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PROJECTOR OWNER'S MANUAL

Epson

PowerLite Pro G5450WU

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PowerLite® Pro G5450WUNL/G5550NL/ G5650WNL/G5750WUNL/ G5950NL 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.

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Welcome

The PowerLite® Pro G5450WUNL/G5550NL/G5650WNL/G5750WUNL/G5950NL is an easy-to-use, lightweight projector. It offers up to 4000 lumens (G5450WUNL), 4500 lumens (G5550NL/G5650WNL/G5750WUNL), or 5200 lumens (G5950NL) of brightness, and provides a native XGA (G5550NL/G5950NL), WXGA (G5650WNL), or WUXGA (G5450WUNL/G5750WUNL) resolution. You can connect it to a wide range of computers and video sources. You can project from a USB storage device, or over a wired network. With the optional Wireless 802.11g/b/a Module, you can also project over an 802.11g, 802.11b, or 802.11a wireless network.

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
- 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:

- Crestron RoomView® compatibility
- A Message Broadcasting plug-in that allows you to project timely alerts and messages to all networked projectors (to download both the plug-in and its instructions, visit Epson's support website at **www.epson.com/support** (U.S.) or **www.epson.ca/support** (Canada) and select your product).
- Closed captioning for the hearing impaired
- HDMI for digital connectivity (HDCP compatible)
- DVI-D for digital connectivity (G5450WUNL/G5750WUNL only, HDCP compatible)
- 2000:1 (G5650WNL/G5950NL), 1500:1 (G5750WUNL), or 1000:1 (G5450WUNL/G5550NL) contrast ratio
- Color match images from two or more 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
- Project two images simultaneously using the projector's split screen feature
- Project images from different networked computers simultaneously using the EasyMP Multi PC Projection software
- Project X-ray photographs and other medical images using DICOM SIM Color Mode
- Choose between four different test patterns to use when adjusting the projector image

note
The projector is not a medical device and cannot be used for medical diagnosis.

Using Your Documentation

Please follow these guidelines as you read through this manual:

- 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

In some cases, the illustrations in this guide may not exactly match your projector.

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* card
  Provides information for connecting the projector to your equipment, displaying and adjusting the image, using the remote control, and solving display problems.
- *EasyMP Network Projection Operation Guide*
  Provides detailed instructions on using your projector in a network environment (installed along with this manual from the projector CD). To set up your projector for the first time on a network, see page 75 of this User's Guide.
- *EasyMP Multi PC Projection Operation Guide*
  Provides instructions on using the EasyMP Multi PC Projection software to simultaneously display images from different networked computers (installed along with this manual from the projector CD).
- *EasyMP Monitor Operation Guide*
  Provides instructions on using the EasyMP Monitor software (available for Windows only) to manage projectors on a network. To view the guide, double-click the icon on your computer's desktop. To download the software, double-click the Download EasyMP Monitor icon on your computer's desktop.

- *PC Free Operation Guide*
  Provides instructions on projecting files from a USB storage device or digital camera that is connected to the projector (installed along with this manual from the projector CD).
- *EasyMP Slide Converter Operation Guide*
  Provides instructions on using the EasyMP Slide Converter software to convert and transfer presentations to a USB storage device so that you can present without using a computer (installed along with this manual from the projector CD).
- Built-in help system
  Provides assistance for common problems. Available from the Help button on the projector or the remote control. See page 146 for details.
- epson.com/support (U.S.) or epson.ca/support (Canada)
  Download FAQs and e-mail your questions to Epson support.
- PrivateLine® 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. See page 161 for more information.

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, 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, Canada, or Puerto Rico. See the brochure included with your projector for details.

Register online using your projector CD or at epson.com/webreg. Registering also lets you receive special updates on new accessories, products, and services.

Optional Accessories

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

Product	**Part number**
Replacement lamp for PowerLite Pro G5450WUNL/G5550NL	V13H010L62
Replacement lamp for PowerLite Pro G5650WNL/G5750WUNL/G5950NL	V13H010L63
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>	V12H004S05 V12H004M04 V12H004M05 V12H004L06 V12H004R03
Wireless 802.11g/b/a Module	V12H306P11
Quick Connect Wireless Key	ELPAP08
Wireless IR Mouse Receiver for Remote Control	V12H007T16
Hardwire Remote Control Cable Set	V12H005C28
Replacement remote control	1531179
Advanced projector ceiling mount with precision gear Adjustable suspended ceiling channel kit False ceiling plate kit Structural round ceiling plate Adjustable extension column (pipe) 8″–11″	ELPMBPRG ELPMBP01 ELPMBP02 ELPMBP03 ELPMBC01
Kensington® MicroSaver®security lock	ELPSL01
ES3000 Ultra Portable Projector Screen 50-inch portable screen (4:3 aspect ratio) DUET™ portable projector screen	V12H002S3Y ELPSC06 ELPSC80
Component-to-VGA video cable	ELPKC19
Distribution amplifier	ELPDA01
DC-10s document camera	ELPDC10S
1-Year Extended Depot Repair Service Plan	EPPFTPB1
1-Year Extended Exchange Warranty	EPPEXPB1
2-Year Extended Depot Repair Service Plan	EPPFTPB2

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 Blu-ray Disc™/DVD player, digital tuner, cable or satellite box, video game console, camcorder, or digital camera, and/or to your local area network.

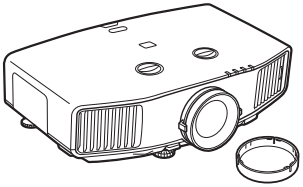
You can also connect the projector to a USB storage device or digital camera.

Follow the instructions in this chapter on:

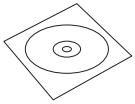
- Unpacking the projector
- Positioning the projector
- Connecting to a computer
- Connecting to video equipment
- Connecting an external monitor
- Playing sound through the projector
- Connecting to a digital camera or other USB device
- Turning the projector on and off

Unpacking the Projector

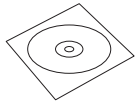
After unpacking the projector, make sure you have all these parts:



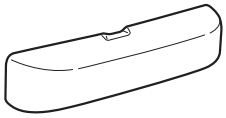
Projector and lens cap



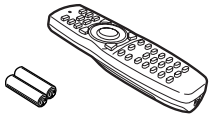
PDF manuals and registration CD-ROM



Projector software CD-ROM



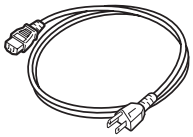
Cable cover



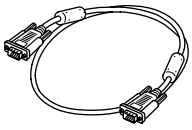
Remote control and 2 AA batteries



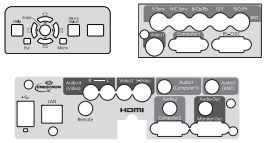
Password Protected sticker



Power cord



VGA computer cable



Interface label stickers

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.

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 143 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 DVI-D video signal from your video device, you'll need a DVI cable (G5450WUNL/G5750WUNL only) or DVI/HDMI conversion cable.

- To receive a component video signal from your 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 provided with your video equipment.
- To receive an S-Video signal, you'll need an S-Video cable. One may be provided with your video equipment.

Positioning the Projector

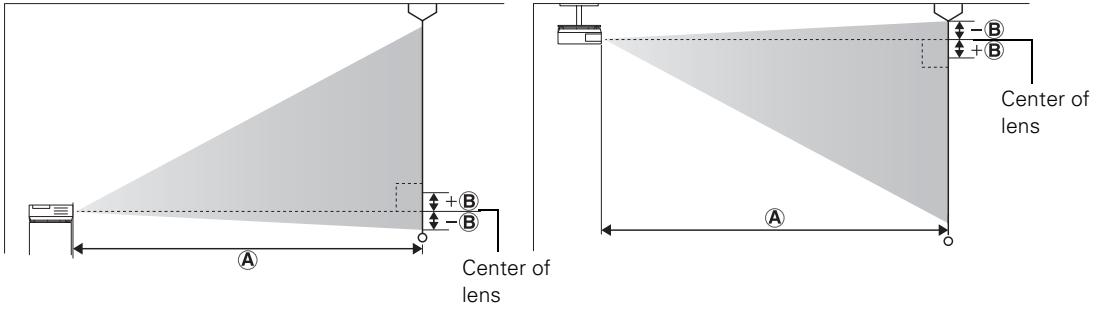
If the projector isn't already installed in the room you're using, you'll probably want to place it on a table in front of the screen. This lets you stand in the front of the room, face the audience, and remain close enough to the equipment to be able to control it. Try to leave as much space as possible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

Use the illustrations and tables below to help you determine placement. Image size increases with distance, but can vary depending on which lens you're using and whether you've adjusted the image with vertical lens shift, zoom, or any other settings.

You can also use the Image Size Calculator on the Epson website.

note

You can mount the projector on the ceiling, or place it behind a translucent screen for rear projection. See page 163 for details.



PowerLite Pro G5450WUNL/G5750WUNL, 16:10 image, Standard zoom lens (part number V12H004S05)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
50 inches	53 to 97 inches (136 to 246 cm)	-2.2 to 28.7 inches (-6 to 73 cm)
60 inches	64 to 117 inches (164 to 296 cm)	-2.7 to 34.5 inches (-7 to 88 cm)
80 inches	87 to 156 inches (220 to 397 cm)	-3.5 to 45.9 inches (-9 to 117 cm)
100 inches	109 to 196 inches (276 to 497 cm)	-4.4 to 57.4 inches (-11 to 146 cm)
150 inches	164 to 294 inches (417 to 747 cm)	-6.6 to 86.1 inches (-17 to 219 cm)
200 inches	219 to 393 inches (557 to 998 cm)	-8.9 to 114.9 inches (-22 to 292 cm)
250 inches	275 to 491 inches (698 to 1248 cm)	-11.1 to 143.6 inches (-28 to 365 cm)
300 inches	330 to 590 inches (838 to 1499 cm)	-13.3 to 172.3 inches (-34 to 438 cm)

PowerLite Pro G5450WUNL/G5750WUNL, 16:10 image, Middle throw zoom lens 1 (part number V12H004M04)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
50 inches	95 to 146 inches (242 to 371 cm)	-2.2 to 28.7 inches (-6 to 73 cm)
60 inches	115 to 176 inches (292 to 447 cm)	-2.7 to 34.5 inches (-7 to 88 cm)
80 inches	155 to 236 inches (393 to 599 cm)	-3.5 to 45.9 inches (-9 to 117 cm)
100 inches	194 to 296 inches (494 to 751 cm)	-4.4 to 57.4 inches (-11 to 146 cm)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
150 inches	294 to 446 inches (746 to 1132 cm)	-6.6 to 86.1 inches (-17 to 219 cm)
200 inches	393 to 595 inches (998 to 1512 cm)	-8.9 to 114.9 inches (-22 to 292 cm)
250 inches	492 to 745 inches (1250 to 1893 cm)	-11.1 to 143.6 inches (-28 to 365 cm)
300 inches	591 to 895 inches (1502 to 2273 cm)	-13.3 to 172.3 inches (-34 to 438 cm)

PowerLite Pro G5450WUNL/G5750WUNL, 16:10 image, Middle throw zoom lens 2 (part number V12H004M05)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
50 inches	142 to 219 inches (361 to 555 cm)	-2.2 to 28.7 inches (-6 to 73 cm)
60 inches	172 to 264 inches (437 to 670 cm)	-2.7 to 34.5 inches (-7 to 88 cm)
80 inches	231 to 354 inches (588 to 898 cm)	-3.5 to 45.9 inches (-9 to 117 cm)
100 inches	291 to 444 inches (739 to 1127 cm)	-4.4 to 57.4 inches (-11 to 146 cm)
150 inches	439 to 669 inches (1116 to 1698 cm)	-6.6 to 86.1 inches (-17 to 219 cm)
200 inches	588 to 894 inches (1494 to 2270 cm)	-8.9 to 114.9 inches (-22 to 292 cm)
250 inches	737 to 1119 inches (1871 to 2841 cm)	-11.1 to 143.6 inches (-28 to 365 cm)
300 inches	885 to 1344 inches (2249 to 3413 cm)	-13.3 to 172.3 inches (-34 to 438 cm)

PowerLite Pro G5450WUNL/G5750WUNL, 16:10 image, Long throw zoom lens (part number V12H004L06)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
50 inches	215 to 292 inches (546 to 742 cm)	-2.2 to 28.7 inches (-6 to 73 cm)
60 inches	259 to 352 inches (659 to 894 cm)	-2.7 to 34.5 inches (-7 to 88 cm)
80 inches	348 to 472 inches (885 to 1199 cm)	-3.5 to 45.9 inches (-9 to 117 cm)
100 inches	437 to 592 inches (1111 to 1503 cm)	-4.4 to 57.4 inches (-11 to 146 cm)
150 inches	660 to 891 inches (1675 to 2263 cm)	-6.6 to 86.1 inches (-17 to 219 cm)
200 inches	882 to 1190 inches (2240 to 3024 cm)	-8.9 to 114.9 inches (-22 to 292 cm)
250 inches	1104 to 1490 inches (2804 to 3784 cm)	-11.1 to 143.6 inches (-28 to 365 cm)
300 inches	1326 to 1789 inches (3369 to 4545 cm)	-13.3 to 172.3 inches (-34 to 438 cm)

PowerLite Pro G5450WUNL/G5750WUNL, 16:10 image, Rear projection wide lens (part number V12H004R03)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
50 inches	31 inches (80 cm)	13.2 inches (34 cm)
60 inches	38 inches (96 cm)	15.9 inches (40 cm)
80 inches	51 inches (130 cm)	21.2 inches (54 cm)
100 inches	64 inches (163 cm)	26.5 inches (67 cm)
150 inches	97 inches (247 cm)	39.7 inches (101 cm)
200 inches	130 inches (330 cm)	53 inches (135 cm)

PowerLite Pro G5650WNL, 16:10 image, Standard zoom lens (part number V12H004S05)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
30 inches	32 to 59 inches (81 to 149 cm)	-1.5 to 17.4 inches (-4 to 44 cm)
40 inches	43 to 79 inches (109 to 200 cm)	-2 to 23.2 inches (-5 to 59 cm)
50 inches	54 to 99 inches (138 to 251 cm)	-2.5 to 29 inches (-6 to 74 cm)
60 inches	66 to 119 inches (167 to 302 cm)	-3 to 34.8 inches (-8 to 88 cm)
80 inches	88 to 159 inches (224 to 405 cm)	-4 to 46.4 inches (-10 to 118 cm)
100 inches	111 to 200 inches (281 to 507 cm)	-5 to 58 inches (-13 to 147 cm)
150 inches	167 to 300 inches (424 to 762 cm)	-7.6 to 87.1 inches (-19 to 221 cm)
200 inches	223 to 401 inches (567 to 1018 cm)	-10.1 to 116.1 inches (-26 to 295 cm)
250 inches	280 to 501 inches (710 to 1273 cm)	-12.6 to 145.1 inches (-32 to 369 cm)
300 inches	336 to 602 inches (853 to 1529 cm)	-15.1 to 174.1 inches (-38 to 442 cm)

PowerLite Pro G5650WNL, 16:10 image, Middle throw zoom lens 1 (part number V12H004M04)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
40 inches	77 to 118 inches (196 to 301 cm)	-2 to 23.2 inches (-5 to 59 cm)
50 inches	97 to 149 inches (247 to 378 cm)	-2.5 to 29.0 inches (-6 to 74 cm)
60 inches	117 to 179 inches (298 to 456 cm)	-3 to 34.8 inches (-8 to 88 cm)
80 inches	158 to 241 inches (401 to 611 cm)	-4 to 46.4 inches (-10 to 118 cm)
100 inches	198 to 302 inches (504 to 766 cm)	-5 to 58 inches (-13 to 147 cm)
150 inches	300 to 454 inches (761 to 1154 cm)	-7.6 to 87.1 inches (-19 to 221 cm)
200 inches	401 to 607 inches (1018 to 1542 cm)	-10.1 to 116.1 inches (-26 to 295 cm)
250 inches	502 to 760 inches (1275 to 1930 cm)	-12.6 to 145.1 inches (-32 to 369 cm)
300 inches	603 to 913 inches (1532 to 2318 cm)	-15.1 to 174.1 inches (-38 to 442 cm)

PowerLite Pro G5650WNL, 16:10 image, Middle throw zoom lens 2 (part number V12H004M05)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
40 inches	115 to 177 inches (292 to 450 cm)	-2 to 23.2 inches (-5 to 59 cm)
50 inches	145 to 223 inches (369 to 567 cm)	-2.5 to 29.0 inches (-6 to 74 cm)
60 inches	175 to 269 inches (446 to 684 cm)	-3 to 34.8 inches (-8 to 88 cm)
80 inches	236 to 361 inches (600 to 917 cm)	-4 to 46.4 inches (-10 to 118 cm)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
100 inches	297 to 453 inches (754 to 1150 cm)	-5 to 58 inches (-13 to 147 cm)
150 inches	448 to 682 inches (1139 to 1733 cm)	-7.6 to 87.1 inches (-19 to 221 cm)
200 inches	600 to 912 inches (1524 to 2316 cm)	-10.1 to 116.1 inches (-26 to 295 cm)
250 inches	751 to 1141 inches (1909 to 2899 cm)	-12.6 to 145.1 inches (-32 to 369 cm)
300 inches	903 to 1371 inches (2294 to 3482 cm)	-15.1 to 174.1 inches (-38 to 442 cm)

PowerLite Pro G5650WNL, 16:10 image, Long throw zoom lens (part number V12H004L06)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
40 inches	174 to 237 inches (442 to 602 cm)	-2 to 23.2 inches (-5 to 59 cm)
50 inches	219 to 298 inches (558 to 757 cm)	-2.5 to 29.0 inches (-6 to 74 cm)
60 inches	265 to 359 inches (673 to 912 cm)	-3 to 34.8 inches (-8 to 88 cm)
80 inches	355 to 481 inches (903 to 1223 cm)	-4 to 46.4 inches (-10 to 118 cm)
100 inches	446 to 603 inches (1133 to 1533 cm)	-5 to 58 inches (-13 to 147 cm)
150 inches	673 to 909 inches (1709 to 2308 cm)	-7.6 to 87.1 inches (-19 to 221 cm)
200 inches	899 to 1214 inches (2284 to 3084 cm)	-10.1 to 116.1 inches (-26 to 295 cm)
250 inches	1126 to 1519 inches (2860 to 3859 cm)	-12.6 to 145.1 inches (-32 to 369 cm)
300 inches	1352 to 1825 inches (3435 to 4635 cm)	-15.1 to 174.1 inches (-38 to 442 cm)

PowerLite Pro G5650WNL, 16:10 image, Rear projection wide lens (part number V12H004R03)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
30 inches	19 inches (47 cm)	7.9 inches (20 cm)
40 inches	25 inches (64 cm)	10.6 inches (27 cm)
50 inches	32 inches (81 cm)	13.2 inches (34 cm)
60 inches	39 inches (98 cm)	15.9 inches (40 cm)
80 inches	52 inches (132 cm)	21.2 inches (54 cm)
100 inches	65 inches (166 cm)	26.5 inches (67 cm)
150 inches	99 inches (251 cm)	39.7 inches (101 cm)
200 inches	132 inches (336 cm)	53 inches (135 cm)

PowerLite Pro G5550NL/G5950NL, 4:3 image, Standard zoom lens (part number V12H004S05)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
30 inches	30 to 56 inches (77 to 142 cm)	0 to 18 inches (0 to 46 cm)
40 inches	41 to 75 inches (104 to 190 cm)	0 to 24 inches (0 to 61 cm)
50 inches	52 to 94 inches (131 to 239 cm)	0 to 30 inches (0 to 76 cm)
60 inches	62 to 113 inches (158 to 287 cm)	0 to 36 inches (0 to 91 cm)
80 inches	84 to 151 inches (213 to 385 cm)	0 to 48 inches (0 to 122 cm)
100 inches	105 to 190 inches (267 to 482 cm)	0 to 60 inches (0 to 152 cm)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
150 inches	159 to 285 inches (403 to 725 cm)	0 to 90 inches (0 to 229 cm)
200 inches	212 to 381 inches (539 to 968 cm)	0 to 120 inches (0 to 305 cm)
250 inches	266 to 477 inches (675 to 1211 cm)	0 to 150 inches (0 to 381 cm)
300 inches	319 to 572 inches (811 to 1454 cm)	0 to 180 inches (0 to 457 cm)

