product name (PowerLite Pro G5150NL, PowerLite Pro G5350NL, or PowerLite Pro G5200WNL)
- Product serial number (located on the projector)
- Proof of purchase (such as a store receipt) and date of purchase
- Computer or video configuration
- Description of the problem

Purchase Supplies and Accessories

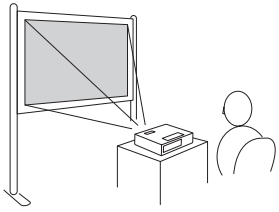
You can purchase screens and other accessories from an Epson authorized reseller. To find the nearest reseller, call 800-GO-EPSON (800-463-7766). Or you can purchase online at www.epsonstore.com (U.S. sales) or www.epson.ca (Canadian sales).

A Projector Installation

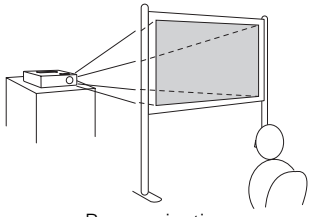
This appendix provides guidelines on installing the projector in a permanent location, such as a theater or conference room.

Installation Guidelines

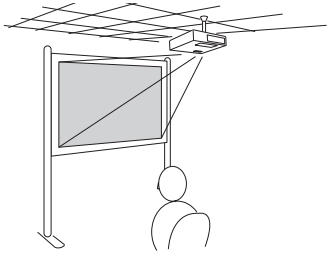
The projector can be installed for four different viewing setups: front projection, ceiling projection, rear projection onto a semi-transparent screen, or rear/ceiling projection, as shown:



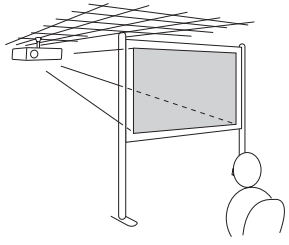
Front projection



Rear projection



Ceiling projection



Rear/ceiling projection

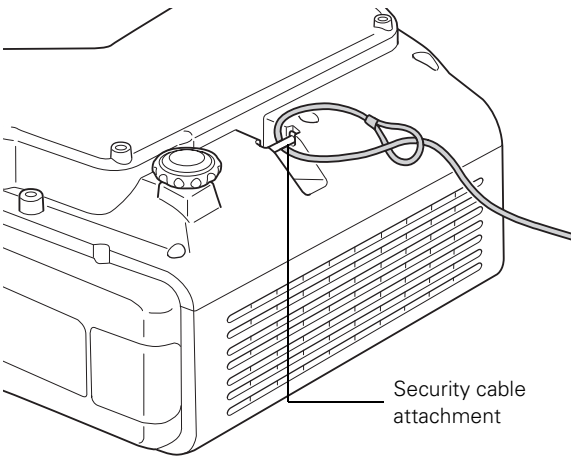
To project from overhead, you'll need the optional ceiling mounting hardware (see page 12). You'll also need to select the appropriate Projection setting in the projector's Extended menu to flip the image upside-down (see page 107).

If you're mounting the projector on the ceiling and you place it above screen level, you'll have to tilt the projector down to position the image on the screen. This causes the image to lose its square shape. You can correct the image using the projector's Quick Corner and/or Keystone functions, as described on page 47.

Security Features

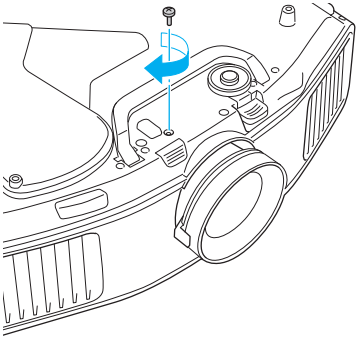
The projector includes security features to prevent its theft when installed or used in public locations:

- Security cable attachment. You can attach a commercially available security cable as shown below to secure the projector to a table or ceiling mount.



- Kensington security slot. The security slot (located above the power inlet) is compatible with the MicroSaver security systems manufactured by Kensington. You can purchase this lock from Epson (see page 12).

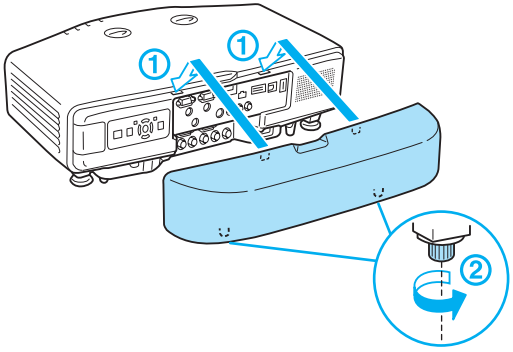
- **Lens theft deterrent screw.** You can lock the lens with the supplied screw, so that the lens cannot be removed.



