EPSON®

EMP-835/830

User's Guide

Features of the Projector

Direct Power On

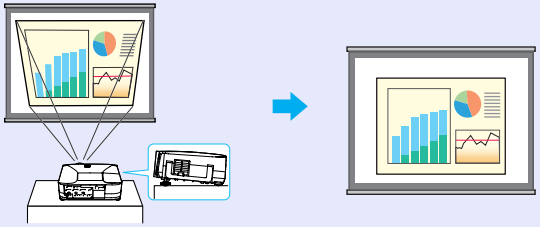
You can make the projector turn on and be ready to project images simply by connecting the power cable. You can also turn the power on for projectors in places such as meeting rooms where the power is centrally controlled, simply by turning the power on at the central control point. ☛ p.85

Direct Power Off

You can turn the power straight off without pressing the [Power] button. This lets you turn the power off when the projector is in a meeting room and you operate a breaker switch to centrally turn off the power. ☛ p.44
After turning the projector off, you can disconnect the power cable right away to move the projector.
You can also turn the power on to restart the projector immediately after turning it off.

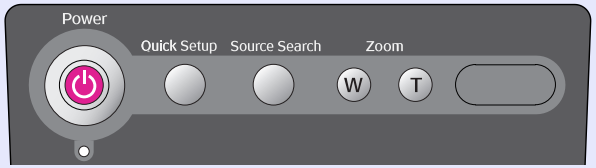
Easy Quick Start Operation (1)

When projection starts, automatic focus operates straight away so that the images are correctly focused.
The keystone distortion that occurs as result of the projector being tilted upward or downward can be automatically corrected. ☛ p.34



Easy Quick Start Operation (2)

The following easy setup buttons are located at the top of the projector's control panel. Projected images can be quickly and easily adjusted to the optimum images just by pressing these buttons.



Quick Setup - Optimising the Projection Screen at a Single Touch - ☛ p.40

The following functions are carried out all at once to optimise the projection area. You can also set which functions are carried out at this time.

- Auto focus
  Adjusts the focus.
- Auto Quick Corner
  This adjusts distorted images that are projected from the side so that they are rectangular (4:3 aspect ratio). If using a projection screen (4:3), the images can fit the screen area exactly.
- Wall Shot
  Even if you don't have a screen, you can project images onto some other surfaces without loss of image color. The projector automatically adjusts images to their natural colours even when projecting onto surfaces like blackboards and walls.

Source Search - Easy Selection of Projection Images - ☛ p.35

This detects image signals from connected equipment. You can change the projected images each time the button is pressed.

Zoom - Easy Adjustment of Image Size - ☛ p.40

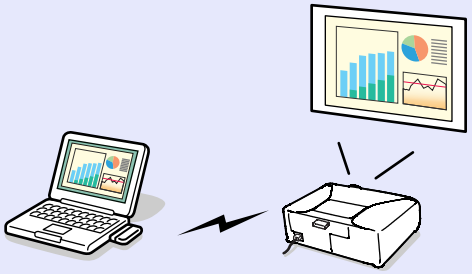
You can adjust the size of the projected images simply by pressing a button.

Network Support

When something goes wrong with the projector, such as lamp blowing during projection, the projector can notify you of the error via e-mail.

In addition, if you are using EMP-835, EasyMP allows you to;

- Make easy network connection with a computer via a wireless LAN.
- Project a computer's image over a network.



☛ For instructions on how to use EasyMP, refer to *EasyMP Network Setup Guide* and *EasyMP Operation Guide*.

Large-volume USB Storage is Available to Use

(EMP-835 only)
As well as a USB-compatible digital camera, you can use a USB-compatible hard disc and a USB-compatible memory device. This allows you to make a presentation in a scenario with large memory. ☛ p.30, "Showing the Presentation (Using the CardPlayer)" in the *EasyMP Operation Guide*

Operation Lock

You can lock the buttons on the projector's control panel and the remote control.
This function is useful at times such as during show events so that only projection is carried out deactivating all buttons operation, or in places such as schools to limit the range of buttons that can be operated. And locking the remote control buttons is useful to prevent errors in operation while giving presentations. ☛ p.66

Contents

Features of the Projector 1

Before Using the Projector

Part Names and Functions 6
- Front/Top/Side 6
- Base 7
- Rear 7
- Remote Control 8
- Control Panel 9
- Input/Output Ports 10

Before Using the Remote Control 11
- Inserting the Batteries 11
- Using the Remote Control and Remote Operating Range 12

Installation 14
- Setting Up the Projector 14
- Screen Size and Projection Distance 15

Inserting and Removing Cards (EMP-835 only) 16
- Installation 16
- Removal 17
- Access Lamp Statuses 18

Connecting to a Computer 19
- Eligible Computers 19
- Connecting to a Computer 20
- Using the Remote Control to Operate the Mouse Pointer (Wireless Mouse Function) 21

Connecting an External Monitor 23

Network Cable Connections 24

Connecting to a Video Source 25
- Projecting Composite Video Images 25
- Projecting S-Video Images 26
- Projecting Component Video Images 26
- Projecting RGB Video Images 27

Playing Sound from Connected Equipment 28

Playing Sound from External Speakers 29

Connecting USB Devices (Digital Camera, Hard Disk Drive or Memory Devices) (EMP-835 Only) 30
- Connecting USB Devices 30
- Disconnecting a USB Device from the Projector 31

Basic Operations

Turning the Projector On 33
- Connecting the Power Cable 33
- Turning the Power On and Projecting Images 34
- Adjusting the Position and Size of the Projection Area 38
- One-touch Adjustment of the Projection Area (Quick Setup) 40

Turning the Projector Off 44

Adjusting the Volume 46

Preventing Theft (Password Protect) 47
- When Password Protect is Enabled 47
- Entering a Password with the Remote Control 48
- Setting Password Protect 49

Advanced Operations

Functions for Enhancing Projection 52
Selecting an Image Source While Viewing Projected Images (Preview Function) 52
Projecting Easy-to-see Images Without a Screen (Wall Shot) ... 53
A/V Mute Function 55
Freeze Function 56
E-Zoom Function 56
PinP (Picture in Picture) Function 57
Pointer Function 58
Preset Function 60
Changing the Resize/Aspect Ratio 62
Projector ID/Remote Control ID 64
Operation Button Lock Function 66
Adjusting Projected Images Manually 68
Focusing the Screen Images (Focus Adjustment) 68
Manually Correcting Projection Area Distortion (Keystone) 68
Adjusting Computer Images 74
Selecting the Projection Quality (Colour Mode Selection) 77
Configuration Menus 78
List of Configuration Menu Commands 79
Using the Configuration Menus 87
Monitoring and Controlling Projectors via a Network (for the EMP-830) 89
Available Network Functions for the EMP-830 89
Projector Network Connecting Settings (EMP-830) 90

Troubleshooting

Using the Help 94
Problem Solving 96
Reading the Indicators 96
When the Indicators Provide No Help 99

Appendices

Maintenance 119
Cleaning 119
Replacing Consumables 120
Saving a User's Logo 125
Optional Accessories and Consumables 128
Optional Accessories 128
Consumables 128
Glossary 129
List of ESC/VP21 Commands 132
Command List 132
Communication Protocol 132
Cable Layouts 132
USB Connection Setup 133
PJLink (EMP-835 only) 134
List of Supported Monitor Displays 135
Specifications 136
Appearance 138

Before Using the Projector

This chapter describes the procedures for setting up the projector before use.

Part Names and Functions 6
- Front/Top/Side 6
- Base 7
- Rear 7
- Remote Control 8
- Control Panel 9
- Input/Output Ports 10

Before Using the Remote Control 11
- Inserting the Batteries 11
- Using the Remote Control and Remote Operating Range 12

Installation 14
- Setting Up the Projector 14
- Screen Size and Projection Distance 15

Inserting and Removing Cards (EMP-835 only) 16
- Installation 16
- Removal 17
- Access Lamp Statuses 18
  - Card Slot Access Lamp Status 18
  - Wireless LAN Card Access Lamp Status 18

Connecting to a Computer 19
- Eligible Computers 19
- Connecting to a Computer 20
  - If the Monitor Port is a Mini D-Sub 15-pin Port (Example) 20
- Using the Remote Control to Operate the Mouse Pointer (Wireless Mouse Function) 21

Connecting an External Monitor 23

Network Cable Connections 24

Connecting to a Video Source 25
- Projecting Composite Video Images 25
- Projecting S-Video Images 26
- Projecting Component Video Images 26
- Projecting RGB Video Images 27
  - If the RGB Output Port is a Mini D-Sub 15-pin Port (Example) 27

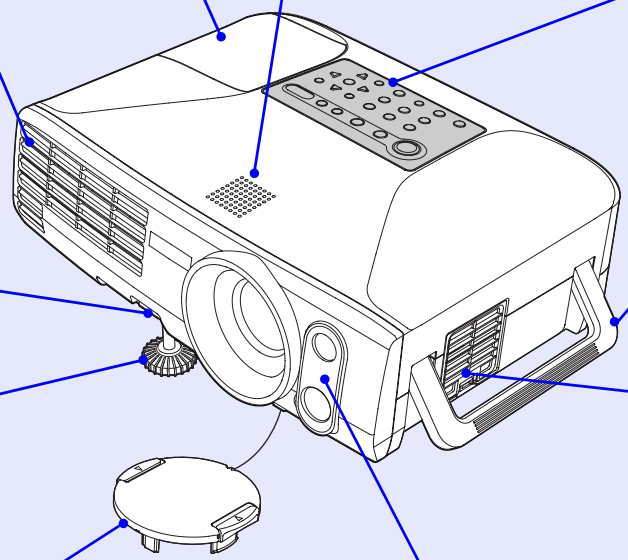
Playing Sound from Connected Equipment 28
  - When Component Video Signals are being Input 28

Playing Sound from External Speakers 29

Connecting USB Devices (Digital Camera, Hard Disk Drive or Memory Devices) (EMP-835 Only) 30
- Connecting USB Devices 30
- Disconnecting a USB Device from the Projector 31

Part Names and Functions

Front/Top/Side



- **Lamp cover** ☛ p.121
  Open this cover when replacing the lamp inside the projector.

- **Air exhaust vent**
  Caution
  Do not place objects that may become warped or otherwise affected by heat near the air exhaust vent and do not bring your face or hands near the air exhaust vent while projection is in progress.

- **Foot adjust lever** ☛ p.39
  Pull out the foot adjust lever to extend and retract the front foot.

- **Front adjustable foot** ☛ p.39
  Extend and retract to adjust the projection angle when the projector is placed on a surface such as a shelf.

- **Lens cover**
  Attach when not using the projector in order to prevent the lens from becoming dirty or damaged.

- **Speaker**

- **Control panel** ☛ p.9

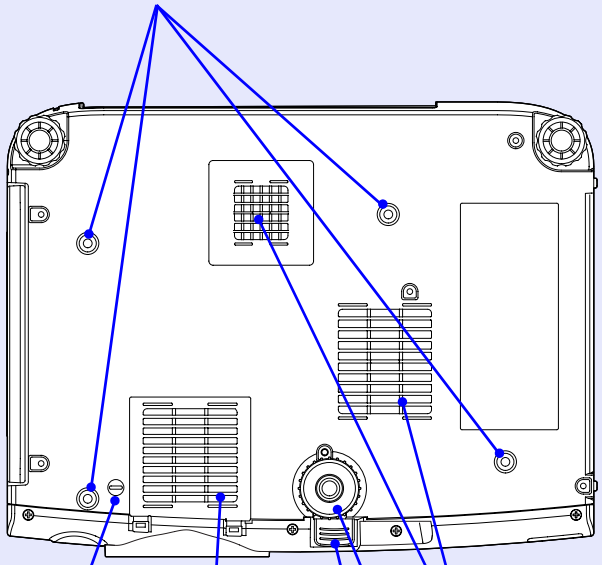
- **Handle**
  Use this handle when carrying the projector.

- **Air filter (Air intake vent)** ☛ p.119, p.124
  Prevents dust and other foreign particles from being drawn into the projector. Clean the air filter periodically.

- **Remote control light-receiving area/sensor** ☛ p.12
  This receives remote control signals, and also detects the state of the projection area for Auto Quick Corner and Wall Shot operations.

Base

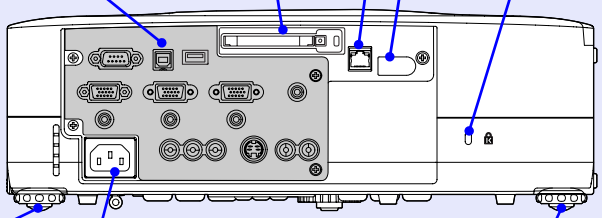
- **Suspension bracket fixing points (4 points)** ☛ p.14, p.128
  Connect an optional ceiling mount here when suspending the projector from the ceiling.



- **Lens cover cord stopper**
  Remove when installing the projector on a ceiling. Grasp the stopper and pull it to remove the lens cover.
- **Air filter** ☛ p.119, p.124
  Prevent dust and other foreign particles from being drawn into the projector. Clean the air filter periodically.
- **Air intake vents** ☛ p.119
  Clean the air intake vents periodically.
- **Front adjustable foot**
- **Foot adjust lever**

Rear

- **Card slot (EMP-835 only)** ☛ p.16
  Insert a wireless LAN card or memory card in here when using EasyMP.
- **Input/output ports** ☛ p.10
  Use to connect the projector to a variety of equipment such as a computer or video equipment.
- **Network port** ☛ p.24
  Connect a network cable here.
- **Remote control light-receiving area** ☛ p.12
  Receives signals from the remote control.
- **Security lock (🔒)** ☛ p.130



- **Rear adjustable foot** ☛ p.39
- **Power inlet** ☛ p.33
  Connect the power cable here.
- **Rear adjustable foot** ☛ p.39
  Extend and retract to adjust the projection angle when the projector is placed on a surface such as a shelf.

Remote Control

If you position the ☝ over the button icon or button name, a description of that button will appear.

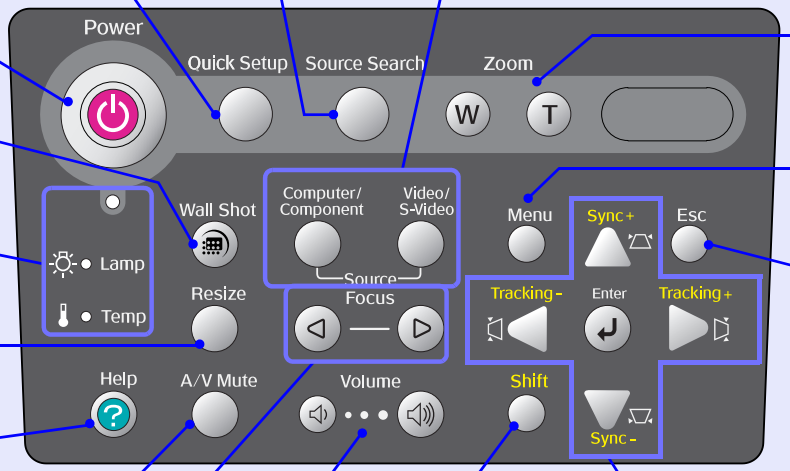
- Remote control light-emitting area ☛ p.12
- Indicator
- [Page] buttons ☛ p.21
- [E-Zoom] buttons ☛ p.56
- [PinP] button ☛ p.57
- [Color Mode] button ☛ p.77
- [☼] (illumination) button
- [Enter(☝)] button ☛ p.22, p.87, p.94
- [Menu] button ☛ p.87
- [Preview] button ☛ p.52
- [Preset] button ☛ p.60
- [Wall Shot] button ☛ p.53
- [Quick Setup] button ☛ p.40
- [Volume] buttons ☛ p.46
- [Num] button ☛ p.48

- [Power] button ☛ p.34, p.44
- [R/C] switch ☛ p.12
- [A/V Mute] button ☛ p.55
- [Resize] button ☛ p.62
- [Freeze] button ☛ p.56
- [ ] button ☛ p.22, p.87, p.94
- [Pointer] button ☛ p.58
- [Esc(☝)] button ☛ p.22, p.88, p.94
- [Help] button ☛ p.94
- Source buttons ☛ p.37
- [Auto] button ☛ p.74
- [Focus] buttons ☛ p.68
- [Zoom] buttons ☛ p.40
- Numeric keypad ☛ p.48, p.65
- [ID] button ☛ p.65
- [Remote] port ☛ p.128

Control Panel

Buttons with no description are the same as the remote control buttons. Refer to the remote control descriptions for details.

- **[Source Search] button** ☛ p.35
  Operates in the same way as the [Search] button on the remote control.
- **[Quick Setup] button** ☛ p.40
- **[Power] button** ☛ p.34, p.44
- **[Wall Shot] button** ☛ p.53
- **Status indicators** ☛ p.96
- **[Resize] button** ☛ p.62
- **[Help] button** ☛ p.94
- **[A/V Mute] button** ☛ p.55
- **[Focus] buttons** ☛ p.68
- **[Volume] button** ☛ p.46
- **[Shift] button** ☛ p.64, p.75, p.76
  This button has no function by itself, but is used when adjusting the sync and tracking and when using the resize function.



- **[Source] buttons** ☛ p.37
  [Computer/Component]button: The input source changes in the order of [Computer1/Component] port →[Computer2/Component] port →EasyMP (EMP-835 only) each time this button is pressed.
  [Video/S-Video] button: The input source changes in the order of [S-Video] port →[Video] port each time this button is pressed.
- **[Zoom] buttons** ☛ p.40
- **[Menu] button** ☛ p.87
- **[Esc] button** ☛ p.88, p.94
  Operates in the same way as the [Esc] button on the remote control.
- **[Enter] button** ☛ p.74, p.88, p.94
  Operates in the same way as the [Enter] button on the remote control when a configuration menu or help screen is displayed.
- **[⏢] and [⏢] buttons** ☛ p.70, p.72, p.76, p.88, p.94
  Use these buttons for vertical keystone correction and correction using Quick Corner.
  If you press one of these buttons while holding down the [Shift] button, you can adjust the sync of computer analogue images.When pressed while a configuration menu or help menu is being displayed, these buttons function as [▲] and [▼] (up and down) buttons for selecting items in the menu.
- **[◁] and [▷] buttons** ☛ p.70, p.72, p.75, p.88
  Use these buttons for horizontal keystone correction and correction using Quick Corner.
  If you press one of these buttons while holding down the [Shift] button, you can adjust the tracking of computer analogue images.When pressed while a configuration menu or help menu is being displayed, these buttons function as [◄] and [►] (left and right) buttons for selecting items in the menu.

Input/Output Ports

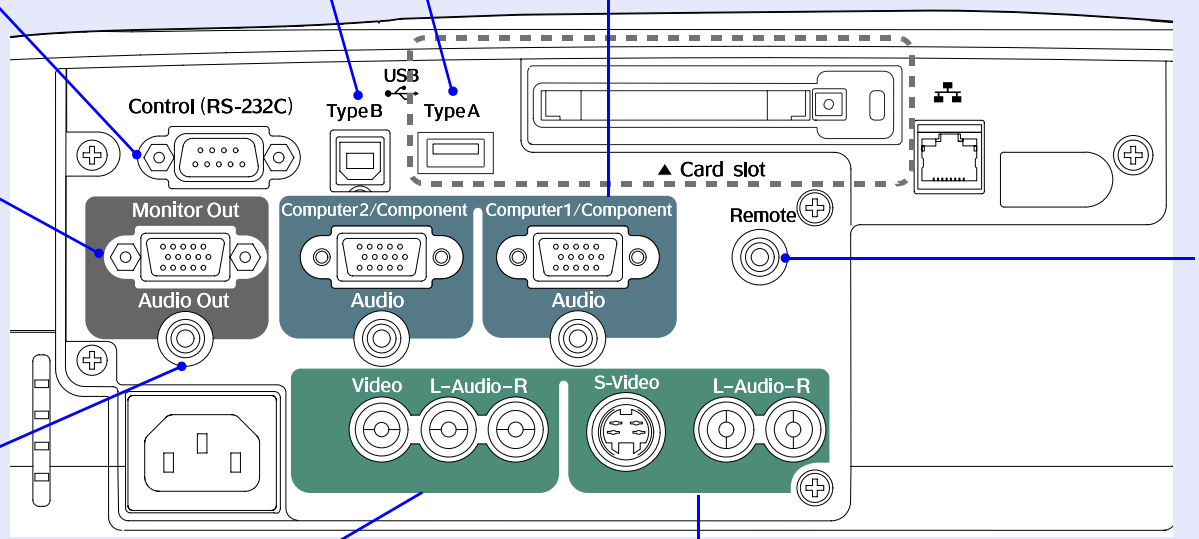
- **[USB TypeA] port (EMP-835 only)** ☛ p.30
  Connects a digital camera or USB support hard disc/ memory to project their image/movie files or scenarios.

- **[USB TypeB] port** ☛ p.21, p.133
  For an USB cable connection to a computer in order to use the wireless mouse function when the computer and the projector are connected using a computer cable.

- **[Control (RS-232C)] port** ☛ p.132
  Connects the projector to a computer using an RS-232C cable. This port is for control use and should not be used by the customer.

- **[Monitor Out] port** ☛ p.23
  Outputs analogue-RGB images from a computer connected by a computer cable, and RGB-video images from a video equipment to an external monitor.
  Doesn't support video images and EasyMP(EMP-835 only).

- **[Audio Out] port** ☛ p.29
  Outputs the audio signals from the selected source to external speakers.



- **[Computer1/Component] port**
  [Computer2/Component] port ☛ p.20, p.26, p.27
  Input analogue-RGB image signals from a computer and RGB-video signals, component video signals from video equipment.

- **[Audio] port (for [Computer1 (or 2)/Component] port)** ☛ p.28
  Input audio signals from the equipment that is connected to the [Computer1 (or 2)/ Component] port directly above.

- **[Remote] port** ☛ p.128
  Connect the optional remote control cable set to input signals from the remote control.

- **[Video] port** ☛ p.25
  Inputs composite video signals from a video source.

- **[Audio] ports (for [Video] port)** ☛ p.28
  Input audio signals from the source that is connected to the [Video] port.
  Also input audio signals from the equipment that is connected to the [Computer2/Component] port if the signal is component video signals.

- **[S-Video] port** ☛ p.26
  Inputs S-Video signals from a video source.

- **[Audio] ports (for [S-Video] port)** ☛ p.28
  Input audio signals from the source that is connected to the [S-Video] port.
  Also input audio signals from the equipment that is connected to the [Computer1/Component] port if the signal is component video signals.

Before Using the Remote Control

Inserting the Batteries

The batteries are not already inserted into the remote control at the time the projector is purchased. You will need to insert the batteries that are provided with the projector before the remote control can be used.

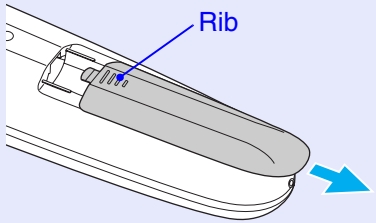
Caution

Be sure to read the Safety Instructions/World-Wide Warranty Terms before handling the batteries.

PROCEDURE

1 Remove the battery cover.

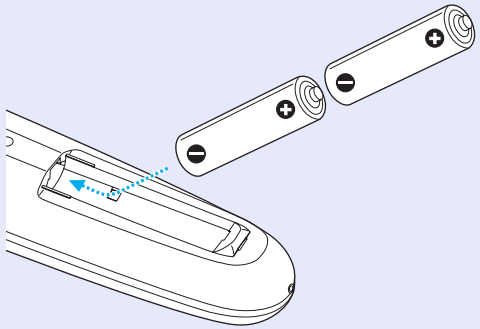
While pushing down on the rib of the battery cover, slide the battery cover in the direction of the arrow.



2 Insert the batteries.

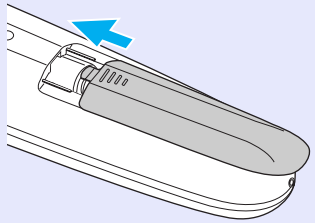
Caution

Check the positions of the (+) and (–) marks inside the battery holder to ensure that the batteries are inserted the correct way.



3 Replace the battery cover.

Slide the battery cover in until the tab clicks into place.



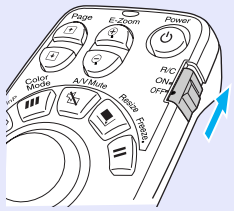
TIP

If delays in the responsiveness of the remote control occur or if it does not operate after it has been used for some time, it probably means that the batteries are becoming flat. If this happens, replace the batteries with two new AA alkali batteries.

Using the Remote Control and Remote Operating Range

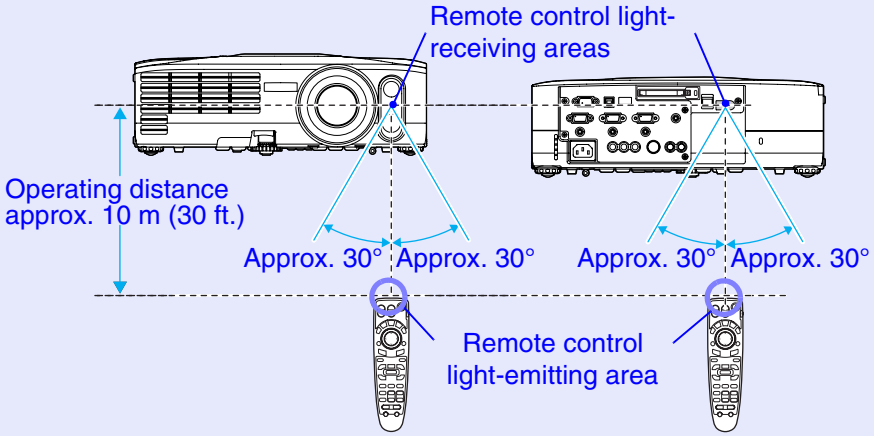
PROCEDURE

1 **Set the [R/C] switch to "ON".**

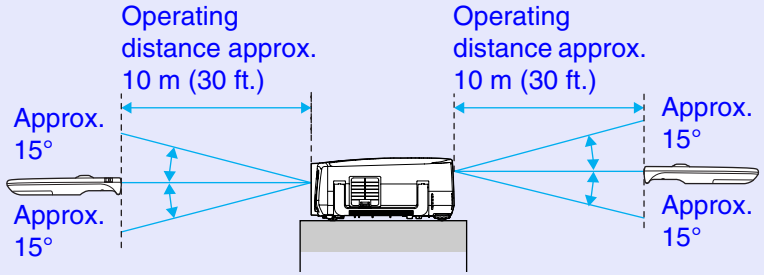


2 **Point the remote control light-emitting area towards one of the remote control light-receiving areas on the projector and operate the remote control buttons.**

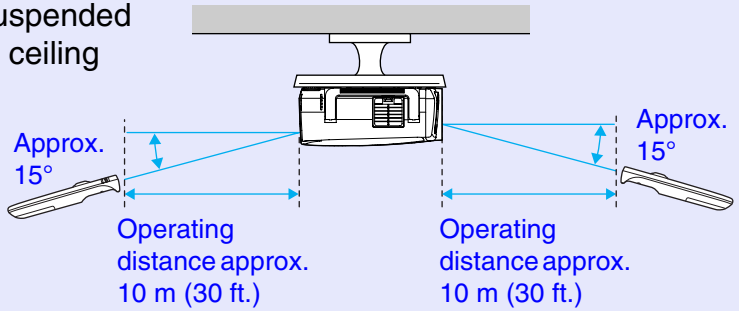
Operating range (horizontal)



Operating angle (vertical)



When suspended from the ceiling



TIP

- *Do not allow sunlight or light from fluorescent lamps to shine directly onto the projector's remote control light-receiving areas, otherwise it may interfere with the reception of signals from the remote control.*
- *When not using the remote control, set the [R/C] switch on the remote control to "OFF". If you leave the [R/C] switch at "ON", it will consume battery power.*
- *If a button on the remote control is pressed down for more than 1 minute while the [R/C] switch is at "ON", the signal for that button operation will stop being transmitted (the remote control will change to sleep mode). The purpose of this is to prevent the batteries from being consumed due to something being placed on top of the remote control.*
  When the button is released, normal remote control operation will resume.
- *If it is within a total of about 10 m (30 ft.) in the distance from the remote control to the screen and from the screen to the projector, the remote control may work by pointing it towards the screen because the signals are reflected by the screen and sent to the projector. However, the operating range varies depending on the status of the screen.*
- *If you would like to ensure that remote control operations work properly from a distance, use the optional remote control cable set to connect the [Remote] port of the remote control to the projector's [Remote] port.*
  ☛ *"Appendices: Optional Accessories and Consumables" p.128*

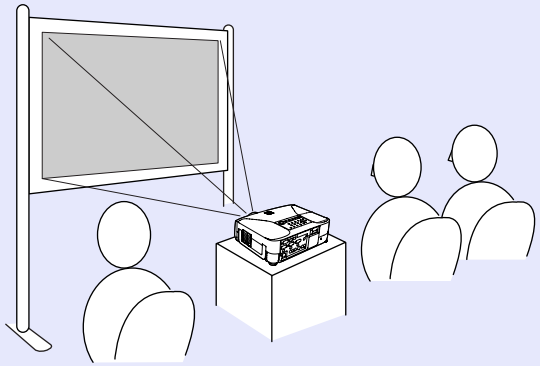
Setting Up the Projector

The projector supports the following four different projection methods, allowing you to choose the best method for displaying your images.