PowerLite Pro G5550NL/G5950NL, 4:3 image, Middle throw zoom lens 1 (part number V12H004M04)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
40 inches	73 to 112 inches (185 to 285 cm)	0 to 24 inches (0 to 61 cm)
50 inches	92 to 141 inches (234 to 359 cm)	0 to 30 inches (0 to 76 cm)
60 inches	111 to 170 inches (283 to 433 cm)	0 to 36 inches (0 to 91 cm)
80 inches	150 to 229 inches (380 to 581 cm)	0 to 48 inches (0 to 122 cm)
100 inches	188 to 287 inches (478 to 728 cm)	0 to 60 inches (0 to 152 cm)
150 inches	284 to 432 inches (722 to 1097 cm)	0 to 90 inches (0 to 229 cm)
200 inches	380 to 577 inches (966 to 1466 cm)	0 to 120 inches (0 to 305 cm)
250 inches	476 to 723 inches (1210 to 1835 cm)	0 to 150 inches (0 to 381 cm)
300 inches	572 to 868 inches (1454 to 2204 cm)	0 to 180 inches (0 to 457 cm)

PowerLite Pro G5550NL/G5950NL, 4:3 image, Middle throw zoom lens 2 (part number V12H004M05)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
40 inches	109 to 168 inches (276 to 427 cm)	0 to 24 inches (0 to 61 cm)
50 inches	138 to 212 inches (350 to 538 cm)	0 to 30 inches (0 to 76 cm)
60 inches	166 to 256 inches (423 to 649 cm)	0 to 36 inches (0 to 91 cm)
80 inches	224 to 343 inches (569 to 871 cm)	0 to 48 inches (0 to 122 cm)
100 inches	282 to 430 inches (716 to 1093 cm)	0 to 60 inches (0 to 152 cm)
150 inches	426 to 649 inches (1082 to 1647 cm)	0 to 90 inches (0 to 229 cm)
200 inches	570 to 867 inches (1448 to 2202 cm)	0 to 120 inches (0 to 305 cm)
250 inches	714 to 1085 inches (1814 to 2756 cm)	0 to 150 inches (0 to 381 cm)
300 inches	858 to 1304 inches (2180 to 3311 cm)	0 to 180 inches (0 to 457 cm)

PowerLite Pro G5550NL/G5950NL, 4:3 image, Long throw zoom lens (part number V12H004L06)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
40 inches	165 to 225 inches (420 to 572 cm)	0 to 24 inches (0 to 61 cm)
50 inches	208 to 283 inches (529 to 719 cm)	0 to 30 inches (0 to 76 cm)
60 inches	251 to 341 inches (639 to 867 cm)	0 to 36 inches (0 to 91 cm)
80 inches	338 to 457 inches (857 to 1162 cm)	0 to 48 inches (0 to 122 cm)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
100 inches	424 to 574 inches (1076 to 1457 cm)	0 to 60 inches (0 to 152 cm)
150 inches	639 to 864 inches (1623 to 2194 cm)	0 to 90 inches (0 to 229 cm)
200 inches	854 to 1154 inches (2170 to 2932 cm)	0 to 120 inches (0 to 305 cm)
250 inches	1070 to 1445 inches (2717 to 3669cm)	0 to 150 inches (0 to 381 cm)
300 inches	1285 to 1735 inches (3264 to 4407 cm)	0 to 180 inches (0 to 457 cm)

PowerLite Pro G5550NL/G5950NL, 4:3 image, Rear projection wide lens (part number V12H004R03)

Screen size	Projection distance (A) Wide to Tele	Offset (B)
30 inches	18 inches (45 cm)	9 inches (23 cm)
40 inches	24 inches (61 cm)	12 inches (30 cm)
50 inches	30 inches (77 cm)	15 inches (38 cm)
60 inches	37 inches (93 cm)	18 inches (46 cm)
80 inches	49 inches (126 cm)	24 inches (61 cm)
100 inches	62 inches (158 cm)	30 inches (76 cm)
150 inches	94 inches (239 cm)	45 inches (114 cm)
200 inches	126 inches (320 cm)	60 inches (152 cm)

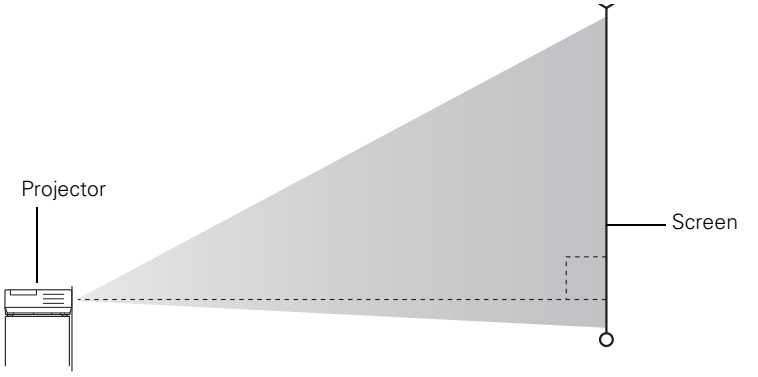
Also keep these considerations in mind:

- 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.

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 15.

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 57). 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 58).

For instructions on installing the projector in a permanent location, such as a theater or conference room, see page 163.

Connecting to a Computer

note

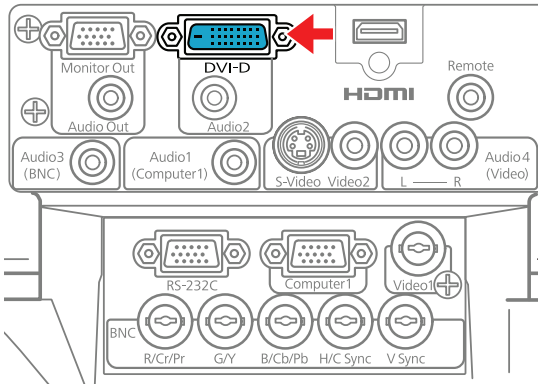
To connect a Macintosh that includes only a Mini DisplayPort or Mini-DVI port for video output, you need to obtain an adapter that allows you to connect to the projector's VGA video port. Contact Apple for compatible adapter options.

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

If you have the optional wireless mouse receiver, you can use your remote control as a wireless mouse when projecting from a computer (page 70).

Connecting to the DVI-D Port (G5450WUNL/G5750WUNL only)

1. Locate a DVI-D cable.
2. Connect the cable to the DVI-D connector on your computer and the DVI-D connector on the projector.

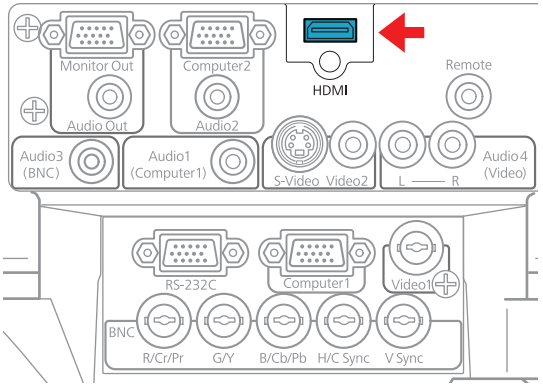


3. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables. With the optional wireless mouse receiver (see page 70), you can use the remote control as a mouse.
4. When you've finished making any connections, see page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

Connecting a DVI-D Source to the HDMI Port

You can connect your DVI-D source to the projector using a DVI/HDMI conversion cable.

1. Locate a DVI/HDMI conversion cable.
2. Connect the cable to the DVI-D connector on your computer and the HDMI connector on the projector.



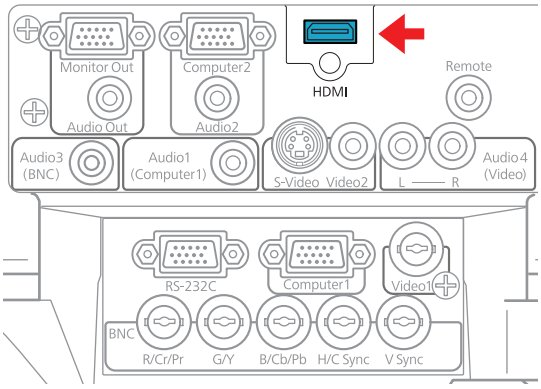
3. With the PowerLite Pro G5550NL/G5650WNL/G5950NL, if you want to play sound through the projector, see page 46 for instructions on connecting audio cables. With the optional wireless mouse receiver (see page 70), you can use the remote control as a mouse.
4. When you've finished making any connections, see page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

note

With the PowerLite Pro G5450WUNL/ G5750WUNL, you must connect your DVI-D source to the DVI-D port in order to play sound.

Connecting to the HDMI Port

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



3. See page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image. With the optional wireless mouse receiver (see page 70), you can use the remote control as a mouse.

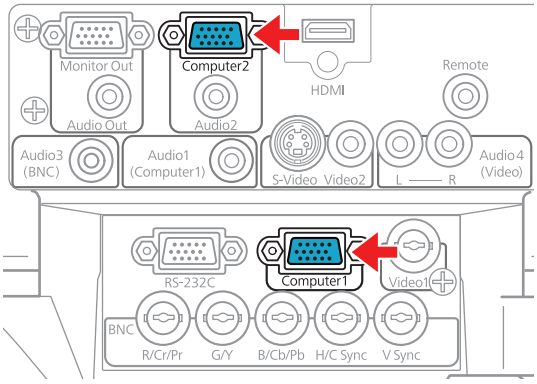
Connecting to the Computer Port

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 port, and the other end to your computer's monitor port. With the PowerLite Pro G5550NL/G5650WNL/G5950NL, you can also connect to the Computer2 port.

caution

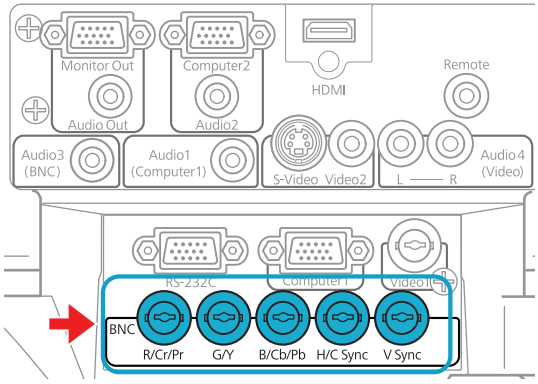
Don't try to force a connector to fit a port with a different shape or number of pins. You may damage the port or connector.



2. You may need to change the Input Signal setting in the projector's Signal menu to RGB (see page 118).
3. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables. With the optional wireless mouse receiver (see page 70), you can use the remote control as a mouse.
4. When you've finished making any connections, see page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

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.)

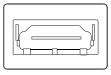


3. Plug the VGA connector on the other end of the cable into your computer's monitor port.
4. You may need to change the Input Signal setting in the projector's Signal menu to RGB (see page 118).
5. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables. With the optional wireless mouse receiver (see page 70), you can use the remote control as a mouse.
6. When you've finished making any connections, see page 51 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 37.



HDMI connector

- If your video player has a DVI-D video port, see "Connecting a DVI-D Video Source to the DVI-D Port (G5450WUNL/G5750WUNL only)" on page 38 or "Connecting a DVI-D Video Source to the HDMI Port" on page 39.
- 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 42.
- If your video player has a yellow RCA video output connector, or if you're using a coax video cable, see "Connecting a Composite Video Source" on page 40.



BNC connector (component or composite video)



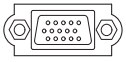
RCA connector (composite video)

- If your video player has an S-Video connector, see "Connecting an S-Video Source" on page 41.



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 43.



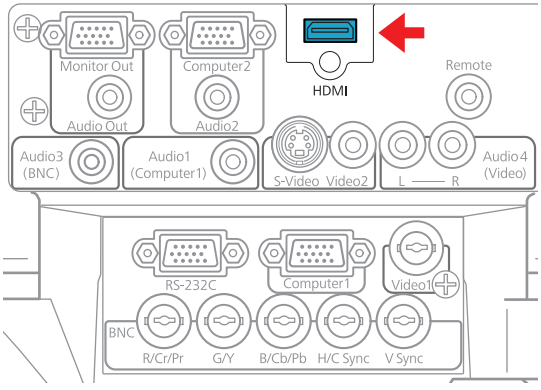
VGA connector
(RGB video)

After connecting video cables, you may also want to connect an audio cable to play sound through the projector; see page 46. 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.

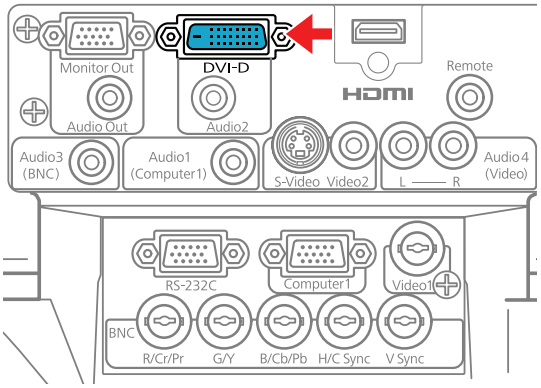
1. Locate an HDMI cable.
2. Connect the cable to the HDMI connector on your player and the HDMI connector on the projector.



3. See page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

Connecting a DVI-D Video Source to the DVI-D Port (G5450WUNL/G5750WUNL only)

1. Locate a DVI-D cable.
2. Connect the cable to the DVI-D connector on your player and the DVI-D connector on the projector.

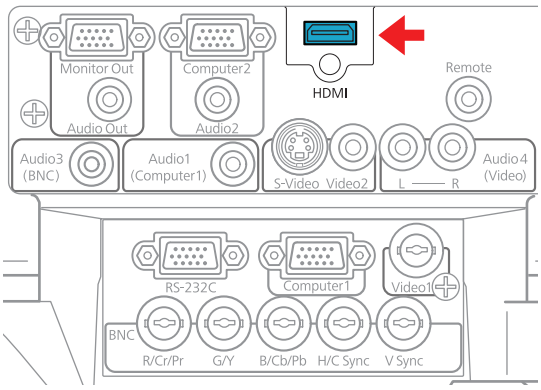


3. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables.
4. When you've finished making any connections, see page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

Connecting a DVI-D Video Source to the HDMI Port

You can connect your DVI-D source to the projector using a DVI/HDMI conversion cable.

1. Locate a DVI/HDMI conversion cable.
2. Connect the cable to the DVI-D connector on your player and the HDMI connector on the projector.



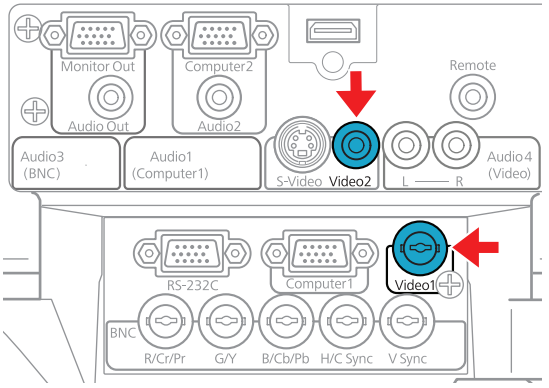
3. With the PowerLite Pro G5550NL/G5650WNL/G5950NL, if you want to play sound through the projector, see page 46 for instructions on connecting audio cables.
4. When you've finished making any connections, see page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

note

With the PowerLite Pro G5450WUNL/ G5750WUNL, you must connect your DVI-D source to the DVI-D port in order to play sound.

Connecting a Composite Video Source

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 you're using a coax video cable, connect it to the Video1 connector on the projector.



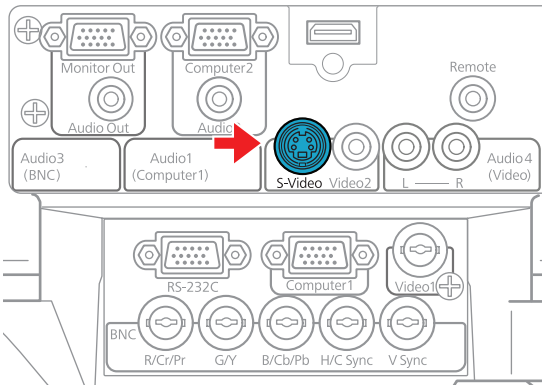
2. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables.
3. When you've finished making any connections, see page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

note

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

Connecting an S-Video Source

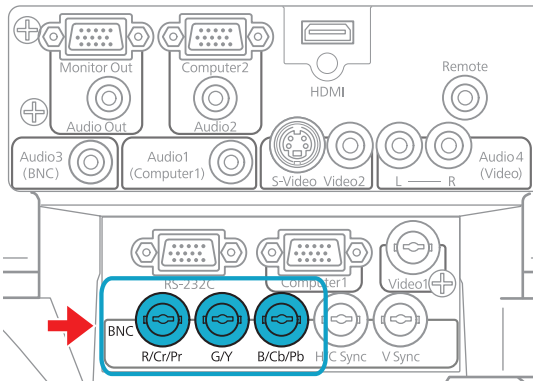
1. Connect the S-Video cable to the S-Video connector on your player and the S-Video connector on the projector.



2. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables.
3. When you've finished making any connections, see page 51 for instructions on turning on the projector and Chapter 2 for instructions on displaying and adjusting the image.

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 118).
4. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables.
5. When you've finished making any connections, see page 51 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 *(see page 118).*

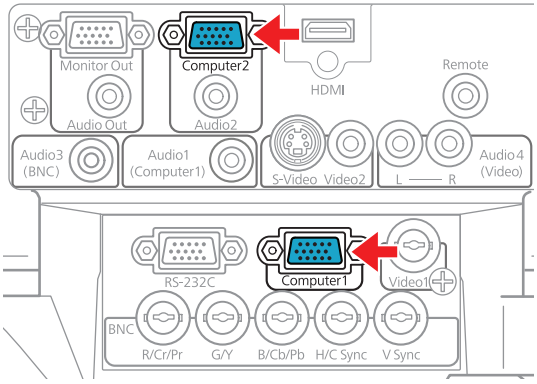
note

If you have a component-to-VGA video cable, you can use it to connect a component video source. Connect the VGA connector to the projector's Computer1 *or* Computer2 *(G5550NL/G5650WNL/G5950NL only) port, then connect the other end of the cable to your player.*

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 port on the projector. With the PowerLite Pro G5550NL/G5650WNL/G5950NL, you can also connect to the Computer2 port.



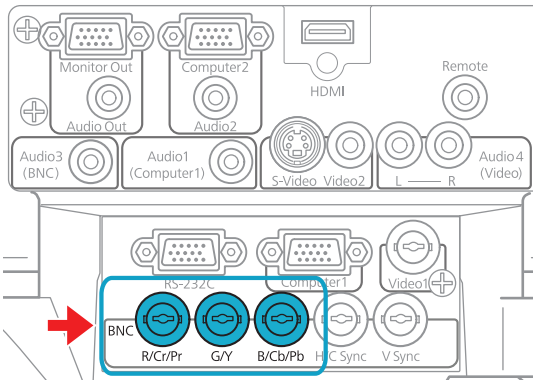
3. You may need to change the Input Signal setting in the projector's Signal menu to RGB (see page 118).
4. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables.
5. When you've finished making any connections, see page 51 for instructions on turning 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.

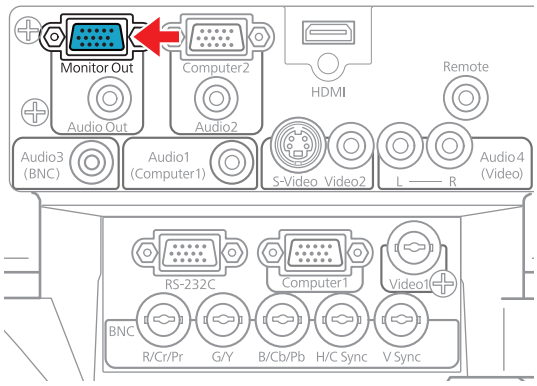


3. You may need to change the Input Signal setting in the projector's Signal menu to RGB (see page 118).
4. If you want to play sound through the projector, see page 46 for instructions on connecting audio cables.
5. When you've finished making any connections, see page 51 for instructions on turning 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 (G5550NL/G5650WNL/G5950NL only), or BNC ports (see page 34). 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.

