



BrightLink® 536Wi User's Guide

OPureGlare

Contents

BrightLink 536Wi User's Guide	11
Introduction to Your Projector	12
Projector Features	12
Product Box Contents	13
Additional Components	15
Optional Equipment and Replacement Parts	15
Warranty and Registration Information	17
Notations Used in the Documentation	17
Where to Go for Additional Information	18
Projector Part Locations	
Projector Parts - Front/Top	
Projector Parts - Rear	20
Projector Parts - Base	
Projector Parts - Control Panel	
Projector Parts - Interactive Pen	
Projector Parts - Remote Control	25
Setting Up the Projector	27
Projector Placement	27
Projector Setup and Installation Options	
Projection Distance	29
Projector Connections	31
Connecting to Computer Sources	32
	02
Connecting to a Computer for USB Video and Audio	33
Connecting to a Computer for USB Video and Audio Connecting to a Computer for VGA Video	33 34
Connecting to a Computer for USB Video and Audio Connecting to a Computer for VGA Video Connecting to a Computer for HDMI Video and Audio	33 34 34
Connecting to a Computer for USB Video and Audio Connecting to a Computer for VGA Video Connecting to a Computer for HDMI Video and Audio Connecting to a Computer for Pen Use or USB Mouse Control	33 34 34 35
Connecting to a Computer for USB Video and Audio Connecting to a Computer for VGA Video Connecting to a Computer for HDMI Video and Audio Connecting to a Computer for Pen Use or USB Mouse Control Connecting to a Computer for Sound	33 34 34 35 36
Connecting to a Computer for USB Video and Audio Connecting to a Computer for VGA Video Connecting to a Computer for HDMI Video and Audio Connecting to a Computer for Pen Use or USB Mouse Control Connecting to a Computer for Sound Connecting to a Computer for Sound	33 34 34 35 36 36
Connecting to a Computer for USB Video and Audio Connecting to a Computer for VGA Video Connecting to a Computer for HDMI Video and Audio Connecting to a Computer for Pen Use or USB Mouse Control Connecting to a Computer for Sound	 33 34 34 35 36 36 36

Connecting to a Composite Video Source 38	8
Connecting to an S-Video Video Source 38	8
Connecting to a Video Source for Sound 39	9
Connecting to an External Computer Monitor	9
Connecting to External Speakers 40	0
Connecting a Microphone 47	1
Connecting to External USB Devices 42	2
USB Device Projection 42	2
Connecting a USB Device or Camera to the Projector	3
Selecting the Connected USB Source 43	3
Disconnecting a USB Device or Camera From the Projector	4
Connecting to a Document Camera 44	4
Connecting Multiple Projectors of the Same Model 44	4
Installing Batteries in the Remote Control 48	5
Installing Batteries in the Pen 47	7
Using the Projector on a Network	9
Wired Network Projection	
Connecting to a Wired Network	0
Selecting Wired Network Settings	0
Wireless Network Projection	3
Installing the Wireless LAN Module	4
Using Quick Wireless Connection (Windows Only)	6
Selecting Wireless Network Settings Manually	6
Wireless LAN Menu Settings	9
Selecting Wireless Network Settings in Windows	0
Selecting Wireless Network Settings in OS X	0
Setting Up Wireless Network Security 6 ²	51
Wireless Security Menu Settings 62	2
Setting Up Projector Network E-Mail Alerts 62	2
Network Projector E-mail Alert Messages 63	3
Setting Up Monitoring Using SNMP	4
Controlling a Networked Projector Using a Web Browser	
Crestron RoomView Support	7

Setting Up Crestron RoomView Support	
Controlling a Networked Projector Using Crestron RoomView	68
Using Basic Projector Features	70
Turning On the Projector	70
Turning Off the Projector	71
Selecting the Language for the Projector Menus	73
Adjusting the Image Height	73
Image Shape	. 75
Correcting Image Shape with the Horizontal Keystone Slider	75
Correcting Image Shape with the Keystone Buttons	76
Correcting Image Shape with Quick Corner	78
Resizing the Image with the Wide and Tele Buttons	79
Focusing the Image Using the Focus Ring	80
Remote Control Operation	81
Using the Remote Control as a Wireless Mouse	82
Using the Remote Control as a Pointer	83
Selecting an Image Source	83
Projection Modes	. 85
Changing the Projection Mode Using the Remote Control	85
Changing the Projection Mode Using the Menus	86
Image Aspect Ratio	86
Changing the Image Aspect Ratio	87
Available Image Aspect Ratios	87
Color Mode	. 88
Changing the Color Mode	89
Available Color Modes	89
Turning On Auto Iris	90
Controlling the Volume with the Volume Buttons	91
Projecting a PC Free Presentation	91
Slideshow Features	92
Supported PC Free File Types	92
Starting a Slide Show	. 93
PC Free Display Options	95

Starting a PC Free Movie Presentation	96
Adjusting Projector Features	98
Shutting Off the Picture and Sound Temporarily	98
Stopping Video Action Temporarily	98
Zooming Into and Out of Images	99
Projector Security Features1	00
Password Security Types 10	00
Setting a Password 10	01
Selecting Password Security Types1	02
Entering a Password to Use the Projector1	03
Saving a User's Logo Image to Display1	04
Locking the Projector's Buttons 1	06
Unlocking the Projector's Buttons1	07
Installing a Security Cable 10	07
Creating a User Pattern to Display 10	07
Using the Interactive Features	09
Interactive Modes 10	09
Using the Projected Screen as a Whiteboard (Whiteboard Mode)	09
Drawing on a Projected Image (PC Free Annotation Mode) 1	11
Controlling Computer Features from a Projected Screen (PC Interactive Mode)1	13
PC Interactive Mode System Requirements1	15
Using the Interactive Pens1	16
Using the Pens1	16
Pen Calibration 1	19
Calibrating Automatically 12	20
Calibrating Manually1	22
Using BrightLink With a Computer 12	25
Adjusting the Pen Operation Area 12	25
Easy Interactive Tools 12	28
Windows Pen Input and Ink Tools 12	28
Enabling Windows Pen Input and Ink Tools12	28
Using Windows Pen Input and Ink Tools1	30
Using BrightLink Without a Computer 13	31

Using PC Free Annotation	. 131
Built-in Tools for Use Without a Computer	. 132
Using the Built-in Whiteboard Mode	. 134
Changing Pen Width and Color Using the Built-in Toolbar	. 135
Projector Control Toolbar	. 135
Selecting Network Device Display from the Projector Control Toolbar	. 137
Adjusting the Menu Settings	. 139
Using the Projector's Menus	. 139
Image Quality Settings - Image Menu	. 141
Input Signal Settings - Signal Menu	. 143
Projector Feature Settings - Settings Menu	. 146
Projector Setup Settings - Extended Menu	. 148
Projector Network Settings - Network Menu	. 154
Projector Setup Settings - ECO Menu	. 156
Projector Information Display - Info Menu	. 158
Event ID Code List	. 159
Projector Reset Options - Reset Menu	. 160
Maintaining and Transporting the Projector	. 162
Projector Maintenance	. 162
Cleaning the Lens	. 162
Cleaning the Projector Case	. 163
Air Filter and Vent Maintenance	. 163
Cleaning the Air Filter and Vents	. 164
Replacing the Air Filter	. 166
Projector Lamp Maintenance	. 168
Replacing the Lamp	. 169
Resetting the Lamp Timer	. 174
Replacing the Remote Control Batteries	. 175
Transporting the Projector	. 176
Solving Problems	. 178
Projection Problem Tips	. 178
Projector Light Status	. 179
Using the Projector Help Displays	. 181

	Solving Image or Sound Problems	182
	Solutions When No Image Appears	182
	Solutions When Image is Incorrect Using the USB Display Function	183
	Solutions When "No Signal" Message Appears	184
	Displaying From a PC Laptop	184
	Displaying From a Mac Laptop	184
	Solutions When "Not Supported" Message Appears	185
	Solutions When Only a Partial Image Appears	185
	Solutions When the Image is Not Rectangular	185
	Solutions When the Image Contains Noise or Static	186
	Solutions When the Image is Fuzzy or Blurry	187
	Solutions When the Image Brightness or Colors are Incorrect	187
	Solutions to Sound Problems	188
	Solutions to Microphone Problems	189
	Solving Projector or Remote Control Operation Problems	189
	Solutions to Projector Power or Shut-Off Problems	189
	Solutions to Problems with the Remote Control	190
	Solutions to Password Problems	191
	Solving Interactive Problems	191
	Solutions When "Hardware Device Not Found" Message Appears	191
	Solutions When "Error Occurred in the Easy Interactive Function" Message Appears	192
	Solutions When the Interactive Pens Do Not Work	192
	Solutions When Manual Calibration Does Not Work	193
	Solutions When the Built-In Toolbar (PC Free Annotation) Does Not Work	193
	Solutions When the Interactive Pen Position Is Not Accurate	194
	Solutions When the Interactive Pens Are Slow or Difficult to Use	194
	Solutions When the Interactive Pens Cause Interference or Unwanted Effects	195
	Solving Network Problems	195
	Solutions When Network Alert E-Mails are Not Received	195
	Solutions When You Cannot Access the Projector Through the Web	196
	Where to Get Help	196
Tech	nical Specifications	198
	General Projector Specifications	198

Projector Lamp Specifications 199
Remote Control Specifications
Projector Dimension Specifications
Projector Electrical Specifications 200
Projector Environmental Specifications
Projector Safety and Approvals Specifications 201
Supported Video Display Formats
USB Display System Requirements
Notices
Recycling
Important Safety Information
Important Safety Instructions
Restriction of Use
FCC Compliance Statement 210
Trademarks
Open Source Software License
Copyright Notice
A Note Concerning Responsible Use of Copyrighted Materials
Copyright Attribution

OPureGlare

BrightLink 536Wi User's Guide

Welcome to the BrightLink 536Wi User's Guide.

Introduction to Your Projector

Refer to these sections to learn more about your projector and this manual.

Projector Features Notations Used in the Documentation Where to Go for Additional Information Projector Part Locations

Projector Features

The BrightLink 536Wi projector includes these special features:

Unique interactive functions

- Annotation with or without a computer
- Annotation with up to two pens at the same time (includes one pen)
- Enhanced Easy Interactive toolbar for Windows and Mac

Short-throw projection system

- Project an 87 inch (221 cm) image (16:10) from just 35.7 inches (90 cm) away
- · Easily mounted to the wall for fast, low-cost installations
- Reduced shadow interference and glare

Bright, high-resolution projection system

• Up to 3400 lumens of color brightness (color light output) and 3400 lumens of white brightness (white light output)

Note: Color brightness (color light output) and white brightness (white light output) will vary depending on usage conditions. Color light output measured in accordance with IDMS 15.4; white light output measured in accordance with ISO 21118.

• Native resolution of 1280 × 800 pixels (WXGA)

Flexible connectivity

- Plug-and-play 3-in-1 USB projection, audio, and mouse control for instant setup
- HDMI port for computer or video device connection
- Wired network support for projection, monitoring, and control via remote network computer

- Optional wireless network support, including video and audio transfer
- PC Free photo slide shows via connected USB memory devices or Epson document camera
- Dual VGA ports for connections by multiple presenters
- Port for connecting an external monitor or second projector
- Port for connecting a microphone

Innovative display and operation features

- · Low total cost of ownership with long-life projector lamp and high-efficiency air filter
- · High zoom ratio for larger images in shorter projection distances
- 16000:1 contrast ratio and Auto Iris control for crisply detailed images
- · Built-in closed captioning decoder
- Powerful 16 W speaker system with audio out port for connecting external speakers
- Epson's Instant Off and Direct Power On features for quick setup and shut down
- Support for Crestron RoomView network monitoring systems
- Network message broadcast system to project timely messages to all networked projectors

Product Box Contents

Additional Components

Optional Equipment and Replacement Parts

Warranty and Registration Information

Parent topic: Introduction to Your Projector

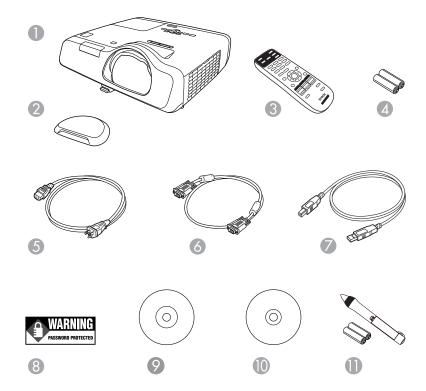
Related concepts

Projector Part Locations

Product Box Contents

Save all the packaging in case you need to ship the projector. Always use the original packaging (or equivalent) when shipping.

Make sure your projector box included all of these parts:



- 1 Projector
- 2 Lens cover
- 3 Remote control
- 4 Remote control batteries (two AA alkaline)
- 5 Power cord
- 6 VGA computer cable
- 7 Password Protected sticker
- 8 Projector documentation CD-ROM
- 9 Projector software CD-ROM

10 Interactive pen and battery (one AA alkaline)

Parent topic: Projector Features

Related concepts

Projector Connections

Additional Components

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

- To receive a composite video signal, you need an RCA-style video or A/V cable. See your local computer or electronics dealer for purchase information.
- To receive an S-Video signal, you need an S-Video cable compatible with your device. See your local computer or electronics dealer for purchase information.
- To receive a component video signal, you need a D-sub, 15-pin, component-to-VGA video cable. You can purchase one from Epson or an authorized Epson reseller.
- To receive an HDMI signal, you need a compatible HDMI cable. You can purchase one from Epson or an authorized Epson reseller.

Note: To connect a Mac that includes only a Mini DisplayPort, Thunderbolt port, or Mini-DVI port for video output, you need to obtain an adapter that allows you to connect to the projector's **HDMI** port. Contact Apple for compatible adapter options. Older Mac computers (2009 and earlier) may not support audio through the **HDMI** port.

- To project with audio from certain ports, you may need a commercially available audio cable compatible with your device. See your local computer or electronics dealer for purchase information.
- To connect a Mac that includes only a Mini DisplayPort, Thunderbolt port, or Mini-DVI port for video output to the projector's VGA video port, you need to obtain an adapter. Contact Apple for compatible adapter options.

Parent topic: Projector Features

Optional Equipment and Replacement Parts

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

Epson offers the following optional accessories and replacement parts for your projector:

Option or part	Part number
Genuine Epson replacement lamp (ELPLP87)	V13H010L87
Air filter replacement (ELPAF47)	V13H134A47
Wireless LAN module (ELPAP07)	V12H418P12
Quick Wireless Connection USB key (ELPAP09)	V12H005M09
Additional interactive pen A (ELPN04A) (orange)	V12H666010
Additional interactive pen B (ELPN04B) (blue)	V12H667010
Interactive pen extension	V12H590001
Replacement interactive pen tips	V12H668010
Mimio Studio Interactive software	V12HMSS020
Promethean ActivInspire software	V12HPSW001
SMART Notebook software	V12HSSW020
Epson DC-06 document camera (ELPDC06)	V12H321005
Epson DC-11 document camera (ELPDC11)	V12H377020
Epson DC-12 document camera (ELPDC12)	V12H594020
Epson DC-20 document camera (ELPDC20)	V12H500020
PowerLite Pilot 2 (ELPCB02)	V12H614020
Remote control cable set (ELPKC28)	V12H005C28
Active speakers (ELPSP02)	V12H467020
Short Throw Wall Mount (ELPMB45)	V12H706020
Universal projector ceiling mount	ELPMBPJF
Adjustable suspended ceiling channel kit	ELPMBP01
False ceiling plate kit	ELPMBP02
Structural round ceiling plate	ELPMBP03
Adjustable extension column (pipe) 8" - 11" (20 to 28 cm)	ELPMBC01
Kensington security lock	ELPSL01
90-inch whiteboard	V12H468002

Option or part	Part number
96-inch whiteboard	V12H468001
Accolade Duet portable projector screen	ELPSC80
Component-to-VGA video cable (ELPKC19)	V12H005C19
1-Year Extended Depot Repair Service Plan	EPPFTPA1
1-Year Extended Exchange Service Plan	EPPEXPA1
2-Year Extended Depot Repair Service Plan	EPPFTPA2
2-Year Extended Exchange Service Plan	EPPEXPA2

Parent topic: Projector Features

Warranty and Registration Information

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

In addition, Epson offers free Extra Care Road Service. In the unlikely event of an equipment failure, you won't have to wait for your unit to be repaired. Instead, Epson will ship you a replacement unit anywhere in the United States, Canada, or Puerto Rico. See the Extra Care Road Service brochure for details.

Register your product online using the projector CD or at this site: epson.com/webreg.

Registering also lets you receive special updates on new accessories, products, and services.

Parent topic: Projector Features

Notations Used in the Documentation

Follow the guidelines in these notations as you read your documentation:

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

Parent topic: Introduction to Your Projector

Where to Go for Additional Information

Need quick help on using your projector? Here's where to look for help:

• Built-in help system

Press the Help button on the remote control or projector to get quick solutions to common problems.

• epson.com/support (U.S) or epson.ca/support (Canada)

View FAQs (frequently asked questions) and e-mail your questions to Epson technical support 24 hours a day.

- For detailed instructions on using your projector in a network environment, see the EasyMP Network Projection Operation Guide.
- For detailed instructions on monitoring your projector in a network environment (Windows only), see the *EasyMP Monitor Operation Guide*.
- For detailed instructions on using your projector to hold interactive meetings in a network environment, see the *EasyMP Multi PC Projection Operation Guide*.
- For detailed instructions on using your computer to draw on projected images, see the *Easy Interactive Tools Operation Guide*.
- If you still need help after checking this manual and the sources listed above, you can use the Epson PrivateLine Support service to get help fast. For details, see "Where to Get Help".

Parent topic: Introduction to Your Projector

Related references

Where to Get Help

Projector Part Locations

Check the projector part illustrations to learn about the parts on your projector.

Projector Parts - Front/Top

Projector Parts - Rear

Projector Parts - Base

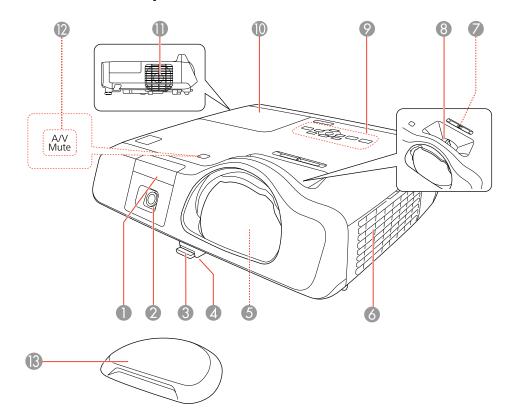
Projector Parts - Control Panel

Projector Parts - Interactive Pen

Projector Parts - Remote Control

Parent topic: Introduction to Your Projector

Projector Parts - Front/Top

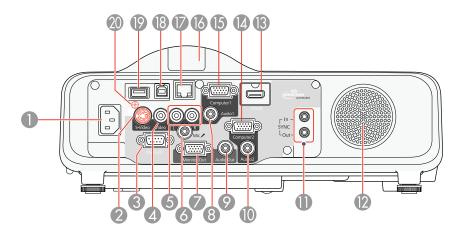


- 1 Remote control receiver
- 2 Interactive pen receiver
- 3 Foot release lever
- 4 Front adjustable foot
- 5 Projector lens
- 6 Air intake vent (air filter)
- 7 Horizontal keystone slider
- 8 Focus ring

- 9 Control panel
- 10 Lamp cover
- 11 Exhaust vent
- 12 A/V Mute button and Auto Calibration button (hold down for 3 seconds to auto calibrate)
- 13 Lens cover

Parent topic: Projector Part Locations

Projector Parts - Rear

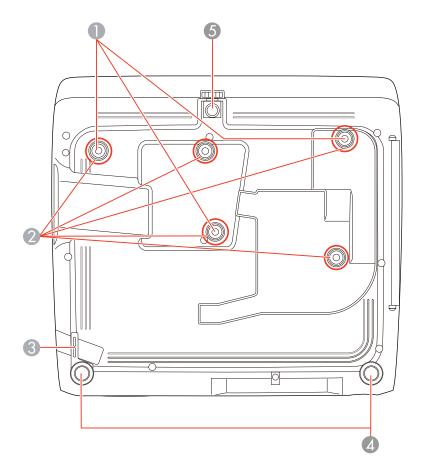


- 1 Power inlet
- 2 S-Video port
- 3 **RS-232C** port
- 4 Video port
- 5 L-Audio-R ports
- 6 **Mic** (microphone) port
- 7 Monitor Out port

- 8 Audio1 port
- 9 Audio Out port
- 10 Audio2 port
- 11 SYNC In/Out ports
- 12 Speaker
- 13 HDMI port
- 14 Computer2 port
- 15 **Computer1** port
- 16 Remote receiver
- 17 Network (LAN) port
- 18 USB-B port
- 19 USB-A port
- 20 Wireless LAN unit cover screw

Parent topic: Projector Part Locations

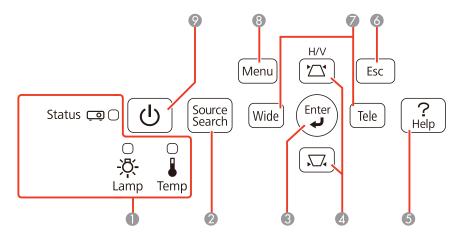
Projector Parts - Base



- 1 Ceiling mount holes (3)
- 2 Wall mount holes (5)
- 3 Security cable attachment point
- 4 Rear feet
- 5 Front adjustable foot

Parent topic: Projector Part Locations

Projector Parts - Control Panel



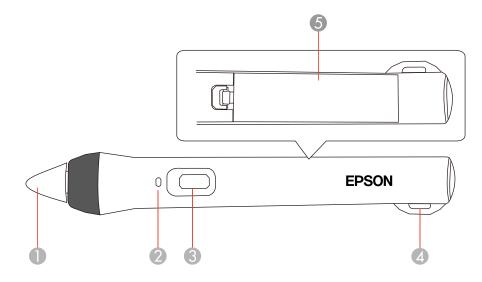
- 1 Status lights
- 2 **Source Search** button (searches for connected video sources)
- 3 Enter button (selects options)
- 4 Vertical keystone adjustment buttons (adjust screen shape) and arrow buttons
- 5 **Help** button (accesses projector help information)
- 6 **Esc** button (cancels/exits functions)
- 7 **Wide/Tele** buttons (adjust projected image size), horizontal keystone adjustment buttons (adjust screen shape), and arrow buttons
- 8 **Menu** button (accesses projector menu system)
- 9 Power button and light

Parent topic: Projector Part Locations

Related references

Projector Light Status

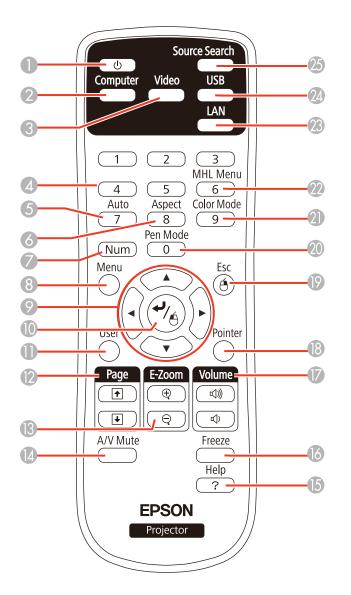
Projector Parts - Interactive Pen



- 1 Pen tip
- 2 Battery light
- 3 Power/function button
- 4 Attachment for optional strap or cord
- 5 Battery cover

Parent topic: Projector Part Locations

Projector Parts - Remote Control



1 Power button

- 2 **Computer** button (cycles through connected computer sources)
- 3 Video button (cycles through connected video sources)
- 4 Numeric buttons (enter numbers)
- 5 **Auto** button (automatically adjusts position, tracking, and sync settings)
- 6 **Aspect** button (selects the image aspect ratio)
- 7 **Num** button (when held down, switches numeric buttons to number function)
- 8 **Menu** button (accesses projector menu system)
- 9 Arrow buttons (move through on-screen options and control wireless mouse functions)
- 10 Enter button (selects options and controls wireless mouse functions)
- 11 **User** button (customizable for different functions)
- 12 **Page** up/down buttons (control presentation slides)
- 13 **E-Zoom +**/– buttons (zoom into and out of the image)
- 14 **A/V Mute** button (turns off picture and sound)
- 15 **Help** button (accesses projector help information)
- 16 **Freeze** button (stops video action)
- 17 Volume up/down buttons (adjust speaker volume)
- 18 **Pointer** button (activates on-screen pointer)
- 19 **Esc** button (cancels/exits functions and controls wireless mouse functions)
- 20 **Pen Mode** button (cycles between PC Interactive and PC Free Annotation modes)
- 21 Color Mode button (selects display modes)
- 22 **MHL Menu** button (not active)
- 23 LAN button (cycles between network and optional Quick Wireless Connection USB Key sources)
- 24 **USB** button (cycles through connected USB sources)
- 25 **Source Search** button (searches for connected sources)

Parent topic: Projector Part Locations

Related references

Remote Control Operation

Setting Up the Projector

Follow the instructions in these sections to set up your projector for use.

Projector Placement Projector Connections Installing Batteries in the Remote Control Installing Batteries in the Pen

Projector Placement

You can place the projector on almost any flat surface to project an image.

You can also install the projector in a ceiling or wall mount if you want to use it in a fixed location.

Keep these considerations in mind as you select a projector location:

- Place the projector on a sturdy, level surface or install it using a compatible mount.
- Leave plenty of space around and under the projector for ventilation, and do not place it on top of or next to anything that could block the vents.
- Position the projector within reach of a grounded electrical outlet or extension cord.

Projector Setup and Installation Options

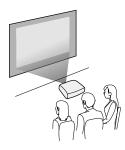
Projection Distance

Parent topic: Setting Up the Projector

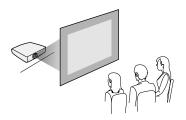
Projector Setup and Installation Options

You can set up or install your projector in the following ways:

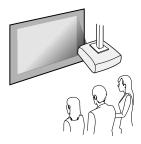
Front



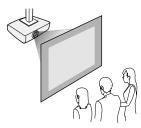
Rear



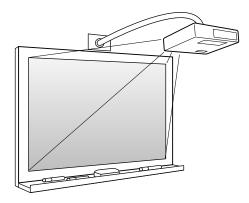
Front ceiling



Rear ceiling



Wall-mounted



Wherever you set up the projector, make sure to position it squarely in front of the screen, not at an angle.

If you project from the ceiling or wall, or from the rear, be sure to select the correct **Projection** option in the projector's menu system.

Note: Interactivity is not available when using rear or rear ceiling projection.

Parent topic: Projector Placement

Related references

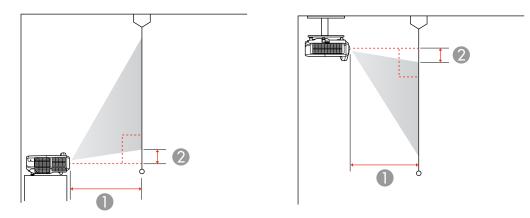
Projector Setup Settings - Extended Menu

Projection Distance

The distance at which you place the projector from the screen determines the approximate size of the image. The image size increases the farther the projector is from the screen, but can vary depending on the zoom factor, aspect ratio, and other settings.

Use the tables here to determine approximately how far to place the projector from the screen based on the size of the projected image. (Conversion figures may have been rounded up or down.) For more detailed information and installation instructions for the wall mount, see the *Installation Guide*. You can

also use the projector Throw Distance Calculator at epson.com/support (U.S.) or epson.ca/support (Canada).



16:10 Aspect Ratio		
Screen or image size	Projection distance (1) Wide to Tele	Offset from lens center (2)
55 inches	22 to 30 inches (56 to 77 cm)	3.4 inches (9 cm)
60 inches	24 to 33 inches (61 to 84 cm)	3.7 inches (9 cm)
70 inches	28 to 39 inches (72 to 99 cm)	4.4 inches (11 cm)
80 inches	33 to 45 inches (83 to 113 cm)	5 inches (13 cm)
90 inches	37 inches (94 cm)*	5.6 inches (14 cm)
100 inches	41 inches (105 cm)*	6.2 inches (16 cm)
116 inches	48 inches (122 cm)*	7.2 inches (18 cm)

* Wide resolution only

4:3 Aspect Ratio		
Screen or image size	Projection distance (1) Wide to Tele	Offset from lens center (2)
50 inches	23 to 31 inches (58 to 79 cm)	3.5 inches (9 cm)
60 inches	28 to 38 inches (70 to 96 cm)	4.2 inches (11 cm)
70 inches	32 to 44 inches (82 to 112 cm)	4.9 inches (13 cm)
80 inches	37 inches (94 cm)*	5.6 inches (14 cm)
90 inches	42 inches (107 cm)*	6.3 inches (16 cm)
102 inches	48 inches (121 cm)*	7.2 inches (18 cm)

* Wide resolution only

16:9 Aspect Ratio		
Screen or image	Projection distance (1)	Offset from lens center (2)
size	Wide to Tele	
60 inches	25 to 34 inches (63 to 87 cm)	5.5 inches (14 cm)
70 inches	29 to 40 inches (74 to 101 cm)	6.4 inches (16 cm)
80 inches	34 to 46 inches (85 to 116 cm)	7.3 inches (19 cm)
90 inches	38 inches (97 cm)*	8.2 inches (21 cm)
100 inches	42 inches (108 cm)*	9.1 inches (23 cm)
113 inches	48 inches (122 cm)*	10.3 inches (26 cm)

* Wide resolution only

Parent topic: Projector Placement

Projector Connections

You can connect the projector to a variety of computer, video, and audio sources to display presentations, movies, or other images, with or without sound.