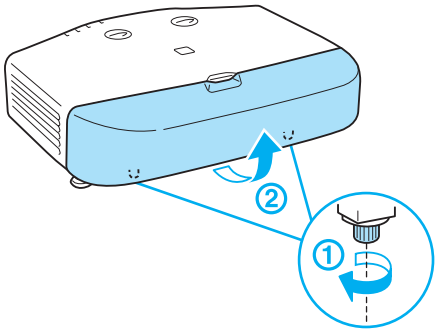
In addition, the projector includes several menu-operated security features. See page 102.

Installing the Cable Cover

Install the rear cable cover to enhance the appearance of the projector and prevent any cables from being loosened or removed. To install the cover, insert its tabs into the slots as shown, then push the cover against the projector and tighten the screws at the bottom of the cover.



To remove the cover (when connecting or disconnecting cables), loosen the screws on the bottom of the cover, pull the bottom of the cover away from the projector as shown.



Installing and Removing the Lens

note

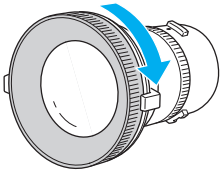
Only install or remove the lens when necessary. If dust enters the projector, projection quality may deteriorate and/or the projector may malfunction.

Do not install or remove the lens when the projector's lens insertion section is facing up. Dust could enter the projector.

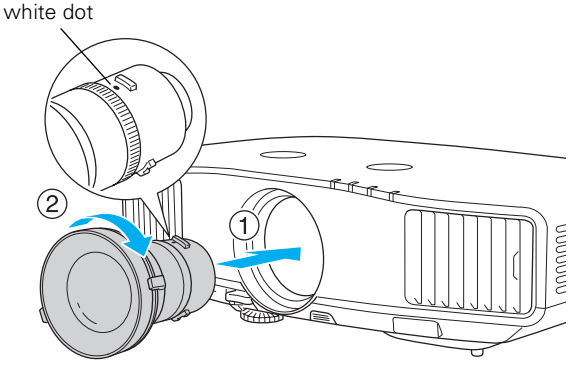
Do not touch the lens with your hand or fingers. If fingerprints or oils are left on the surface of the lens, projection quality will deteriorate.

Installing the Lens

1. Turn off the projector and unplug the power cord.
2. Turn the focus ring clockwise until it stops moving.



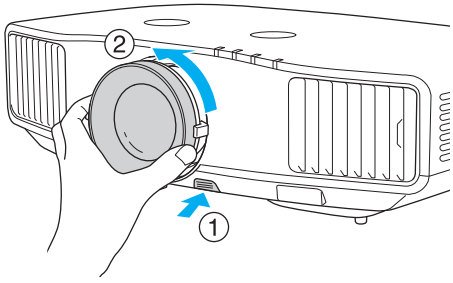
3. Make sure the white dot on the lens is facing up. Insert the lens straight into the projector, then turn clockwise until you hear it click into place.



4. If necessary, attach the lens theft deterrent screw (see page 151).

Removing the Lens

1. Turn off the projector and unplug the power cord.
2. If you've attached the lens theft deterrent screw, remove it (see page 151).
3. Hold down the lens removal button and turn the lens counterclockwise until you hear it click.



4. Remove the lens by pulling it straight out.

B Technical Specifications

General

Type of display	Epson poly-silicon TFT active matrix
Resolution (native format)	PowerLite Pro G5150NL: 1024 × 768 pixels (XGA) PowerLite Pro G5350NL: 1024 × 768 pixels (XGA) PowerLite Pro G5200WNL 1280 × 800 pixels (WXGA)
Color reproduction	16.8 million colors
Brightness	PowerLite Pro G5150NL: 4000 lumens (High Brightness mode) 3200 lumens (Low Brightness mode) PowerLite Pro G5350NL: 5000 lumens (High Brightness mode) 4000 lumens (Low Brightness mode) PowerLite Pro G5200WNL: 4200 lumens (High Brightness mode) 3360 lumens (Low Brightness mode)
Contrast ratio	PowerLite Pro G5150NL: 1000:1 PowerLite Pro G5350NL: 1000:1 PowerLite Pro G5200WNL: 800:1