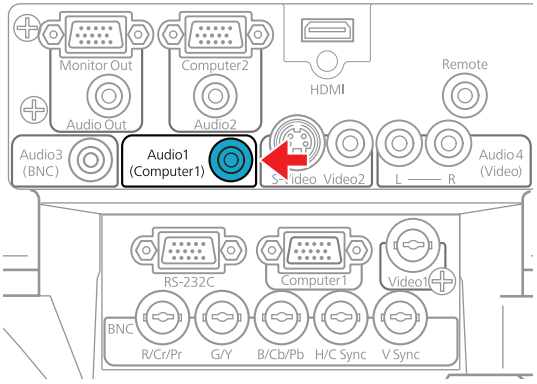
Playing Sound Through the Projector

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

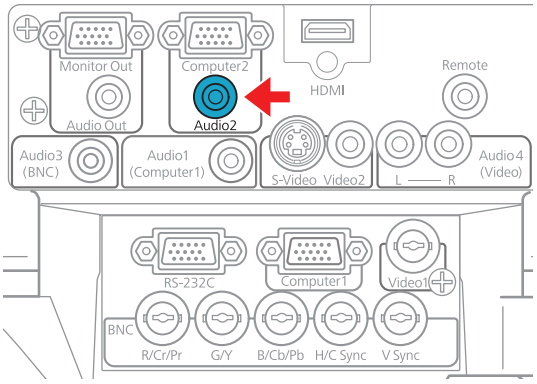
To play sound through the projector, follow these steps:

1. Locate the appropriate cable and connect it to the appropriate jack on the projector, as described below.

   - If you have equipment connected to the Computer1 port, use a stereo mini-jack cable. Connect the cable to the Audio1 port.



   - If you have equipment connected to the Computer2 port (G5550NL/G5650WNL/G5950NL only), use a stereo mini-jack cable. Connect the cable to the Audio2 port.

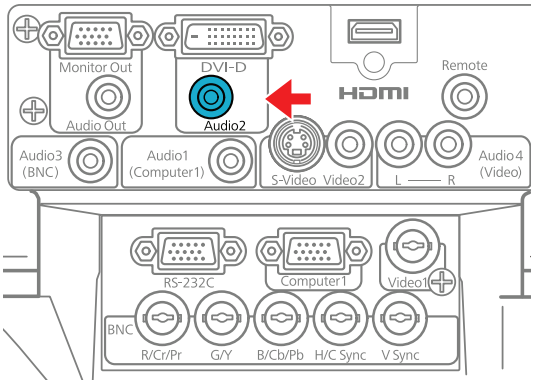


note

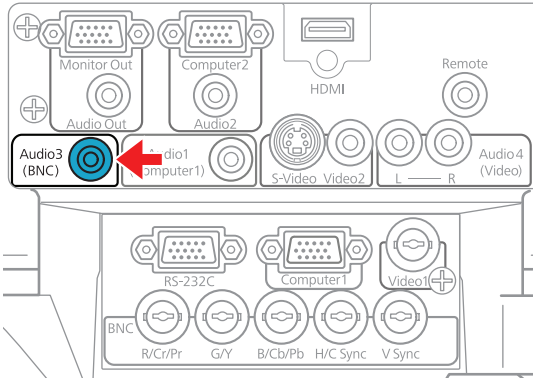
If you have equipment connected to the LAN *port, in most cases you do not need to connect an additional cable for sound. You can, however, connect an audio cable to the* Audio1, Audio2, *or* Audio3 *port (as described in this section) and output the sound by adjusting the* Audio Input *setting. With the PowerLite G5550NL/G5650WNL/G5950NL, you can also adjust this setting for equipment connected to the HDMI port. See page 119.*

If you are using a DVI/HDMI conversion cable to connect your DVI-D source through the HDMI *port on the PowerLite G5550NL/G5650WNL/G5950NL, you will need to connect an additional audio cable and adjust the* Audio Input *setting as described above.*

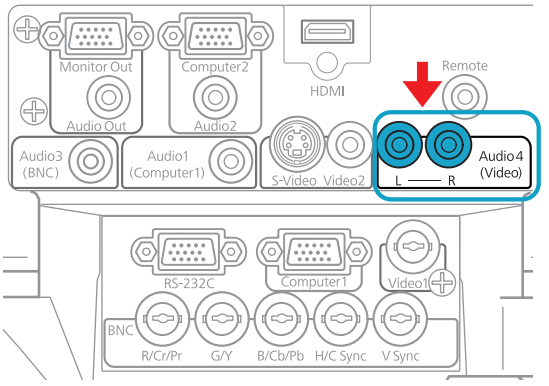
- If you have equipment connected to the DVI-D port (G5450WUNL/G5750WUNL only), use a stereo mini-jack cable. Connect the cable to the Audio2 port.



- If you have equipment connected to the BNC ports, use a stereo mini-jack cable. Connect the cable to the Audio3 port.



- If you have equipment connected to the Video1, Video2, or S-Video ports, connect an RCA audio cable to the Audio4 ports.



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

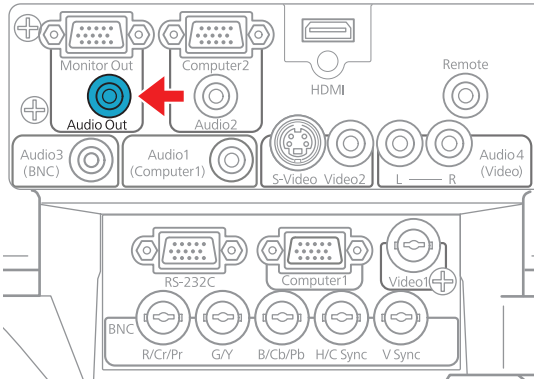
Connecting External Speakers

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. You can use the remote control or the projector's menu system to adjust the volume.

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.

Connecting to a Digital Camera or Other USB Device

note

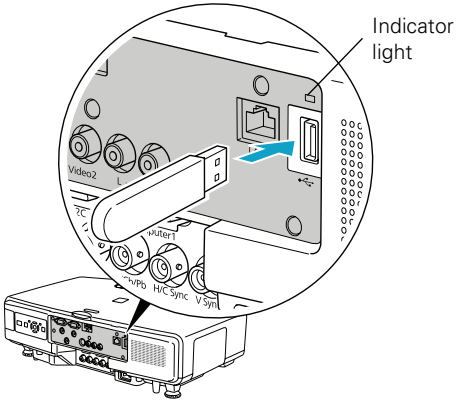
Use a cable less than 10 feet (3 meters) long and connect the camera or other device directly to the projector. Your projector may not function correctly if you use a longer cable or connect your camera to a USB hub.

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.

You can connect your digital camera, USB flash memory drive, USB hard drive, or multimedia storage viewer, such as the Epson P-7000 to the projector. Use the USB cable specified for your device, if necessary. Then you can use the projector's PC Free feature. See the *PC Free Operation Guide* for more information.

1. Follow the instructions beginning on page 51 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.

Removing the USB Device or Cable

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

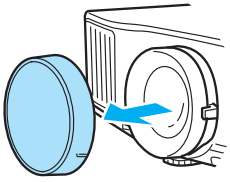
1. If you're projecting a still image, press the Esc button on the remote or the projector's control panel.
2. If you're projecting a slideshow of your images, a movie, or a presentation, press the Esc button on the remote or the projector's control panel. Then select Exit in the window that appears and press the Enter.
3. Turn off your digital camera or other device.
4. Disconnect the USB device or cable.

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 56).

Follow these steps to turn on the projector:

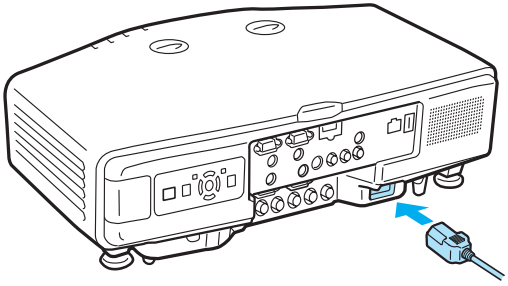
1. Remove the lens cover.



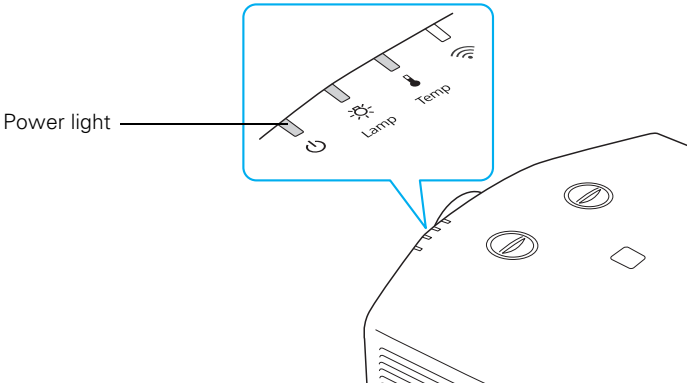
note

You can set the projector to automatically turn off the lamp and enter "sleep mode" when it has not received any signals for 1 to 30 minutes (see page 126 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.

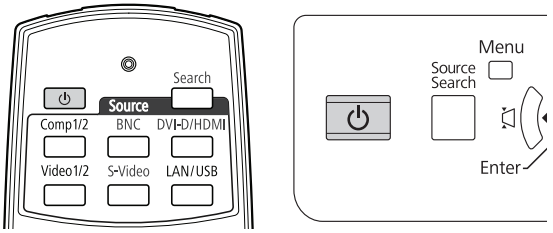
2. Plug one end of the power cord into the projector, and the other end into an electrical outlet.



The ⏻ power light turns orange.



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 122.

warning

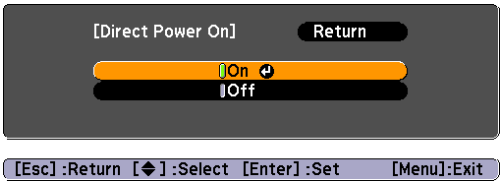
Never look into the lens when the lamp is on. This can damage your eyes, and is especially dangerous for children and pets.

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

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

2 *Displaying and Adjusting the Image*

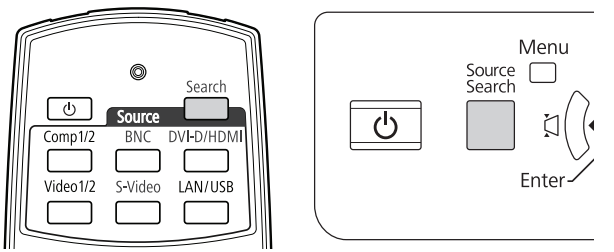
Follow the guidelines in this chapter for:

- Displaying an image
- Adjusting the image
- Projecting two images simultaneously

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.

Adjusting the Image

note

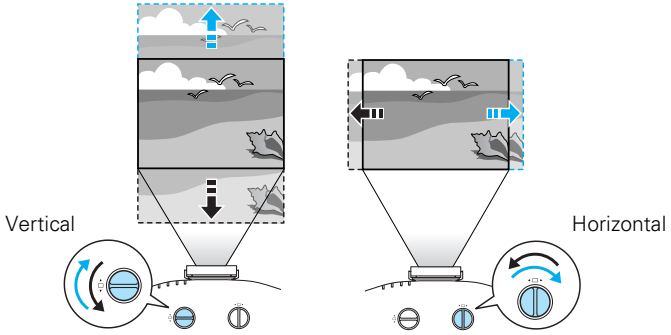
The projector can display a test pattern to help you adjust some image settings. See page 119.

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 57.
- To focus or zoom your image, see page 58.
- If the image isn't square, see page 58.
- To quickly adjust the color, brightness, or contrast, see page 60.
- To change the image aspect ratio, see page 61.
- If you need to fine-tune the image and/or sound, see Chapter 5.

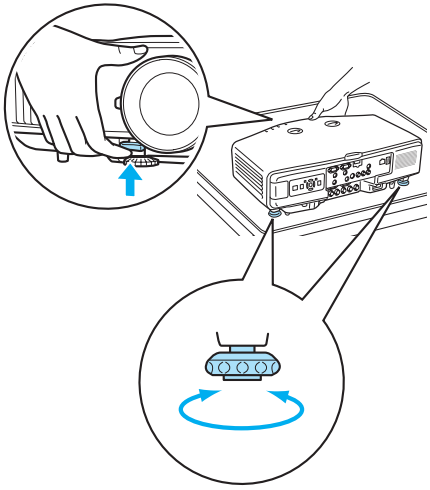
Adjusting the Position of the Image

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.



Additionally, if the projector is on a table, you can use the projector's adjustable feet to adjust the image:

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.

note

Raising the projector with the front adjustable foot causes the image shape to distort or "keystone," but you can correct the shape as described on page 58.

3. If necessary, you can fine-tune the height or level the image by turning any of the projector's adjustable feet.

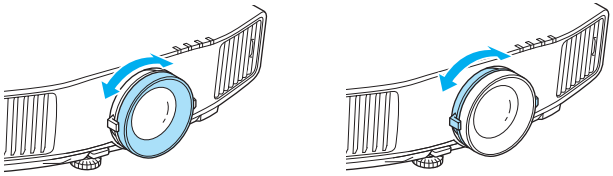
Focusing and Zooming the Image

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.

note

If you have installed the Rear Projection Wide Lens (part number V12H004R03), you cannot use the zoom ring to reduce or enlarge the image, but you can still use the E-Zoom *buttons on the remote control.*



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 68 for instructions.

Adjusting the Image Shape

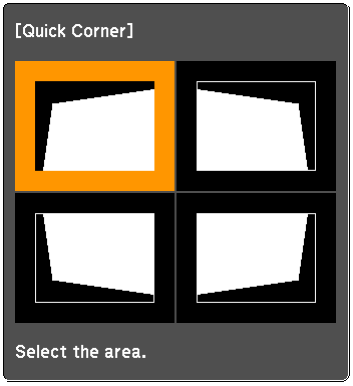
You can maintain a square or rectangular image by placing the projector directly in front of the screen and keeping it level. This also produces the best picture quality. If the projector is tilted up or placed at an angle, you'll need to correct the image shape by using one of the functions described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

note
To undo your Quick Corner adjustments, press and hold the Esc *button for about 2 seconds, select* Reset Quick Corner *from the screen that appears, then press* Enter.

Using Keystone Correction

You can manually adjust the shape of the image to compensate for vertical and horizontal keystone distortion.

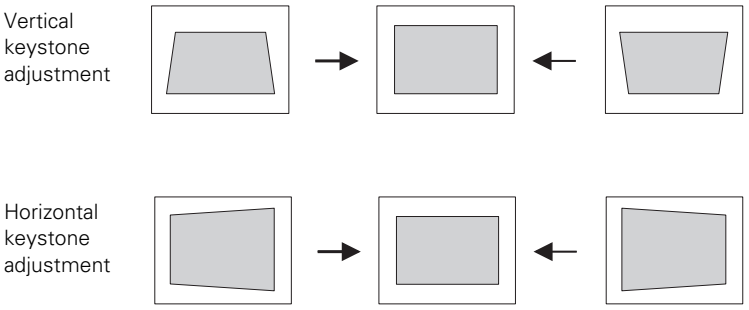
Before performing horizontal or vertical keystone, use the lens shift function to horizontally center the lens and vertically move the lens to the top or bottom (see page 57); otherwise, the distortion will not be corrected accurately. Also, the distortion may not be corrected accurately for some zoom settings.

note
Epson recommends using Quick Corner to accurately adjust keystone distortion. See page 58.

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.

note
You 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.

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.



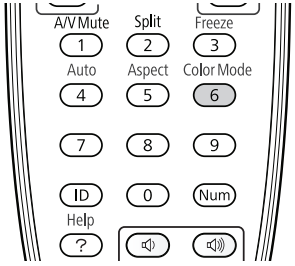
If the image becomes smaller, use the zoom ring to enlarge the image so it fits the screen. If the image contains faint lines or a gridlike pattern, decrease the sharpness setting (see page 115).

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:



- Dynamic: Brightest mode; for video games or TV in a bright room.
- Presentation: For making color 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 (RGB signals or signals input through the USB or LAN ports only).
- 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.
- DICOM SIM: Ideal for projecting X-ray photographs and other medical images.
- Customized: For manual color adjustment (see page 115).

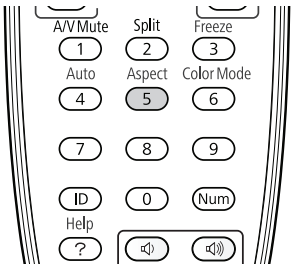
You can also change the Color Mode using the projector's Image menu. See page 114 for details.

note

The projector is not a medical device and cannot be used for medical diagnosis.

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 (video equipment and 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 (computer images 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 (G5550NL/G5950NL 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.
- Full (G5450WUNL/G5650WNL/G5750WUNL 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.
- Zoom (G5450WUNL/G5650WNL/G5750WUNL 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.
- Native (HDMI and computer images only if you are using the G5550NL/G5950NL): Displays images as is (aspect ratio and resolution are maintained). Black bands appear if the resolution is less than 1024 × 768 (G5550NL/G5950NL), 1280 × 800

note

To select Full *while inputting a 1080i signal, set the Progressive setting to* Off. *See page 116.*

(G5650WNL), or 1920 × 1200 (G5450WUNL/G5750WUNL); images are cut off if the resolution is over 1024 × 768 (G5550NL/G5950NL), 1280 × 800 (G5650WNL), or 1920 × 1200 (G5450WUNL/G5750WUNL).

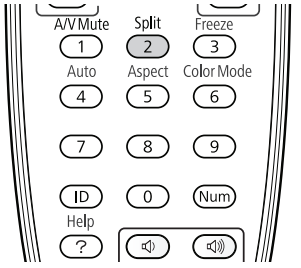
Press the Aspect button repeatedly to cycle through the available options.

You can also change the aspect ratio using the projector's Signal menu. See page 116 for details.

note

In order to use the Split Screen feature, one of your images must be input through the HDMI *or* DVI-D *(G5450WUNL/G5750WUNL only) port. The other image can be input through the* Computer1, Computer2 *(G5550NL/G5650WNL/G5950NL only),* BNC, S-Video, Video1, *or* Video2 *ports.*

Images input through the USB *or* LAN *port cannot be projected as part of the split screen.*

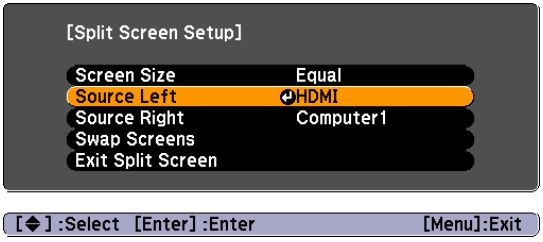


Projecting Two Images Simultaneously

You can use the projector's split screen feature to divide the screen into left and right sections and simultaneously project two images.

Follow these steps to activate the split screen:

1. Press the Split button on the remote control. The currently selected input source will move to the left side of the screen.
2. Press the Menu button. You see the following screen:



3. To change one of the images, highlight either Source Left or Source Right (whichever side contains the image you want to change) and press Enter. Then highlight the input source you want to change to and press Enter again.
4. To switch the images, highlight Swap Screens and press Enter.
5. To change one of the image sizes, highlight Screen Size and press Enter. Then highlight a sizing option and press Enter again. Press Menu to exit.

Depending on the video signals that are input, the images on the left and right may not appear at the same size even if you choose Equal as the sizing option.

6. To end the split screen, do one of the following:

   - Press the Esc button on the remote control or the projector's control panel.
   - Press the Split button on the remote control.
   - Select Exit Split Screen from the Split Screen Setup window and press Enter.