• Connect any type of computer that has a USB port, standard video output (monitor) port, or HDMI port.

- For video projection, connect devices such as DVD players, gaming consoles, digital cameras, and smartphones with compatible video output ports.
- If your presentation or video includes sound, you can connect audio input cables, if necessary.
- For slide shows without a computer, you can connect USB devices (such as a flash drive or camera) or an optional Epson document camera.

Caution: If you will use the projector at altitudes above 4921 feet (1500 m), turn on **High Altitude Mode** to ensure the projector's internal temperature is regulated properly.

Connecting to Computer Sources Connecting to Video Sources Connecting to an External Computer Monitor Connecting to External Speakers Connecting a Microphone Connecting to External USB Devices Connecting to a Document Camera Connecting Multiple Projectors of the Same Model Parent topic: Setting Up the Projector Related references

Product Box Contents Projector Setup Settings - Extended Menu

Connecting to Computer Sources

Follow the instructions in these sections to connect a computer to the projector.

Connecting to a Computer for USB Video and Audio

Connecting to a Computer for VGA Video

Connecting to a Computer for HDMI Video and Audio

Connecting to a Computer for Pen Use or USB Mouse Control

Connecting to a Computer for Sound

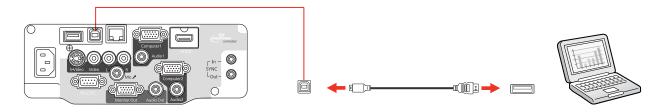
Parent topic: Projector Connections

Connecting to a Computer for USB Video and Audio

If your computer meets the system requirements, you can send video and audio output to the projector through the computer's USB port (preferably USB 2.0). Connect the projector to your computer using a USB cable.

Note: This also lets you use the interactive pen with your computer. You need to change the **USB Type B** setting in the projector's Extended menu before you can project through the USB port. Note that using USB Display will slow interactive pen function. For the best performance, VGA or HDMI connections are recommended.

- 1. Turn on your computer.
- 2. Connect the cable to your projector's USB-B port.



- 3. Connect the other end to any available USB port on your computer.
- 4. To use USB Display, do one of the following:
 - Windows 8.x: Click EPSON_PJ_UD in the upper right-corner, then select Run EMP_UDSE.exe in the dialog box that appears to install the Epson USB Display software.
 - Windows 7/Windows Vista: Select Run EMP_UDSE.exe in the dialog box that appears to install the Epson USB Display software.
 - Windows XP: Wait as messages appear on your computer screen and the projector installs the Epson USB Display software on your computer.
 - Windows 2000: Select Computer, EPSON_PJ_UD, and EMP_UDSE.EXE to install the Eposn USB Display software.
 - **OS X**: The USB Display setup folder appears on your screen. Select **USB Display Installer** and follow the on-screen instructions to install the Epson USB Display software.

Follow any on-screen instructions. You need to install this software only the first time you connect the projector to the computer.

The projector displays the image from your computer's desktop and outputs sound, if your presentation contains audio.

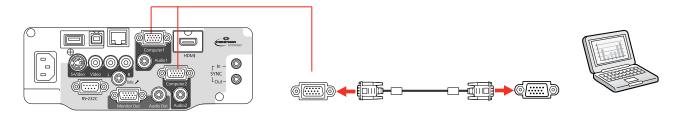
Parent topic: Connecting to Computer Sources

Connecting to a Computer for VGA Video

You can connect the projector to your computer using a VGA computer cable.

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

- 1. If necessary, disconnect your computer's monitor cable.
- 2. Connect the VGA computer cable to your computer's monitor port.
- 3. Connect the other end to a **Computer** port on the projector.



4. Tighten the screws on the VGA connector.

Parent topic: Connecting to Computer Sources

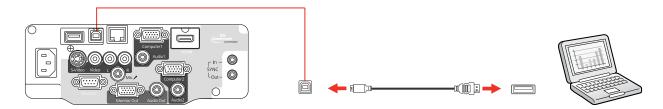
Connecting to a Computer for HDMI Video and Audio

If your computer has an HDMI port, you can connect it to the projector using an optional HDMI cable.

Note: To connect a Mac that includes only a Mini DisplayPort, Thunderbolt port, or Mini-DVI port for video output, you need to obtain an adapter that allows you to connect to the projector's **HDMI** port. Contact Apple for compatible adapter options. Older Mac computers (2009 and earlier) may not support audio through the **HDMI** port.

1. Connect the HDMI cable to your computer's HDMI output port.

2. Connect the other end to the projector's HDMI port.



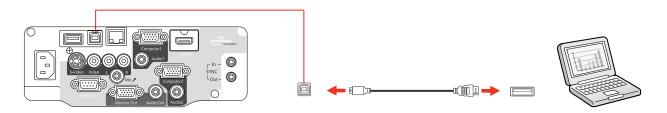
Parent topic: Connecting to Computer Sources

Connecting to a Computer for Pen Use or USB Mouse Control

If you connected your computer to a **Computer** or **HDMI** port on the projector, you also need to connect the USB cable so you can use the pens with your computer.

Connecting the USB cable also lets you set up the remote control to act as a wireless mouse, but you cannot use this feature at the same time you are using the pens with your computer.

1. Connect the USB cable to your projector's USB-B port.



2. Connect the other end to any available USB port on your computer.

If you want to use the remote control as a wireless mouse, you need to change the **USB Type B** setting in the projector's Extended menu. You may also need to configure your computer to work with an external USB mouse. See your computer documentation for details.

Parent topic: Connecting to Computer Sources

Related references

Projector Parts - Remote Control

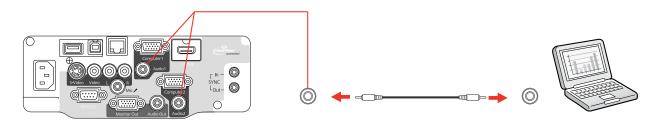
Related tasks

Using the Remote Control as a Wireless Mouse

Connecting to a Computer for Sound

If your computer presentation includes sound and you did not connect it to the projector's **USB-B** or **HDMI** port, you can still play sound through the projector's speaker system. Just connect an optional 3.5 mm stereo mini-jack audio cable as described here.

- 1. Connect the audio cable to your laptop's headphone or audio-out jack, or your desktop's speaker or audio-out port.
- 2. Connect the other end to the Audio port that corresponds to the Computer port you are using.



Parent topic: Connecting to Computer Sources

Connecting to Video Sources

Follow the instructions in these sections to connect video devices to the projector.

Connecting to an HDMI Video Source

Connecting to a Component-to-VGA Video Source

Connecting to a Composite Video Source

Connecting to an S-Video Video Source

Connecting to a Video Source for Sound

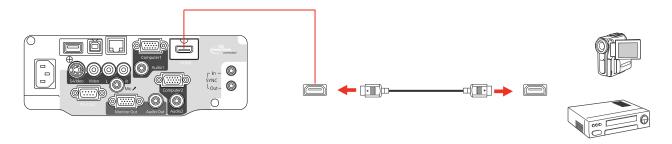
Parent topic: Projector Connections

Connecting to an HDMI Video Source

If your video source has an HDMI port, you can connect it to the projector using an optional HDMI cable. The HDMI connection provides the best image quality.

1. Connect the HDMI cable to your video source's HDMI output port.

2. Connect the other end to the projector's HDMI port.

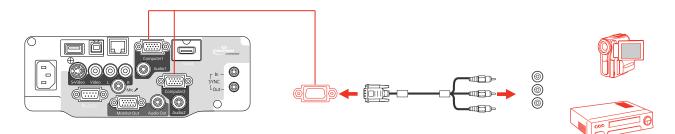


Parent topic: Connecting to Video Sources

Connecting to a Component-to-VGA Video Source

If your video source has component video ports, you can connect it to the projector using an optional component-to-VGA video cable. Depending on your component ports, you may need to use an adapter cable along with a component video cable.

- 1. Connect the component connectors to your video source's color-coded component video output ports, usually labeled **Y**, **Pb**, **Pr** or **Y**, **Cb**, **Cr**. If you are using an adapter, connect these connectors to your component video cable.
- 2. Connect the VGA connector to a **Computer** port on the projector.



3. Tighten the screws on the VGA connector.

If your image colors appear incorrect, you may need to change the **Input Signal** setting in the projector's Signal menu.

Parent topic: Connecting to Video Sources

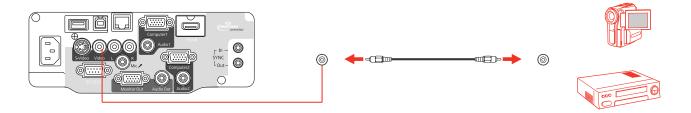
Related references

Input Signal Settings - Signal Menu

Connecting to a Composite Video Source

If your video source has a composite video port, you can connect it to the projector using an optional RCA-style video or A/V cable.

- 1. Connect the cable with the yellow connector to your video source's yellow video output port.
- 2. Connect the other end to the projector's Video port.

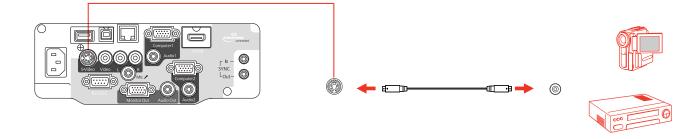


Parent topic: Connecting to Video Sources

Connecting to an S-Video Video Source

If your video source has an S-Video port, you can connect it to the projector using an optional S-Video cable.

- 1. Connect the S-Video cable to your video source's S-Video output port.
- 2. Connect the other end to the projector's **S-Video** port.



Parent topic: Connecting to Video Sources

Connecting to a Video Source for Sound

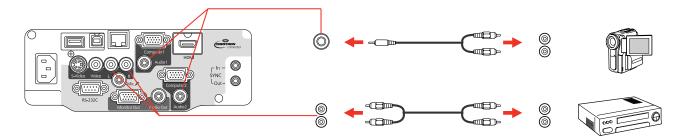
You can play sound through the projector's speaker system if your video source has audio output ports.

If you are projecting video using a **Computer** port, connect the projector to the video source using an optional stereo mini-jack audio cable.

If you are projecting video using the **Video** or **S-Video** port, connect the projector to the video source using an RCA audio cable.

Note: If you connected your video source to the projector using an HDMI cable, the audio signal is transferred with the video signal; you do not need an additional cable for sound.

- 1. Connect the audio cable to your video source's audio-out ports.
- 2. Do one of the following:
 - Connect the other end of the cable to the projector's **Audio** port that corresponds to the **Computer** port you are using for video.
 - Connect the red and white plugs on the other end of the cable to the projector's L-Audio-R ports.



Parent topic: Connecting to Video Sources

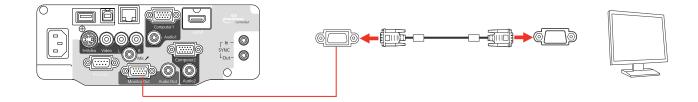
Connecting to an External Computer Monitor

If you connected the projector to a computer using a **Computer** port, you can also connect an external monitor to the projector. This lets you see your presentation on the external monitor even when the projected image is not visible.

If you want to output images to an external monitor when the projector is turned off, you need to select **Communication On** as the **Standby Mode** setting and **Always On** as the **A/V Output** setting in the projector's menu system.

Note: Monitors that use a refresh rate less than 60 Hz may not be able to display images correctly.

- 1. Make sure your computer is connected to the projector's **Computer** port. If there are two computer ports, make sure you use the **Computer1** port.
- 2. Connect the external monitor's cable to your projector's Monitor Out port.



Note: Only analog RGB signals from the Computer 1 port can be output to an external monitor.

Note: Content you draw using the interactive features is not displayed on an external monitor unless you draw it using Easy Interactive Tools.

Parent topic: Projector Connections

Connecting to External Speakers

To enhance the sound from your presentation, you can connect the projector to external self-powered speakers. You can control the volume using the projector's remote control.

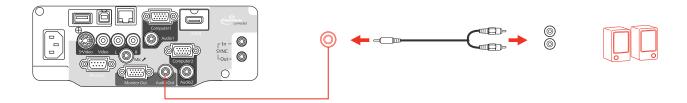
You can also connect the projector to an amplifier with speakers.

If you want to output audio from the external speakers when the projector is turned off, you need to select **Communication On** for the **Standby Mode** setting and **Always On** for the **A/V Output** setting in the projector's menu system.

Note: The projector's built-in speaker system is disabled when you connect external speakers.

- 1. Make sure your computer or video source is connected to the projector with both audio and video cables as necessary.
- 2. Locate the appropriate cable to connect your external speakers, such as a stereo mini-jack-to-pinjack cable, or another type of cable or adapter.
- 3. Connect one end of the cable to your external speakers as necessary.

4. Connect the stereo mini-jack end of the cable to your projector's Audio Out port.



Parent topic: Projector Connections Related references

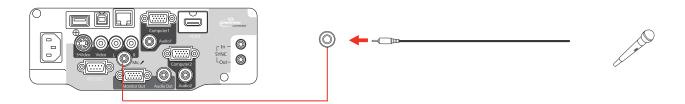
Projector Setup Settings - Extended Menu

Connecting a Microphone

You can connect a microphone to the projector's **Mic** port to provide audio support during presentations.

Note: The projector supports powered or dynamic microphones only. If you want to output audio from the microphone when the projector is turned off, you need to select **Communication On** for the **Standby Mode** setting and **Always On** for the **A/V Output** setting in the projector's menu system.

1. Connect the microphone cable to the projector's **Mic** port.



2. Turn on the microphone, if necessary.

Parent topic: Projector Connections

Related references

Projector Setup Settings - Extended Menu

Connecting to External USB Devices

Follow the instructions in these sections to connect external USB devices to the projector.

USB Device Projection Connecting a USB Device or Camera to the Projector Selecting the Connected USB Source Disconnecting a USB Device or Camera From the Projector

Parent topic: Projector Connections

USB Device Projection

You can project images and other content without using a computer or video device by connecting any of these devices to your projector:

- USB flash drive
- Digital camera or smartphone
- USB hard drive
- Multimedia storage viewer
- USB memory card reader

Note: Digital cameras or smartphones must be USB-mounted devices, not TWAIN-compliant devices, and must be USB Mass Storage Class-compliant.

Note: USB hard drives must meet these requirements:

- USB Mass Storage Class-compliant (not all USB Mass Storage Class devices are supported)
- Formatted in FAT or FAT32
- Self-powered by their own AC power supplies (bus-powered hard drives are not recommended)
- Does not have multiple partitions

You can project slide shows from image files on a connected USB device or memory card reader.

Parent topic: Connecting to External USB Devices

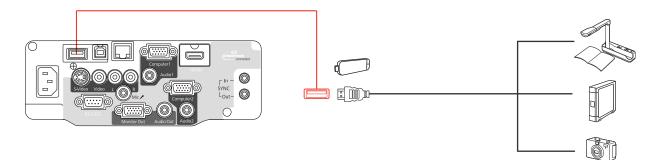
Related topics

Projecting a PC Free Presentation

Connecting a USB Device or Camera to the Projector

You can connect your USB device or camera to the projector's **USB-A** port and use it to project images and other content.

- 1. If your USB device came with a power adapter, plug the device into an electrical outlet.
- 2. Connect the USB cable (or USB flash drive or USB memory card reader) to the projector's **USB-A** port.



Note: Do not connect a USB hub or a USB cable longer than 10 feet (3 m), or the device may not operate correctly.

3. Connect the other end of the cable (if applicable) to your device.

Parent topic: Connecting to External USB Devices

Related topics

Projecting a PC Free Presentation

Selecting the Connected USB Source

You can switch the projector's display to the source you connected to the USB-A port.

- 1. Make sure the connected USB source is turned on, if necessary.
- 2. Press the **USB** button on the remote control.
- 3. Press the button again to cycle through other USB sources, if available.

Parent topic: Connecting to External USB Devices

Disconnecting a USB Device or Camera From the Projector

When you finish presenting with a connected USB device or camera, you must prepare to disconnect the device from the projector.

- 1. If the device has a power button, turn off and unplug the device.
- 2. Disconnect the USB device or camera from the projector.

Parent topic: Connecting to External USB Devices

Connecting to a Document Camera

You can connect an Epson document camera to your projector to project images viewed by the camera.

Depending on your document camera model, do one of the following to connect the document camera to your projector:

- For the Epson DC-06 document camera, locate the USB cable that came with the camera and connect it to the to the projector's **USB-A** port and to the document camera's USB Type B port.
- For the Epson DC-11 document camera, connect it to the projector's **Computer** or **Video** port and to the corresponding port on the document camera. See the document camera manual for details.
- For the Epson DC-12 document camera, connect it to the projector's **HDMI**, **Computer**, or **Video** port and to the corresponding port on the document camera. See the document camera manual for details.
- For the Epson DC-20 document camera, connect it to the projector's **HDMI**, **Computer**, or **Video** port and to the corresponding port on the document camera. See the document camera manual for details.

Note: For additional features supported by software, connect your document camera to your computer instead of the projector. See the document camera manual for details.

Parent topic: Projector Connections

Related references

Optional Equipment and Replacement Parts

Connecting Multiple Projectors of the Same Model

If you use the interactive features of multiple projectors of the same model in the same room, you need to synchronize the projectors. To do this, connect the optional remote control cable set (V12H005C28) to the **SYNC** port on each projector.

1. Connect one end of the remote control cable to the **SYNC In** port on one projector, and connect the other end to the **SYNC Out** port on the other projector.



Note: If you are connecting three or more projectors, connect the projectors in a chain as shown.



2. In the Extended menu, set the **Sync of Projectors** setting to **Wired**.

Note: If you are using the projector in the same room as another projector that does not support cable connection or if you do not have the optional remote control cable, set the **Wired Sync Mode** setting to **Mode 2** in the projector's Extended menu.

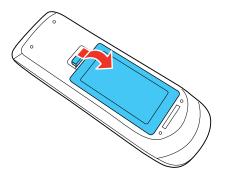
Parent topic: Projector Connections

Installing Batteries in the Remote Control

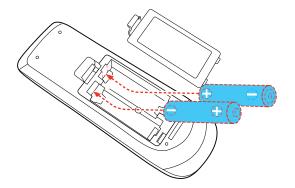
The remote control uses the two AA batteries that came with the projector.

Caution: Use only the type of batteries specified in this manual. Do not install batteries of different types, or mix new and old batteries.

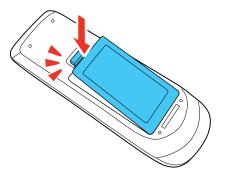
1. Remove the battery cover.



2. Insert the batteries with the + and – ends facing as shown.



3. Replace the battery cover and press it down until it clicks into place.



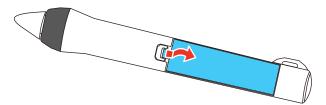
Warning: Dispose of used batteries according to local regulations. Do not expose batteries to heat or flame. Keep batteries out of the reach of children; they are choking hazards and are very dangerous if swallowed.

Parent topic: Setting Up the Projector

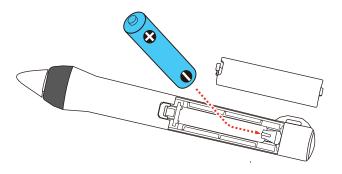
Installing Batteries in the Pen

The pen uses one AA battery.

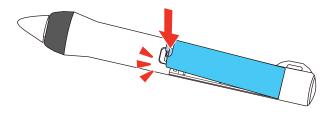
1. Remove the battery cover as shown.



2. Insert the battery with the + and – ends facing as shown.



3. Replace the battery cover and press it down until it clicks into place.



Parent topic: Setting Up the Projector

Using the Projector on a Network

Follow the instructions in these sections to set up your projector for use on a network.

Wired Network Projection Wireless Network Projection Setting Up Projector Network E-Mail Alerts Setting Up Monitoring Using SNMP Controlling a Networked Projector Using a Web Browser Crestron RoomView Support

Wired Network Projection

You can send images to your projector through a wired network. To do this, you connect the projector to your network, and then set up your projector and computer for network projection.

After connecting and setting up the projector as described here, install the network software from the *Epson Projector Software* CD or download the software as necessary. Use the following software and documentation to set up, control, and monitor network projection:

- EasyMP Network Projection software sets up your computer for network projection. See the EasyMP Network Projection Operation Guide for instructions.
- EasyMP Monitor software (Windows only) lets you monitor and control your projector through the network. You can download the latest software and documentation from the Epson web site. Go to epson.com/support (U.S.) or epson.ca/support (Canada) and select your projector.
- EasyMP Multi PC Projection software allows you to hold interactive meetings by projecting the computer screens of users over a network. See the EasyMP Multi PC Projection Operation Guide for instructions.
- EasyMP Network Updater software (Windows only) allows you to update firmware for a projector over a wired LAN. See the *EasyMP Network Updater Operation Guide* for instructions. You can download the latest software and documentation from the Epson web site. Go to epson.com/support (U.S.) or epson.ca/support (Canada) and select your projector.
- Projection from iOS or Android devices using the free Epson iProjection app (if your projector is connected to a network that includes a wireless access point); visit epson.com/projectorapp (U.S.) or epson.ca/projectorapp (Canada) for more information.

Note: If your projector is connected via a LAN cable to a network that includes a wireless access point, you can connect to the projector wirelessly through the access point using the EasyMP Network Projection software.

Connecting to a Wired Network Selecting Wired Network Settings

Parent topic: Using the Projector on a Network

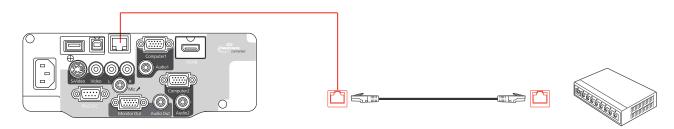
Related references

Projector Network Settings - Network Menu

Connecting to a Wired Network

To connect the projector to a wired local area network (LAN), use a 100Base-TX or 10Base-T network cable. To ensure proper data transmission, use a Category 5 shielded cable or better.

- 1. Connect one end of the network cable to your network hub, switch, or router.
- 2. Connect the other end of the cable to the projector's LAN port.



Parent topic: Wired Network Projection

Selecting Wired Network Settings

Before you can project from computers on your network, you must select the network settings for the projector using its menu system.

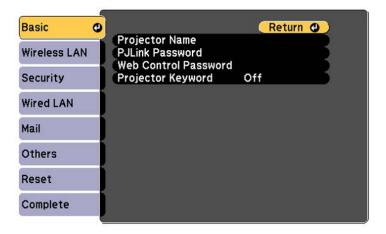
Note: Make sure you already connected the projector to your wired network using the LAN port.

- 1. Turn on the projector.
- 2. Press the Menu button.

3. Select the **Network** menu and press **Enter**.

Image			Return 🕘
Signal		Wireless Mode Net. Info Wireless LAN	Wireless L
Settings		Net. Info Wired LAN Network Configuration	
Extended			
Network	0		
ECO			
Info			
Reset			

- 4. Select Network Configuration and press Enter.
- 5. Select the **Basic** menu and press **Enter**.

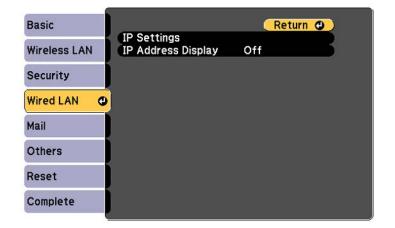


- 6. Select the following basic options as necessary:
 - **Projector Name** lets you enter a name up to 16 alphanumeric characters long to identify the projector over the network.

- **PJLink Password** lets you enter a password up to 32 alphanumeric characters long for using the PJLink protocol for projector control.
- Web Control Password lets you enter a password up to 8 alphanumeric characters long for accessing the projector over the web. (Default user name is EPSONWEB; default password is admin.)
- **Projector Keyword** lets you turn on a security password to prevent access to the projector by anyone not in the room with it. You must enter a displayed, randomized keyword from a computer using the EasyMP Network Projection software to access the projector.

Note: Use the displayed keyboard to enter the name, passwords and keyword. Press the arrow buttons on the remote control to highlight characters and press **Enter** to select them.

7. Select the Wired LAN menu and press Enter.



- 8. If necessary, select IP Settings and press Enter.
- 9. Select your IP Settings as necessary:
 - If your network assigns addresses automatically, turn on the DHCP setting.
 - If you must set addresses manually, turn off DHCP and enter the projector's IP Address, Subnet Mask, and Gateway Address as needed.

Note: To highlight the numbers you want from the displayed keyboard, press the arrow buttons on the remote control. To select a highlighted number, press **Enter**.

- 10. To prevent display of the IP address on the standby screen, turn off **IP Address Display**.
- 11. When you finish selecting settings, select **Complete** and follow the on-screen instructions to save your settings and exit the menus.

Parent topic: Wired Network Projection

Wireless Network Projection

You can send images to your projector through a wireless network. To do this, you must install the Epson 802.11b/g/n wireless LAN module, and then set up your projector and computer for wireless projection.

Note: The wireless LAN module is not included with your projector.

Note: If your projector is connected via a LAN cable to a network that includes a wireless access point, you can connect to the projector wirelessly using the EasyMP Network Projection software.

There are two ways to connect the projector to your wireless network:

- Using the optional Quick Wireless Connection USB Key (Windows only)
- Configuring the connection manually using the projector's Network menus

After installing the module and setting up the projector, install the network software from the *Epson Projector Software* CD or download the software, as necessary. Use the following software and documentation to set up, control, and monitor wireless projection:

- EasyMP Network Projection software sets up your computer for wireless network projection. See the EasyMP Network Projection Operation Guide for instructions.
- EasyMP Monitor software (Windows only) lets you monitor and control your projector through the network. You can download the latest software and documentation from the Epson web site. Go to epson.com/support (U.S.) or epson.ca/support (Canada) and select your projector.
- EasyMP Multi PC Projection software allows you to hold interactive meetings by projecting the computer screens of users over a network. See the *EasyMP Multi PC Projection Operation Guide* for instructions.
- EasyMP Network Updater software (Windows only) allows you to update firmware for a projector over a wired LAN. See the *EasyMP Network Updater Operation Guide* for instructions. You can download the latest software and documentation from the Epson web site. Go to epson.com/support (U.S.) or epson.ca/support (Canada) and select your projector.
- Projection from iOS or Android devices with the wireless LAN module and free Epson iProjection app; visit epson.com/projectorapp (U.S.) or epson.ca/projectorapp (Canada) for more information.

Installing the Wireless LAN Module Using Quick Wireless Connection (Windows Only) Selecting Wireless Network Settings Manually Selecting Wireless Network Settings in Windows Selecting Wireless Network Settings in OS X Setting Up Wireless Network Security

Parent topic: Using the Projector on a Network

Related references

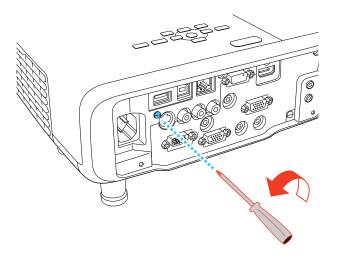
Optional Equipment and Replacement Parts Projector Network Settings - Network Menu

Installing the Wireless LAN Module

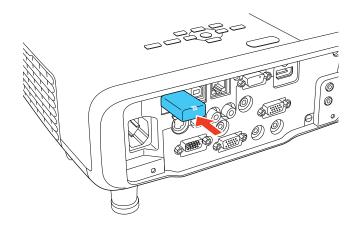
To use the projector over a wireless network, install the optional Epson 802.11b/g/n wireless LAN module. Do not install any other type of wireless LAN module.

Caution: Never remove the module while its indicator light is green or flashing, or while you are projecting wirelessly. You may damage the module or lose data.

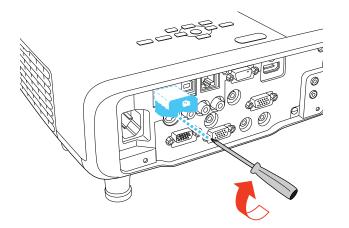
- 1. Turn off the projector and unplug the power cord.
- 2. Remove the screw securing the wireless LAN module stopper.



3. Insert the wireless LAN module into the port.



4. Attach the wireless LAN module stopper and secure it using the screw you removed.



5. Plug in and turn on the projector.

Parent topic: Wireless Network Projection

Using Quick Wireless Connection (Windows Only)

You can use the Quick Wireless Connection USB Key to quickly connect the projector to a Windows computer wirelessly. Then you can project your presentation and remove the key when you are done.

Note: The Quick Wireless Connection USB Key is not included with your projector.

- 1. Turn on the projector.
- 2. Connect the USB key to the projector's **USB-A** port.

You see a projected message that the network information update is complete.

- 3. Remove the USB key.
- 4. Connect the USB key to a USB port on your computer or laptop.

Note: In Windows Vista, if you see the AutoPlay window, select **Run LaunchU3.exe**, then select **Allow** on the next screen.

5. Follow the on-screen instructions to install the Quick Wireless Connection driver.

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

After a few minutes, your computer image is displayed by the projector. If it does not appear, press the **LAN** button on your remote control or restart your computer.