Image size	PowerLite Pro G5150NL (4:3 image): 30 to 300 inches (76.2 to 762 centimeters) PowerLite Pro G5350NL (4:3 image): 30 to 300 inches (76.2 to 762 centimeters) PowerLite Pro G5200WNL (16:10 image): 30 to 300 inches (76.2 to 762 centimeters)
Projection distance	PowerLite Pro G5150NL (4:3 image): 2.7 to 47.8 feet (0.8 to 14.6 meters) PowerLite Pro G5350NL (4:3 image): 2.7 to 47.8 feet (0.8 to 14.6 meters) PowerLite Pro G5200WNL (16:10 image): 2.7 to 50.3 feet (0.8 to 15.3 meters)
Projection methods	Front, rear, upside-down (ceiling mount)
Internal sound system	7 W monaural
Optical aspect ratio	PowerLite Pro G5150NL: 4:3 (horizontal:vertical) PowerLite Pro G5350NL: 4:3 (horizontal:vertical) PowerLite Pro G5200WNL: 16:10 (horizontal:vertical)
Zoom ratio (standard lens, not included)	1:1.8
Noise level	PowerLite Pro G5150NL: 29 dB in Low Brightness mode, 35 dB in High Brightness mode PowerLite Pro G5150NL: 31 dB in Low Brightness mode, 38 dB in High Brightness mode PowerLite Pro G5200WNL: 30 dB in Low Brightness mode, 37 dB in High Brightness mode

Keystone correction	±40° vertical, ±20° horizontal (standard lens)
Mouse compatibility	Requires optional Wireless IR Mouse Receiver (part number V12H007T16)

Projection Lamp

Type	UHE (Ultra High Efficiency)
Power consumption	PowerLite Pro G5150NL 210 W PowerLite Pro G5350NL 275 W PowerLite Pro G5200WNL 275 W
Lamp life	Approx. 2000 hours (High Brightness mode) Approx. 3000 hours (Low Brightness mode)
Part number	PowerLite Pro G5150NL V13H010L47 PowerLite Pro G5350NL V13H010L46 PowerLite Pro G5200WNL V13H010L46

note

Lamp life results depend upon the Brightness Control setting you've selected, environmental conditions, and usage.

Turn off this product when not in use to prolong the life of the projector.

Remote Control

Range	49.2 feet (15 meters)
Batteries (2)	Alkaline AA

Dimensions

Height	5.3 inches (135 mm), feet retracted
Width	18.5 inches (470 mm)
Depth	12.3 inches (311.5 mm), without lens

Weight (without lens)	PowerLite Pro G5150NL 14.8 lb (6.7 kg) PowerLite Pro G5200WNL 14.8 lb (6.7 kg) PowerLite Pro G5350NL 15 lb (6.8 kg)

Electrical

Rated frequency	50/60 Hz AC
Power supply	100/240 VAC, 3.8A/1.7 A
Power consumption	PowerLite Pro G5150NL Operating: 100 to 120 VAC, 343 W 220 to 240 VAC, 327 W Standby: 100 to 120 VAC, 0.4 W (network off) 10 W (network on) 220 to 240 VAC, 0.6 W (network off) 12 W (network on) PowerLite Pro G5350NL Operating: 100 to 120 VAC, 423 W 220 to 240 VAC, 398 W Standby: 100 to 120 VAC, 0.4 W (network off) 10 W (network on) 220 to 240 VAC, 0.6 W (network off) 12 W (network on) PowerLite Pro G5200WNL Operating: 100 to 120 VAC, 423 W 220 to 240 VAC, 398 W Standby: 100 to 120 VAC, 0.4 W (network off) 10 W (network on) 220 to 240 VAC, 0.6 W (network off) 12 W (network on)

Environmental

Temperature	Operating: 32 to 104 °F (0 to 40 °C) 32 to 95 °F (0 to 35 °C) (over 1,500 m/4,921 ft, with High Altitude Mode and High Brightness mode active) Storage: 14 to 140 °F (–10 to 60 °C)
Humidity (non-condensing)	Operating: 20 to 80% RH
Operating altitude	0 to 9,843 ft (0 to 3,000 m)

Safety and Approvals

United States	FCC 47CFR Part 15B Class B (DoC) UL60950-1 First Edition (cTUVus Mark)
Canada	ICES-003 Class B CSA C22.2 No. 60950-1
CE Marking	EMC Directive (2004/108/EC) IEC 60950-1 First edition

Pixelworks™ DNX™ ICs are used in this projector.

Compatible Video Formats

These projectors support the high definition video and computer display formats listed beginning on page 160, as well as traditional NTSC, PAL, and SECAM video standards.