   You cannot do the following while the split screen is active:

   - Use the projector's on-screen menus
   - Use the E-Zoom feature
   - Change the aspect ratio of either image
   - Use the User button on the remote control
   - Use the Help button (unless an error or warning is occurring)

   Additionally, while you are using the split screen:

   - The audio from the source on the left side of the screen will be output.
   - The Color Mode, Abs. Color Temp, and Color Adjustment settings for the image on the left are applied to the image on the right (all of the remaining settings in the projector's Image menu are set to default for the image on the right side).
   - You cannot use the Thin Line Enhancement or Thick Line Enhancement settings or the Progressive, Noise Reduction, or 2-2 Pull-down features.
   - The Overscan setting is set to its default value, if applicable.
   - The screen will be blue for any side which is not receiving a signal, and the screen will turn black when the A/V Mute button is pressed.

- The image on the left side of the screen can be output to an external monitor as long as it meets the requirements (see page 45).

You can also activate the split screen using the projector's Signal menu. See page 119 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 66), as a pointer to highlight your presentation (page 69), or to control two or more projectors at the same time (page 71). 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 70).

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 142. 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.

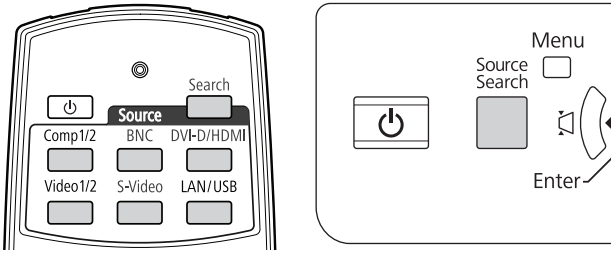
Controlling the Picture and Sound

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.

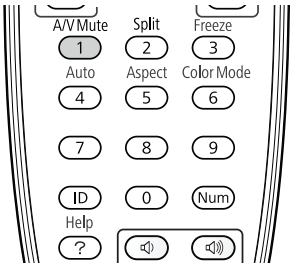


- On the remote control, you can press one of the Source buttons to select the connected device you need.

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.

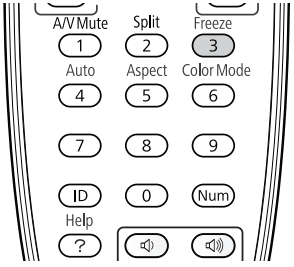


You can have the screen turn blue (using the Display setting as described on page 126) or display an image such as a company logo when you press the A/V Mute button. (See page 123 for more information on displaying an image.)

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.

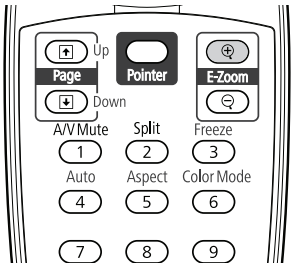
To restart the action, press the Freeze button again.



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.

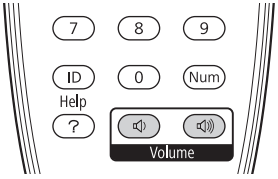
2. Use the pointer button to position the crosshair.
3. Continue pressing the E-Zoom button to enlarge the selected area up to 4 times.
4. While the image is enlarged, you can:
   - Use the pointer button to move around the screen.
   - Press the E-Zoom button to zoom out.
5. When done, press the Esc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

note

You cannot use the Progressive or Noise Reduction features (see page 116) 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 120.

note

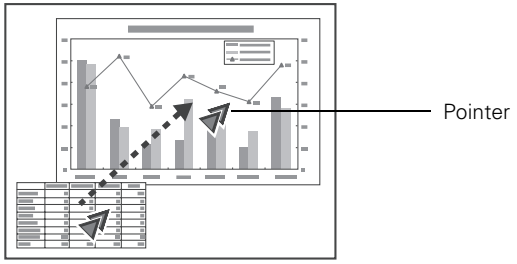
To temporarily shut off the sound and picture, press the A/V Mute *button.*

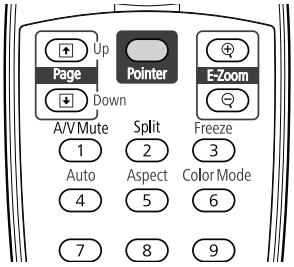
Highlighting Your Presentation

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, and press Enter. Then 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.

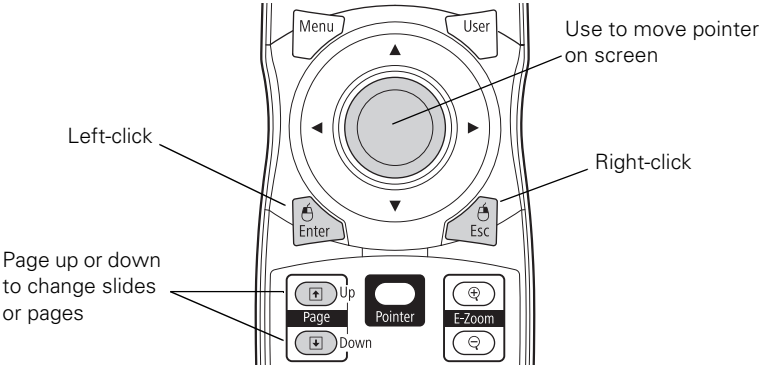
Operating Your Computer With the Remote Control

With the optional wireless mouse receiver (see page 15), 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.

note

You can also use the Up *and* Down *buttons to move through a presentation that is being projected over a network or from a device connected to the projector's USB port.*

- Use the Up and Down buttons to move through slides or pages in a presentation.



- 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.

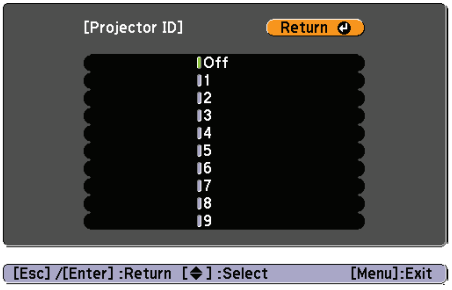
Operating Two or More Projectors With the Remote Control

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, press Enter, select Projector ID, then press Enter again.

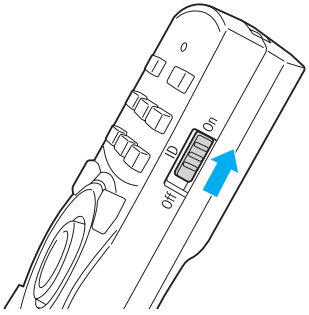


3. Use the pointer button to highlight the new ID, and press Enter to select it.
4. When you're done, press Menu to exit.

Checking the Projector ID

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

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



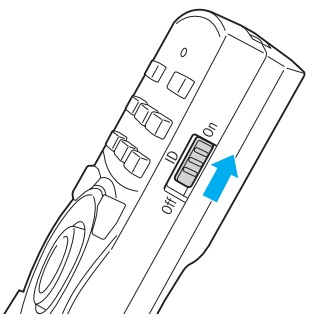
2. Point the remote control at the projector you want to check.
3. While holding the ID button, press the Help button. You see a message on the screen like this:



Setting the Remote Control ID

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:

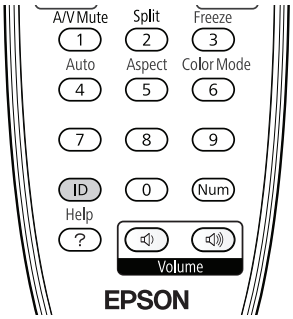
1. Move the remote control ID switch to the On position.



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 Using the Projector on a Network

You can use Quick Wireless Connection or EasyMP® Network Projection to project images shown on your computer screen—including text, graphics, and video—directly to your audience. See the *EasyMP Network Projection Operation Guide* for information on features and use.

You can use EasyMP Monitor (available for Windows only) to monitor and control your projector through the network. For information on installing and using EasyMP Monitor, see the *EasyMP Monitor Operation Guide*.

You can use EasyMP Multi PC Projection to simultaneously display images from different networked computers. For information on installing and using EasyMP Multi PC Projection, see the *EasyMP Multi PC Projection Operation Guide*.

You'll find instructions in this chapter on:

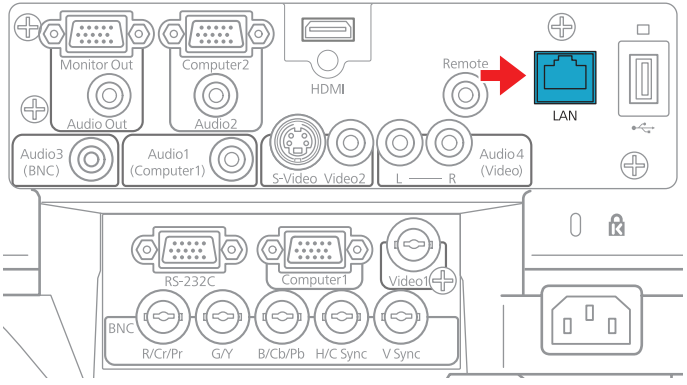
- Connecting the projector to a wired LAN
- Installing the optional wireless LAN module
- Using Quick Wireless Connection
- Configuring projector and network settings
- Using wireless security options
- Removing the optional wireless LAN module
- Sending e-mail alerts and monitoring the projector
- Using a browser to control the projector

For a wireless connection, make sure you've installed the optional Wireless 802.11g/b/a Module, as described on page 78. Then follow the steps in this chapter to use Quick Wireless Connection (Windows only) or configure your projector and network. See the *EasyMP Network Projection Operation Guide* for instructions on installing the EasyMP Network Projection software. The *EasyMP Network Projection Operation Guide* also contains instructions on using the software to project over the network.

Connecting to a Wired Network

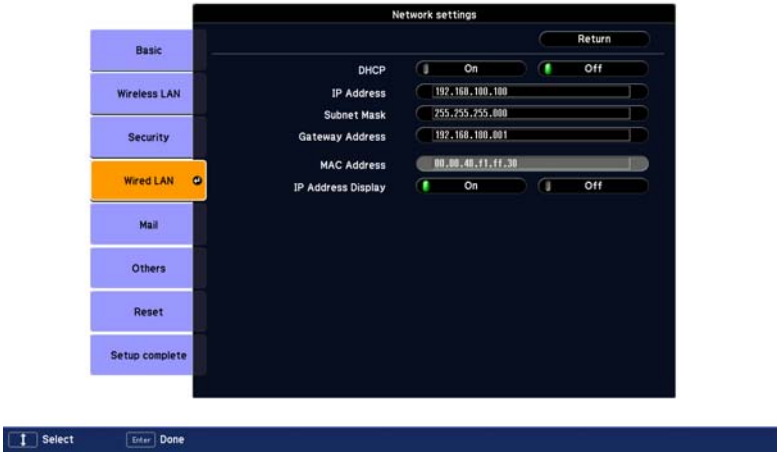
With an Ethernet cable, you can connect the projector to your network and configure it with an IP address.

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 as shown. To ensure proper data transmission, use a shielded, Category-5 cable or better.



2. Connect the other end to your Ethernet hub or router.
3. Turn on the projector.
4. Press the Menu button, select the Network menu, then press Enter.
5. Choose Network Configuration and press Enter.

6. Choose Wired LAN and press Enter. You see the following screen:



7. 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.

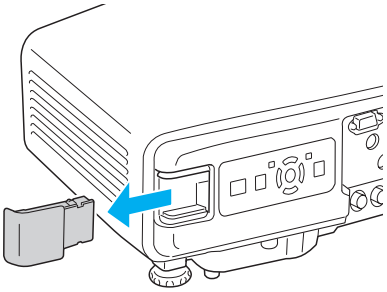
     To enter numbers, use the pointer button on the remote control to highlight the number you want to input, then press the Enter button.

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 all necessary changes, highlight the Return button at the top of the screen, then press Enter. Choose Setup complete and press Enter, then choose Yes and press Enter to save the changes.
10. Press Menu to exit.

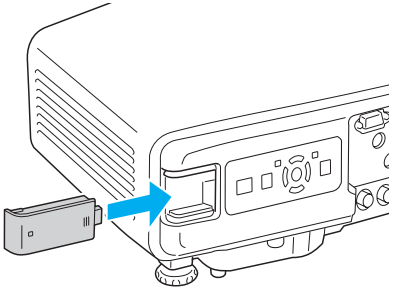
Installing the Optional Wireless 802.11g/b/a Module

Make sure you have the optional Wireless 802.11g/b/a Module. Turn off the projector and disconnect the power cord before you install the module.

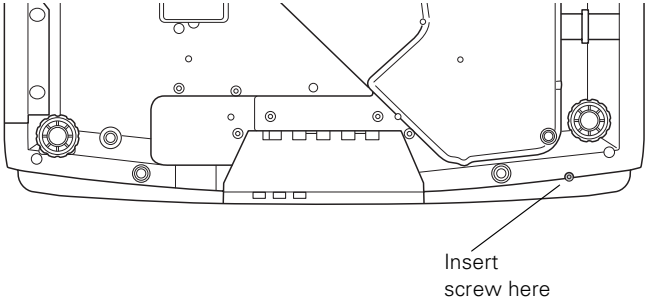
1. Remove the cover from the wireless module's insertion area.



2. Insert the Wireless 802.11g/b/a Module as shown.



3. Fasten the module using the screw that came with it.



If you have the optional USB key, you can use Quick Wireless connection as described in the next section. Or, you can configure your connection manually as described on page 80.

Using Quick Wireless Connection

Using the optional USB key, you can quickly connect the projector to a Windows computer wirelessly without any configuration.

First, make sure you have installed the optional wireless module as described on page 78 and turned on the projector.

1. Connect the USB key to the projector's USB port.
2. When you see a projected message that the network information update is complete, remove the USB key.
3. Connect the USB key to a USB port on your computer or notebook.

   In Windows 7 or Windows Vista, if you see the AutoPlay window, select Run LaunchQW.exe. When you see the User Account Control screen, click Allow.
4. Follow the instructions on the screen to install the Quick Wireless Connection driver.

   If you see a Windows Firewall message, click Yes to disable the firewall.

   After a few minutes, your computer image will be displayed through the projector. If not, try restarting your computer.
5. When you're done with your presentation, remove the USB key. You may need to restart your computer to reactivate your wireless interface.

note

Do not attempt to write to the USB key or use it as a flash memory drive.

note

The Quick Wireless Connection utility will disable any other wireless sessions and adapter programs. Make sure you leave the USB key in your computer for your entire Quick Wireless Connection session.

Configuring Basic Settings

You can give your projector a unique name, enable a projector keyword, or create a password for controlling the projector over the Web.

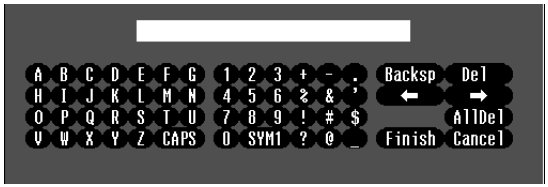
1. Press the Menu button, then choose Network and press Enter.
2. Choose Network Configuration and press Enter. You see a screen like the following:



3. Make sure the projector has a unique name, so you can identify it on your network.

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

4. Use the pointer button on the remote control 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. If you want to create a password for using PJLink to control the projector, highlight PJLink Password, press Enter, and enter a password of up to 8 alphanumeric characters. 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, set the Projector keyword option to On. Then when you want to connect to the projector, it displays a randomized four-digit number or "keyword" on the screen. If you're using EasyMP Network Projection, you can enter the keyword on your computer to connect (see the *EasyMP Network Projection Operation Guide* for details).
8. When you're done making these settings, highlight the Return button at the top of the screen, then press Enter. Choose Complete and press Enter, then choose Yes and press Enter to save your settings.
9. 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

After you install the optional Wireless 802.11g/b/a Module, you can use the EasyMP Network Projection software 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 with this mode, any connection to other wireless networks is broken; you can connect to the projector only.

note

Make sure you've installed the EasyMP Network Projection software as described in the EasyMP Network Projection Operation Guide.

To connect to the projector over a wireless network, your computer must be running Windows 7, Windows Vista, Windows XP, or Windows 2000. Your Mac must be running Mac OS X 10.3 to 10.6.

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.

- **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 (802.11g, 802.11b, or 802.11a) access point or an AirPort Extreme (or AirPort) base station, and one or more computers with wireless network cards or adapters.

Configuring the Projector

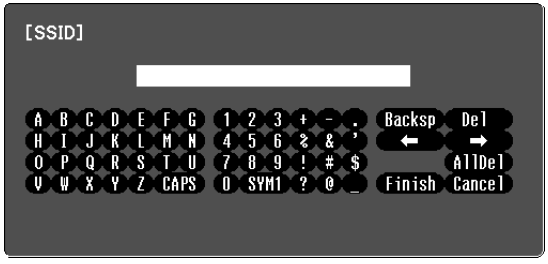
1. Press the Menu button, then choose Network and press Enter.
2. Choose Network Configuration and press Enter.
3. Choose Wireless LAN and press Enter. You see this screen:



4. Make sure Wireless LAN Power is set to On. You can turn it off to prevent unauthorized access.
5. Select one of the following connection modes:
   - Quick mode lets you easily connect one computer to the projector at a time. You can also select this setting when you're using the optional Epson Quick Wireless Connection USB key.
   - Advanced mode lets multiple computers access the projector at the same time and easily trade off control of the projector. This method requires a wireless network access point or an AirPort Extreme (or AirPort) base station.

6. If your network is using 802.11b/g, use the pointer button on the remote control to select a Channel setting. If interference occurs, select a different channel.
7. 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.
8. If you are connecting in Quick mode, you can set SSID Auto Setting to On to find the projector faster and create a more stable connection. Skip step 9 if you activate this setting. Select Off if you are connecting to multiple projectors from a single computer.
9. Highlight the SSID text box, press Enter, and enter the name you want to assign to the projector (Quick mode), or the name of your existing wireless network (Advanced mode):

   Use the arrow buttons 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).
10. 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, as needed.

  To enter numbers, use the arrow buttons on the remote control to select each number on the screen, then press the Enter button. When you're finished entering an address in the network menu, highlight Finish, then press the Enter button.

11. If you want to prevent the SSID from being displayed on the standby screen, set the SSID Display option to Off.
12. To prevent the IP address from appearing on the standby screen, set the IP Address Display setting to Off.
13. When you're done making these settings, press Esc. Highlight the Return button at the top of the screen, then press Enter. Choose Complete and press Enter, then choose Yes and press Enter to save your settings.

Now you're ready to select the wireless network your computer, as described in the next section.

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

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.

Selecting Wireless Network Settings in Windows

Before connecting to the projector, select the correct wireless network on your computer.

1. To access your wireless utility software, double-click the network icon on the Windows taskbar.
2. Do one of the following:
   - If your projector is set up on an existing network (Advanced mode), select the network name (SSID).
   - If your projector is configured for Quick mode, select the SSID you assigned to the projector.
3. Click Connect.

Now you're ready to connect to the projector. See the *EasyMP Network Projection Operation Guide* for details.

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

Selecting Wireless Network Settings in Mac OS

Before connecting to the projector, select the correct wireless network on your computer.

1. Click the AirPort icon on the menu bar at the top of the screen.
2. Make sure AirPort is turned on, then do one of the following:
   - If your projector is set up on an existing network (Advanced mode), select the network name (SSID).
   - If your projector is configured for Quick mode, select the SSID you assigned to the projector.

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.

