

**EPSON**

***PowerLite***<sup>TM</sup>

***7000***

**User's Guide**

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# Important Information About Your PowerLite 7000

## 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 PowerLite 7000 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.*

## Remote Control Information

You can operate the PowerLite 7000 by remote control via a line-of-sight infrared (IR) receiver at the front and rear of the projector. The projector may not respond to remote control commands under the following conditions:

- ❑ There is an object between the remote control IR emitter and the IR receiver on the projector.
- ❑ Ambient light is too bright.
- ❑ Certain types of fluorescent lighting are used.
- ❑ A strong light source shines into the IR receiver.
- ❑ Other equipment that emits infrared energy, such as a radiant room heater, is in the room.

These conditions commonly cause problems for most infrared-controlled equipment. Try the following solutions:

- ❑ The remote control unit's batteries may be low on power; replace them.
- ❑ Dim the ambient lighting and/or turn off any fluorescent lights.
- ❑ Close any window coverings and/or move the projector out of direct sunlight.
- ❑ Turn off other equipment that emits infrared energy.

If the remote control still does not work properly, remember you can always control your computer-based presentation directly from the computer, even in an environment containing one of the conditions listed above.

## **FCC Compliance Statement For United States Users**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

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

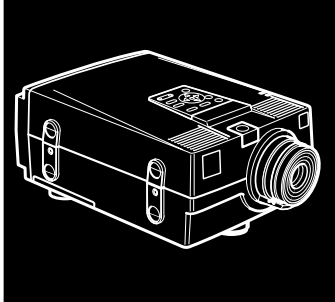
### **WARNING**

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

## **For Canadian Users**

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

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



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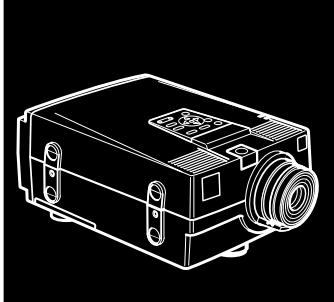
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# Introduction

The compact, lightweight EPSON® PowerLite 7000 Projector allows you to project XGA full-color images and video onto a large screen for presentations. You can connect the projector simultaneously to three image sources: two PC or Apple® Macintosh® computer image sources plus one video source, such as a VCR or camcorder. You can also connect audio for each image source.

Images are displayed in XGA compatible full color (16,770,000 colors) at a resolution of 1024 x 768 pixels. The projector produces bright images that can be easily seen in rooms light enough to take notes. The projector's two speakers employ a built-in Spatializer 3D Sound System for rich, powerful audio output. You can even connect an external speaker when further amplification is required.



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A totally new, patent pending AVTSS system (Automatic Video Tracking and Synchronization Sensing) provides automatic image setup from a computer with a touch of a button, producing beautiful images quickly and easily.

You control the projector through a hand-held remote control unit, with menus provided for image source switching and image adjustment. The remote control can also act as a wireless mouse to control operations on your computer screen during presentations. The projector's ELP Link II software provides a number of add-on features designed to make presentations more effective.

The projector also features a new patented SizeWise chip for support of VGA and SXGA output. No matter what type of computer output is used, the result is a full-size video image of outstanding clarity.

The PowerLite 7000 Projector supports IBM® compatible PCs and laptops, as well as Apple® Macintosh®, Power Macintosh,™ and PowerBook™ computers. The video source can be NTSC, PAL, or SECAM in composite video or S-Video format.

## **Getting the Most Out of Your Projector**

The PowerLite 7000 projector comes with a full set of features that enable you to control the settings for the image display, video, and audio. To get the most out of your projector, read this section for a quick summary of the important features.

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## **Remote Control**

The buttons on the remote control enable you to turn the projector on and off, and provide direct access to auto set up, blank, freeze, volume, mute, and image source switching. Use the remote control buttons to access custom functions (with the ELP Link II software) and the projector's menu system. You can even use the remote control to control your computer in place of your computer's mouse.

## **Sleep Mode**

Sleep mode conserves electricity by automatically turning off the lamp after the projector has not been used for 30 minutes. In sleep mode, the projector remains on but the lamp is turned off, conserving electricity, cooling the projector, and extending the life of the lamp.

## **Control Panel**

The control panel buttons on the projector duplicate the remote control buttons and let you perform additional functions, such as adjusting the tracking and sync for computer images.

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## Optional Accessories

To enhance your use of the projector, EPSON provides the following accessories:

- Carrying cases especially designed for the projector and its cables. Both a soft and hard case are available.

Soft Carrying Case                   ELPKS04

Hard Carrying Case                 ELPKS05

- Replacement lamp and air filter.

Lamp with Filter                    ELPLP03

- Remote control receiver module with a cable for rear and ceiling mount projection. The infrared receiver allows wireless remote control at up to 30 feet (10 meters).

Remote control receiver module

- Communication cable set and computer cable so you can connect your projector to a second computer. Also add a MAC adapter set to connect to a second Macintosh, or a video cable to connect the projector to a video source that supports S-Video.

ELP communication cable set   ELPKC04

MAC adapter set                   2023359

VGA-13WS video cable         ELPKC06

VGA-BNC video cable          ELPKC07

You can purchase these accessories from your PowerLite 7000 dealer or by calling EPSON Accessories at (800) 873-7766.

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## About This Manual

Chapter 1, “Installation,” gives step-by-step instructions on how to set up the projector and connect it to your computer, video source, or other optional equipment. Read the installation procedures that apply to your environment.

Chapter 2, “Using the Projector,” describes how to turn on the projector and control simple projector settings using the remote control or the operation panel.

Chapter 3, “Using the Projector Menus,” describes how to use the menus to adjust the color and image settings, change the display of the projected image, and modify audio settings such as bass and treble.

Chapter 4, “Using the ELP Link II Software,” describes how to use the ELP Link II software to control the computer and use the special presentation functions.

Chapter 5, “Maintenance,” describes how to maintain the projector in good working order.

Chapter 6, “Troubleshooting,” describes how to interpret the projector’s warning lights and gives helpful information for avoiding errors, optimizing image quality, and solving problems.

Chapter 7, “Technical Specifications,” lists the technical specifications for your PowerLite 7000 projector.

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# Safety Instructions

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

1. Do not place the projector on an unstable cart, stand, or table.
2. Do not use the projector near water or sources of heat.
3. Use attachments only as recommended.
4. Use the type of power source indicated on the projector. If you are not sure of the power available, consult your dealer or power company.
5. Place the projector near a wall outlet where the plug can be easily unplugged. *Placez l'imprimante près d'une prise de contact où la fiche peut être débranchée facilement.*
6. Insert the projector's three-wire grounding-type plug into a properly grounded outlet. If you have a two-prong outlet, contact an electrician to replace it. Do not hold the plug with wet hands.
7. Take the following precautions for the plug. Failure to comply with these precautions could result in sparks or fire.
  - Do not insert the plug into an outlet with dust present.
  - Insert the plug firmly into the outlet.
8. Do not overload wall outlets, extension cords, or integral convenience receptacles. This can cause fire or electric shock.
9. Do not place the projector where the cord can be walked on. It may result in fraying or damage to the plug.

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10. Unplug the projector from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use liquid or aerosol cleaners.
  11. Do not block the slots and openings in the projector case. They provide ventilation and prevent the projector from overheating. Do not operate the projector on a sofa, rug, or other soft surface, or in a closed-in cabinet unless proper ventilation is provided.
  12. Never push objects of any kind through cabinet slots. Never spill liquid of any kind into the projector.
  13. Except as specifically explained in this *User's Guide*, do not attempt to service this product yourself. Refer all servicing to qualified service personnel. Opening or removing covers may expose you to dangerous voltages and other hazards.
  14. Unplug projector during lightning storms or when it will not be used for extended periods.
  15. Do not place the projector and remote control on top of heat-producing equipment or in a heated place, such as a car.
  16. Unplug the projector from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    - When the power cord or plug is damaged or frayed
    - If liquid has been spilled into the projector, or if it has been exposed to rain or water
    - If it does not operate normally when you follow the operating instructions, or if it exhibits a distinct change in performance, indicating a need for service
    - If it has been dropped or the housing has been damaged

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## Where to Get Help

EPSON provides customer support and service through a network of authorized EPSON Customer Care Centers. Dial (800) 922-8911 for the nearest location or the following services:

- Fax-on-Demand access to EPSON's technical information library
- Literature on current and new products
- The location of your nearest Authorized EPSON Reseller or Customer Care Center
- Technical information on installation, configuration, and operation of EPSON products
- Customer relations

For answers to commonly asked questions about EPSON products 24 hours a day, 7 days a week, call EPSON Sound Advice at (800) 442-2110.

You can purchase manuals, accessories, or parts from EPSON Accessories at (800) 873-7766 (U.S. sales only). In Canada, please call (800) 873-7766 for dealer referral.

If you need help using third-party software with an EPSON product, see the documentation for that program for technical support information.

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## **Electronic Support Services**

You can access helpful tips, specifications, DIP switch or jumper settings, drivers, Frequently Asked Questions (FAQs), sample files, application notes, and EPSON product bulletins 24 hours a day, 7 days a week, using a modem and one of the on-line services below.

### **World Wide Web**

From the Internet, you can reach EPSON's Home Page at  
<http://www.epson.com>

### **EPSON Download Service**

You can call the EPSON Download Service at (800) 442-2007. Set your communications software to 8 data bits, 1 stop bit, no parity. Modem speed can be up to 28.8 Kbps.

### **EPSON FaxAdvice Service**

You can access EPSON's technical information library by calling (800) 442-2110 and selecting the appropriate phone option. You must provide a return fax number to use EPSON FaxAdvice.

### **EPSON Forum on CompuServe®**

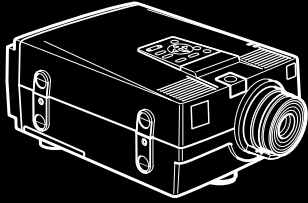
Members of CompuServe can type GO EPSON at the menu prompt to reach CompuServe's Epson America Forum. As an owner of an EPSON product, you are eligible for a free introductory CompuServe



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membership, which entitles you to an introductory credit and your own user ID and password. To take advantage of this offer in the U.S. or Canada, call (800) 848-8199 and ask for representative #529.





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# Installation

This chapter describes how to unpack, set up, and connect your projector to other equipment. The projector must be connected to a computer or a video source such as a VCR, camcorder, or laser disc player. For example, you may want to connect the projector to both your computer and a video source, or set up the projector for one or more of the following:

- Connect the mouse cable to use the remote control as a wireless mouse.
- Provide audio for one or both image sources. The audio source can be the computer, video source, or another device such as a stereo.
- Connect to an external speaker or PA system to amplify the audio.

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# Unpacking the Projector

When you unpack the projector, make sure you have all these components:

- Projector
- Lens cover
- Remote control
- 2 AA batteries
- Power cord
- Video cable
- Audio cable
- Audio/visual (A/V) cable
- Macintosh adapter set
  - Macintosh desktop adapter
  - Macintosh monitor adapter
- ELP Link II Kit
  - Main cable
  - PC serial cable
  - Mouse cable for PS/2
  - Macintosh serial cable
  - Mouse cable for Serial
  - Diskette for Windows
  - Mouse cable for Macintosh
  - Diskette for Macintosh

Depending on the configuration of your equipment, you may not need all these components.

Save all packaging in case you need to ship the projector in the future. Always transport the projector in its original packaging or the equivalent.

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## Additional Components

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

- To receive an S-Video signal, you need an S-Video cable. (One is usually provided with your video device.) A separate cable is required for each video source.
- Video and audio cable to connect a second computer
- To connect the projector to a Macintosh PowerBook, you need a video-out cable. (One is provided for all new PowerBooks that have video-out capability.) If your PowerBook does not include one, see your Macintosh dealer.
- To connect the projector to an external sound system, you need an RCA-to-3.5 mm stereo audio cable. You can obtain one from your computer dealer.
- To connect the mouse cable to your computer, you may require a special connector, cable, or other components. You can obtain these items from your computer dealer.

*Note: You can connect a Kensington MicroSaver anti-theft device in the hole on the right side of the projector. Contact your local computer dealer.*

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## Setting Up the Projector

1. Place the projector on a sturdy, level surface within five feet of the computer or video source.



*Caution: Do not hold the projector by the lens. This can damage the lens.*

2. Place the projector the proper distance from the screen.

The distance between the projector and the screen determines the actual image size. Use the general guidelines in the table on the next page to determine the proper distance.