To project images output from a computer, the computer's video card must be set at a refresh rate (vertical frequency) that's compatible with the projector. Some images are automatically resized using Epson's SizeWize™ technology to display in the projector's native format. The frequencies of some computers may not allow images to display correctly; see your computer's documentation for details.

PowerLite Pro G5150NL/G5350NL

Compatible video formats

Mode	Refresh Rate (Hz)	Resolution
VGA EGA*	70	640 × 350
VGA—60	60	640 × 480
VESA—72*	72	640 × 480
VESA—75*	75	640 × 480
VESA—85*	85	640 × 480
SVGA—56*	56	800 × 600
SVGA—60	60	800 × 600
SVGA—72*	72	800 × 600
SVGA—75*	75	800 × 600
SVGA—85*	85	800 × 600
XGA—60*	60	1024 × 768
XGA—70*	70	1024 × 768
XGA—75*	75	1024 × 768
XGA—85*	85	1024 × 768
SXGA1—70*	70	1152 × 864
SXGA1—75*	75	1152 × 864
SXGA1—85*	85	1152 × 864
WXGA—60	60	1280 × 800
WXGA—75*	75	1280 × 800
WXGA—85*	85	1280 × 800
SXGA2—60	60	1280 × 960
SXGA2—75*	75	1280 × 960
SXGA2—85*	85	1280 × 960
SXGA3—60	60	1280 × 1024
SXGA3—75*	75	1280 × 1024
SXGA3—85*	85	1280 × 1024
WXGA1—60*	60	1280 × 768
WXGA2—60*	60	1360 × 768
WXGA+60**	60	1440 × 900
WXGA+75**	75	1440 × 900
WXGA+85**	85	1440 × 900
SXGA+60	60	1400 × 1050
SXGA+75*	75	1400 × 1050
SXGA+85*	85	1400 × 1050
UXGA—60	60	1600 × 1200

Compatible video formats (continued)

Mode	Refresh Rate (Hz)	Resolution
iMAC VGA*	117	640 × 480
iMAC SVGA*	95	800 × 600
iMAC XGA*	75	1024 × 768
MAC13*	67	640 × 480
MAC16*	75	832 × 624
MAC19*	75	1024 × 768
MAC19-60*	59	1024 × 768
MAC21*	75	1152 × 870
NTSC	60	—
NTSC 4:43	60	—
PAL	50	—
N-PAL	50	—
M-PAL	60	—
PAL—60	60	—
SECAM	50	—
TV525i (480i)	60	—
TV625i (576i)	50	—
SDTV525p (480p)	60	—
SDTV625p (576p)	50	—
HDTV750p (720p)	60	—
HDTV750p (720p)	50	—
HDTV1125i (1080i)	60	—
HDTV1125i (1080i)	50	—
HDTV1125p (1080p)	60	—
HDTV1125p (1080p)	50	—
HDTV1125p (1080p)**	24	—

*Analog only

** HDMI only

PowerLite Pro G5200WNL

Compatible video formats

Mode	Refresh Rate (Hz)	Resolution
VGA EGA*	70	640 × 350
VGA—60	60	640 × 480
VESA—72*	72	640 × 480
VESA—75*	75	640 × 480
VESA—85*	85	640 × 480
SVGA—56*	56	800 × 600
SVGA—60	60	800 × 600
SVGA—72*	72	800 × 600
SVGA—75*	75	800 × 600
SVGA—85*	85	800 × 600
XGA—60*	60	1024 × 768
XGA—70*	70	1024 × 768
XGA—75*	75	1024 × 768
XGA—85*	85	1024 × 768
SXGA1—70*	70	1152 × 864
SXGA1—75*	75	1152 × 864
SXGA1—85*	85	1152 × 864
WXGA—60	60	1280 × 800
WXGA—75*	75	1280 × 800
WXGA—85*	85	1280 × 800
SXGA2—60	60	1280 × 960
SXGA2—75*	75	1280 × 960
SXGA2—85*	85	1280 × 960
SXGA3—60	60	1280 × 1024
SXGA3—75*	75	1280 × 1024
SXGA3—85*	85	1280 × 1024
WXGA1—60*	60	1280 × 768
WXGA2—60*	60	1360 × 768
WXGA+60**	60	1440 × 900
WXGA+75**	75	1440 × 900
WXGA+85**	85	1440 × 900
SXGA+60	60	1400 × 1050
SXGA+75*	75	1400 × 1050
SXGA+85*	85	1400 × 1050
UXGA—60	60	1600 × 1200
WSXGA+60*,***	60	1680 × 1050

Compatible video formats (continued)