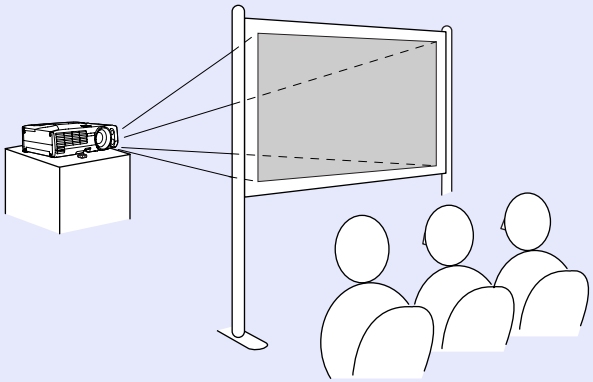
Caution

- ***Before setting up the projector, be sure to first read the separate Safety Instructions/World-Wide Warranty Terms.***
- ***Do not set this projector up on its side to carry out projection, otherwise malfunctions may occur.***

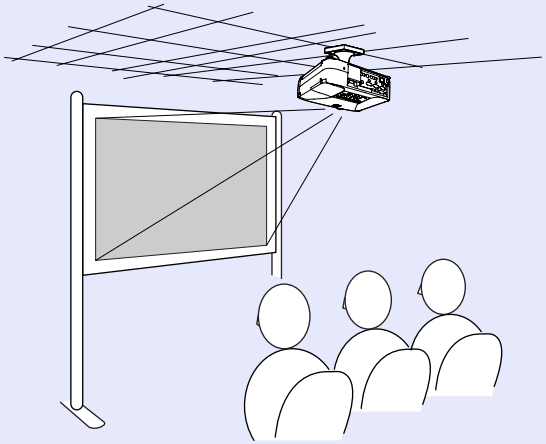
- Front projection



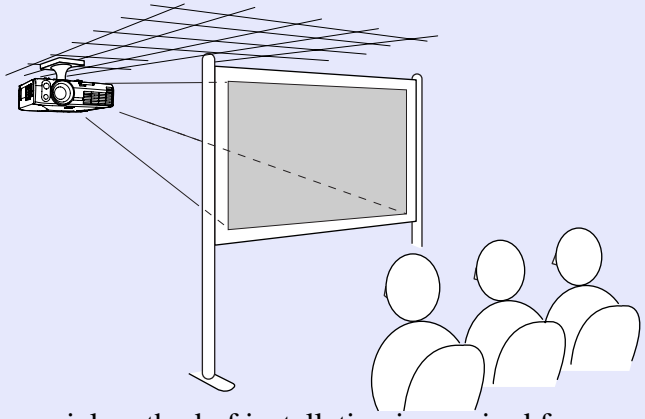
- Rear projection using a translucent screen



- Front/ceiling projection



- Rear/ceiling projection using a translucent screen



* A special method of installation is required for suspending the projector from the ceiling. Please contact your supplier if you would like to use this installation method. The optional ceiling mount is required when installing the projector on the ceiling. ☛ p.128

TIP

When the projector is suspended from a ceiling or projecting from behind the screen, change the "Extended" - "Projection" setting to the appropriate setting. ☛ *p.84*

Screen Size and Projection Distance

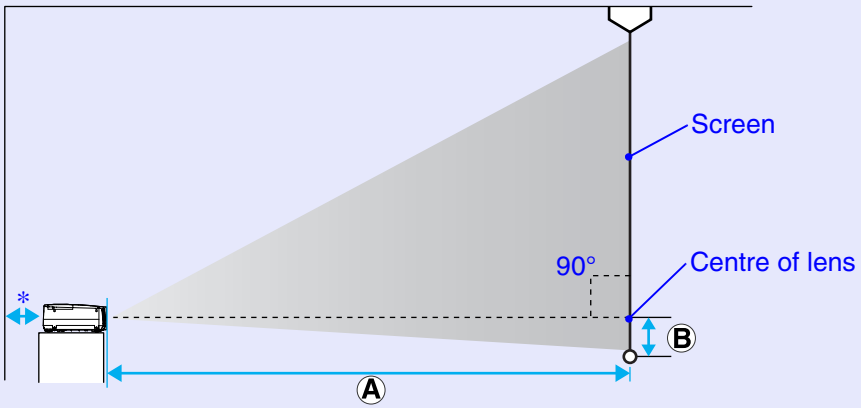
The distance from the lens to the screen determines the actual image size.

Recommended distance	86–1473 cm (2.8–48.3 ft.)

While referring to the following table, position the projector so that the images are projected onto the screen at the optimum size. The values should be used as a guide for setting up the projector. The actual values will vary depending on projection conditions and the zoom setting.

Units: cm (in.) Units: cm (ft.) Units: cm (in.)

4:3 Screen size		Projection distance Ⓐ		Vertical distance from centre of lens to bottom edge of screen Ⓑ
		Shortest (Wide)	Longest (Tele)	
30"	61 × 46 (24.0 × 18.1)	86–142 (2.8–4.7)		4 (1.6)
40"	81 × 61 (31.9 × 24.0)	117–192 (3.8–6.3)		6 (2.2)
50"	100 × 76 (39.4 × 30.0)	147–241 (4.8–7.9)		7 (2.7)
60"	120 × 90 (47.2 × 35.4)	178–290 (5.8–9.5)		8 (3.3)
80"	160 × 120 (63.0 × 47.2)	239–389 (7.8–12.8)		11 (4.4)
100"	200 × 150 (78.7 × 59.1)	300–487 (9.8–16.0)		14 (5.5)
150"	300 × 230 (118.1 × 90.6)	452–734 (14.8–24.1)		21 (8.2)
200"	410 × 300 (161.4 × 118.1)	604–980 (19.8–32.2)		28 (10.9)
250"	510 × 380 (200.8 × 149.6)	756–1226 (24.8–40.2)		35 (13.6)
300"	610 × 460 (240.2 × 181.1)	909–1473 (29.8–48.3)		42 (16.4)



* When installing against a wall, leave a space of 20 cm (7.9 in.) or more between the projector and the wall.

TIP

- ***The standard lens allows a zoom ratio of up to about 1.6. The image size at the maximum zoom setting is about 1.6 times bigger than the image size at the minimum zoom setting.***
- ***When keystone correction is carried out, the projected images will become smaller. Use the zoom function to adjust the size of the images if necessary.*** ☛ *p.40*

Inserting and Removing Cards (EMP-835 only)

You can use PC cards such as wireless LAN cards and memory cards with the EMP-835.
Inserting and removing PC cards will be explained using the included wireless LAN card provided as an example. When using other cards, or inserting or removing a card in a PC card slot on a computer, refer to the documentation included with the card.

TIP

The following PC cards can be inserted into the projector's card slot.
- ***Wireless LAN card (only compatible with the included accessory)***
- ***Memory card*** ☛ *"Specifications" p.136*

Installation

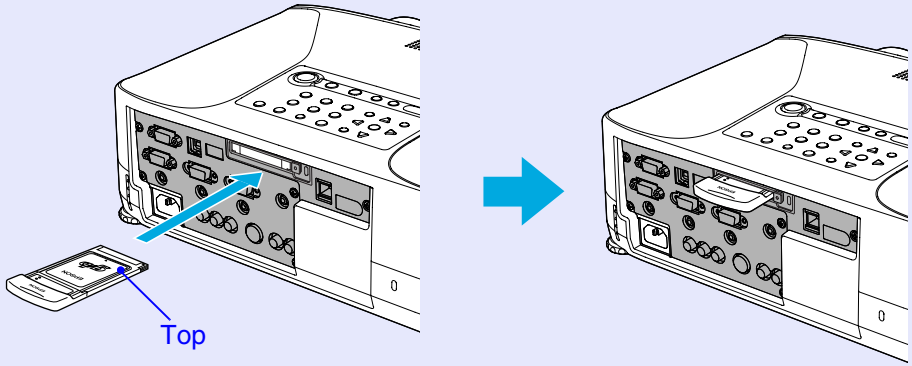
Caution

- ***Insert the PC card facing the right way. Installing the device back to front or upside down may cause failure or damage.***
- ***Be sure to remove the card before transporting the projector.***

PROCEDURE

Insert the PC card into the card slot so that it is facing upwards.

Insert firmly into the slot until it is secure.



Removal

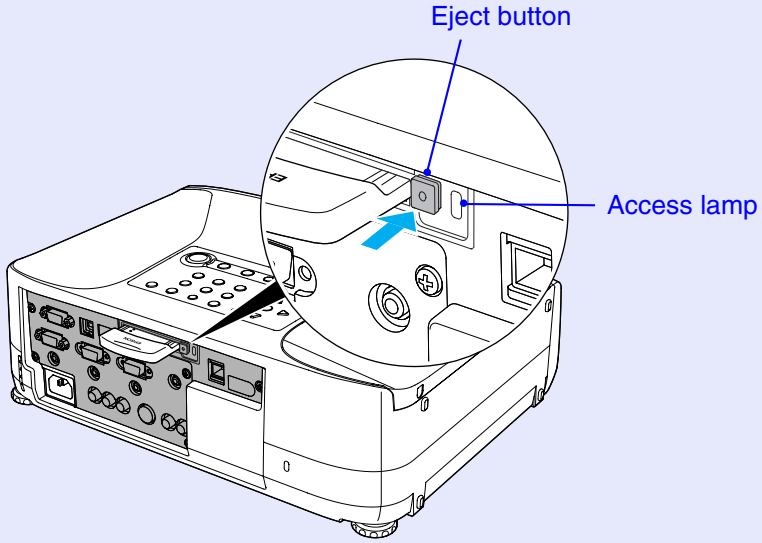
Caution

- *Do not remove the wireless LAN card while the access lamp of the wireless LAN card is flashing green, otherwise it may damage the wireless LAN card.*
- *Do not remove a memory card while the access lamp of the projector's card slot is flashing green, or while projecting a scenario. Doing so may damage the memory card itself or data in the card.*
- *The PC card gets hot during and immediately after projector use. Handle the card carefully when removing it from the card slot. Please handle the card carefully to avoid personal injury or burns.*
- *When you wish to remove a memory card while using CardPlayer, be sure to close CardPlayer before removal. CardPlayer may malfunction if a memory card is removed without closing CardPlayer first.* ☛ *"Closing CardPlayer" in the EasyMP Operation Guide*

PROCEDURE

1 Press the eject button to the right of the card slot.

The eject button will pop out.



2 Press the eject button again.

Enough of the PC card will be ejected so that you can grasp the edge of the card and pull it straight out of the slot.

Caution

Be sure to press the eject button back in to prevent it from being broken or damaged.

Access Lamp Statuses

Card Slot Access Lamp Status

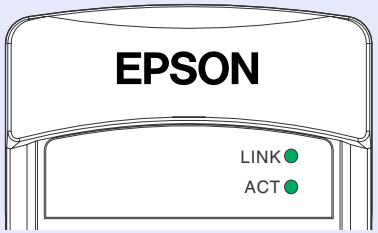
When a memory card has been inserted into the card slot of the projector, you can check the access status for the memory card by noting whether the access lamp is lit and what colour it is, as described below.

Lit Off

Status	Access status
Green	Data is being read from the memory card.
Off	The memory card is in standby state.
Red	An error occurred while data was being read from the memory card.

Wireless LAN Card Access Lamp Status

The card slot access lamp does not light when a wireless LAN card has been inserted into the projector.
You can check the network communication status by observing the status of the wireless LAN access lamps as described below.



Lit flashing

Lamp	Status	Communication status
LINK	Green	The projector is connected to the network and communication is possible.
	Green	Connection to a valid network is in progress.
ACT	Green	Data is being transmitted or received.

Connecting to a Computer

Caution

When connecting the projector to a computer, be sure to check the following.

- ***Turn the power off for both the projector and the computer before connecting them. If the power for either device is on at the time of connection, damage may result.***
- ***Check the shapes of the cable connectors and the device ports before making the connections. If you try to force a connector to fit a device port with a different shape or number of terminals, a malfunction or damage to the connector or port may result.***
- ***Do not bind the power cable and the connecting cable together. If the power cable and the connecting cable are bound together, image interference or errors in operation may result.***

Eligible Computers

The method for connecting the projector to a computer using a cable is explained here.
About network connection with a computer, refer to the following documentation.
If using the EMP-835
☛ *EasyMP Network Setup Guide.*
If using the EMP-830
☛ "Monitoring and Controlling Projectors via a Network (for the EMP-830)" p.89

The projector cannot be connected to some types of computer, or projection of images may not be possible even if actual connection is possible. Make sure that the computer you intend to use satisfies the conditions given below.

- Condition 1: The computer must have an image signal output port.
  Check that the computer has a port such as an "RGB port", "monitor port" or "CRT port" which can output image signals.
  If the computer has a built-in monitor, or if using a laptop computer, it may not be possible to connect the computer to the projector, or alternatively you may need to purchase a separate external output port.
  Refer to the documentation for your computer under a heading such as "Connecting an external monitor" or similar for further details.

- Condition 2: The display resolution and frequency of the computer must be listed in the "List of Supported Monitor Displays"
  ☛ p.135
  Some computers allow you to change the output resolution, so if necessary, change the resolution to one that matches a setting in the "List of Supported Monitor Displays". Refer to the documentation provided with the computer.

TIP

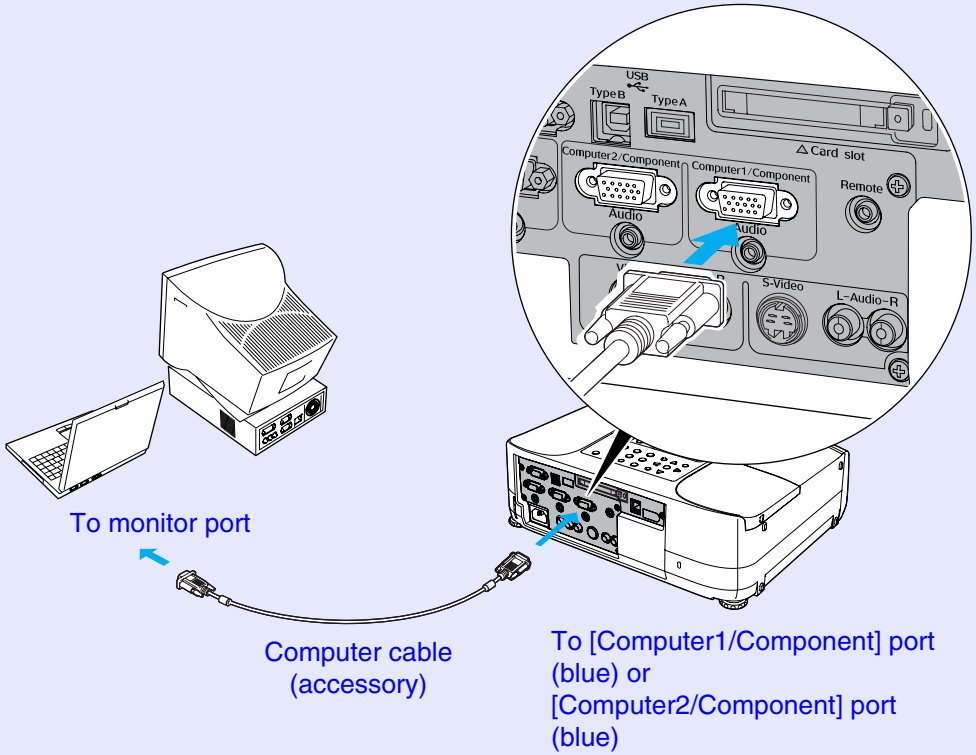
- ***You may need to purchase a commercially-available adapter depending on the shape of the computer's port. Refer to the documentation provided with the computer for further details.***
- ***If the computer and projector are too far away from each other for the accessory computer cable to reach, use the optional VGA-HD15 PC cable. ☛ "Appendices: Optional Accessories and Consumables" p.128***

Connecting to a Computer

The shape and specifications of the computer's monitor port will determine what type of cable should be used. Select the port and cable in accordance with the computer being used.

If the Monitor Port is a Mini D-Sub 15-pin Port (Example)

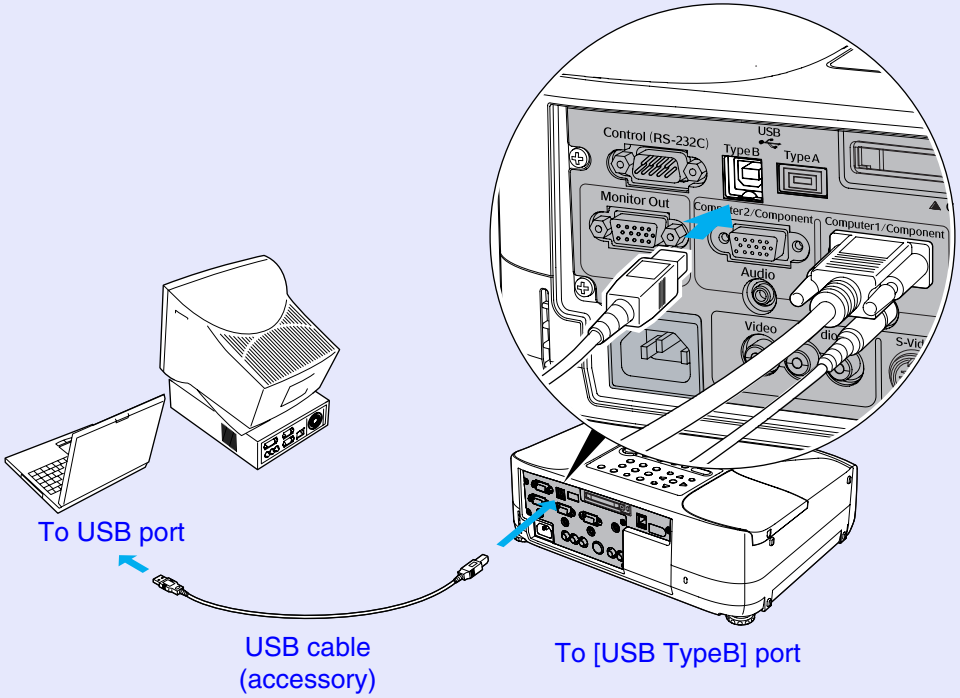
Use the accessory computer cable to make the connections.



Using the Remote Control to Operate the Mouse Pointer (Wireless Mouse Function)

You can use the remote control as a wireless mouse to control the mouse pointer on the screen by using the accessory USB cable to connect the USB port of the computer to the [USB TypeB] port at the rear of the projector.

Computer	Mouse used	Applicable cable
Windows 98/2000/Me/ XP Home Edition/XP Professional	USB mouse	USB cable (accessory)
Macintosh (OS 8.6–9.2/10.1–10.3)	USB mouse	USB cable (accessory)



* When using the remote control as a wireless mouse, the [Page ↓] and [Page ↑] buttons on the remote control can be used to scroll back and forth through slides when projecting a PowerPoint presentation.

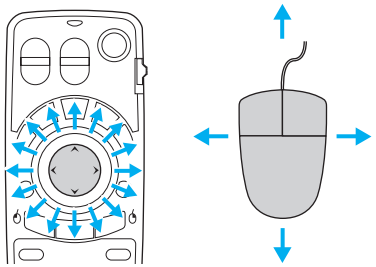
TIP

- ***If your projector is EMP-835, the [USB TypeA] port on the back of the projector does not function as a USB hub.***
- ***The USB cable can only be connected to computers with a standard USB interface. If using a computer which is running Windows, the computer must have had a full version of Windows 98/2000/Me/XP Home Edition/XP Professional installed. If the computer is running a version of Windows 98/2000/Me/XP Home Edition/XP Professional that has been upgraded from an earlier version of Windows, correct operation cannot be guaranteed.***
- ***It may not be possible to use the wireless mouse function under some versions of both the Windows and Macintosh operating systems.***
- ***Some computer settings may have to be changed in order for the mouse function to be used. Consult the documentation for the computer for further details.***

Once the connection has been made, the mouse pointer can be operated as follows.

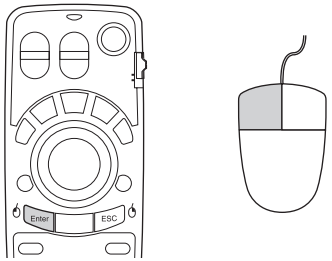
Moving the mouse pointer

Tilt the [⊕] button on the remote control to move the mouse pointer in the direction of tilt.



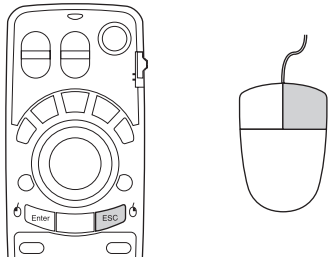
Left click

Press the [Enter (⏻)] button.
If you press the [Enter (⏻)] button twice in rapid succession, it has the effect of a double-click.



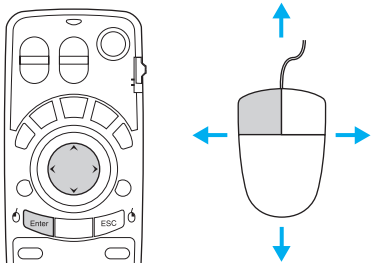
Right click

Press the [Esc (⏻)] button.



Drag and drop

When you hold down the [Enter (⏻)] button for approximately 1.5 seconds, the button will light and drag and drop mode will be enabled. In this mode, you can carry out drag operations by tilting the [⊕] button.
Press the [Enter (⏻)] button at the desired position to drop the items being dragged.



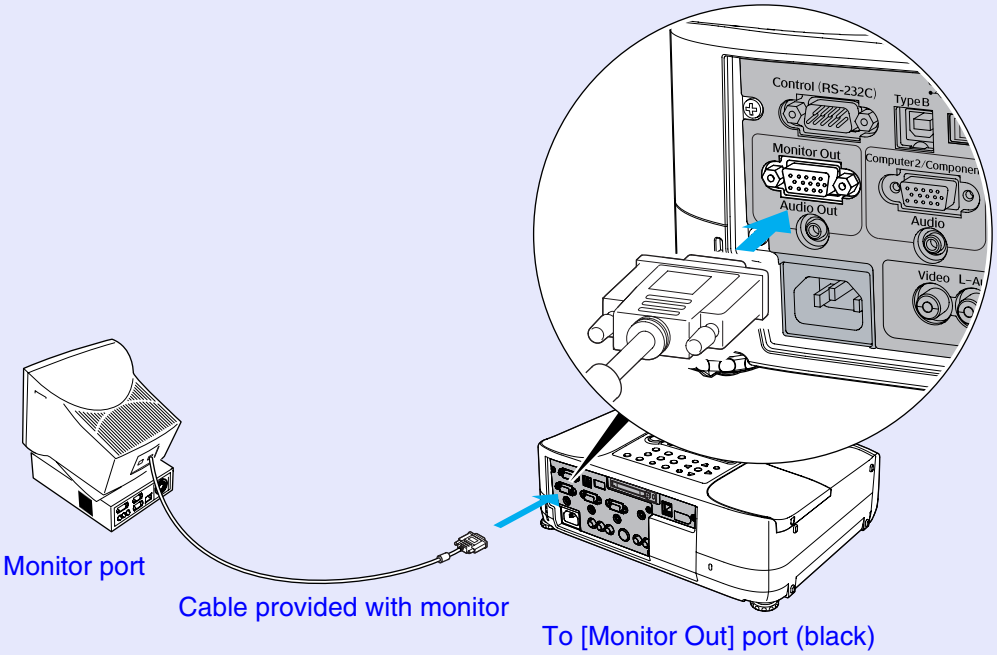
Drag and drop mode can also be enabled in the same way by pressing the [Esc (⏻)] button for approximately 1.5 seconds. This operation allows right click dragging and dropping.

TIP

- ***If the mouse button settings have been reversed at the computer, the operation of the remote control buttons will also be reversed.***
- ***The wireless mouse function of the remote control cannot be used while a warning message is being displayed or while the following functions are being used.***
  - ***While Quick Setup is running***
  - ***While Password Protect is being set***
  - ***While a configuration menu is being displayed***
  - ***While a help menu is being displayed***
  - ***While the pointer function is being used***
  - ***While a sub-screen has been set using the PinP function***
  - ***While the E-Zoom function is being used***
  - ***While a Quick Corner setting has been made***
  - ***While an image is being displayed in real display using the resize function***
  - ***While the preview function is being used***
  - ***While a user's logo is being captured***
  - ***While Wall Shot is enabled***

Connecting an External Monitor

While projecting analogue RGB images from a computer connected by a computer cable or projecting RGB-video images from a video equipment, you can give a presentation viewing the images at an external monitor connected to the projector.
Connect the external monitor using the cable that is provided with the monitor.

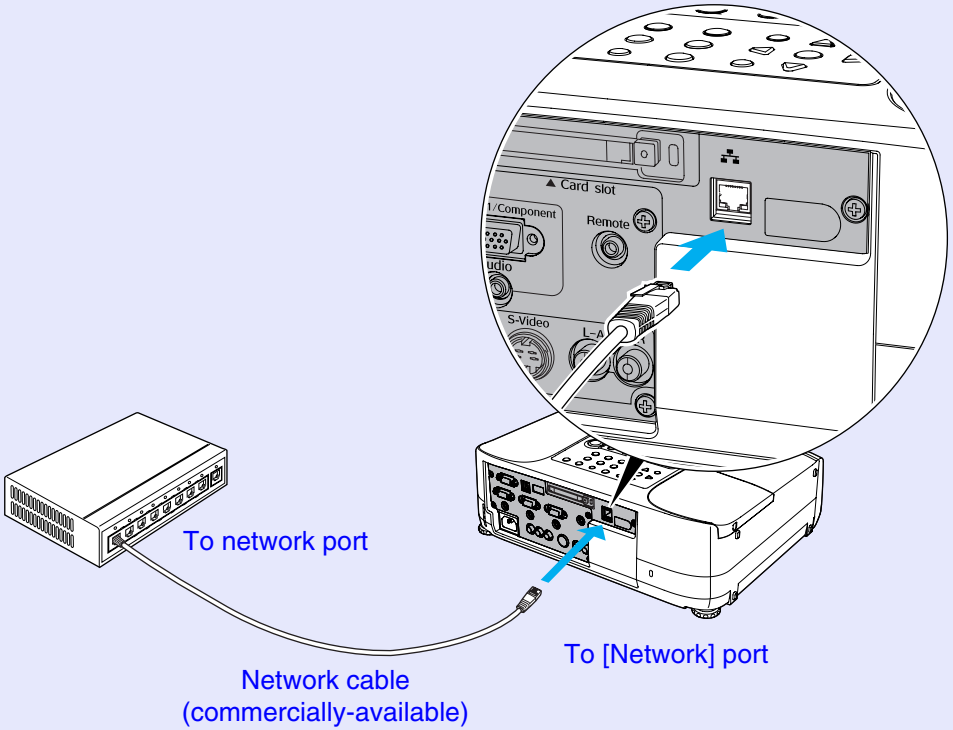


TIP

- ***Composite video, S-Video and EasyMP (EMP-835 only) images cannot be output to an external monitor.***
- ***The setting gauge for keystone correction and the configuration menus and help menus are not output to the external monitor.***
- ***Component video images can be output to an external monitor, but the colours may not be displayed correctly. (This is normal and is not a sign of a problem.)***

Network Cable Connections

Connect using a commercially-available 100baseTX or 10baseT network cable.