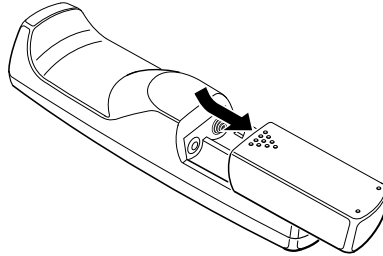
Image size (diagonal)	Horizontal distance from projector to screen	
	Minimum	Maximum
300 inches	393.7 inches (10 m)	
200 inches	263.8 inches (6.7 m)	342.5 inches (8.7 m)
100 inches	129.9 inches (3.3 m)	169.3 inches (4.3 m)
80 inches	106.3 inches (2.7 m)	137.8 inches (3.5 m)
60 inches	78.7 inches (2 m)	102.4 inches (2.6 m)
40 inches	51.2 inches (1.3 m)	66.9 inches (1.7 m)
30 inches	39.4 inches (1 m)	51.2 inches (1.3 m)
23 inches	39.4 inches (1 m)	

3. Make sure the projector is at a right angle to the screen. Otherwise, the screen image will be distorted.
4. Connect one end of the power cord to the projector's power connector. Connect the other end to a grounded electrical outlet. The projector goes into sleep mode, indicated by the orange power status light.

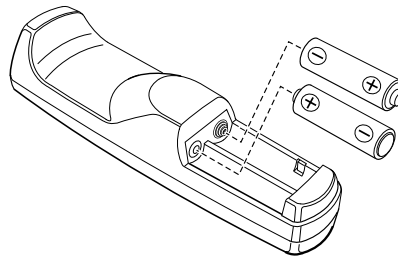


*Warning: Never look into the lens when the lamp is on. The projector might come on suddenly, even when it is not operating. This can damage your eyes. It is especially important that children not look into the lens.*

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5. To insert the batteries in the remote control, slide off the battery compartment cover as shown here.



6. Insert the two AA batteries included with the projector. Make sure the polarity of the batteries is correct.



7. Replace the battery compartment cover.

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When replacing batteries, take the following precautions:

- Do not mix old and new batteries.
- Replace 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 them immediately.
- Remove batteries if you will not be using the projector for a long period of time.

## Connecting to a Computer

You can connect the projector to any computer capable of standard VGA, Super VGA, XGA, or Super XGA output, including:

- IBM compatible desktop PC
- IBM compatible laptop PC
- Apple Macintosh desktop computer, including Macintosh Quadra<sup>®</sup>, Macintosh Centris<sup>®</sup>, and Power Macintosh
- Any Apple PowerBook with video-out capability. This includes all 160, 165, 180, and 500 series PowerBooks.

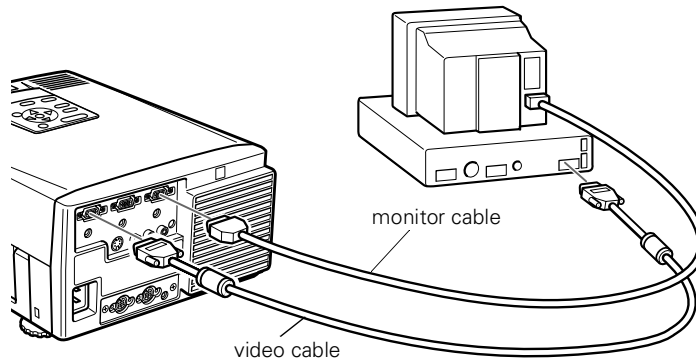
See the section that applies to your computer.



## Connecting to a PC Desktop Computer

Before beginning, turn off the projector and computer if they are on.

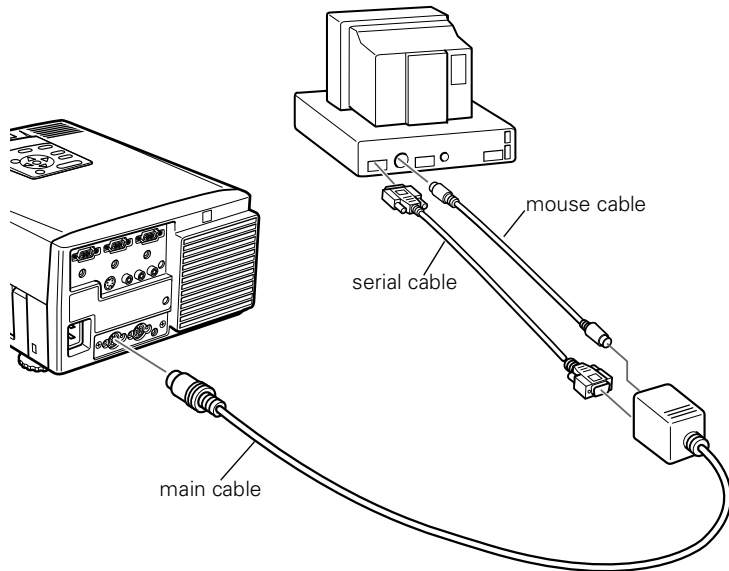
1. Connect the video cable.



*Note: Computer configurations vary. See your computer manual for the location of the ports needed to connect your PowerLite 7000 projector.*

- a. Connect one end of the video cable to the projector's Computer In 1 port. (Use the Computer In 2 port if you are connecting a second computer.)
- b. Disconnect the computer monitor cable from the video port on the back of the computer, and connect the other end of the video cable to the computer's video port.

- c. To also view the video on the computer monitor, connect the computer monitor's monitor cable to the projector's Monitor port. This is useful when you need to view the video output but the projection screen is behind you.
  - d. Tighten the screws on all connectors.
2. Connect the main cable. The main cable connects the mouse cable (needed to use the remote control as a mouse) and serial cable (needed to use the ELP Link II software and the Effects buttons on the remote control) from your computer to the projector.

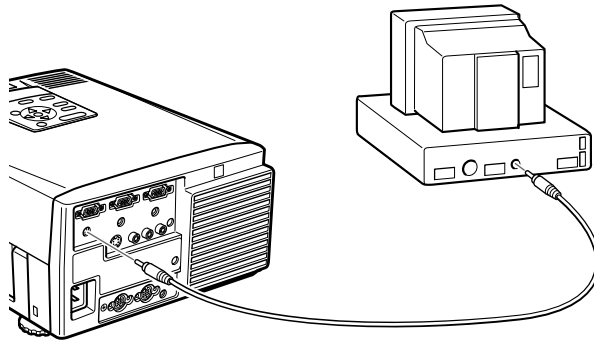


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- a. Connect the small end of the main cable to the projector's Mouse/Com 1 port. (Use the Mouse/Com 2 port if you are connecting a second computer.)
  - b. Connect one end of the PS/2 mouse cable included with the projector to the mouse terminal on the square end of the main cable.
  - c. Disconnect the computer's PS/2 mouse cable from the mouse port on the back of your computer and replace it with the other end of the mouse PS/2 mouse cable included with the projector.
  - d. If your system uses a serial mouse, perform steps b and c using the serial mouse cable instead of the PS/2 mouse cable (not shown in the illustration).
  - e. To configure the projector from your PC using the ELP Link II software or to use the Effects buttons on the remote control, connect one end of the serial cable to the serial terminal on the square end of the main cable.
  - f. Connect the other end of the serial cable to the serial port on the back of your computer.

*Note: You will not be able to use ELP Link II software if your system has only one serial port that is being used to support a serial mouse.*

- g. Tighten the screws on all connectors to make sure they are fastened securely.

3. Connect the audio cable if needed.



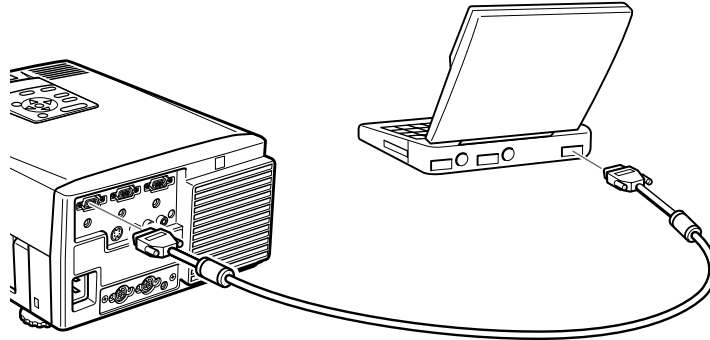
- a. Connect one end of the audio cable to the Audio In 1 jack on the projector. (Use the Audio In 2 jack if you are connecting a second computer).
- b. Connect the other end of the audio cable to the speaker or audio out port on a sound card in the computer.

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## Connecting to a PC Laptop Computer

Before beginning, turn off the projector and computer if they are on.

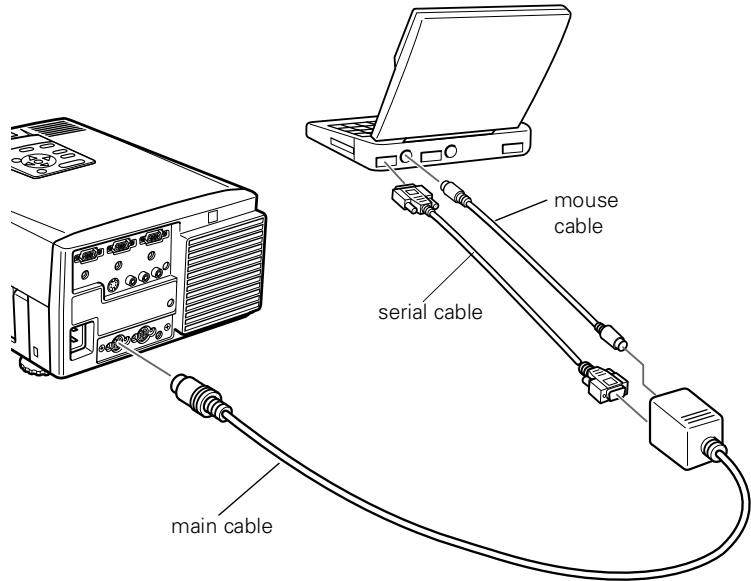
1. Connect the video cable.



*Note: Laptop configurations vary. See your computer manual for the location of the ports needed to connect your PowerLite 7000 projector.*

- a. Connect either end of the video cable to the projector's Computer In 1 port. (Use the Computer In 2 port if you are connecting a second computer.)
- b. Connect the other end of the video cable to the laptop's video (monitor) port.
- c. Tighten the screws on all connectors to make sure they are fastened securely.

2. Connect the main cable. The main cable connects the mouse cable (needed to use the remote control as a mouse) and serial cable (needed to use the ELP Link II software and the Effects buttons on the remote control) to the projector.



- a. Connect the small end of the main cable to the projector's Mouse/Com 1 port. (Use the Mouse/Com 2 port if you are connecting a second computer.)
- b. Connect one end of the PS/2 mouse cable included with the projector to the mouse terminal on the square end of the main cable.

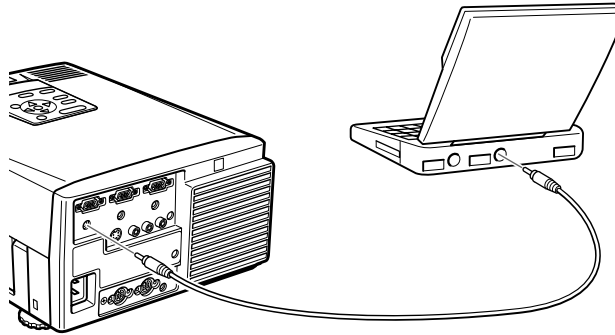
- 
- c. Connect the other end of the PS/2 mouse cable to the mouse port on your laptop.
  - d. If your laptop uses a serial mouse, perform steps b and c using the serial mouse cable instead of the PS/2 mouse cable (not shown in the illustration).
  - e. To configure the projector from your laptop using the ELP Link II software or to use the Effects buttons on the remote control, connect one end of the serial cable to the serial terminal on the square end of the main cable.
  - f. Connect the other end of the serial cable to the serial port on the back of your computer.

*Note: You will not be able to use ELP Link II software if your laptop has only one serial port that is being used to support a serial mouse.*

- g. Tighten the screws on all the connectors to make sure they are fastened securely.
- h. Configure your laptop to work with an external mouse.

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3. Connect the audio cable.