- 6. Run your presentation as necessary.
- 7. When you finish projecting wirelessly, select the **Safely Remove Hardware** option in the Windows taskbar, then remove the USB key from your computer.

Note: You may need to restart your computer to reactivate your wireless LAN connection.

Parent topic: Wireless Network Projection

Selecting Wireless Network Settings Manually

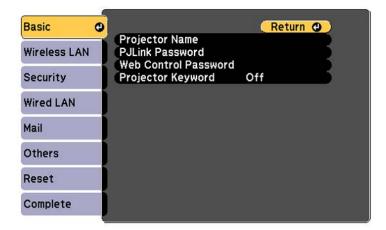
Before you can project from your wireless network, you must select the network settings for the projector using its menu system.

- 1. Turn on the projector.
- 2. Press the **Menu** button.

3. Select the **Network** menu and press **Enter**.

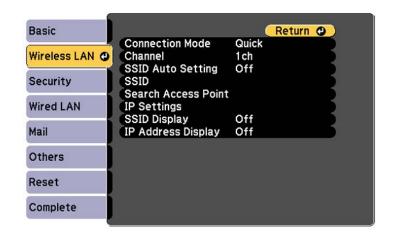
Image			Return 🕘
Signal		Wireless Mode Net. Info Wireless LAN Net. Info Wired LAN	Wireless L
Settings		Network Configuration	
Extended			
Network	0		
ECO			
Info			
Reset			

- 4. Set the Wireless Mode setting to Wireless LAN On and press Enter.
- 5. Select Network Configuration and press Enter.
- 6. Select the **Basic** menu and press **Enter**.



- 7. Select the following basic options as necessary:
 - **Projector Name** lets you enter a name up to 16 alphanumeric characters long to identify the projector over the network.
 - **PJLink Password** lets you enter a password up to 32 alphanumeric characters long for using the PJLink protocol for projector control.
 - Web Control Password lets you enter a password up to 8 alphanumeric characters long for accessing the projector over the web. (Default user name is EPSONWEB; default password is admin.)
 - **Projector Keyword** lets you turn on a security password to prevent access to the projector by anyone not in the room with it. You must enter a displayed, randomized keyword from a computer using the EasyMP Network Projection software to access the projector.

Note: Use the displayed keyboard to enter the name, passwords and keyword. Press the arrow buttons on the remote control to highlight characters and press **Enter** to select them.



8. Select the Wireless LAN menu and press Enter.

- 9. Select the settings on the Wireless LAN menu as necessary for your network.
- 10. When you finish selecting settings, select **Complete** and follow the on-screen instructions to save your settings and exit the menus.

After you complete the wireless settings for your projector, you need to select the wireless network on your computer.

Wireless LAN Menu Settings

Parent topic: Wireless Network Projection

Wireless LAN Menu Settings

Setting	Options	Description
Connection Mode	Quick Advanced	Selects the type of wireless connection:
		Quick : lets you quickly connect to one computer or use the optional Quick Wireless Connection USB key to connect
		Advanced : lets you connect to multiple computers via a wireless network access point
Channel	1ch	In Quick connection mode,
	6ch	selects the frequency band (channel) used by the wireless
	11ch	LAN
SSID Auto Setting	On	Turns on automatic SSID
	Off	searching in Quick connection mode; set to Off when connecting to multiple projectors at the same time
SSID	Up 32 alphanumeric characters	Sets the SSID (network name) of the wireless LAN system the projector is connecting to
Search Access Point		Search for available wireless network access points in Advanced connection mode
IP Settings	DHCP	In Advanced connection mode,
	IP Address	select DHCP if your network assigns addresses automatically,
	Subnet Mask	or manually enter the network's
	Gateway Address	IP Address, Subnet Mask, and Gateway Address

Setting	Options	Description
SSID Display	On Off	Selects whether to display the SSID on the network standby screen
IP Address Display	On Off	Selects whether to display the IP address on the network standby screen

Parent topic: Selecting Wireless Network Settings Manually

Selecting Wireless Network Settings in Windows

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

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

Parent topic: Wireless Network Projection

Selecting Wireless Network Settings in OS X

Before connecting to the projector, select the correct wireless network in OS X.

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

Parent topic: Wireless Network Projection

Setting Up Wireless Network Security

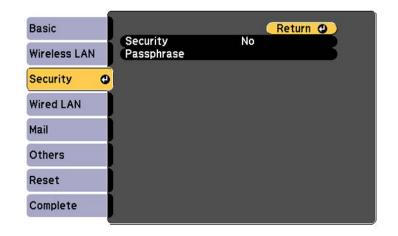
You can set up security for your projector to use on the wireless network. Set up one of the following security options to match the settings used on your network:

- WPA/WPA2-PSK security (Advanced connection mode)
- WPA2-PSK security (Advanced and Quick connection mode)

Note: To use wireless network security in Quick connection mode, you must enable SSID Auto Setting.

Check with your network administrator for guidance on entering the correct information.

- 1. Press the Menu button.
- 2. Select the Network menu and press Enter.
- 3. Select Network Configuration and press Enter.
- 4. Select the Security menu and press Enter.



- 5. Select the security settings for your network.
- 6. When you finish selecting settings, select **Complete** and follow the on-screen instructions to save your settings and exit the menus.

Wireless Security Menu Settings

Parent topic: Wireless Network Projection

Wireless Security Menu Settings

Settings on the Security menu let you select the type of security and security settings that match the network you are connecting the projector to.

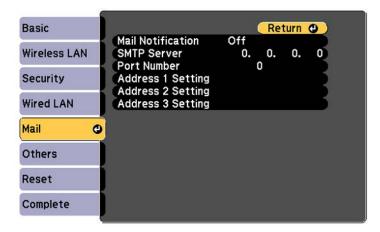
Setting	Options	Description
Security	WPA2-PSK and WPA types available	Selects the type of security used on the wireless network
Passphrase	Various keys from 8 to 32 characters	Selects the pre-shared key used on the network; passphrases are case-sensitive

Parent topic: Setting Up Wireless Network Security

Setting Up Projector Network E-Mail Alerts

You can set up the projector to send you an e-mail alert over the network if there is a problem with the projector.

- 1. Press the **Menu** button.
- 2. Select the Network menu and press Enter.
- 3. Select Network Configuration and press Enter.
- 4. Select the Mail menu and press Enter.



- 5. Turn on **Mail Notification**.
- 6. Enter the IP address for the SMTP Server option.

Note: Do not use these addresses: 127.x.x.x or 224.0.0.0 through 255.255.255.255 (where x is a number from 0 to 255).

- 7. Select a number for the SMTP server **Port Number**, from 1 to 65535 (default is 25).
- 8. Choose an **Address** field, enter the e-mail address, and select the alerts you want to receive there. Repeat for up to three addresses.

Note: Your e-mail address can be up to 32 alphanumeric characters long.

9. When you finish selecting settings, select **Complete** and follow the on-screen instructions to save your settings and exit the menus.

Note: If a critical problem causes a projector to shut down, you may not receive an e-mail alert.

Network Projector E-mail Alert Messages

Parent topic: Using the Projector on a Network

Network Projector E-mail Alert Messages

When a problem occurs with a networked projector, and you selected to receive e-mail alerts, you receive an e-mail containing the following information:

- Epson Projector on the subject line
- The name of the projector experiencing a problem
- · The IP address of the affected projector
- Detailed information about the problem

Note: If a critical problem causes a projector to shut down, you may not receive an e-mail alert.

Parent topic: Setting Up Projector Network E-Mail Alerts

Setting Up Monitoring Using SNMP

Network administrators can install SNMP (Simple Network Management Protocol) software on network computers so they can monitor projectors. If your network uses this software, you can set up the projector for SNMP monitoring.

- 1. Press the **Menu** button.
- 2. Select the Network menu and press Enter.
- 3. Select Network Configuration and press Enter.
- 4. Select the **Others** menu and press **Enter**.

Basic		Return 🕘
Wireless LAN	Trap IP Address 1	ff 0. 0. 0. 0
Security	Trap IP Address 2 Priority Gateway	
Wired LAN	AMX Device Discovery Crestron RoomView	Off
Mail	Bonjour Message Broadcasting	Off Off
Others 😋		
Reset		
Complete		

5. Enter up to two IP addresses to receive SNMP notifications, using 0 to 255 for each address field.

Note: Do not use these addresses: 127.x.x.x or 224.0.0.0 through 255.255.255.255 (where x is a number from 0 to 255).

- 6. If available, select the **Priority Gateway** setting for your network.
- 7. If your network environment uses an AMX controller, turn on the **AMX Device Discovery** setting to allow the projector to be detected.
- 8. If your network environment uses a Crestron RoomView controller, turn on the **Crestron RoomView** setting to allow the projector to be detected.
- 9. If you are connecting to a network using Bonjour, turn on the **Bonjour** setting.

- If you want this projector to receive broadcasted messages over the network, turn on the Message Broadcasting setting. Administrators can broadcast messages over the network using the Message Broadcasting plug-in for EasyMP Monitor (Windows only).
- 11. When you finish selecting settings, select **Complete** and follow the on-screen instructions to save your settings and exit the menus.

Parent topic: Using the Projector on a Network

Controlling a Networked Projector Using a Web Browser

Once you have connected your projector to your network, you can select projector settings and control projection using a compatible web browser. This lets you access the projector remotely.

Note: The web setup and control features support Microsoft Internet Explorer 8.0 or later, and Safari on networks that do not use a proxy server for connection. You cannot select all of the projector menu settings or control all projector functions using a web browser.

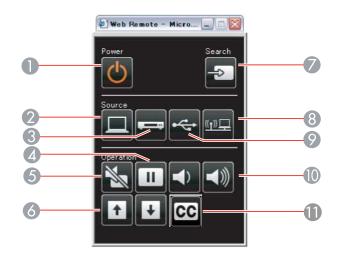
Note: If you set Standby Mode to **Communication On**, you can use a web browser to select settings and control projection even if the projector is in standby mode.

- 1. Make sure the projector is turned on.
- 2. Start your web browser on a computer or device connected to the network.
- 3. Type the projector's IP address into the browser's address box and press the computer's **Enter** key. You see the Web Control screen.

Note: You may need to log in before you see the Web Control screen. If you see a log in window, enter your user name and password. (The default user name is **EPSONWEB** and the default password is **admin**.)

- 4. To select projector menu settings, select the name of the menu and follow the on-screen instructions.
- 5. To control projection remotely, select the **Web Remote** option.

You see a screen like this:



- 1 Power button control
- 2 Selects **Computer** port source
- 3 Selects Video, S-Video, and HDMI port sources
- 4 Freeze button control
- 5 A/V Mute button control
- 6 **Page Up** and **Page Down** button controls
- 7 Searches for sources
- 8 Selects the network source
- 9 Selects the USB Display or USB device source
- 10 **Volume** button controls
- 11 Closed Caption control
- 6. Select the icon corresponding to the projector function you want to control.

Parent topic: Using the Projector on a Network

Related references

Projector Setup Settings - Extended Menu

Crestron RoomView Support

If you are using the Crestron RoomView network monitoring and control system, you can set up your projector for use on the system. Crestron RoomView lets you control and monitor your projector using a web browser.

Note: You cannot use the Epson Web Control feature or the Message Broadcasting plug-in for EasyMP Monitor when you use Crestron RoomView.

For additional information on Crestron RoomView, contact Crestron.

Setting Up Crestron RoomView Support Controlling a Networked Projector Using Crestron RoomView **Parent topic:** Using the Projector on a Network

Setting Up Crestron RoomView Support

To set up your projector for monitoring and control using a Crestron RoomView system, make sure your computer and projector are connected to the network. If you are connecting wirelessly, set up the projector using the Advanced network connection mode.

Note: If you want to use the Crestron RoomView system when the projector is turned off, you need to adjust the **Standby Mode** settings in the ECO menu.

- 1. Press the Menu button.
- 2. Select the Network menu and press Enter.
- 3. Select Network Configuration and press Enter.

4. Select the **Others** menu and press **Enter**.

Basic	1200000	(Re	turn	0
Wireless LAN	SNMP O Trap IP Address 1	off O.	0.		0
Security	Trap IP Address 2 Priority Gateway	Wire	0. d L <i>i</i>		0
Wired LAN	AMX Device Discovery Crestron RoomView	Off			
Mail	Bonjour Message Broadcasting	Off Off			_
Others 🖸					
Reset	ĺ				
Complete	ĺ				

- 5. Set the setting to **On** to allow the projector to be detected.
- 6. Turn off the projector, then turn it on again to enable the setting.

Parent topic: Crestron RoomView Support

Related references

Projector Setup Settings - Extended Menu

Controlling a Networked Projector Using Crestron RoomView

Once you have set up your projector to use Crestron RoomView, you can control and monitor projection using a compatible web browser.

- 1. Start your web browser on a computer connected to the network.
- 2. Type the projector's IP address into the browser's address box and press the computer's Enter key.

You see this screen:



- 3. Select the input source that you want to control in the Sources List box. You can scroll through available sources using the up and down arrows in the box.
- 4. To control projection remotely, click the on-screen buttons that correspond to the projector's remote control buttons. You can scroll through button options at the bottom of the screen.

Note: These on-screen buttons do not directly correspond to the projector's remote control buttons:

- OK acts as the Enter button
- Menu displays the projector's menu
- 5. To view information about the projector, click the **Info** tab.
- 6. To change projector, Crestron, and password settings, click the **Tools** tab, select settings on the displayed screen, and click **Send**.
- 7. When you finish selecting settings, click **Exit** to exit the program.

Parent topic: Crestron RoomView Support

Using Basic Projector Features

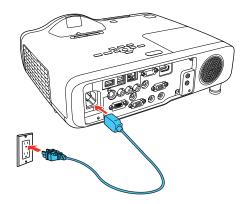
Follow the instructions in these sections to use your projector's basic features.

Turning On the Projector Turning Off the Projector Selecting the Language for the Projector Menus Adjusting the Image Height Image Shape Resizing the Image with the Wide and Tele Buttons Focusing the Image Using the Focus Ring Remote Control Operation Selecting an Image Source Projection Modes Image Aspect Ratio Color Mode Controlling the Volume with the Volume Buttons Projecting a PC Free Presentation

Turning On the Projector

Turn on the computer or video equipment you want to use before you turn on the projector so it can display the image source.

1. Connect the power cord to the projector's power inlet.



2. Plug the power cord into an electrical outlet.

Note: With Direct Power On turned on, the projector turns on as soon as you plug it in.

The projector's power light turns blue. This indicates that the projector is receiving power.

3. Press the power button on the projector or the remote control to turn on the projector.

The projector beeps and the Status light flashes blue as the projector warms up. Once the projector is warmed up, the Status light stops flashing and turns blue.

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

If you do not see a projected image right away, try the following:

- Turn on the connected computer or video device.
- Press the **Source Search** button on the projector or remote control to detect the video source.
- Press the button for the video source on the remote control.

Parent topic: Using Basic Projector Features

Turning Off the Projector

Before turning off the projector, shut down any computer connected to it so you can see the computer display during shutdown.

Note: Turn off this product when not in use to prolong the life of the projector. Lamp life will vary depending upon mode selected, environmental conditions, and usage. Brightness decreases over time.

Note: When using the A/V Mute feature, the projector lamp is still on. To turn off the lamp, turn off the projector.

1. Press the power button on the projector or the remote control.

The projector displays a shutdown confirmation screen.

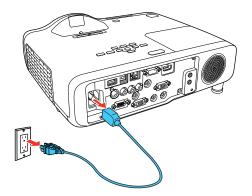


2. Press the power button again. (To leave it on, press any other button.)

The projector beeps twice, the lamp turns off, and the Status light turns off.

Note: With Epson's Instant Off technology, there is no cool-down period so you can pack up the projector for transport right away (if necessary).

3. To transport or store the projector, make sure the Status light is off, then unplug the power cord.



Caution: To avoid damaging the projector or lamp, never unplug the power cord when the Status light is on or flashing.

Parent topic: Using Basic Projector Features

Related references

Projector Setup Settings - Extended Menu

Selecting the Language for the Projector Menus

If you want to view the projector's menus and messages in another language, you can change the Language setting.

- 1. Turn on the projector.
- 2. Press the Menu button.
- 3. Select the Extended menu and press Enter.

Image		Return O
Signal	Display Closed Caption	Off
Settings	User's Logo Projection	Front
Extended		Frailat
Network	Language 🥝 Reset	English
ECO		
Info		
Reset		

- 4. Select the Language setting and press Enter.
- 5. Select the language you want to use and press Enter.
- 6. Press Menu or Esc to exit the menus.

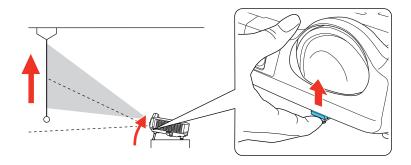
Parent topic: Using Basic Projector Features

Adjusting the Image Height

If you are projecting from a table or other flat surface, and the image is too high or low, you can adjust the image height using the projector's adjustable feet.

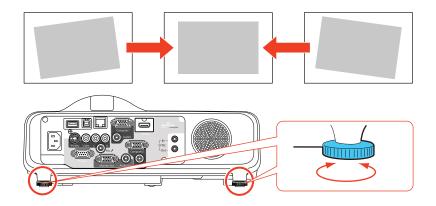
1. Turn on the projector and display an image.

2. To adjust the front foot, pull up on the foot release lever and lift the front of the projector.



The foot extends from the projector.

- 3. Release the lever to lock the foot.
- 4. If the image is tilted, rotate the rear feet to adjust their height.



If the projected image is unevenly rectangular, you need to adjust the image shape.

Parent topic: Using Basic Projector Features

Related concepts

Image Shape

Related references

Projector Feature Settings - Settings Menu

Image Shape

You can project an evenly rectangular image by placing the projector directly in front of the center of the screen and keeping it level. If you place the projector at an angle to the screen, or tilted up or down, or off to the side, you may need to correct the image shape for the best display quality.

When you turn on automatic keystone correction in your projector's Settings menu, your projector automatically corrects vertical keystone effects when you reposition the projector.

Note: When using interactive features, try not to make keystone corrections or use the Quick Corner setting. These features can affect interactive pen accuracy.

Correcting Image Shape with the Horizontal Keystone Slider Correcting Image Shape with the Keystone Buttons Correcting Image Shape with Quick Corner

Parent topic: Using Basic Projector Features

Correcting Image Shape with the Horizontal Keystone Slider

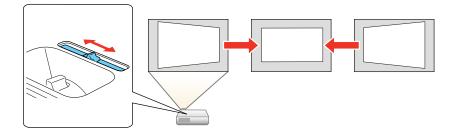
You can use the projector's horizontal keystone slider to correct the shape of an image that is unevenly rectangular horizontally, such as when the projector is placed to the side of the projection area.

1. Turn on the projector and display an image.

Note: You can display a pattern to aid in adjusting the projected image using the Settings menu.

Note: You can also display the pattern by pressing the **User** button on the remote control (if the test pattern is assigned to this button).

2. Adjust the slider until the image is evenly rectangular.



After correction, your image is slightly smaller.

Parent topic: Image Shape

Correcting Image Shape with the Keystone Buttons

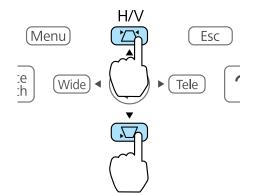
You can use the projector's keystone correction buttons to correct the shape of an image that is unevenly rectangular on the sides.

Note: For interactive use, make sure the degree of horizontal and vertical keystone correction is no more than $\pm 3^{\circ}$.

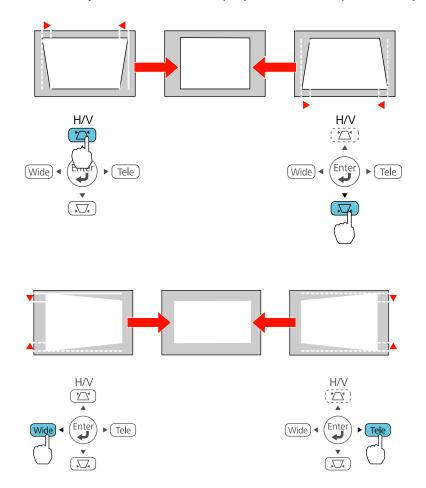
1. Turn on the projector and display an image.

Note: You can also display the pattern by pressing the **User** button on the remote control (if the test pattern is assigned to this button).

2. Press one of these keystone buttons on the control panel to display the Keystone adjustment screen.



3. Press a keystone button on the projector's control panel to adjust the image shape.



Note: The horizontal keystone adjustment buttons are labeled Wide and Tele.

After correction, your image is slightly smaller.

Note: If the projector is installed out of reach, you can also correct the image shape with the remote control using the **Keystone** settings in the projector menus.

Parent topic: Image Shape

Related references

Projector Feature Settings - Settings Menu

Correcting Image Shape with Quick Corner

You can use the projector's Quick Corner setting to correct the shape and size of an image that is unevenly rectangular on all sides.

1. Turn on the projector and display an image.

Note: You can display a pattern to aid in adjusting the projected image using the Settings menu.

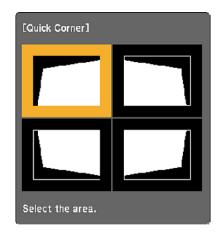
Note: You can also display the pattern by pressing the **User** button on the remote control (if the test pattern is assigned to this button).

- 2. Press the **Menu** button.
- 3. Select the **Settings** menu and press **Enter**.

Image		🤇 🔁 🦉 🦉 🦉
Signal	Keystone Zoom	H/V-Keystone
Settings (2)	Control Panel Lock Pointer Shape	Full Lock Pointer 1
Sectings G	Volume	0
Extended	Mic Input Level	0 i
	Remote Receiver	Front/Rear
Network	User Button Pattern	Power Consum)
ECO	Reset	
Info		
Reset		

- 4. Select the **Keystone** setting and press **Enter**.
- 5. Select the **Quick Corner** setting and press **Enter**. Then press **Enter** again.

You see the Quick Corner adjustment screen:



- 6. Use the arrow buttons on the projector or the remote control to select the corner of the image you want to adjust. Then press **Enter**.
- 7. Press the arrow buttons to adjust the image shape as necessary.
- 8. When you are finished, press **Esc**.

Note: Using Quick Corner can affect the accuracy of the interactive pens.

Parent topic: Image Shape

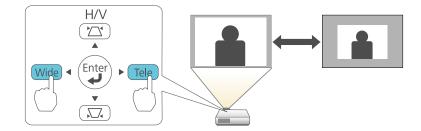
Related references

Projector Feature Settings - Settings Menu

Resizing the Image with the Wide and Tele Buttons

- 1. Turn on the projector and display an image.
- 2. To enlarge the image size, press the **Wide** button on the projector's control panel.

3. To reduce the image size, press the **Tele** button.



Note: If the projector is installed out of reach, you can also adjust the image size with the remote control using the **Zoom** setting in the projector menus.

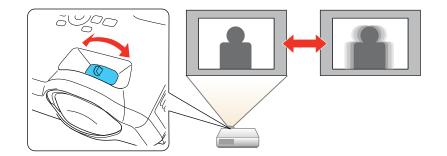
Parent topic: Using Basic Projector Features

Related references

Projector Feature Settings - Settings Menu

Focusing the Image Using the Focus Ring

- 1. Turn on the projector and display an image.
- 2. To sharpen the image focus, rotate the projector's focus ring.

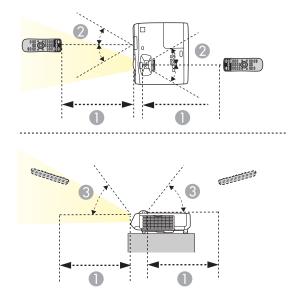


Parent topic: Using Basic Projector Features

Remote Control Operation

The remote control lets you control the projector from almost anywhere in the room. You can point it at the screen, or the front or back of the projector.

Make sure that you aim the remote control at the projector's receivers within the distance and angles listed here.



- 1 19.7 feet (6 m)
- 2 ± 30°
- 3 60°

Note: Avoid using the remote control in conditions with bright fluorescent lights or in direct sunlight, or the projector may not respond to commands. If you will not use the remote control for a long time, remove the batteries.

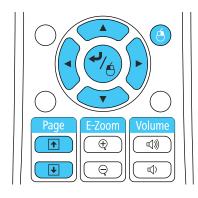
Using the Remote Control as a Wireless Mouse Using the Remote Control as a Pointer

Parent topic: Using Basic Projector Features

Using the Remote Control as a Wireless Mouse

You can use the projector's remote control as a wireless mouse so you can control projection at a distance from the computer.

- 1. Connect the projector to a computer using the projector's **USB-B**, **Computer**, or **HDMI** port to display video.
- 2. If you connected your computer to a port other than the projector's **USB-B** port, also connect a USB cable to the projector's **USB-B** port and to a USB port on your computer (for wireless mouse support).
- 3. Start your presentation.
- 4. Use the following buttons on the remote control to control your presentation:
 - To move through slides or pages, press the up or down **Page** buttons.



- To move the cursor on the screen, use the arrow buttons.
- To right-click, press the **Esc** button.
- To drag-and-drop, hold the button as you move the cursor with the arrow buttons, then release
 at the destination.

Parent topic: Remote Control Operation

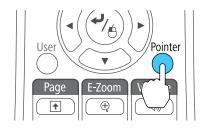
Related tasks

Connecting to a Computer for Pen Use or USB Mouse Control

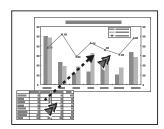
Using the Remote Control as a Pointer

You can use the projector's remote control as a pointer to help you call out important information on the screen. The default pointer shape is an arrow, but you can select an alternative shape using the Settings menu.

1. Press the **Pointer** button on the remote control.



2. Use the arrow buttons on the remote control to move the pointer on the screen.



3. Press **Esc** to clear the pointer from the screen.

Parent topic: Remote Control Operation

Related references

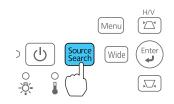
Projector Feature Settings - Settings Menu

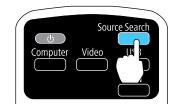
Selecting an Image Source

If you connected multiple image sources to the projector, such as a computer and DVD player, you may want to switch from one image source to the other.

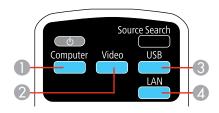
- 1. Make sure the connected image source you want to use is turned on.
- 2. For video image sources, insert a DVD or other video media and press its play button, if necessary.

- 3. Do one of the following:
 - Press the **Source Search** button on the projector or remote control until you see the image from the source you want.





• Press the button for the source you want on the remote control. If there is more than one port for that source, press the button again to cycle through the sources.



- 1 Computer port sources
- 2 Video and HDMI sources
- 3 USB port sources (computer display and external devices)
- 4 Network source (LAN)

Parent topic: Using Basic Projector Features

Projection Modes

Depending on how you positioned the projector, you may need to change the projection mode so your images project correctly.

- Front (default setting) lets you project from a table in front of the screen.
- Front/Ceiling flips the image over top-to-bottom to project upside-down from a ceiling or wall mount.
- Rear flips the image horizontally to project from behind a translucent screen.
- **Rear/Ceiling** flips the image over top-to-bottom and horizontally to project from the ceiling and behind a translucent screen.

Changing the Projection Mode Using the Remote Control Changing the Projection Mode Using the Menus

Parent topic: Using Basic Projector Features

Changing the Projection Mode Using the Remote Control

You can change the projection mode to flip the image over top-to-bottom.

- 1. Turn on the projector and display an image.
- 2. Hold down the A/V Mute button on the remote control for five seconds.



The image disappears briefly and reappears flipped top-to-bottom.

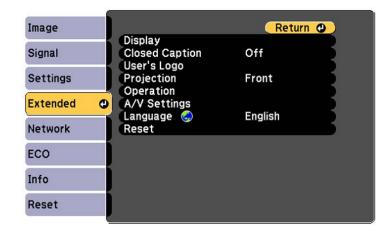
3. To change projection back to the original mode, hold down the **A/V Mute** button for five seconds again.

Parent topic: Projection Modes

Changing the Projection Mode Using the Menus

You can change the projection mode to flip the image over top-to-bottom and/or left-to-right using the projector menus.

- 1. Turn on the projector and display an image.
- 2. Press the Menu button.
- 3. Select the Extended menu and press Enter.



- 4. Select the **Projection** setting and press Enter.
- 5. Select a projection mode and press Enter.
- 6. Press Menu or Esc to exit the menus.

Parent topic: Projection Modes

Image Aspect Ratio

The projector can display images in different width-to-height ratios called aspect ratios. Normally the input signal from your video source determines the image's aspect ratio. However, for certain images you can change the aspect ratio to fit your screen by pressing a button on the remote control.

If you always want to use a particular aspect ratio for a certain video input source, you can select it using the projector's menus.

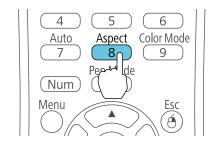
Changing the Image Aspect Ratio Available Image Aspect Ratios Parent topic: Using Basic Projector Features

Related references Image Quality Settings - Image Menu

Changing the Image Aspect Ratio

You can change the aspect ratio of the displayed image to resize it.

- 1. Turn on the projector and switch to the image source you want to use.
- 2. Press the **Aspect** button on the remote control.



The shape and size of the displayed image changes, and the name of the aspect ratio appears briefly on the screen.