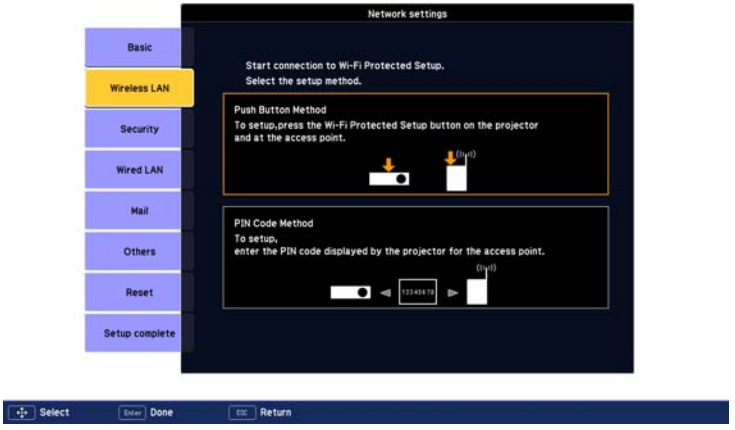
Follow these steps to open the WPS connection screen:

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

3. Choose Wireless LAN and press Enter. You see this screen:



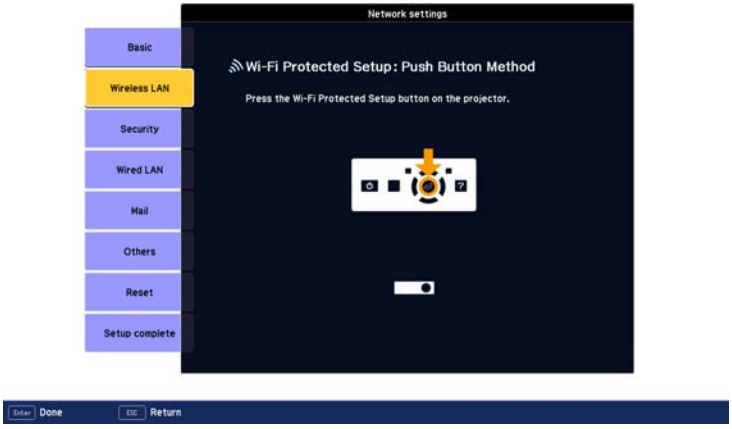
4. Select To Setup Wizard, then press Enter. You see the WPS (Wi-Fi Protected Setup) connection screen:



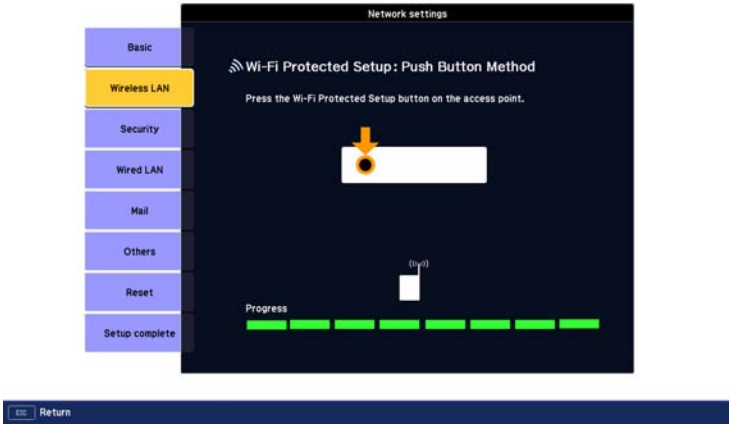
5. For the Push Button Method, follow the instructions on page 87. For the PIN Code Method, follow the instructions on page 88.

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.



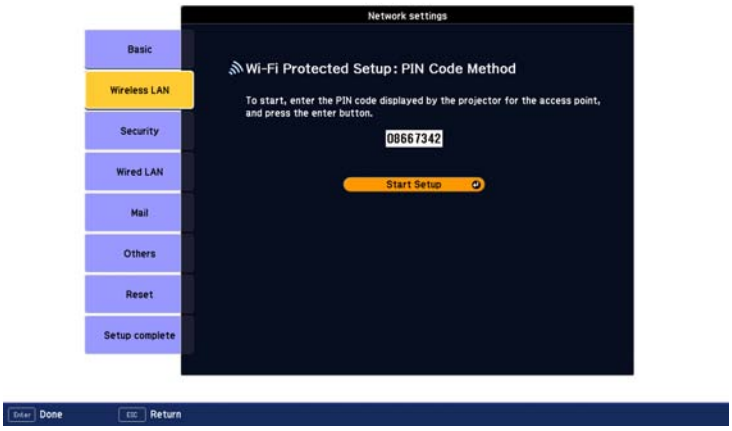
6. Make sure Yes is selected and press Enter.
7. Press the Menu button.

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 beginning on page 85 to access the WPS Connection Screen.

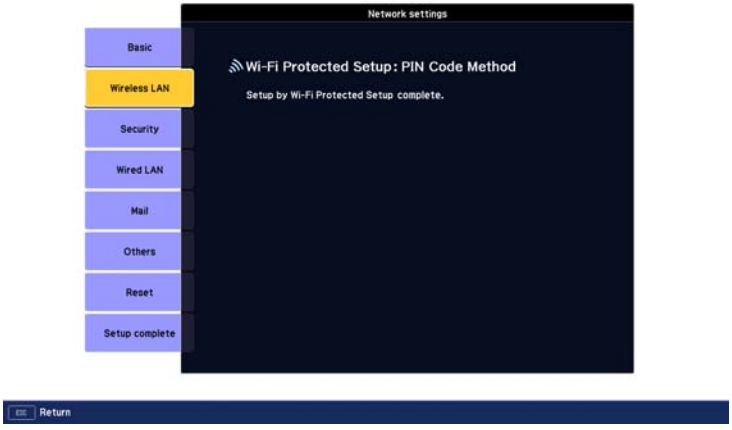
2. Select PIN Code Method and press Enter. You see this screen:



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.

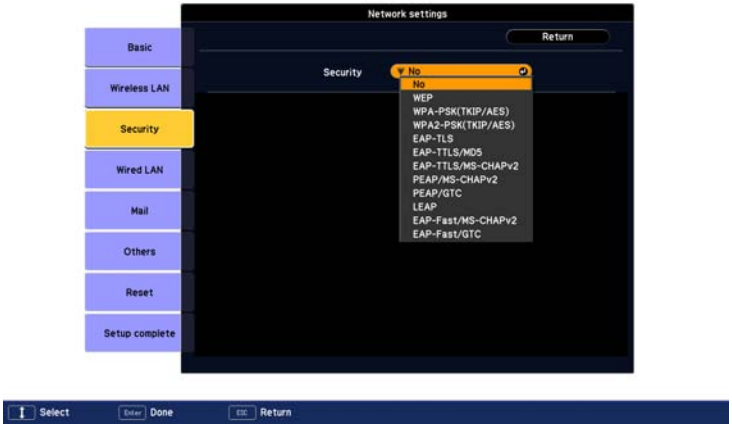
Using Wireless Security Options

If you have installed the optional Wireless 802.11g/b/a Module, 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" on page 91
- "Enabling WPA Security" on page 93
- "Enabling EAP, LEAP, or PEAP Authentication" on page 94
- "Enabling EAP-TLS Certificate Validation" on page 95

Enabling WEP Encryption

1. Press Menu, 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.

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.

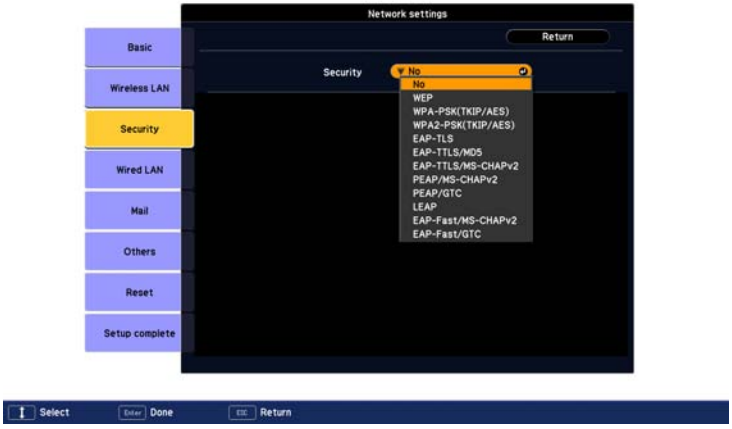
Highlight the Encryption key text box that corresponds to the Key ID you selected, then press Enter. Press the pointer button to select individual letters, then press Enter to input a character. To navigate backward and forward through the input text, highlight the arrows and press Enter. To toggle symbol 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.

Enabling WPA Security

1. Press Menu, then 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/AES) or WPA2-PSK(TKIP/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 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.



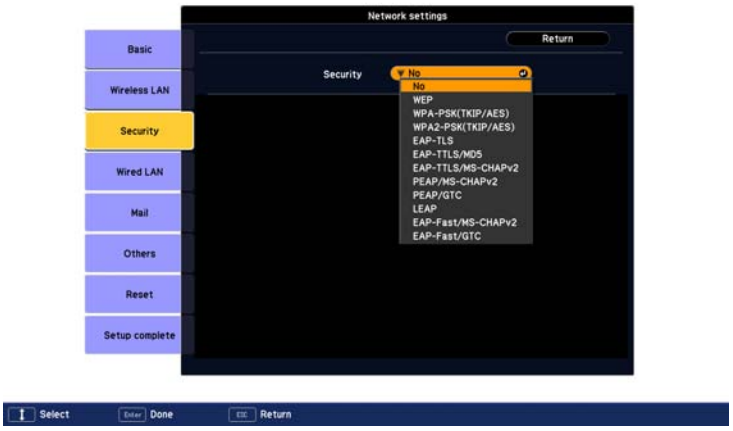
5. When you're done making these settings, select Return, Setup complete, and then Yes to confirm that you want to save the changes. Press Menu to exit.

note

You can enter up to 32 characters when you use the projector's menu. If you enter the pre-shared key using a web browser (see page 101), you can enter up to 63 characters.

Enabling EAP, LEAP, or PEAP Authentication

1. Press Menu, then 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.



note

You can enter up to 32 characters when you use the projector's menu. If you enter the user name and password using a web browser (see page 101), you can enter up to 64 characters.

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

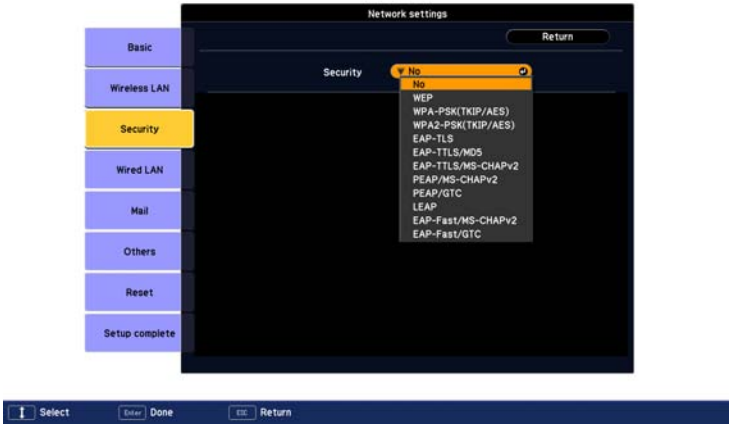
6. When you're done making these settings, select Return, Setup complete, and then Yes to confirm that you want to save the changes.
7. Press Menu to exit.

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.)

For information on registering a certificate to the projector, see the *PC Free Operation Guide*.

1. Press Menu, then 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.

Enabling Data Encryption from EasyMP Network Projection

When using the EasyMP Network Projection software, follow these steps to enable data encryption.

1. Click Set options on the main screen.
2. Click the General settings tab.
3. Select the Encrypt communications checkbox.
4. Click OK.

For more information, see the *EasyMP Network Projection Operation Guide*.

Using the EasyMP Network Projection Software

Once you've set up your projector and computer for network projection, see the *EasyMP Network Projection Operation Guide* for instructions on the following EasyMP features:

- Starting EasyMP Network Projection
- Projecting over the network (content over IP)
- Multi-screen projection
- Using Presentation mode
- Connecting to a projector on a different subnet

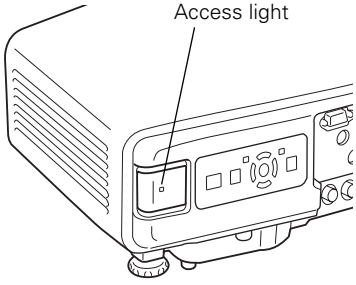
Removing the Wireless 802.11g/b/a Module

Follow these steps to remove the module from your projector.

1. If you're running EasyMP Network Projection, click **Disconnect** on the control bar.



2. Check the access light to make sure it isn't flashing.

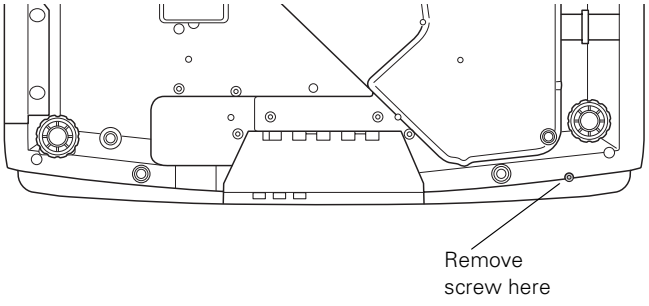


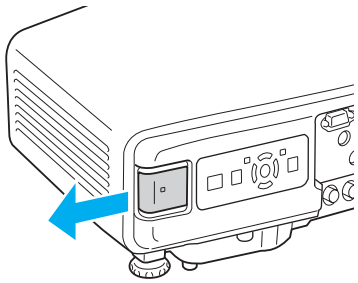
3. Turn off the projector and unplug it.

caution

Never remove the module while its access light is green or when projecting wirelessly. You may damage the module.

4. Unscrew the module, then pull it out.





Using Projector E-mail Alerts

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

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

note

You can also set e-mail alerts from EasyMP Monitor (available for Windows only). See the EasyMP Monitor Operation Guide *for more information.*

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, highlight the Return button at the top of the screen, then press Enter. Choose Setup complete and press Enter, then choose Yes and press Enter to save the changes.
10. Press Menu to exit.

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 Communication On *in the Extended menu, the projector can still be monitored even if the projector is in standby mode (when the power is off but the projector is still connected to power and the network).*

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

11. 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.

Using SNMP to Monitor the Projector

Network administrators can use SNMP (Simple Network Management Protocol) to monitor projectors.

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.

1. Press the Menu button, select the Network menu, then press Enter.
2. Choose Network Configuration and press Enter.
3. Choose Others and press Enter. You see the following screen:



4. Turn on the SNMP setting.
5. Enter up to two IP addresses for notification.

   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. For Priority Gateway, select Wired or Wireless.
7. If your network environment uses an AMX controller, select On to allow the projector to be detected by AMX Device Discovery.
8. When you're done making all necessary changes, highlight the Return button at the top of the screen, then press Enter. Choose Setup complete and press Enter, then choose Yes and press Enter to save the changes.
9. Press Menu to exit.

Using a Browser to Control the Projector

You can use a standard web browser to monitor and control the projector through the network.

1. Make sure that the projector is set up for your network, as described on page 76 (for a wired connection) or page 81 (for a wireless connection).
2. Open your web browser and enter the IP address of the projector you want to monitor in the browser window.

   If you're not sure what the address of the projector is, turn the projector on and select Net. Info.-Wired LAN or Net. Info.-Wireless LAN from the Network menu to display the IP address of the projector. Do not enter leading zeroes.
3. Press Enter, or, if you set a Web control password in the projector's Network menu, enter the user name EPSONWEB and your password, then press Enter.

note

When using a browser to access the projector, you cannot connect through a proxy server.

When using a browser to access the projector over a wireless connection, use Advanced Mode (see page 81).

Standby Mode in the Extended menu should be set to Communication On *to monitor the projector in standby mode.*

4. Select one of the menu options listed on the screen, then change any of the settings as needed. These settings correspond to those found in the projector's menu system.

   You cannot change the following settings using a web browser:

   - Quick Corner, Pointer Shape, Test Pattern, or User Button in the Settings menu
   - User's Logo, High Altitude Mode, BNC Sync Termination, Remote Control Type, and Language in the Extended menu
   - Any settings in the Reset menu
   - Any settings related to the Power On Protect, User's Logo Protect, or Network Protect passwords

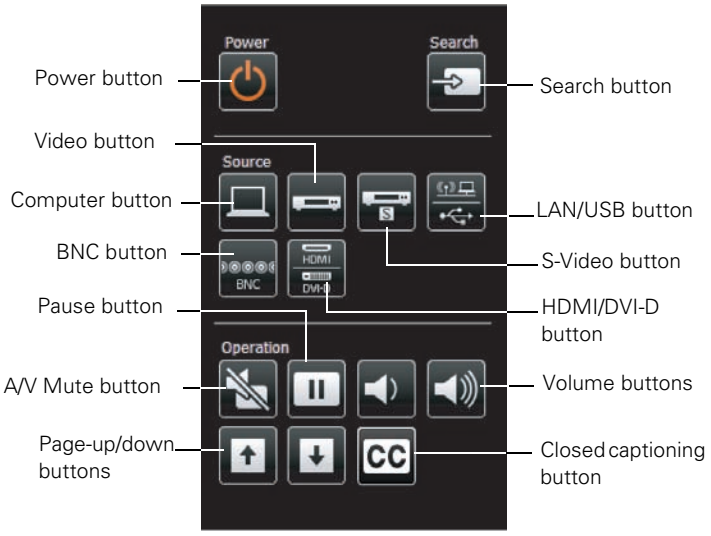
   You can only change the following settings using a web browser:

   - Community Name
   - Monitor password

Using Web Remote Control

When you access the projector through your browser, you can display a "virtual remote control" on your computer screen. This lets you change sources and perform many of the same functions as you can with the physical remote control.

From the Projector Control menu, select Web Remote. You see the following screen:



- The Power button turns the projector on and off.
- The Search button searches for signal sources (see page 56).
- The Computer button changes the input source to Computer1 (PowerLite G5450WUNL/G5750WUNL) or, with the PowerLite G5550NL/G5650WNL/G5950NL, selects a computer signal (connected to the Computer1 or Computer2 port).
- The Video button selects a video signal (connected to the Video1 or Video2 port).
- The S-Video button changes the input source to S-Video.
- The LAN/USB button selects a network signal or a signal from equipment connected to the USB port on the projector.
- The BNC button changes the input source to BNC.
- The HDMI/DVI-D button changes the input source to HDMI (G5550NL/G5650WNL/G5950NL), or selects a signal from equipment connected to the HDMI or DVI-D port on the projector (G5450WUNL/G5750WUNL).

- The A/V Mute button temporarily turns off the picture and sound (see page 67).
- The Pause button stops the image (see page 67).
- The Volume buttons raise or lower the volume.
- The Page-up/down buttons change slides when you project a slideshow over a network or from a device connected to the USB port.
- The CC (Closed Captioning) button lets you display closed captioning for content that provides it.

Using Crestron RoomView to Monitor and Control the Projector

You can use Crestron RoomView to monitor and control the projector through the network.

note

You cannot use the web browser control described on page 101 or the Message Broadcasting plug-in (see page 12) while you are using Crestron RoomView.

Standby Mode in the Extended menu should be set to Communication On *to monitor or control the projector in standby mode.*

When accessing the projector over a wireless connection, use Advanced Mode (see page 81).

Setting up the Projector

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

3. Choose Others and press Enter. You see the following screen:



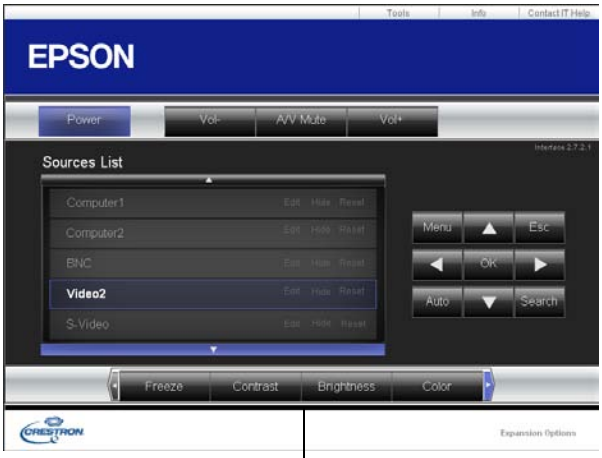
4. Turn on the RoomView setting.
5. Highlight the Return button at the top of the screen, then press Enter. Choose Setup complete and press Enter, then choose Yes and press Enter to save the changes.
6. Press Menu to exit.
7. Turn the projector off and then on again. The setting change will take effect once the projector restarts.

Using a Browser to Control the Projector

You can use a standard web browser to monitor and control the projector through the network.

1. Make sure that the projector is set up for your network, as described on page 76 (for a wired connection) or page 81 (for a wireless connection).