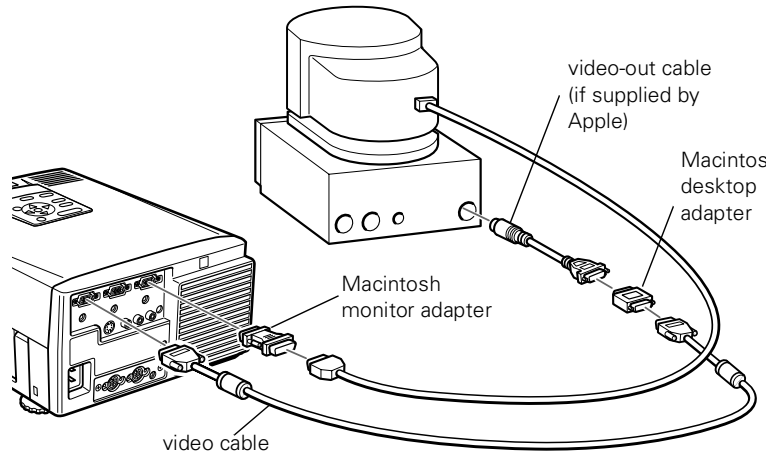
- a. Connect one end of the audio cable to the Audio In 1 jack on the projector. (Use the Audio In 2 jack if you are connecting a second computer).
- b. Connect the other end of the audio cable to your laptop.



## Connecting to a Desktop Macintosh

Before beginning, turn off the projector and Macintosh if they are on.

1. Connect the video cables.

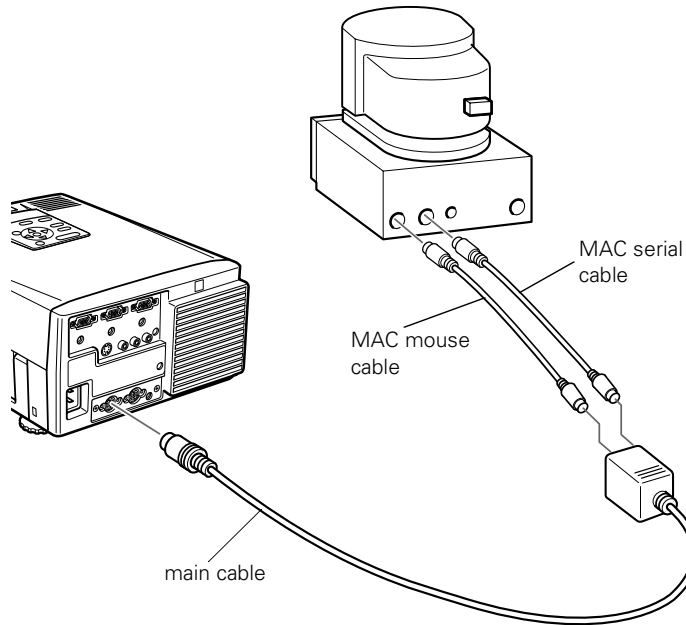


*Note: Macintosh computer configurations vary. See your computer manual for the location of the ports needed to connect your PowerLite 7000 projector.*

- a. Connect either end of the video cable to the projector's Computer In 1 port. (Use the Computer In 2 port if you are connecting a second computer.)
- b. Remove the small cover and set the DIP switches on the Macintosh desktop adapter in accordance with the resolutions you want to use (such as 16 inch mode).

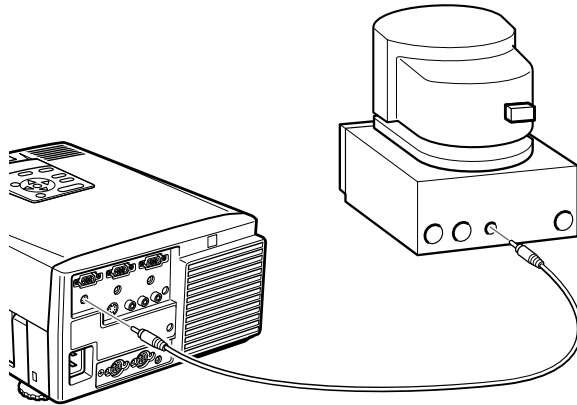
- 
- c. Connect the small terminal of the Macintosh video adapter to the other end of the video cable.
  - d. Disconnect the monitor cable from the video port on the back of the Macintosh and connect the video cable (with Macintosh video adapter attached) to the video port. If a video-out cable was supplied with your Macintosh, connect one end to the video adapter and the other end to the video port on your Macintosh.
  - e. If you wish to view or check images on the computer's monitor, attach the Macintosh monitor adapter to the monitor cable and connect the monitor to the projector's Monitor port.
  - f. Tighten the screws on both connectors to make sure they are fastened securely.

2. Connect the main cable. The main cable connects the mouse cable (needed to use the remote control as a mouse) and serial cable (needed to use the ELP Link II software) from your Macintosh to the projector.



- a. Connect the small end of the main cable to the projector's Mouse/Com 1 port. (Use the Mouse/Com 2 to connect a second computer.)
- b. Connect the MAC mouse cable to the mouse terminal on the other end of the main cable.

- c. Disconnect the mouse cable from the ADB port of the Macintosh and connect the mouse connector of the MAC mouse cable to the mouse port.
  - d. If you are planning to use the ELP Link II software, connect either end of the serial cable to the serial terminal on the large end of the main cable. Connect the other end of the serial cable to the PRINTER or MODEM port on the back of your Macintosh.
  - e. Tighten the screws on both connectors.
3. Connect the audio cable.



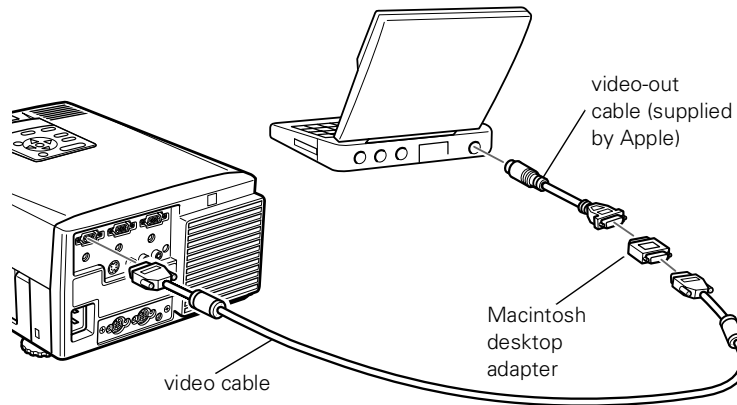
- a. Connect one end of the audio cable to the Audio In 1 jack on the projector. (Use the Audio In 2 jack if you are connecting a second computer.)
- b. Connect the other end of the audio cable to your computer.

## Connecting to a PowerBook

Your PowerBook must have a video-out capability in order to connect to the PowerLite 7000 projector.

Before beginning, turn off the projector and computer if they are on.

1. Connect the video cable.

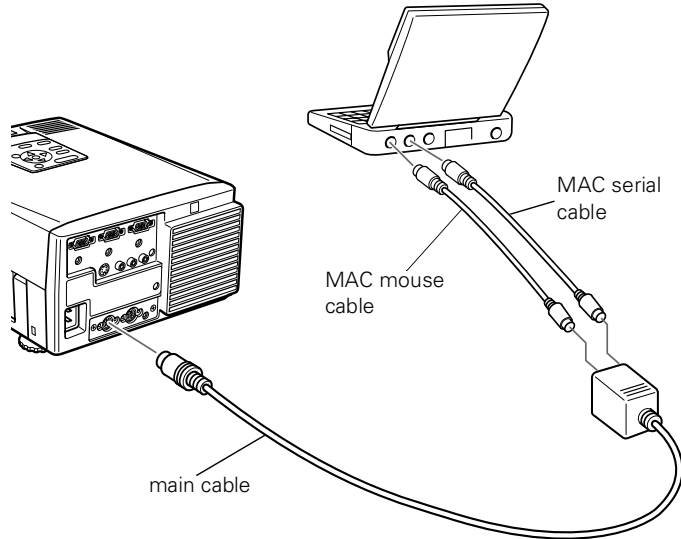


*Note: PowerBook configurations vary. See your computer manual for the location of the ports needed to connect your PowerLite 7000 projector.*

- a. Connect one end of the video cable to the projector's Computer In 1 port. (Use the Computer In 2 port to connect a second computer.)

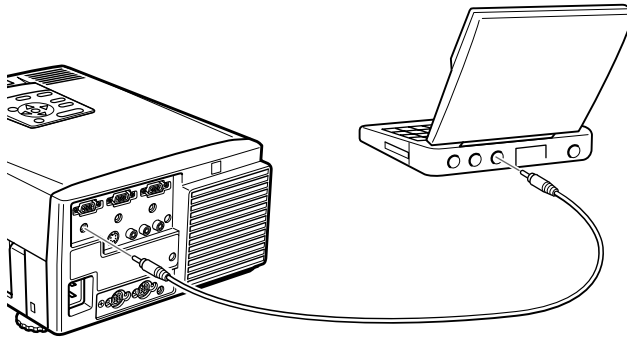
- 
- b. Remove the small cover and set the DIP switches on the Macintosh video adapter in accordance with the resolutions you want to use (such as 16 inch mode).
  - c. Connect the small terminal of the Macintosh video adapter to the other end of the video cable.
  - d. Connect one end of the video-out cable that came with your PowerBook to the video-out connector on the back of the PowerBook.
  - e. Connect the other end of the PowerBook video-out cable to the projector video cable (with Macintosh video adapter attached).
  - f. Tighten the screws on all the connectors to make sure they are fastened securely.

2. Connect the main cable. The main cable connects the mouse cable (needed to use the remote control as a mouse) and serial cable (needed to use the ELP Link II software) to the projector.



- a. Connect the small end of the main cable to the projector's Mouse/Com 1 port. (Use the Mouse/Com 2 port if you are connecting a second computer.)
- b. Connect the MAC mouse cable to the mouse terminal on the other end of the main cable.
- c. Connect the mouse connector of the MAC mouse cable to the mouse port on the back of the PowerBook.

- 
- d. If you are planning to use the ELP Link II software, connect either end of the serial cable to the serial terminal on the large end of the main cable. Connect the other end of the serial cable to the PRINTER or MODEM port on the back of your PowerBook.
  - e. Tighten the screws on all connectors to make sure they are fastened securely.
4. Connect the audio cable.



- a. Connect one end of the audio cable to the Audio In 1 jack on the projector. (Use the Audio In 2 jack if you are connecting a second computer.)
- b. Connect the other end of the audio cable to your computer.



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## Connecting to a Video Source

You can connect a VCR, a camcorder, a laser disc player, or any other compatible video image source to your PowerLite 7000 projector.

The projector can receive composite video or S-Video. Your equipment has composite video if your video source has a one-pin RCA video jack. Your equipment has S-Video if your video source has a four-pin video jack.

*Note: The PowerLite 7000 projector is not compatible with a cable TV-style F connector.*

You can connect the projector to both an S-Video and a composite video source at the same time. However, the projector automatically selects the S-Video as the video source. To display composite video, first disconnect the S-Video source.

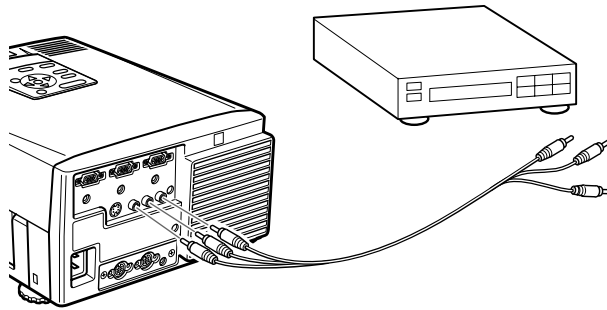
The projector supports NTSC, PAL, and SECAM video formats, and automatically detects and identifies the video format. However, you can specify that a single broadcast format be detected. (See Chapter 3.) Note that the projector will then be able to detect only one type of video signal.

The type of cable you use to connect the video source to the projector depends on whether you have composite video or S-Video. For composite video, use the audio/visual (A/V) cable supplied with the projector. For S-Video, use the S-Video cable supplied with your video device or obtain one from your computer dealer.