Mode	Refresh Rate (Hz)	Resolution
iMAC VGA*	117	640 × 480
iMAC SVGA*	95	800 × 600
iMAC XGA*	75	1024 × 768
MAC13*	67	640 × 480
MAC16*	75	832 × 624
MAC19*	75	1024 × 768
MAC19-60*	59	1024 × 768
MAC21*	75	1152 × 870
NTSC	60	—
NTSC 4:43	60	—
PAL	50	—
N-PAL	50	—
M-PAL	60	—
PAL—60	60	—
SECAM	50	—
TV525i (480i)	60	—
TV625i (576i)	50	—
SDTV525p (480p)	60	—
SDTV625p (576p)	50	—
HDTV750p (720p)	60	—
HDTV750p (720p)	50	—
HDTV1125i (1080i)	60	—
HDTV1125i (1080i)	50	—
HDTV1125p (1080p)	60	—
HDTV1125p (1080p)	50	—
HDTV1125p (1080p)**	24	—

*Analog only

** HDMI only

*** Available only when **Wide** is selected as the Resolution.

C Notices

This appendix includes safety instructions and other important information about your projector.

Important Safety Instructions

Follow these safety instructions when setting up and using the projector:

- Do not look into the lens when the projector is on. The bright light can damage your eyes.
- Do not place the projector on an unstable cart, stand, or table.
- Do not operate the projector on its side, or while tilted to one side. Do not tilt the projector forward or back at a greater angle than that specified for vertical keystone correction (see page 157).
- If the projector is mounted on a ceiling, it should be installed by qualified technicians using mounting hardware designed for use with this projector.
- If you use a ceiling mount and apply adhesives to the mount to prevent the screws from loosening, or if you use lubricants or oils on the projector, the projector case may crack and the projector may fall from its ceiling mount. This could cause serious injury to anyone under the mount and could damage the projector. When installing or adjusting a ceiling mount, do not use adhesives to prevent the screws from loosening and do not use oils or lubricants.
- Do not stand on the projector or place heavy objects on it.
- Do not use the projector where it may be exposed to rain, water, or excessive humidity.
- Unplug the projector from the wall outlet before cleaning. Use a dry cloth (or, for stubborn dirt or stains, a moist cloth that has been wrung dry) for cleaning. Do not use liquid or aerosol cleaners.
- Never spill liquid of any kind into the projector.
- Do not use the projector where it may be exposed to excessive dust or smoke.

- Never push objects of any kind through the cabinet slots.
- Do not use or store the projector or remote control in a hot location, such as near a heater, in direct sunlight, or in a closed vehicle.
- Do not block the slots and openings in the projector case. They provide ventilation and prevent the projector from overheating. Do not operate the projector on a sofa, rug, or other soft surface, or set it on top of loose papers, which could block vents underneath your projector. If you are setting up the projector near a wall, leave at least 7.9 inches (20 cm) of space between the wall and the air exhaust vent.
- Do not operate the projector in a closed-in cabinet unless proper ventilation is provided.
- If you are using two or more projectors side-by-side, leave at least 2 feet (60 cm) of space between the projectors to allow for proper ventilation.
- You may need to clean the air filter and vent. A clogged air filter or vent can block ventilation needed to cool the projector.
- Do not store the projector outdoors for an extended length of time.
- Do not use the projector outside the required temperature range of 32 to 104 °F (0 to 40 °C). Doing so may cause an unstable display and could lead to projector damage.
- Do not store the projector outside the required temperature range of 14 to 140 °F (–10 to 60 °C) or in direct sunlight for long periods of time. Doing so may cause damage to the case.
- Do not touch the plug during an electrical storm. Otherwise, you may receive an electric shock.
- Unplug the projector when it will not be used for extended periods.
- Unplug the projector from the wall outlet and refer servicing to qualified service personnel under the following conditions: If it does not operate normally when you follow the operating instructions, or exhibits a distinct change in performance; If smoke, strange odors, or strange noises come from the projector; If the power cord or plug is damaged or frayed; If liquid or foreign objects get inside the projector, or if it has been exposed to rain or water; If it has been dropped or the housing has been damaged.
- Except as specifically explained in this *User's Guide*, do not attempt to service this product yourself. Refer all servicing to qualified personnel. Opening or removing covers may expose you to dangerous voltages and other hazards.
- Never open any covers on the projector except as specifically explained in this *User's Guide*. Never attempt to disassemble or modify the projector. Refer all repairs to qualified service personnel.