2. Open your web browser and enter the IP address of the projector you want to monitor in the browser's address box. You see a window like this:



toolbar

3. Select options on the screen as necessary:
   - To turn the projector on or off, click the Power button.
   - To raise or lower the volume, click the Vol+ and Vol- buttons.
   - To temporarily turn off the picture and sound, click the A/V Mute button (see page 67).
   - To select an input source, click it in the Sources List. To scroll through the list, click the arrow bars at the top or bottom of the list.
   - To pause or unpause an image, click the Freeze button in the toolbar.
   - To adjust the contrast, click the Contrast button in the toolbar.
   - To adjust the image brightness, click the Brightness button in the toolbar.
   - To adjust the color saturation, click the Color button in the toolbar.

note

If you're not sure what the IP address of the projector is, turn the projector on and select Net. Info.-Wired LAN *or* Net. Info.-Wireless LAN *from the Network menu to display the address. Do not enter leading zeroes.*

note

The toolbar buttons are not all visible at the same time. To scroll through the toolbar buttons, click the arrow buttons on the left or right side of the toolbar.

- To adjust the image sharpness, click the Sharpness button in the toolbar.
- To enlarge the image without changing the projection size, click the Zoom button in the toolbar. Then click the ⊕ button to enlarge the image or the ⊖ button to reduce an image that was enlarged with the ⊕ button. Click the arrow buttons the change the position of an enlarged image.

4. Use the following buttons in place of the buttons on the projector's remote control:

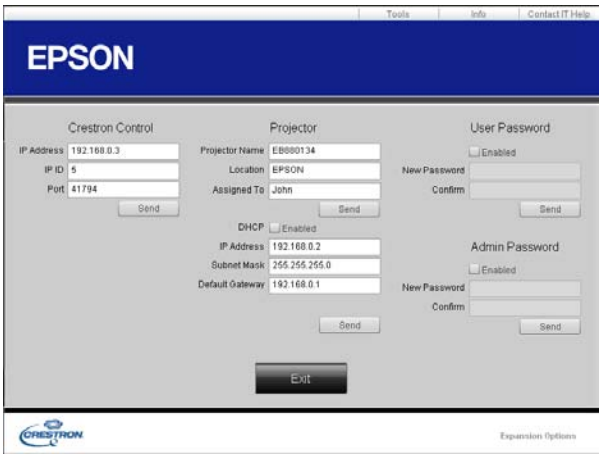
Crestron RoomView button	Remote control button
OK	Enter
Menu	Menu
Auto	Auto (see page 117)
Search	Search (see page 66)
Esc	Esc

Additionally, the arrow buttons in the Crestron RoomView window can be used in place of the ◎ pointer button on the remote control.

5. Select the Info tab in the top right corner of the window to display information about the projector.
6. Select the Contact IT Help tab in the top right corner of the window to display the Help Desk window, which can be used to send messages to and receive messages from an administrator using Crestron RoomView Express.

Using the Tools Tab

Select the Tools tab in the top right corner of the window to display the window shown below:



1. Enter settings for Crestron® central controllers in the Crestron Control section of the window.
2. Enter settings in the Projector section of the window:
   - Enter a Projector Name to differentiate the current projector from other projectors on the network (up to 15 single-byte alphanumeric characters).
   - Enter a Location name for the projector (up to 32 single-byte alphanumeric characters).
   - Enter a user name for the projector in the Assigned To box (up to 32 single-byte alphanumeric characters).
   - Click the Enabled checkbox to use DHCP.
   - If you're not using DHCP, enter an IP Address for the projector.
   - Enter a Subnet Mask and Default Gateway address for the projector.
3. Click Send to register the changes you made in the Projector section of the window.

4. To require a password for access to the initial Crestron RoomView window, click Enable in the User Password section of the window, enter a password (in both the New Password and Confirm boxes), and click Send.
5. To require a password for access to the Tools tab, click Enable in the Admin Password section of the window, enter a password (in both the New Password and Confirm boxes), and click Send.
6. When you're through making settings on the Tools tab, click Exit.

note

Passwords you enter in the User Password *or* Admin Password *window sections can contain up to 26 single-byte alphanumeric characters.*

5 Fine-Tuning the Projector

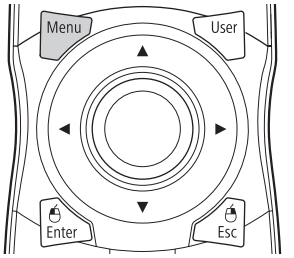
You can use the projector's on-screen menus to adjust the image, sound, and other features. This chapter covers the following information:

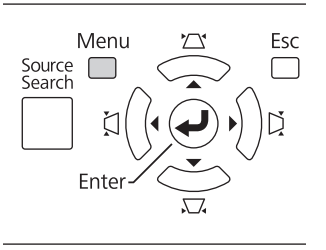
- Using the menu system
- Adjusting the image
- Adjusting signal settings
- Customizing projector features
- Using the projector security features
- Customizing power and operation
- Multi-screen color adjustment
- Projector Menu and Options List

Using the Menu System

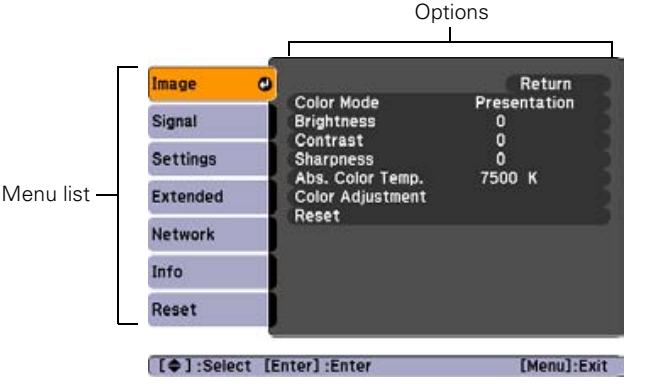
You can use the remote control or the projector's control panel to access the menus and change settings. Follow these steps:

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 129. 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.



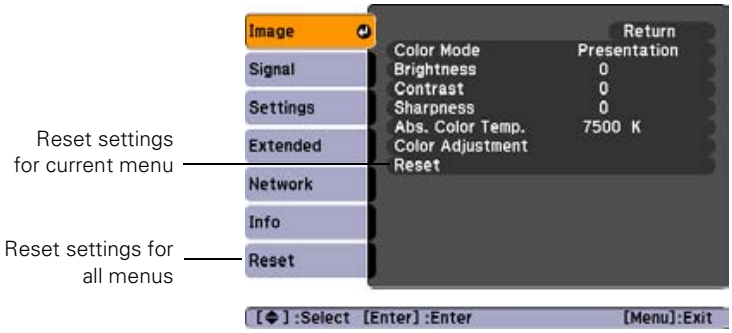
5. After changing the settings, press the Esc button to save your changes and return to the previous menu (or press it repeatedly to exit the menu system).

   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

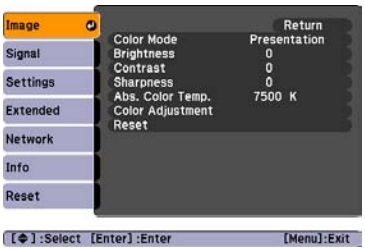
When you select Reset All *in the Reset menu, it does not reset the Input Signal, User's Logo, Multi-screen, Language, Lamp Hours, or Network settings.*

Adjusting the Image

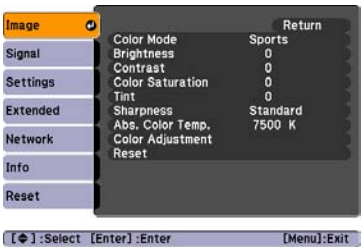
You can use the Image menu to adjust the brightness, sharpness, color, tint, and contrast.

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/
USB/LAN



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 60 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 use the* Power Consumption *setting to change the lamp's brightness (see page 119).*

- Sharpness
  Adjusts the sharpness of the image.

  If you select Advanced, you can access more detailed settings: Adjust Thin Line Enhancement to enhance or soften objects like hair or fabric patterns. Adjust Thick Line Enhancement to enhance or soften outlines of objects or backgrounds. Adjust Vert. Line Enhancement to enhance vertical lines in the image. Adjust Horiz. Line Enhancement to enhance horizontal lines in 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, saturation, and brightness values. For other color modes, RGB may be selected to adjust red, green, and blue saturation values. (Not available if sRGB is selected as the Color Mode setting.)

note
You cannot adjust the advanced Sharpness settings if the input signal is RGB or if the input source is USB or LAN.

Six-Axis Color Adjustment

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

1. Follow the instructions on page 114 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, saturation, and brightness 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, saturation, and brightness.

   Hue changes the balance of color, and saturation changes the strength of the color.

5. Use the pointer button to adjust the hue, saturation, and brightness. 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.

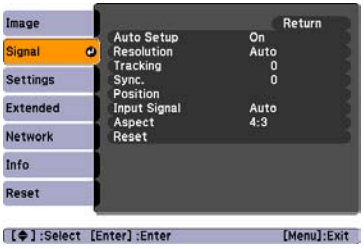
You may need to readjust the color as the lamp in your projector changes over time.

Adjusting Signal Settings

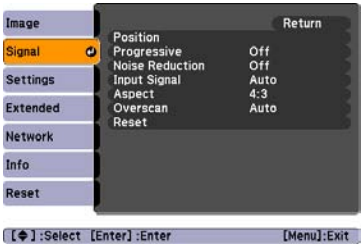
Although the projector normally detects and optimizes the input signal automatically, you can use the Signal menu to make manual adjustments. In addition to changing the position of the projected image, you can correct tracking and sync for computer images, or change the aspect ratio to widescreen format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

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 the setting that makes the selected input source look best. Epson recommends that you select Off when viewing image sources with very low noise, such as DVDs.
- HDMI Video Range (G5550NL/G5650WNL/G5950NL only)
  When you connect to the HDMI input port, set the projector's video range to match the video range setting of your device.
- DVI/HDMI Video Range (G5450WUNL/G5750WUNL only)
  When you connect to the DVI-D or HDMI input port, set the projector's video range to match the video range setting of your device.

note

You can also use the remote control's Auto *button to automatically reset the projector's Tracking, Sync, and Position settings. See page 155 for details.*

note

For component or RGB video, the Progressive setting can only be adjusted when 480i/576i/1080i signals are being input. However, the setting cannot be adjusted with 1080i signals when the Aspect setting is Full.

note

The Noise Reduction, Progressive, and Overscan settings cannot be set for digital RGB signals.

- 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 (G5550NL/G5650WNL/G5950NL only), 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).

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

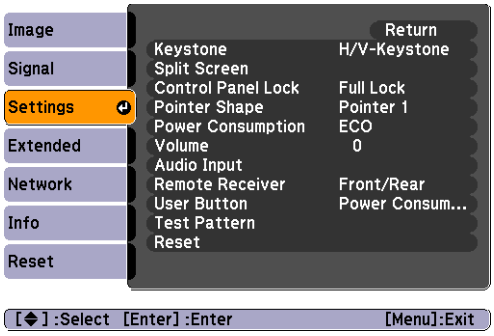
- Aspect
  Sets the image's aspect ratio (ratio of width to height). Depending on your projector model and input source, you can select Auto, Normal, 4:3, 16:9, Full, Zoom, or Native; see page 61 for more information.

- Overscan
  Allows you to reduce the image size slightly when the edges of the image are not visible. The range of trimming can be set to Off, 4%, or 8%. You can select Auto only when the input source is HDMI. When Auto is selected, the range is automatically switched to Off or 8% according to the input signal.

- 2-2 Pull-down (G5450WUNL/G5750WUNL only)
  Projects 24 frames per second images at their original frame rate without interpolation. This can be set only when 1080p/24Hz signals are being input.

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.

- Split Screen
  Lets you divide the screen into two parts and show two input sources at the same time. See page 62 for more information.

- Control Panel Lock
  Lets you disable all of the buttons on the projector, or all of the buttons except the ⏻ power button. See page 125 for more information.

- Pointer Shape
  Lets you choose from three pointer shapes. See page 69 for more information.

- Power Consumption
  Lets you select from two levels of brightness. The ECO setting reduces power consumption and noise, and extends the lamp's operating life.

note
You can also adjust the volume using the remote control.

- Volume
  Raises or lowers the volume.
- Audio Input
  Lets you select the input port to use for audio when your video input is LAN. With the PowerLite G5550NL/G5650WNL/G5950NL, you can also select an audio input port when your video input is HDMI.
- 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: Power Consumption, 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, focus, image position, Color Mode, Brightness, Sharpness (standard only), Abs. Color Temp, Color Adjustment, and when performing keystone correction.

  Press the pointer button on the remote control to the left or right or press the Enter button on the projector to change the test pattern. Press the Esc button to clear the test pattern.

Using the Projector Security Features

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 123.
- 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 125.

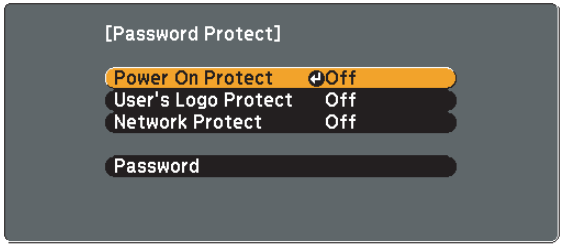
note

You can also attach a security cable to the projector to prevent theft (see page 164).

Enabling Password Protection

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

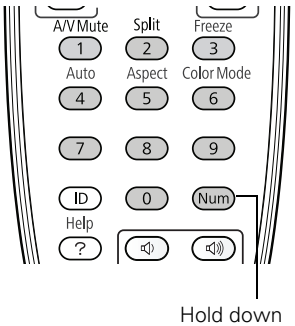
1. Press the Freeze button on the remote control for about five seconds. You see this screen:



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.

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.



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 121, and then turn on any of the following options:

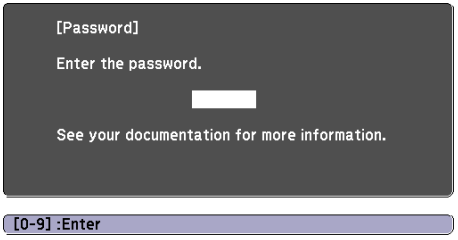
- Power On Protect to prevent unauthorized use of the projector. After the projector is plugged in and turned on, you must enter a password to use the projector. For details, see "Starting the Projector with a Password" below.
- User's Logo Protect to prevent your custom screen and display settings from 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 123.
- Network Protect to lock the Network settings in the menu system.

Starting the Projector with a Password

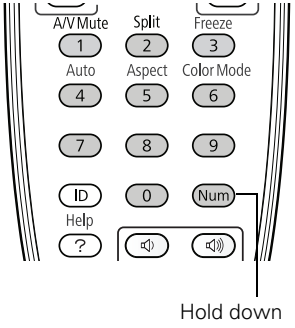
note

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

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.



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. Request code xxxxx. Write down the request code. The message displays for approximately 5 minutes, and then the projector switches to standby mode. Once the projector is in 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 161.

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

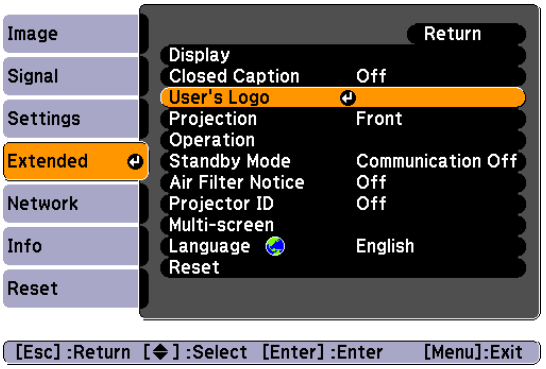
Start by displaying the image you want to use from either a computer or video source, such as a DVD player or digital camera. Then follow these steps to capture the image and transfer it to the projector:

1. Press the Menu button, highlight the Extended menu, and press Enter.

note

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

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 on the remote control (or the arrow buttons on the projector) 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. Highlight 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.

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 67).

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 121).

Disabling the Projector's Buttons

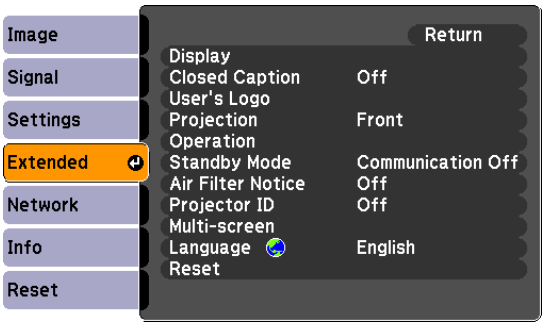
When you enable the Control Panel Lock function, you can lock all of the projector's buttons, or all of the buttons except the ⏻ power button. The remote control can still be used to operate the projector.

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. With the PowerLite G5450WUNL/G5750WUNL, you can also increase the size of the projector menus and messages.

- **Closed Caption**
  Lets you display closed captioning for content that provides it.

- **User's Logo**
  Create a custom startup screen, as described on page 123.

- **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**
  Direct Power On: Enable if you want to be able to start the projector when you connect the power cord (without pressing the ⏻ power button).

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.

Sleep Mode: Enable if you want the projector to turn off automatically if it is idle and no signal is received for 1 to 30 minutes (you can adjust the amount of time using the next setting).

Sleep Mode Timer: When Sleep Mode is on, you can set the period of time before the projector turns off automatically, from 1 to 30 minutes.

High Altitude Mode: Enable when you are using the projector above 4,900 feet (1,500 meters) to ensure that the temperature is regulated properly. Turn this setting off for lower elevations.

note
Do not use the projector at altitudes above 9,800 feet (3,000 meters).

BNC Sync Termination: Enable when analog (75Ω) termination (such as for switchers) is necessary.

Remote Control Type: Select Normal when you use the remote control provided with this projector, the PowerLite G5000, or the PowerLite Pro G5150NL, G5350NL, G5200WNL, Z8000WUNL, or Z8050WNL. Select Simple if you want to use the remote control provided with a different Epson projector.

note
You cannot use this projector's remote control when the Remote Control Type *is set to* Simple. *Select this setting carefully as changing it back may be difficult if the projector is mounted on the ceiling.*

Inv Direction Button: Enable when the projector is mounted on the ceiling to reverse the directions of the arrow buttons on the projector's control panel.

- Standby Mode
  Select Communication On to enable the projector to be monitored over a network when it is in standby mode (the power light is orange).
- Air Filter Notice
  Enable this option to receive a message on the screen when a clog in the air filter is detected.
- 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 71 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 Network Projection 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 the next section for more information about multi-screen color adjustment.
- Language
  Select a language to use for the projector menus and messages.

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 Network Projection 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 71 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 114 for instructions.
2. Press the Menu button, highlight the Extended menu, and press Enter.
3. Select Multi-screen and press Enter.
4. 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.

5. Next, adjust the brightness of Level 5 for the same two projectors. Match the brighter projector to the darker one.
6. Adjust and match the brightness of Levels 2, 3, and 4.
7. Adjust and match the G/R color correction for all levels. Then adjust and match the B/Y correction for all levels.
8. If you are using three or more projectors, repeat steps 4 through 7 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

Menu	Options
Signal	Auto Setup Resolution Tracking Sync. Position Progressive Noise Reduction HDMI Video Range DVI/HDMI Video Range Input Signal Video Signal Aspect Overscan 2-2 Pull-down Reset
Settings	Keystone Split Screen Control Panel Lock Pointer Shape Power Consumption Volume Audio Input Remote Receiver User Button Test Pattern Reset
Extended	Display Closed Caption User's Logo Projection Operation Standby Mode Air Filter Notice Projector ID Multi-screen Language Reset
Network	Basic Wireless LAN Security Wired LAN Mail Others Reset

Menu	Options
Info	Lamp Hours Source Input Signal Resolution Video Signal Refresh Rate Sync Info Status Serial Number Event ID
Reset	Reset All Reset Lamp Hours

6 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.

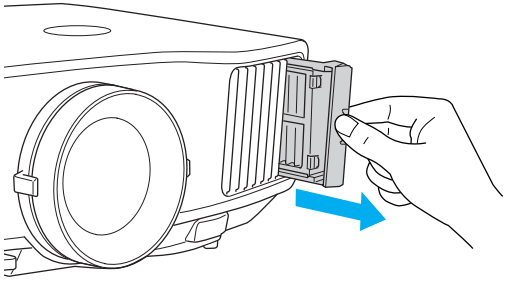
Cleaning the Air Filter

note
To order replacement air filters, request part number V13H134A17. See page 15 for ordering information.