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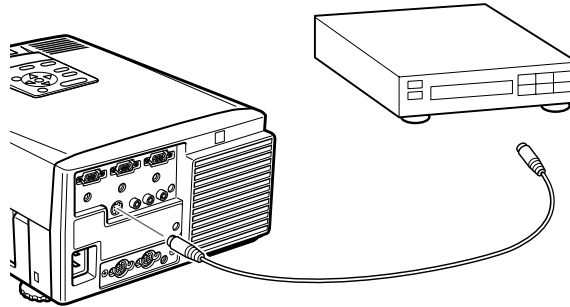
To connect a video source to the projector:

1. Turn off the projector and video source if they are on.
2. If your video source uses a small, round, one-prong composite (RCA) video connectors, you'll need the audio/visual cable that comes with the PowerLite 7000. If your video source uses a large, round, four-prong S-Video connector, you will need to purchase an S-Video cable.
3. For composite video, connect the yellow RCA plug on one end of the audio/visual cable to the projector's Video In jack. Connect the other yellow RCA plug to the video-out jack of your video source.



4. Connect the other plugs on the audio/visual cable to the Audio In jacks of the projector: insert the white plug into the L Audio In jack and the red plug into the R Audio In jack. Connect the plug at the other end of the audio/visual cable to the audio output jacks of the video source.

5. For S-Video, insert one end of the S-Video cable into the projector's S-Video jack. Insert the other end into the S-video-out jack of your video source.



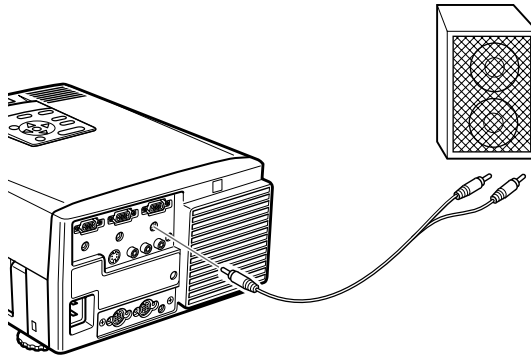
## Connecting to an External Speaker or PA System

Although the projector's internal speakers are enough for most small- or medium-size rooms, you can connect the projector to an external speaker or public address (PA) system for large rooms or to gain maximum benefit from the projector's built-in Spatializer function.

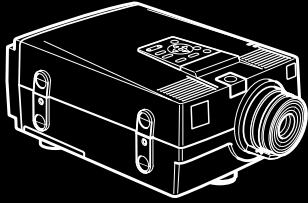
To connect the projector to an external sound system, you need to obtain an RCA-to-3.5 mm stereo audio cable. You can get one from your computer dealer.

1. Turn off the projector and speaker or PA system if they are on.

2. Connect the cable's 3.5 mm stereo miniplug to the projector's Audio Out jack.



3. Connect the RCA plugs to the external amplified speaker or PA system. Insert the cable's red plug into the Audio In R jack, and the white plug into the Audio In L jack.



# 2

## Using the Projector

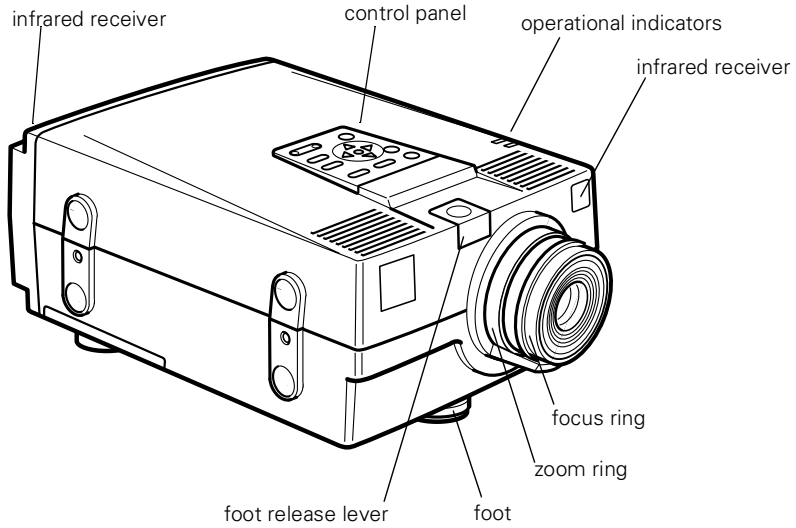
This chapter provides the following information about using your projector:

- Turning the equipment on and off
- Focusing and positioning the image
- Controlling the projector with the remote control and the control panel
- Monitoring the status of the projector

---

# About Your Projector

The illustration below identifies the parts of your projector.



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## Turning the Equipment On and Off

Always turn on the projector and its attached equipment in the following order:

1. Video source (such as a VCR), if your video source is not your computer
2. Audio source (if different from computer or video source)
3. Projector
4. External amplified speaker or PA system (if necessary)
5. Computer

## Turning the Projector On and Off

1. Remove the projector lens cap.
2. Press the Power button on the remote control or control panel. The green power indicator comes on.

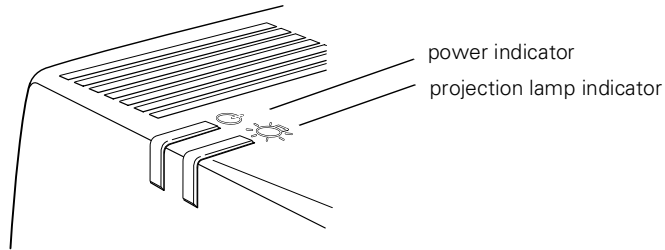
If computer or video equipment is attached, the computer or video signal is projected.

Allow about 30 seconds for full illumination.

◆ *Warning: Never look into the lens when the lamp is on. This can damage your eyes. It is especially important that children not look into the lens.*

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When you want to stop projecting images, press the Power button again. The fan remains on, the projection lamp indicator flashes orange for about 60 seconds, and the power indicator changes to orange as the projector cools off.



When the projector has cooled off, flashing stops and the power indicator changes to orange.

*Note: If you press the Power button to turn the projector back on while the power indicator is orange, there may be a delay before a projected image appears.*

## Sleep Mode

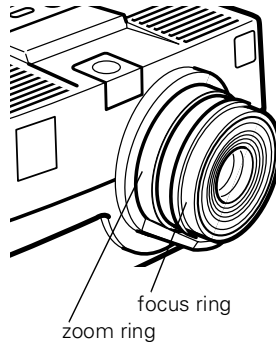
Sleep mode conserves electricity by automatically turning off the lamp after the projector has not been used for 30 minutes. In sleep mode, the projector's power indicator is orange and only a minimum amount of the projector's circuitry remains on. This conserves electricity, cools the projector, and extends the life of the lamp. When the projector is in sleep mode, you can press the Power button to start projecting images, or you can unplug the projector's power cord.



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## Focusing and Positioning the Screen Image

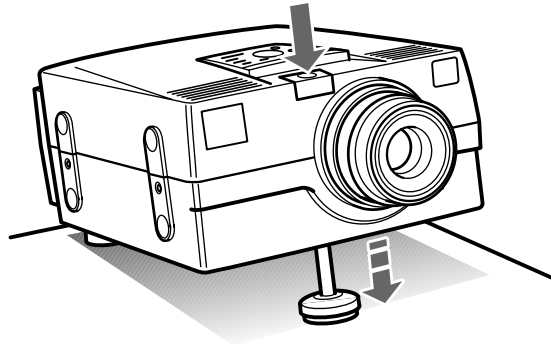
When an image appears on screen, check that it is in focus and correctly positioned on the screen.



- To focus the image, rotate the focus ring (the inside ring on the lens).
- To adjust the size of the image, rotate the zoom ring (the outside ring). Rotate the zoom ring clockwise to make the screen image larger or counterclockwise to make it smaller.

---

If you need to raise or lower the image on the screen, extend or retract the foot at the bottom of the projector as follows:



1. Stand behind the projector and support the front of it while you press the purple button above the lens. This unlocks the foot so it can move up and down freely. Do not let the projector drop.



*Caution: Do not hold the projector by its lens. This can damage the lens.*

2. While pressing the purple Foot Release button, raise or lower the projector until the screen image is correctly positioned.
3. Release the Foot Release button to lock the foot in its new position.
4. Level the projector by turning the left-rear foot clockwise to raise the height or counterclockwise to lower it.

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## Auto Button

If you are using image input from a computer, you can press the Auto button after fitting the image to the screen. Pressing the Auto button automatically adjusts the computer signal input to the current projector settings.

Press the Auto button while the image fills the entire screen of your computer, like a maximized Windows screen. Certain computer input signals may not be totally compatible with Auto button settings, so you may need to use the remote control or control panel menus to make adjustments.

## Resize Button

The Resize button lets you select the projection method for certain types of image signals input from a computer.

With images up to XGA size (1024 x 768 pixels)—a 640 x 480 VGA image for example—you can choose from two projection methods. Either display the image in the center of the projection area or display the image full size.

With images greater than XGA size (1024 x 768 pixels)—a 1280 x 1024 SXGA image or a 1152 x 870 Macintosh 21 inch image, for example—you can choose from two projection methods. Either project a portion of the image or project the entire image in a compressed format. The projector automatically reduces the image size to XGA resolution.

The Resize button cannot be used with XGA (1024 x 768 pixels).

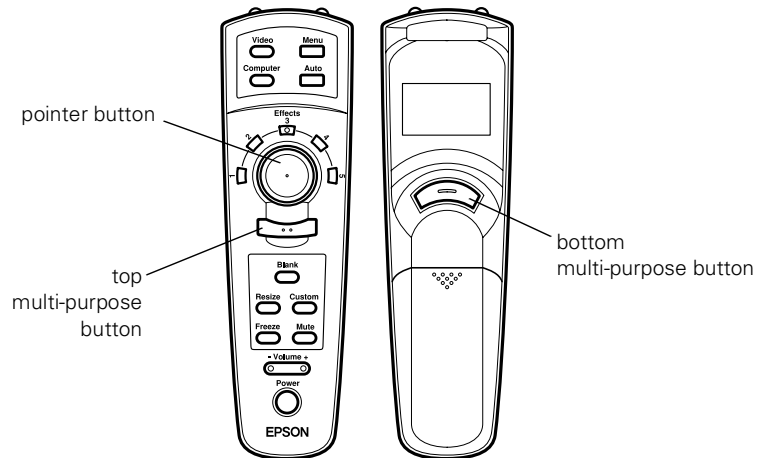
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# Controlling the Projector

You can use the control panel on the top of the projector or the remote control to perform the following actions:

- Turn power on or off
- Select auto-setup for the computer image screen
- Switch between input images (Computer 1, Computer 2, video-computer)
- Access the projector menus for adjustment of image, audio, video, and display settings
- Control resizing
- Control display freeze
- Control display blanking
- Adjust or mute audio output
- Use custom functions (remote control only)
- Adjust or mute the video

## Using the Remote Control



The remote control uses a line-of-sight infrared signal. To use the remote control, point it towards one of the remote control receivers located at the front and back of the projector.

You can use the remote control up to about 30 feet (10 meters) from the projector. (This distance may be shorter if the remote control batteries are low.)

*Note: The projector may not respond to remote control commands in these conditions: ambient light is too bright; a certain type of fluorescent light is present; a strong light source (such as direct sunlight) shines into the*

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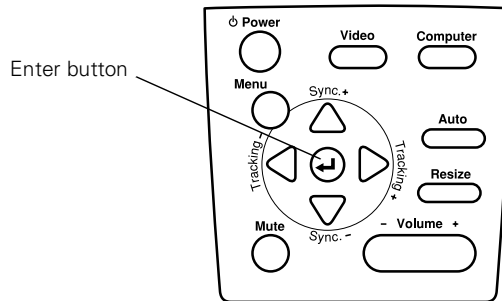
*infrared receiver; or other equipment emitting infrared energy is present (such as a radiant room heater). Remove these conditions to use the remote control or control the projector from a computer.*

This table summarizes the functions on the remote control.

Button	Function
Video	Switches from computer to video.
Menu	Displays or hides the menu.
Computer	Switches between Computer 1 and Computer 2, and from video to computer.
Auto	Adjusts the computer signal input to the current projector settings.
Pointer button	Use the pointer button to navigate the menus or use the remote as a mouse pointer when the projector is connected to the computer with all cables in the ELP Link II communications kit.
Effects buttons	Use to display special effects in conjunction with the ELP Link II software.
Top multi-purpose button	Acts as a right mouse click, registers a menu selection, and selects other custom functions.
Bottom multi-purpose button	Acts as a left mouse click, registers a menu selection, and selects other custom functions.
Blank	Clears the screen of special effects and switches to a black display.