Caution

To prevent the possibility of incorrect operation, you should use a category 5 shielded cable.

Connecting to a Video Source

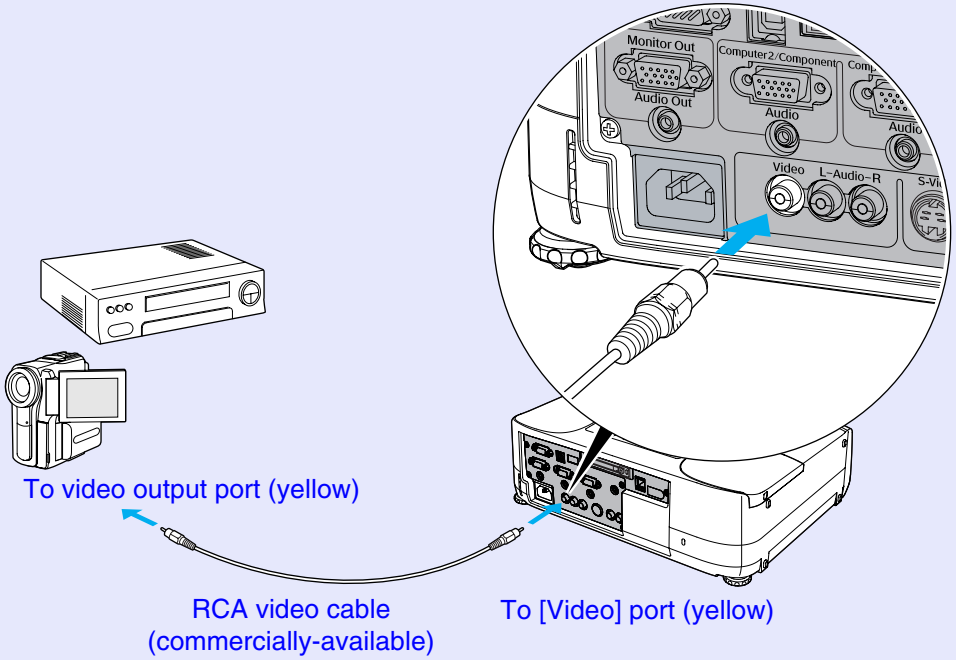
Caution

When connecting the projector to other video sources, take the following precautions.

- *Turn the power off for both the projector and the video source before connecting them. If the power for either device is on at the time of connection, damage may result.*
- *Check the shapes of the cable connectors and the device ports before making the connections. If you try to force a connector to fit a device port with a different shape or number of terminals, damage to the connector or port may result.*
- *Do not bind the power cable and the connecting cable together. If the power cable and the connecting cable are bound together, image interference or errors in operation may result.*

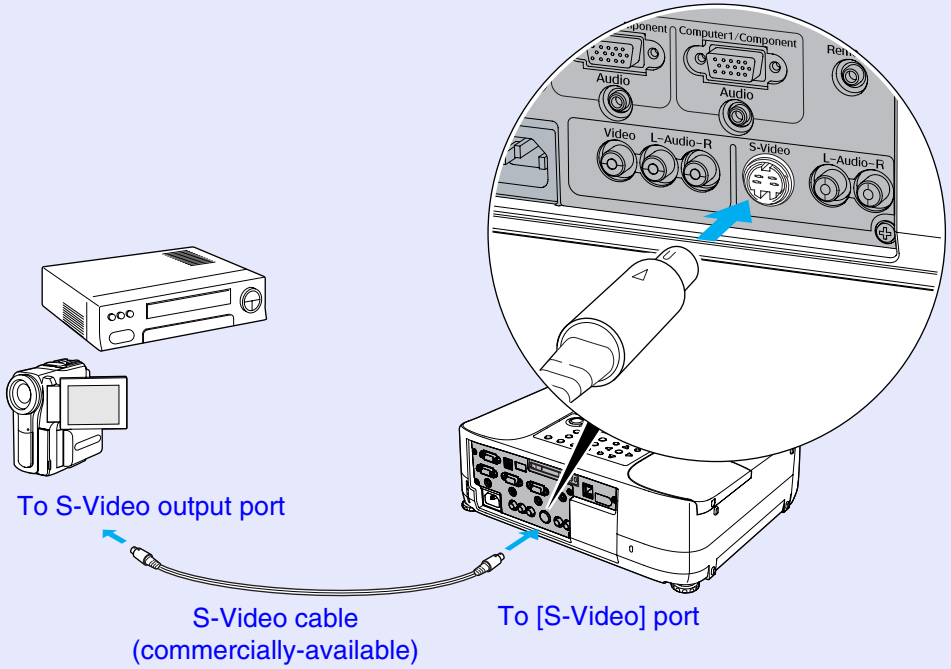
Projecting Composite Video Images

Use a commercially-available RCA video cable to make the connections.



Projecting S-Video Images

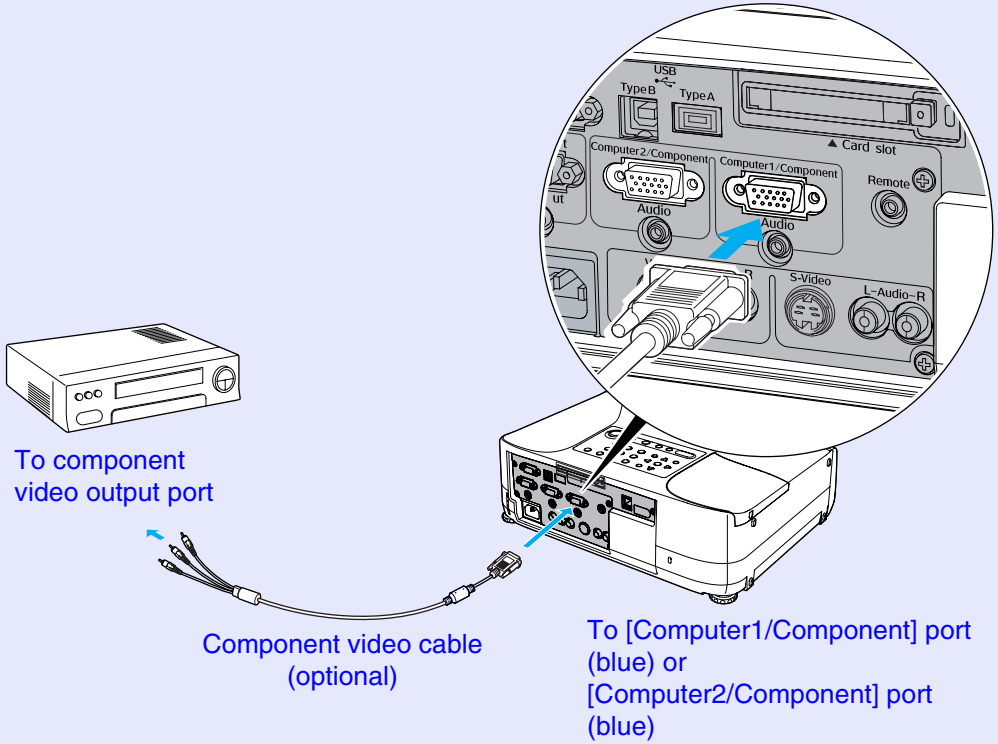
Use a commercially-available S-Video cable to make the connections.



Projecting Component Video Images

Use the optional component video cable to make the connections.

☛ "Optional Accessories and Consumables" p.128

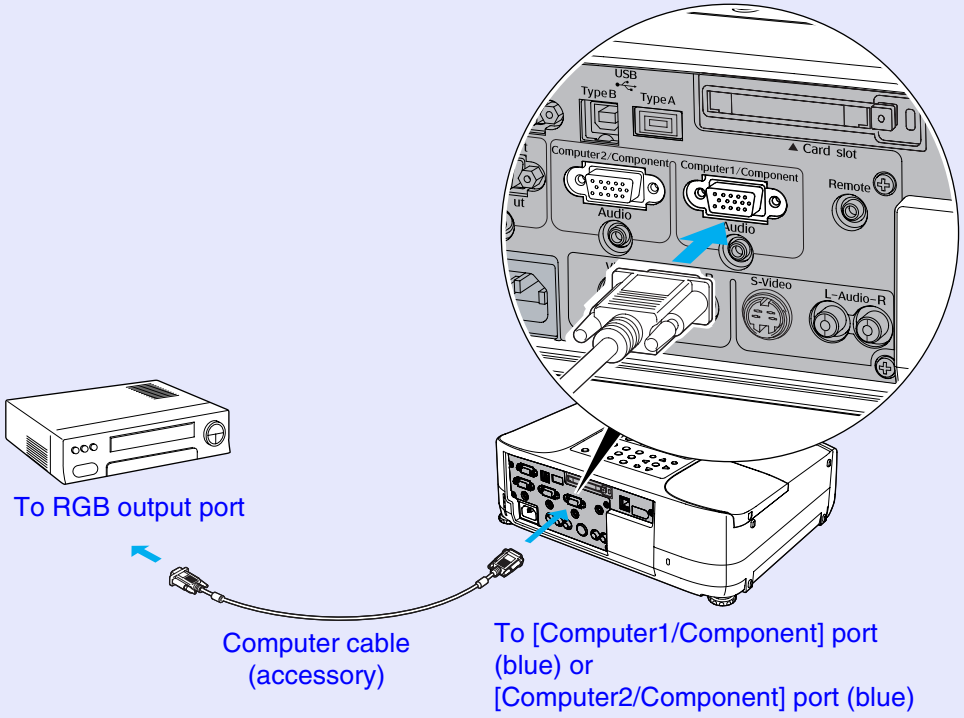


Projecting RGB Video Images

An RGB video source is a video source other than a computer that outputs RGB signals.

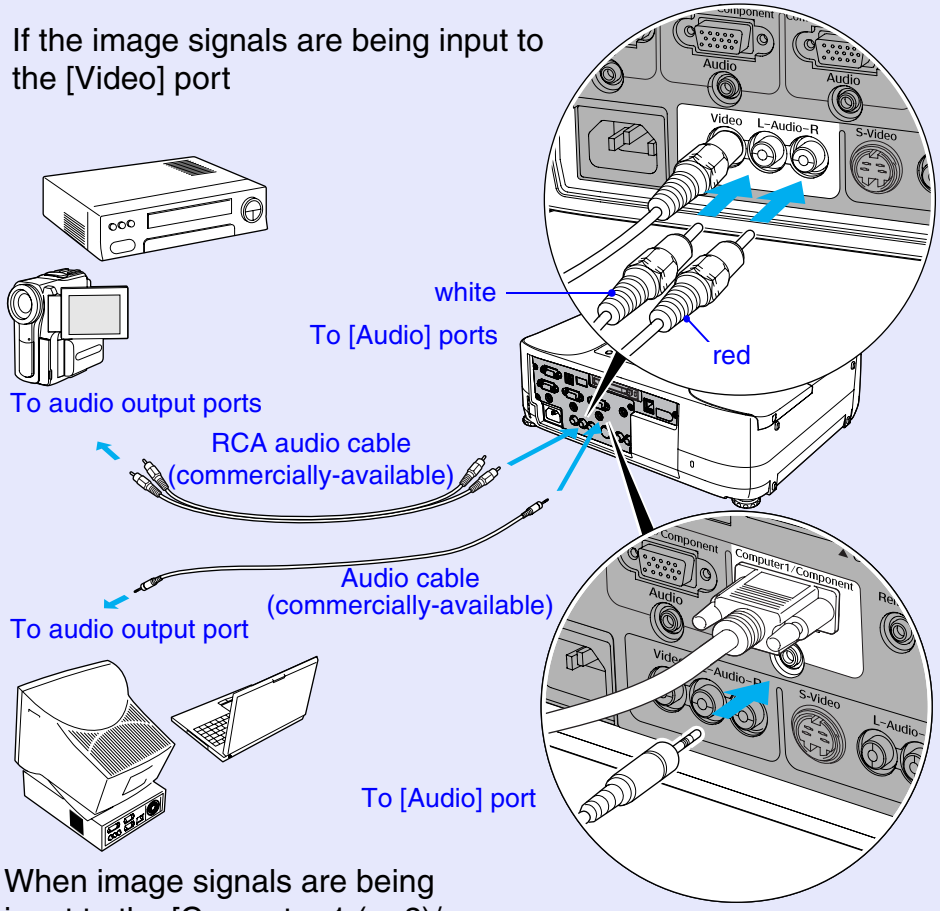
If the RGB Output Port is a Mini D-Sub 15-pin Port (Example)

Use the accessory computer cable to make the connections.



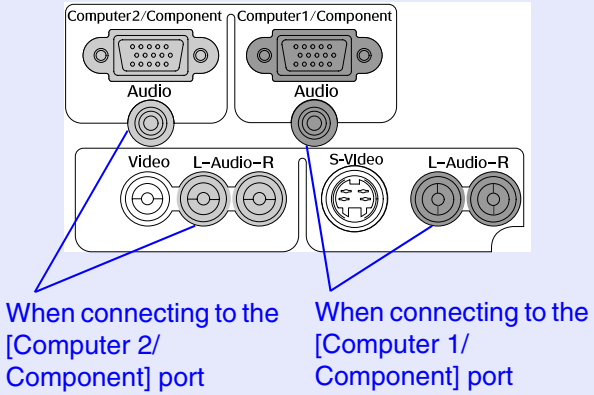
Playing Sound from Connected Equipment

The projector has a built-in speaker with a maximum output of 5 W. You can output sound from the connected equipment (such as a computer or VCR) through the projector's built-in speaker if the equipment has an audio output port.
The [Audio] port to use is the port that is in the same box as the port being used to input the image signals, except when component video signals are being input.



When Component Video Signals are being Input

If component video signals are being input from a DVD player or some other equipment to the [Computer 1 (or 2)/Component] port, you can use one or other of two combinations shown below depending on the audio cable type you use.



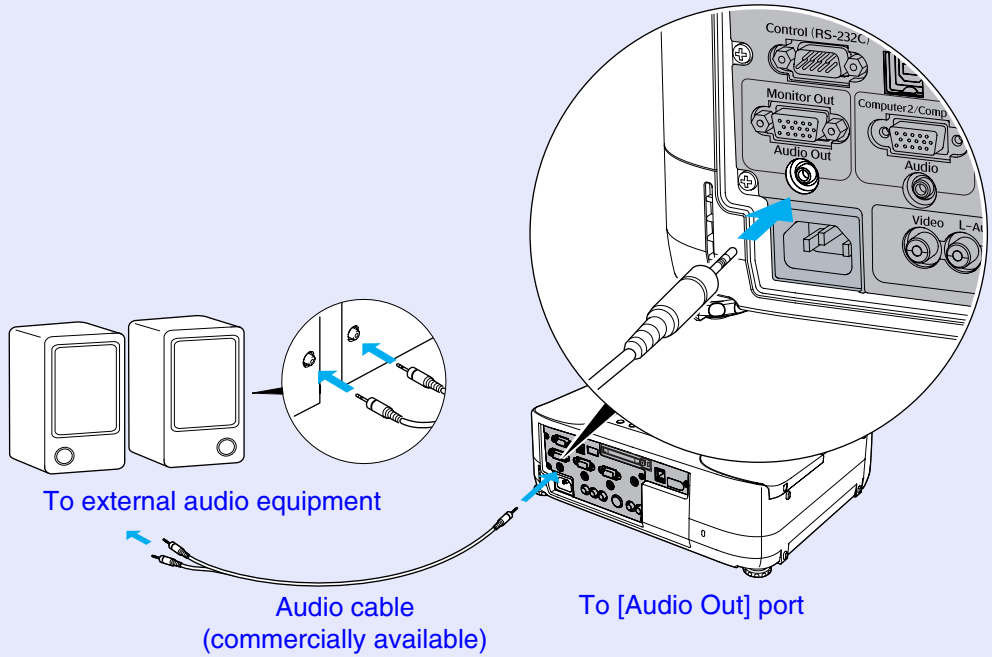
When component video images are projected, the connected port is automatically recognized regardless of which [Audio] port is being used, and the sound is then output from the projector's built-in speaker.

TIP

- *You can adjust the volume after projection has started.* ☛ *p.46*
- *If using a commercially- available 2RCA (L/ R)/ stereo mini- jack audio cable, use one that is marked as "No resistance".*

Playing Sound from External Speakers

The audio signals from the input source that is currently being projected can be output to external speakers. When the input source is changed, the audio signals change automatically too.
You can connect speakers with built-in amplifiers to the projector's [Audio Out] port in order to enjoy a fuller quality of sound.
Use a commercially-available audio cable with pin jack ⇔ stereo mini jack (3.5 mm) plugs or similar.
Use an audio cable with a plugs that match the ports for the external audio equipment.



TIP

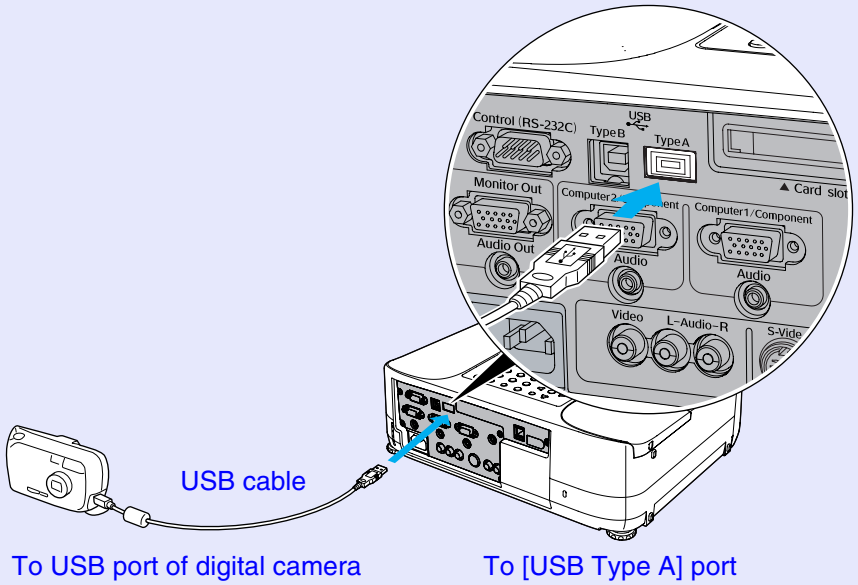
When a stereo mini-jack audio cable is inserted into the [Audio Out] port, the sound will be output to external speakers. No sound will be output from the projector's built-in speaker at this time.

Connecting USB Devices (Digital Camera, Hard Disk Drive or Memory Devices) (EMP-835 Only)

USB1.1-compatible digital cameras, hard disk drives and USB storage devices can be connected to the projector. Image files that are stored inside the digital camera and scenarios, images and movies that are stored inside USB storage devices can be played back by EasyMP CardPlayer. ☛ "Showing the Presentation (Using the CardPlayer)" in the *EasyMP Operation Guide*

Connecting USB Devices

The following procedure describes how to connect USB devices, using a digital camera as an example.
Connect a digital camera to the projector using a USB cable provided with, or specified for use with your digital camera.



TIP

- ***Use a USB cable less than 3m in length. If the cable exceeds 3m, CardPlayer may not function correctly.***
- ***Check that there is no wireless LAN card or memory card in the projector's card slot before connecting any USB device.***

Caution

- ***If you use a USB hub, the connection may not operate correctly. Devices such as digital cameras and USB storage devices should be connected to the projector directly.***
- ***When using an USB-compatible hard disc, be sure to connect the AC adaptor supplied with the hard disc.***

Disconnecting a USB Device from the Projector

After projection is finished, disconnect the USB device from the projector by the following procedure.

PROCEDURE

1. **Position the cursor with the "EJECT" button on the CardPlayer screen and press the [Enter] button on the remote control to close CardPlayer.** ☛ "Showing the Presentation (Using the CardPlayer)" in the *EasyMP Operation Guide*

Caution

Be sure to shut down CardPlayer first before disconnecting a USB cable or a USB storage device from the projector. If you do not shut down CardPlayer before disconnecting the USB device, CardPlayer may no longer operate correctly.

2. **Disconnect the USB cable or USB storage device from the projector's [USB Type A] port.**

Caution

When a USB-compatible hard disk drive is connected, disconnect the hard disk drive or turn the power for the hard disk drive off before turning the power for the projector off. If this is not done, it may cause problems with the projector.

Basic Operations

This chapter describes basic operations such as turning projection on and off and adjusting the projected images.

Turning the Projector On 33

- **Connecting the Power Cable 33**
- **Turning the Power On and Projecting Images 34**
- **Adjusting the Position and Size of the Projection Area...38**
  - Adjusting the Vertical Position of the Projection Area (Foot Adjustment)...38
  - Adjusting the Horizontal Position of the Projection Area 39
  - Adjusting the Size of the Projection Area (Zoom Adjustment).....40
- **One-touch Adjustment of the Projection Area (Quick Setup).....40**

Turning the Projector Off 44

Adjusting the Volume 46

Preventing Theft (Password Protect) 47

- **When Password Protect is Enabled 47**
  - When "Power ON Protect" is Enabled (ON) 47
  - If the "Timer" Setting is for One Hour or More 48
  - If "User's Logo Protect" is Enabled (ON)..... 48
- **Entering a Password with the Remote Control 48**
- **Setting Password Protect 49**

Turning the Projector On

Turn the power on to start projecting images.

Caution

Be sure to read the Safety Instructions/World-Wide Warranty Terms before projecting images.

Connecting the Power Cable

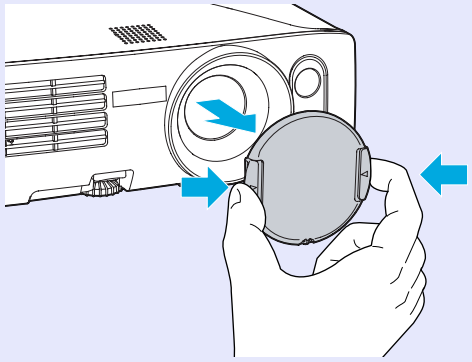
PROCEDURE

1 **Check that the power is turned off for the projector and, if necessary, that all components are connected to the projector.**

2 **Connect the computer or other video source to the projector.** ☛ p.19, p.25

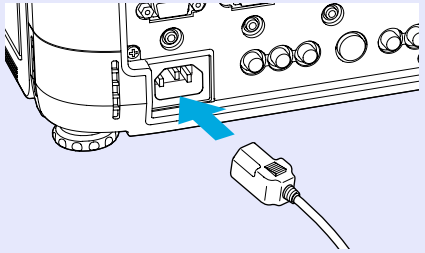
3 **Remove the lens cover.**

Place your fingers against the [▷] and [◁] on the lens cover and press in while pulling the lens cover forward to remove it.



4 **Connect the accessory power cable to the projector.**

Check that the power connector is facing the same way as the power inlet on the projector, and then insert the power cable connector securely into the projector.



5 **Connect the other end of the power cable to an earthed electrical outlet.**

TIP

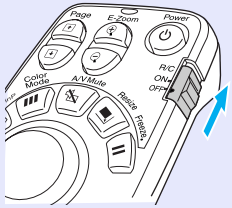
When "Direct Power ON" in the configuration menu is set to "ON", the projector's power can be turned on simply by connecting the power cable.
The default setting is "OFF". ☛ *"Extented" - "Operation" p.85*

Turning the Power On and Projecting Images

PROCEDURE

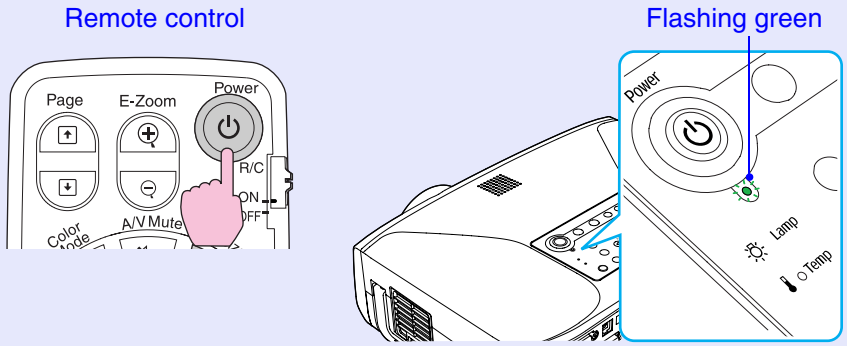
1 **Check that the Power indicator is lit orange.**

2 **If using the remote control, set the [R/C] switch on the remote control to "ON".**



3 **Press the [Power] button on either the remote control or the projector's control panel to turn the power on for the projector.**

A beep will sound and the Power indicator will change to flashing green.



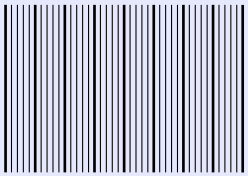
Caution

Do not disconnect the power cable or turn off a circuit breaker to turn the power off directly while the Power indicator is still flashing green, otherwise it will shorten the lamp's operating life. In addition, the [Power] buttons on the remote control and the projector's control panel will be disabled for the same reason.

4 Turn the power on for all equipment connected to the projector.

For a video source, press the [Play] button at the video source to start playback if necessary.

When projection starts, the automatic focus function will operate and adjustment of the focus will start.
A screen such as that shown below will appear while adjustment is in progress, but this is normal.



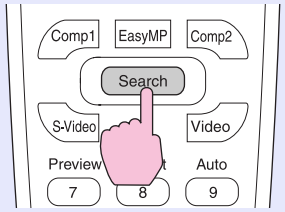
TIP

- *If Password Protect has been enabled, the password entry screen will be displayed when the power is turned on.*
  Type in the password. ☛ *p.48*
- *Press [Esc] button on the remote control to stop the Auto Focus.*
- *You can use the "Startup Options" configuration menu to set functions that are to run when the projector is turned on. You can change this so that Quick Setup is run instead.*
  Default setting: Auto Focus is run. ☛ *"Setting" -"Quick Setup"- "Startup Options" p.81*

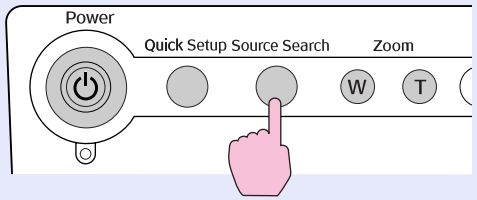
5 If no images are projected, press the [Search] button on the remote control or the [Source Search] button on the projector's control panel.

The projector detects sources that currently being input and projects them.

Remote control



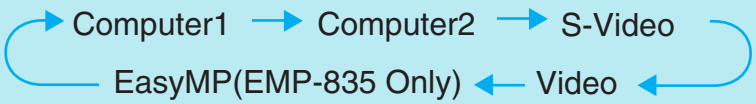
Projector



The type of input source will be displayed at the top-right of the screen.
When connecting to multiple equipments, press the [Search] button or the [Source Search] button until the desired image is projected.

TIP

- *When you press the [Search] button or the [Source Search] button, the projector starts to search incoming image signals from the next source from the currently-selected source in the order shown below. The projector projects the images each time it detects those signals.*



The projector skips to the next source when it detects no incoming signals. If a video device is connected, start playback and then press the [Search] button or the [Source Search] button.