3. To cycle through the available aspect ratios for your input signal, press the **Aspect** button repeatedly.

Parent topic: Image Aspect Ratio

Available Image Aspect Ratios

You can select the following image aspect ratios, depending on the input signal from your image source.

Note: Black bands and cropped images may project in certain aspect ratios, depending on the aspect ratio and resolution of your input signal.

BrightLink 536Wi

Aspect ratio setting	Description
Auto	Automatically sets the aspect ratio according to the input signal and the Resolution setting.
Normal	Displays images using the full projection area and maintains the aspect ratio of the image.
16:9	Converts the aspect ratio of the image to 16:9.
Full	Displays images using the full width of the projection area, but does not maintain the aspect ratio.
Zoom	Displays images using the full width of the projection area and maintains the aspect ratio of the image.
Native	Displays images as is (aspect ratio and resolution are maintained).

Note: The Auto aspect ratio setting is available only for HDMI image sources.

Aspect ratio setting	Description	
4:3	Displays images using the full projection area at 4:3 aspect ratio.	
16:9	Converts the aspect ratio of the image to 16:9.	

Note: The Auto aspect ratio setting is available only for HDMI image sources.

Parent topic: Image Aspect Ratio

Color Mode

The projector offers different Color Modes to provide optimum brightness, contrast, and color for a variety of viewing environments and image types. You can select a mode designed to match your image and environment, or experiment with the available modes.

If you always want to use a particular color mode for a certain video input source, you can select it using the projector menus.

Changing the Color Mode

Available Color Modes

Turning On Auto Iris

Parent topic: Using Basic Projector Features

Related references

Image Quality Settings - Image Menu

Changing the Color Mode

You can change the projector's Color Mode using the remote control to optimize the image for your viewing environment.

- 1. Turn on the projector and switch to the image source you want to use.
- 2. If you are projecting from a DVD player or other video source, insert a disc or other video media and press the play button, if necessary.
- 3. Press the **Color Mode** button on the remote control to change the Color Mode.



The image appearance changes and the name of the Color Mode appears briefly on the screen.

4. To cycle through all the available Color Modes for your input signal, press the **Color Mode** button repeatedly.

Parent topic: Color Mode

Available Color Modes

You can set the projector to use these Color Modes, depending on the input source you are using:

Color Mode	Description	
Dynamic	Best for projecting in a bright room	
Presentation	Best for color presentations in a bright room	
Theatre	Best for movies projected in a dark room	
sRGB	Best for standard sRGB computer displays	

Color Mode	Description
Blackboard	Best for presentations onto a green chalkboard (adjusts the colors accordingly)

Parent topic: Color Mode

Related references

Image Quality Settings - Image Menu

Turning On Auto Iris

In certain color modes, you can turn on the Auto Iris setting to automatically optimize the image based on the brightness of the content you project.

- 1. Turn on the projector and switch to the image source you want to use.
- 2. Press the Menu button.
- 3. Select the Image menu and press Enter.

Image	0	Return 🕘
	Color Mode	Photo
Signal	Brightness	0
	Contrast	0
Settings	Color Saturation	0
	Tint	0
Extended	Sharpness	0
	Color Temp.	0
Network	Color Adjustment	
ning states of the	Auto Iris	Off
ECO	Reset	
Info		
Reset		

- 4. Select the Auto Iris setting and choose one of the following:
 - High Speed to adjust brightness as soon as the scene changes.

• Normal for standard brightness adjustment.

Note: You can set **Auto Iris** for each Color Mode that supports the feature. You cannot change the **Auto Iris** setting when you are using a **Closed Caption** setting.

5. Press Menu or Esc to exit the menus.

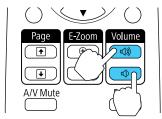
Parent topic: Color Mode

Controlling the Volume with the Volume Buttons

You can use the **Volume** buttons on the remote control to adjust the volume as you project a presentation with audio. The volume buttons control the projector's internal speaker system or any external speakers you connected to the projector.

You must adjust the volume separately for each connected input source.

- 1. Turn on the projector and start a presentation that includes audio.
- 2. To lower or raise the volume, press the **Volume** buttons on the remote control.



A volume gauge appears on the screen.

3. To set the volume to a specific level for an input source, use the projector menus.

Parent topic: Using Basic Projector Features

Projecting a PC Free Presentation

You can use your projector's PC Free feature whenever you connect a USB device that contains compatible image or movie files. This lets you quickly and easily display and control them using the projector's remote control. You can also display a slide show of the images.

Slideshow Features Supported PC Free File Types Starting a Slide Show Starting a PC Free Movie Presentation Parent topic: Using Basic Projector Features Related concepts USB Device Projection Related tasks Connecting a USB Device or Camera to the Projector

Slideshow Features

Your projector's Slideshow feature lets you do the following:

- Display individual images
- Present a slide show of all images in a folder

Parent topic: Projecting a PC Free Presentation

Supported PC Free File Types

You can project these types of files using the projector's PC Free feature.

Note: For best results, place your files on media that is formatted in FAT16/32. If you have trouble projecting from media formatted for non-Windows file systems, try formatting the media for Windows instead. You may not be able to use the security features on certain USB storage devices with PC Free features.

File contents	File type (extension)	Details		
Image	.jpg	Make sure the file is not:		
		CMYK format		
		Progressive format		
		Highly compressed		
		Above 8192 × 8192 resolution		
	.bmp	Make sure the file resolution is not above 1280 × 800		
	.gif	Make sure the file is not:		
		 Above 1280 × 800 resolution 		
		Animated		
	.png	Make sure the file resolution is not above 1280×800		
Movie	.avi	Make sure the file is not:		
		 Saved with an audio codec other than linear PCM or ADPCM 		
		Above 1280 × 720 resolution		
		Larger than 2GB		

Parent topic: Projecting a PC Free Presentation

Starting a Slide Show

After connecting a USB device to the projector, you can switch to the USB input source and start your slide show.

Note: You can change the Slideshow operation options or add special effects by highlighting **Option** at the bottom of the screen and pressing **Enter**.

1. Press the **USB** button on the projector remote control.

The Slideshow screen appears.



- 2. Do the following as necessary to locate your files:
 - If you need to display files inside a subfolder on your device, press the arrow buttons to highlight the folder and press the **Enter** button.
 - To move back up a folder level on your device, highlight **Back to Top** and press **Enter**.
 - To view additional images in a folder, highlight **Next page** or **Previous page**, or press the **Page** up or down buttons on the remote control, and press **Enter**.
- 3. Do one of the following to start your slide show:
 - To display an individual image, press the arrow buttons to highlight the image and press **Enter**. (Press the **Esc** button to return to the file list screen.)
 - To display a slide show of all the images in a folder, press the arrow buttons to highlight the **Slideshow** option at the bottom of the screen and press **Enter**.

Note: If any file names are longer than 8 characters or include unsupported symbols, the file names may be shortened or changed only in the screen display.

- 4. While projecting, use the following commands to control the display as necessary:
 - To rotate a displayed image, press the up or down arrow button.
 - To move to the next or previous image, press the left or right arrow button.
- 5. To stop the display, follow the on-screen instructions or press the **Esc** button.

PC Free Display Options

Parent topic: Projecting a PC Free Presentation

PC Free Display Options

You can select these display options when using the projector's PC Free feature.

		🎻 Opti	on			
POOO2 Disp	lay Setting					
	Display	Order 🧧 🧧	Name Or	der 🕐 👔	Date Order	
	Sort	Order 🚺	In Ascen	ding 🦷	In Descending	
0007S Slid	eshow Setup					
	Continuous	Play	On		011	
	Screen Switching	Time 📑	Seconds	-		•
	0 00155 E	ffect	No		Wipe	
			Dissolv	/e 1	Random	
			ок		Cancel	

Setting	Options	Description
Display Order	Name Order	Displays files in name order
	Date Order	Displays files in date order
Sort Order	In Ascending	Sorts files in first-to-last order
	In Descending	Sorts files in last-to-first order
Continuous Play	On	Displays a slide show continuously
	Off	Displays a slide show one time through
Screen Switching Time	Νο	Does not display the next file automatically
	1 Second to 60 Seconds	Displays files for the selected time and switches to the next file automatically; high resolution images may switch at a slightly slower rate

Setting	Options	Description	
Effect	Wipe	Transitions between images with a wipe effect	
	Dissolve	Transitions between images with a dissolve effect	
	Random	Transitions between images using a random variety of effects	

Parent topic: Starting a Slide Show

Starting a PC Free Movie Presentation

After connecting a USB device or digital camera to the projector, you can switch to the USB input source and start your movie.

Note: You can change the PC Free operation options by highlighting **Option** at the bottom of the screen and pressing **Enter**.

1. Press the **USB** button on the projector remote control.

The PC Free screen appears.



- 2. Do the following as necessary to locate your files:
 - If you need to display files inside a subfolder on your device, press the arrow buttons to highlight the folder and press the **Enter** button.
 - To move back up a folder level on your device, highlight **Back to Top** and press **Enter**.
 - To view additional files in a folder, highlight **Next page** or **Previous page** and press **Enter**, or press the **Page** up or down buttons on the remote control.
- 3. To play back a movie, press the arrow buttons to highlight the file and press Enter.

Note: If any file names are longer than 8 characters or include unsupported symbols, the file names may be shortened or changed only in the screen display. If you want to play back all the movies in a folder in sequence, select the **Slideshow** option at the bottom of the screen.

4. To stop movie playback, press the **Esc** button, highlight **Exit**, and press **Enter**.

Parent topic: Projecting a PC Free Presentation

Adjusting Projector Features

Follow the instructions in these sections to use your projector's feature adjustments.

Shutting Off the Picture and Sound Temporarily

Stopping Video Action Temporarily

Zooming Into and Out of Images

Projector Security Features

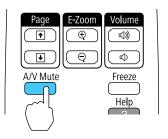
Creating a User Pattern to Display

Shutting Off the Picture and Sound Temporarily

You can temporarily turn off the projected picture and sound if you want to redirect your audience's attention during a presentation. Any sound or video action continues to run, however, so you cannot resume projection at the point that you stopped it.

If you want to display an image such as a company logo or picture when the presentation is stopped, you can set up this feature using the projector's menus.

1. Press the **A/V Mute** button on the remote control or the projector to temporarily stop projection and mute any sound.



2. To turn the picture and sound back on, press A/V Mute again.

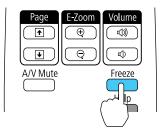
Parent topic: Adjusting Projector Features

Stopping Video Action Temporarily

You can temporarily stop the action in a video or computer presentation and keep the current image on the screen. Any sound or video action continues to run, however, so you cannot resume projection at the point that you stopped it.

Note: You can also stop video action using the interactive pens.

1. Press the Freeze button on the remote control to stop the video action.



2. To restart the video action in progress, press Freeze again.

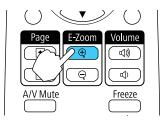
Parent topic: Adjusting Projector Features

Zooming Into and Out of Images

You can draw attention to parts of a presentation by zooming into a portion of the image and enlarging it on the screen.

Note: You can also zoom into your image using the interactive pen.

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



You see a crosshair on the screen indicating the center of the zoom area.

- 2. Use the following buttons on the remote control to adjust the zoomed image:
 - Use the arrow buttons to position the crosshair in the image area you want to zoom into.
 - Press the E-Zoom + button repeatedly to zoom into the image area, enlarging it as necessary.

- To pan around the zoomed image area, use the arrow buttons.
- To zoom out of the image, press the **E-Zoom** button as necessary.
- To return to the original image size, press Esc.

Parent topic: Adjusting Projector Features

Projector Security Features

You can secure your projector to deter theft or prevent unintended use by setting up the following security features:

- Password security to prevent the projector from being turned on, and prevent changes to the startup screen and other settings.
- Button lock security to block operation of the projector using the buttons on the control panel.
- · Security cabling to physically cable the projector in place.

Password Security Types Locking the Projector's Buttons Installing a Security Cable

Parent topic: Adjusting Projector Features

Password Security Types

You can set up these types of password security using one shared password:

- **Power On Protection** password prevents anyone from using the projector without first entering a password.
- User's Logo Protection password prevents anyone from changing the custom screen the projector can display when it turns on or when you use the A/V Mute feature. The presence of the custom screen discourages theft by identifying the projector's owner.
- Network Protection password prevents anyone from changing the network settings in the projector menus.

Setting a Password Selecting Password Security Types Entering a Password to Use the Projector Saving a User's Logo Image to Display

Parent topic: Projector Security Features

Setting a Password

To use password security, you must set a password.

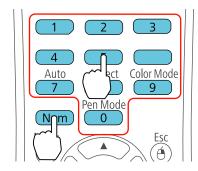
1. Hold down the Freeze button on the remote control for about ten seconds or until you see this menu.

[Password Protection]		
Power On Protection User's Logo Protection Network Protection Password	Off Off Off	

2. Press the down arrow to select **Password** and press Enter.

You see the prompt "Change the password?".

- 3. Select **Yes** and press **Enter**.
- 4. Press and hold down the **Num** button on the remote control and use the numeric buttons to set a four-digit password.



The password displays as **** as you enter it. Then you see the confirmation prompt.

5. Enter the password again.

You see the message "Password accepted."

- 6. Press **Esc** to return to the menu.
- 7. Make a note of the password and keep it in a safe place in case you forget it.

Parent topic: Password Security Types

Selecting Password Security Types

After setting a password, you see this menu, allowing you to select the password security types you want to use.

[Passw	ord Protection]		
Power	On Protection	Off	
	Logo Protection	Off	
	rk Protection	Off	
Passw	ord		

If you do not see this menu, hold down the **Freeze** button on the remote control for about 10 seconds or until the menu appears.

- 1. To prevent unauthorized use of the projector, select **Power On Protection**, press **Enter**, select **On**, press **Enter** again, and press **Esc**.
- 2. To prevent changes to the User's Logo screen or related display settings, select **User's Logo Protection**, press **Enter**, select **On**, press **Enter** again, and press **Esc**.
- 3. To prevent changes to network settings, select **Network Protection**, press **Enter**, select **On**, press **Enter** again, and press **Esc**.

You can attach the Password Protect sticker to the projector as an additional theft deterrent.

Note: Be sure to keep the remote control in a safe place; if you lose it, you will not be able to enter the password required to use the projector.

Parent topic: Password Security Types

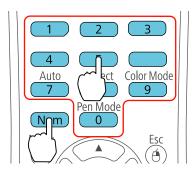
Entering a Password to Use the Projector

If a password is set up and a **Power On Protection** password is enabled, you see a prompt to enter a password whenever you turn on the projector.

[Password]
Enter the password.
See your documentation for more information.
[0-9] :Enter

You must enter the correct password to use the projector.

1. Press and hold down the **Num** button on the remote control while you enter the password using the numeric buttons.



The password screen closes.

- 2. If the password is incorrect, the following may happen:
 - You see a "wrong password" message and a prompt to try again. Enter the correct password to proceed.

 If you enter an incorrect password several times in succession, the projector displays a request code and a message to contact Epson Support. Do not attempt to enter the password again.
 When you contact Epson Support, provide the displayed request code and proof of ownership for assistance in unlocking the projector.

Parent topic: Password Security Types

Related references

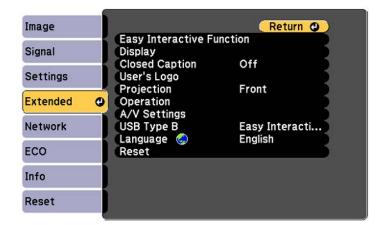
Projector Setup Settings - Extended Menu

Saving a User's Logo Image to Display

You can transfer an image to the projector and then display it whenever the projector turns on. You can also display the image when the projector is not receiving an input signal or when you temporarily stop projection (using the A/V Mute feature). This transferred image is called the User's Logo screen.

The image you select as the User's Logo can be a photo, graphic, or company logo, which is useful in identifying the projector's owner to help deter theft. You can prevent changes to the User's Logo by setting up password protection for it.

- 1. Display the image you want to project as the User's Logo.
- 2. Press the Menu button, select the Extended menu, and press Enter.



3. Select the User's Logo setting and press Enter.

You see a prompt asking if you want to use the displayed image as a user's logo.

4. Select **Yes** and press **Enter**.

You see a selection box overlaying your image.

5. Use the arrow buttons on the remote control to surround the image area you want to use as the User's Logo and press **Enter**.

You see a prompt asking if you want to select this image area.

6. Select **Yes** and press **Enter**. (If you want to change the selected area, select **No**, press **Enter**, and repeat the last step.)

You see the User's Logo zoom factor menu.

[User's Lo	go]	
Set the zo	oom factor.	
Zoom fact	or:	
	0100% 🕑	
E E	1200% 1300%	R
	1300%	

7. Select a zoom percentage and press **Enter**.

You see a prompt asking if you want to save the image as the User's Logo.

8. Select Yes and press Enter.

You see a completion message.

- 9. Press **Esc** to exit the message screen.
- 10. Select the Extended menu and press Enter.
- 11. Select **Display** and press **Enter**.
- 12. Select when you want to display the User's Logo screen:
 - To display it whenever there is no input signal, select **Display Background** and set it to **Logo**.
 - To display it whenever you turn the projector on, select **Startup Screen** and set it to **On**.
 - To display it whenever you press the A/V Mute button, select A/V Mute and set it to Logo.

To prevent anyone from changing the User's Logo settings without first entering a password, set a password and enable User's Logo security.

Parent topic: Password Security Types

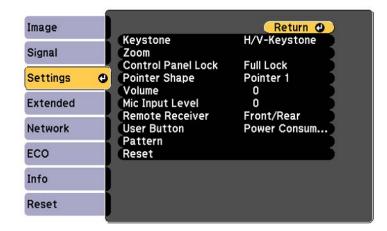
Related references

Projector Setup Settings - Extended Menu

Locking the Projector's Buttons

You can lock the buttons on the projector's control panel to prevent anyone from using the projector. You can lock all the buttons or all the buttons except the power button.

- 1. Press the **Menu** button.
- 2. Select the Settings menu and press Enter.



- 3. Select the **Control Panel Lock** setting and press **Enter**.
- 4. Select one of these lock types and press Enter:
 - To lock all of the projector's buttons, select Full Lock.
 - To lock all buttons except the power button, select **Partial Lock**. You see a confirmation prompt.
- 5. Select **Yes** and press **Enter**.

Unlocking the Projector's Buttons

Parent topic: Projector Security Features

Related references

Projector Feature Settings - Settings Menu

Unlocking the Projector's Buttons

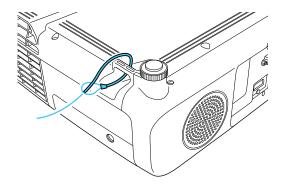
If the projector's buttons have been locked, hold the **Enter** button on the projector's control panel for seven seconds to unlock them.

Parent topic: Locking the Projector's Buttons

Installing a Security Cable

You can install two types of security cables on the projector to deter theft.

- Use the security slot on the projector to attach a Kensington Microsaver Security system, available from Epson.
- Use the security cable attachment point on the projector to attach a wire cable and secure it to a room fixture or heavy furniture.



Note: Do not pass drop-prevention cables through the security cable attachment point when mounting the projector on a wall or ceiling.

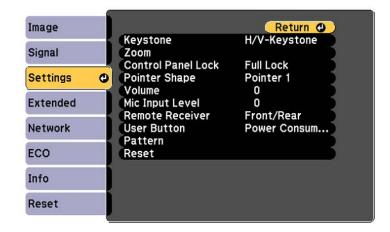
Parent topic: Projector Security Features

Creating a User Pattern to Display

You can transfer an image to the projector and then display it as a pattern to aid in presentations when you use the Pattern Display feature. This transferred image is called the User Pattern.

1. Display the image you want to project as the User Pattern from a connected computer or video source.

2. Press the Menu button, select the Settings menu, and press Enter.



- 3. Select the **Pattern** setting and press **Enter**.
- 4. Select the User Pattern setting and press Enter.

You see a prompt asking if you want to use the displayed image as a User Pattern.

5. Select **Yes** and press **Enter**.

Note: It takes a few moments for the projector to save the image; do not use the projector, its remote control, or any connected equipment until it is finished.

You see a completion message.

6. Press **Esc** to exit the message screen.

Parent topic: Adjusting Projector Features

Related references

Projector Feature Settings - Settings Menu

Using the Interactive Features

Follow the instructions in these sections to use your projector's interactive features.

Interactive Modes Using the Interactive Pens Using BrightLink With a Computer Using BrightLink Without a Computer

Interactive Modes

The BrightLink interactive features turn any wall into an interactive whiteboard, either with or without a computer. These interactive modes are available:

- In whiteboard mode, you can use one or both interactive pens to write on the projected "whiteboard".
- In annotation mode (PC Free Annotation), you can annotate over content projected from a computer, tablet, document camera, or other source.
- In PC Interactive mode, you can use the interactive pen as a mouse to navigate, select, and scroll through content from your computer.

Note: You can also use the Easy Interactive Tools software to provide additional interactive features, such as saving your annotations and printing them. See the online *Easy Interactive Tools Operation Guide* for detailed instructions.

Using the Projected Screen as a Whiteboard (Whiteboard Mode) Drawing on a Projected Image (PC Free Annotation Mode) Controlling Computer Features from a Projected Screen (PC Interactive Mode) **Parent topic:** Using the Interactive Features

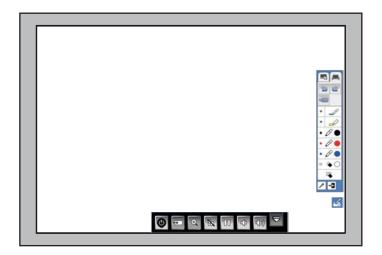
Using the Projected Screen as a Whiteboard (Whiteboard Mode)

You can use the interactive pens to write or draw on the projection surface just as you would on a chalkboard or dry erase board. You can use either one or two pens at the same time.

Note: Make sure you use two pens with different colored ends (blue and orange). You cannot use two pens of the same color simultaneously.

- 1. Make sure the **Pen Mode** option in the Easy Interactive Function menu is set to **PC Free** Interactive.
- 2. Hover near or tap the board or projected image with the interactive pen. Tap the left or right arrow icon,
- 3. Tap the 💻 whiteboard icon in the toolbar.

You see the whiteboard screen, with the main toolbar on the side and the projection control toolbar on the bottom of the screen:



4. To move the main toolbar to the other side of the screen, tap the arrow on the opposite side of the screen.

Note: You can use the pen to move the arrow icon up or down to reposition the toolbar.

5. To close the main toolbar, select the icon at the bottom of the toolbar.

Note: If you want to hide the toolbar automatically after drawing, select the *L* icon at the bottom of the toolbar (the icon will change shape).

6. To show or hide the projection control toolbar, select the kind arrow.

Note: You can also show or hide the projection control toolbar from the projector's Display menu.

Parent topic: Interactive Modes

Drawing on a Projected Image (PC Free Annotation Mode)

You can project from a computer, tablet, video device, or other source and add notes to your projected content using the interactive pens. You can use either one pen or both pens at the same time.

Note: Make sure you use two pens with different colored ends (blue and orange). You cannot use two pens of the same color simultaneously.

- 1. Make sure the **Pen Mode** option in the Easy Interactive Function menu is set to **PC Free** Interactive.
- 2. Project an image from a connected device.
- 3. Hover near or tap the board or projected image with the interactive pen. Tap the left or right arrow icon.
- 4. Tap the sannotation icon on the toolbar.

You see the main toolbar on the side and the projection control toolbar on the bottom of the projected image.

5. To move the main toolbar to the other side of the screen, tap the arrow on the opposite side of the screen.

Note: You can use the pen to move the arrow icon up or down to reposition the toolbar.

- 6. To switch to one of the other interactive modes, do one of the following:
 - To switch to whiteboard mode, select the 💻 Whiteboard tool.
 - To switch to PC Interactive mode, select ¹/₂, then select ¹/₂.

Note: You can also press the Pen Mode button on the remote control to switch between modes.



7. To close the main toolbar, select the icon at the bottom of the toolbar.

Note: If you want to hide the toolbar automatically after drawing, select the **use is a state of the toolbar (the icon will change shape).**

8. To show or hide the projection control toolbar, select the *arrow*.

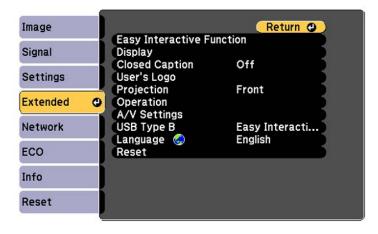
Parent topic: Interactive Modes

Controlling Computer Features from a Projected Screen (PC Interactive Mode)

You can navigate, select, and interact with your computer programs from the projected screen using the interactive pens just as you would a mouse.

Note: OS X users need to install the Easy Interactive Driver before using PC Interactive mode. Go to epson.com/support (U.S.) or epson.ca/support (Canada) and select your projector.

- 1. Connect the projector to your computer using a USB cable.
- 2. Turn on your projector and project your computer screen.
- 3. Press the **Menu** button on the remote control, select the **Extended** menu, and press the **Enter** button.



4. Select the **USB Type B** setting and press the **Enter** button.

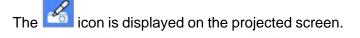
lmage		100 - 10 - 10 - 10	Return
N		Easy Interactive F	unction
Signal		Display Closed Caption	Off
Settings		User's Logo	011
	_	Projection	Front
Extended	0	Operation	
1		A/V Settings	OHOD Disulary/E
Network		USB Type B	OUSB Display/E
ECO		Language 🌏 Reset	English
info	- í		
Reset	1		

- 5. Select one of the following:
 - Easy Interactive Function to use PC Interactive mode.
 - USB Display/Easy Interactive Function to use PC Interactive mode and USB Display.
 - Wireless Mouse/USB Display to use the mouse and USB Display
- 6. Press the **Esc** button to exit the USB Type B menu.
- 7. Select the **Easy Interactive Function** setting and press the **Enter** button.

8. Select one of the following as the **Pen Operation Mode**:

Image	[Easy Intera	active Function] Return
Signal	[General]	
Settings	Auto Calib Manual Cal Pen Mode	
Extended	Hovering Advanced	Off
Network	[PC Interac	tival
ECO	Pen Opera	tion Mode @Two Users/Mouse
Info	Advanced	ht Click Off
Reset		

- **Two Users/Mouse**: Lets you use both interactive pens as a mouse with programs that support two pens
- One User/Mouse: Lets you use one interactive pen as a mouse
- **One User/Pen**: Uses the Windows pen and ink feature (Windows 8.x, Windows 7, and Windows Vista)
- 9. Press the **Enter** button on the remote control and press the **Menu** button to exit the Extended menu.
- 10. Hover near or tap on the board or the projected image with the interactive pen.



11. Select the $\boxed{\textcircled{}}$ icon, then select the $\boxed{\textcircled{}}$ icon.

You can now operate the computer using the interactive pens.

PC Interactive Mode System Requirements

Parent topic: Interactive Modes

PC Interactive Mode System Requirements

Your computer system must meet the system requirements here to use PC Interactive mode and Easy Interactive Tools.

Requirement	Windows	Мас	
Operating system	Windows XP Professional, Home Edition, and Tablet PC Edition (32-bit); except for Service Pack 1	OS X 10.5.8, 10.6.x, 10.7.x, 10.8.x, 10.9.x, 10.10.x	
	Windows Vista Ultimate, Enterprise, Business, Home Premium, and Home Basic (32-bit)		
	Windows 8.x Pro, Enterprise, Windows 7 Ultimate, Enterprise, Professional, Home Premium, and Home Basic (32- and 64- bit)		
CPU	Intel Pentium M 1.6 GHz or faster (Core2 Duo 1.2 GHz or faster recommended)	Power PC G4 1.5 GHz or faster (Core Duo 1.5 GHz or faster recommended)	
Memory	512MB or more (1GB or more recommended)		
Hard disk space	100MB or more		
Display	Resolution between 1024 × 768 and 1920 × 1080, 16-bit color or greater		

Note: The Easy Interactive Driver must be installed and running to use Easy Interactive Tools on a Mac.

Parent topic: Controlling Computer Features from a Projected Screen (PC Interactive Mode)

Using the Interactive Pens

Follow the instructions in these sections to use the interactive pens.

Using the Pens

Pen Calibration

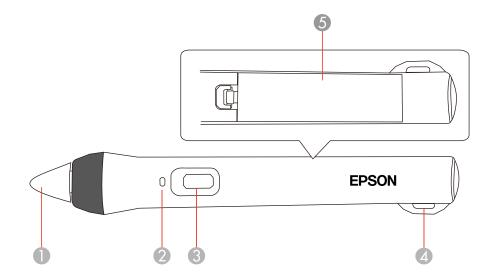
Parent topic: Using the Interactive Features

Using the Pens

Your projector came with an orange pen (Interactive Pen A), identified by the color on the end of the pen. You can purchase a second pen with a blue end (Interactive Pen B). You can use either pen, or both pens at the same time (one of each color), with Easy Interactive Tools. You can also purchase the Interactive Pen Extender to increase your reach with the pen.

Make sure the pen batteries are installed.

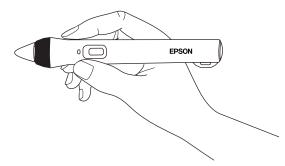
Note: The pen turns off automatically after 20 minutes of inactivity. Tap the pen tip or press the button on the side to turn the pen back on.