Button	Function
Resize	Switches the display dot mode and resize mode (for VGA, SVGA and SXGA input).
Custom	Use to assign functions to the Effects keys using the ELP Link II software.
Freeze	Keeps the current computer or video image on the screen.
Mute	Cuts off audio.
- Volume +	Adjusts the volume.
Power	Starts or stops the projector.

## Using the Control Panel



You can use the control panel to control the printer instead of the remote control. However, you can program and access the custom features only when you are using the remote control.

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The following table summarizes the functions on the control panel.

Button	Function
Power	Starts or stops projection.
Video	Switches from computer to video.
Computer	Switches between Computer 1 and Computer 2, and from video to computer.
Menu	Displays or hides the menu.
Up, down arrows (Sync+/Sync-)	Synchronizes the computer's graphic signal. Use these buttons to adjust an overall image that is fuzzy or streaked, or to select menu items during menu operations.
Left, right arrows (tracking-/ tracking+)	Matches the projector's internal clock to various computer graphic signals (tracking adjustment). Use these buttons to adjust an image with vertical fuzzy lines, or to change numeric settings during menu operations.
Enter	Registers a menu selection.
Auto	Adjusts the computer signal input to the current projector settings.
Resize	Switches the display dot mode and resize mode (for VGA, SVGA, and SXGA input).
Mute	Cuts off audio.
- Volume +	Adjusts the volume.

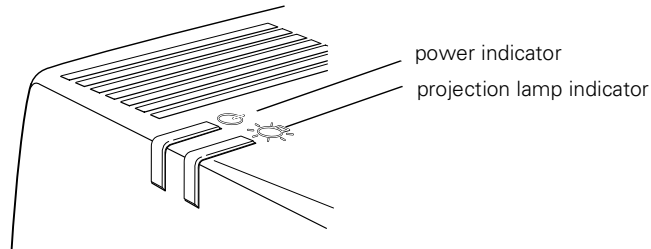
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# Projector Status Indicators

The power and lamp indicators at the top of the projector tell you the projector's operating status.



*Caution: A red indicator warns you if a serious problem occurs. See Chapter 6, "Troubleshooting," for what to do if a warning light comes on.*

## Power Indicator

Light status	Meaning
Steady orange	Sleep mode. (The projector is plugged in, but not projecting.)
Steady green	Power and lamp are on.
Flashing orange	The projector is hot.
Steady red	The projector is too hot and has turned off.
Flashing red	There is an internal projector problem.

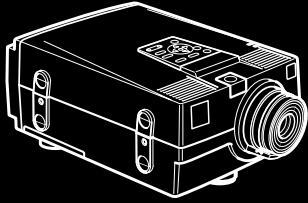
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## Projection Lamp Indicator

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Light status	Meaning
Steady green	Projection lamp is on.
Flashing green	The projector is warming up.
Orange and red flashing alternately	Projection lamp needs replacing.
Flashing orange	Projector lamp is cooling down.
Steady red	Projector lamp has burned out. Replace it to project images.
Flashing red	Problem with projection lamp or lamp power supply.

---



# 3

## Using the Projector Menus

The six projector menus enable you to control your projector.

- The Video menu controls the computer image, such as brightness and contrast, when the computer is the image source.
- The Video menu controls the video image, such as brightness and color saturation, when the image source is video, such as a VCR.
- The Audio menu controls audio features, such as the volume level, tone setting, and Spatializer.
- The Options menu enables you to set various projector options.
- The Custom menu assigns functions to the remote control's Custom button.
- The Reset All menu returns all settings to their factory defaults.

---

## Accessing the Main Menu

The projector menus can be accessed using either the projector control panel or remote control.

To display the Main menu, first press the Computer or Video button on the control panel or remote control, then press the Menu button.

The Main menu appears:



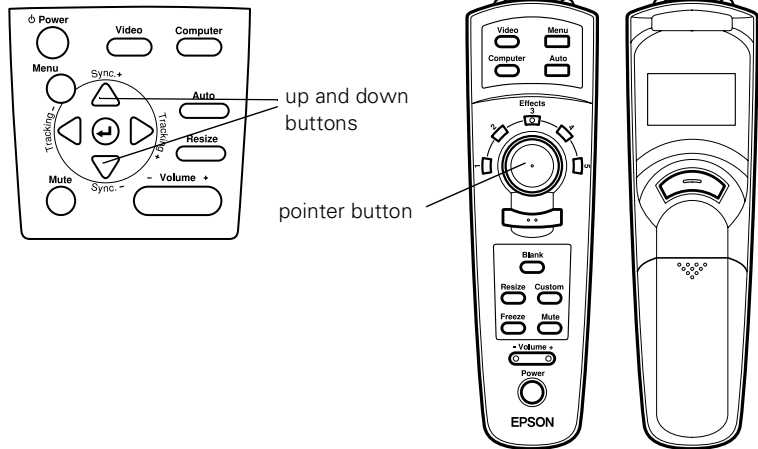
Press the Menu button again to hide the menu.

## Changing a Menu Setting

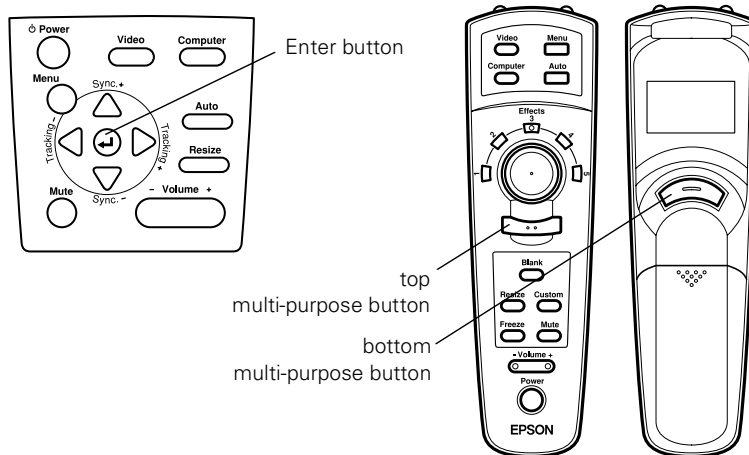
To change a menu setting:

1. Press the Menu button on the control panel or remote control to display the Main menu.

2. Press the up or down arrows (control panel) or press the top or bottom of the pointer button (remote) to scroll through the menu choices.



- Press either the Enter button (control panel) or the top or bottom multi-purpose button (remote) to display a submenu.



A sub-menu such as the following appears.



*Note: Sub-menus differ, depending on if the current image source is Computer or Video.*

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4. Press the up or down arrows (control panel) or the top or bottom of the pointer button (remote) to scroll through the menu choices.
  5. Press either the left or right arrow buttons (control panel) or the right or left sides of the pointer button (remote) to change the setting.
  6. When you are finished changing settings, press the Menu button again to hide the menu, or select RETURN and press Enter to go back to the Main menu. The changes are saved automatically.

## Menu Options

The following menus are described in this section:

- Video menu (Image source = Computer)
- Video menu (Image source = Video)
- Audio menu
- Options menu
- Custom menu

### Video Menu (Image source = Computer)

The Video menu enables you make adjustments to the projected image. The following options are available when the image source is Computer.

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*Note: The computer must be connected and operating, and the image source on the projector must be set to Computer for you to access these menu options.*

---

Menu item	Description
Brightness	Lightens or darkens the overall image. Increase brightness to lighten an image, or decrease it to darken the image.
Contrast	Adjusts the difference between light and dark areas. Increase the contrast to make light areas lighter and dark areas darker. Decrease it to minimize the difference between light and dark areas.
Sync	Synchronizes with the tracking signal sent from the computer. Adjust this setting to correct fuzziness or to remove streaks from the image.
Tracking	Matches the projector's internal clock to various computer graphic signals. Adjust this setting to remove fuzzy lines from the image.
Color	Adjusts the color balance of the input source.  Select this item and then press the Enter button (control panel) or either multi-purpose button (remote) to enter the color adjustment mode. Then use the pointer button or up and down buttons (control panel) to select a color.  Next, use the pointer button or left and right buttons (control panel) to adjust the selected color. Increase the color setting for more intense color on the screen, and lower the setting for less intense color.  When you finish making adjustments, press the Enter button (control panel) or a multi-purpose button (remote) to return to the Computer menu.

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Menu item	Description
Position	<p>Select this item and then press the Enter button (control panel) or either multi-purpose button (remote) to enter the screen position adjustment mode. Then use the pointer button or up, down, left, and right buttons (control panel) to move the screen position in the corresponding direction.</p> <p>When you finish making adjustments, press the Enter button (control panel) or a multi-purpose button (remote) to return to the Computer menu.</p>
Mouse/Com	<p>Locks and unlocks the Mouse/Com port.</p> <p>Select 1 to assign the wireless mouse control to the computer connected to the Mouse/Com 1 port. The wireless mouse controls the computer connected to Mouse/Com 1 only if the input source is switched to Computer 2.</p> <p>Select 2 to assign the wireless mouse control to the computer connected to the Mouse/Com 2 port.</p> <p>Selecting 1 ↔ 2 tells the projector to automatically switch wireless mouse control whenever the input source computer is changed.</p>
Reset	<p>Returns all Computer menu items to their initial factory defaults.</p> <p>Select this item and then press the Enter button (control panel) or either multi-purpose button (remote) to display the confirmation screen.</p> <p>Next, select Yes and then press the Enter button (control panel) or a multi-purpose button (remote) to reset the Computer menu.</p> <p>If you change your mind, select No and then press a multi-purpose button (remote) or the Enter button to clear the confirmation screen without changing any settings.</p>
Return	<p>Saves changes and displays the Main menu.</p>

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## Video Menu (Image source = Video)

The Video menu enables you make adjustments to the projected image. The following options are available when the image source is Video.

*Note: The video source (such as a VCR or camcorder) must be connected and operating, and the image source on the projector must be set to Video for you to access these menu options.*

---

Menu item	Description
Brightness	Lightens or darkens the overall image. Increase brightness to lighten an image, or decrease it to darken the image.
Contrast	Adjusts the degree of difference between light and dark areas. Increase the contrast to make light areas lighter and dark areas darker. Decrease it to minimize the difference between the lightest and darkest areas of the image.
Saturation	Adjusts color density. Increase the setting for darker and more opaque colors. Decrease it for lighter and less opaque colors.
Tint (NTSC only)	Adjust the red-green color balance of the screen. Increase tint to add more green, or decrease it to add more red.
Mode	Specifies the video signal system. Normally this signal system setting should be left at AUTO to automatically detect the type of video signal. If automatic selection is not possible for some reason, use this menu to manually specify NTSC, PAL, or SECAM.

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Menu item	Description
Reset	<p>Returns all Video menu items to their initial factory defaults.</p> <p>Select this item and then press either multi-purpose button (remote) or the Enter key (control panel) to display the confirmation screen. Next, select Yes and then press a multi-purpose button (remote) or the Enter key (control panel) to reset the Video Menu.</p> <p>If you change your mind, select No and then press a multi-purpose button (remote) or the Enter key (control panel) to clear the confirmation screen without changing any settings.</p>
Return	Saves your changes and displays the Main menu.

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## Audio Menu

The Audio menu enables you make adjustments related to audio.

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Menu item	Description
Volume	<p>Adjusts the volume level for the speakers and audio-out terminal.</p> <p>Increase the audio volume to raise the volume, or decrease it to lower the volume.</p>
Tone	Adjusts the tone of the speakers and audio-out terminal. Increase the tone to raise the treble, or decrease it to raise the bass.
Spatializer	<p>Adjusts audio effects provided by the Spatializer.</p> <p>Off: Normal sound for stereo input</p> <p>Normal: Expansive sound for stereo input</p> <p>Wide: More expansive sound for stereo input</p>

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Menu item	Description
Reset	Returns all Audio menu items to their initial factory defaults. Select this item and then press the Enter button (control panel) or either multi-purpose button (remote) to display the confirmation screen. Next, select Yes and then press the Enter button (control panel) or a multi-purpose button (remote) to reset the Audio menu. If you change your mind, select No and then press a multi-purpose button (remote) or the Enter button (control panel) to clear the confirmation screen without changing any settings.
Return	Saves your changes and displays the Main menu.

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## Options Menu

The Options menu enables you to adjust basic settings that normally do not need changing.