- Use the type of power source indicated on the projector. Use of a different power source may result in fire or electric shock. If you are not sure of the power available, consult your dealer or power company.
- If you use the projector in a country other than where you purchased it, use the correct power cord for that country.
- Do not overload wall outlets, extension cords, or power strips. Do not insert the plug into a dusty outlet. This can cause fire or electric shock.
- Take the following precautions when handling the plug: Do not hold the plug with wet hands. Do not insert the plug into an outlet with dust present. Insert the plug firmly into the outlet. Do not pull the power cord when disconnecting the plug; always be sure to hold the plug when disconnecting it. Failure to comply with these precautions could result in fire or electric shock.
- Do not place the projector where the cord can be walked on.
- Ⓗg The lamp(s) in this product contain mercury. Please consult your state and local regulations regarding disposal or recycling. Do not put in the trash.
- Do not place anything that can become warped or damaged by heat near the exhaust vents. Do not bring your hands or face close to the vents while projection is in progress.
- Before you move the projector, make sure its power is turned off, the plug is disconnected from the outlet, and all cables are disconnected.
- Do not project images while the detachable lens cover is still attached. Heat may cause the lens cover to melt, and if you touch the lens cover you could get burned.
- Never try to remove the lamp immediately after use because it will be extremely hot. Before removing the lamp, turn off the power and wait at least an hour to allow the lamp to cool completely.
- Do not place the source of an open flame, such as a lit candle, on or near the projector.
- Do not modify the power cord. Do not place heavy objects on top of the power cord or bend, twist, or pull it excessively. Keep the power cord away from hot electrical appliances.
- If the lamp breaks, ventilate the room to prevent gases contained in the lamp from being inhaled or coming in contact with the eyes or mouth.
- If the projector is mounted overhead and the lamp breaks, be careful to prevent pieces of glass from falling into your eyes when you open the lamp cover.

WARNING: The cords included with this product contain chemicals, including lead, known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling.*** *(Provided in accordance with Proposition 65 in Cal. Health & Safety Code §25249.5 et seq.)*

FCC Compliance Statement

For United States Users

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

For Canadian Users

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

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le materiel brouilleur du Canada.

Index

A

A/V Mute
  button, 53
  display settings, 106
Access Point mode, 69 to 79
Access point, checking IP address of, 76 to 77
Accessories, 12 to 13
Ad Hoc mode, 62 to 68
Air filter
  cleaning, 122 to 124
  ordering, 12
  replacing, 125 to 126
AirPort, configuring for wireless, 67 to 68, 77 to 79
Altitude, 108, 136, 159
Anti-theft device, 13, 19, 150 to 151
Aspect ratio, 156
Audio
  connecting equipment, 32 to 34
  controlling volume, 54
  problems, troubleshooting, 142 to 143
  turning off (using A/V Mute), 53
Authentication, 88 to 89
Auto Setup setting, 98

B

Background screen settings, 106
Bands, vertical, 141
Blackboard color mode, 49
Blank screen, 42 to 44
Blurry image, 140 to 141
Brightness, 155
Brightness control, 101
Brightness setting, 96

C

Cable cover, 151 to 152
Cables
  BNC to VGA, 22
  component, 13, 24, 28
  composite, 24, 26
  HDMI, 25
  illustrations, 16
  network, 37
  ordering, 12 to 13
  remote control cable set, 12
  security, 150
  S-video, 13, 27
  VGA, 20, 29
Capturing image, 105
Ceiling mount, 13, 149 to 150
Certificate validation, 89
Chalkboard, projecting on, 49
Cleaning
  air filter, 122 to 124
  lens, 122
  projector case, 122
Closed captions, 107
Color
  correcting, 49, 96 to 98
  multi-screen adjustment, 109
  problems, 142
  saturation, 96
  settings, 96 to 97
  temperature, 97
Color Mode, 49, 96
Component video cable, 13, 24, 28
Composite video cable, 24, 26
Computer
  connecting to, 19 to 23
  selecting source, 42

Connecting projector
to audio equipment, 32 to 34
to computer, 19 to 23
to digital camera, 35 to 36
to external monitor, 31
to speakers, 34
to video equipment, 24 to 30
Contrast setting, 96
Control Panel Lock setting, 101, 106
Custom screen, *see* User's Logo
Customized color mode, 49

D

Default settings, restoring, 95
DHCP, 70, 74, 78
Digital camera
connecting to, 35 to 36
Direct Power On, 39
Distance from projector to screen, 17, 156
Documentation, 10 to 11
DVD player, connecting, 24 to 30