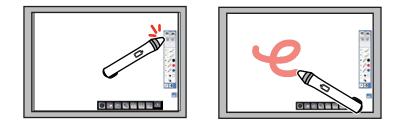
- 1 Pen tip
- 2 Battery light
- 3 Power/function button
- 4 Attachment for optional strap or cord
- 5 Battery cover
- To turn on the pen, tap the pen tip or press the power/function button.

Note: If you press the button, the battery light flashes briefly, then turns off. If the battery is low, the battery light flashes continuously.

• For best performance, hold the pen perpendicular to the board, as shown below. Do not cover the black section near the tip of the pen.



• To write or draw on the projection surface in annotation mode or whiteboard mode, do the following:



- To select a projected item, such as an icon, tap the projection surface with the pen tip.
- To draw on the projected screen, tap the projection surface with the pen and drag it as necessary.
- To move the pointer, hover over the surface without touching it.

• To use the pen as a mouse in PC Interactive mode, select the icon and do the following:



- To left-click, tap the board with the pen tip.
- To double-click, tap twice.
- To right-click, press the board with the pen for about 3 seconds.
- To click and drag, tap and drag with the pen.
- To move the cursor, hover over the board without touching it.

Note: If you do not want to use the hovering feature, you can turn it off using the **Easy Interactive Function** setting in the projector's Extended menu.

Parent topic: Using the Interactive Pens

Pen Calibration

Calibration coordinates the position of the pen with the location of your cursor. You only need to calibrate the first time you use your projector's interactive features. Calibration results remain until you calibrate again.

If you notice positioning discrepancies after doing any of the following, calibrate again:

- Performing Keystone correction
- Using the Quick Corner feature
- · Adjusting the image size
- Moving the projector

Note: Move any pen you are not using away from the projection screen while calibrating.

Calibrating Automatically Calibrating Manually

Parent topic: Using the Interactive Pens

Calibrating Automatically

You do not need the pens or a computer for Auto Calibration.

Note: You can start Auto Calibration by pressing the **User** button on the remote control, by pressing and holding the **A/V Mute** button on the projector for three seconds, or by pressing the **Menu** button on the remote control as described here.

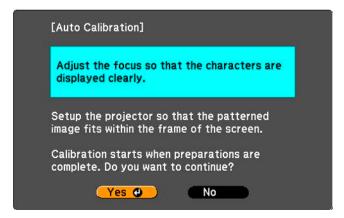
1. Press the **Menu** button, select the **Extended** menu, and press **Enter**.

Image		Return 🕘
Signal	Easy Interactive Fu Display	unction
Settings	Closed Caption User's Logo	Off
Extended (Projection Operation	Front
Network	A/V Settings USB Type B	Easy Interacti
FCO	Language 📀 Reset	English
	Reset	
Info	ļ	
Reset		

2. Select the Easy Interactive Function setting and press Enter.

Image	[Easy Interactive F	unction] <u>Return</u>
Signal	[General]	
Settings	Auto Calibration Manual Calibration Pen Mode	PC Free Annot
Extended	Hovering Advanced	Off
Network	[PC Interactive]	
ECO	Pen Operation Mod Enable Right Click	te Two Users/Mouse
Info	Advanced	011
Reset		

3. Select Auto Calibration and press Enter.



- 4. Adjust the image focus, if necessary.
- 5. Press Enter to select Yes.

A pattern appears then disappears, and the system is calibrated. If you see a message that calibration failed, check for obstacles, disable the **Quick Corner** and **Keystone** settings, and retry the Auto Calibration. If you still see a message that calibration failed, you need to calibrate manually.

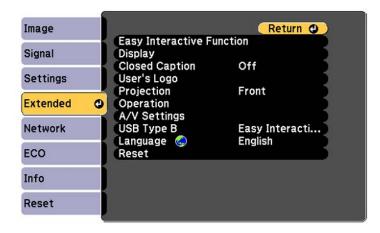
The cursor location and pen position should match after calibration. If not, you may need to calibrate manually.

Parent topic: Pen Calibration

Calibrating Manually

If the cursor location and pen position do not match after auto calibration, you can calibrate manually.

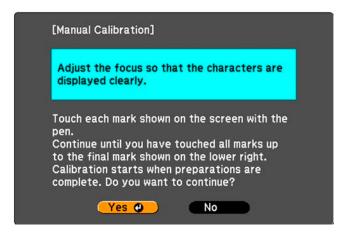
1. Press the **Menu** button, select the **Extended** menu, and press **Enter**.



2. Select the Easy Interactive Function setting and press Enter.

Image	[Easy Interactive Fund	tion] Return 🕘
Signal	[General]	
Settings	Auto Calibration Manual Calibration Pen Mode	PC Free Annot
Extended G	Hovering	Off
Network	Advanced	
ECO	Pen Operation Mode	Two Users/Mouse
Info	Enable Right Click Advanced	Off
Reset		

3. Select Manual Calibration and press Enter.

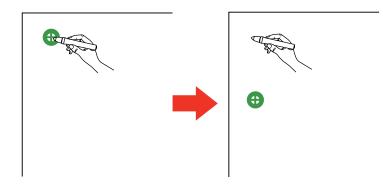


- 4. Adjust the image focus, if necessary.
- 5. Press Enter to select Yes.

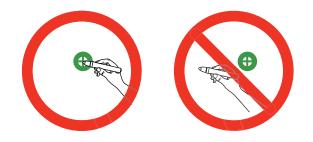
A green circle appears in the upper left corner of your projected image.

6. Touch the center of the circle with the tip of the pen.

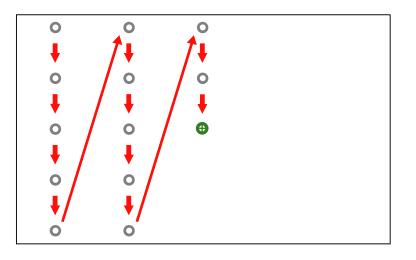
The circle disappears, and you see another circle below the first one.



Note: For the most accurate calibration, make sure you touch the center of the circle.



7. Touch the center of the next circle, then repeat. When you get to the bottom of the column, the next circle appears at the top of a new column.



Note: Make sure you are not blocking the signal between the pen and the interactive receiver (next to the projection window on the projector).

If you make a mistake, press the **Esc** button on the remote control to go back to the previous circle. To restart the calibration process, press and hold the **Esc** button for 2 seconds.

8. Continue until all of the circles disappear.

Parent topic: Pen Calibration

Using BrightLink With a Computer

You can connect a computer to the projector and install the software from the CD labeled "Epson Projector Software for Easy Interactive Function" or you can install third party interactive software. You can then do the following:

- Use the pens as a mouse to control your computer
- Use the Easy Interactive Tools software to annotate with two pens at the same time

Note: See the online Easy Interactive Tools Operation Guide for detailed information.

- Save and print your annotations
- Use the Tablet PC input panel in Windows 8.x, Windows 7, or Windows Vista
- Use Ink Tools for annotation in Microsoft Office applications

Adjusting the Pen Operation Area Easy Interactive Tools Windows Pen Input and Ink Tools **Parent topic:** Using the Interactive Features

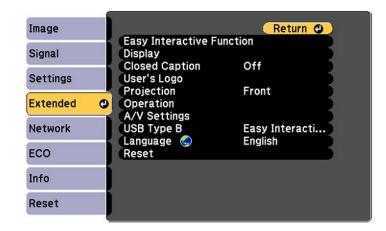
Adjusting the Pen Operation Area

If you connect a different computer or adjust the computer's resolution, the pen operation area is adjusted automatically to match your mouse pointer position. If you notice that the pen position is incorrect when using PC Interactive mode, you can adjust the pen area manually.

Note: Manual adjustment is not available when projecting from a LAN source.

1. Project your computer's desktop.

2. Press the Menu button, select the Extended menu, and press Enter.



3. Select the **Easy Interactive Function** setting and press **Enter**.

Image	[Easy Interactive I	Function] (Return 🥹
Signal	[General]	
Settings	Auto Calibration Manual Calibration Pen Mode	n PC Free Annot
Extended	Hovering Advanced	Off
Network	[PC Interactive]	
ECO	Pen Operation Mo	
Info	Enable Right Click	Off
Reset		

4. Set the Pen Mode setting to PC Interactive.

Note: You can also change this setting by pressing the **Pen Mode** button on the remote control.

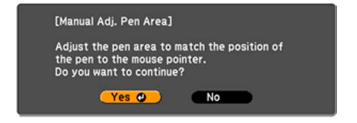
5. Select Advanced in the PC Interactive section and press Enter.

Image	[PC Interactive]	Return 🔮
Signal	[Advanced]	
Settings	Pen Tip Button Auto Adjust Pen Area Manual Adj. Pen Area	Left Click Off
Extended	0	
Network		
ECO		
Info		
Reset		

Note: Make sure the Auto Adjust Pen Area option is set to Off to prevent changes to your manual pen area adjustments.

6. Select Manual Adj. Pen Area and press Enter.

You see this screen:



7. Press Enter to select Yes.

The mouse pointer moves toward the top left corner.

8. When the mouse pointer stops at the top left corner of the image, touch the tip of the pointer with the interactive pen.

The mouse pointer moves toward the bottom right corner.

9. When the mouse pointer stops at the bottom right corner of the image, touch the tip of the pointer with the interactive pen.

Parent topic: Using BrightLink With a Computer

Easy Interactive Tools

Your projector came with a CD containing the Easy Interactive Tools software for use with a computer. Easy Interactive Tools lets you use your interactive pen as a mouse to navigate, select, scroll, draw, save, and interact with projected content from your computer.

These two modes are available:

- Annotation (PC interactive) mode displays the toolbar on the projected image and lets you use the pen as a mouse to open applications, access links, and operate scroll bars, for example (using one pen at a time). You can also annotate whatever is displayed from your computer (using both pens at the same time).
- Whiteboard mode lets you project on one of 3 solid colors or 6 background patterns, and use the toolbar to write or draw on the background. You can also import images from your computer or a document camera. In full screen whiteboard mode, two people can use the pens at the same time.

Note: For detailed instructions on using the Easy Interactive Tools software, see the online *Easy Interactive Tools Operation Guide* or the online help.

Parent topic: Using BrightLink With a Computer

Windows Pen Input and Ink Tools

If you are using Windows 8.x, Windows 7, or Windows Vista, you can use the pen input and Ink tools to add input and annotations to your work. You can also use these features over a network when you set the interactive features to be available on your network. See the *EasyMP Network Projection Operation Guide* for instructions on setting up your computer for network projection.

Enabling Windows Pen Input and Ink Tools

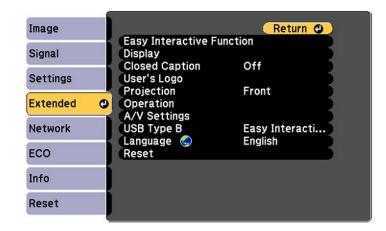
Using Windows Pen Input and Ink Tools

Parent topic: Using BrightLink With a Computer

Enabling Windows Pen Input and Ink Tools

To use the pen input and Ink tools in Windows 8.x, Windows 7, or Windows Vista, you need to adjust the pen operation mode in your projector's menus.

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



2. Select the **Easy Interactive Function** setting and press **Enter**.

Image	[Easy Interactive Function] Return 🕑
Signal	[General]
Settings	Auto Calibration Manual Calibration
Extended	Pen Mode PC Free Annot Hovering Off Advanced
Network	[PC Interactive]
ECO	Pen Operation Mode Two Users/Mouse Enable Right Click Off
Info	Advanced
Reset	

3. Set the **Pen Operation Mode** setting in the PC Interactive section to **One User/Pen** and press **Enter**.

Parent topic: Windows Pen Input and Ink Tools

Using Windows Pen Input and Ink Tools

If you are using Windows 8.x, Windows 7, or Windows Vista, you can add handwritten input to your work and convert it to text.

If you have Microsoft Office 2003 or later, you can also use the Ink function to add handwritten notes to a Word document, Excel spreadsheet, or PowerPoint presentation.

Note: Option names for the annotation functions may vary depending on your version of Microsoft Office.

- To open the Touch Keyboard in Windows 8.x, right-click or tap-and-hold on the Taskbar, and select **Toolbars > Touch Keyboard**. Select the keyboard icon on the screen and select the pen icon.
- To open the Tablet PC input panel in Windows 7 or Windows Vista, select
 All Programs > Accessories > Tablet PC > Tablet PC Input Panel.

Tools • EN •	Correcting Deleting Splitting	Joining	<i>v</i>
		+ Bicsp	Del +
		Tab	Enter
		Space	44
		Num Sy	m Web

You can write in the box using the interactive pen or your finger, and select from a variety of options to edit and convert the text.

• To add Ink annotations in Microsoft Office applications, select the **Review** menu, and select **Start Inking**.

Note: In Microsoft Word or Excel, select the Insert tab and select Start Inking.

Slide Show	Revie	w	View		
New Comment	Edit Comment		Previous	Next	Start Inking Ink

 To annotate your PowerPoint slides in Slideshow mode, press the button on the side of the interactive pen or press the projection surface with your finger for about 3 seconds, and select **Pointer Options > Pen** from the pop-up menu.

Note: This also works in Windows XP Tablet PC Edition.

For more information about these features, see Windows Help.

Parent topic: Windows Pen Input and Ink Tools

Using BrightLink Without a Computer

You can use the pens to write or draw on the projection surface simultaneously without connecting a computer (PC Free annotation). This lets you annotate images from a document camera, iPad, DVD player, or other source.

These two modes are available:

- Annotation mode displays the built-in toolbar on whatever image is being projected from a document camera, iPad, or other source.
- Whiteboard mode lets you project a white or black screen or one of 4 background patterns, and use the toolbar to write or draw as you would on a chalkboard or dry erase board.

Using PC Free Annotation Built-in Tools for Use Without a Computer Using the Built-in Whiteboard Mode Changing Pen Width and Color Using the Built-in Toolbar Projector Control Toolbar

Parent topic: Using the Interactive Features

Using PC Free Annotation

You can use a single pen with the built-in toolbar or two pens at the same time.

Note: Make sure you use two pens with different colored ends (blue and orange). You cannot use two pens of the same color simultaneously.

- 1. Make sure the **Pen Mode** option in the Easy Interactive Function menu is set to **PC Free** Interactive.
- 2. Press one of the **Source** buttons on the remote control to select the source for the image you want to annotate. If you simply want to use a blank screen, select another unused source.

3. To activate the toolbar, tap the projection surface with the pen.

You see arrow icons on the left and right side of the projected image.

Note: The toolbar arrows disappear if they are not used. To make them reappear, tap the projection surface with the pen.

4. To display the toolbar, select one of the arrows.

Note: You can use the pen to move the arrows up or down.

5. To close the toolbar, select the **equility** icon at the bottom of the toolbar.

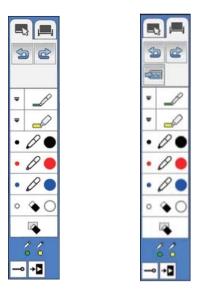
Note: If you want to hide the toolbar automatically after drawing, select the icon at the bottom of the toolbar (the icon will change shape).

Parent topic: Using BrightLink Without a Computer

Built-in Tools for Use Without a Computer

The built-in toolbar is embedded in the projector and provides fewer functions than Easy Interactive Tools. For example, you cannot save your work with the built-in toolbar. If you want to save, connect a computer to the projector and use Easy Interactive Tools.

In the following illustration, the annotation mode tools are shown on the left, and the whiteboard mode tools on the right:



-13	Switch to annotation mode
j ill i	Switch to whiteboard mode
5	Undo the last annotation
Ċ	Redo the last undo
4	Select a white or black background or one of 4 patterns (whiteboard mode only)
Ŧ	Change custom pen color and width
	Write or draw free-form lines with custom pen

Ŧ	Change highlighter pen color
	Write or draw free-form lines with transparent highlighter pen
Ø	Black pen (fine point on left, thick on right)
Ø	Red pen (fine point on left, thick on right)
Ø	Blue pen (fine point on left, thick on right)
٠	Eraser (thin width on left, thick on right)
	Clear all annotations
P	Hide the toolbar after each annotation
+0	Close the toolbar

Parent topic: Using BrightLink Without a Computer

Using the Built-in Whiteboard Mode

In whiteboard mode, you can project a solid or patterned background, and then write or draw on it as you would on a chalkboard or dry erase board.

1. Select the Whiteboard tool on the built-in toolbar.

You see a white background.

2. If you want to change the background, do the following:

Select the Background tool.

- Select a black background or one of 4 different patterns.
- Select the right arrow icon to close the selection window.

- 3. Do one of the following to write or draw on the background.
 - To erase, select the • Eraser tool.
 - To clear the whole screen, select the Sclear all tool.

Parent topic: Using BrightLink Without a Computer

Changing Pen Width and Color Using the Built-in Toolbar

When you use the *custom* Pen or highlighter tools, you can select different colors and line widths.

Note: You can also select the Black, Red, or Blue pen on the toolbar, and select the small circle on the left of the pen for a thin line, or the large circle on the right for a thick line.

Note: When multiple users draw on the projected screen using multiple pens, you can select different colors and line widths for each pen.

- 1. Select the arrow next to the custom Pen or Highlighter pen on the toolbar.
- 2. Select the color and line width you want.
- 3. Select the right arrow icon to close the selection window.

Parent topic: Using BrightLink Without a Computer

Projector Control Toolbar

The projector control toolbar lets you control the projector with your pen from the projected screen just as you would using the remote control.

If your network device is connected to the projector using EasyMP Multi PC Projection or Epson iProjection, you can also use the toolbar to select the network device from which you want to project.



٩	Turn off the projector
(mark)	Change the image source using a displayed list.
÷	(To close the image source list, select the arrow icon at the bottom of the list.)
Ð,	Zoom into and out of the image
×	Turn off the picture and sound
00	Pause video action
Ŕ	Decrease the volume
J)))	Increase the volume
\bigtriangledown	Close the projector control toolbar

Selecting Network Device Display from the Projector Control Toolbar Parent topic: Using BrightLink Without a Computer

Selecting Network Device Display from the Projector Control Toolbar

If you have connected devices to the projector via a network, you can select to project an image from up to 50 of those devices using the projector control toolbar. You can select the image source from computers that are running EasyMP Multi PC Projection, and smartphones or tablets that are running Epson iProjection.

1. Select the 🖾 icon on the projector control toolbar.

An image source list appears.

2. Select the **Participant List** option.

USB Display			
∎eeee USB			
<u>⟨⟨•⟩⟩</u> LAN			
Participant List			

You see a list of available devices.

3. Select the user name for the device from which you want to project.

The icon next to a user name indicates the currently selected source.

	User02	User03	Uber04	UkerS
Uwr06	Uter07	UwOI	User09	Uker20
Uer11	Uel2	Liw13	Uter14	Uw15
Uter16	Use17	Uerill	Uter29	Use20
Use21	User22	Um21	the24	Uwr25

Note: Select Refresh to update the user list.

4. Select Return.

You see the selected user's screen image.

Parent topic: Projector Control Toolbar

Adjusting the Menu Settings

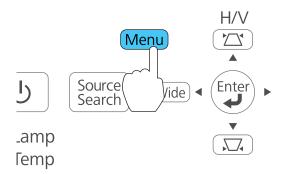
Follow the instructions in these sections to access the projector menu system and change projector settings.

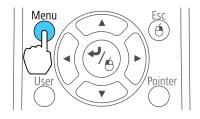
Using the Projector's Menus Image Quality Settings - Image Menu Input Signal Settings - Signal Menu Projector Feature Settings - Settings Menu Projector Setup Settings - Extended Menu Projector Network Settings - Network Menu Projector Setup Settings - ECO Menu Projector Information Display - Info Menu Projector Reset Options - Reset Menu

Using the Projector's Menus

You can use the projector's menus to adjust the settings that control how your projector works. The projector displays the menus on the screen.

1. Press the **Menu** button on the control panel or remote control.





You see the menu screen displaying the Image menu settings.

Image	0	Retu	rn 🕒
<u></u>	Color Mode	Photo	
Signal	Brightness	0	
	Contrast	0	
Settings	Color Saturation	0	
	Tint	0	
Extended	Sharpness	0	
	Color Temp.	0	
Network	Color Adjustment		
Constant of the second s	Auto Iris	Off	
ECO	Reset		
Info			
Reset			
Reaet			

2. Press the up or down arrow button to move through the menus listed on the left. The settings for each menu are displayed on the right.

Note: The available settings depend on the current input source.

- 3. To change settings in the displayed menu, press **Enter**.
- 4. Press the up or down arrow button to move through the settings.
- 5. Change the settings using the buttons listed on the bottom of the menu screens.
- 6. To return all the menu settings to their default values, select **Reset**.
- 7. When you finish changing settings on a menu, press Esc.
- 8. Press Menu or Esc to exit the menus.

Parent topic: Adjusting the Menu Settings

Image Quality Settings - Image Menu

Settings on the Image menu let you adjust the quality of your image for the input source you are currently using. The available settings depend on the currently selected input source.

Image	0	Return 🕘
	Color Mode	Photo
Signal	Brightness	0
	Contrast	0
Settings	Color Saturation	0
<u> </u>	Tint	0
Extended	Sharpness	0
	Color Temp.	0
Network	Color Adjustment	
Carlos and	Auto Iris	Off
ECO	Reset	
-		
Info		
Reset		

To change settings for an input source, make sure the source is connected and select that source.

Setting	Options	Description
Color Mode	See the list of available Color Modes	Adjusts the vividness of image colors for various image types and environments
Brightness	Varying levels available	Lightens or darkens the overall image
Contrast	Varying levels available	Adjusts the difference between light and dark areas of the image
Color Saturation	Varying levels available	Adjusts the intensity of the image colors
Tint	Varying levels available	Adjusts the balance of green to magenta tones in the image
Sharpness	Varying levels available	Adjusts the sharpness or softness of image details
Color Temp. (color temperature)	Varying levels available	Sets the overall color tone. Lower values tint the image red, and higher values tint the image blue.
Color Adjustment	Slider bars for each color	Adjusts the intensity of individual hues in the image
Auto Iris	Normal High Speed Off	Adjusts the projected luminance based on the image brightness when certain Color Modes are selected

Note: The **Brightness** setting does not affect lamp brightness. To change the lamp brightness mode, use the **Power Consumption** setting.

Parent topic: Adjusting the Menu Settings

Related references

Available Color Modes

Input Signal Settings - Signal Menu

Normally the projector detects and optimizes the input signal settings automatically. If you need to customize the settings, you can use the Signal menu. The available settings depend on the currently selected input source.

Image		Return 😲		
	Auto Setup	Off		
Signal	Contraction	Auto		
	Tracking	0		
Settings	Sync.	0		
	Position			
Extended	Input Signal	Auto		
	Aspect	4:3		
Network	Image Processing	Fine		
ECO	Reset			
100	_			
Info				
	2			
Reset				

Note: You can restore the default settings of the **Position**, **Tracking**, and **Sync** settings by pressing the **Auto** button on the remote control.

To change settings for an input source, make sure the source is connected and select that source.

Setting	Options	Description
Auto Setup	On	Automatically optimizes computer
	Off	image quality (when On)
Resolution	Auto	Sets the input signal resolution if
	Wide	not detected automatically using the Auto option
	Normal	
Tracking	Varying levels available	Adjusts signal to eliminate vertical stripes in computer images

Setting	Options	Description	
Sync.	Varying levels available	Adjusts signal to eliminate fuzziness or flickering in computer images	
Position	Up, down, left, right	Adjusts the image location on the screen	
Progressive	Off Video	Sets whether to convert interlaced-to-progressive signals for certain video image types	
	Film/Auto	Off: for fast-moving video images	
		Video: for most video images	
		Film/Auto : for movies, computer graphics, and animation	
Noise Reduction	Off NR1	Reduces flickering in analog images in two levels	
	NR2		
HDMI Video Range	Auto Normal	Sets the video range to match the setting of the device connected to the HDMI input port	
	Expanded	Auto: detects the video range automatically	
		Normal : normally for images from a device other than a computer; can also be selected if the black areas of the image are too bright	
		Expanded : normally for images from a computer; can also be selected if the image is too dark	

Setting	Options	Description
Input Signal	Auto RGB	Specifies the signal type from input sources connected to computer ports
	Component	Auto: detects signals automatically
		RGB : corrects color for computer/RGB video inputs
		Component : corrects color for component video inputs
Video Signal	Auto Various video standards	Specifies the signal type from the input sources connected to the video ports
		Auto: detects signals automatically
Aspect	See the list of available aspect ratios	Sets the aspect ratio (width-to- height ratio) for the selected input source
Overscan	Auto Off 4% 8%	Changes the projected image ratio to make the edges visible by a selectable percentage or automatically
Image Processing	Fine Fast	Adjusts image processing speed/quality

Parent topic: Adjusting the Menu Settings

Related references

Available Image Aspect Ratios Supported Video Display Formats

Projector Feature Settings - Settings Menu

Image		🤇 Return 🔮
Signal	Keystone Zoom	H/V-Keystone
	Control Panel Lock	Full Lock
Settings 🕘	Pointer Shape	Pointer 1
	Volume	0
Extended	Mic Input Level	0
	Remote Receiver	Front/Rear
Network	User Button	Power Consum
and the second se	Pattern	
ECO	Reset	
Info		
Reset		

Options on the Settings menu let you customize various projector features.

Setting	Options	Description
Keystone	H/V Keystone Quick Corner	Adjusts image shape to rectangular (horizontally and vertically)
		H/V Keystone : lets you manually correct horizontal and vertical sides
		Quick Corner : select to correct image shape and alignment using an on-screen display
Zoom	Varying levels available	Adjusts the size of the projected image

Setting	Options	Description
Control Panel Lock	Full Lock Partial Lock	Controls projector button locking to secure the projector
	Off	Full Lock: locks all buttons
		Partial Lock : locks all buttons except the power button
		Off: no buttons locked
Pointer Shape	Three shapes available	Changes the shape of the remote control pointer feature
Volume	Varying levels available	Adjusts the volume of projector's speaker system or external speakers
Mic Input Level	Varying levels available	Adjusts the volume of the projector's speaker system when you use a connected microphone
Remote Receiver	Front/Rear	Limits reception of remote control
	Front	signals by the selected receiver; Off turns off all receivers
Rea	Rear	
	Off	
User Button	Power Consumption	Assigns a menu option to the
	Info	User button on the remote control for one-touch access
	Progressive	
	Closed Caption	
	Test Pattern	
	Resolution	
	Mic Input Level	
	Pattern Display	
	Auto Calibration	
	Flip Horizontal	

Setting	Options	Description
Pattern	Pattern Display Pattern Type	Selects various pattern display options
	User Pattern Test Pattern	Pattern Display : lets you display the selected pattern type on the screen to aid in presentation
		Pattern Type : selects the type of grid or line pattern to display
		User Pattern : captures a projected screen and saves it as a pattern for display
		Test Pattern : displays a test pattern to assist in focusing and zooming the image and correcting image shape

Parent topic: Adjusting the Menu Settings

Projector Setup Settings - Extended Menu

Settings on the Extended menu let you customize various projector setup features that control its operation.

	(Return 🕲)
Easy Interactive Display	Function
Closed Caption User's Logo	Off
 Projection Operation 	Front
USB Type B	Easy Interacti
Reset	English
	Display Closed Caption User's Logo Projection Operation A/V Settings USB Type B Language

Easy Interactive Function Settings

Setting	Options	Description
General		
Auto Calibration Manual Calibration	—	Auto Calibration and Manual Calibration: start calibration for pen operations
Pen Mode	PC Free Annotation PC Interactive	Selects the mode for the interactive pens
lovering	On Off	Turns the pen hovering feature on and off; when set to On , the pointer follows the pen tip as you hover it over the screen and move it around
Advanced	Distance of Projectors Sync of Projectors Wired Sync Mode Confirm Clear Screen Color Palette	Selects various settings for interactive features Distance of Projectors, Sync of Projectors, and Wired Sync Mode: let you adjust features for using multiple projectors of the same model in the same room Confirm Clear Screen: lets you display a confirmation screen before clearing all of the content
		Color Palette : lets you choose a different palette if certain colors are difficult to see
PC Interactive		

Setting	Options	Description
Pen Operation Mode	Two Users/Mouse One User/Mouse	Selects the operating system version for pen operations
	One User/Pen	One User/Mouse and Two Users/Mouse: let you to perform mouse operations using either one or two interactive pens
		One User/Pen : lets you use the pen input and Ink features on Windows Vista, Windows 7 and Windows 8.x
Enable Right Click	On Off	Lets you use a long pen press as a right-click operation when using mouse mode; available only when Pen Operation Mode is set to One User/Mouse or Two Users/Mouse
Advanced	Pen Tip Button Auto Adjust Pen Area	Let you select pen operation and adjustment options
	Manual Adj. Pen Area	Pen Tip Button : assign either Right Click or Left Click to the pen tip button
		Select either Auto Adjust Pen Area or Manual Adj. Pen Area as the pen area adjustment option

Note: To access the **Manual Adj. Pen Area** option, a computer must be connected to the **USB-B** port and the **Pen Mode** option must be set to **PC Interactive**.