---

Menu item	Description
Prompt	Temporarily displays a prompt on the projector screen to identify which source (computer or video) is providing the image.
Rear Projection	Mirrors the projected image on its Y-axis (left-right). Selecting ON turns mirroring on, while OFF turns it off (for a normal image). Turn on this option when projecting from behind onto a transparent screen.

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<b>Menu item</b>	<b>Description</b>
Color Temperature	<p>Adjusts the whiteness of the screen. The H setting provides a cold white, M a standard white, and L a warm white.</p> <p>To set the color temperature setting more precisely, press the right arrow button past H, M, and L to select the User item. This displays a screen showing USER RED and USER BLUE. Use the up and down pointer buttons to select the color you want to adjust, and then use the left and right buttons (control panel) or the pointer button (remote) to change the selected value. A high color temperature value enhances the selected color within the overall image, while a lower value weakens the color.</p> <p>Press the Enter button (control panel) or either multi-purpose button (remote) or select Return to clear the setting screen and return to the Option menu.</p>
Ceiling	<p>Mirrors the projected image on its X-axis (top-bottom). Selecting ON turns mirroring on, while OFF turns it off (for a normal image). Turn this option on when hanging the projector upside-down from the ceiling.</p>
Blank	<p>Blanks the screen, or displays the user logo temporarily.</p>

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Menu item	Description
View Change	Specifies the screen switching effect to use when the input source is changed.
	Off No screen switching effect.
	Upper Left - Lower Right Original source screen shrinks from upper left to lower right, and new source screen expands from upper left to lower right.
	Left-Right: Original source screen shrinks from left to right, and new source screen expands from left to right.
	Outside-Middle Original source screen shrinks from outside in, and new source screen expands from inside out.
Language	Selects the menu language: Japanese, English, German, French, Italian, Spanish, and Portuguese.
Lamp	Displays the number of hours the current projector lamp has been used. The color of this display turns red when the projector lamp is close to the end of its normal life. When this happens, replace the projector lamp with a new one as soon as possible.
Return	Saves your changes and displays the Main menu.

---

## Custom Menu

The Custom menu allows you to select special features such as zoom, preview, or strobe effects. Unlike the other menus, which use the Enter button to select a menu option, the Custom menu requires that you use the Custom button to select a Custom menu option.

The Custom button is located on the lower part of the remote control.

---

To open the Custom menu, press the top multi-purpose button or select CUSTOM from the Main menu. ZOOM is highlighted and the words PRESENT SET are displayed after it. Refer to the table below for a description of the various zoom functions.

To change PREVIEW or STROBE settings, select the function you want, then press the top multi-purpose button.

The Custom menu functions are:

Menu item	Function	Description
Zoom		Press the bottom multi-purpose button then check if the value next to the Zoom menu is New Set or Present Set. If the value is New Set, press the bottom multi-purpose button to toggle the value. Press the Custom button to access the Zoom function. An indicator appears in the lower right of the screen while the zoom function is on. Zoom remains on until you press the Custom button again. The following remote control functions are available while the zoom function is on:
	Zoom In	Each press of the remote control's bottom multi-purpose button zooms in on the center of the displayed image, enlarging it +0.25 times.
	Zoom Out	Each press of the remote control's top multi-purpose button zooms out on the center of the displayed image, reducing it +0.25 times.

---

Menu item	Function	Description
	Zoom Screen Shift	Press the pointer button to zoom in on a portion of the enlarged display. You can move the image up, down, left, right, and diagonally to closely view any part of the display.
Preview		<p>Press the bottom multi-purpose button then check if the value next to the Preview menu is New Set or Present Set. If the value is New Set, press the bottom multi-purpose button to toggle the value.</p> <p>Press the Custom button to turn on the Preview function. The preview function remains on until you press the Custom button again, select an input source with the pointer button, or press the remote control's bottom multi-purpose button.</p>
Strobe		<p>Press the bottom multi-purpose button then check if the value next to the Strobe menu is New Set or Present Set. If the value is New Set, press the bottom multi-purpose button to toggle the value.</p> <p>Press the Custom button to turn on the strobe function. The strobe function remains on until you press the Custom button again. The screen is divided into four quadrants, each of which shows the image from the current input source.</p>

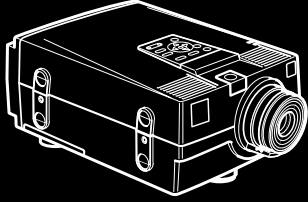
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Menu item	Function	Description
	Number of Frames, Time	Press the top multi-purpose button while the strobe effect is running to display a screen specifying the number of frames flashed and the time interval between them. You can specify the number of frames as 4, 9, or 16, and the time interval from 0.1 to 1 second in 0.1 second increments. Press the top multi-purpose button again to clear the setting screen.
Return		Saves your changes and displays the Main menu.

---



# 4

## Using the ELP Link II Software

The ELP Link II software is a utility you can run from your desktop or laptop computer to control projector features and configure special effect buttons on the remote control.

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## Installing the Software

ELP Link II software can be used with the following operating systems:

- Windows 3.x
- Windows 95
- Macintosh OS System 7.

## Connecting Needed Cables

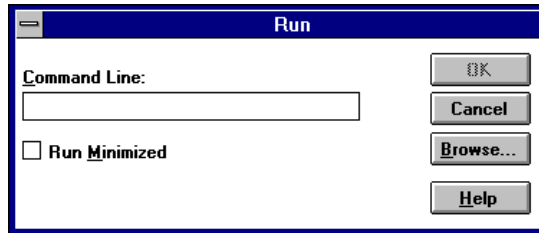
Before installing the software, make sure the projector is properly connected to your computer. See Chapter 1, “Installation,” for instructions about how to install the serial and mouse cables needed to use the Link II software.

## Installing the Software from Windows 3.x

Perform the following steps to set up the software for Windows 3.x.

1. Insert the Link II for Windows installation diskette into a diskette drive (A: or B: as appropriate).

2. In the Windows Program Manager, click on the File menu, then on Run. The Run dialog box appears:



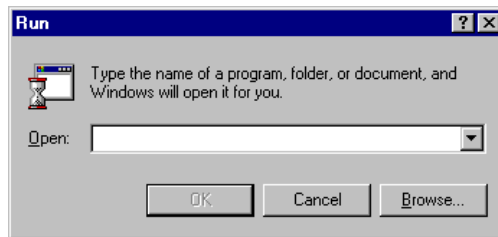
3. Type **A:\SETUP** (or **B:\SETUP** as appropriate), then press Enter or click OK. The ELP Link II introduction appears.
4. Press **C** to continue.
5. To accept the default location for where the software should be installed, press **C** to continue. Otherwise, enter a new directory name and then press **C**.
6. The Link II software communicates with the projector using the computer's serial communication (COM) port. Specify which COM port to use, then press **C** to continue. (Most likely, your computer is using COM 1.)
7. A summary screen appears stating how much free hard disk space is required to run the software and how much is available. If sufficient disk space is available, press **C**. Otherwise, press **X** (exit) to free up some disk space; then restart the installation program from step 1.

8. You see a prompt to create the installation directory you specified in step 5. Press **Y** (yes).

## Installing the Software from Windows 95

Perform the following steps to set up the software for Windows 95.

1. Insert the Link II for Windows installation diskette into a diskette drive (A: or B: as appropriate).
2. Click **Start**.
3. Click the **Run** menu option. The Run dialog box appears:



4. Type **A:\SETUP** (or **B:\SETUP** as appropriate), then press **Enter** or click **OK**. The ELP Link II introduction appears.
5. Press **C** to continue.
6. To accept the default location for where the software should be installed, press **C** to continue. Otherwise, enter a new directory name and then press **C**.

- 
7. The Link II software communicates with the projector using the computer's serial communication (COM) port. Specify which COM port to use, then press **C** to continue. (Most likely, your computer is using COM 1.)
  8. A summary screen appears stating how much free hard disk space is required to run the software and how much is available. If sufficient disk space is available, press **C**. Otherwise, press **X** (exit) to free up some disk space; then restart the installation program from step 1.
  9. You see a prompt to create the installation directory you specified in step 6. Press **Y** (yes).

## **Installing the Software from Macintosh OS System 7**

Perform the following steps to set up the software for the Macintosh.

1. Insert the Link II for Windows installation diskette into the diskette drive.
2. Double-click the **ELP Utility** icon. The window for installing the ELP utility appears.
3. Double-click the **ELP Utility Installer** icon and follow the instructions displayed.

- 
4. When prompted that the installation has been completed, click **OK**. Then restart your Macintosh for the changes to take effect.

## Launching the Software

1. Double-click the ELP Link II program icon from the Windows 3.x ELP Link II program group or Mac OS ELP Link II folder, or select **ELP Link II** from the Windows 95 Programs menu. The ELP Link II program icon appears minimized at the bottom of your screen.
2. Double-click the ELP Link II program icon. The ELP Link II main dialog box appears.

## Using the Software

The ELP Link II software can be used to:

- Customize the remote control Effects buttons
- Control standard and special projector features

## Customizing the Remote Control Effects Buttons

You can assign functions to the remote control Effects buttons so you can use them to perform special operations, such as drawing shapes on the projected image or changing the cursor shape.

*Note: The ELP Link II software works only when the projector is on and connected to the computer's serial port.*

---

## Function Description and Usage

The function list on the left side of the ELP Link II main dialog box shows the functions available for assignment to an Effects button. To assign the functions, see page 67.

The table below describes these functions and how to use them.

*Note: To use the Effects buttons, the ELP Link II software must be running and the computer connected to the projector.*

---

Function	Description and usage
Line	Draws a straight line on the screen. Press the Effects key assigned to this effect. Then press the bottom multi-purpose button once to define the line start position. Move the cursor using the remote Pointer button. Then press the bottom multi-purpose button twice to define the line end position.
Ellipse	Draws an ellipse (oval) on the screen. Press the Effects key assigned to this effect. Then press the bottom multi-purpose button once to define the position of one end of the ellipse. Move the cursor using the remote Pointer button. Then press the bottom multi-purpose button twice to define the position of the other end of the ellipse.
Square	Draws a square on the screen. Press the Effects key assigned to this effect. Then press the bottom multi-purpose button once to define the position of one corner of the square. Move the cursor using the remote Pointer button. Then press the bottom multi-purpose button twice to define the position of the other corner of the square.

---



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Function	Description and usage
Bar	<p>Creates a horizontal or vertical bar. You can use this function to highlight a portion of the screen with a horizontal or vertical bar.</p> <p>Press the Effects key assigned to this effect. Move the bar using the remote pointer button. Press the bottom multi-purpose button to lock the bar in place.</p>
Stamp	<p>Leaves one or several copies of the pre-selected image on the screen.</p> <p>Press the Effects key assigned to this effect. Use the pointer button to place the cursor where you want the stamp to appear. Then press the assigned Effects button to display the stamp.</p>
Change Cursor	<p>Changes the cursor shape.</p> <p>Press the assigned Effects button to change the cursor shape.</p>
Clear Screen	<p>Clears all Effects functions previously executed.</p> <p>Press the assigned Effects button to clear the screen.</p>
Macro Key	<p>Types a pre-defined key sequence. This is useful when you often need to type a sequence of characters into your computer.</p> <p>Press the assigned Effects button to automatically type the key sequence.</p>

---

## Assigning Functions



There are three ways to assign functions to each of the five Effects buttons on the remote control:

- Drag and drop a function from the function list to the Effects button you want to customize.
- Click a function in the function list, click the Effects button number you want to customize, then click Customize.
- Select the function from the function list, and then press the Effects button on the remote control.

## Setting Effect Options

Once you have assigned functions to one or more Effects buttons, you can specify detailed options for each function.

To set detailed options, click **Detail Setting**. A dialog box similar to the following appears. (The options and tabs displayed depend on which functions are currently assigned to the Effects buttons.)



Click the tab for the function you want to adjust, then make any settings you wish.

To test each setting, click the Test button and then click the left mouse button to start and stop each setting. To end the test, click the right mouse button. (If you are using the remote control as a mouse pointer, use the bottom and top multi-purpose buttons, respectively.)

To save the changes, click **OK**.

The table on the following page describes the available options for each function.