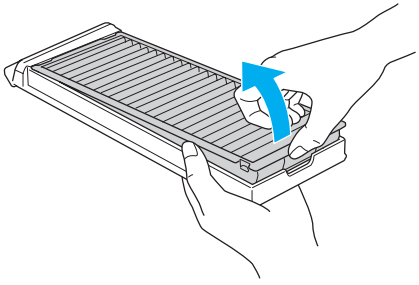
Your projector includes an air filter to ensure the best performance. If dust collects on the air filter (on the side of the projector), you see a message on the screen telling you to clean the filter, or the Temp light flashes green, clean the filter as described on page 135. Dust clogs prevent proper ventilation and can cause overheating, which can damage the projector.

Follow these steps:

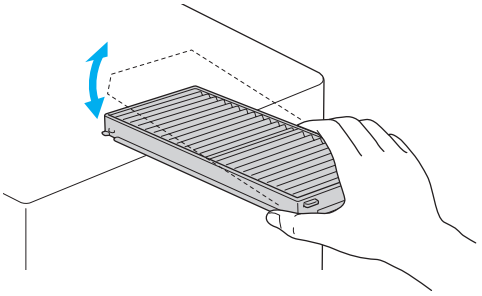
1. Press the ⏻ power button on the back of the projector to turn it off. After the projector beeps twice, unplug the power cord.
2. Grip the air filter cover tab and remove the air filter cover as shown.



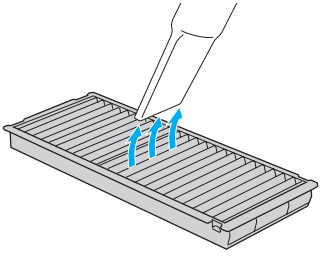
3. Place your finger into the groove and remove the air filter as shown.



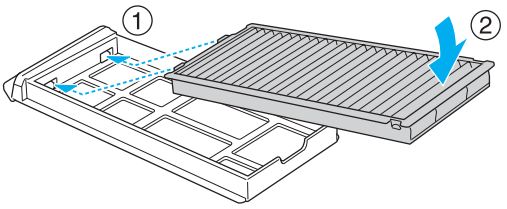
4. With the front of the air filter facing down, tap it four or five times to shake off the dust. Turn it over and tap the other side in the same way to shake off the dust.



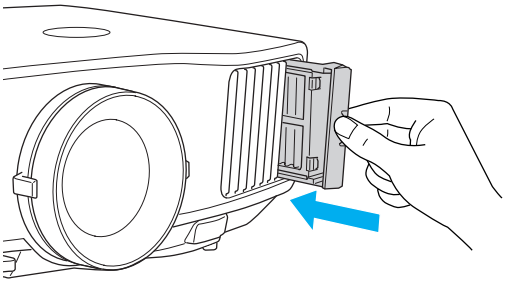
5. To clean any dust remaining on the air filter, use a small vacuum cleaner designed for computer and other office equipment to clean the front. If you don't have one, gently clean the vent with a soft brush (such as an artist's paintbrush).



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 it clicks into place.

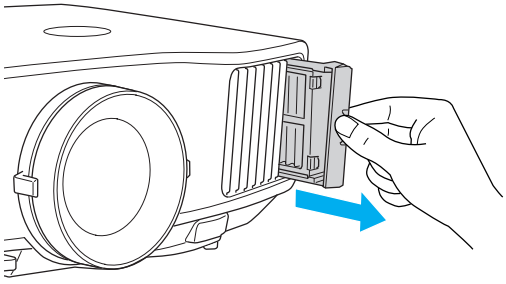


8. If the dirt is difficult to remove, the filter is broken or discolored, or you continue to see air filter related messages even after cleaning, replace the filter as described in the next section. Contact your dealer or call Epson at 800-GO-EPSON (800-463-7766) to obtain a new filter.

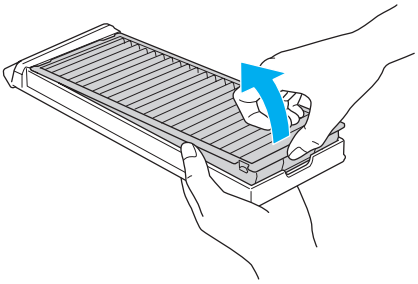
Replacing the Air Filter

Follow these steps to replace the air filter:

1. Press the ⏻ power button on the back of the projector to turn it off. After the projector beeps twice, unplug the power cord.
2. Grip the air filter cover tab and remove the air filter cover as shown.

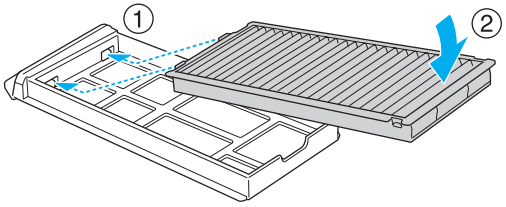


3. Place your finger into the groove and remove the air filter as shown.

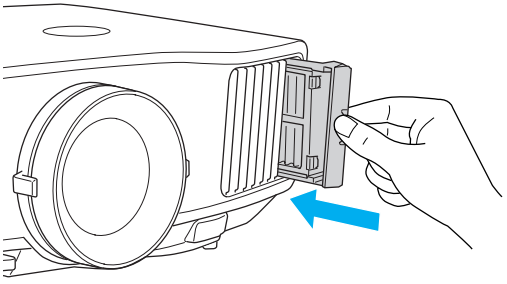


note
The air filter contains Polypropylene. Dispose of used air filters properly in accordance with your local regulations.

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



5. Slide the air filter cover in until it clicks into place.



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

Do not turn the projector on immediately after turning it off. Turning the projector on and off frequently may shorten the life of the lamp.

Replacing the Lamp

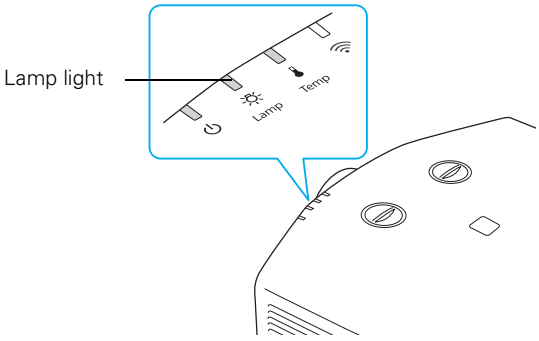
The life span of the projection lamp is about 2000 hours if Power Consumption in the Settings menu is set to Normal (default), and 3000 hours if Power Consumption is set to ECO.
See page 142 to check the lamp usage.

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.
- 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 147.



Contact your dealer or call Epson at 800-GO-EPSON (800-463-7766). Request part number V13H010L62 (G5450WUNL/G5550NL) or V13H010L63 (G5650WNL/G5750WUNL/G5950NL).

Follow these steps to replace the lamp:

1. Press the power button on the back of the projector to turn it off. 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.

note

Epson recommends that you clean the air filter whenever you replace the lamp.

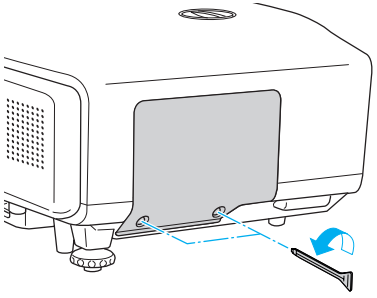
warning

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.

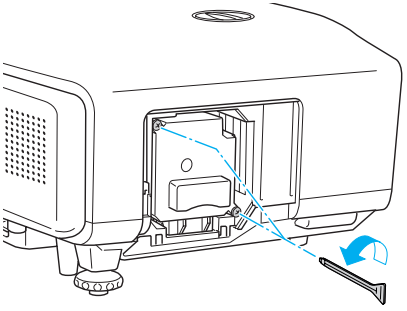
3. Loosen the lamp cover screws (you don't need to remove them). Then remove the lamp cover.



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).

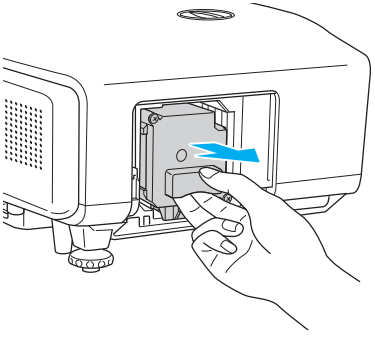


Loosen, but don't remove these screws

note

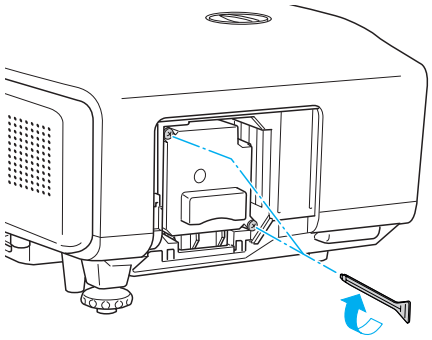
Hg The lamp(s) in this product contain mercury. Please consult your state and local regulations regarding disposal or recycling. Do not put in the trash.

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.



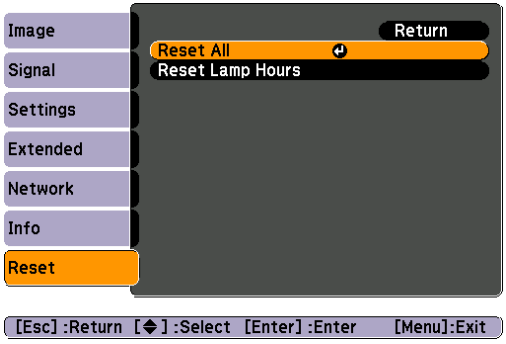
8. Replace the lamp cover, then tighten its screws.
9. Reset the lamp timer as described in the next section.

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:



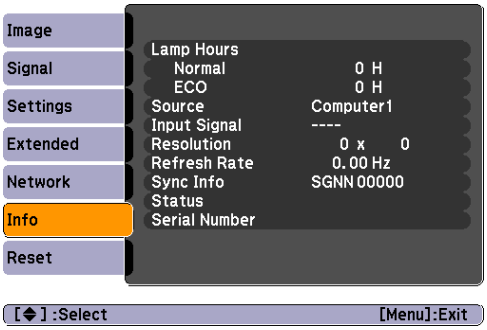
3. Select Reset Lamp Hours and press Enter.
4. When you see the prompt, select Yes and press Enter.

5. When you're finished, press Menu to exit.

Checking Lamp Usage

note
The information displayed depends on the input signal currently selected.

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:



The life span of the projection lamp is about 2000 hours if Power Consumption in the Settings menu is set to Normal (default), and 3000 hours if Power Consumption is set to ECO. Make sure you have a spare lamp handy if the usage hours on this menu are close to the life span of your lamp.

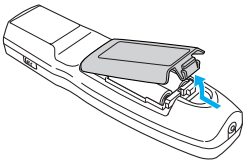
caution
When replacing batteries, take the following precautions:

- *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 and do not put them in water.*
- *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.*

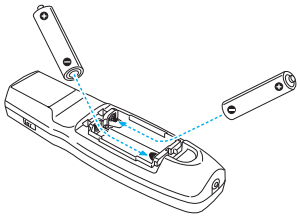
Replacing the Batteries

Replace the batteries in the remote control as described below:

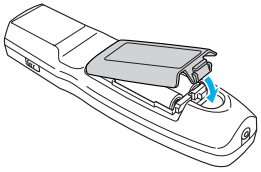
1. Turn the remote control over.
2. Push the tab on the battery cover as you lift the cover off.



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:

- If you are moving the projector by hand, use the projector handle.
- Attach the lens cover to the lens.
- Return the projector feet to their stored (highest) positions.

Additionally, follow these guidelines when you are transporting the projector a long distance:

- Turn the vertical lens shift dial so that the lens is in its lowest position.
- When packing the projector, 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 to protect it from shock.

note

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

7 *Solving Problems*

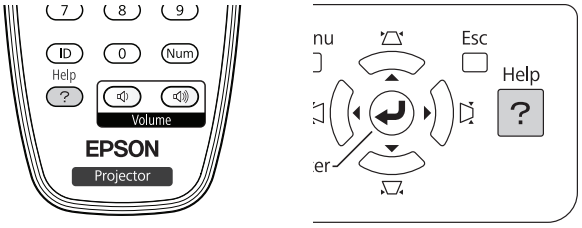
This chapter helps you solve problems with your projector, and tells you how to contact technical support for problems you can't solve yourself. The following information is included:

- 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

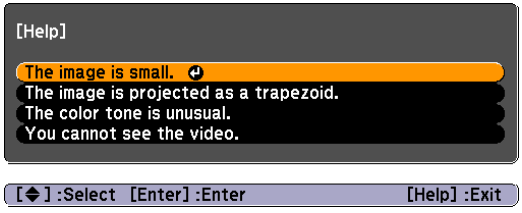
Using On-Screen Help

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.

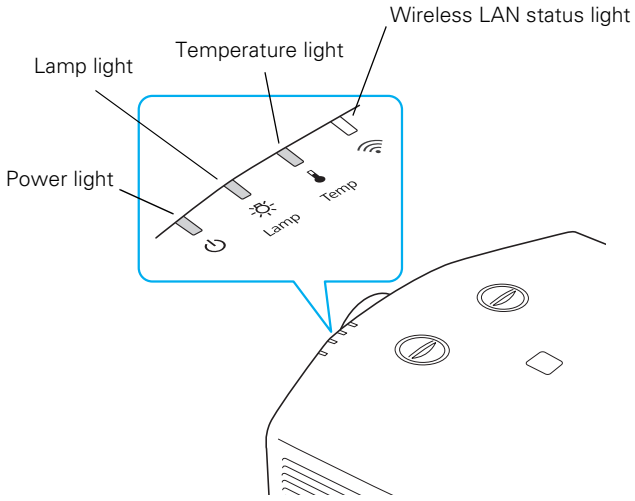
If none of the suggestions solve your problem, see additional solutions to problems in the following sections.

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.

Status lights (continued)

Light	Status	Description
	Flashing orange	The projector is cooling down. You can't turn it back on (and you should not unplug it) until the light stops flashing and remains orange. The projector is setting itself up for network monitoring.
	Flashing green	The air filter may be clogged. Clean or replace the air filter as described on pages 134 to 138.
	Red or flashing red	There is a problem with the projector. Check the other two lights and the information on page 149 to diagnose the problem.
	Flashing orange	It's time to replace the lamp. See page 138 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 vents are clear. The air filter may be clogged. Clean or replace the air filter as described on pages 134 to 138.
	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 outside the required temperature range of the projector (see page 173), 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 134 to 138. 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 126). 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 161. **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 161.
	Flashing red	

Status lights (continued)

Light	Status	Description
	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 161.
	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 134 to 138. 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 138. 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 126). If none of these suggestions resolves the problem, contact Epson as described on page 161.

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 161.
- 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 125 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, and that the lens cover is removed.
- 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 116).
- You can also try resetting all of the configuration menu settings. See page 113.

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 beginning on page 30.

- 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.)
- Make sure the power for your connected equipment is turned on.

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. 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 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. Do one of the following:

   Mac OS X 10.6.x users: Click Show displays in menu bar.

   Other Mac OS X users: Make sure the VGA Display or Color LCD dialog box is selected, click the Arrangement or Arrange tab, then 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 116).
- Make sure your computer's resolution and frequency or refresh rate is supported by the projector (see page 174). If necessary, change your computer's settings.

The projector and notebook don't display the same image

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, select the Settings option, then select the Advanced option (in Windows Vista, right-click on the desktop, select Personalize, select Display Settings, then select Advanced Settings).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. Make sure your projector is connected, then follow these steps:

1. Open System Preferences.
2. Click Displays.

3. Click Detect Displays.
4. Do one of the following:

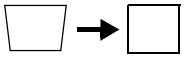
   Mac OS X 10.6.x users: Click Show displays in menu bar.

   Other Mac OS X users: Make sure the VGA Display or Color LCD dialog box is selected, click the Arrangement or Arrange tab, then make sure the Mirror Displays checkbox is selected.

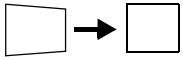
Only part of the computer image is displayed.

- 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 117 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 174.
- 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 116).
- 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 58.



The image contains static or noise.

- Make sure the cables are securely connected.

- 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 118).
- If you've used the Quick Corner or Keystone adjustment, you may need to decrease the Sharpness setting in the Image menu (see page 115).
- If you're projecting from a computer, make sure its signal is compatible with the projector. See page 174.
- If you're using the Split Screen function, you may need to set the Resolution setting in the Signal menu to Auto (see page 117).
- 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 117.

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.*

The image is blurry.

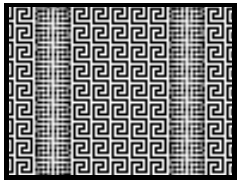
- There may be dirt or smears on the lens. Clean the lens as described on page 134.
- Adjust the focus using the focus ring (see page 58).
- If the projector is angled sharply toward the screen, it may not be possible to focus the entire image. Move the projector to position it more directly in front 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 170).
- 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.

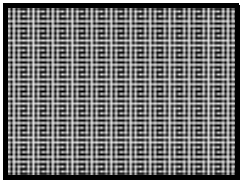
You see vertical bands or the image still looks blurry after trying the solutions in the previous section.

- 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 117.

  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.



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



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.*

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 114).
- 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 Power Consumption setting (see page 119).
- Check your computer display settings to correct the color balance.
- The projector's lamp may need to be replaced. See page 138 for instructions.
- Make sure the correct input signal is selected in the Signal menu (see page 118).
- 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 120).
- 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 46.

- 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 as described on page 46.
- If you're using an HDMI cable and you hear no sound, set your equipment to PCM output.
- If your equipment is connected through the LAN port, or the HDMI port with the PowerLite G5550NL/G5650WNL/G5950NL, make sure you've set the Audio Input setting correctly. See page page 119.

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 (G5550NL/G5650WNL/G5950NL only) or BNC input ports. See page 45.
- If you are using the Split Screen function, the computer image must be on the left side if you want to display it on an external monitor. See page 62.

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 98.
- Set Standby Mode to Communication 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 76).

For problems with the EasyMP Network Projection software, see the *EasyMP Network Projection Operation Guide*.

For problems with the EasyMP Multi PC Projection software, see the *EasyMP Multi PC Projection Operation Guide*.

For problems with EasyMP Monitor (available for Windows only), see the *EasyMP Monitor Operation Guide.*

You can also check the Event ID in the projector when you have network related problems:

1. Press the Menu button and highlight the Info menu.
2. If you see an Event ID at the bottom of the menu, refer to the following table for additional information:

Event ID	Description
0432 0435	EasyMP Network Projection failed to start. Turn the projector off and then back on.
0434 0481 0482 0485	Network communication is unstable. Check the status of your network. Wait a few moments, then try connecting to the projector again.
433	A transferred image cannot be projected. Restart EasyMP Network Projection.
484	There was a network communication problem. Restart EasyMP Network Projection.
04FE	Check the status of your network. Turn the projector off and then back on.
0891	There is a an SSID problem. Set the computer, access point, and projector to the same SSID.
0892	There is a problem related to WPA or WPA2 authentication. Check the setting wireless LAN security setting in the projector (page 93).

Event ID	Description
0893	There is a problem related to WEP, TKIP, or AES encoding. Check the setting wireless LAN security setting in the projector (page 93).
0894	There was a network communication problem because a connection was made to the wrong access point. Consult your network administrator.
0898	Failed to obtain DHCP settings. Check the DHCP server to make sure it is operating correctly. Turn off DHCP in the projector if it is not being used. See page 76 (for a wired connection) or page 81 (for a wireless connection).
0899	Connection error. If you cannot resolve the problem by restarting EasyMP Network Projection or turning the projector off and on, contact Epson for help as described on page 161.

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 142.
- 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 120).
- Make sure the Remote Receiver setting isn't disabling both of the projector's sensors (see page 120).
- 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.
- Make sure the Remote Control Type setting is correct. See page 126.

Where to Get Help

Epson provides these technical support services:

Internet Support

Visit Epson's support website at www.epson.com/support for solutions to common problems. You can download utilities and documentation, get FAQs and troubleshooting advice, or e-mail Epson with your questions.