Other Extended Settings

Setting	Options	Description
Display	Messages	Selects various display options
	Display Background Startup Screen A/V Mute Toolbars Pen Mode Icon Projector Control	Messages: controls whether messages are displayed on the screen
		Display Background : selects the screen color or logo to display when no signal is received Startup Screen : controls
		whether a special screen appears when the projector starts up
		A/V Mute : selects the screen color or logo to display when A/V Mute is turned on
		Toolbars : controls whether the toolbars are always displayed in annotation mode
		Pen Mode Icon : controls the display and position of the pen icon in interactive computer mode
		Projector Control : controls where the projector control toolbar is displayed on the screen
Closed Caption	Off CC1 CC2	Controls use of closed captions and selects the closed caption type (closed captions are only visible for NTSC signals connected through the S-Video or Video ports)
User's Logo	_	Creates a screen that the projector displays to identify itself and enhance security

Setting	Options	Description
Projection	Front Front/Ceiling Rear Rear/Ceiling	Selects the way the projector faces the screen so the image is oriented correctly
Operation	Direct Power On High Altitude Mode Startup Source Search Auto Power On	Selects various operation options Direct Power On : lets you turn on the projector without pressing the power button High Altitude Mode : regulates the projector's operating temperature at altitudes above 4921 feet (1500 m) Startup Source Search : automatically detects the image signal that is input when the projector is turned on Auto Power On : lets you turn on the projector by turning on a computer connected to the Computer1 and Computer2 ports

Setting	Options	Description
A/V Settings	A/V Output Audio Output HDMI Audio Output	Selects the following when the projector is in standby mode (turned off):
		A/V Output: the Always On setting indicates that the projector outputs audio and video signals even while it is in standby mode; available only when Standby Mode is set to Communication On
		Audio Output: selects the audio input port when projecting images from the Computer1, Computer2, S-Video, Video, and USB-A ports
		HDMI Audio Output: selects which Audio port provides audio when viewing images from the HDMI port on the projector
USB Type B	Easy Interactive Function USB Display/Easy Interactive Function	Selects what happens when you connect your computer to the projector's USB-B port
	Wireless Mouse/USB Display	Easy Interactive Function : lets you use the interactive pens with your computer
		USB Display/Easy Interactive Function: lets you display your computer's image through the USB port and use the interactive pens with your computer
		Wireless Mouse/USB Display: lets you use the wireless mouse feature and display your computer's image through the USB port (interactivity not available)

Setting	Options	Description
Language	Various languages available	Selects the language for projector menu and message displays (not changed by Reset option)

Parent topic: Adjusting the Menu Settings

Projector Network Settings - Network Menu

Settings on the Network menu let you view network information and set up the projector for monitoring and control over a network.

Image			Return 🙂
Signal		Wireless Mode Net. Info Wireless LAN	Wireless L
Settings		Net. Info Wired LAN Network Configuration	B
Extended			
Network	0		
ECO			
Info			
Reset			

Setting	Options	Description
Wireless Mode	Wireless LAN On	Turns wireless LAN features on
	Off	and off

Setting	Options	Description
Net. Info - Wireless LAN	Connection mode	Displays wireless network status
	Wireless LAN Sys.	and details
	Antenna Level	
	Projector Name	
	SSID	
	DHCP	
	IP Address	
	Subnet Mask	
	Gateway Address	
	MAC Address	
	Region Code	
Net. Info - Wired LAN	Projector Name	Displays wired network status
	DHCP	and details
	IP Address	
	Subnet Mask	
	Gateway Address	
	MAC Address	
Network Configuration	Accesses additional network menus	Configures your network settings

Parent topic: Adjusting the Menu Settings

Related concepts

Wired Network Projection

Wireless Network Projection

Projector Setup Settings - ECO Menu

Settings on the ECO menu let you customize projector functions to save power. When you select a power-saving setting, a leaf icon appears next to the menu item.

Image		Return 🕘
Signal	Power Consumption Light Optimizer	ECO Off
Signal	Sleep Mode	Off
Settings	Sleep Mode Timer	0 min.
	A/V Mute Timer	Off
Extended	Standby Mode	Communication Off
	ECO Display	Off
Network	Reset	
ECO (0	
Info	Í	
Reset		

Setting	Options	Description
Power Consumption	Normal ECO	Selects the brightness mode of the projector lamp
		Normal : sets maximum lamp brightness
		ECO : reduces lamp brightness and fan noise, and saves power and lamp life
Light Optimizer	On Off	When Power Consumption is set to Normal and Auto Iris is turned off, the lamp brightness is adjusted based on the projected image; you can set this option for each color mode
Sleep Mode	On Off	Automatically places the projector in standby mode after an interval of inactivity

Setting	Options	Description
Sleep Mode Timer	1 to 30 minutes	Sets the interval for Sleep Mode
A/V Mute Timer	On Off	Automatically turns off the projector after 30 minutes if A/V Mute is enabled
Standby Mode	Communication On Communication Off	 Enable this setting to allow the following operations to occur when the projector is in standby mode: Monitor and control the projector over a network Output audio and video to an external device (A/V Output must be set to Always On) Output audio from a microphone (A/V Output must be set to Always On)
ECO Display	On Off	Displays a leaf icon in the bottom left corner of the projected screen to indicate the power-saving status when the lamp brightness changes

Parent topic: Adjusting the Menu Settings

Projector Information Display - Info Menu

You can display information about the projector and input sources by viewing the Info menu. However, you cannot change any settings in the menu.

Image	Designation In fa	Return 🕘
Signal	Projector Info Version	
Settings		
Extended		
Network		
ECO		
Info	0	
Reset	1	

Select **Version** to display the projector's firmware version. Select **Info** to display the settings described below.

Note: Available settings depend on the current input source. The lamp usage timer does not register any hours until you have used the lamp for at least 10 hours.

Information item	Description
Lamp Hours	Displays the number of hours (H) the lamp has been used in Normal and ECO Power Consumption modes; if the information is displayed in yellow, obtain a genuine Epson replacement lamp soon
Source	Displays the name of the port to which the current input source is connected
Input Signal	Displays the input signal setting of the current input source
Resolution	Displays the resolution of the current input source
Video Signal	Displays the video signal format of the current input source

Information item	Description
Refresh Rate	Displays the refresh rate of the current input source
Sync Info	Displays information that may be needed by a service technician
Status	Displays information about projector problems that may be needed by a service technician
Serial Number	Displays the projector's serial number
Event ID	Displays the Event ID number corresponding to a specific projector problem; see the list of Event ID codes

Event ID Code List

Parent topic: Adjusting the Menu Settings

Related references

Projector Lamp Specifications Optional Equipment and Replacement Parts

Event ID Code List

If the **Event ID** option on the Info menu displays a code number, check this list of Event ID codes for the solution to the projector problem associated with the code.

Event ID code	Cause and solution
0432	The EasyMP Network Projection program did not start. Turn the projector off and
0435	then on again.
0434	Unstable network communication. Check the network communication status, wait a few moments, and try connecting to the network again.
0482	
0484	
0485	
0433	Cannot display the transferred images. Restart the EasyMP Network Projection program.
0481	Communication with computer was disconnected. Restart the EasyMP Network Projection program.

Event ID code	Cause and solution
0483	The EasyMP Network Projection program quit unexpectedly. Check the network
04FE	communication status, then turn the projector off and then on again.
0479	A projector system error has occurred. Turn the projector off and then on again.
04FF	
0891	Cannot find an access point with the same SSID. Set your computer, access point, and projector to the same SSID.
0892	The WPA/WPA2 authentication type does not match. Make sure the wireless network security settings are correct.
0893	The WEP/TKIP/AES encryption type does not match. Make sure the wireless network security settings are correct.
0894	Communication with unauthorized access point was disconnected. Contact your network administrator.
0898	Failed to acquire DHCP address. Make sure the DHCP server is operating correctly. If you are not using DHCP, turn off the DHCP setting in the Network menus.
0899	A communication error has occurred. Try restarting the EasyMP Network Projection program and restarting your projector. If that does not solve the problem, contact Epson for help.

Parent topic: Projector Information Display - Info Menu

Projector Reset Options - Reset Menu

You can reset most of the projector settings to their default values using the **Reset All** option on the Reset menu.

You can also reset the projector's lamp usage timer to zero when you replace the lamp using the **Reset Lamp Hours** option.

Image	Return 🕘
Signal	Reset All Reset Lamp Hours
Settings	
Extended	
Network	
ECO	
Info	
Reset	0

You cannot reset the following settings using the **Reset All** option:

- Input Signal
- User's Logo
- Language
- Network menu items
- Lamp Hours
- Password
- Zoom

Parent topic: Adjusting the Menu Settings

Maintaining and Transporting the Projector

Follow the instructions in these sections to maintain your projector and transport it from place to place.

Projector Maintenance Transporting the Projector

Projector Maintenance

Your projector needs little maintenance to keep working at its best.

You may need to clean the lens periodically, and clean the air filter and air vents to prevent the projector from overheating due to blocked ventilation.

The only parts you should replace are the lamp, air filter, and remote control batteries. If any other part needs replacing, contact Epson or an authorized Epson servicer.

Warning: Before cleaning any part of the projector, turn it off and unplug the power cord. Never open any cover on the projector, except as specifically explained in this manual. Dangerous electrical voltages in the projector can injure you severely.

Warning: Do not try to service this product yourself, except as specifically explained in this manual. Refer all other servicing to qualified servicers.

Cleaning the Lens Cleaning the Projector Case Air Filter and Vent Maintenance Projector Lamp Maintenance Replacing the Remote Control Batteries **Parent topic:** Maintaining and Transporting the Projector

Cleaning the Lens

Clean the projector's lens periodically, or whenever you notice dust or smudges on the surface.

• To remove dust or smudges, gently wipe the lens with a soft, lint-free cloth.

• To remove stubborn smudges, moisten a soft, lint-free cloth with lens cleaner and gently wipe the lens. Do not spray any liquid directly on the lens.

Warning: Do not use a lens cleaner that contains flammable gas. The high heat generated by the projector lamp may cause a fire.

Caution: Do not use glass cleaner or any harsh materials to clean the lens and do not subject the lens to any impacts; you may damage it. Do not use canned air, or the gases may leave a residue. Avoid touching the lens with your bare hands to prevent fingerprints on or damage to the lens surface.

Parent topic: Projector Maintenance

Cleaning the Projector Case

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

- To remove dust or dirt, use a soft, dry, lint-free cloth.
- To remove stubborn dirt, use a soft cloth moistened with water and mild soap. Do not spray liquid directly on the projector.

Caution: Do not use wax, alcohol, benzine, paint thinner, or other chemicals to clean the projector case. These can damage the case. Do not use canned air, or the gases may leave a residue.

Parent topic: Projector Maintenance

Air Filter and Vent Maintenance

Regular filter maintenance is important to maintaining your projector. Your Epson projector is designed with an easily accessible, user-replaceable filter to protect your projector and make regular maintenance simple. Filter maintenance intervals will depend on the environment.

If regular maintenance is not performed, your Epson projector will notify you when the temperature inside the projector has reached a high level. Do not wait until this warning appears to maintain your projector filter as prolonged exposure to high temperatures may reduce the life of your projector or lamp.

Damage due to the failure to properly maintain the projector or its filter may not be covered by the projector or lamp Limited Warranties.

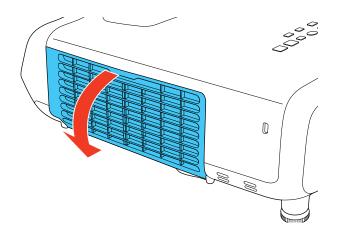
Cleaning the Air Filter and Vents Replacing the Air Filter

Parent topic: Projector Maintenance

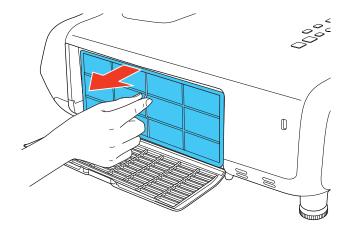
Cleaning the Air Filter and Vents

Clean the projector's air filter or vents if they get dusty, or if you see a message telling you to clean them.

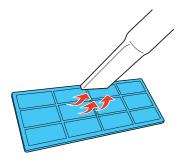
- 1. Turn off the projector and unplug the power cord.
- 2. Place your finger into the groove at the top of the air filter cover and pull to open the cover.



3. Pull the air filter out of the projector.

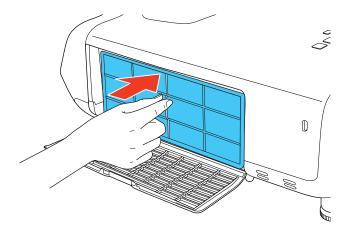


4. Vacuum the front of the air filter (the side with the tabs) to remove any remaining dust.

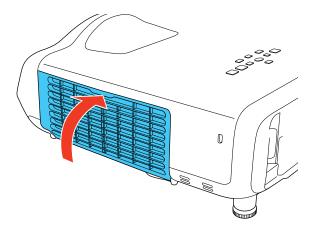


Note: If dust is difficult to remove or the air filter is damaged, replace the air filter.

5. Place the air filter back in the projector as shown.



6. Close the air filter cover.



Parent topic: Air Filter and Vent Maintenance

Replacing the Air Filter

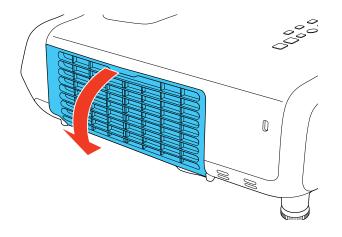
You need to replace the air filter in the following situations:

- After cleaning the air filter, you see a message telling you to clean or replace it
- The air filter is torn or damaged

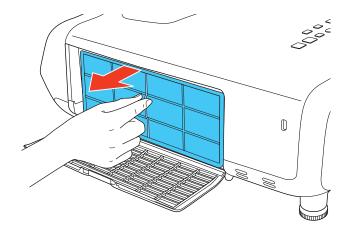
You can replace the air filter while the projector is mounted to the ceiling or placed on a table.

1. Turn off the projector and unplug the power cord.

2. Place your finger into the groove at the top of the air filter cover and pull to open the cover.

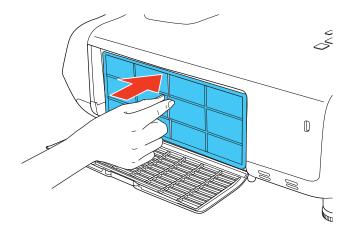


3. Pull the air filter out of the projector.



Note: Air filters contain ABS resin and polyurethane foam. Dispose of used air filters according to local regulations.

4. Place the new air filter in the projector as shown.



5. Close the air filter cover.

Parent topic: Air Filter and Vent Maintenance

Related references

Optional Equipment and Replacement Parts

Projector Lamp Maintenance

The projector keeps track of the number of hours the lamp is used and displays this information in the projector's menu system.

Replace the lamp as soon as possible when the following occurs:

- The projected image gets darker or starts to deteriorate
- A message appears when you turn on the projector telling you to replace the lamp
- The projector's lamp light is flashing orange and its power light is flashing blue

Replacing the Lamp

Resetting the Lamp Timer

Parent topic: Projector Maintenance

Related references

Optional Equipment and Replacement Parts

Projector Lamp Specifications Projector Information Display - Info Menu

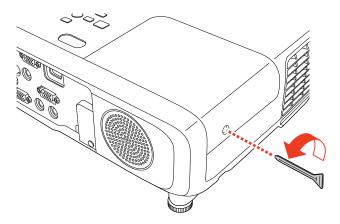
Replacing the Lamp

Before you replace the lamp, let the projector cool down for at least one hour so the lamp will not be hot.

Warning: Let the lamp fully cool before replacing it to avoid injury.

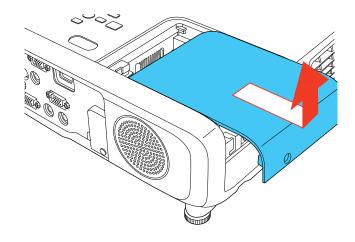
You can replace the lamp while the projector is mounted to the ceiling, if necessary.

- 1. Turn off the projector and unplug the power cord.
- 2. Allow the projector lamp to cool down for at least one hour.
- 3. Use the screwdriver included with the replacement lamp to loosen the screw securing the lamp cover.

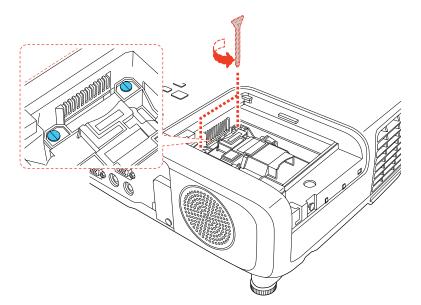


Warning: If the lamp is broken, glass fragments may be loose inside the lamp chamber. Be careful removing any broken glass to avoid injury. If the projector is installed on the ceiling, stand to the side of the lamp cover and not underneath it; pieces of glass could fall into your eyes or mouth when you open the lamp cover.

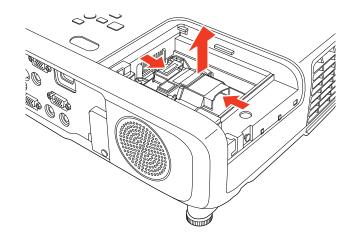
4. Slide the lamp cover out and lift it off.



5. Loosen the screws securing the lamp to the projector. The screws do not come all the way out.

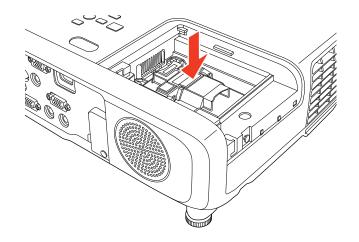


6. Grasp the raised section of the lamp and gently pull the lamp out of the projector.



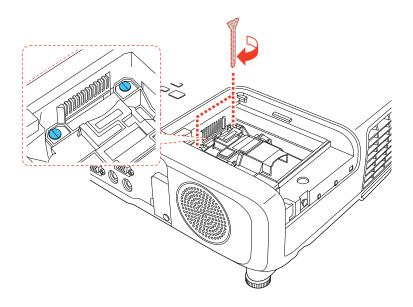
Note: ^(hg) The lamp(s) in this product contain mercury. Please consult your state and local regulations regarding disposal or recycling. Do not put in the trash.

7. Gently insert the new lamp into the projector. If it does not fit easily, make sure it is facing the right way.



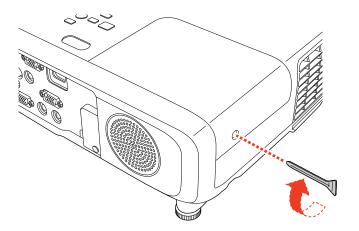
Caution: Do not touch any glass on the lamp assembly to avoid premature lamp failure.

8. Push in the lamp firmly and tighten the screws to secure it.



Caution: Do not over-tighten the screws.

9. Replace the lamp cover and tighten the screw to secure it.



Note: Be sure the lamp cover is securely installed or the lamp will not come on.

Reset the lamp timer to zero to keep track of the new lamp's usage.

Parent topic: Projector Lamp Maintenance

Related tasks

Resetting the Lamp Timer

Resetting the Lamp Timer

You must reset the lamp timer after replacing the projector's lamp to clear the lamp replacement message and to keep track of lamp usage correctly.

Note: Do not reset the lamp timer if you have not replaced the lamp to avoid inaccurate lamp usage information.

- 1. Turn on the projector.
- 2. Press the **Menu** button.
- 3. Select the **Reset** menu and press **Enter**.

Image	Return @
Signal	Reset All Reset Lamp Hours
Settings	
Extended	
Network	
ECO	
Info	
Reset	<u>o</u>

4. Select Reset Lamp Hours and press Enter.

You see a prompt asking if you want to reset the lamp hours.

5. Select **Yes** and press **Enter**.

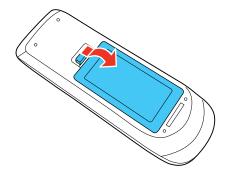
6. Press Menu or Esc to exit the menus.
Parent topic: Projector Lamp Maintenance
Related references
Projector Reset Options - Reset Menu
Related tasks
Replacing the Lamp

Replacing the Remote Control Batteries

The remote control uses two AA manganese or alkaline batteries. Replace the batteries as soon as they run out.

Caution: Use only the type of batteries specified in this manual. Do not install batteries of different types, or mix new and old batteries.

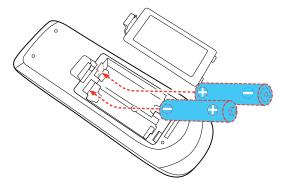
1. Remove the battery cover as shown.



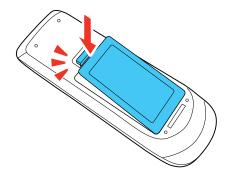
2. Remove the old batteries.

Warning: If the battery fluid has leaked, wipe it away with a soft cloth and avoid getting the fluid on your hands. If it gets on your hands, wash them immediately to avoid injury.

3. Insert the batteries with the + and – ends facing as shown.



4. Replace the battery cover and press it down until it clicks into place.



Warning: Dispose of used batteries according to local regulations. Do not expose batteries to heat or flame. Keep batteries out of the reach of children; they are choking hazards and are very dangerous if swallowed.

Parent topic: Projector Maintenance

Transporting the Projector

The projector contains precision parts, some of which are glass. Follow these guidelines to transport, ship, or store the projector safely:

• Remove any equipment connected to the projector.

- When transporting the projector a long distance or as checked luggage, pack it in a firm box with cushioning around it and mark the box "Fragile."
- When shipping the projector for repairs, place it in its original packing materials, if possible, or use equivalent materials with cushioning around the projector. Mark the box "Fragile."

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

Parent topic: Maintaining and Transporting the Projector

Solving Problems

Check the solutions in these sections if you have any problems using the projector.

Projection Problem Tips Projector Light Status Using the Projector Help Displays Solving Image or Sound Problems Solving Projector or Remote Control Operation Problems Solving Interactive Problems Solving Network Problems Where to Get Help

Projection Problem Tips

If the projector is not working properly, try turning it off and unplugging it. Then plug it back in and turn it on.

If this does not solve the problem, check the following:

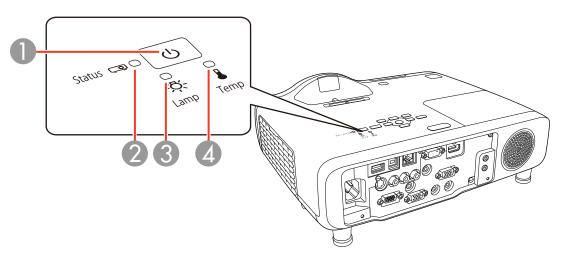
- The lights on the projector may indicate what the problem is.
- The projector's Help system can display information about common problems, if the projector is operating.
- The solutions in this manual can help you solve many problems.

If none of these solutions help, you can contact Epson for technical support.

Parent topic: Solving Problems

Projector Light Status

The lights on the projector indicate the projector status and let you know when a problem occurs. Check the status and color of the lights and look for a solution in the table here.



- 1 Power light
- 2 Status light
- 3 Lamp light
- 4 Temp (temperature) light

Power light	Status light	Lamp light	Temp light	Status and solution
Blue	Blue	Off	Off	Normal operation.
Blue	Flashing blue	Off	Off	Warming up. Wait for an image to appear.
Blue	Off	Off	Off	Standby or sleep mode.
Blue	Flashing blue	Off	Off	Shutting down. (When the Status light stops flashing, you can unplug the projector.)

Power light	Status light	Lamp light	Temp light	Status and solution
Blue	Varies	Off	Flashing orange	Projector is too hot.
				 Make sure that the vents and air filter are not clogged with dust or obstructed by nearby objects.
				Clean or replace the air filter.
				 Make sure the environmental temperature is not too hot.
Off	Flashing blue	Off	Orange	Projector has overheated and turned off. Leave it turned off to cool down. After about five minutes, do the following:
				 Make sure that the vents and air filter are not clogged with dust or obstructed by nearby objects.
				Clean or replace the air filter.
				 If operating the projector at high altitude, turn on High Altitude Mode.
				 If the problem persists, unplug the projector and contact Epson for help.
Off	Flashing blue	Orange	Off	Lamp has a problem.
				 Check to see if the lamp is burned out, broken, or installed incorrectly. Reseat or replace the lamp as necessary.
				Clean or replace the air filter.
				 If operating the projector at high altitude, turn on High Altitude Mode.
				 If the problem persists, unplug the projector and contact Epson for help.

Power light	Status light	Lamp light	Temp light	Status and solution
Flashing blue	Varies	Flashing orange	Varies	Replace the lamp soon to avoid damage. Do not continue using the projector.
Off	Flashing blue	Off	Flashing orange	A fan or sensor has a problem. Turn the projector off, unplug it, and contact Epson for help.
Off	Flashing blue	Flashing orange	Flashing orange	Auto Iris error. Turn the projector off, unplug it, and contact Epson for help.
Off	Flashing blue	Orange	Orange	Power error. Turn the projector off, unplug it, and contact Epson for help.
Off	Flashing blue	Flashing orange	Off	Internal projector error. Turn the projector off, unplug it, and contact Epson for help.

Note: If the lights display a pattern not listed in the table above, turn the projector off, unplug it, and contact Epson for help.

Parent topic: Solving Problems

Related references

Where to Get Help Projector Setup Settings - Extended Menu

Related tasks

Cleaning the Air Filter and Vents Replacing the Air Filter

Using the Projector Help Displays

You can display information to help you solve common problems using the projector's Help system.

- 1. Turn on the projector.
- 2. Press the **Help** button on the projector or the remote control.

You see the Help menu.

- 3. Use the up and down arrow buttons to highlight the problem you want to solve.
- 4. Press Enter to view the solutions.

- 5. When you are finished, do one of the following:
 - To select another problem to solve, press Esc.
 - To exit the help system, press Help.

Parent topic: Solving Problems

Solving Image or Sound Problems

Check the solutions in these sections if you have any problems with projected images or sound.

Solutions When No Image Appears

Solutions When Image is Incorrect Using the USB Display Function

Solutions When "No Signal" Message Appears

Solutions When "Not Supported" Message Appears

Solutions When Only a Partial Image Appears

Solutions When the Image is Not Rectangular

Solutions When the Image Contains Noise or Static

Solutions When the Image is Fuzzy or Blurry

Solutions When the Image Brightness or Colors are Incorrect

Solutions to Sound Problems

Solutions to Microphone Problems

Parent topic: Solving Problems

Solutions When No Image Appears

If no image appears, try the following solutions:

- Make sure the lens cover is open all the way or off.
- Press the A/V Mute button on the remote control to see if the image was temporarily turned off.
- Make sure all necessary cables are securely connected and the power is on for the projector and connected video sources.
- Press the projector's power button to wake it from standby or sleep mode. Also see if your connected computer is in sleep mode or displaying a blank screen saver.
- Check the settings on the Signal menu to make sure they are correct for the current video source.
- Adjust the Brightness setting or select the Normal Power Consumption setting.
- Check the **Display** setting to make sure **Messages** is set to **On**.

- If the projector does not respond when you press the control panel buttons, the buttons may be locked. Unlock the buttons.
- If the projector does not respond when you press buttons on the remote control, make sure the remote receivers are turned on.
- For images projected with Windows Media Center, reduce the screen size from full screen mode.
- For images projected from applications using Windows DirectX, turn off DirectX functions.

Parent topic: Solving Image or Sound Problems

Related references

Projector Setup Settings - Extended Menu Image Quality Settings - Image Menu Input Signal Settings - Signal Menu Projector Feature Settings - Settings Menu

Related tasks

Unlocking the Projector's Buttons

Solutions When Image is Incorrect Using the USB Display Function

If no image appears or if the image appears incorrectly using the USB Display function, try the following solutions:

- Press the **USB** button on the remote control.
- Make sure the USB Display software has installed correctly. Install it manually if necessary.
- Make sure the **USB Type B** setting in the Extended menu is set to one of the **USB Display** options.
- With OS X, select the **USB Display** icon in the Dock or from the **Applications** folder.
- For images projected with Windows Media Center, reduce the screen size from full screen mode.
- For images projected from applications using Windows DirectX, turn off DirectX functions.
- If the mouse cursor flickers, select **Make the movement of the mouse pointer smooth** in the Epson USB Display Settings program on your computer (feature not available with Windows 2000).
- Turn off the **Transfer layered window** setting in the Epson USB Display Settings program on your computer.
- Make sure you are using the most recent version of the USB display software.

Parent topic: Solving Image or Sound Problems

Solutions When "No Signal" Message Appears

If the "No Signal" message appears, try the following solutions:

- Press the **Source Search** button and wait a few seconds for an image to appear.
- Turn on the connected computer or video source, and press its play button to begin your presentation, if necessary.
- Check the connection from the projector to your video sources.
- If you are projecting from a laptop computer, make sure it is set up to display on an external monitor.
- If necessary, turn the projector and the connected computer or video source off and then on again.

Displaying From a PC Laptop Displaying From a Mac Laptop

Parent topic: Solving Image or Sound Problems

Displaying From a PC Laptop

If you see the "No Signal" message when you display from a PC laptop, you need to set up the laptop to display on an external monitor.

- 1. Hold down the laptop's **Fn** key and press the key labelled with a monitor icon or **CRT/LCD**. (See your laptop manual for details.) Wait a few seconds for an image to appear.
- 2. To display on both the laptop's monitor and the projector, try pressing the same keys again.
- 3. If the same image is not displayed by the laptop and projector, check the Windows **Display** utility to make sure the external monitor port is enabled and extended desktop mode is disabled. (See your computer or Windows manual for instructions.)
- 4. If necessary, check your video card settings and set the multiple display option to **Mirror** or **Duplicate**.