---

Function	Options	
Line	Width	Specify the line width, from 1 to 32 points.
	Grid	Specify whether to have the line “snap” to the corners of a grid by entering the size of the sides of the box, in pixels (dots).
	Color	Choose a color for the line.
	Transparent	Click this check box to make the background text or image visible through the line.
Ellipse	Width	Specify the line width, from 1 to 32 points.
	Color	Choose a color for the line.
	Transparent	Click this check box to make the background text or image visible through the ellipse.
	Fill	Click this check box to fill the ellipse with color.
Square	Width	Specify the line width, from 1 to 32 points.
	Color	Choose a color for the line.
	Transparent	Click this check box to make the background text or image visible through the square.
	Fill	Click this check box to fill the ellipse with color.
	Make oval shape	Click this check box to round the corners of the square.
Bar	Width	Specify the line width, from 1 to 300 points.
	Color	Choose a color for the bar.
	Direction	Choose Horizontal or Vertical.
	Transparent	Click this check box to make the background text or image visible through the bar.
Stamp	Click on the stamp to be used.	

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Function	Options
Change Cursor	Click on the cursor shape to be used.
Clear Screen	No options available.
Macro Key	<p>Enter up to 16 characters, including combinations such as Ctrl + A in the Registration Keys Macro field. The Backspace and Delete keys are also recorded.</p> <p>Click on the <b>Clear</b> button to clear the current key assignment.</p> <p>Click on the <b>Registration</b> button to save more than one set of key assignments.</p> <p><b>Note:</b> <i>Although you can save multiple sets of key assignments, only one set can be active at any time.</i></p>

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---

## **Saving and Recalling Effects Key Button Assignments**

To save Effects button assignments, click **Execute**.

To save multiple sets of button assignments, click **Registration** and specify a name for the current settings.

To recall a saved set of assignments, select its name from the Setting menu.

To delete a set of assignments from the Registration List, select its name and then click **Delete**.

To exit without saving the settings, click **Exit**.

## **Changing the COM Port Assignment**

If you did not select the correct COM (communication) port when setting up the software, or if you have changed the COM port to which the projector is connected, you can change the COM port setting from the ELP Link II software.

From the Option menu, select **COM Port**, then choose a new COM port from the list provided.

---

## Controlling Projector Features

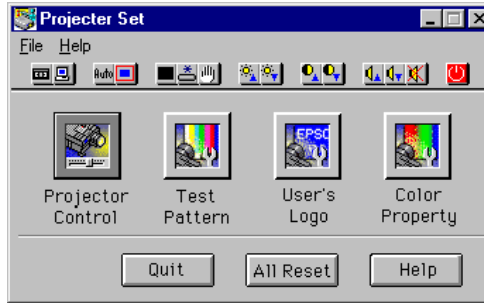
You can use the ELP Link II software to control the following features:

- Projector Controls
- Test Pattern
- Color Properties.

## Displaying the Projector Set Window

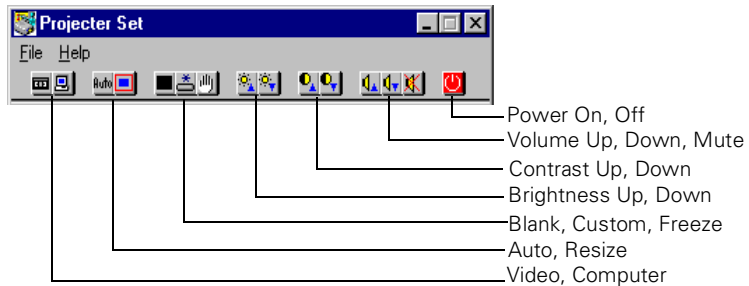
1. Double-click the ELP Link II program icon from the Windows 3.x ELP Link II program group or Mac OS ELP Link II folder, or select **ELP Link II** from the Windows 95 Programs menu. The ELP Link II program icon appears minimized on your screen.
2. Double-click the ELP Link II program icon. The main dialog box appears.

- From the Options menu, select **Projector Control**. The Projector Set window appears:



## Using the Quick Change Toolbar

To quickly change some basic projector settings, click one of the toolbar buttons described below:

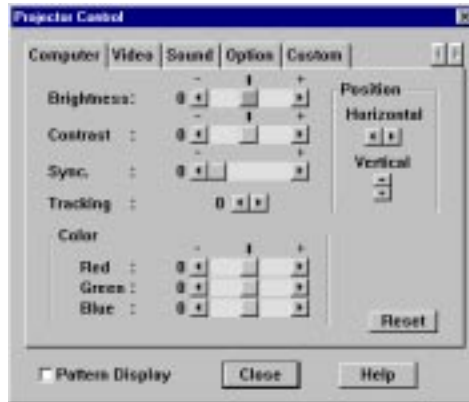




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## Changing Projector Settings

1. Click **Projector Control** on the Projector Set dialog box. The following window appears:



2. Click on the tab for the settings you want to adjust.
3. Change one or more of the following options.

### Computer Tab

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Option	Description
Brightness	Adjusts screen brightness.
Contrast	Adjusts screen contrast.
Sync	Adjusts the sych (synchronization) to remove screen flicker.
Tracking	Adjusts tracking to remove horizontal lines.

---

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Option	Description
Position	Adjusts the horizontal and vertical screen position.
Color	Adjusts the balance of red, green, and blue in the image.
Pattern Display	Displays the test pattern currently selected.
Reset	Click <b>Reset</b> to reset all fields to their default values.

---

### **Video Tab**

---

Option	Description
Brightness	Adjusts screen brightness.
Contrast	Adjusts screen contrast.
Saturation	Adjusts the color saturation.
Tint	Adjusts the color tint. (NTSC only)
Mode	Selects the signal format. You can select AUTO, PAL, NTSC, or SECAM. AUTO automatically adjusts the image to the signal received.
Pattern Display	Displays the test pattern currently selected.
Reset	Click <b>Reset</b> to reset all fields to their default values.

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## Sound Tab

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Option	Description
Volume	Adjusts sound volume.
Tone	Adjusts sound tone.
Spatializer	Select one of the following sound qualities for three dimensional-like sound: Normal      Stereo sound is expanded. Wide         Stereo sound is further expanded to sound more three-dimensional. Off            Stereo sound is not expanded.
Reset	Click <b>Reset</b> to reset all fields to their default values.

---

## Option Tab

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Option	Description
Blank To	Specify if a blank screen is to be displayed when no signal is connected.
Source Prompt	Temporarily displays a prompt on the projector screen identifying which source (computer or video) is providing the image.
Install	Specify how the projector is being used: Rear Proj     Use this setting when projecting to the back of a screen so the image is flipped left to right. Ceiling Mount Use this setting when the projector is installed on the ceiling so the image is flipped top to bottom.

---

---

Option	Description
View Change	Specify how the screen should disappear when changing the image source:
Diagonally	Images disappear and appear from the top left of the screen to the bottom right.
Left to Right	Images disappear and appear from the left to the right.
Fade In	Images appear from the center of the screen and disappear to the center.
Lamp Life	Displays the number of hours the lamp has been used.
Pattern Display	Displays the test pattern currently selected.
Reset	Click <b>Reset</b> to reset all fields to their default values.

---

### Custom Tab

---

Option	Description
Customize Function	Zoom Zooms in on the screen image.
	Preview Displays the images from all the connected devices on the screen at one time.
	Strobe Displays the selected images in the specified number of frames and time interval.
	Frame Count Specify the number of frames in which to show the image.
	Frame Times Specify the interval for the strobe, in seconds.
Pattern Display	Displays the test pattern currently selected.

---

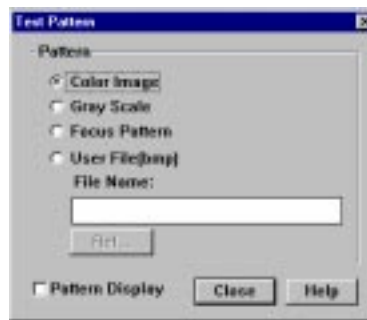
---

Option	Description
Reset	Click <b>Reset</b> to reset all fields to their default values.

---

## Changing the Test Pattern

1. Click **Test Pattern** on the Projector Set dialog box. The following window appears:



2. You can display a test pattern when setting up the projector to verify that the projector is working properly. Choose one of the following:

**Color Image** Displays a color bar test pattern.

**Gray Scale** Displays a gray scale test pattern.

**Focus Pattern** Displays a character-based focus pattern.

---

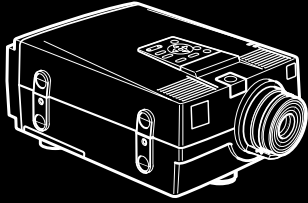
**User File(bmp)** Displays a bitmapped test pattern from the file name specified. Either type the name or click **Ref...** (refer) to browse the hard disk for the file. The bitmap should be 1024 x 768 pixels (dots).

3. Click **Pattern Display** to display the test pattern selected. Then click **Close**.

---

## Setting the Image Color Property

1. Click **Color Property** on the Projector Set dialog box. The Color Property window appears.
2. Specify a color temperature:
  - H High (more blue)
  - M Medium (normal white)
  - L Low (more red)
  - User Create a custom color temperature by using the slide bars to specify the amount of red and blue.
3. Specify an image gamma:
  - Gamma 1** Provides a dynamic and contrastive image.
  - Gamma 2** Provides an image between Gamma 1 and Gamma 3.
  - Gamma 3** Provides a natural image.
4. Click **Pattern Display** to display the test pattern selected.



# 5

## Maintenance

The PowerLite 7000 projector needs little maintenance. You should keep the lens clean because any dirt or smears appear on the screen. You also need to periodically clean the air filter at the bottom of the projector. A clogged air filter can block ventilation needed to cool the projector and keep it from overheating.

The only parts you should replace are the lamp and air filter. If any other part needs replacing, contact your PowerLite 7000 dealer or a qualified service person.



*Warning: Before you clean any part of the projector, turn off the projector and unplug the power cord. Never open any cover on the projector, except the lamp and filter covers. Dangerous electrical voltages in the projector*



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*can injure you severely. Do not try to service this product yourself, except as specifically explained in this Owner's Manual. Refer all other servicing to qualified service personnel.*

## **Cleaning the Lens**

Clean the lens whenever you notice dirt or dust on the surface. Lightly wipe the lens surface with a soft, dry, lint-free cloth. To remove dirt or smears on the lens, moisten a soft cloth with an alcohol-based cleaner and gently wipe the lens surface.

## **Cleaning the Projector Case**

To clean the projector case, first 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. Then wipe the case.

Do not use alcohol, benzene, thinner, or other chemical detergents. These can cause the case to warp.

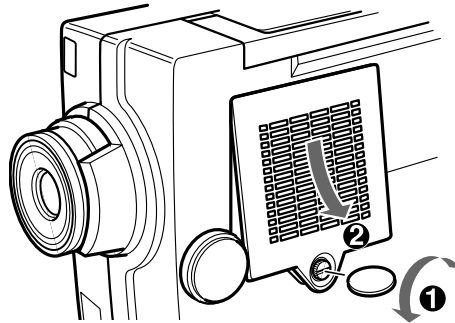
## Cleaning the Air Filter

Clean the air filter at the bottom of the projector after every 100 hours of use. If it is not cleaned periodically, it can become clogged with dust, preventing proper ventilation. This can cause overheating and damage the projector. To clean the air filter, follow these steps:

1. Turn off the projector and unplug the power cable.
2. Turn the projector on its right side so that the handle is on top and you can access the filter easily.

*Note: Standing the projector with the handle at the top keeps dust from getting inside the projector housing.*

3. Use a screwdriver, coin, or similar object to unscrew one screw, lift, and remove the filter cover.



- 
4. The filter is attached to the inside of the filter cover. It is recommended that you use a small vacuum cleaner designed for computers and other office equipment to clean the filter. If you don't have one, use a dry, lint-free cloth.

If the dirt is difficult to remove or if the filter is torn, replace it. Contact your PowerLite 7000 dealer or call EPSON Accessories at (800) 873-7766 in the United States and Canada to obtain a new one. Request part number 1032043.

## Replacing the Lamp

The projector lamp typically lasts for about 2000 hours of use. It is time to replace the lamp when:

- The projected image gets darker or starts to deteriorate.
- The projection lamp indicator (orange and red, flashing alternately) is red.

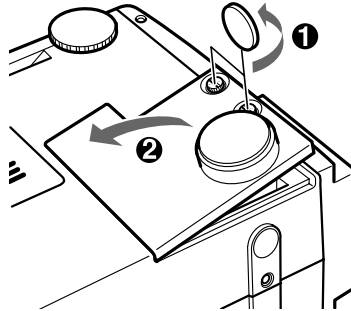
Contact your PowerLite 7000 dealer or call EPSON Accessories at (800) 873-7766 in the United States and Canada for a replacement lamp.