E

EAP authentication, 88 to 89
EAP-TLS certificate, 89
EasyMP, problems, 144
Electrical specifications, 158
E-mail alerts, 116 to 119
EMP Monitor, problems, 144
EMP NS Connection
creating password for, 61
problems, 144
Encryption, 67, 73, 85 to 86
Environmental specifications, 159
Epson
accessories, 12 to 13
presentation tips, 11
PrivateLine Support, 11
technical support, 11, 146 to 147
warranty, 12
ESSID, 64, 67, 73, 78
Ethernet connection, 114 to 116
Extended menu, 107 to 108
External monitor, connecting, 31
E-Zoom button, 54

F

FCC compliance statement, 168
Filter, *see* Air filter
Focusing image, 46
Freeze button, 53

G

Game color mode, 49
Gateway address, checking, 76

H

HDMI cable, 25
HDTV images, video formats, 161, 163
Height of image, adjusting, 45 to 46
Help, 146 to 147
Help system, using, 134
Help, Epson, 11
High altitude, 108, 136

I

Image
adjusting, 44 to 50, 96 to 98
blurry, 140 to 141
capturing and saving in projector, 105
correcting shape, 47 to 48, 100, 140
fitting on screen, 98, 139 to 140
height, adjusting, 45 to 46
problems with, 137 to 142
projecting on chalkboard, 49
raising, 45 to 46
selecting source, 42, 52
shape, correcting, 47 to 48
size and projection distance, 17, 156
turning off (using A/V Mute), 53
turning off temporarily, 53
zooming, 46, 54
Image menu, 96 to 97

Info menu, 130
Infrastructure mode, *see* Access Point mode
Input Signal setting, 99
Input signal, selecting, 42, 52
Installing
  cable cover, 151 to 152
  projector, 149 to 150
Instant Off, 40

K

Kensington anti-theft device, 13, 19, 150
Keystone correction, 47 to 48, 100, 140, 157
Keyword, 61

L

Lamp
  number of hours used, 130
  ordering, 12
  replacing, 126 to 129
  specifications, 157
  status light, 135 to 136
Lamp timer, resetting, 129
Language setting, 108
Laptop computer
  connecting to, 20 to 23
  display problems, 43 to 44, 137 to 139
  selecting source, 42, 52
LEAP authentication, 88 to 89
Lens theft deterrent screw, 151
Lens, cleaning, 122
Lights, status, 135 to 136
Logo, saving on projector, 104 to 106

M

Mac
  configuring for wireless, 67 to 68, 77 to 79
  display problems, 139
Manuals, 10 to 11
Menus
  changing settings, 94 to 95
  default settings, restoring, 95
  Extended, 107 to 108
  Image, 96 to 97
  Info, 130
  network, 60, 62, 69, 85, 87, 88, 89, 114, 115, 116, 118
  Settings, 100 to 101
  Signal, 98 to 100
  User's Logo, 105
Monitor, connecting, 31
Monitoring projector
  e-mail notifications, 116 to 119
Mouse
  compatibility, 157
  using remote control as, 56
Multiple projectors, controlling, 57 to 58
Multi-screen color adjustment, 109

N

Network
  cable, 37
  managing projector remotely, 113 to 119
  problems, 143 to 144
  wired, 114 to 116
  wireless, 59 to 92
Network settings, configuring, 59 to 89
No Signal message, 42 to 43, 138 to 139
Noise level, 156
Noise Reduction setting, 99
Not Supported message, 139
NS Connection, *see* EMP NS Connection
Numeric keypad, using, 103

O

Optical aspect ratio, 156
Options for projector, 12 to 13

P

Password
  protection, 102 to 104
  remote access, 61
  request code, 104
PEAP authentication, 88 to 89
Photo color mode, 49
Picture source, selecting, 42, 52
Picture, *see* Image
PIN code method, 79, 83 to 84
Pointer shape, 101
Pointer tool, using, 55
Positioning
  image, 45 to 46
  projector, 17 to 19, 149 to 150
Power
  button, 39
  specifications, 158
  status light, 39, 135 to 136
Presentation color mode, 49
Presentations
  computer, 19 to 23
  digital camera, 35 to 36
  room conditions, 17, 52
  tips and training, 11
  using the pointer tool, 55
  video, 24 to 30
  wireless, 59 to 92
Presenters Online, 11
PrivateLine Support, 11
Problems
  color, 142
  image, 137 to 142
  monitoring projector, 143 to 144
  no signal, 42 to 43, 138 to 139
  remote control, 145
  sound, 142 to 143
  using on-screen help, 134
Progressive format, 99
Projecting without screen, 49
Projection lamp, *see* Lamp
Projector
  cleaning, 122
  disabling buttons, 106
  distance from screen, 17, 156
  installing, 149 to 150
  lamp specifications, 157
  Menu and Options List, 110 to 111
  monitoring remotely, 113 to 119
  options, 12 to 13
  password protection, 102 to 104
  positioning, 17 to 19, 149 to 150
  resolution, 155
  security features, 102 to 106, 150 to 151
  specifications, 155 to 159
  transporting, 131
  troubleshooting, 133 to 147
  turning off, 40
  turning on, 37 to 39
  unpacking, 16
  viewing information about, 130
Projector ID
  checking, 58
  setting, 57
Push button method, 79, 81 to 82