Parent topic: Solutions When "No Signal" Message Appears

Displaying From a Mac Laptop

If you see the "No Signal" message when you display from a Mac laptop, you need to set up the laptop for mirrored display. (See your laptop manual for details.)

- 1. Open the System Preferences utility and select Displays.
- 2. Click the Arrangement tab.
- 3. Select the Mirror Displays checkbox.

Parent topic: Solutions When "No Signal" Message Appears

Solutions When "Not Supported" Message Appears

If the "Not Supported" message appears, try the following solutions:

- Make sure the correct input signal is selected on the Signal menu.
- Make sure the computer's display resolution does not exceed the projector's resolution and frequency limit. If necessary, select a different display resolution for your computer. (See your computer manual for details.)

Parent topic: Solving Image or Sound Problems

Solutions When Only a Partial Image Appears

If only a partial computer image appears, try the following solutions:

- Press the Auto button on the remote control to optimize the image signal.
- Try adjusting the image position using the **Position** menu setting.
- Press the Aspect button on the remote control to select a different image aspect ratio.
- If you zoomed into or out of the image using the **E-Zoom** buttons, press the **Esc** button until the projector returns to a full display.
- Check the cables connecting the computer or video source to the projector. Try connecting different cables.
- Check your computer display settings to disable dual display and set the resolution within the projector's limits. (See your computer manual for details.)
- Check the resolution assigned to your presentation files to see if they are created for a different resolution than you are projecting in. (See your software help for details.)

Parent topic: Solving Image or Sound Problems

Related references

Input Signal Settings - Signal Menu Supported Video Display Formats

Solutions When the Image is Not Rectangular

If the projected image is not evenly rectangular, try the following solutions:

- If the projector is not mounted on the wall or ceiling, place it directly in front of the center of the screen, facing it squarely, if possible.
- If you adjusted the projector height using the projector feet, press the keystone buttons on the projector to adjust the image shape.

• Adjust the **Quick Corner** or **Keystone** setting to correct the image shape.

Note: Adjusting Quick Corner and Keystone settings may affect focus and pen calibration.

Parent topic: Solving Image or Sound Problems

Solutions When the Image Contains Noise or Static

If the projected image seems to contain electronic interference (noise) or static, try the following solutions:

- Check the cables connecting your computer or video source to the projector. They should be:
 - Separated from the power cord to prevent interference
 - Securely connected at both ends
 - · Not connected to an extension cable
 - No longer than 10 feet (3 m) for VGA/computer cables or 24 feet (7.3 m) for HDMI cables
- Check the settings on the projector's Signal menu to make sure they match the video source. If available for your video source, adjust the **Progressive** and **Noise Reduction** settings.
- Select a computer video resolution and refresh rate that are compatible with the projector.
- If you are projecting from a computer, press the **Auto** button on the remote control to automatically adjust the tracking and sync. If the problem remains, display a uniformly patterned image on the screen and manually adjust the **Tracking** and **Sync** settings.
- If you adjusted the image shape using the projector controls, try decreasing the **Sharpness** setting to improve image quality.
- If you connected an extension power cable, try projecting without it to see if it caused interference in the signal.
- If you are using the USB Display function, turn off the **Transfer layered window** setting in the Epson USB Display Settings program on your computer.

Parent topic: Solving Image or Sound Problems

Related references

Input Signal Settings - Signal Menu Supported Video Display Formats

Related tasks

Displaying From a PC Laptop

Displaying From a Mac Laptop

Solutions When the Image is Fuzzy or Blurry

If the projected image is fuzzy or blurry, try the following solutions:

- Adjust the image focus.
- Clean the projector lens.
- Position the projector close enough to the screen, and directly in front of it.
- Position the projector so the keystone adjustment angle is not so wide that it distorts the image.
- Adjust the **Sharpness** setting to improve image quality.
- If you are projecting from a computer, press the **Auto** button on the remote control to automatically adjust the tracking and sync. If any bands or overall blurriness remain, display a uniformly patterned image on the screen and manually adjust the **Tracking** and **Sync** settings.
- If you are projecting from a computer, use a lower resolution.
- Turn off any keystone correction and disable the **Quick Corner** setting.

Parent topic: Solving Image or Sound Problems

Solutions When the Image Brightness or Colors are Incorrect

If the projected image is too dark or light, or the colors are incorrect, try the following solutions:

- Press the **Color Mode** button on the remote control to try different color modes for the image and environment.
- Check your video source settings.
- Adjust the available settings on the Image menu for the current input source, such as **Brightness**, **Contrast**, **Tint**, **Color Adjustment**, and/or **Color Saturation**.
- Make sure you selected the correct Input Signal or Video Signal setting on the Signal menu, if available for your image source.
- Make sure all the cables are securely connected to the projector and your video device. If you connected long cables, try connecting shorter cables.
- If you are using the ECO Power Consumption setting, try selecting Normal in the projector's menus.

Note: At high altitudes or locations subject to high temperatures, the image may become darker and you may not be able to adjust the Power Consumption setting.

- Position the projector close enough to the screen.
- If the image has been progressively darkening, you may need to replace the projector lamp soon.

Parent topic: Solving Image or Sound Problems

Related concepts

Projector Lamp Maintenance

Related references

Input Signal Settings - Signal Menu Image Quality Settings - Image Menu Projector Feature Settings - Settings Menu

Solutions to Sound Problems

If there is no sound when you expect it or the volume is too low or high, try the following solutions:

- · Adjust the projector's volume settings.
- Press the **A/V Mute** button on the remote control to resume video and audio if they were temporarily stopped.
- Press the **Source Search** button to switch to the correct input source, if necessary.
- Check your computer or video source to make sure the volume is turned up and the audio output is set for the correct source.
- Check the audio cable connections between the projector and your video source.
- Make sure any connected audio cables are labeled "No Resistance".
- If you are using the USB Display function, turn on the **Output audio from the projector** setting in the Epson USB Display Settings program on your computer.
- If you are using a Mac and you do not hear sound from an HDMI source, make sure your Mac supports audio through the HDMI port. If not, you need to connect an audio cable.
- If you want to use a connected audio source when the projector is off, set the **Standby Mode** option to **Communication On** and the **A/V Output** option to **Always On**.
- Make sure the Audio Output option is set to the correct audio port for your video device.
- If you turn the projector on immediately after turning it off, the cooling fans may run at high speed momentarily and cause an unexpected noise. This is normal.

Parent topic: Solving Image or Sound Problems

Solutions to Microphone Problems

If there is no sound when you use a microphone connected to the projector, try the following solutions:

- Make sure the microphone is securely connected to the projector.
- Make sure you are using a dynamic microphone, not a condenser microphone.
- Adjust the Mic Input Level setting as necessary in the projector's menus.
- If you want to use the microphone when the projector is off, set the **Standby Mode** option to **Communication On** and the **A/V Output** option to **Always On**.

Parent topic: Solving Image or Sound Problems

Related references

Projector Feature Settings - Settings Menu Projector Setup Settings - Extended Menu

Related tasks

Connecting a Microphone

Solving Projector or Remote Control Operation Problems

Check the solutions in these sections if you have problems operating the projector or remote control.

Solutions to Projector Power or Shut-Off Problems

Solutions to Problems with the Remote Control

Solutions to Password Problems

Parent topic: Solving Problems

Solutions to Projector Power or Shut-Off Problems

If the projector does not come on when you press the power button or it shuts off unexpectedly, try the following solutions:

- Make sure the power cord is securely connected to the projector and to a working electrical outlet.
- The projector's buttons may be locked for security. Unlock the buttons or use the remote control to turn on the projector.
- The power cord may be defective. Disconnect the cord and contact Epson.
- If the projector's lamp shuts off unexpectedly, it may have entered standby mode after a period of inactivity. Press the power button to wake the projector.

- If the projector's lamp shuts off and the power and Temp lights are red, the projector has overheated and shut off. Check the solutions for this light status.
- If the power button on the remote control does not turn on the projector, check its batteries and make sure the **Remote Receiver** setting is turned on in the projector's menu, if available.

Parent topic: Solving Projector or Remote Control Operation Problems

Related references

Projector Feature Settings - Settings Menu Projector Light Status

Related tasks

Unlocking the Projector's Buttons

Solutions to Problems with the Remote Control

If the projector does not respond to remote control commands, try the following solutions:

- Check that the remote control batteries are installed correctly and have power. If necessary, replace the batteries.
- Make sure you are operating the remote control within the reception angle and range of the projector.
- Make sure the projector is not warming up or shutting down.
- Check to see if a button on the remote control is stuck down, causing it to enter sleep mode. Release the button to wake the remote control up.
- Strong fluorescent lighting, direct sunlight, or infrared device signals may be interfering with the projector's remote receivers. Dim the lights or move the projector away from the sun or interfering equipment.
- If available, turn off one of the remote receivers in the projector's menu system, or check if all the remote receivers were turned off.
- If you assigned an ID number to the remote control to operate multiple projectors, you may need to check or change the ID setting (feature not available with all projectors).
- If you lose the remote control, you can order another one from Epson.

Parent topic: Solving Projector or Remote Control Operation Problems

Related references

Projector Feature Settings - Settings Menu Optional Equipment and Replacement Parts Remote Control Operation

Solutions to Password Problems

If you cannot enter or remember a password, try the following solutions:

- You may have turned on password protection without first setting a password. Try entering **0000** using the remote control.
- If you have entered an incorrect password too many times and see a message displaying a request code, write down the code and contact Epson. Do not attempt to enter the password again. Provide the request code and proof of ownership for assistance in unlocking the projector.
- If you set a Web Control password and forgot the user ID or password, try entering the following:
 - User ID: EPSONWEB
 - Default password: admin
- If you lose the remote control you cannot enter a password. Order a new one from Epson.

Parent topic: Solving Projector or Remote Control Operation Problems

Related tasks

Controlling a Networked Projector Using a Web Browser

Solving Interactive Problems

Check the solutions in these sections if you have problems using the interactive system.

Solutions When "Hardware Device Not Found" Message Appears Solutions When "Error Occurred in the Easy Interactive Function" Message Appears Solutions When the Interactive Pens Do Not Work Solutions When Manual Calibration Does Not Work Solutions When the Built-In Toolbar (PC Free Annotation) Does Not Work Solutions When the Interactive Pen Position Is Not Accurate Solutions When the Interactive Pens Are Slow or Difficult to Use Solutions When the Interactive Pens Cause Interference or Unwanted Effects **Parent topic:** Solving Problems

Solutions When "Hardware Device Not Found" Message Appears

If the "Hardware device not found" message appears, try the following solutions:

• Check the USB cable connection from the projector to your computer. Try disconnecting and then reconnecting the cable.

- If you are projecting from a laptop computer, make sure the battery has enough power, or connect the laptop to a power outlet.
- If your USB cable is installed in the wall, try connecting a different USB cable to the projector and your computer.

Parent topic: Solving Interactive Problems

Related tasks

Connecting to a Computer for Pen Use or USB Mouse Control Connecting to a Computer for USB Video and Audio

Solutions When "Error Occurred in the Easy Interactive Function" Message Appears

If the "Error occurred in the Easy Interactive Function" message appears, contact Epson for help.

Parent topic: Solving Interactive Problems

Solutions When the Interactive Pens Do Not Work

If the interactive pens do not work, try the following solutions:

- The pens turn off automatically. Tap the pen tip or press the power/function button to turn the pen back on.
- Make sure you are not covering the black section near the tip of the pen.
- Make sure nothing is blocking the signal between the pen and the interactive pen receiver on the projector.
- Try holding the pen at a different angle so that your hand is not blocking the signal.
- Make sure the pen battery has enough power. Press the button on the side of the pen to check remaining battery power. Try replacing the battery.
- If you are projecting from a computer, make sure the USB cable is connected to the computer and projector.
- Dim the room lights and turn off any fluorescent lights. Make sure the projection surface and pen receiver are not in direct sunlight or other sources of bright lighting.
- Remove any decorative lights from around the projector or projection surface.
- If the pen tip is worn out or damaged, you may need to replace it.
- Make sure the interactive pen receiver on the projector is clean and free from dust.
- Make sure there is no interference from infrared remote controls, mice, or infrared microphones.

- Make sure the USB Type B option on the Extended menu is set to Easy Interactive Function or USB Display/Easy Interactive Function.
- Make sure you have calibrated the system. Try recalibrating.
- Make sure the **Pen Mode** and **Pen Operation Mode** settings are set correctly in the **Easy Interactive Function** options on the Extended menu.

Parent topic: Solving Interactive Problems

Related concepts

Pen Calibration

Related references

Optional Equipment and Replacement Parts Projector Setup Settings - Extended Menu

Related tasks

Installing Batteries in the Pen Connecting to a Computer for Pen Use or USB Mouse Control Connecting to a Computer for USB Video and Audio Using the Pens

Solutions When Manual Calibration Does Not Work

If you are having trouble calibrating manually, try the following solutions:

- If the circle does not move to the next position, or it moves automatically, dim or turn off any bright lights near the projection surface.
- · Make sure the projector is not too close to the projection surface.
- Select Reset All from the Reset menu to restore the projector settings to their default values.

Parent topic: Solving Interactive Problems

Related references

Projector Reset Options - Reset Menu

Solutions When the Built-In Toolbar (PC Free Annotation) Does Not Work

If you cannot use the pen without a computer, try the following solutions:

- Press one of the Source buttons on the remote control to select the source for the image you want to annotate. To use a blank screen, select **Computer2** or another unused source.
- Make sure you have calibrated the system. Try recalibrating.

• Press the **Pen Mode** button on the remote control to toggle between **PC Interactive** and **PC Free Annotation** modes.

Parent topic: Solving Interactive Problems

Related concepts

Pen Calibration

Related references

Projector Setup Settings - Extended Menu

Solutions When the Interactive Pen Position Is Not Accurate

If the pen position is not the same as the mouse pointer, try the following solutions:

- Make sure you have calibrated the system. Try manual calibration.
- Try adjusting the pen operation area.
- If you use the **E-Zoom +** button on the remote control to enlarge the image, the pen position is not accurate. When you return the image to the original size, the position should be correct.
- In PC Interactive mode (in the Extended menu), turn off Auto Adjust Pen Area and select Manual Adj. Pen Area.
- Try changing the computer's resolution to 1280 × 800.
- Select Reset All from the Reset menu to restore the projector settings to their default values.

Parent topic: Solving Interactive Problems

Related concepts

Pen Calibration

Related references

Projector Reset Options - Reset Menu Projector Setup Settings - Extended Menu

Related tasks

Adjusting the Pen Operation Area

Solutions When the Interactive Pens Are Slow or Difficult to Use

If the pens are difficult to use or respond too slowly, try the following solutions:

• For easier operation, hold the pen perpendicular to the projection surface.

- For the best performance, connect your computer to the projector using a VGA or HDMI cable for display and the USB cable for interactivity.
- If you are using a computer, try setting your computer's display to 1280 × 800.
- If you are using USB Display in Windows, you may need to disable Windows Aero in the Epson USB Display Settings program on your computer.
- If you are having difficulty double-clicking in OS X, go to the **System Preferences** menu, select **Mouse** or **Trackpad**, and reduce the **Double-Click Speed**.
- If you are projecting over a network, see the *EasyMP Network Projection Operation Guide* for performance adjustment instructions.

Parent topic: Solving Interactive Problems

Solutions When the Interactive Pens Cause Interference or Unwanted Effects

If the pens are causing interference or unwanted effects, try the following solutions:

- When two pens are used at the same time, make sure they are approximately 4 inches (10.16 cm) apart.
- Do not rest the pens on the image area of an interactive table, to avoid interference with your computer's mouse.
- Make sure that nothing is blocking the direct line to the infrared site.

Parent topic: Solving Interactive Problems

Solving Network Problems

Check the solutions in these sections if you have problems using the projector on a network.

Solutions When Network Alert E-Mails are Not Received

Solutions When You Cannot Access the Projector Through the Web

Parent topic: Solving Problems

Solutions When Network Alert E-Mails are Not Received

If you do not receive an e-mail alerting you to problems with a projector over the network, try the following solutions:

• Make sure the projector is turned on and connected to the network correctly. (If an error shut down the projector, it cannot send an e-mail.)

- Make sure you set up the projector e-mail alert settings correctly on the projector's network Mail menu or in the network software.
- Set the Standby Mode setting to Communication On so the network software can monitor the projector in standby mode.

Parent topic: Solving Network Problems

Related concepts

Wired Network Projection Wireless Network Projection

Related references

Projector Setup Settings - Extended Menu Projector Network Settings - Network Menu

Solutions When You Cannot Access the Projector Through the Web

If you are unable to access the projector through a web browser, make sure you are using the correct ID and password, which are case sensitive.

- For the user ID, enter EPSONWEB. (You cannot change the user ID.)
- For the password, enter the password set in the projector's Network menu. The default password is **admin**.
- Make sure you have access to the network the projector is on.

Note: The user ID and password are case sensitive.

Parent topic: Solving Network Problems

Related tasks

Controlling a Networked Projector Using a Web Browser

Where to Get Help

If you need to contact Epson for technical support services, use the following support options.

Internet Support

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

Speak to a Support Representative

To use the Epson PrivateLine Support service, call (800) 637-7661. This service is available for the duration of your warranty period. You may also speak with a projector support specialist by dialing (562) 276-4394 (U.S.) or (905) 709-3839 (Canada).

Support hours are 6 AM to 8 PM, Pacific Time, Monday through Friday and 7 AM to 4 PM, Pacific Time, Saturday.

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

Before you call, have the following information ready:

- Product name
- Product serial number (located on the bottom or rear of the projector, or in the menu system)
- Proof of purchase (such as a store receipt) and date of purchase
- Computer or video configuration
- Description of the problem

Purchase Supplies and Accessories

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

To purchase a replacement remote control, call (562) 276-4394 (U.S.) or (905) 709-3839 (for dealer referral in Canada).

Parent topic: Solving Problems

Technical Specifications

These sections list the technical specifications of your projector.

General Projector Specifications Projector Lamp Specifications Remote Control Specifications Projector Dimension Specifications Projector Electrical Specifications Projector Environmental Specifications Projector Safety and Approvals Specifications Supported Video Display Formats USB Display System Requirements

General Projector Specifications

Type of display	Poly-silicon TFT active matrix	
Resolution	1280 × 800 pixels (WXGA)	
Lens	F=1.60	
	Focal length: 6.4 mm	
Color reproduction	Full color, up to 1 billion colors	
Brightness	Normal Power Consumption mode:	
	White light output 3400 lumens (ISO 21118 standard)	
	Color light output 3400 lumens	
	ECO Power Consumption mode:	
	White light output 1900 lumens (ISO 21118 standard)	
	Note: Color brightness (color light output) and white brightness (white light output) will vary depending on usage conditions. Color light output measured in accordance with IDMS 15.4; white light output measured in accordance with ISO 21118.	
Contrast ratio	16000:1 with Dynamic Color Mode, Normal Power Consumption mode, Wide Zoom setting, and Auto Iris on	

Image size	39 inches (0.99 m) to 116 inches (2.95 m)	
(in native aspect ratio)		
Projection distance	21.3 inches (0.54 m) to 48 inches (1.22 m)	
(in native aspect ratio)		
Projection methods	Front, rear, ceiling-mounted	
Optical aspect ratio	16:10	
(width-to-height)		
Focus adjustment	Manual	
Zoom adjustment	Digital	
Zoom ratio	1.0 to 1.35	
(Tele-to-Wide)		
Internal sound system	16 W monaural	
Noise level	37 dB (Normal Power Consumption mode)	
	29 dB (ECO Power Consumption mode)	
Keystone correction angle	± 7º vertical; Auto Keystone correction	
	± 5° horizontal keystone	
USB Type B port compatibility	USB 1.1 and 2.0 compliant for USB display, external mouse control, firmware update, interactive functions, or copying menu settings	
USB Type A port compatibility	One USB 1.1 and 2.0 compliant port for USB device input, Epson document camera display, wireless LAN, firmware update, or copying menu settings	

Parent topic: Technical Specifications

Projector Lamp Specifications

Туре	UHE (Ultra High Efficiency)
Power consumption	215 W

Lamp lifeNormal Power Consumption mode:Up to about 5000 hoursECO Power Consumption mode:Up to about 10000 hours

Note: Turn off this product when not in use to prolong the life of the projector. Lamp life will vary depending upon mode selected, environmental conditions, and usage. Brightness decreases over time.

Parent topic: Technical Specifications

Remote Control Specifications

Reception range	19.7 feet (6 m)
Batteries	Two alkaline or manganese AA

Parent topic: Technical Specifications

Projector Dimension Specifications

Height (excluding feet)	3.7 inches (94 mm)
Width	13.5 inches (344 mm)
Depth	12.4 inches (314.5 mm)
Weight	8.5 lb (3.9 kg)

Parent topic: Technical Specifications

Projector Electrical Specifications

Rated frequency	50/60 Hz
Power supply	100 to 240 VAC ±10%
	3.2 to 1.4 A

Power consumption	Operating:
(100 to 120 V)	Normal Power Consumption mode: 315 W
	ECO Power Consumption mode: 230 W
	Standby:
	1.90 W (Networked Standby), 0.22 W (Energy Saving)
Power consumption	Operating:
(220 to 240 V)	Normal Power Consumption mode: 298 W
	ECO Power Consumption mode: 221 W
	Standby:
	2.10 W (Networked Standby), 0.28 W (Energy Saving)

Parent topic: Technical Specifications

Projector Environmental Specifications

Temperature	Operating:
	Up to 7500 ft (2286 m): 41 to 95 °F (5 to 35 °C)
	7500 ft (2286 m) to 9843 ft (3000 m): 41 to 86 °F (5 to 30 °C)
	Storage: 14 to 140 °F (–10 to 60 °C)
Humidity (relative, non-	Operating: 20 to 80%
condensing)	Storage: 10 to 90%
Operating altitude	Up to 4921 feet (1500 m)
	4921 feet (1500 m) to 9843 feet (3000 m) with High Altitude Mode enabled

Parent topic: Technical Specifications

Projector Safety and Approvals Specifications

United States

FCC Part 15 Class B (DoC)

UL60950-1 2nd edition (cTUVus Mark)

Canada

ICES-003 Class B CSA C22.2 No. 60950-1-07

Parent topic: Technical Specifications

Supported Video Display Formats

For best results, your computer's monitor port or video card resolution should be set to display in the projector's native resolution. However, your projector includes Epson's SizeWise chip that supports other computer display resolutions, so your image will be resized to fit automatically.

Your computer's monitor port or video card refresh rate (vertical frequency) must be compatible with the projector. (See your computer or video card manual for details.)

Display format	Refresh rate (in Hz)	Resolution (in pixels)	
Computer signals (analog RGB)			
VGA	60/72/75/85	640 × 480	
SVGA	56/60/72/75/85	800 × 600	
XGA	60/72/75/85	1024 × 768	
WXGA	60	1280 × 768	
	60	1366 × 768	
	60/75/85	1280 × 800	
WXGA+	60/75/85	1440 × 900	
WXGA++	60	1600 × 900	
SXGA	70/75/85	1152 × 864	
	60/75/85	1280 × 1024	
	60/75/85	1280 × 960	
SXGA+	60/75	1400 × 1050	
WSXGA+*	60	1680 × 1050	
UXGA	60	1600 × 1200	
MAC13"	67	640 × 480	

The table here lists the compatible refresh rate and resolution for each compatible video display format.

Display format	Refresh rate (in Hz)	Resolution (in pixels)
MAC16"	75	832 × 624
MAC19"	75	1024 × 768
	59	1024 × 768
MAC21"	75	1152 × 870
Composite video	· · ·	· · · · ·
TV (NTSC)	60	720 × 480
TV (SECAM)	50	720 × 576
TV (PAL)	50/60	720 × 576
Component video		
SDTV (480i)	60	720 × 480
SDTV (576i)	50	720 × 576
SDTV (480p)	60	720 × 480
SDTV (576p)	50	720 × 576
HDTV (720p)	50/60	1280 × 720
HDTV (1080i)	50/60	1920 × 1080
HDMI input signals		
VGA	60	640 × 480
SVGA	60	800 × 600
XGA	60	1024 × 768
WXGA	60	1280 × 800
	60	1366 × 768
WXGA+	60	1440 × 900
WXGA++	60	1600 × 900
WSXGA+	60	1680 × 1050
SXGA	60	1280 × 960
	60	1280 × 1024

Display format	Refresh rate (in Hz)	Resolution (in pixels)
SXGA+	60	1400 × 1050
UXGA	60	1600 × 1200
SDTV (480i/480p)	60	720 × 480
SDTV (576i/576p)	50	720 × 576
HDTV (720p)	50/60	1280 × 720
HDTV (1080i)	50/60	1920 × 1080
HDTV (1080p)	24/30/50/60	1920 × 1080

* Wide resolution only

Parent topic: Technical Specifications

USB Display System Requirements

Your computer system must meet the system requirements here to use the projector's USB Display software.

Requirement	Windows	Мас
Operating system	Windows 2000 (Service Pack 4 only)	Mac OS X 10.5.x (32-bit), and 10.6.x, 10.7.x , 10.8.x, 10.9.x, 10.10.x (32- and 64-bit)
	Windows XP Professional, Home Edition, and Tablet PC Edition (32-bit)	
	Windows Vista Ultimate, Enterprise, Business, Home Premium, and Home Basic (32-bit)	
	Windows 7 Ultimate, Enterprise, Professional, and Home Premium (32- and 64-bit); Home Basic and Starter (32- bit)	
	Windows 8.x, Pro, and Enterprise (32- and 64-bit)	
USB version	USB 1.1 and above (USB 2.0 recommended)	

Requirement	Windows	Мас
CPU	Mobile Pentium III 1.2 GHz or faster (1.6 GHz or faster recommended)	Power PC G4 1 GHz or faster (Core Duo 1.83 GHz or faster recommended)
Memory	256MB or more (512MB or more recommended)	512MB or more
Hard disk space	20MB or more	
Display	Resolution between 640×480 and 1920 × 1200, 16-bit color or greater	Resolution between 640×480 and 1680×1200 , 16-bit color or greater

Parent topic: Technical Specifications

Notices

Check these sections for important notices about your projector.

Recycling Important Safety Information Important Safety Instructions FCC Compliance Statement Trademarks Open Source Software License Copyright Notice

Recycling

Epson offers a recycling program for end of life products. Please go to this site for information on how to return your products for proper disposal.

Parent topic: Notices

Important Safety Information

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

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

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

Parent topic: Notices

Important Safety Instructions

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

- Do not look into the lens when the projector is on. The bright light can damage your eyes. Avoid standing in front of the projector so the bright light does not shine into your eyes.
- Do not place the projector on an unstable cart, stand, or table.
- Do not operate the projector on its side, or while tilted to one side. Do not tilt the projector more than 7° forward or back.
- If the projector is mounted on a ceiling or wall, it should be installed by qualified technicians using mounting hardware designed for use with this projector.
- When installing or adjusting a ceiling or wall mount, do not use adhesives to prevent the screws from loosening and do not use oils or lubricants. This may cause the projector case to crack and the projector to fall from its ceiling mount. This could cause serious injury to anyone under the mount and could damage the projector.
- Do not use the projector near water, sources of heat, high-voltage electrical wires, or sources of magnetic fields.
- Use the type of power source indicated on the projector. Use of a different power source may result in fire or electric shock. If you are not sure of the power available, consult your dealer or power company.
- Place the projector near a wall outlet where the plug can be easily unplugged.
- Take the following precautions when handling the plug: Do not hold the plug with wet hands. Do not insert the plug into a dusty outlet. Insert the plug firmly into the outlet. Do not pull the power cord when disconnecting the plug; always be sure to hold the plug when disconnecting it. Do not overload wall outlets, extension cords, or power strips. Failure to comply with these precautions could result in fire or electric shock.
- Do not place the projector where the cord can be walked on. This may result in fraying or damage to the plug.
- Unplug the projector from the wall outlet before cleaning. Use a dry cloth (or, for stubborn dirt or stains, a moist cloth that has been wrung dry) for cleaning. Do not use liquid or aerosol cleaners, any sprays containing flammable gas, or solvents such as alcohol, paint thinner, or benzine.
- Do not block the slots and openings in the projector case. They provide ventilation and prevent the projector from overheating. Do not operate the projector on a sofa, rug, or other soft surface, or set it on top of loose papers. Do not cover the projector with a blanket, curtain, or tablecloth. If you are setting up the projector near a wall, leave at least 7.9 inches (20 cm) of space between the wall and the air exhaust vent.
- Do not operate the projector in a closed-in cabinet unless proper ventilation is provided.