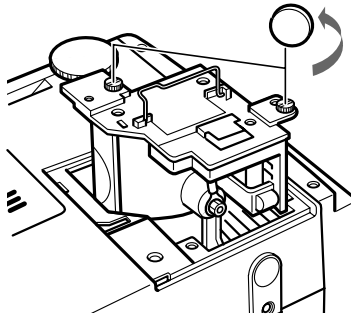
*Warning: Let the lamp cool before replacing it.*

1. Turn off the projector and unplug the power cable.
2. Turn the projector over so you can access the lamp cover.

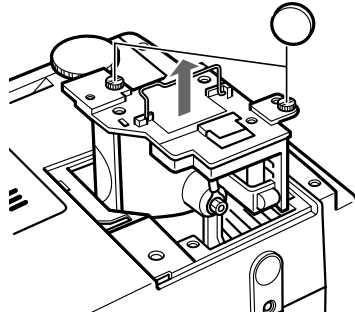
3. Use a screwdriver, coin, or similar object to loosen the two retaining screws on the lamp cover. When the screws are loose, lift off the lamp cover. (You cannot remove these screws.)



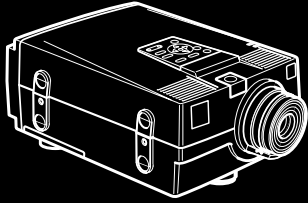
4. Use a screwdriver, coin, or similar object to loosen the two screws holding the lamp in position. (You cannot remove these screws.)



- 
5. Lift up the handle and pull out the lamp.



6. Gently insert the new lamp by lowering it into position. Make sure it is inserted securely.
7. Tighten the screws you loosened in step 4.
8. Replace the lamp cover and tighten the cover screws. (Make sure the lamp cover is securely fastened. The projector turns itself off if the lamp cover is open.)



6



## Troubleshooting

This chapter describes the problems indicated by the warning lights and provides information on how to solve problems with the projector. It is divided into the following sections:

- Problems with the projector. See this section if the projector is not working and to find out what the warning lights are indicating.
- Problems with the screen image. See this section if you cannot project an image or if the screen image is not good.

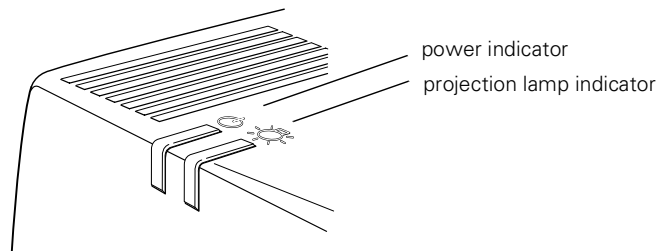


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If you have a problem, check the appropriate section and follow all suggestions that apply to your problem. If none of the suggestions solves the problem, call your PowerLite 7000 dealer or contact EPSON as described on pages xvii through xviii.

## Problems with the Projector

If you have problems with the projector, first turn it off and unplug it. Then plug the power cord back in and turn on the projector. If this does not solve the problem, check the warning lights at the top of the projector. These lights alert you to problems with projector operation.



Indicator	Color	Meaning
Power	Red	The projector is hot.
Projection lamp	Red	The lamp needs to be replaced. (See "Replacing the Lamp" in Chapter 5 for instructions.)

Indicator	Color	Meaning
Both	Flashing red	The projector is malfunctioning. Call a service representative.

See the following pages for information on what to do when you see these warning lights or encounter other specific problems with the projector.

- ▶ **The projection lamp light is flashing orange and you cannot turn on the projector.**

The lamp is cooling down. Wait until the light turns off and then turn on the projector.

- ▶ **The power light does not come on.**

Turn off the projector, check that the power cable is connected securely both at the power outlet and the projector, and press the Power button again.

- ▶ **Projected images get darker or start to deteriorate, or the projection lamp light is red.**

Replace the projector lamp as described on page 84.

- ▶ **The power light is red.**

The projector is overheating, which turns the lamp off automatically. Let the projector cool for a few minutes, then turn it back on. Make sure nothing is blocking the ventilation vents.

The air filter may be clogged. Clean it as described in Chapter 5 and then let the projector cool for a while.



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If the projector continues to overheat after you clean the air filter, the problem may be caused by damage to the cooling fan or internal circuits. Contact a qualified service person.

- ▶ **The projection lamp and power lights are flashing at the same time.**

An abnormality may have occurred in the projector. Turn off the projector and unplug the power cord. Then plug the power cord back in and turn on the projector. If nothing changes, call the service center.

❖ *Warning: Except as specifically explained in this User's Guide, do not attempt to service this product yourself.*

## Problems with the Image or Sound

- ▶ **An image does not appear on the screen.**

Check that the power light is on and the lens cover is off. Also make sure the cables are installed correctly, as described in Chapter 1.

The correct image source may not be selected. Press the Source button on the remote control or the control panel to choose another image source.

- ▶ **Only part of the computer image is displayed.**

If the computer's output resolution setting is higher than 1024 × 768, the projector resizes the image. If the computer output is not compatible with this resizing, choose a different display setting on the computer. In Windows 3.x, use Windows Setup in the Main program group. For a Macintosh, choose Control Panels under the Apple menu and then choose Monitors. In the Monitors screen, choose Options

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and make sure Macintosh Hi-Res Display or another 1024 × 768 display is selected. For supported display settings, see page “Supported Monitor Displays” on page 95.

You also may need to modify existing presentation files if you created them for a different resolution. See your software manual for specific information.

▶ **The message NO SIGNAL is displayed.**

An image source not connected to the projector is selected, the signal is not being output from the computer, or the signal is not reaching the projector. Make sure the connectors are securely attached to both the projector and the image source. Then check that the image source is selected correctly. When NO SIGNAL is displayed, you cannot access the source (computer/video) menu.

▶ **A blank screen is displayed.**

The computer signal cannot be interpreted by the projector. Verify the display format (see page 95). When you see a blank screen, you cannot access the projector menus.

▶ **The image or parts of the image are blurred or not in focus.**

Adjust the Brightness and Contrast settings on the Video main menu. If you’re viewing a computer image, also try adjusting the Comp Tracking and Comp Sync buttons on the projector’s control panel.

There may be dirt or smears on the lens. Clean the lens as described in Chapter 5, “Maintenance.”

---

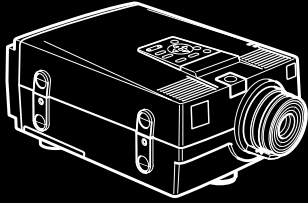
- ▶ **The colors of the image are not right.**

The color balance may be incorrect. If you're displaying a computer image, adjust the red, green, and blue settings in the Video menu. If you're displaying video, adjust the color and tint (NTSC only) settings on the Video menu.

- ▶ **There is no sound.**

First check that the volume setting is not turned all the way down and that the audio/visual cable is securely attached to both the projector and the audio source.

The wrong source is selected. Press either the Computer or Video button on the remote control or control panel to select the proper source.



7

## Technical Specifications

### General

Type of display	Liquid crystal panel, Thin Film Transistor (TFT)
Size of liquid crystal panels	1.32 inches (33.6 mm)
Resolution	1024 (horizontal) × 768 (vertical) pixels
Image size	21 to 300 inches (0.6 to 7 meters)
Projection distance	3.28 to 32.8 feet (1 to 10 meters)
Remote control range	32.8 feet (10 meters)
Internal speaker system	2 × 2W stereo
Optical aspect ratio	4 × 3 (horizontal × vertical)
Zoom ratio	1:1.3

---

**Projector  
Lamp**

Type	Metal Halide, DC
Power	150 W
Part number	ELPLP04

**Mechanical**

Height	6.3 inches (159 mm)
Width	9.7 inches (245 mm)
Depth	15.0 inches (380 mm) with lens
Weight	14.55 lb (6.6 kg)

**Electrical**

Voltage	100 to 120 VAC and 200 to 240 VAC
Rated frequency	50/60 Hz
Power supply	100 to 120 VAC, 2.7 A, 50/60 Hz 200 to 240 VAC, 1.6 A, 50/60 Hz
Power consumption	260 W

**Environmental**

Temperature	Operation: 41 to 104° F (5 to 40° C), non-condensing Storage: 14 to 140° F (-10 to 60° C), non-condensing
Humidity	Operation: 20 to 80% RH, non-condensing Storage: 10 to 90% RH, non-condensing

---

## Supported Monitor Displays

The projector displays images at a resolution of 1024 × 768 pixels. To display a higher resolution image, the projector compresses it to 1024 × 768. The following table lists the display formats supported by the projector:

Computer type	Formats	Resolutions
IBM PC and IBM PC compatible	VGA, VESA, JEGA CGA, SVGA, XGA	640 × 480
		640 × 200
		640 × 400
		800 × 600
		1024 × 768
		1280 × 1024*
Apple Macintosh	Standard 8- and 24-bit color monitor	640 × 480
		832 × 624
		1024 × 768
		1017 × 768
		1152 × 870*
NEC	PC	640 × 480
		800 × 600
		1024 × 768

\* The projector uses a patent-pending technology to resize the image to 1024 × 768.

*Note: The frequencies of some computers may not allow the image to be displayed correctly.*

*Note: This projector is compatible with DDC-capable graphic sub-systems and boards only.*

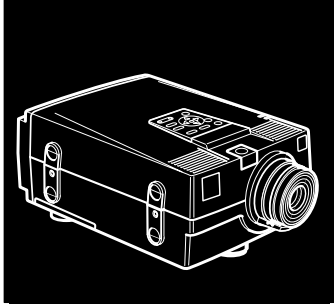
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## Monitor and Computer In 1/2 connector pin assignments

The Monitor and Computer In 1/2 connectors are female video RGB, 15-pin micro-D-style connectors. The pin assignments are:

Input pin	Monitor connector signals	Computer In 1/2 connector signals
1	Red out / red video	Red video
2	Green out / green video	Green video
3	Blue out / blue video	Blue video
4	Reserved	Monitor (ID bit 2)
5	GND	GND
6	GND	Red video GND
7	GND	Green video GND
8	GND	Blue video GND
9	Reserved	+5 V
10	GND	Synchronous GND
11	Reserved	Monitor (ID bit 0)
12	Reserved	SDA
13	Horizontal sync	Horizontal sync
14	Vertical sync	Vertical sync
15	Vertical sync	Reserved

---



# Glossary

**Brightness.** The balance of light and dark shades in an image.

**Composite video.** A type of video signal that encodes picture, luminance, and synchronization information so it can be carried in one signal.

**Contrast.** A measure of the tonal differences between the highlights and shadows of an image. In a high-contrast image, light areas are very bright and dark areas are very dark, with relatively few levels of gray between white and black. Contrast is decreased by adding grays.

**NTSC.** A 525-line video broadcast format developed by the National Television Standards Committee. NTSC is widely used in North America, Mexico, and Japan.

**PAL (Phase Alternation by Line).** A 625-line video broadcast format used in Western Europe, India, China, Australia, New Zealand, and parts of Africa.





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**Point.** A measurement of drawn or printed objects. One point equals 1/72 inch.

**Resolution.** A measure of the amount of detail contained in an image. Resolution can be measured in dots per inch or in pixels. Image sharpness and clarity improve as resolution increases.

**RGB.** A type of color scheme that defines color as percentages of red, green, and blue.

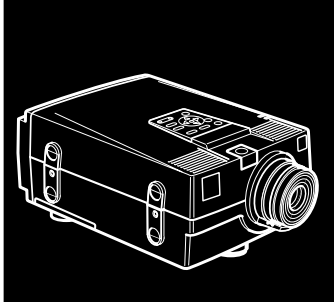
**S-Video.** A type of video signal used in S-VHS videotape formats. It transmits luminance and color separately.

**SECAM** (System Electronique pour Couleur Avec Memoire). A 625-line TV system used in France, Eastern Europe, Russia, and parts of Africa.

**Sleep mode.** A power-saving feature in which the projector's lamp is turned off when the projector has not been used for 30 minutes. In sleep mode, only a minimum amount of the projector's circuitry remains on.

**VGA.** Video Graphics Array. A high-resolution display adapter that provides a variety of video modes.

**XGA.** Extended Graphics Array. IBM's next generation display adapter, XGA provides higher resolution than VGA.



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