Q

Quick Corner, 47, 100

R

Raising image, 45 to 46
Rear-screen projection, 107, 149 to 150
Registration, 12

Remote control
A/V Mute button, 53
as wireless mouse, 56
battery used, 157
controlling multiple projectors, 57 to 58
correcting color, 49, 96 to 98
E-Zoom button, 54
Freeze button, 53
ID, 58
numeric keypad, using, 103
pointer tool, using, 55
problems, 145
range, 157
specifications, 157
switching sources, 52
troubleshooting, 145
Remote Receiver setting, 101
Replacing lamp, 126 to 129
Request code, password, 104
Resetting lamp timer, 129
Resetting menu options, 95
Resize image, 50
Resolution, 50, 139, 155
Resolution setting, 98

S

Safety
instructions, 165 to 168
specifications, 159
Saturation setting, 96
Screen
blank, 42 to 44
distance from projector, 17, 156
ordering, 13
startup screen, creating, 104 to 105
Screen image, *see* Image
SD card, inserting, 36 to 37
Security
cables, 150
Control Panel Lock, 106
identifying logo, 105 to 106
Kensington lock, 13, 150
password protection, 102 to 104
Settings menu, 100 to 101
Sharpness setting, 97
Signal menu, 98 to 100
Six-axis color adjustment, 97 to 98
Sleep mode, 38, 108
Sound, troubleshooting, 142
Source, selecting, 42, 52
Speaker, specifications, 156
Speakers, connecting, 34
Specifications
brightness, 155
dimensions, 157
electrical, 158
environmental, 159
general, 155
lamp, 157
remote control, 157
resolution, 155
safety, 159
speaker, 156
Sports color mode, 49
sRGB color mode, 49
SSID, *see* ESSID
Startup screen
creating, 104 to 106
settings, 106
user's logo, *see* User's Logo
Status lights, 135 to 136
Support, *see* Technical support
S-video cable, 13, 27
Switching picture source, 42, 52
Sync setting, 99
Synchronization, adjusting, 141 to 142

T

Technical support, 11, 146 to 147
Temperature
requirements, 159
status light, 135 to 136
Temperature, color, 97
Test pattern, displaying, 101
Text color mode, 49
Theatre color mode, 49
Tint setting, 96
Tracking, adjusting, 141 to 142

Transporting projector, 131
Troubleshooting
  blank screen, 42 to 44, 137 to 139
  cut-off image, 139 to 140
  distorted image, 47 to 48
  EasyMP problems, 144
  EMP Monitor problems, 144
  EMP NS Connection problems, 144
  image and sound problems, 137 to 143
  network problems, 143 to 144
  no signal, 42 to 43, 138 to 139
  projector problems, 133 to 147
  remote control problems, 145
  tapered image, 47 to 48
Turning off picture (using A/V Mute), 53
Turning off projector, 40

U

Unpacking projector, 16
USB, display, 21 to 22
User's Logo
  creating, 105
  display settings, 106

V

VCR, connecting, 24 to 30
VGA video cable, 20, 29
Video
  cables, 12 to 13, 16, 24
  connecting video equipment, 24 to 30
  formats, supported, 159 to 163
  selecting source, 42, 52
Video Signal setting, 100
Volume, controlling, 54, 101

W

Warning lights, 135 to 136
Warranty, 12
WEP encryption, 85 to 86
Wi-Fi, 79 to 84
Windows
  configuring for wireless, 65 to 67, 71 to 75
  display problems, 138
  Vista, 90 to 92
Wired network, 114 to 116
Wireless
  EAP, 88 to 89
  EAP-TLS, 89
  LEAP, 88 to 89
  module, 12
  PEAP, 88 to 89
  presentation, 59 to 92
  WEP encryption, 85 to 86
  Windows Vista, 90 to 92
  WPA security, 87
Wireless, mouse, 56
WPA security, 87
WPS connection, 79 to 84

Z

Zoom ratio, 156
Zooming image, 46, 54

EPSON®

EXCEED YOUR VISION