- Never allow objects of any kind to enter any openings in the projector. Do not leave objects, especially flammable objects, near the projector. Never spill liquid of any kind into the projector.
- If you are using two or more projectors side-by-side, leave at least 2 feet (60 cm) of space between the projectors to allow for proper ventilation.
- You may need to clean the air filter and vent. A clogged air filter or vent can block ventilation needed to cool the projector. Do not use canned air, or the gases may leave a residue.
- Do not store the projector outdoors for an extended length of time.
- Except as specifically explained in this manual, do not attempt to service this product yourself. Refer all servicing to qualified personnel. Opening or removing covers may expose you to dangerous voltages and other hazards.
- Never open any covers on the projector except as specifically explained in this manual. Never attempt to disassemble or modify the projector. Refer all repairs to qualified service personnel.
- Unplug the projector from the wall outlet and refer servicing to qualified service personnel under the following conditions: if it does not operate normally when you follow the operating instructions, or exhibits a distinct change in performance; if smoke, strange odors, or strange noises come from the projector; if the power cord or plug is damaged or frayed; if liquid or foreign objects get inside the projector, or if it has been exposed to rain or water; if it has been dropped or the housing has been damaged.
- Do not touch the plug during an electrical storm. Otherwise, you may receive an electric shock.
- Unplug the projector when it will not be used for extended periods.
- Do not use the projector where it may be exposed to rain, water, or excessive humidity.
- Do not use or store the projector where it may be exposed to smoke, steam, corrosive gases, excessive dust, vibration, or shock.
- Do not use the projector where flammable or explosive gases may be present.
- Do not use or store the projector or remote control in a hot location, such as near a heater, in direct sunlight, or in a closed vehicle.
- If you use the projector in a country other than where you purchased it, use the correct power cord for that country.
- Do not stand on the projector or place heavy objects on it.
- Do not use the projector outside of the required temperature range of 41 to 95 °F (5 to 35 °C) at an altitude of 7500 feet (2286 m) or less, or 41 to 86 °F (5 to 30 °C) at a higher altitude. Doing so may cause an unstable display and could lead to projector damage. Do not use or store the projector where it may be exposed to sudden changes in temperature.

- Do not store the projector outside of the required temperature range of 14 to 140 °F (-10 to 60 °C) or in direct sunlight for long periods of time. Doing so may cause damage to the case.
- Do not place anything that can become warped or damaged by heat near the exhaust vents. Do not bring your hands or face close to the vents while projection is in progress. Do not bring your face close to the projector while it is in use.
- Before you move the projector, make sure its power is turned off, the plug is disconnected from the outlet, and all cables are disconnected.
- Never try to remove the lamp immediately after use because it will be extremely hot. Before removing the lamp, turn off the power and wait at least an hour to allow the lamp to cool completely.
- Do not disassemble the lamp or subject it to impacts.
- Do not place the source of an open flame, such as a lit candle, on or near the projector.
- Do not modify the power cord. Do not place heavy objects on top of the power cord or bend, twist, or pull it excessively. Keep the power cord away from hot electrical appliances.
- If the lamp breaks, ventilate the room to prevent gases contained in the lamp from being inhaled or coming in contact with your eyes or mouth. If you do inhale gases or gases come in contact with your eyes or mouth, seek medical advice immediately.
- If the projector is mounted overhead and the lamp breaks, be careful to prevent pieces of glass from falling into your eyes or mouth when you open the lamp cover. If pieces of glass do get into your eyes or mouth, seek medical advice immediately.

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

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

Restriction of Use

Parent topic: Notices

Restriction of Use

When this product is used for applications requiring high reliability/safety such as transportation devices related to aviation, rail, marine, automotive; disaster prevention devices; various safety devices; or functional/precision devices, you should use this product only after giving consideration to including fail-safes and redundancies into your design to maintain safety and total system reliability.

Because this product was not intended for use in applications requiring extremely high reliability/safety such as aerospace equipment, main communication equipment, nuclear power control equipment, or medical equipment related to direct medical care, please make your own judgment on this product's suitability after a full evaluation.

Parent topic: Important Safety Instructions

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

For Canadian Users

CAN ICES-3(B)/NMB-3(B)

Parent topic: Notices

Trademarks

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

Accolade[®] and PrivateLine[®] are registered trademarks, and Extra CareSM is a service mark of Epson America, Inc.

Mac, OS X and iPad are trademarks of Apple Inc., registered in the U.S. and other countries.

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

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



Parent topic: Notices

Open Source Software License

GNU GPL

This projector product includes the open source software programs which apply the GNU General Public License Version 2 or later version ("GPL Programs").

We provide the source code of the GPL Programs until five (5) years after the discontinuation of same model of this projector product.

If you desire to receive the source code of the GPL Programs, contact Epson as described in the User's *Guide*.

These GPL Programs are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

The list of GPL Programs is as follows and the names of author are described in the source code of the GPL Programs

The list of GPL Programs

busybox-1.13.4

iptables-1.4.4

libgcc1(gcc-4.3.3)

libstdc++-6.0.10

linux-2.6.27

patches

udhcp 0.9.8

uvc rev.219

wireless_tools 29

EPSON original drivers

The GNU General Public License Version 2 is as follows. You also can see the GNU General Public License Version 2 at http://www.gnu.org/licenses/.

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (c) 1989, 1991 Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any

associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have

made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR

DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>

Copyright (c) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (c) year name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type 'show w'. This is free software, and you are welcome to redistribute it under certain conditions; type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than 'show w' and 'show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

GNU LGPL

This projector product includes the open source software programs which apply the GNU Lesser General Public License Version 2 or later version ("LGPL Programs").

We provide the source code of the LGPL Programs until five (5) years after the discontinuation of same model of this projector product.

If you desire to receive the source code of the LGPL Programs, please see the "EPSON Projector Contact List" in the User's Guide, and contact the customer support of your region.

These LGPL Programs are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

The list of LGPL Programs is as follows and the names of author are described in the source code of the LGPL Programs.

LGPL Programs

glibc-2.8

SDL-1.2.13

SDL-Image

The GNU Lesser General Public License Version 2 is as follows. You also can see the GNU Lesser General Public License Version 2 at http://www.gnu.org/licenses/.

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright ©) 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General

Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is

unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form)

with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>

Copyright (c) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

BSD License (Berkeley Software Distribution License)

This projector product includes the open source software program "University of California, Berkeley License (Berkeley Software Distribution License)" which applies the terms and conditions provided by owner of the copyright to the "BSD License".

The "BSD License" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of BSD License programs

busybox-1.13.4

License terms of conditions of each program which are provided by owner of the copyright to the "BSD License" are as follows.

Copyright (c) The Regents of the University of California. All rights reserved.

This code is derived from software contributed to Berkeley by Kenneth Almquist.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

libjpeg

This projector product includes the open source software program "libjpeg" which applies the terms and conditions provided by owner of the copyright to the "libjpeg".

The "libjpeg" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of libjpeg programs

libjpeg-6b

License terms of conditions of each program which are provided by owner of the copyright to the "libjpeg" are as follows.

Copyright (c) 1994-1997, Thomas G. Lane. This file is part of the Independent JPEG Group's software. For conditions of distribution and use, see the accompanying README file.

This distribution contains the sixth public release of the Independent JPEG Group's free JPEG software. You are welcome to redistribute this software and to use it for any purpose, subject to the conditions under LEGAL ISSUES, below.

LEGAL ISSUES

In plain English:

1. We don't promise that this software works. (But if you find any bugs, please let us know!)

2. You can use this software for whatever you want. You don't have to pay us.

3. You may not pretend that you wrote this software. If you use it in a program, you must acknowledge somewhere in your documentation that you've used the IJG code.

In legalese:

The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided "AS IS", and you, its user, assume the entire risk as to its quality and accuracy.

This software is copyright (c) 1991-1998, Thomas G. Lane. All Rights Reserved except as specified below.

Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these conditions:

(1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation.

(2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".

(3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

ansi2knr.c is included in this distribution by permission of L. Peter Deutsch, sole proprietor of its copyright holder, Aladdin Enterprises of Menlo Park, CA. ansi2knr.c is NOT covered by the above copyright and conditions, but instead by the usual distribution terms of the Free Software Foundation; principally, that you must include source code if you redistribute it. (See the file ansi2knr.c for full details.) However, since ansi2knr.c is not needed as part of any program generated from the IJG code, this does not limit you more than the foregoing paragraphs do.

The Unix configuration script "configure" was produced with GNU Autoconf. It is copyright by the Free Software Foundation but is freely distributable. The same holds for its supporting scripts (config.guess, config.sub, Itconfig, Itmain.sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.) So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

We are required to state that

"The Graphics Interchange Format(c)) is the Copyright property of CompuServe Incorporated. GIF(sm) is a Service Mark property of CompuServe Incorporated."

libpng

This projector product includes the open source software program "libpng" which applies the terms and conditions provided by owner of the copyright to the "libpng".

The "libpng" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of libpng programs

libpng-1.2.49

License terms of conditions of each program which are provided by owner of the copyright to the "libpng" are as follows.

This copy of the libpng notices is provided for your convenience. In case of any discrepancy between this copy and the notices in the file png.h that is included in the libpng distribution, the latter shall prevail.

COPYRIGHT NOTICE, DISCLAIMER, and LICENSE:

If you modify libpng you may insert additional notices immediately following this sentence.

This code is released under the libpng license.

libpng version 1.2.6, August 15, 2004, through 1.2.49, March 29, 2012, are Copyright (c) 2004, 2006-2009 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-1.2.5 with the following individual added to the list of Contributing Authors

Cosmin Truta

libpng versions 1.0.7, July 1, 2000, through 1.2.5 - October 3, 2002, are Copyright (c) 2000-2002 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-1.0.6 with the following individuals added to the list of Contributing Authors

Simon-Pierre Cadieux

Eric S. Raymond

Gilles Vollant

and with the following additions to the disclaimer:

There is no warranty against interference with your enjoyment of the library or against infringement. There is no warranty that our efforts or the library will fulfill any of your particular purposes or needs. This library is provided with all faults, and the entire risk of satisfactory quality, performance, accuracy, and effort is with the user.

libpng versions 0.97, January 1998, through 1.0.6, March 20, 2000, are Copyright ©) 1998, 1999 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-0.96, with the following individuals added to the list of Contributing Authors:

Tom Lane

Glenn Randers-Pehrson

Willem van Schaik

libpng versions 0.89, June 1996, through 0.96, May 1997, are Copyright (c) 1996, 1997 Andreas Dilger Distributed according to the same disclaimer and license as libpng-0.88, with the following individuals added to the list of Contributing Authors:

John Bowler

Kevin Bracey

Sam Bushell

Magnus Holmgren

Greg Roelofs

Tom Tanner

libpng versions 0.5, May 1995, through 0.88, January 1996, are Copyright (c) 1995, 1996 Guy Eric Schalnat, Group 42, Inc.

For the purposes of this copyright and license, "Contributing Authors" is defined as the following set of individuals:

Andreas Dilger

Dave Martindale

Guy Eric Schalnat

Paul Schmidt

Tim Wegner

The PNG Reference Library is supplied "AS IS". The Contributing Authors and Group 42, Inc. disclaim all warranties, expressed or implied, including, without limitation, the warranties of merchantability and of fitness for any purpose. The Contributing Authors and Group 42, Inc. assume no liability for direct, indirect, incidental, special, exemplary, or consequential damages, which may result from the use of the PNG Reference Library, even if advised of the possibility of such damage.

Permission is hereby granted to use, copy, modify, and distribute this source code, or portions hereof, for any purpose, without fee, subject to the following restrictions:

1. The origin of this source code must not be misrepresented.

2. Altered versions must be plainly marked as such and must not be misrepresented as being the original source.

3. This Copyright notice may not be removed or altered from any source or altered source distribution.

The Contributing Authors and Group 42, Inc. specifically permit, without fee, and encourage the use of this source code as a component to supporting the PNG file format in commercial products. If you use this source code in a product, acknowledgment is not required but would be appreciated.

A "png_get_copyright" function is available, for convenient use in "about" boxes and the like:

printf("%s",png_get_copyright(NULL));

Also, the PNG logo (in PNG format, of course) is supplied in the files "pngbar.png" and "pngbar.jpg" (88x31) and "pngnow.png" (98x31).

Libpng is OSI Certified Open Source Software. OSI Certified Open Source is a certification mark of the Open Source Initiative.

Glenn Randers-Pehrson

glennrp@users.sourceforge.net

March 29, 2012

zlib

This projector product includes the open source software program "zlib" which applies the terms and conditions provided by owner of the copyright to the "zlib".

The "zlib" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of zlib programs

zlib-1.1.4

License terms of conditions of each program which are provided by owner of the copyright to the "zlib" are as follows.

Copyright notice:

(c) 1995-1998 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.

2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.

3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly

jloup@gzip.org Mark Adler

madler@alumni.caltech.edu

If you use the zlib library in a product, we would appreciate *not* receiving lengthy legal documents to sign. The sources are provided for free but without warranty of any kind. The library has been entirely written by Jean-loup Gailly and Mark Adler; it does not include third-party code.

If you redistribute modified sources, we would appreciate that you include in the file ChangeLog history information documenting your changes.

mDNSResponder

This projector product includes the open source software program "mDNSResponder" which applies the following license terms "Apache License Version 2.0, January 2004".

List of "mDNSResponder"

mDNSResponder-107.6 (only mDNSResponderPosix is used)

License terms "Apache License Version 2.0, January 2004" are as follows.

Apache License

Version 2.0, January 2004

http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (I) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");

you may not use this file except in compliance with the License.

You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

aes-src-29-04-09

This projector product includes the open source software program "aes-src-29-04-09" which applies the terms and conditions provided by owner of the copyright to the "aes-src-29-04-09".

The "aes-src-29-04-09" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of es-src-29-04-09 programs

newlib

This projector product includes the open source software program "newlib" which applies the terms and conditions provided by owner of the copyright to the "newlib".

The "newlib" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of newlib programs

newlib 1.17.0

License terms of conditions of each program which are provided by owner of the copyright to the "newlib" are as follows.

The newlib subdirectory is a collection of software from several sources.

Each file may have its own copyright/license that is embedded in the source file. Unless otherwise noted in the body of the source file(s), the following copyright notices will apply to the contents of the newlib subdirectory:

(1) Red Hat Incorporated

Copyright (c) 1994-2007 Red Hat, Inc. All rights reserved.

This copyrighted material is made available to anyone wishing to use, modify, copy, or redistribute it subject to the terms and conditions of the BSD License. This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY expressed or implied, including the implied warranties of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. A copy of this license is available at http://www.opensource.org/licenses. Any Red Hat trademarks that are incorporated in the source code or documentation are not subject to the BSD License and may only be used or replicated with the express permission of Red Hat, Inc.

(2) University of California, Berkeley

Copyright (c) 1981-2000 The Regents of the University of California.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(3) David M. Gay (AT&T 1991, Lucent 1998)

The author of this software is David M. Gay.

Copyright ©) 1991 by AT&T.

Permission to use, copy, modify, and distribute this software for any purpose without fee is hereby granted, provided that this entire notice is included in all copies of any software which is or includes a copy or modification of this software and in all copies of the supporting documentation for such software.

THIS SOFTWARE IS BEING PROVIDED "AS IS", WITHOUT ANY EXPRESS OR IMPLIED WARRANTY. IN PARTICULAR, NEITHER THE AUTHOR NOR AT&T MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND CONCERNING THE MERCHANTABILITY OF THIS SOFTWARE OR ITS FITNESS FOR ANY PARTICULAR PURPOSE.

The author of this software is David M. Gay.

Copyright (c) 1998-2001 by Lucent Technologies

All Rights Reserved

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that the copyright notice and this permission notice and warranty disclaimer appear in supporting documentation, and that the name of Lucent or any of its entities not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

LUCENT DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL LUCENT OR

ANY OF ITS ENTITIES BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

(4) Advanced Micro Devices

Copyright 1989, 1990 Advanced Micro Devices, Inc.

This software is the property of Advanced Micro Devices, Inc (AMD) which specifically grants the user the right to modify, use and distribute this software provided this notice is not removed or altered. All other rights are reserved by AMD.

AMD MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARD TO THIS SOFTWARE. IN NO EVENT SHALL AMD BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THE FURNISHING, PERFORMANCE, OR USE OF THIS SOFTWARE.

So that all may benefit from your experience, please report any problems or suggestions about this software to the 29K Technical Support Center at 800-29-29-AMD (800-292-9263) in the USA, or 0800-89-1131 in the UK, or 0031-11-1129 in Japan, toll free. The direct dial number is 512-462-4118.

Advanced Micro Devices, Inc.

29K Support Products

Mail Stop 573

5900 E. Ben White Blvd.

Austin, TX 78741

800-292-9263

(5) C.W. Sandmann

Copyright (C) 1993 C.W. Sandmann

This file may be freely distributed as long as the author's name remains.

(6) Eric Backus

(C) Copyright 1992 Eric Backus

This software may be used freely so long as this copyright notice is left intact. There is no warrantee on this software.

(7) Sun Microsystems

Copyright (C) 1993 by Sun Microsystems, Inc. All rights reserved.

Developed at SunPro, a Sun Microsystems, Inc. business. Permission to use, copy, modify, and distribute this software is freely granted, provided that this notice is preserved.

(8) Hewlett Packard

(c) Copyright 1986 HEWLETT-PACKARD COMPANY

To anyone who acknowledges that this file is provided "AS IS" without any express or implied warranty: permission to use, copy, modify, and distribute this file for any purpose is hereby granted without fee, provided that the above copyright notice and this notice appears in all copies, and that the name of Hewlett-Packard Company not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. Hewlett-Packard Company makes no representations about the suitability of this software for any purpose.

(9) Hans-Peter Nilsson

Copyright (C) 2001 Hans-Peter Nilsson

Permission to use, copy, modify, and distribute this software is freely granted, provided that the above copyright notice, this notice and the following disclaimer are preserved with no changes.

THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

(11) Christopher G. Demetriou

Copyright (c) 2001 Christopher G. Demetriou

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(12) SuperH, Inc.

Copyright 2002 SuperH, Inc. All rights reserved

This software is the property of SuperH, Inc (SuperH) which specifically grants the user the right to modify, use and distribute this software provided this notice is not removed or altered. All other rights are reserved by SuperH.

SUPERH MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARD TO THIS SOFTWARE. IN NO EVENT SHALL SUPERH BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THE FURNISHING, PERFORMANCE, OR USE OF THIS SOFTWARE.

So that all may benefit from your experience, please report any problems or suggestions about this software to the SuperH Support Center via e-mail at softwaresupport@superh.com.

SuperH, Inc.

405 River Oaks Parkway

San Jose

CA 95134

USA

(13) Royal Institute of Technology

Copyright (c) 1999 Kungliga Tekniska Hökolan (Royal Institute of Technology, Stockholm, Sweden).

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of KTH nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY KTH AND ITS CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL KTH OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(14) Alexey Zelkin

Copyright (c) 2000, 2001 Alexey Zelkin <phantom@FreeBSD.org>

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(15) Andrey A. Chernov

Copyright (C) 1997 by Andrey A. Chernov, Moscow, Russia.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(16) FreeBSD

Copyright (c) 1997-2002 FreeBSD Project.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(17) S. L. Moshier

Author: S. L. Moshier.

Copyright (c) 1984,2000 S.L. Moshier

Permission to use, copy, modify, and distribute this software for any purpose without fee is hereby granted, provided that this entire notice is included in all copies of any software which is or includes a copy or modification of this software and in all copies of the supporting documentation for such software.

THIS SOFTWARE IS BEING PROVIDED "AS IS", WITHOUT ANY EXPRESS OR IMPLIED WARRANTY. IN PARTICULAR, THE AUTHOR MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND CONCERNING THE MERCHANTABILITY OF THIS SOFTWARE OR ITS FITNESS FOR ANY PARTICULAR PURPOSE.

(18) Citrus Project

Copyright (c)1999 Citrus Project,

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(19) Todd C. Miller

Copyright (c) 1998 Todd C. Miller < Todd.Miller@courtesan.com>

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(20) DJ Delorie (i386)

Copyright (C) 1991 DJ Delorie

All rights reserved.

Redistribution and use in source and binary forms is permitted provided that the above copyright notice and following paragraph are duplicated in all such forms.

This file is distributed WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

(23) Intel (i960)

Copyright (c) 1993 Intel Corporation

Intel hereby grants you permission to copy, modify, and distribute this software and its documentation. Intel grants this permission provided that the above copyright notice appears in all copies and that both the copyright notice and this permission notice appear in supporting documentation. In addition, Intel grants this permission provided that you prominently mark as "not part of the original" any modifications made to this software or documentation, and that the name of Intel Corporation not be used in advertising or publicity pertaining to distribution of the software or the documentation without specific, written prior permission.

Intel Corporation provides this AS IS, WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Intel makes no guarantee or representations regarding the use of, or the results of the use of, the software and documentation in terms of correctness, accuracy, reliability, currentness, or otherwise; and you rely on the software, documentation and results solely at your own risk.

IN NO EVENT SHALL INTEL BE LIABLE FOR ANY LOSS OF USE, LOSS OF BUSINESS, LOSS OF PROFITS, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. IN NO EVENT SHALL INTEL'S TOTAL LIABILITY EXCEED THE SUM PAID TO INTEL FOR THE PRODUCT LICENSED HEREUNDER.

(26) Mike Barcroft

Copyright (c) 2001 Mike Barcroft <mike@FreeBSD.org>

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(27) Konstantin Chuguev (--enable-newlib-iconv)

Copyright (c) 1999, 2000

Konstantin Chuguev. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED

WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

iconv (Charset Conversion Library) v2.0

(28) Artem Bityuckiy (--enable-newlib-iconv)

Copyright (c) 2003, Artem B. Bityuckiy, SoftMine Corporation. Rights transferred to Franklin Electronic Publishers.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(30) - Alex Tatmanjants (targets using libc/posix)

Copyright (c) 1995 Alex Tatmanjants <alex@elvisti.kiev.ua>

at Electronni Visti IA, Kiev, Ukraine.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(31) - M. Warner Losh (targets using libc/posix)

Copyright (c) 1998, M. Warner Losh <imp@freebsd.org>

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(32) - Andrey A. Chernov (targets using libc/posix)

Copyright (C) 1996 by Andrey A. Chernov, Moscow, Russia.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(33) - Daniel Eischen (targets using libc/posix)

Copyright (c) 2001 Daniel Eischen <deischen@FreeBSD.org>.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. (35) - ARM Ltd (arm and thumb variant targets only)

Copyright (c) 2009 ARM Ltd

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. The name of the company may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY ARM LTD "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL ARM LTD BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(36) - CodeSourcery, Inc.

Copyright (c) 2009 CodeSourcery, Inc.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* Neither the name of CodeSourcery nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY CODESOURCERY, INC. "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF

MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AREDISCLAIMED. IN NO EVENT SHALL CODESOURCERY BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(37) MIPS Technologies, Inc

/*

* Copyright (c) 2009 MIPS Technologies, Inc.

*

* All rights reserved.

*

* Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

*

* * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* * Neither the name of MIPS Technologies Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

* THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

/*

MIT License

This projector product includes the open source software program which applies the terms and conditions provided by owner of the copyright to the "MIT License".

The "MIT License" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of MIT License programs

jquery-1.7.2.min.js

jquery-ui-1.8.20.custom.zip

jquery.ui.touch-punch.js

jquery.upload-1.0.2.min.js

License terms of conditions of each program which are provided by owner of the copyright to the "MIT License" are as follows.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

TOPPERS/JSP

This projector product includes the open source software program "TOPPERS/JSP" which applies the terms and conditions provided by owner of the copyright to the "TOPPERS/JSP". The "TOPPERS/JSP" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of TOPPERS/JSP programs

jsp-1.4.3

License terms of conditions of each program which are provided by owner of the copyright to the "TOPPERS/JSP" are as follows.

TOPPERS/JSP Kernel

Toyohashi Open Platform for Embedded Real-Time Systems/

Just Standard Profile Kernel

Copyright (C) 2000-2003 by Embedded and Real-Time Systems Laboratory Toyohashi Univ. of Technology, JAPAN

Copyright (C) 2004 by Embedded and Real-Time Systems Laboratory

Graduate School of Information Science, Nagoya Univ., JAPAN.

The above copyright holder, limited to cases in which one satisfies conditions $(1) \sim (4)$ below, or the conditions described in Version 2 of the GNU Public License officially announced by the Free Software Foundation, consents to the use, reproduction, alteration, and redistribution (hereafter called utilization) of this software (this software includes alterations, likewise below) without compensation.

(1) When this software is utilized in the form of source code, the above copyright declaration, these conditions of utilization, and the following stipulation of no guarantee shall be included in unchanged form inside the source code.

(2) When this software is redistributed in a form in which it can be used in the development of other software, library form, etc., the above copyright display, these terms of utilization, and the following stipulation of no guarantee shall be inserted in documentation accompanying redistribution (user's manual, etc.).

(3) When this software is redistributed in a form in which it cannot be used in the development of other software, embedded in devices, etc., one of the following conditions shall be satisfied.

(a) The above copyright display, these terms of utilization, and the following stipulation of no guarantee shall be inserted in documentation accompanying redistribution (user's manual, etc.).

(b) The TOPPERS Project shall be notified owing to a method in which the form of distribution is decided otherwise.

(4) The above copyright holder and the TOPPERS Project shall be exempt from responsibility for whatever damages occur either directly or indirectly through the utilization of this software.

This software is something that is provided with no guarantee. The above copyright holder and the TOPPERS Project make no guarantee whatsoever in regard to this software, including the possibility of its application. In addition, the above copyright holder and the TOPPERS Project shall also not bear responsibility for whatever damages occur either directly or indirectly through the utilization of this software.

Note: The TOPPERS License has been revised several times; what is shown above is the latest version that is to be applied to software made public hereafter.

TINET

This projector product includes the open source software program "TINET" which applies the terms and conditions provided by owner of the copyright to the "TINET". The "TINET" are WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

List of TINET programs

tinet-1.4.4

License terms of conditions of each program which are provided by owner of the copyright to the "TINET" are as follows.

(1) FreeBSD

Copyright (c) 1980, 1986, 1993

The Regents of the University of California. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

This product includes software developed by the University of California, Berkeley and its contributors.

4. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING

NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

(6) TINET and TOPPERS

TINET (TCP/IP Protocol Stack)

Copyright (C) 2001-2006 by Dep. of Computer Science and Engineering Tomakomai National College of Technology, JAPAN

TINET (TCP/IP Protocol Stack)

Copyright (C) 2001-2006 by Dep. of Computer Science and Engineering Tomakomai National College of Technology, JAPAN

The above copyright holder, limited to cases in which one satisfies conditions $(1) \sim (4)$ below, or the conditions described in Version 2 of the GNU Public License officially announced by the Free Software Foundation, consents to the use, reproduction, alteration, and redistribution (hereafter called utilization) of this software (this software includes alterations, likewise below) without compensation.

(1) When this software is utilized in the form of source code, the above copyright declaration, these conditions of utilization, and the following stipulation of no guarantee shall be included in unchanged form inside the source code.

(2) When this software is redistributed in a form in which it can be used in the development of other software, library form, etc., the above copyright display, these terms of utilization, and the following stipulation of no guarantee shall be inserted in documentation accompanying redistribution (user's manual, etc.).

(3) When this software is redistributed in a form in which it cannot be used in the development of other software, embedded in devices, etc., following conditions shall be satisfied.

(a) The above copyright display, these terms of utilization, and the following stipulation of no guarantee shall be inserted in documentation accompanying redistribution (user's manual, etc.).

(4) The above copyright holder and the TOPPERS Project shall be exempt from responsibility for whatever damages occur either directly or indirectly through the utilization of this software.

This software is something that is provided with no guarantee. The above copyright holder and the TOPPERS Project make no guarantee whatsoever in regard to this software, including the possibility of its application. In addition, the above copyright holder and the TOPPERS Project shall also not bear responsibility for whatever damages occur either directly or indirectly through the utilization of this software.

Tomakomai National College of Technology, JAPAN

The above copyright holder, limited to cases in which one satisfies conditions (1) ~ (4) below, or the conditions described in Version 2 of the GNU Public License officially announced by the Free Software

Foundation, consents to the use, reproduction, alteration, and redistribution (hereafter called utilization) of this software (this software includes alterations, likewise below) without compensation.

(1) When this software is utilized in the form of source code, the above copyright declaration, these conditions of utilization, and the following stipulation of no guarantee shall be included in unchanged form inside the source code.

(2) When this software is redistributed in a form in which it can be used in the development of other software, library form, etc., the above copyright display, these terms of utilization, and the following stipulation of no guarantee shall be inserted in documentation accompanying redistribution (user's manual, etc.).

(3) When this software is redistributed in a form in which it cannot be used in the development of other software, embedded in devices, etc., following conditions shall be satisfied.

(a) The above copyright display, these terms of utilization, and the following stipulation of no guarantee shall be inserted in documentation accompanying redistribution (user's manual, etc.).

(4) The above copyright holder and the TOPPERS Project shall be exempt from responsibility for whatever damages occur either directly or indirectly through the utilization of this software.

This software is something that is provided with no guarantee. The above copyright holder and the TOPPERS Project make no guarantee whatsoever in regard to this software, including the possibility of its application. In addition, the above copyright holder and the TOPPERS Project shall also not bear responsibility for whatever damages occur either directly or indirectly through the utilization of this software.

Parent topic: Notices

Copyright Notice

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

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

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

This information is subject to change without notice.

A Note Concerning Responsible Use of Copyrighted Materials Copyright Attribution

Parent topic: Notices

A Note Concerning Responsible Use of Copyrighted Materials

Epson encourages each user to be responsible and respectful of the copyright laws when using any Epson product. While some countries' laws permit limited copying or reuse of copyrighted material in certain circumstances, those circumstances may not be as broad as some people assume. Contact your legal advisor for any questions regarding copyright law.

Parent topic: Copyright Notice

Copyright Attribution

© 2015 Epson America, Inc. 1/15 CPD-41714 **Parent topic:** Copyright Notice