- *If using the EMP-835, EasyMP will be detected as a source while CardPlayer is running with a memory card or a USB device, or while Network Screen is activated. While EasyMP standby screen or setting screen is displayed, the EasyMP screen will not be displayed by pressing the [Search] or [Source Search] button. Press the [EasyMP] button on the remote control or the [Computer/ Component] button on the projector's control panel to switch the source to EasyMP.*
- *If the input source is not detected correctly, try once more with different images.*
- *If the "No Signal." message does not disappear, check the connections again.*
- *If an image signal that is not supported is detected, a message will be displayed and source searching will stop.*
- *If a laptop computer or a computer with an LCD screen has been connected to the projector by a computer cable and the images are not be projected straight away, after starting projection, check that the computer has been set up to output signals externally.*

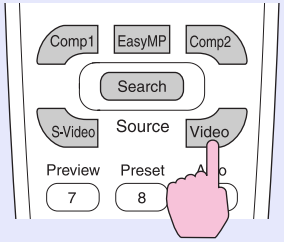
  The following table shows examples of how to toggle output settings. For details, refer to the section of the documentation provided with your computer under a heading such as "External output", "Connecting an external monitor" or similar.

NEC	Panasonic	Toshiba	IBM	Sony	Fujitsu	Macintosh
[Fn]+[F3]	[Fn]+[F3]	[Fn]+[F5]	[Fn]+[F7]	[Fn]+[F7]	[Fn]+[F10]	Set mirror setting or display detection.

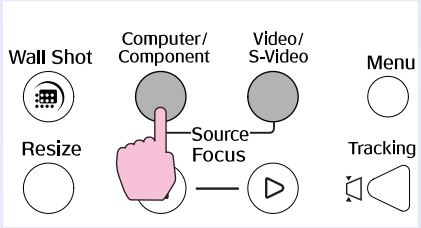
- *If the same still picture is projected for a long period of time, the projected image may become burned in on the computer screen. You should avoid leaving the same image displayed for long periods.*

You can press the buttons shown in the following table to select the desired input source directly.
You can also use the preview function to select the input source while viewing the input signal images. ☛ p.52

Remote control



Projector



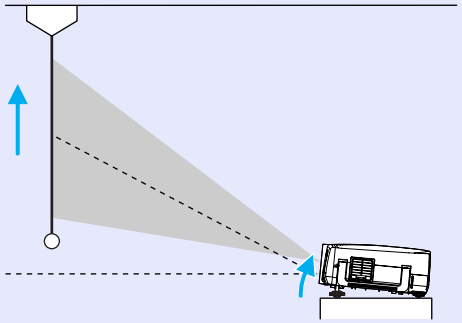
Source	Button to press		On-screen display
	Remote control	Projector	
EasyMP*1	[EasyMP]	The source changes in the following order each time [Computer/Component] is pressed.*2 Computer1/Component → Computer2/Component → EasyMP*1 → Computer1/Component	EasyMP
Computer1/Component	[Comp1]		Computer1 (Auto) Computer1 (RGB) Computer1 (Component Video) *3
Computer2/Component	[Comp2]		Computer2 (Auto) Computer2 (RGB) Computer2 (Component Video) *3
S-Video	[S-Video]	The source switches alternately as follows.*2 Video ⟷ S-Video	S-Video
Video	[Video]		Video

*1 Only changes when using the EMP-835.
☛ *EasyMP Operation Guide* and the *EasyMP Network Setup Guide* for details on using EasyMP.
*2 The input signal will not change to the next signal source unless a button is pressed while the current signal name is still being displayed on the screen.
*3 The status selected using "Signal" - "Computer1 (or 2) Input" in the configuration menu will be displayed inside brackets.

Adjusting the Position and Size of the Projection Area

Adjusting the Vertical Position of the Projection Area (Foot Adjustment)

If the images are being projected onto a screen that is higher than the position of the projector, extend the front adjustable foot to tilt the projector.



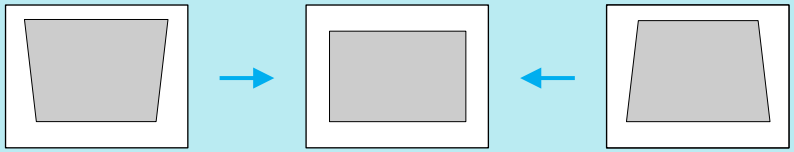
The front adjustable foot and the rear adjustable feet can be extended and retracted to adjust the tilt of the projector to a maximum of 12° upwards and 4° downwards.

Caution

Do not tilt the projector any more than 12° upwards or 4 ° downwards from the horizontal. If the projector is tilted to much, it may fall down or tip over and injury may result.

TIP

If the projector is tilted vertically, the automatic vertical keystone correction will operate to automatically correct distortion of the projected images.



Auto V-Keystone is carried out approximately one second after projection starts. A vertical keystone correction gauge is displayed while adjustment is in progress.

However, automatic vertical keystone correction will not work in the following cases

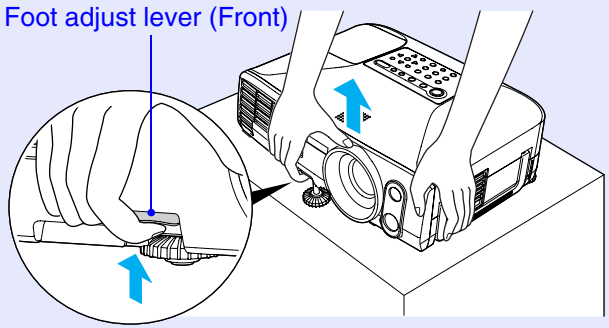
- ***When the "Projection" configuration menu is set to a setting other than "Front"***
- ***When keystone correction has been carried out using Auto Quick Corner or Quick Corner to fit the images within a border***

PROCEDURE

While pulling the foot adjust lever at the front of the projector, lift up the front of the projector to extend the front adjustable foot.

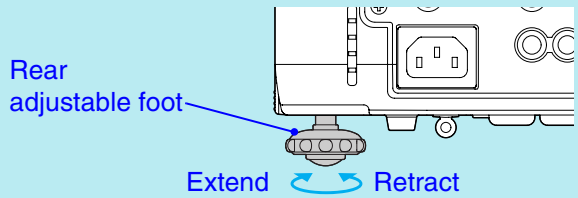
Extend the front adjustable foot until the desired angle is obtained, and then release the foot adjust lever.

To retract the front adjustable foot, gently push down on the projector while pulling the foot adjust lever.



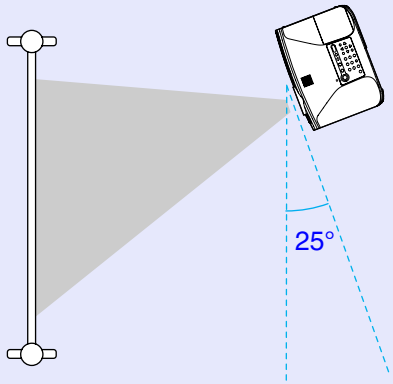
TIP

If the projector is tilted vertically or horizontally, turn the bases of the rear adjustable feet to make fine adjustments to the height of the projector. If the projector is tilted horizontally, the Auto V-Keystone correction may not work correctly.



Adjusting the Horizontal Position of the Projection Area

If the projector cannot be positioned directly in front of the screen, this adjustment allows projection to be carried out from the side.



If the projector is set up at an angle of within 25° to the left or right of the projection area, distortion of the images can be corrected by the horizontal correction function or the Quick Corner correction.

TIP

Press the [Quick Setup] button to start "Auto Quick Corner" to correct the keystone distortion that occurs as result of projecting from the side of the screen.

☛ *"One-touch Adjustment of the Projection Area (Quick Setup)" p.40*

☛ *p.70, p.72 Correcting the keystone distortion manually by the H/V-Keystone and Quick Corner function.*

Adjusting the Size of the Projection Area (Zoom Adjustment)

The size of the projected images is basically determined by the distance from the projector to the screen. ☛ p.15
The following procedures explain how to adjust the screen images once the projector itself has been set up.

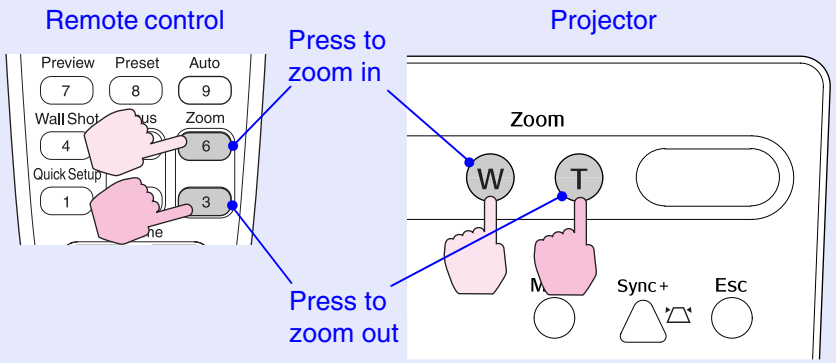
TIP

The E-Zoom function can also be used to enlarge parts of the images.
☛ p.56

PROCEDURE

Press the [Zoom] buttons to adjust the size.

The zoom ratio will change while the buttons are being pressed.
The images can be enlarged to 1.6 times their normal size.
If you would like the images to be larger than this, adjust the projection distance.



One-touch Adjustment of the Projection Area (Quick Setup)

Whenever projectors were moved from one place to another, it was usually necessary to adjust the focus, zoom and keystone distortion each time the projector was set up in its new position. This projector lets you make the following adjustments simply by pressing the [Quick Setup] button so that optimum images can be obtained.

- Focus adjustment for projected images (Auto Focus)
- Keystone correction for projected images (Auto Quick Corner)
  This automatically corrects horizontal distortion of the projection area that occurs when the projector is tilted, and projects the image at an aspect ratio of 4:3. If using a screen (horizontal to vertical ratio is 4:3) for projection, this function can be used so that the projection area exactly fits the size of the screen.
- Colour correction for projected images (Wall Shot)
  This automatically adjusts the image colours so that natural colours can be obtained even when the projection area is not white in colour (such as a blackboard or wall). Furthermore, it can be used to make shading adjustments to match the brightness of the room.

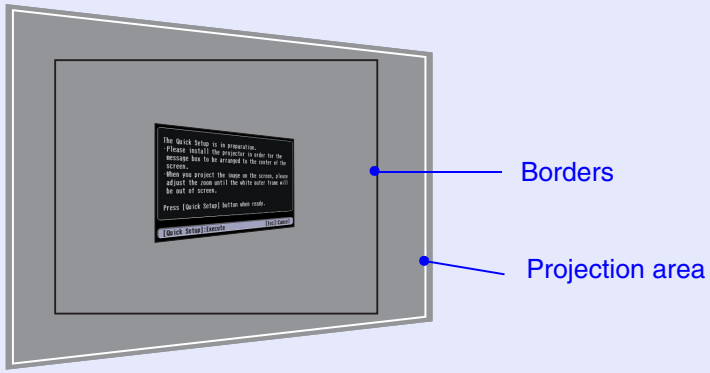
TIP

- *You can use the "Quick Setup Options" in the configuration menu to set which functions are carried out when the [Quick Setup] button is pressed.*
  Default setting: Auto Focus and Auto Quick Corner are carried out. Wall Shot is not carried out.
  ☛ *"Setting" - "Quick Setup" - "Quick Setup Options" p.81*
- *"Wall Shot" can also be carried out separately by pressing the [Wall Shot] button on either the remote control or the projector's control panel.* ☛ *p.53*
- *When Quick Setup is used, the adjusted state will be memorised even after the projector's power is turned off. If you are using the projector in a single location all the time, you only need to carry out Quick Setup once, and from then on you do not need to adjust the projection area.*
- *Quick Setup cannot be used when the "Projection" configuration menu is set to "Rear" or "Rear/Ceiling".*

PROCEDURE

1 Press the [Quick Setup] button on either the remote control or the projector's control panel.

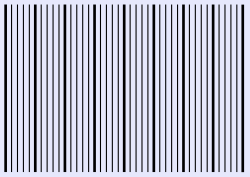
The message "The Quick Setup is in preparation" will be displayed and the zoom is adjusted to wide automatically.
If projecting onto a screen, whiteboard or blackboard, adjust the projection area so that it fits within the borders of the screen or board.

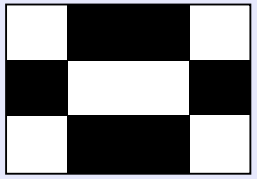


If projecting onto a wall surface without using a projection screen, blackboard or whiteboard, adjust the projection area to the desired position and size.

2 Press the [Quick Setup] button once more.

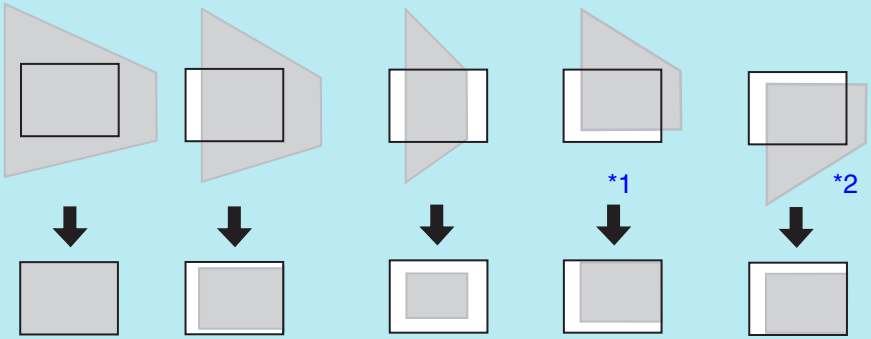
Adjustment of the projection area will start.
A screen such as that shown below will appear while adjustment is in progress, but this is normal.


(While Auto Focus is being carried out)


(While Auto Quick Corner is being carried out)

TIP

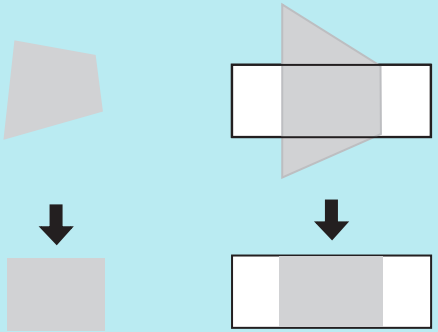
- *You can cancel Quick Setup operation at any time by pressing the [Esc] button on either the remote control or the projector's control panel.*
- *When Auto Quick Corner detects a "frame" (detecting 3 or more sides, or top and bottom sides, or 2 adjacent sides) within the projection area, it automatically corrects the image so that it fits within the "frame" at an aspect ratio of 4:3. The "frame" means the borders of the screen, whiteboard or blackboard.*



When 3 or more sides are detected

When top and bottom sides, or 2 adjacent sides are detected

The Auto Quick Corner works properly by doing the following beforehand.
*1 When the "Projection" menu is set to "Front", adjust the projection area so that the top edge of the screen frame is inside the area.
*2 When the "Projection" menu is set to "Front/Ceiling", adjust the projection area so that the bottom edge of the screen frame is inside the area.



When no border is detected

When the frame is horizontally long

- *When running Auto Quick Corner, always be sure to adjust so that the top edge of the screen is inside the projection area. If the top edge of the screen is outside the projection area, correction will not be carried out correctly.*
- *Auto Quick Corner can provide effective correction when the borders of the projection surface stand out clearly, such as a white screen with black borders. If the borders of the projection area do not stand out clearly, correction may not be carried out correctly. If projecting onto a surface such as a blackboard, drawing a white box with chalk as a border, or attaching a sheet of paper as projection area may help the correct adjustment.*
- *Auto Quick Corner can be used to carry out correction within the ranges given below. If the distortion is outside these ranges, correction will not be carried out correctly.*
  Furthermore, if the image is distorted both vertically and horizontally or if the zoom has been adjusted to "W", the correction range will become narrower than the angles given below.
  · When correcting to within a border
  Vertically: Approx. 40°Horizontally: Approx. 20°
  · When projecting onto a surface without a border
  Vertically: Approx. 45°Horizontally: Approx. 15°

- *If the distance from the projector to the screen is more than 7.5m,(24.6 ft.) Auto Focus and Auto Quick Corner may not work correctly. In such cases, adjust the focus manually.* ☛ *"Adjusting Projected Images Manually" p.68*
- *Auto Focus and Auto Quick Corner use sensors in order to work. These sensors may not work correctly depending on factors such as the condition of the projection surface and the effects of external light. If this happens, make the adjustments manually.*
☛ *"Adjusting Projected Images Manually" p.68*

Turning the Projector Off

Follow the procedure below to turn the projector off.

PROCEDURE

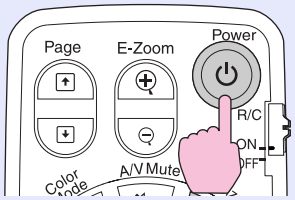
1 Turn the power off for the signal sources that are connected to the projector.

Check that the power for all connected components has been turned off.

2 Press the [Power] button on either the remote control or the projector's control panel.

The following confirmation message will appear.

Remote control



If you do not want to turn the power off, press a button other than any of the following:

- At the remote control: [Power], [⊡], [⊡], [☼], [Num], [ID]
- At the control panel : [Power]

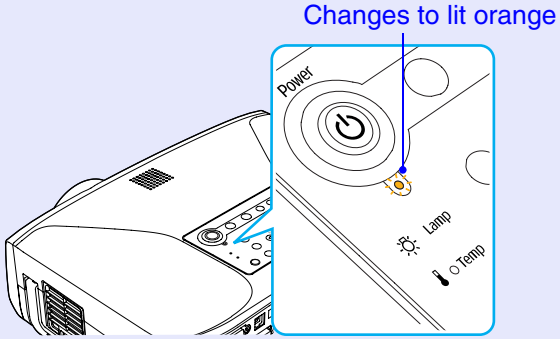
If you do not press any button, the message will disappear automatically after seven seconds. (The power will not turn off at this time.)

Caution

If the message "The projector is overheating. Clean or replace the air filter and lower the room temperature." appears on the screen, press the [Enter] button on either the remote control or the projector's control panel to turn the power off and then clean the air filters.
☛ *p.119*

3 Press the [Power] button on either the remote control or the projector's control panel once more.

The lamp will switch off. The Power indicator will change to lit orange.



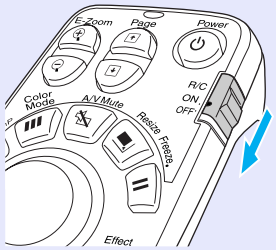
TIP

- *The projector has a direct power off feature. If the projector is being used in a room such as a meeting room where the power is controlled centrally, the power can be turned off by operating a circuit breaker without pressing the [Power] button.*
- *The projector's power cable can be disconnected immediately after using the projector and the projector can then be moved.*
- *If "Standby Mode" in the configuration menu is set to "Network ON", fans will continue operating. This is normal and does not indicate a problem.*

Caution

You should wait for at least 10 seconds after disconnecting the power cable before connecting it again. If you connect the power cable without waiting for 10 seconds, the projector may not start operating correctly.

4 Set the [R/C] switch to "OFF".

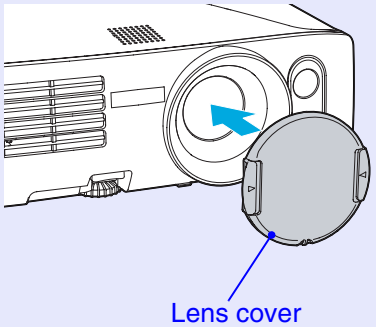


TIP

If you leave the [R/C] switch on the remote control at "ON", it will consume battery power. When not using the remote control, set the [R/C] switch to "OFF".

5 Attach the lens cover.

Attach the lens cover to the lens when not using the projector, in order to stop the lens from getting dusty or dirty.
Push the lens cover on until it clicks into place.



Caution

Note the following points if using the direct power off feature.

- *If you disconnect the power cable or turn off a circuit breaker while using a configuration menu, the settings may not be stored correctly. Close the configuration menus before using the direct power off feature.*
- *If you disconnect the power cable or turn off a circuit breaker while saving a user's logo, the user's logo may not be saved correctly. If the user's logo has not been saved correctly, you will need to resave it.*

Adjusting the Volume

You can adjust the volume for the sound from the projector's built-in speaker or from the external speakers that are connected to the projector.

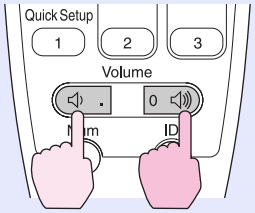
PROCEDURE

The volume can be adjusted using either the remote control, the projector's control panel or the configuration menus. This procedure explains how to use the remote control and the projector's control panel to adjust the volume.
For adjustment using the configuration menus:
☛ "Setting" - "Audio" - "Volume" p.83

Press the [Volume] button on either the remote control or the projector's control panel.

Press the [🔊] button to turn up the volume and press the [🔈] button to turn down the volume.
The volume gauge appears on the screen when the volume is being adjusted.

Remote control



TIP

- ***If the value displayed in the gauge on the screen stops changing when the volume is being adjusted, it indicates that the limit for volume adjustment has been reached.***
- ***The results of volume adjustment are saved separately for each input source.***

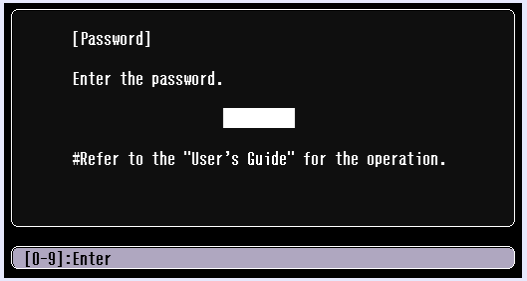
Preventing Theft (Password Protect)

When the Password Protect function is enabled, people who do not know the password cannot project images even though they can turn on the projector's power. Furthermore, it will not be possible to change the company logo or other logo that is displayed when the power is turned on. This can help to increase anti-theft effectiveness.

When Password Protect is Enabled

When "Power ON Protect" is Enabled (ON)

When the power is turned on for the first time after the projector's power cable is connected to the electrical outlet, or when Direct Power On is carried out, the following password entry screen will be displayed.



Use the numeric keypad on the remote control to set the password.
☛ p.48
If the correct password is entered, projection will then start.

If you leave the power cable connected to the electrical outlet and turn the projector's power on when it is in standby mode, projection will start without the password entry screen appearing. The password entry screen will only be displayed when the power is turned on for the first time after the power cable has been disconnected and then reconnected. If Direct Power On is set to "ON" and you are using a circuit breaker or similar to centrally control the power, the password entry screen will be displayed the first time the projector is turned on after the power supply is restored.

TIP

- ***If an incorrect password is entered three times in succession, the message "The projector's operation will be locked." will be displayed for approximately five minutes, and then the projector will switch to standby mode. If this happens, disconnect the power plug from the electrical outlet and then reinsert it and turn the projector's power back on. The screen requesting you to enter the password will be displayed, so enter the password correctly.***
  If you forget the password, make a note of the "Request Code: xxxxx" number that is displayed on the screen, and contact the nearest address provided at "International Warranty Conditions" section of the Safety Instructions/World-Wide Warranty Terms booklet.
- ***If the above operation should happen to be repeated 30 times without a correct password being entered, the following message will be displayed and the projector will accept no more password entry. "The projector's operation will be locked." Contact the nearest address provided in the "International Warranty Conditions" section of the Safety Instructions/World-Wide Warranty Terms booklet.***

If the "Timer" Setting is for One Hour or More

The password entry screen will not be displayed at all when the power is turned on until the length of time that has been set has elapsed. When the set length of time has elapsed, the password entry screen will be displayed each time the power is turned on. The length of time referred to here is the total illumination time for the projector's lamp from the point when the projector's menu is closed.
If "Timer" is set to "0", the password entry screen will be displayed each time the power plug is disconnected and reinserted from the electrical outlet. If the projector's power on when it is in standby mode, the password entry screen will not be displayed.

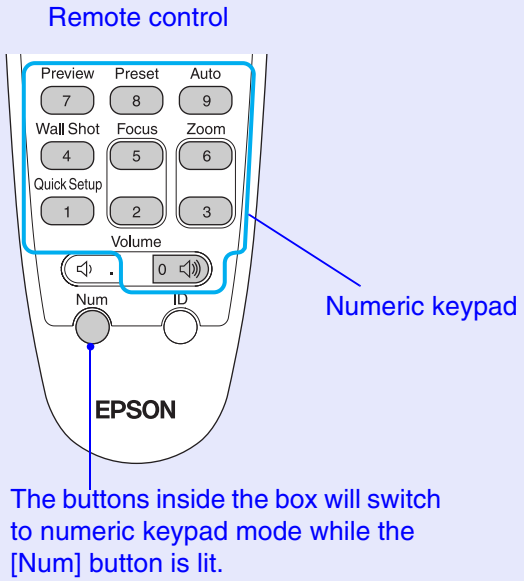
If "User's Logo Protect" is Enabled (ON)

If you try to carry out any of the following user's logo-related operations, a message will be displayed, and the settings cannot be changed. To change any of the settings, first set "User's Logo Protect" to "OFF". ☛ p.50

- Capturing a user's logo
- Changing the "Extended" - "Display" - "Display Background" menu setting or "A/V Mute" setting to "Black" or "Blue" from "Logo", or to "Logo" from "Black" or "Blue".
- Changing the "Extended" - "Display" - "Startup Screen" menu setting ("ON" or "OFF")

Entering a Password with the Remote Control

Press the [Num] button on the remote control to enter the password.
If you press the [Num] button, it will light up and the remote control buttons will change to numeric keypad mode so that you can enter numbers.
If you do not press any button for about 10 seconds while numeric keypad mode is active, or if you press the [Num] button once more, the [Num] button will turn off and numeric keypad mode will be cancelled.



Setting Password Protect

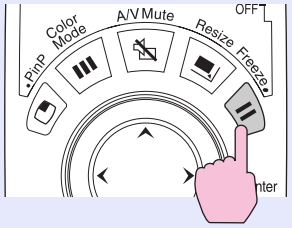
Follow the procedure below to make Password Protect settings.

PROCEDURE

1 **Press the [Freeze] button on the remote control for approximately five seconds.**
If using the projector's control panel, hold down the [▷] button and press the [Menu] button for approximately five seconds.

The Password Protect menu will be displayed.

Remote control



TIP

- *If Password Protect has already been enabled, the screen requesting a password will be displayed.*
  If the correct password is entered, the Password Protect setting menu will be displayed. ☛ *"When Password Protect is Enabled" p.47*
- *When Password Protect has been set to "ON", attach the Password Protect sticker to your preferred place on the projector to increase anti-theft effectiveness.*

2 **Enable "Power ON Protect".**

(1) Select When "Power ON Protect" and then press the [Enter] button on either the remote control or the projector's control panel.
(2) Select "ON" and then press the [Enter] button on either the remote control or the projector's control panel.
(3) Press the [Esc] button on either the remote control or the projector's control panel.

3 **"Timer" setting allows you to specify the time interval for password prompt.**

If you don't use this setting, proceed to step 4.

(1) Select "Timer" and then press the [Enter] button on either the remote control or the projector's control panel.
(2) After enabling numeric keypad of the remote control, enter desired hours within the range of 0 to 9999 and press the [Enter] button on either the remote control or the projector's control panel.
Press the [Esc] button on either the remote control or the projector's control panel to reenter the time.
The elapsed time counter will start counting once the Password Protect setting menu is exited.

4 Enable "User's Logo Protect".

(1) Select "User's Logo Protect" and then press the [Enter] button on either the remote control or the projector's control panel.
(2) Select "ON" and then press the [Enter] button on either the remote control or the projector's control panel.
(3) Press the [Esc] button on either the remote control or the projector's control panel.

5 Enter the password.

(1) Select "Password" and press the [Enter] button on either the remote control or the projector's control panel.
(2) When the message "Change the password?" is displayed, select "Yes" and then press the [Enter] button on either the remote control or the projector's control panel.
The default setting for the password is "0000", and you can change it to the required password.
If you select "No", the display will return to the screen in step 1.
(3) Enables numeric keypad of the remote control and enter a 4-digit password.
The password entered will be displayed as "****".
Once four digits have been entered, the confirmation screen will be displayed.
(4) Re-enter the password to confirm.
The message "The new password is stored." will be displayed.
If you enter the password incorrectly, a message will be displayed prompting you to re-enter the password.