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 G5450WUNL, G5550NL, G5650WNL, G5750WUNL, or G5950NL)
- Product serial number (located both on the projector and in the projector's menu as described on page 162)
- Proof of purchase (such as a store receipt) and date of purchase
- Computer or video configuration

- Description of the problem

You can obtain the serial number from the projector's menu system: Just press the Menu button and highlight the Info menu.

Purchase Supplies and Accessories

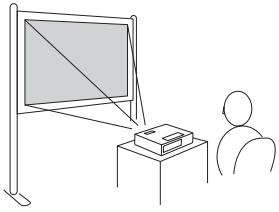
You can purchase screens and other accessories from an Epson authorized reseller. To find the nearest reseller, call 800-GO-EPSON (800-463-7766). Or you can purchase online at www.epsonstore.com (U.S. sales) or www.epson.ca (Canadian sales).

A Projector Installation

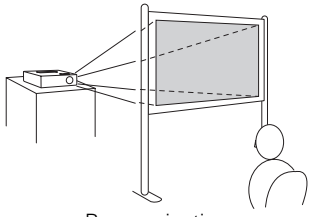
This appendix provides guidelines on installing the projector in a permanent location, such as a theater or conference room.

Installation Guidelines

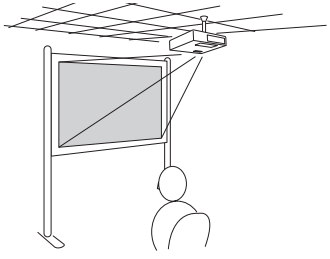
The projector can be installed for four different viewing setups: front projection, ceiling projection, rear projection onto a semi-transparent screen, or rear/ceiling projection, as shown:



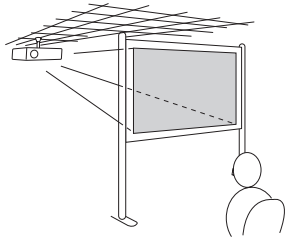
Front projection



Rear projection



Ceiling projection



Rear/ceiling projection

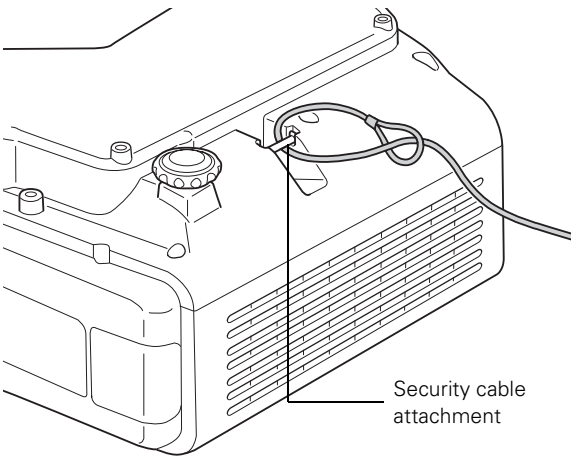
To project from overhead, you'll need the optional ceiling mounting hardware (see page 15). You'll also need to select the appropriate Projection setting in the projector's Extended menu to flip the image upside-down (see page 126).

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 58.

Security Features

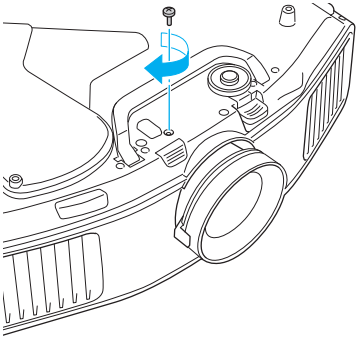
The projector includes security features to prevent its theft when installed or used in public locations:

- 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 15).

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

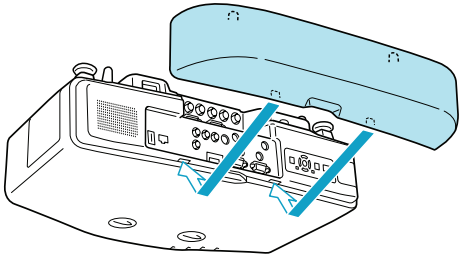


In addition, the projector includes several menu-operated security features. See page 121.

Installing and Removing the Cable Cover

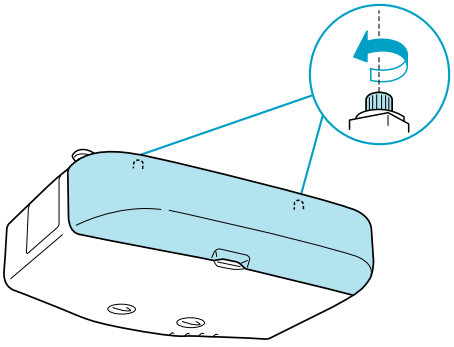
Install the rear cable cover to enhance the appearance of the projector and prevent any cables from being loosened or removed. To install the cover, follow these steps:

1. Insert its tabs into the slots as shown, then push the cover against the projector.

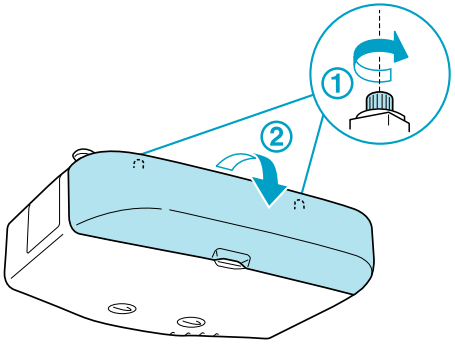


note
These illustrations show the projector mounted on the ceiling.

2. Tighten the screws at the bottom of the cover.



3. 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.



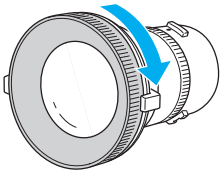
Installing and Removing the Lens

See the following sections for instructions on installing and removing the lens.

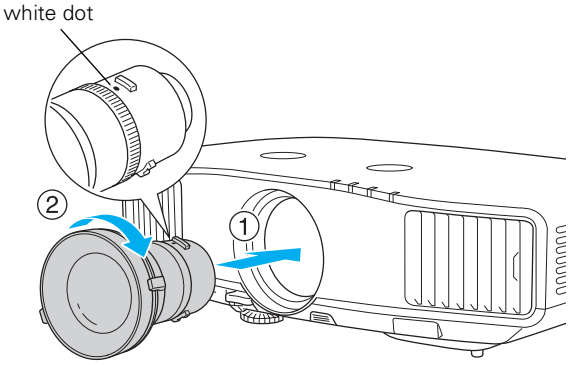
Installing the Lens

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 165).

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.

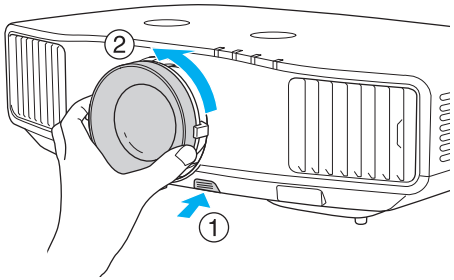
Removing the Lens

1. Turn off the projector and unplug the power cord.
2. If you've attached the lens theft deterrent screw, remove it (see page 165).

note

If you have moved the lens with the lens shift dials (see page 57), center the lens again before removing it.

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 G5550NL/G5950NL: 1024 × 768 pixels (XGA) PowerLite Pro G5650WNL: 1280 × 800 pixels (WXGA) PowerLite Pro G5450WUNL/G5750WUNL: 1920 × 1200 pixels (WUXGA)
Color reproduction	16.8 million colors
Brightness	White light output

	Normal Power Consumption Mode (ISO 21118 standard) (lumens)	**ECO Power Consumption Mode (lumens)**
G5450WUNL	4000	3200
G5550NL/G5650WNL/ G5750WUNL	4500	3600
G5950NL	5200	4160

Color light output

	Normal Power Consumption Mode (lumens)
G5450WUNL	4000
G5550NL/G5650WNL/ G5750WUNL	4500
G5950NL	5200

Contrast ratio	PowerLite Pro G5450WUNL/G5550NL: 1000:1 PowerLite Pro G5750WUNL: 1500:1 PowerLite Pro G5650WNL/G5950NL: 2000:1
Image size (includes all lenses)	PowerLite Pro G5450WUNL/G5750WUNL (16:10 image): 50 to 300 inches (127 to 762 centimeters) PowerLite Pro G5650WNL (16:10 image): 30 to 300 inches (76.2 to 762 centimeters) PowerLite Pro G5550NL/G5950NL (4:3 image): 30 to 300 inches (76.2 to 762 centimeters)
Projection distance (includes all lenses)	PowerLite Pro G5450WNL/G5750WUNL (16:10 image): 2.6 to 149.1 feet (0.8 to 45.5 meters) PowerLite Pro G5650WNL (16:10 image): 1.5 to 152.1 feet (0.5 to 46.4 meters) PowerLite Pro G5550NL/G5950NL (4:3 image): 1.5 to 144.6 feet (0.5 to 44.1 meters)
Projection methods	Front, rear, upside-down (ceiling mount)
Internal sound system	7 W monaural
Optical aspect ratio	PowerLite Pro G5550NL/G5950NL: 4:3 (horizontal:vertical) PowerLite Pro G5450WUNL/G5650WNL/G5750WUNL: 16:10 (horizontal:vertical)
Zoom ratio (standard lens, not included)	1:1.8
Noise level	PowerLite Pro G5450WUNL: 35 dB in Normal Power Consumption mode 30 dB in ECO Power Consumption mode PowerLite Pro G5550NL: 33 dB in Normal Power Consumption mode 28 dB in ECO Power Consumption mode PowerLite Pro G5650WNL/G5950NL: 38 dB in Normal Power Consumption mode 32 dB in ECO Power Consumption mode PowerLite Pro G5750WUNL: 39 dB in Normal Power Consumption mode 33 dB in ECO Power Consumption mode

Keystone correction	PowerLite Pro G5450WUNL/G5750WUNL: ±30° vertical, ±20° horizontal (standard lens) PowerLite Pro G5550NL/G5650WNL/G5950NL: ±40° vertical, ±20° horizontal (standard lens)
Mouse compatibility	Requires optional Wireless IR Mouse Receiver (part number V12H007T16)

Projection Lamp

note

Lamp life will vary depending upon mode selected, environmental conditions, and usage. Brightness decreases over time.

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

Type	UHE (Ultra High Efficiency)
Power consumption	PowerLite Pro G5450WUNL/G5550NL: 275 W PowerLite Pro G5650WNL/G5750WUNL/G5950NL: 330 W
Lamp life	Approx. 2000 hours (Normal Power Consumption mode) Approx. 3000 hours (ECO Power Consumption mode)
Part number	PowerLite Pro G5450WUNL/G5550NL: V13H010L62 PowerLite Pro G5650WNL/G5750WUNL/G5950NL: V13H010L63

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), not including lens
Weight (without lens)	13.7 lb (6.2 kg)

Electrical

Rated frequency	50/60 Hz AC
Power supply	Powerlite Pro G5450WUNL: 100/240 VAC, 4.2 A/1.8 A Powerlite Pro G5550NL: 100/240 VAC, 3.9 A/1.7 A PowerLite Pro G5650WNL/G5950NL: 100/240 VAC, 4.7 A/2.0 A Powerlite Pro G5750WUNL: 100/240 VAC, 4.8 A/2.1 A
Power consumption	PowerLite Pro G5450WUNL: Operating: 100 to 120 VAC 413 W (Normal Power Consumption mode) 345 W (ECO Power Consumption mode) 220 to 240 VAC 393W (Normal Power Consumption mode) 330 W (ECO Power Consumption mode) Standby: 100 to 120 VAC 0.38 W (Communication off) 10 W (Communication on) 220 to 240 VAC 0.47 W (Communication off) 11 W (Communication on) PowerLite Pro G5550NL: Operating: 100 to 120 VAC 390 W (Normal Power Consumption mode) 323 W (ECO Power Consumption mode) 220 to 240 VAC 373 W (Normal Power Consumption mode) 311 W (ECO Power Consumption mode) Standby: 100 to 120 VAC 0.38 W (Communication off) 10 W (Communication on) 220 to 240 VAC 0.47 W (Communication off) 11 W (Communication on)

PowerLite Pro G5650WNL/G5950NL:
Operating:
100 to 120 VAC
464 W (Normal Power Consumption mode)
383 W (ECO Power Consumption mode)
220 to 240 VAC
442 W (Normal Power Consumption mode)
367 W (ECO Power Consumption mode)
Standby:
100 to 120 VAC
0.38 W (Communication off)
10 W (Communication on)
220 to 240 VAC
0.47 W (Communication off)
11 W (Communication on)
PowerLite Pro G5750WUNL:
Operating:
100 to 120 VAC
477 W (Normal Power Consumption mode)
394 W (ECO Power Consumption mode)
220 to 240 VAC
451W (Normal Power Consumption mode)
376 W (ECO Power Consumption mode)
Standby:
100 to 120 VAC
0.38 W (Communication off)
10 W (Communication on)
220 to 240 VAC
0.47 W (Communication off)
11 W (Communication on)

Environmental

Temperature	Operating: 32 to 104 °F (0 to 40 °C) 32 to 95 °F (0 to 35 °C) (over 4,900 ft/1,500 m, with High Altitude Mode and Normal Power Consumption mode active) Storage: 14 to 140 °F (–10 to 60 °C)
Humidity (non-condensing)	Operating: 20 to 80% RH

Operating altitude	0 to 9,800 ft (0 to 3,000 m) (over 4,900 ft/1,500 m, with High Altitude Mode active)

Safety and Approvals

United States	FCC 47CFR Part 15B Class B (DoC) UL60950-1 Second Edition (cTUVus Mark)
Canada	ICES-003 Class B CSA C22.2 No. 60950-1-07 (cTUVus Mark)

Pixelworks™ DNX™ ICs are used in this projector.

Compatible Video Formats

These projectors support the high definition video and computer display formats listed in this section, 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.

Computer signals (analog RGB)

Mode	Refresh Rate (Hz)	Resolution
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

Computer signals (analog RGB) (continued)

Mode	Refresh Rate (Hz)	Resolution
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
UXGA—60	60	1600 × 1200
WSXGA+60*	60	1680 × 1050
WUXGA—60**	60	1920 × 1200
MAC13	67	640 × 480
MAC16	75	832 × 624
MAC19	75	1024 × 768
MAC19-60	59	1024 × 768
MAC21	75	1152 × 870

* Available only when **Wide** is selected as the Resolution with the PowerLite Pro G5450WUNL/G5650WNL/G5750WUNL.

** Available only when a VESA CVT-RB (Reduced Blanking) signal is input with the PowerLite G5450WUNL/G5750WUNL.

Component video

Mode	Refresh Rate (Hz)	Resolution
TV525i (480i)	60	720 × 480
TV625i (576i)	50	720 × 576
SDTV525p (480p)	60	720 × 480
SDTV625p (576p)	50	720 × 576
HDTV750p (720p)	60	1280 × 720
HDTV750p (720p)	50	1280 × 720
HDTV1125i (1080i)	60	1920 × 1080
HDTV1125i (1080i)	50	1920 × 1080

Composite video/S-Video

Mode	Refresh Rate (Hz)	Resolution
NTSC	60	720 × 480
NTSC 4:43	60	720 × 480
PAL	50	720 × 576
N-PAL	50	720 × 576
M-PAL	60	720 × 576
PAL—60	60	720 × 576
SECAM	50	720 × 576

Signals input through the DVI-D (G5450WUNL/G5750WUNL only) or HDMI ports

Mode	Refresh Rate (Hz)	Resolution
VGA—60	60	640 × 480
SVGA—60	60	800 × 600
XGA—60	60	1024 × 768
WXGA—60	60	1280 × 800
SXGA2—60	60	1280 × 960
SXGA3—60	60	1280 × 1024
SXGA+60	60	1400 × 1050
UXGA—60	60	1600 × 1200
WUXGA—60*	60	1920 × 1200

Signals input through the DVI-D (G5450WUNL/G5750WUNL only) or HDMI ports (continued)

Mode	Refresh Rate (Hz)	Resolution
TV525i (480i)	60	720 × 480
TV625i (576i)	50	720 × 576
SDTV525p (480p)	60	720 × 480
SDTV625p (576p)	50	720 × 576
HDTV750p (720p)	60	1280 × 720
HDTV750p (720p)	50	1280 × 720
HDTV1125i (1080i)	60	1920 × 1080
HDTV1125i (1080i)	50	1920 × 1080
HDTV1125p (1080p)	60	1920 × 1080
HDTV1125p (1080p)	50	1920 × 1080
HDTV1125p (1080p)	30	1920 × 1080
HDTV1125p (1080p)	24	1920 × 1080

* Available only when a VESA CVT-RB (Reduced Blanking) signal is input with the PowerLite G5450WUNL/G5750WUNL.

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, and is especially dangerous for children and pets.
- 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 171).
- 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 the projector is not installed correctly, the projector may fall from its ceiling mount. This could cause serious injury to anyone under the mount and could damage the 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, or solvents such as alcohol, thinner, or benzine.

- Do not use sprays containing flammable gas to clean the lens or filter. Do not spray a liquid of any kind directly on the projector or its lens. Do not use the projector where there may be flammable, explosive, or corrosive gases present in the atmosphere.
- Do not place containers of liquid on top of the projector. Never spill liquid of any kind into the projector.
- Do not use the projector where it may be exposed to smoke, steam, or excessive dust.
- Never insert or drop objects of any kind through the projector's vents or openings. Do not leave metal, flammable, or foreign objects nearby.
- 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. 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 (see page 173). Doing so may cause an unstable display and could lead to projector damage.
- Do not store the projector outside the required temperature range (see page 173) 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. Place the projector near an outlet where the plug can be easily unplugged.
- Remove the batteries from the remote control if you will not be using the projector for a long period of time.
- 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 (including consumables). 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 the country where it was purchased, only use the power cable that came with the projector. If you use the projector in a country other than where you purchased it, use the correct power cord for that country.
- Take the following precautions when handling the plug: Do not overload wall outlets, extension cords, or power strips. Do not hold the plug with wet hands. Do not insert the plug into a dusty outlet. 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 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.
- Do not block the light coming from the projector with any object. The object may be damaged or the reflected light may heat the lens and damage the projector.
- Do not touch the lens with bare hands.
- Always attach the lens cover to the lens when not using the projector, to prevent the lens from becoming dirty or damaged.

- 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. 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.
- The gases inside the lamp contain mercury vapor. 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, small pieces of glass may fall down when you remove the lamp cover. Be careful to prevent pieces of glass from getting into your eyes or mouth.
- If the lamp breaks and gases or fragments of broken glass from the lamp are inhaled or get into the eyes or mouth, or if any other ill effects are noticed, immediately seek medical advice.
- Do not disassemble or damage the lamp or subject it to any impacts.
- Do not start the projector while the volume is too high.
- Do not use the projector where there may be low or high temperature extremes or sudden changes in temperature.
- Do not set up the projector where it may be subjected to vibrations or shocks, or near high-voltage electrical wires or sources of magnetic fields.

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.*** (This notice is provided in accordance with Proposition 65 in Cal. Health & Safety Code §25249.5 and following.)

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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 communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or 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 or Declaration 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.

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L. Peter Deutsch ghost@aladdin.com

Independent implementation of MD5 (RFC 1321).

This code implements the MD5 Algorithm defined in RFC 1321, whose text is available at

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The code is derived from the text of the RFC, including the test suite (section A.5) but excluding the rest of Appendix A. It does not include any code or documentation that is identified in the RFC as being copyrighted.

The original and principal author of md5.h is L. Peter Deutsch <ghost@aladdin.com>. Other authors are noted in the change history that follows (in reverse chronological order):

2002-04-13 lpd Removed support for non-ANSI compilers; removed

references to Ghostscript; clarified derivation from RFC 1321; now handles byte order either statically or dynamically.

1999-11-04 lpd Edited comments slightly for automatic TOC extraction.

1999-10-18 lpd Fixed typo in header comment (ansi2knr rather than md5);

added conditionalization for C++ compilation from Martin Purschke<purschke@bnl.gov>.

1999-05-03 lpd Original version.

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