6 Once the settings are complete, press the [Menu] button.

TIP

- *When the set time has elapsed and the password is entered, projection will start and the "Time-elapsed" counter will be cleared to count again.*
- *Make a note of the password so that you do not forget it and keep it in a safe place.*
- *If you lose the remote control, you will not be able to enter the password. Keep the remote control in a safe place at all times.*

Advanced Operations

This chapter describes functions for enhancing the projection of images, and how to use the configuration menus.

Functions for Enhancing Projection 52

- **Selecting an Image Source While Viewing Projected Images (Preview Function) 52**
- **Projecting Easy-to-see Images Without a Screen (Wall Shot) 53**
- **A/V Mute Function 55**
- **Freeze Function 56**
- **E-Zoom Function 56**
- **PinP (Picture in Picture) Function 57**
- **Pointer Function 58**
- **Preset Function 60**
  - Storing Setting Values 60
  - Applying Preset Settings 61
- **Changing the Resize/Aspect Ratio 62**
  - Selecting the Computer Display Method 62
  - Projecting Wide-screen Images from Video Equipment 63
- **Projector ID/Remote Control ID 64**
  - Registering an ID Number for a Projector 64
  - Registering an ID Number for a Remote Control 65
- **Operation Button Lock Function 66**
  - Locking the Control Panel Buttons 66
  - Locking the Remote Control Buttons 67

Adjusting Projected Images Manually 68

- **Focusing the Screen Images (Focus Adjustment) 68**
- **Manually Correcting Projection Area Distortion (Keystone) 68**
  - Vertical and Horizontal Correction 70
  - Height Correction 71
  - Correcting Keystone Distortion so that the Projection Area Fits the Screen Exactly (Quick Corner) 72
- **Adjusting Computer Images 74**
  - Automatic Setup 74
  - Adjusting the Tracking 75
  - Adjusting the Sync 76
- **Selecting the Projection Quality (Colour Mode Selection) 77**

Configuration Menus 78

List of Configuration Menu Commands 79

- **Using the Configuration Menus 87**

Monitoring and Controlling Projectors via a Network (for the EMP-830) 89

- **Available Network Functions for the EMP-830 ..... 89**
  - Monitoring Function Using SNMP and the SNMP Manager Program 89
  - Monitoring and Control Functions Using the Accessory Software 89
  - Using a Network for Monitoring and Control 90
- **Projector Network Connecting Settings (EMP-830) 90**

Functions for Enhancing Projection

This section describes the various useful functions that can be used to enhance presentations.

Selecting an Image Source While Viewing Projected Images (Preview Function)

You can momentarily project images from the currently-selected input source, and switch images while viewing them in a preview screen.
Use the remote control to carry out all preview function operations.

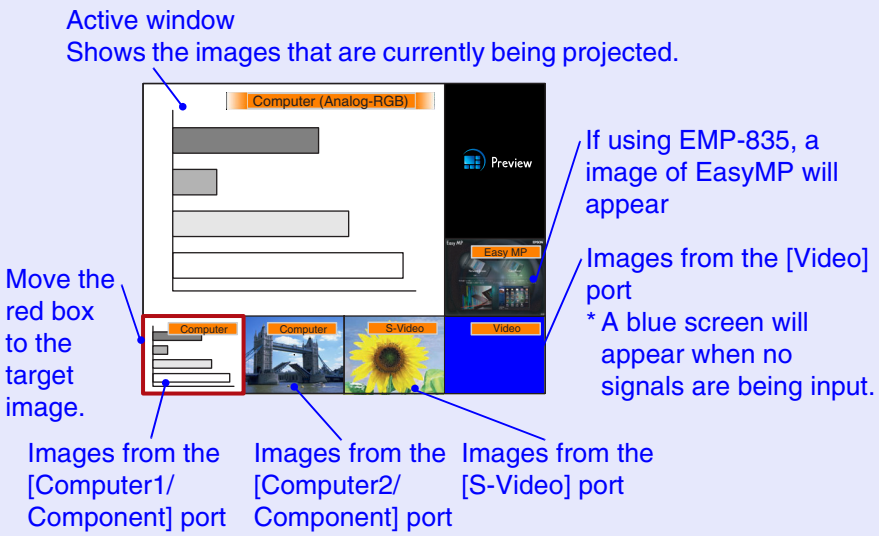
PROCEDURE

1 Press the [Preview] button on the remote control.

After a short while, a preview screen such as the one shown in the illustration below will appear on the screen.

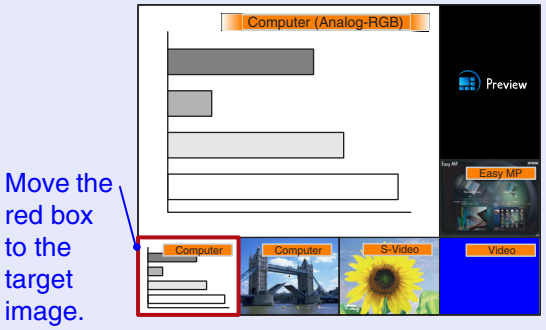
When the preview screen is being displayed, the frames for ports that have no image signal being input or which have a signal being input that is not supported will be solid blue.

Once you select an input source by pressing any of the Search buttons on the remote control, the preview function is terminated and the selected image is projected.



2 Tilt the [◌] button to select the images to be projected.

Move the red box until the desired image is selected.



3 Press the [Enter] button.

The selected images are then projected in the active window.
If you press the [Enter] button once more, the preview function is cancelled and the images in the active window are projected.
To return to the images that were being projected before the preview function was activated, press the [Esc] or [Preview] button.

TIP

- *You can hear the sound for the images in the active window while the preview window is being displayed.*
- *Images other than the image in the active window will be projected as still images.*
- *If you press the [Preview] button while E-Zoom function is active or real display is being used, these functions will be cancelled and the preview screen will be displayed. If you cancel the preview function without changing the input source, the projected images will return to the state they were at before the preview function was activated.*

Projecting Easy-to-see Images Without a Screen (Wall Shot)

When the Wall Shot function is used, images can be projected without loss of original colour even onto surfaces such as blackboards and coloured wall surfaces which are being used instead of a screen.
For example, if projecting onto a green blackboard, the projected images would normally appear greenish and be very difficult to see. The Wall Shot function uses a sensor to measure the condition of the projection surface and automatically adjusts the colour of the projected images based on these measurements.
The Wall Shot function also allows shading to be adjusted. If projecting onto a screen that is located near a window, the Wall Shot function can be used to obtain clear images when they might otherwise appear faded.

TIP

- *Wall Shot can be used for adjustment if the projection distance is within approximately 86–750 cm (2.8–24.6 ft.). However, this distance will vary depending on the condition of the projected surface, for instance if the projection surface is an extremely reflective surface such as a whiteboard, or if it is a highly non-reflective surface such as a dark wall.*
- *The sensor may not be able to correctly measure the condition of the projection surface if you are projecting on a striped or patterned wall. In this event, Wall Shot may not be able to correctly adjust the color of the projected images.*

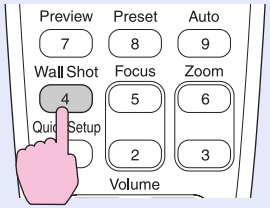
PROCEDURE

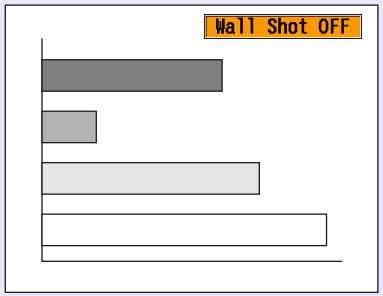
The Wall Shot function can be operated using either the remote control or the projector's control panel.

1 Press the [Wall Shot] button on either the remote control or the projector's control panel while the images are being projected.

When the button is pressed, the current status is displayed on the screen.

Remote control





2 To change the status, press the [Wall Shot] button while the status is being displayed on the screen.

For example, if you press the [Wall Shot] button while "Wall Shot OFF" is displayed, the status will change to "Wall Shot ON" and measurement of the projection surface will start.

Colours in the order red →green →blue →black will be projected for approximately five seconds while measurement is in progress.

3 Once the measurement is finished and colour correction is complete, the images will be projected in the corrected condition.

To cancel the correction, press the [Wall Shot] button while "Wall Shot ON" is being displayed on the screen so that "Wall Shot OFF" is selected.

TIP

- ***When the projector's power is turned off, images will be projected next time with the status set to "Wall Shot OFF". However, the correction values that were obtained by the previous measurement operation will be stored even when the power is turned off.***
  If projecting in the same location as before, you can retrieve the colour correction values that were used previously (the five seconds required for readjustment will not be necessary).
  The status will change as follows each time the [Wall Shot] button is pressed.

  Wall Shot OFF → Wall Shot ON → Wall Shot Memory Call → Wall Shot OFF

  When "Wall Shot Memory Call" is selected, the previous adjustment values are retrieved.
- ***If you change the projection location or change the condition of the projection surface, you should repeat the Wall Shot measurements.***
  If you press the [Wall Shot] button twice while "Wall Shot ON" is being displayed, "Wall Shot Readjustment" will be displayed and adjustment will then start.

  Wall Shot ON → Wall Shot OFF → Wall Shot Readjustment → Wall Shot ON

A/V Mute Function

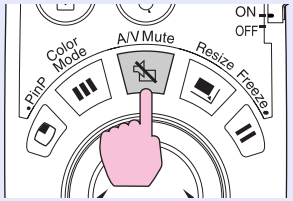
This function momentarily pauses the images and sound.
For example, it can be used when you do not wish to show details of operations such as selecting different files while computer images are being projected.
However, if you use this function when projecting moving images, the images and sound will still continue to be played back by the source, and you cannot return to the point where the A/V Mute function was activated.

PROCEDURE

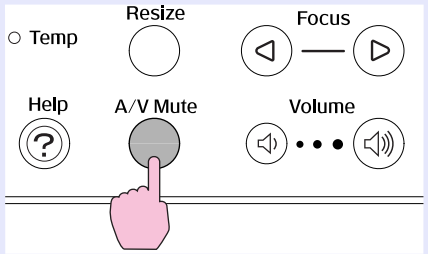
Press the [A/V Mute] button.

The images and sound will then be momentarily turned off.

Remote control



Projector



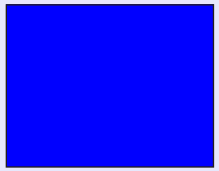
Press the [A/V Mute] button once more to continue normal projection.
You can also continue normal projection by pressing the [Esc] button on either the remote control or the projector's control panel.

You can use "Extended" - "Display" - "A/V Mute" in the configuration menu to select one of the following three displays to appear when the pictures and sound is momentarily turned off.
☛ p.84

Solid black

Default setting

Solid blue



User's logo

TIP

The default user's logo is the EPSON logo. You can change the user's logo by recording and setting your own logo. ☛ *p.125*

Freeze Function

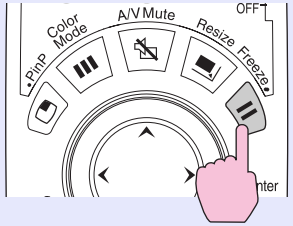
This function pauses only the projected images. The sound keeps playing without pausing.
The signal source will still be playing back the images even while projection is paused, and so it will not be possible to resume projection from the point where it was paused.

PROCEDURE

Press the [Freeze] button.

The images will then be paused.

Remote control



To continue projecting the images, press the [Freeze] button once more. You can also continue normal projection by pressing the [Esc] button on either the remote control or the projector's control panel.

TIP

- ***If you press the [Freeze] button on the remote control while a configuration menu or help menu is displayed, the configuration menu and help menu display is cancelled.***
- ***The Freeze function also works while the E-Zoom function is being used.***

E-Zoom Function

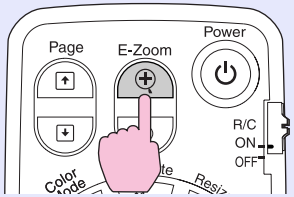
You can use this function to enlarge portions of graphs and tables that you want to see more closely.
The E-Zoom function is controlled using the remote control.

PROCEDURE

1 Press the [E-Zoom⊕] button.

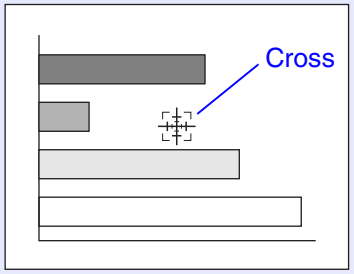
A cursor (cross) indicating the centre point for the area to be enlarged will appear on the screen.

Remote control



2 Move the cross to the area of the image that is to be enlarged.

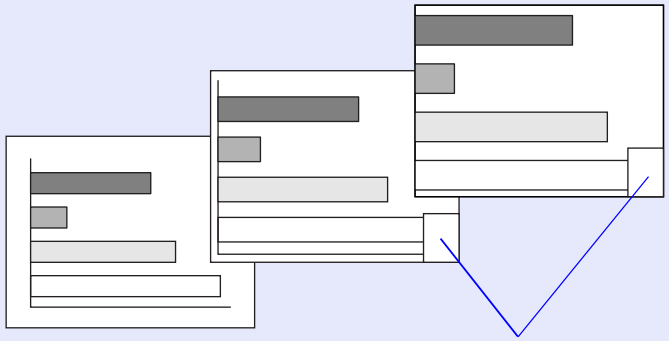
Tilt the [⊕] button on the remote control to move the cross.



3 **When the [⊕] button is pressed, the image is enlarged with the cross at its centre. When the [⊖] button is pressed, the enlarged image is then reduced.**

The enlargement ratio will appear at the bottom-right of the screen.

You can scroll around the image by tilting the [◌] button.



To cancel the E-Zoom function, press the [Esc] button.

TIP

- *The selected area can be enlarged to between 1–4 times, in 25 steps of × 0.125.*
- *The E-Zoom function will be cancelled when the zoom ratio returns to × 1.*
- *The following buttons can be used while E-Zoom has been used to increase the image size.*
  [Power] , [A/V Mute] , [Freeze] , [Menu] , [Help] , [Focus] , [Zoom] , [Pointer] , [Page]

PinP (Picture in Picture) Function

This function lets you display separate images in a smaller screen (sub-screen) over the top of the images that are currently being projected (main screen).
Computer images or EasyMP images (for the EMP-835) can be displayed in the main screen , and video images (composite video or S-Video) can be displayed in the sub-screen.
The video images in the sub-screen are selected using "Setting" - "PinP Options" - "Subscreen Image" in the configuration menu. ☛ p.83
The PinP function is controlled using the remote control.

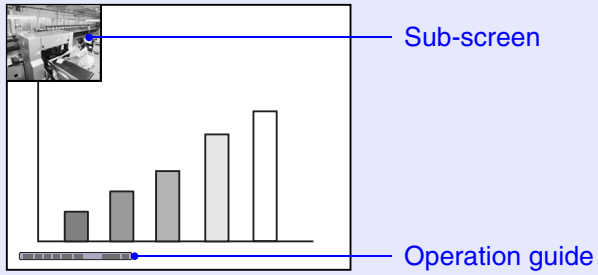
TIP

The PinP function cannot be used for computer images when the refresh rate is set to "interlaced".

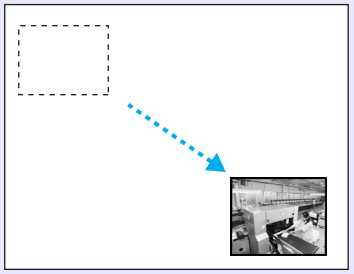
PROCEDURE

1 **Connect the equipment for projecting to the main screen and the sub-screen, and then use "Setting" - "PinP Options" - "Subscreen Image" in the configuration menu to make the sub-screen settings, then press the [PinP] button on the remote control.**

The sub-screen will appear at the top-left of the screen, and the operation guide will appear at the bottom-left of the screen.



2 **Tilt the [◌] button on the remote control to change the position of the sub-screen.**



3 **When you press the [Enter] button, the operation guide screen will disappear and the sub-screen display position will be set.**

To cancel the PinP function, press the [PinP] button once more.

TIP

- *The position of the sub-screen is memorised, so that the sub-screen will appear in the last position which was set next time the PinP function is used.*
- *To switch between sound for the main screen and the sub-screen, use "Setting" - "PinP Options" - "Audio Output" in the configuration menu.*

Pointer Function

You can use this function to display a pointer icon on the images that are being projected, and use the remote control to control it.
The pointer icon can be used to indicate parts of an image that is being projected to clarify which part is being described or to draw attention to it.

TIP

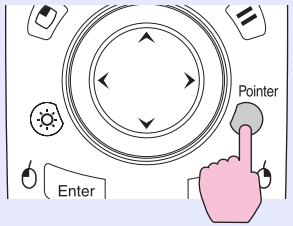
You can use the "Setting" - "Pointer" configuration menu to set the type, size and movement speed for the pointer. ☛ *p.83*

PROCEDURE

1 **Press the [Pointer] button.**

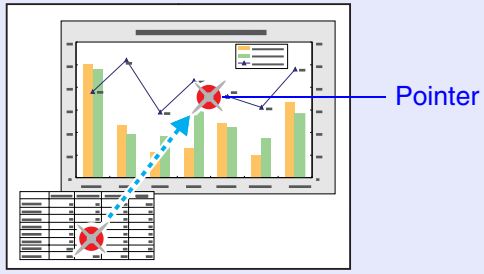
The pointer will be displayed in the centre of the screen.

Remote control



2 **Tilt the [◌] button to move the pointer.**

Press the [Pointer] button again to cancel the pointer. The pointer will then disappear.



Preset Function

While projecting analogue RGB images from a computer connected via a computer cable, you can store the following settings in the configuration menu.

- All items in the "Image" menu
- All items in the "Signal" menu except for "Computer1 Input" and "Computer2 Input"

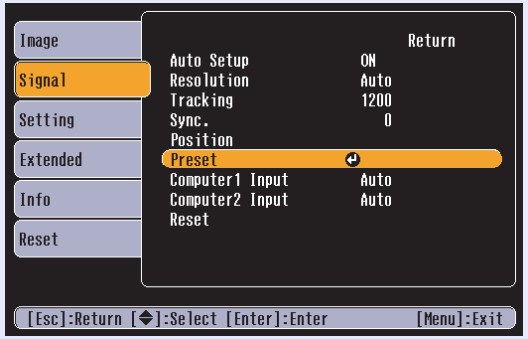
If settings are stored for signals with different resolutions and frequencies, the preset values can be applied to the analogue RGB signals that are currently being projected simply by pressing the [Preset] button on the remote control.
Up to five groups of the settings can be stored.

Storing Setting Values

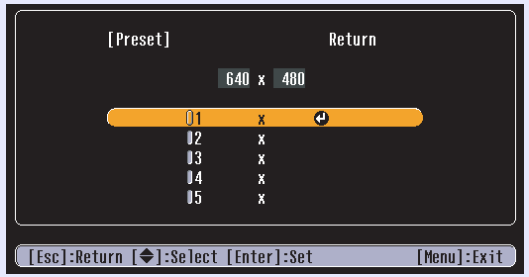
PROCEDURE

1 **Press the [Menu] button on either the remote control or the projector's control panel, and then select "Image" or "Signal" from the configuration menu. The mode for storing setting details will then be enabled.**
☛ p.79, p.80

2 **Once the settings are complete, select "Preset" from the "Signal" menu and then press the [Enter] button on either the remote control or the projector's control panel.**



3 **Select a preset number (1 to 5).**



TIP

The preset numbers that have an input resolution displayed have already been set. If you select a preset number that has already been set and use it to save the current settings, the existing settings in that recording area will be overwritten.

4 **Press the [Enter] button on either the remote control or the projector's control panel to store the setting values.**

When the settings have been saved, the input resolution will appear.

TIP

- *To clear the memorised details, select "Reset" from the "Signal" menu. Note that this will clear all of the preset settings.*
- *Preset recording is possible regardless of whether Wall Shot is ON or OFF. However, the Wall Shot settings are not memorised.*

Applying Preset Settings

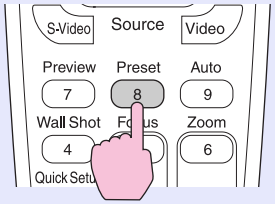
PROCEDURE

While images from analogue RGB signals are being input from a computer which is connected by means of a computer cable, press the [Preset] button on the remote control to apply the preset settings for the "Image" or "Signal" menu to the images that are currently being projected.

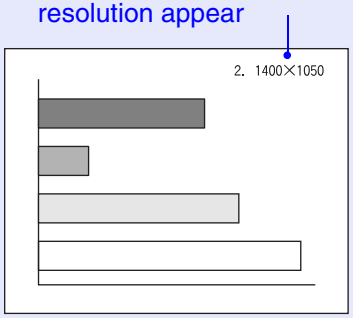
The memorised preset number changes in ascending order each time the button is pressed.

You must press the [Preset] button while the preset number and input resolution appear on the screen, otherwise the selection will not change.

Remote control



Preset number and input resolution appear



TIP

- *Preset numbers that have not yet been preset will be skipped.*
- *If no preset settings have been made, the message "No Entry" will appear when you press the [Preset] button.*

Changing the Resize/Aspect Ratio

You cannot switch to real display or change the aspect ratio while EasyMP is running (EMP-835 only).

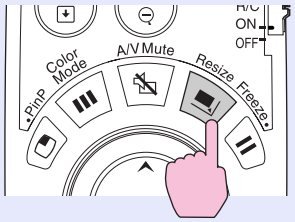
Selecting the Computer Display Method

When projecting computer images, the display method can be changed between resized display (in which the images are projected so that they fill the available projection area) and real display (in which the images are projected at the resolution of the original input signal).
The default setting is the resized display.

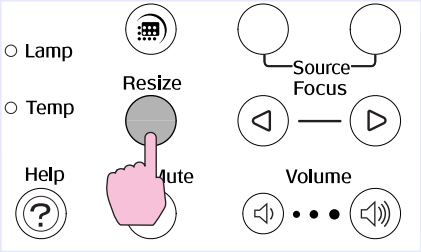
PROCEDURE

The display switches between real display and resized display each time you press the [Resize] button.

Remote control

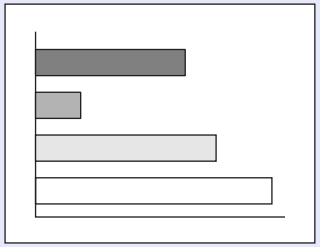


Projector

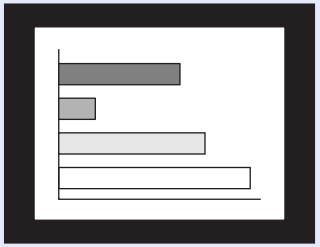


If the input resolution is lower than the panel resolution (1024 × 768)

Resized display



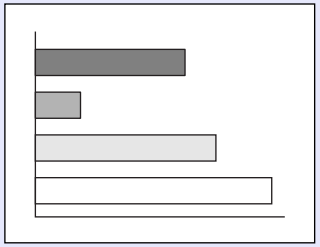
Real display



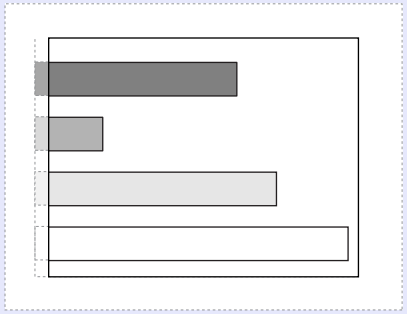
The image is projected in the middle of the screen at the original input signal resolution.

If the input resolution is higher than the panel resolution (1024 × 768)

Resized display



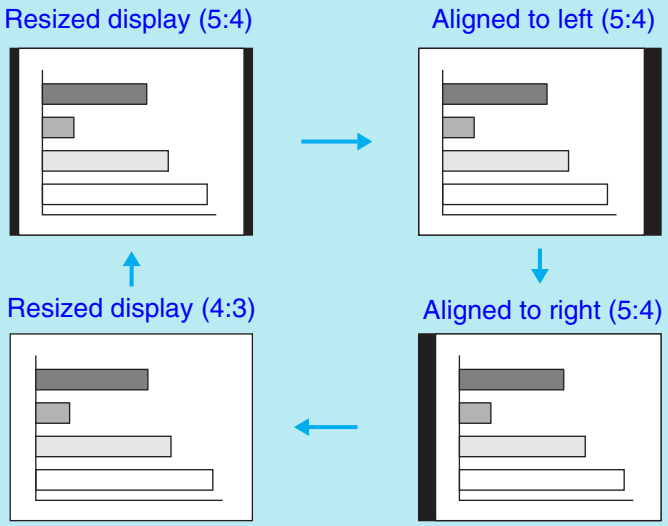
Real display



The middle section of the image is projected. You can tilt the [◌] button on the remote control to scroll around the image.

TIP

- *The type of display for projected images can be saved separately for each input source.*
- *If the input resolution is the same as the panel resolution (1024× 768 dots), the image size will not change.*
- *In the case of SXGA (5:4) input signals, the image position changes as shown below each time you press the [Resize] button while holding down the [Shift] button on the projector's control panel.*



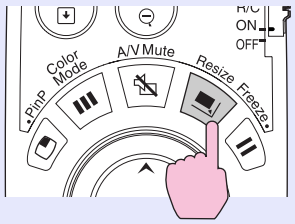
Projecting Wide-screen Images from Video Equipment

You can switch the aspect ratio between 4:3 and 16:9 when component video (YCbCr and YPbPr), S-Video and composite video signals are being projected.
Images that have been recorded in digital video and DVD images can be projected in 16:9 wide-screen format.

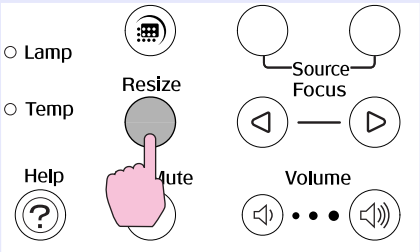
PROCEDURE

The display switches each time you press the [Resize] button.

Remote control



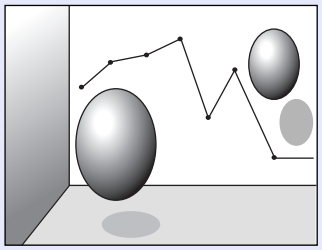
Projector



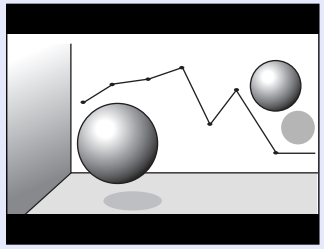
For SDTV

When 16:9 format images in squeeze mode are projected at 4:3 aspect ratio, the images are squeezed horizontally and appear vertically elongated.

When images in squeeze mode are projected at 4:3



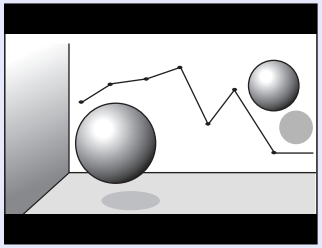
When images in squeeze mode are projected at 16:9



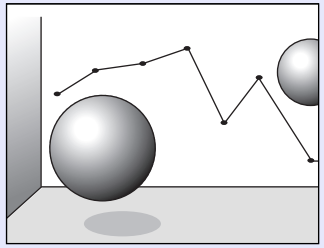
For HDTV

When 16:9 format images in squeeze mode are projected at 4:3 aspect ratio, the images are resized so that they fill the full vertical area of the screen, and the left and right edges are truncated and are not displayed.

When images in squeeze mode are projected at 16:9



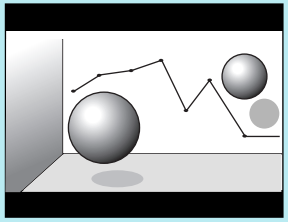
When images in squeeze mode are projected at 4:3



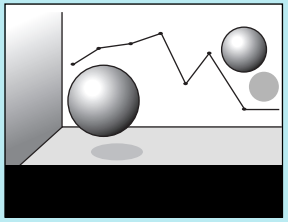
TIP

When projecting images with an aspect ratio of 16:9, the image position will change as follows each time you press the [Resize] button while holding down the [Shift] button on the projector's control panel.

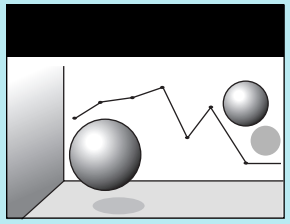
Centre display



Top edge display



Bottom edge display



Projector ID/Remote Control ID

If using more than one projector at a time, such as at a show, you can record ID numbers for the projectors and for the remote controls in order to simultaneously operate projectors with the same ID number. Alternatively, if you set the remote control ID to "0", all projectors can be operated by the remote control regardless of the projector ID numbers.

TIP

The default values for ID numbers are "1" for projectors and "0" for remote controls.

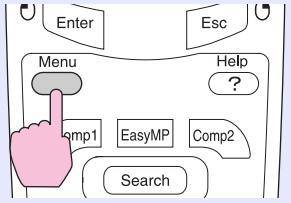
Registering an ID Number for a Projector

PROCEDURE

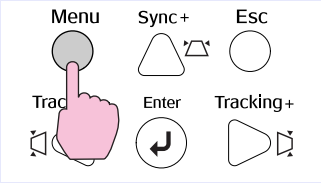
1 Press the [Menu] button and then select the "Extended" - "Projector ID" configuration menu.

☛ "Using the Configuration Menus" for details on this operation. p.87

Remote control

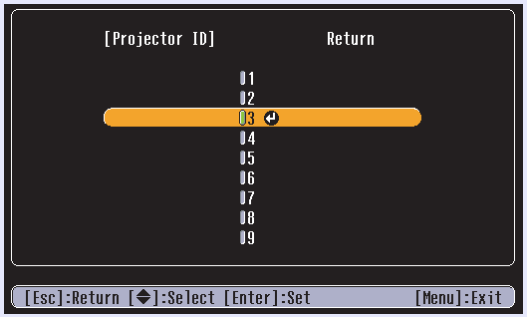


Projector



2 **Use the [◎] button on the remote control or the [⏢] or [⏢] button on the projector's control panel to select the desired ID number (1–9).**

Press the [Enter] button on either the remote control or the projector's control panel to accept the ID number setting.



3 **Once the setting has been made, press the [Menu] button to close the configuration menu.**

When registration is complete, only signals from remote controls with the same ID number or an ID number of "0" can be received.

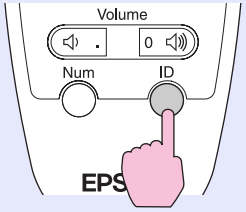
Registering an ID Number for a Remote Control

PROCEDURE

1 **Press the [ID] button.**

The [ID] button will light.

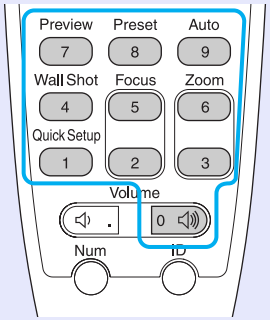
Remote control



2 **Press a button from [0] to [9] to specify an ID number.**

The light for the [ID] button will turn off and the registration will be complete. If a number other than "0" is registered, the remote control will only be able to operate projectors that have the same ID number.

Remote control



TIP

If you would like to check the ID number that is currently set for a remote control, press the [ID] button on the remote control so that the button lights, and then press the [ID] button once more. After a brief period, the [ID] button will flash, and the number of flashes will equal the remote control's ID number.

Operation Button Lock Function

This function locks the buttons on the projector's control panel and the remote control.

- Locking the control panel button
  This function is useful at times such as during show events so that only projection is carried out deactivating all buttons operation, or in places such as schools to limit the range of buttons that can be operated.
- Locking the remote control buttons
  You can lock the buttons that are related to making adjustments in order to prevent errors in operation while giving presentations.

Locking the Control Panel Buttons

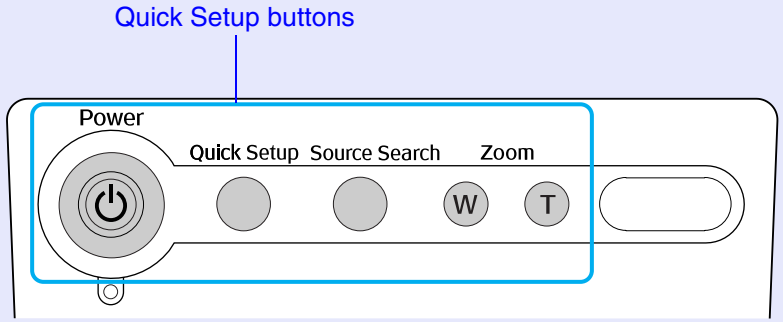
You can either lock all of the control panel buttons or only some of them.

PROCEDURE

1 Press the [Menu] button on either the remote control or the projector's control panel, and then select "Setting" - "Operation Lock" - "Control Panel" from the configuration menu.

2 Set to "Full Lock" or "Partial Lock".

If set to "Full Lock", none of the buttons on the control panel except the [Power] button can be operated.
If set to "Partial Lock", all buttons other than the Quick Setup buttons will be disabled and cannot be used.



3 When the confirmation message is displayed, select "Yes".

The control panel buttons will be locked in accordance with the selected setting.

TIP

There are two methods to cancel the projector's control panel lock.
- *Using remote control, change the "Setting" - "Operation Lock" - "Control Panel" in the configuration menu to "OFF".*
- *Hold down the projector's [Enter] button continuously for about 7 seconds, a message will be displayed and the lock will be cancelled.*

Locking the Remote Control Buttons

You can lock some of the remote control buttons to prevent mis-operations during presentations.

PROCEDURE

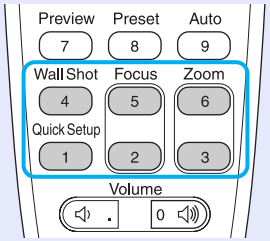
1 **Press the [Menu] button on either the remote control or the projector's control panel, and then select "Setting" - "Operation Lock" - "Remote Control" from the configuration menu.**

2 **Set to "Partial Lock".**

3 **When the confirmation message is displayed, select "Yes".**

The buttons shown in the box in the illustration below will be disabled.

Remote control



TIP

To cancel the remote control button lock function, change the "Setting" - "Operation Lock" - "Remote Control" setting in the configuration menu to "OFF". ☛ *p.82*

Adjusting Projected Images Manually

Focusing the Screen Images (Focus Adjustment)

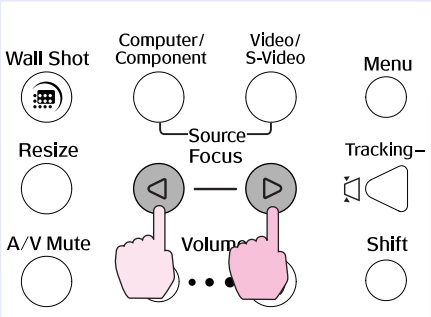
PROCEDURE

Press the [Focus] button to adjust the focus.

The images may lose their focus when keystone correction and sharpness are adjusted.

Remote control

Projector



TIP

- ***If the surface of the lens is dirty or misted over as a result of condensation, it may not be possible to adjust the focus correctly. If this happens, clean or de-mist the lens.*** ☛ *p.103, p.119*
- ***If the projection distance is outside the range of 86 – 1473 cm (2.8–48.3 ft.), the focus cannot be adjusted correctly. Check the projection distance.***

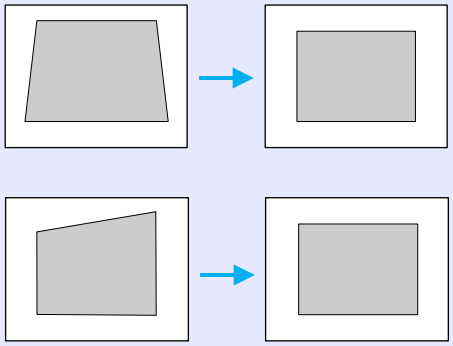
Manually Correcting Projection Area Distortion (Keystone)

This projector is equipped with an "Auto V-keystone" function that detects vertical tilt of the projector and automatically corrects the vertical keystone distortion of the projected image when staring projection. Furthermore, horizontal keystone distortion caused by tilting the projector horizontally can also be corrected using the "Auto Quick Corner" function. Auto Quick Corner is carried out when the [Quick Setup] button is pressed. ☛ "One-touch Adjustment of the Projection Area (Quick Setup)" p.40
If you would like to make fine adjustments to the results of automatic vertical keystone correction or Auto Quick Corner, you can carry out keystone correction manually.

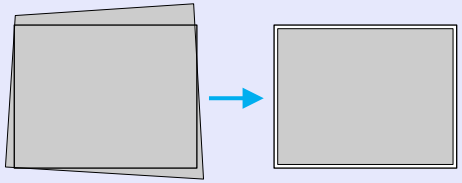
This projector is equipped with the following two keystone correction functions.

- Vertical and horizontal correction

☛ "Vertical and Horizontal Correction" p.70
☛ "Height Correction" p.71



- Quick Corner:
  This correction function is used when both horizontal and vertical keystone distortion occurs in the projection area to adjust the projection area so that it fits the screen exactly. ☛ p.72



The above correction method is selected automatically when automatic vertical keystone correction and Auto Quick Corner are carried out. The selection conditions are as follows.

- When only automatic vertical keystone correction is carried out, or when Auto Quick Corner is carried out for a projection surface such as a wall that has no borders.
  H/V-Keystone is selected. The setting in the "Keystone" configuration menu will also change.
- When the screen has a border and Auto Quick Corner is selected
  Quick Corner is selected. The setting in the "Keystone" configuration menu will also change.
- When Auto Quick Corner is not carried out
  Correction is carried out according to the setting in the "Keystone" configuration menu.

TIP

- ***Vertical keystone correction can be carried out up to a maximum of approximately 45°. Horizontal keystone correction can be carried out up to a maximum of approximately 25°.***
  Do not set up the projector at an upward angle of more than 12° or a downward angle of more than 4°.
  However, the corresponding angle will be smaller under any of the following conditions.
  · If the projector is tilted both vertically and horizontally
  · If the zoom has been adjusted to "W"
- ***The larger the angle of tilt, the poorer the focus of the contours in the projected images will become.***
- ***If a large amount of keystone correction is applied, fine details such as text characters and lines may go out of focus. If the text part of the image is blurred after keystone correction is carried out, decrease the sharpness setting.*** ☛ *p.79*
- ***Keystone corrections that have been applied using the keystone correction functions are memorised even when the projector's power is turned off. If you have changed the projection position or angle, you will need to repeat the correction procedure.***
- ***When keystone correction is carried out, the projected images will become smaller. Use the zoom function to adjust the size of the images if necessary.*** ☛ *p.40*

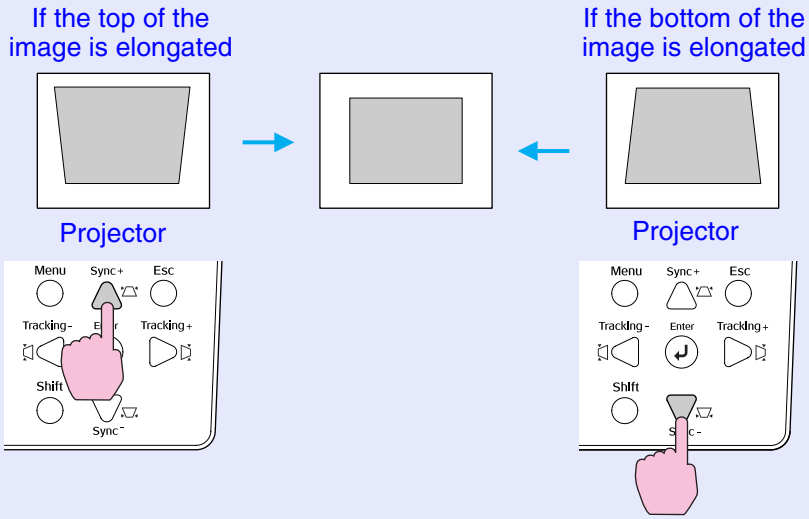
Vertical and Horizontal Correction

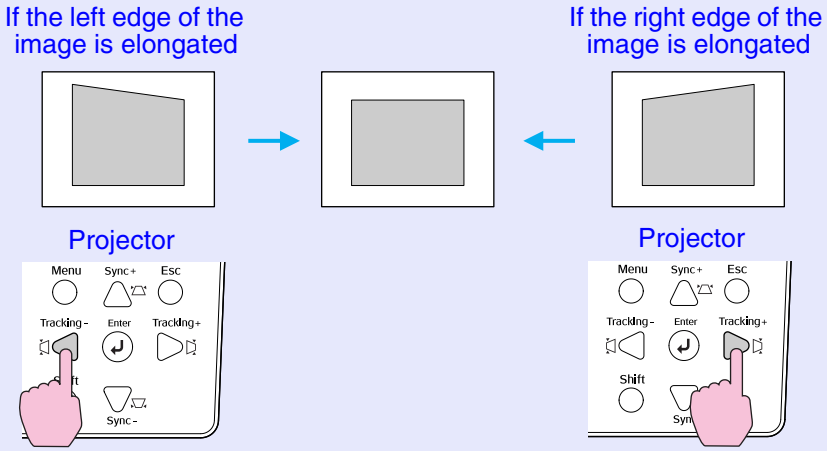
Vertical and horizontal correction can be carried out using either the projector's control panel or the configuration menus. This procedure explains how to use the projector's control panel to correct keystone distortion.

For adjustment using the configuration menus: ☛ "Setting" - "Keystone" - "H/V-Keystone" p.82

"H-Keystone" and "Height" cannot be used at the same time. If you use the horizontal correction function when height correction adjustment has already been carried out, the height correction adjustment will be cancelled.

PROCEDURE





TIP

- *If the "Quick Corner" correction screen is displayed when pressing the [⏢], [⏢], [◸] or [◹], the "Quick Corner" is currently selected.* ☛ *p.72*
  When carrying out vertical correction and horizontal correction, select "Setting" - "Keystone" - "H/V-Keystone" in the configuration menu and then make the correction. ☛ *p.82*
- *If the value displayed in the gauge on the screen stops changing when vertical correction and horizontal correction is being carried out, it indicates that the limit for vertical correction and horizontal correction has been exceeded. Check that the projector has not been set up at an angle which exceeds the proper limit.*

Height Correction

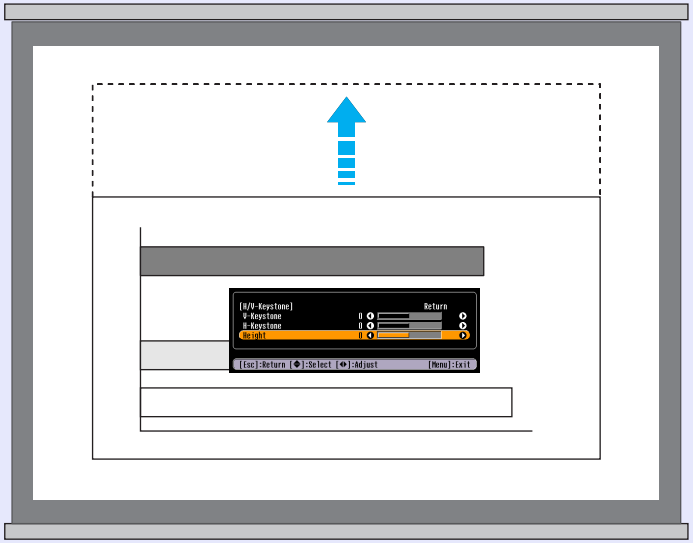
When vertical keystone correction is carried out automatically or manually, the height of the projected images will become shorter. Use the height correction function to adjust the height of the projection area.
The height correction function is accessible from the configuration menu.
This cannot be set when horizontal correction is carried out.

PROCEDURE

1 **Press the [Menu] button on either the remote control or the projector's control panel.**
Then select "Setting" - Keystone" - "H/V-Keystone" - "Horz./Vert./Height" - "Height" from the configuration menu.

For details, refer to "Using the Configuration Menus" ☛ p.87

2 **Tilt the [◎] button on the remote control to the left or right, or press the [◁] or [▷] buttons on the projector's control panel to correct the height while viewing the projected images.**



3 **When the adjustment is complete, press the [Menu] button on the remote control or the projector's control panel to close the configuration menu.**

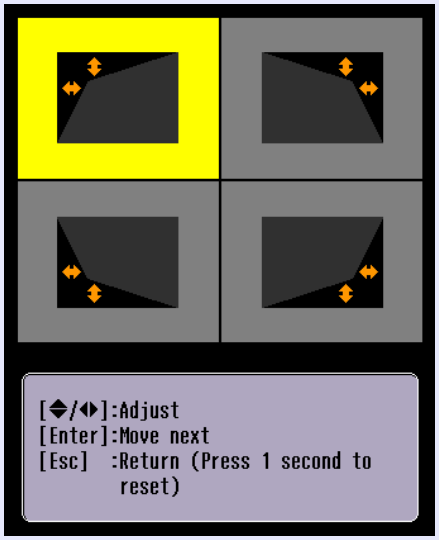
Correcting Keystone Distortion so that the Projection Area Fits the Screen Exactly (Quick Corner)

Quick Corner correction can be carried out using either the projector's control panel or the configuration menus. This procedure explains how to use the projector's control panel to correct keystone distortion.
If using the configuration menu: ☛ "Setting" - "Keystone" - "Quick Corner" p.82

PROCEDURE

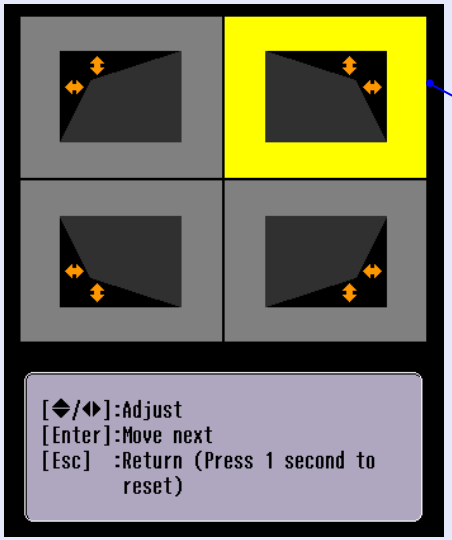
1 Press any one of the [⏢], [⏢], [◁] or [▷] buttons on the projector's control panel.

The Quick Corner correction screen will be displayed.



2 Press the [Enter] button on the projector's control panel and then select the corner to be corrected on the screen.

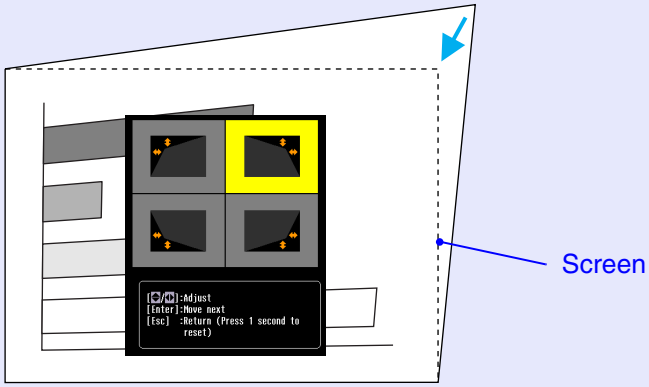
You can also press the [Enter] button on the remote control to select the corner.



The selected angle will appear yellow.

3 **Press the [△], [▽], [◁] and [▷] buttons on the remote control to correct the angle position.**

You can also tilt the [◎] button on the remote control to correct the angle position.



TIP

- *If the vertical or horizontal keystone correction gauge appears when [△], [▽], [◁] or [▷], is pressed, it means that "H/V-Keystone" is selected.* ☛ *p.70*
  When carrying out Quick Corner, select "Quick Corner" in the "Setting" - "Keystone" configuration menu first. ☛ *p.82*
- *If you press down the [Esc] button on the remote control or the projector's control panel for one second while the Quick Corner correction screen is displayed, the correction results will be restored to their default values.*
- *If the message "Cannot move anymore." appears on the screen while using the Quick Corner function, it means that the limit for correction has been reached. Check the following two points.*
  · Is the projection distance appropriate for the size of the target projection screen? ☛ *p.15*
  · Is the projector tilted past its maximum limit? ☛ *p.68*
- *If the input signal is interrupted or an image signal that is not supported is input while using the Quick Corner function, the correction value at that point will be recorded and the Quick Corner function will be cancelled.*
- *When the Quick Corner correction screen is displayed, the following functions will be cancelled.*
  · E-Zoom function · Real display · Freeze

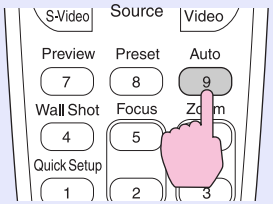
4 **When the adjustment is complete, press the [Menu] button on either the remote control or the projector's control panel to close the configuration menu.**

Adjusting Computer Images

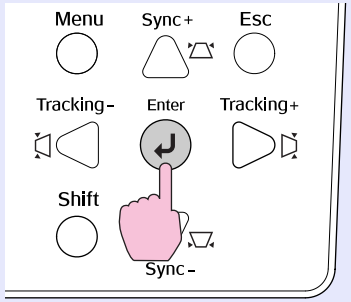
Automatic Setup

Automatic setup detects analogue RGB signals coming from a computer connected by a computer cable, and automatically adjusts these signals so that the optimum images can be obtained.
The default setting for the automatic setup function is "ON", but if the images are not displayed correctly or if "Signal" - "Auto Setup" in the configuration menu is set to "OFF", press the [Auto] button on the remote control or the [Enter] button on the projector's control panel while computer (analogue-RGB) images are being projected to adjust the images.

Remote control



Projector



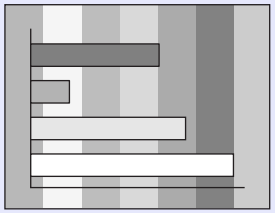
Automatic setup involves adjustment of the following three items: Tracking, Position and Sync. If the "Contrast" configuration menu has been set to "Manual", it will change to "Auto".

TIP

- *If you press the [Auto] button on the remote control or the [Enter] button on the projector's control panel while the E-Zoom function or Freeze function is active, the active function will be cancelled and then the adjustment will be carried out.*
- *Sometimes the signals may not be adjusted correctly depending on the type of signals being output by the computer. In such cases, use the "Tracking", "Position" and "Sync." menu commands to make the adjustments manually.* ☛ *p.38, p.75, p.76*
- *Automatic setup is not carried out while the preview function is being used.*

Adjusting the Tracking

If vertical stripes appear in the projected images, and this cannot be fixed using automatic setup, you will need to adjust the tracking manually using the following procedure.
(Only effective when RGB signals are being input)



TIP

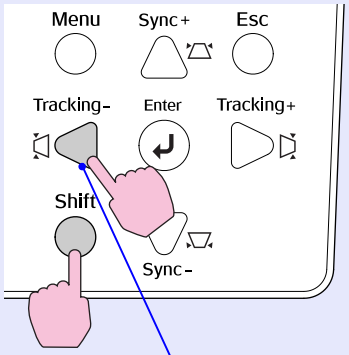
The images will flash when continuous tracking adjustment is carried out, but this is normal.

PROCEDURE

Tracking adjustment can be carried out using either the projector's control panel or the configuration menus. This procedure explains how to use the projector's control panel to adjust the tracking.
For adjustment using the configuration menus:
☛ "Signal" - "Tracking" p.80

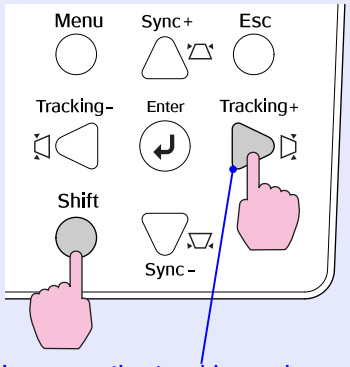
While holding down the [Shift] button on the projector's control panel, press [◁] or [▷] button until the vertical stripes disappear from the projected images.

Projector



Decrease the tracking value each time pressing the [◁] button.

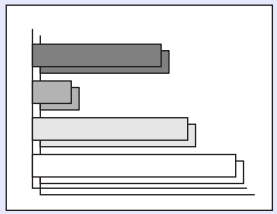
Projector



Increase the tracking value each time pressing the [▷] button.

Adjusting the Sync

If flickering, fuzziness or interference appear in images that are input from the computer, and this cannot be fixed using automatic setup, you will need to adjust the sync manually using the following procedure.
(Only effective when RGB signals are being input)

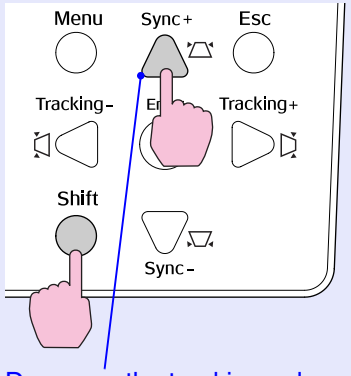


PROCEDURE

Sync adjustment can be carried out using either the projector's control panel or the configuration menus. This procedure explains how to use the projector's control panel to adjust the sync.
For adjustment using the configuration menus:
☛ "Signal" - "Sync." p.80

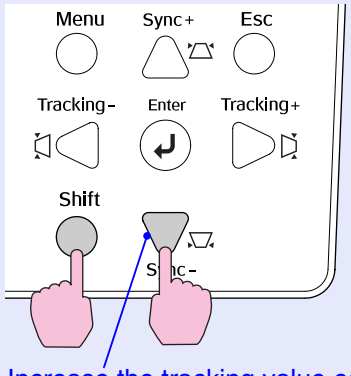
While holding down the [Shift] button on the projector's control panel, press [⏢] or [⏢] button until the flickering, fuzziness or interference disappears from the projected image.

Projector



Decrease the tracking value each time pressing the [⏢] button.

Projector



Increase the tracking value each time pressing the [⏢] button.

TIP

- *If you adjust the sync without adjusting the tracking first, it will not be possible to get the best adjustment results. Incorrect tracking adjustment may not be noticeable with some types of image. However, images with lots of lines and shading will tend to show incorrect tracking adjustments more clearly, so be sure to check the tracking adjustment first.*
- *It may also be possible to fix flickering and fuzziness by adjusting the brightness, contrast, sharpness and keystone correction settings.*

Selecting the Projection Quality (Colour Mode Selection)

The following five preset colour modes are available for use depending on the characteristics of the images that are being projected. You can easily obtain the optimum image quality simply by selecting the colour mode that corresponds to the projected images. The brightness of the images will vary depending on which colour mode is selected.

Mode	Application
Dynamic	Images are modulated and made fresher to emphasise brightness.
Presentation	Brightness is emphasised. For presentations in bright rooms.
Theatre	Movie images are optimised using natural tints.
Living Room	Brightness is emphasised. Ideal for playing video games in bright rooms.
sRGB	Images conform to the sRGB colour standard. If the connected source has a sRGB mode, set both the projector and the connected signal source to sRGB.

PROCEDURE

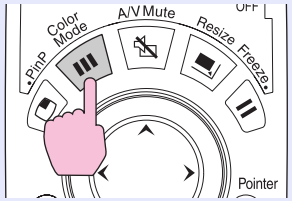
Selecting the colour mode can be carried out using either the remote control or the configuration menus. This procedure explains how to use the remote control to select the colour mode.

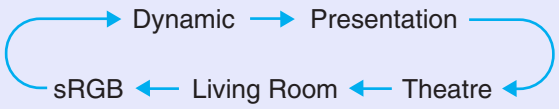
For selecting using the configuration menus

☛ "Image" - "Color Mode" p.79

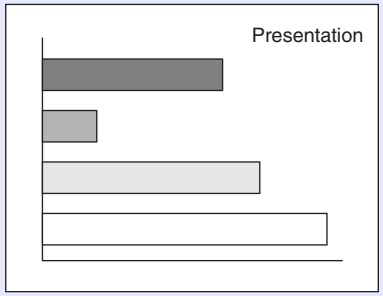
The colour mode changes as follows each time the [Color Mode] button is pressed.

Remote control





The current setting is displayed on the screen each time the mode is changed.



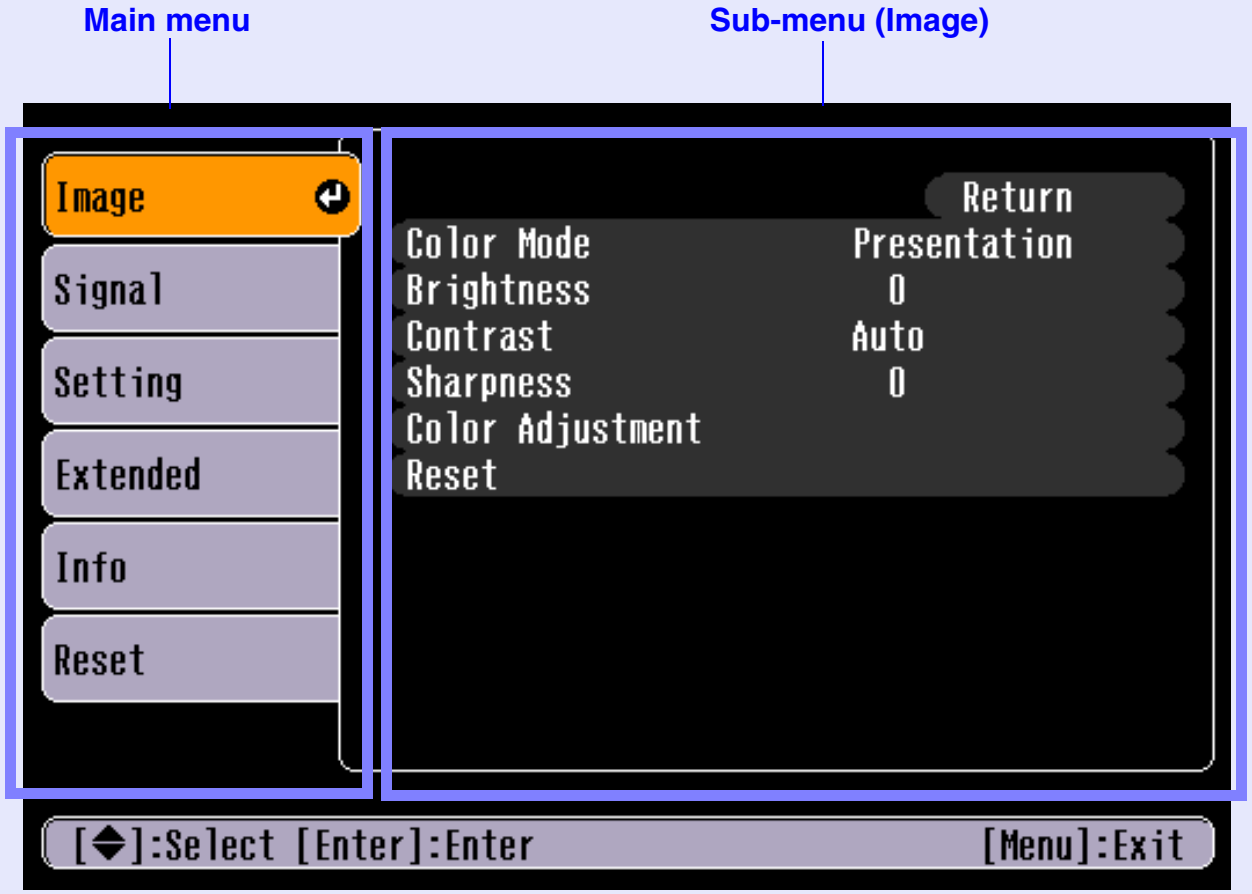
The default setting for the colour mode is as follows:
When computer images are being input: "Presentation"
When other types of images are being projected: "Dynamic"

Configuration Menus

The configuration menus can be used to carry out a variety of settings and adjustments.
The menus have a hierarchical structure, with a main menu that is divided into sub-menus, which are further divided into other sub-menus.
Refer to "Using the Configuration Menus" (☛ p.87) for details on using the menus.

Caution

If you use Direct Power Off while a configuration menu is being displayed, the settings from that configuration menu may not be saved. Close the configuration menu before using Direct Power Off.



List of Configuration Menu Commands

Following is a list of the functions that can be set using the configuration menus and the default setting values.
The menu items displayed and the default values will vary depending on the type of image signals. If you click *1 to *7, you can check the setting conditions (*3 to *7) and default values for that menu (*1 and *2). The menu names are coloured according to the display conditions.

Default setting values

■Image

The items that can be set will vary depending on the input source that is currently being projected. Setting details are saved separately for each source.

Color Mode — Dynamic *1, Presentation *2, Theatre, Living Room, sRGB
The picture quality can be set to one of five settings to match the projection environment. ☛ p.77

Brightness — Median value (0)
Adjusts the brightness of images.

Contrast — Median value (0) *1
Adjusts the difference between light and dark shades in the projected images. If the input source is *3, you can make the following selections.

- **Auto** *3
  Automatically adjusts contrast to the optimum setting.
- **Manual** *3
  Contrast can be adjusted manually.

Color Intensity *4 — Median value (0)
Adjusts the depth of image colours.

Tint *4 — Median value (0)
Adjusts the tint of projected images.

Sharpness — Median value (0)
Adjusts the sharpness of projected images.

Color Adjustment — Median value (0)
Adjusts the absolute color temperature and the intensity of red/green/blue components for each input source.
If "Color Mode" is set to "sRGB", "Color Adjustment" cannot be selected.

- **Abs. Color Temp.** — 10000K, 9300K, 8500K, 8000K, 7500K *2, 7000K, 6700K, 6500K *1, 6000K, 5500K, 5000K
  (Depends on colour mode)
  Whites can be adjusted from reddish tints to bluish tints. If you set a low colour temperature, the tints will tend to appear reddish. If you set a higher colour temperature, the tints will tend to appear bluish.
- **Red** — Median value (0)
- **Green** — Median value (0)
- **Blue** — Median value (0)

Make the adjustments while looking at the state of the images on the screen.

Reset — Yes, No
This returns all adjustment values in the "Image" menu to their default setting values.
If you would like to return all menu items to their default, see "All Reset" ☛ p.86

Default setting values

■Signal

The items that can be set will vary depending on the input source that is currently being projected. Setting details are saved separately for each source.
If using the EMP-835, you cannot change any of the "Signal" configuration menu settings while EasyMP is running.

Auto Setup *1	**ON**, OFF	This sets the automatic adjustment function to "ON" or "OFF", to control whether images are automatically adjusted to the optimum condition when the image signal is changed.
Resolution *1	**Auto**, Manual	"Auto" function sets the resolution for image signal automatically. When this function doesn't work resulting in improper projection, you may need to input the resolution manually.
Tracking *1	Depends on image signal	Adjusts images when vertical striped patterns appear. ☛ p.75
Sync. *1	Depends on image signal	Adjusts images when flickering, fuzziness or horizontal interference occur. ☛ p.76
Position		Adjusts the vertical and horizontal display position for images.
Preset *1	1, 2, 3, 4, 5	Records the setting values for the "Image" and "Signal" configuration menus.
Progressive *2	OFF	Converts each field of interlaced (I) signals to progressive (P) signals. This is ideal for use when viewing images with a large amount of movement in them.
	Video	Carries out IP conversion. Sets the film judgment function to "OFF". Suitable for normal video images.
	Film/Auto	This setting should normally be used. The image source is determined automatically, and if the images are judged to be film images, they are reproduced with almost the same image quality as the original.
Computer1 Input *3	**Auto**, RGB, Component Video	Selects the image signals from equipment that is connected to the [Computer1/Component] or [Computer2/Component] port. With the "Auto" function, image signals are recognized automatically. If the colours do not appear correctly when you select "Auto", select the appropriate signal for the connected equipment manually.
Computer2 Input *3	**Auto**, RGB, Component Video	

Video Signal *4 — Auto, NTSC, NTSC4.43, PAL, M-PAL, N-PAL, PAL60, SECAM

With the "Auto" function, image signals are recognized automatically. If interference appears in the projected images or no images appear when you select "Auto", select the appropriate signal manually.

Reset

Returns all adjustment values in the "Signal" menu except for the "Computer1 Input" and "Computer2 Input" settings to their default values. If you would like to return all menu items to their default, see "All Reset" ☛ p.86

Default setting values

■Setting

Quick Setup

This is used for Quick Setup settings.
Quick Setup cannot be used when "Projection" is set to "Rear" or "Rear/Ceiling".

Startup Options

Sets the items that are to be set up automatically when the projector is turned on. ☛ p.34

- Quick Setup — Carries out the operations specified in "Quick Setup Options" when the projector is turned on.
- Auto Focus — The focus is adjusted automatically.
- OFF — Automatic setup is not carried out.

Quick Setup Options

Lets you select which operations are to be carried out when the [Quick Setup] button is pressed. ☛ p.40

- **Auto Focus** — ON, OFF
- **Auto Quick Corner** — ON, OFF
- **Wall Shot** — ON, OFF

Default setting values

Keystone

Corrects keystone distortion in the projection area. ☛ p.68
"Auto V-Keystone" can only be set when "Projection" is set to "Front".

H/V-Keystone

Auto V-Keystone ON, OFF

Selects whether vertical keystone correction is carried out automatically ("ON") or not carried out ("OFF") when vertical tilting of the projector is detected. ☛ p.38

Horz./Vert./Height

V-Keystone: Median value (0)
H-Keystone: Median value (0)
Height: Median value (0)

Corrects the height of the projection area when it has been made smaller as a result of vertical or horizontal distortion correction or vertical keystone correction. ☛ p.70

Quick Corner

Lets you adjust the four corners of the projection area so that it fits the screen exactly. ☛ p.72

Operation Lock

This function disables operation of the projector's control panel and the remote control buttons. ☛ p.66

Control Panel

- Full Lock — All buttons on the control panel except the [Power] button will be disabled. The remote control can be used to operate the projector.
- Partial Lock — All buttons except the [Power], [Quick Setup], [Source Search], [Zoom W] and [Zoom T] buttons are disabled. The remote control can be used to operate the projector.
- OFF

Remote Control Partial Lock, OFF

The [Wall shot],[Quick Setup], [Focus] ([5] and [2]) and [Zoom] ([6] and [3]) buttons on the remote control are disabled. The projector's control panel can be used to operate the projector.

Default setting values

Pointer — Lets you set the shape and movement speed for the pointer. ☛ p.58

- **Pointer Shape** — Pointer1, Pointer2, Pointer3 — The shape of the pointer can be selected.
- **Pointer Zoom** — 100%, 200% — Selects the display size for the pointer.
- **Pointer Speed** — High Speed, Medium Speed, Low Speed — Selects the movement speed for the pointer when the [◎] button on the remote control is tilted.

Brightness Control — High, Low — Lets you select the brightness of the lamp from one of two settings.
If projecting images in a dark room or onto a small screen and the images are too bright, change the setting to "Low".
Compared with the "High" setting, the "Low" setting reduces power consumption and extends operating life of the lamp. (Power consumption: reduced by approximately 60W, Lamp operating life: increased by approximately 1.5 times)

PinP Options — Sets the properties to be applied when using the PinP function. ☛ p.57

- **Audio Output** — Main Screen, Subscreen — Selects whether sound is to be output for the main screen or for the sub-screen.
- **Subscreen Image** — Video, S-Video — Selects the image signal to be projected in the sub-screen from either composite video or S-Video.

Audio

- **Volume** — Median value (15) — Adjusts the sound volume for the input source being projected.
- **Tone** — Median value (0) — Adjusts the tone for the input source being projected.

Reset — Returns all adjustment values in the "Setting" menu to their default values.
If you would like to return all menu items to their default, ☛ "All Reset" p.86

Default setting values

■Extended

Display

Message ON, OFF
Sets whether the input source name or colour mode name or a message is displayed on the screen ("ON") or not displayed ("OFF") at times such as when the input source or colour mode is changed or when no image signals are being input.

Display Background Black, Blue, Logo
Sets the background screen when a message is being displayed at times such as when no image signals are being input.

A/V Mute Black, Blue, Logo
Sets the screen status when the [A/V Mute] button is pressed. ☛ p.55

Startup Screen ON, OFF
Sets whether the startup screen is displayed ("ON") or not displayed ("OFF") when the projector is turned on. If you change the setting, the new setting will be enabled after the power is turned off and then back on.

User's Logo EPSON
Change the user's logo that is displayed as a background and displayed during A/V Mute. ☛ p.125

Projector ID 1, 2, 3, 4, 5, 6, 7, 8, 9
Sets the projector's ID number. ☛ p.64

Projection Front, Front/Ceiling, Rear, Rear/Ceiling
Sets the setup position for the projector. ☛ p.14

Default setting values

Operation

Direct Power ON ON, **OFF**

Sets whether direct power on is enabled ("ON") or disabled ("OFF"). ☛ p.33
When you set to "ON" and leave the power cable connecting to a wall socket, be aware of the sudden surges of electricity when the power comes back on after the power outage or something, that cause the projector turn on automatically.

Sleep Mode **ON**, OFF

Sets whether projection stops automatically ("ON") or not ("OFF") when no operations are carried out for approximately 30 minutes while no image signals are being input.

Network

Configure network connection. (EMP-830 only)
For details about settings ☛ p.90
If using the EMP-835, network settings are made using EasyMP. ☛ *EasyMP Network Setup Guide*

Standby Mode Network ON, **Network OFF**

If set to "Network ON", the network monitoring and control functions can be used even when the projector is in standby mode. If you change the setting, the new setting will be enabled after the power is turned off.

COM Port **RS-232C**, USB

Sets whether the [RS-232C] or [USB] port is to be used for communicating with a computer. If you change the setting, the new setting will be enabled after the power is turned off.

Language 日本語, **English**, Français, Deutsch, Italiano, Español,Português, 中文, 한국어

(Varies depending on country of purchase)

Sets the language to be used for menu and message displays.
If using the EMP-835, this setting is also applied to EasyMP.

Reset

Returns all adjustment values in the "Extended" menu except for the "Projector ID", "Projection", "Standby Mode", "COM Port" and "Language" settings to their default values. If you would like to return all menu items to their default, ☛ "All Reset" p.86

Default setting values

■Info

Lets you check the statuses of the image signals being projected and the projector. (Display only)

Lamp Hours (High Brightness) (Low Brightness)	Shows the cumulative lamp operating time. When it reaches the lamp warning time, the characters are displayed in red. The cumulative operating time from 0 to 10 hours will be displayed as "0H". From "10H" onwards, the display will be in units of 1 hour.
Source	Shows the input source that is currently being projected.
Video Signal *1	Shows the video signal format.
Input Signal *2	Shows the image signal settings for the input source.
Resolution *2	Shows the input resolution.
Refresh Rate *2	Shows the refresh rate.
Sync Info *2	Shows the synchronisation polarity and synchronisation attributes.

■Reset

Resets all configuration menu settings and the lamp operating time.

All Reset	Returns all configuration menu settings to their default settings. The "Computer1 Input", "Computer2 Input", "User's Logo", "Language", "Projector ID" and "Lamp Hours" will not be reset to their default values.
Lamp-Hours Reset	Clear the cumulative lamp operating time and reset to "0H".

Using the Configuration Menus

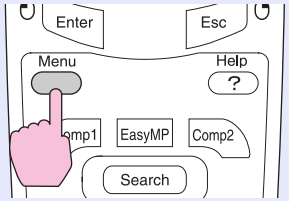
The configuration menus can be operated using either the remote control or the projector's control panel.

PROCEDURE

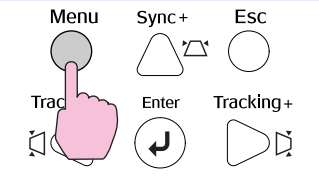
1 Press the [Menu] button.

The main configuration menu appears.

Remote control



Projector



2 Select an item in the main menu.

If using the remote control, tilt the [◎] button up or down to select a menu item.

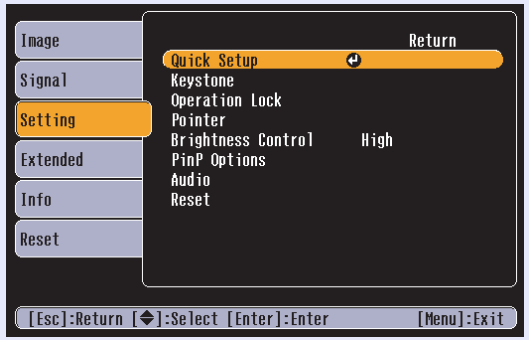
If using the projector's control panel, press the [△] or [▽] button to select a menu item.

The sub-menu will change depending on the command selected in the main menu.

3 Confirm the selection.

Press the [Enter] button on either the remote control or the projector's control panel to confirm the item selection.

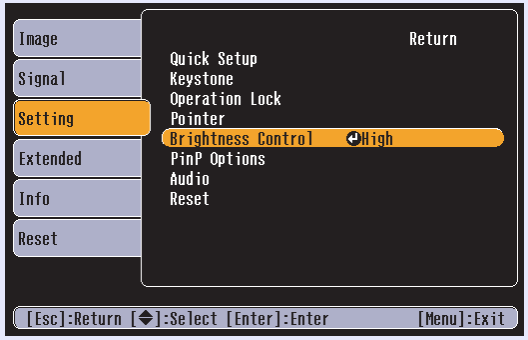
The cursor will be displayed in the sub-menu and settings can then be made.



4 Select a sub-menu item.

If using the remote control, tilt the [◎] button up or down to select a sub-menu item, and then press the [Enter] button to accept the selection.

If using the projector's control panel, press the [△] or [▽] button to select a sub-menu item and then press the [Enter] button to accept the selection.

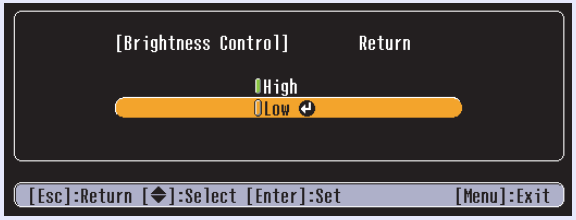


TIP

The items appearing in the "Signal" menu and the "Info" menu will vary depending on the type of input source being projected.

5 Change the settings.

Example 1



(1) Tilt the [◎] button on the remote control up or down or press the [△] or [▽] button on the projector's control panel to select the desired item.
The item which is presently set is displayed with (green).
The item which is now selected is displayed with (orange).
(2) Press the [Enter] button on either the remote control or the projector's control panel to accept the selection.

Example 2

(1) Tilt the [◎] button on the remote control to the left or right or press the [▷] or [◁] button on the projector's control panel to change the setting.
(2) Press the [Enter] button on either the remote control or the projector's control panel to accept the selection.

TIP

- *Sub-menu items which cause another sub-menu to be displayed when they are selected have ⏎ after them. If you select such menu items and press the [Enter] button on either the remote control or the projector's control panel you can then change the settings in the next sub-menu which appears.*
- *To return to the previous screen, press the [Esc] button on either the remote control or the projector's control panel, or select "Return" and press the [Enter] button.*
- *Refer to "List of Configuration Menu Commands" for details on each configuration menu setting item.* ☛ *p.79*

6 Close the menu.

Press the [Menu] button on either the remote control or the projector's control panel.

Monitoring and Controlling Projectors via a Network (for the EMP-830)

You can monitor the status of the projector and control operations such as turning the power on and off from a computer via a network.

TIP

The network functions differ for the EMP-835 and the EMP-830. The following descriptions apply to the EMP-830. If using the EMP-835, refer to the EasyMP Network Setup Guide and the EasyMP Operation Guide.

Available Network Functions for the EMP-830

The EMP-830 is compatible with SNMP.
In addition, you can use the software that is included with the projector for centralised control of projectors and to receive notifications of problems via e-mail.

Monitoring Function Using SNMP and the SNMP Manager Program

You can use SNMP to monitor and control the status of the projector from a computer.
The management functions that are available when using SNMP require SNMP manager program to be installed in the computer. Because of this, management using SNMP should always be carried out by somebody who is familiar with computer networks such as a network administrator.

Monitoring and Control Functions Using the Accessory Software

The Projector Software CD-ROM supplied with the projector contains the following two software programs. These programs can be used to carry out the following network monitoring and control tasks.

- EMP Monitor
  This software is used to monitor the statuses of multiple projectors that are connected to a network by means of a list on the computer screen, and to control the projectors all at once by carrying out operations such as turning the power for the projectors on and off. It allows multiple projectors on a network to be monitored and controlled by a single operator. ☛ *EMP Monitor Operation Guide*

- EMP NetworkManager
  This program lets you make network settings for projectors from configuration menus using a remote control. However, you can use the keyboard of the computer for direct address entry when using EMP NetworkManager, so that network settings can be carried out easily. In addition, EMP NetworkManager can be used to make settings for the mail notification function, so that notifications of problems with projector operation can be sent via e-mail to preset e-mail addresses when such problems occur.

Refer to the following manuals on the Document CD-ROM for details on the operating environments and how to use the above software applications.
EMP Monitor ☛ *EMP Monitor Operation Guide*
EMP NetworkManager ☛ *EMP NetworkManager Operation Guide*

Refer to the ☛ "Installation and Uninstallation" in the *EMP NetworkManager Operation Guide* for details in installing the above programs.

Using a Network for Monitoring and Control

Follow the procedure below to monitor and control the projector over a network.

PROCEDURE

1 Install the software from the Projector Software CD-ROM onto the computer that is to be used.

☛ "Installation and Uninstallation" in the *EMP NetworkManager Operation Guide*

2 Use a network cable to connect the projector to the network. ☛ p.24

3 Use the projector's configuration menus to make the network settings. ☛ p.90

It can be helpful to have EMP NetworkManager running while making detailed settings.

4 Carry out monitoring and control operations from the computer.

- Monitoring using the mail notification function ☛ "Setting the Mail Notification Function" and "If a Problem Notification E-mail Message has been Sent" in the *EMP NetworkManager Operation Guide*
- Monitoring and control using EMP Monitor ☛ *EMP Monitor Operation Guide*

Projector Network Connecting Settings (EMP-830)

In order to connect a projector to a network, you will need to complete various configuration menu settings such as setting an IP address for the projector.

TIP

Once the projector has been connected to the network, you can use EMP NetworkManager to make detailed network settings for the projector. ☛ ***EMP NetworkManager Operation Guide***

The following settings can be carried out using the accessory remote control.

PROCEDURE

1 Press the [Menu] button on the remote control, and then select "Network" from the "Extended" configuration menu.

☛ "Using the Configuration Menus" for details on this operation. p.87

2 Move the cursor to the item to be set, and then press the [Enter] button on the remote control.

Some items require numbers to be entered. Refer to "Entering Numbers" ☛ p.92 for details on entering numbers.

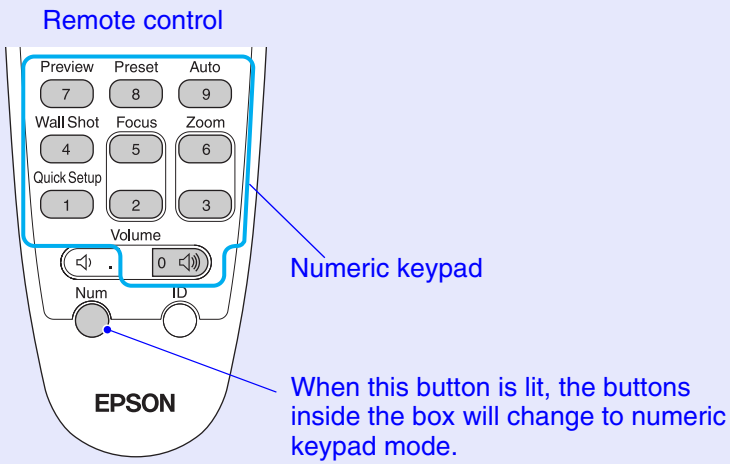
The table below gives details of the settings for each item.

DHCP	Sets whether DHCP is used or not. ON :DHCP is used OFF :DHCP is not used
IP address	Settings can be entered when "DHCP" is set to "OFF". Enter the IP address that has been assigned to the projector. You can enter numbers from 0 to 255 in each field of the IP address. However, the following IP addresses cannot be used. 0.0.0.0, 127.x.x.x, 224.0.0.0 to 255.255.255.255 (where x is a number between 0-255)
Subnet Mask	Settings can be entered when "DHCP" is set to "OFF". Enter the subnet mask that has been assigned to the projector. You can enter numbers from 0 to 255 in each field of the IP address. However, the following subnet masks cannot be used. 0.x.x.x to 254.255.255.255, 255.255.255.255 (where x is a number between 0-255)
Gateway address	Settings can be entered when "DHCP" is set to "OFF". Enter the gateway address that has been assigned to the projector. You can enter numbers from 0 to 255 in each field of the IP address. However, the following gateway addresses cannot be used. 0.0.0.0, 127.x.x.x, 224.0.0.0 to 255.255.255.255 (where x is a number between 0-255)
SNMP	Enter the IP address for the computer to use for notification of SNMP traps. Two IP addresses can be set as notification addresses: "Trap IP address 1" and "Trap IP address 2". If a notification cannot be sent to the IP address that is set for "Trap IP address 1", then it is sent to the IP address that has been set for "Trap IP address 2".
MAC address	Shows the MAC address for the projector.
Projector name	Shows the unique name that is used to identify the projector on the network. This can be changed using EMP NetworkManager. ☛ *EMP NetworkManager Operation Guide*

Entering Numbers

Use the following procedure to enter numbers.

1. Move the cursor to the item to be entered, and then press the [Enter] button on the remote control. The cursor will change to green and entry mode will be enabled.
2. Press the [Num] button on the remote control. The [Num] button will light and the buttons shown in the diagram below will switch to numeric keypad mode so that you can enter numerals. If no buttons are pressed for approximately 10 seconds while in numeric keypad mode, or if you press the [Num] button once more, the [Num] button will switch off and numeric keypad mode will be cancelled.



3. To enter two or more numbers, tilt the [◯] button of the remote control to the right. The first number will be confirmed and the cursor will move to the position for entering the second number.
4. Once all numbers have been entered, press the [Enter] button on the remote control to accept the number. The cursor will change to yellow.

3 Once the settings have been made, press the [Menu] button to close the configuration menu.

Troubleshooting

This chapter describes how to identify problems and what to do if a problem is found.

Using the Help..... 94

Problem Solving..... 96

- **Reading the Indicators.....96**
  - When the Power Indicator is Lit/Flashing Red 96
  - When the Lamp/Temp Indicator is Lit/Flashing Orange 98
- **When the Indicators Provide No Help 99**
  - Problems Relating to Images 101
  - Other Problems.....105
  - Problems Relating to Monitoring and Controlling Projectors Using a Network 107

Using the Help

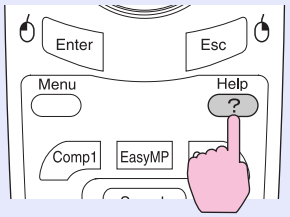
When you have any problems, such as no image appears, or make no sound, press [Help] button on the remote control. The interactive help screen will be displayed. Most of your problems can be solved by answering the displayed questions.

PROCEDURE

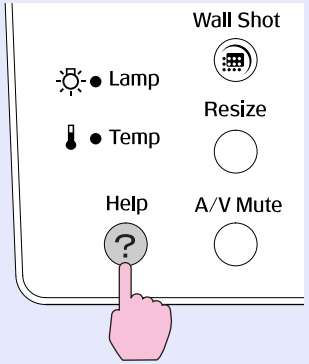
1 Press the [Help] button.

The help screen will be displayed.

Remote control



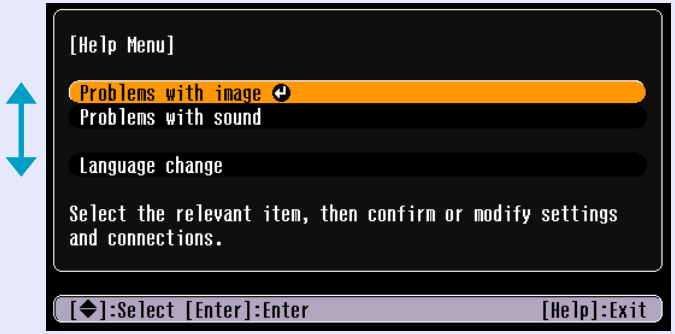
Projector



2 Select a menu item.

If using the remote control, tilt the [◎] button up or down to select a menu item.

If using the projector's control panel, press the [⏢] or [⏢] button to select a menu item.



3 Confirm the selection.

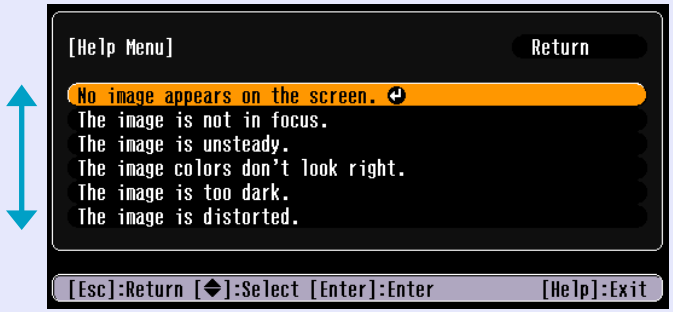
Press the [Enter] button on either the remote control or the projector's control panel to confirm a selection.

TIP

To return to a previous menu, press the [Esc] button on either the remote control or the projector's control panel.

4 **Repeat steps 2 and 3 to proceed through the menu to more detailed items.**

Press the [Help] button to clear the help screen.



TIP

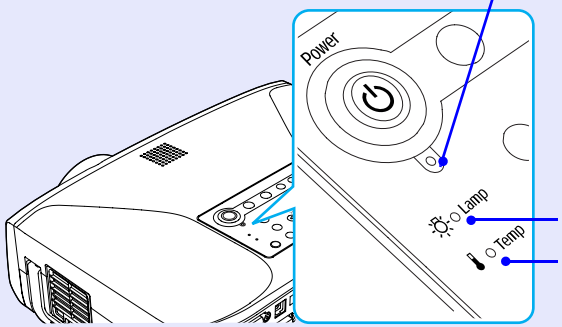
If the Help function does not provide a solution to the problem, refer to "Problem Solving". ☛ *p.96*

Problem Solving

If you are having a problem with the projector, first check the projector's indicators while referring to "Reading the Indicators" below.
If the indicators do not show clearly what the problem might be, refer to "When the Indicators Provide No Help". ☛ p.99

Reading the Indicators

The projector is provided with the following three indicators. These indicators notify you of the operating status of the projector.



Indicates the operating status of the projector.

- Orange : In the start-up process (The [Power] bottons on the remote control and the projector's control panel are disabled during this period.)
  If "Standby Mode" in the configuration menu is set to "Network ON", the start-up process will take about 12 seconds after inserting the power plug into an electrical outlet.
- Orange : Standby condition
  At this condition, press the [Power] button on either the remote control or the projector's control panel to start a projection
- Green : Warm-up is in progress
  It takes about 30 seconds for the warm-up. Do not unplug the power cable or turn off the breaker (Direct Power OFF) while the warm-up is in progress. Doing so may cause an early deterioration of the lamp. For the same reason, the projector is set not to accept the power off by the [Power] button during the warm-up.
- Green : Projection in progress

Indicates the projection lamp status.

Indicates the internal temperature status.

The following tables show what the indicators mean and how to remedy the problems that they indicate.
When no indicators are lit, the power cable is not properly connected, or electricity is not being supplied.

When the Power Indicator is Lit/Flashing Red Abnormality

● : lit ☼ : flashing ○ : off

Status	Cause	Remedy or Status
⏻ ● Red ☼ ☼ Red 🌡 ☼ Red	Internal error	Stop using the projector, disconnect the power cable from the electrical outlet, and contact your dealer or the nearest address provided in the "International Warranty Conditions" section of the *Safety Instructions/World-Wide Warranty Terms* booklet.

● : lit ☼ : flashing ○ : off

Status	Cause	Remedy or Status
⏻ ● Red ☼ ○ 🌡 ☼ Red	Fan related error Sensor error	Stop using the projector, disconnect the power cable from the electrical outlet, and contact your dealer or the nearest address provided in the "International Warranty Conditions" section of the *Safety Instructions/World-Wide Warranty Terms* booklet.
⏻ ● Red ☼ ☼ Red 🌡 ○	Lamp error Lamp timer failure Lamp out Lamp cover is open	Take out the lamp and check if it is broken. ☛ "Replacing the Lamp" p.121 If the lamp is not broken, put it back in and then turn the power on. If the lamp still does not turn on, replace it with a new lamp. If this does not solve the problem, stop using the projector and disconnect the power cable from the electrical outlet. Then contact your dealer or the nearest address provided in the "International Warranty Conditions" section of the *Safety Instructions/World-Wide Warranty Terms* booklet.
		If the lamp is broken, contact your local dealer for further advice. (Projection cannot be carried out until the lamp is replaced.)
		Check that the lamp and the lamp cover are securely installed. If the lamp or lamp cover is not securely installed, the lamp will not switch on.
⏻ ● Red ☼ ○ 🌡 ● Red	Internal temperature error (overheating)	The lamp will turn off automatically and projection will stop. Wait for about 5 minutes without operating the projector. After about 5 minutes have elapsed, unplug the power cable and then check the following two points. •Check that the air filters and air exhaust vent are clear, and that the projector is not positioned against a wall. ☛ p.15 •If the air filters are blocked, clean or replace them. ☛ p.119 When the power cable is plugged back in, the projector will return to its previous state, so press the [Power] button on either the projector's control panel or the remote control to turn it back on. If the projector continues to overheat even after the above points have been checked, or if the indicators show a problem when the power is turned back on, stop using the projector, disconnect the power cable from the electrical outlet, and contact your dealer or the nearest address provided in the "International Warranty Conditions" section of the *Safety Instructions/World-Wide Warranty Terms* booklet.

When the Lamp/Temp Indicator is Lit/Flashing Orange Warning

● : lit ☼ : flashing ○ : off

Status	Cause	Remedy or Status
⏻ ☼ Red ☼ ○ 🌡 ☼ Orange	High-speed cooling in progress	(This is not an abnormality. However, if the temperature rises too high again, projection will stop automatically.) •Check that the air filters and air exhaust vent are clear and that they are not up against a surface such as a wall. ☛ p.15 •If the air filters are blocked, clean them. ☛ p.119
⏻ ● ☼ ☼ Orange 🌡 ○	Lamp replacement notification	Replace the lamp with a new one. ☛ p.121 If you continue to use the lamp after it has passed the replacement period, the possibility that the lamp may break will increase. Replace the lamp with a new one as soon as possible. * The ⏻ indicator status will vary depending on the projector status at the time.

TIP

- *If the projector is not operating properly even though the indicators are all showing normal, refer to "When the Indicators Provide No Help". ☛ p.99*
- *If an indicator is showing a status which does not appear in the previous tables, contact you dealer or the nearest address provided in the "International Warranty Conditions" section of the Safety Instructions/World-Wide Warranty Terms booklet.*

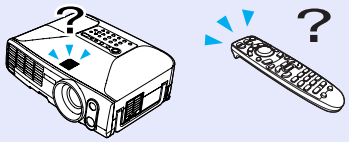
When the Indicators Provide No Help

First refer to the following problems to determine what type of problem it is that you are having, and then refer to the page containing details of the problem.

Problems Relating to Images

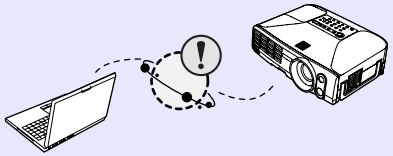
- No images appear ☛ p.101
  Projection does not start, the projection area is completely black, the projection area is completely blue, etc.
- Projection stops automatically ☛ p.101
- The message "Not Supported." is displayed ☛ p.102
- The message "No Signal." is displayed ☛ p.102
- Images are fuzzy or out of focus ☛ p.103
- Interference or distortion appear in images ☛ p.103
  Problems such as interference, distortion or black & white checked patterns appear.
- Image is truncated (large) or small ☛ p.104
  Only part of the image is displayed.
- Image colours are not right ☛ p.104
  The whole image appears purplish or greenish, images are black & white, colours appear dull, etc.
  (Computer monitors and LCD screens have different colour reproduction performance, so that the colours projected by the projector and the colours appearing on the monitor may not necessarily match, but this is not a sign of a problem.)
- Images appear dark ☛ p.105

Other Problems



- No sound can be heard or the sound is faint ☛ p.105
- The remote control does not work ☛ p.106
- The fans do not stop when power is turned off ☛ p.106

Problems Relating to Networks and EasyMP



- Mail notification messages are not being sent when a problem occurs with the projector ☛ p.107
- The projector cannot be monitored and controlled using the EMP Monitor function ☛ p.108
- An error message is displayed (error message when EMP Monitor is running) ☛ p.117

For EMP-835 only

- You cannot connect from another computer when images are being projected during a network connection ☛ p.109
- EMP NS Connection starts, but a projector is not found ☛ p.109
- Connection cannot be established in access point mode or wired LAN connection mode ☛ p.111
- Connection cannot be made in ad hoc mode ☛ p.111
- Network Screen images are not displayed, or the display is slow ☛ p.111
- The PowerPoint slideshow does not work when using the Network Screen ☛ p.112
- Keynote slideshows cannot be played back with Network Screen ☛ p.112
- Network Screen cannot be used ☛ p.112
- When running Microsoft Office applications using Network Screen, the screen does not change as required ☛ p.113
- Files do not work correctly with EMP SlideMaker2 ☛ p.113
- An error message is displayed ☛ p.113–p.117

Problems Relating to Images

■ No images appear

Check	Remedy
Was the [Power] button pressed?	Press the [Power] button on either the remote control or the projector's control panel to turn the power on. The remote control cannot be used unless the [R/C] switch of the remote control is at "ON". ☛ p.34
Is the A/V Mute function active?	Press the [A/V Mute] button on either the remote control or the projector's control panel to cancel the A/V Mute function. ☛ p.55
Have the configuration menu settings been made correctly?	Reset all of the settings. ☛ p.86
Is the projected image completely black? **Only when projecting computer images**	Some input images, such as screen savers, may be completely black.
Are the image signal format settings correct? **Only when projecting images from a video source**	If a composite video or S-Video source is connected to the projector, use the "Video Signal" menu command to select the signal format. ☛ "Signal" - "Video Signal" p.81

■ Projection stops automatically

Check	Remedy
Is "Sleep Mode" set to "ON"?	When the "Sleep Mode" menu command has been set to "ON", the lamp turns off automatically if no operations are carried out for about 30 minutes while no image signal is being input. The Power indicator lights orange at this time. Press the [Power] button on either the remote control or the projector's control panel to turn the power on. If you do not want sleep mode to be used, change the "Sleep Mode" setting to "OFF". ☛ "Extended" - "Operation" - "Sleep Mode" p.85

■ The message "Not Supported." is displayed

Check	Remedy
Are the image signal format settings correct?	If a composite video or S-Video source is connected to the projector, use the "Video Signal" menu command to select the signal format. ☛ "Signal" - "Video Signal" p.81
Does the mode match the resolution of the image signals? **Only when projecting computer images**	Check the resolution of the computer. ☛ "List of Supported Monitor Displays" p.135, Computer documentation

■ The message "No Signal." is displayed

Check	Remedy
Are the cables connected correctly?	Check that all of the cables required for projection are securely connected. ☛ p.19–p.31
Has the correct input port been selected?	Press the [Search] button on the remote control or the [Source Search] button on the projector's control panel to switch images. ☛ p.37
Is the power for the computer or video source turned on?	Turn the power on for the devices. ☛ p.19–p.27
Are the image signals being output to the projector? **Only when projecting images from a laptop computer or computer with a built-in LCD screen**	If the image signals are only being output to the computer's LCD monitor or to the accessory monitor, you need to change the output to an external destination as well as the computer's own monitor. For some computer models, when the image signals are output externally, they no longer appear on the LCD monitor or accessory monitor. ☛ Computer documentation, under a title such as "External output" or "Connecting an external monitor" If the connection is made while the power is already turned on, the function [Fn] key that switches the computer's video signal to external output may not work. Turn the power for the projector and the computer off and then back on again. ☛ p.34, p.44

■ Images are fuzzy or out of focus

Check	Remedy
Has the focus been adjusted correctly?	Press the [Focus] buttons on either the remote control or the projector's control panel to adjust the focus. ☛ p.68
Is the lens cover still attached?	Remove the lens cover. ☛ p.6
Is the projector at the correct distance?	The recommended projection distance range is 86–1473 cm (2.8–48.3 ft.). Set the projector up so that it is within this range. ☛ p.15
Is the keystone adjustment value too large?	Decrease the projection angle to reduce the amount of keystone correction. ☛ p.68
Has condensation formed on the lens?	If the projector is suddenly taken from a cold environment to a warm environment or if sudden ambient temperature changes occur, condensation may form on the surface of the lens, and this may cause the images to appear fuzzy. Set the projector up in the room approximately one hour before it is to be used. If condensation forms on the lens, turn the power off and wait for the condensation to disappear.

■ Interference or distortion appears in images

Check	Remedy
Are the image signal format settings correct?	If a composite video or S-Video source is connected to the projector, use the "Video Signal" menu command to select the signal format. ☛ "Signal" - "Video Signal" p.81
Are the cables connected correctly?	Check that all of the cables required for projection are securely connected. ☛ p.19–p.31
Is an extension cable being used?	If an extension cable is used, electrical interference may affect the signals. Use the accessory cables and check if this helps.
Has the correct resolution been selected? Only when projecting computer images	Set the computer so that the signals that are output are compatible with this projector. ☛ "List of Supported Monitor Displays" p.135 ☛ Computer documentation
Have the "Sync." and "Tracking" settings been adjusted correctly? Only when projecting computer images	Press the [Auto] button on the remote control or the [Enter] button on the projector's control panel to carry out automatic adjustment. If the images have not been adjusted correctly after using automatic adjustment, you can make the adjustments using the "Sync." and "Tracking" menus. ☛ p.75, p.76

■ Image is truncated (large) or small

Check	Remedy
Is the image in real display? **Is the aspect ratio setting correct?**	Press the [Resize] button on either the remote control or the projector's control panel. ☛ p.62
Is the image still being enlarged by the E-Zoom function?	Press the [Esc] button on the remote control to cancel the E-Zoom function. ☛ p.56
Has the "Position" setting been adjusted correctly?	If analogue RGB computer signals are being input, press the [Auto] button on the remote control or the [Enter] button on the projector's control panel to automatically adjust the setting. If the images have not been correctly adjusted after using the automatic setup function, adjust the setting manually using the "Position" menu command. If signals other than analogue RGB computer signals are being input, adjust the setting manually using the "Position" menu command. ☛ "Signal" - "Position" p.80
Has the computer been set for dual display? **Only when projecting computer images**	If dual display has been activated in the Display Properties of the computer's Control Panel, the projector will only project about half of the image on the computer screen. To display the whole of the image on the computer screen, turn off the dual display setting. ☛ Computer video driver documentation
Has the "Resolution" command been set correctly? **Only when projecting computer images**	Set the "Resolution" menu command to match the computer. ☛ "Signal" - "Resolution" p.80 ☛ Computer documentation

■ Image colours are not right

Check	Remedy
Do the input signal settings match the signals from the connected device?	If a composite video or S-Video source is connected to the projector, use the "Video Signal" menu command to select the video signal format. ☛ "Signal" - "Video Signal" p.81
Has the image brightness been adjusted correctly?	Use the "Brightness" menu command to adjust the brightness. ☛ "Image" - "Brightness" p.79
Are the cables connected correctly?	Check that all of the cables required for projection are securely connected. ☛ p.19–p.31
Has the image contrast been adjusted correctly?	Use the "Contrast" menu command to adjust the contrast. ☛ "Image" - "Contrast" p.79
Has the colour been adjusted correctly?	Use the "Color Adjustment" menu command to adjust the colour. ☛ "Image" - "Color Adjustment" p.79

Check	Remedy
Has the Wall Shot function been set to "Wall Shot ON"?	When projecting onto a normal screen, press the [Wall Shot] button on either the remote control or the projector's control panel to change the setting to "Wall Shot OFF". To re-adjust the Wall Shot setting, use "Wall Shot Readjustment". ☛ p.53
Have the colour intensity and tint been adjusted correctly? **Only when projecting images from a video source**	Use the "Color Intensity" and "Tint" menu commands to adjust the colour and tint. ☛ "Image" - "Color Intensity", "Tint" p.79

■ Images appear dark

Check	Remedy
Have the image brightness and luminance been adjusted correctly?	Use the "Brightness" and "Brightness Control" menu commands to adjust the brightness and luminance. ☛ "Image" - "Brightness" p.79 ☛ "Setting" - "Brightness Control" p.83
Has the image contrast been adjusted correctly?	Use the "Contrast" menu command to adjust the contrast. ☛ "Image" - "Contrast" p.79
Is the lamp due for replacement?	When the lamp is nearly due for replacement, the images will become darker and the colour quality will become poorer. When this happens, the lamp should be replaced with a new one. ☛ p.121

Other Problems

■ No sound can be heard or the sound is faint

Check	Remedy
Is the audio source connected correctly?	Check that the cable is connected to the correct [Audio] port. ☛ p.28
Has the volume been adjusted to the minimum setting?	Adjust the volume so that sound can be heard. ☛ p.46
Is an audio cable still connected to the projector's [Audio Out] port?	If a cable connector is inserted into the [Audio Out] port, sound is no longer output from the projector's built-in speaker. If not using external speakers, disconnect the audio cable from the [Audio Out] port.
Is the A/V Mute function active?	Press the [A/V Mute] button on either the remote control or the projector's control panel to cancel the A/V Mute function. ☛ p.55

■ The remote control does not work

Check	Remedy
Is the [R/C] switch at the "ON" position?	Set the [R/C] switch to the "ON" position. ☛ p.34
Is the remote control light-emitting area facing towards the remote control light-receiving area when it is operated?	Face the remote control towards the remote control light-receiving area. The operating angle for the remote control is approximately ±30° horizontally and approximately ±15° vertically. ☛ p.12
Is the remote control too far from the projector?	The operating range for the remote control is approximately 10 m. ☛ p.12 If operating the remote control from a distance or if you would like to ensure that remote control operations work properly, use the optional remote control cable kit. ☛ p.128
Is direct sunlight or strong light from fluorescent lamps shining onto the remote control light-receiving area?	Set the projector up in a location where strong light will not shine onto the remote control light-receiving area.
Are the batteries dead, or have the batteries been inserted correctly?	Insert new batteries, while making sure that they face correctly. ☛ p.11
Does the remote control's ID number match the projector's ID number?	If the remote control's ID number is set to a number other than "0", the ID number must match the projector's ID number, otherwise the remote control will not work. ☛ p.64
Is the remote control cable still connected to the [Remote] port of either the remote control or the projector?	If the remote control cable is still connected to the [Remote] port, the remote control light-receiving areas of the projector or the remote control light-emitting area of the remote control will not work. If not using the remote control cable kit, disconnect the remote control cable from the [Remote] port of either the remote control or the projector.

■ The fans do not stop when power is turned off

Check	Remedy
Is the "Standby Mode" menu setting set to "Network ON"?	If the menu is set to "Network ON", the fans will continue to operate after the cool-down period has finished. ☛ "Extended" - "Standby Mode" p.85

Problems Relating to Monitoring and Controlling Projectors Using a Network

■ Mail notification messages are not being sent when a problem occurs with the projector

Check	Remedy
Is the network cable connected correctly? **When using the EMP-835 connected to a wired LAN, or when using the EMP-830**	Check that the network cable is connected correctly. If it is not connected or is connected incorrectly, reconnect it.
Is the wireless LAN card inserted? **When using the EMP-835 connected to a wireless LAN**	Check that the wireless LAN card is correctly inserted into the card slot of the projector. ☛ "Inserting and Removing Cards" p.16
Has the "Priority Gateway" network setting been made correctly? **When using the EMP-835**	Error notification e-mail messages are sent using the network connection that has been specified by the "Priority Gateway" setting. (The default setting is "Wired LAN".) Check that "Priority Gateway" has been set to a valid network connection type. ☛ "Changing Settings Using a Web Browser (EasyWeb)" in the *EasyMP Operation Guide*
Are the settings for connecting to a network correct?	Check the network settings for the projector. If using the EMP-835 ☛ "Connecting in Access Point Mode or Wired LAN Mode" in the *EasyMP Network Setup Guide* If using the EMP-830 ☛ p.90
Has "Standby Mode" been set to "Network ON"?	If using the mail notification function while the projector is in standby mode, change the "Standby Mode" menu setting to "Network ON". ☛ "Extended" - "Standby Mode" p.85
Has a critical problem developed causing the projector to momentarily stop working?	When the projector has momentarily stopped working, it cannot send e-mail messages. If the projector cannot be reset even after it has been checked, contact your dealer or the nearest address provided in the "International Warranty Conditions" section of the *Safety Instructions/World-Wide Warranty Terms* booklet.
Is power being supplied to the projector?	Check if the power supply to the location where the projector is set up has been interrupted, or if the circuit breaker for the electrical outlet that the projector is connected to has been tripped.

■ The projector cannot be monitored and controlled using the EMP Monitor function

Check	Remedy
Is the network cable connected correctly? **When using the EMP-835 connected to a wired LAN, or when using the EMP-830**	Check that the network cable is connected correctly. If it is not connected or is connected incorrectly, reconnect it.
Is the wireless LAN card inserted? **When using the EMP-835 connected to a wireless LAN**	Check that the wireless LAN card is correctly inserted into the card slot of the projector. ☛ "Inserting and Removing Cards" p.16
Are the settings for connecting to a network correct ?	Check the network settings for the projector. If using the EMP-835 ☛ "Connecting in Access Point Mode or Wired LAN Mode" in the *EasyMP Network Setup Guide* If using the EMP-830 ☛ p.90
Has EMP Monitor function been correctly installed to the computer?	Uninstall EMP Monitor and then re-install it. If using the EMP-835 ☛ "If You would like to Uninstall the EasyMP Software" and "Installing EasyMP Software" in the *EasyMP Network Setup Guide* If using the EMP-830 ☛ "Installation and Uninstallation" in the *EMP NetworkManager Operation Guide*
Have all projectors that are to be monitored and controlled been registered in the projector list?	Register the projector in the projector list. ☛ *EMP Monitor Operation Guide*
Has "Standby Mode" been set to "Network ON"?	If using the EMP Monitor function while the projector is in standby mode, change the "Standby Mode" menu setting to "Network ON". ☛ "Extended" - "Standby Mode" p.85
Is power being supplied to the projector?	Check if the power supply to the location where the projector is set up has been interrupted, or if the circuit breaker for the electrical outlet that the projector is connected to has been tripped.

■ When Network Screen is running, the current image stays projected and connection from another computer is not possible (EMP-835 only)

Check	Remedy
Has the person making the presentation left the meeting room without closing the connection?	If you try to connect to a projector from a computer while Network Screen is running and the projector is already connected to another computer, the connection to the first computer will be terminated and the projector will then connect to the next computer. If no projector keyword has been set in the projector or the keyword is known, it is possible to terminate the current connection and connect to the projector by establishing a new connection from the computer. If a projector keyword has been set in the projector and the projector keyword is unknown, terminate the connection from the projector and then reconnect. To terminate the connection from the projector, press the [Esc] button on the remote control, select the "Exit" button from the displayed menu and then press the [Enter] button on the remote control. Connect from the desired computer after terminating the connection. ☛ "Disconnecting from a Network Connection" in the *EasyMP Network Setup Guide*

■ EMP NS Connection starts, but a projector is not found (EMP-835 only)

Check	Remedy
Is the network cable connected correctly? **When connected to a wired LAN**	Check that the network cable is connected correctly. If it is not connected or is connected incorrectly, reconnect it.
Is the wireless LAN card inserted? **When connected to a wireless LAN**	Check that the wireless LAN card is correctly inserted into the card slot of the projector. ☛ "Inserting and Removing Cards" p.16
Is the access lamp of the wireless LAN card that is inserted into the projector lit green?	If the access lamp is off, remove the wireless LAN card and re-insert it. ☛ "Inserting and Removing Cards" p.16
Is the projector displaying the EasyMP configuration menu screen?	Network connections are disabled while the EasyMP configuration setting screen is displayed. Close the configuration settings to return to the EasyMP standby window.
Is the computer ready for LAN card or in-built LAN functionality to be used?	Check whether the LAN device is functioning in the Device Manager. For example, "Control panel" - "System" - "Device Manager".

Check	Remedy
Is the wireless LAN setting for the computer set to ad hoc mode? **When connected to a wireless LAN in easy connection mode**	Change the wireless LAN settings at the computer to ad hoc mode. ☛ "Computer Wireless LAN Settings" in the *EasyMP Network Setup Guide* Depending on the manufacturer of the wireless LAN card, you may be able to use a communication setting utility (such as Client Manager) to set ad hoc mode. "Ad hoc mode" is also referred to "Computer communication using wireless LAN (WiFi), "Wi-Fi ad hoc", "802.11 ad hoc", "802.11 Mode Connection", "peer to peer" or "computer to computer network".
Is the DHCP function of the wired LAN set to "ON"? **When connected to a wireless LAN in easy connection mode**	Set the DHCP setting of the wired LAN to "OFF" in the EasyMP configuration setting screen. ☛ "Connecting in Access Point Mode or Wired LAN Mode" in the *EasyMP Network Setup Guide*
Has the network adapter been selected correctly in EMP NS Connection?	If the computer that you are using has several LAN environments, the correct network adapter to be used by EMP NS Connection must be selected, otherwise it will not be possible to connect. Start EMP NS Connection and select the network adapter from the "Extension" - "Switch LAN" (Windows) or "Extension" - "Network Set" (Macintosh) menu.
If making a wireless LAN connection, are there any settings within the power saving features of your computer which disable the wireless LAN?	Please enable the wireless LAN.
Is the computer's radio wave setting for the wireless LAN set to low-intensity?	Change the radio wave setting to the highest possible intensity.
Is the LAN card you are using 802.11g or 802.11b compliant?	Only 802.11g or 802.11b compliant equipment can be used. You cannot use equipment conforming to any other standards (such as 802.11 or 802.11a).
Is WEP encryption set to "ON" at the computer?	If using easy connection mode (ad hoc mode), WEP must be set to "OFF", otherwise connection will not be possible. Set WEP encryption to "OFF". ☛ "Connecting Using Easy Connect Mode (Wireless LAN)" in the *EasyMP Network Setup Guide*

■ Connection cannot be established in access point mode or wired LAN connection mode (EMP-835 only)

Check	Remedy
Is the ESSID setting correct?	Enable the automatic ESSID search function, or set the ESSID for the computer or access point and the projector so that they are the same. ☛ "Connecting in Access Point Mode or Wired LAN Mode" in the *EasyMP Network Setup Guide*
Has an identical WEP key been set?	If "WEP" is selected in the "Security" configuration menu, set the WEP key for the computer or access point and the projector to the same key. ☛ "Connecting in Access Point Mode or Wired LAN Mode" in the *EasyMP Network Setup Guide*
Are the connection refusal functions of the access point, such as the MAC address and port restrictions, set correctly?	Set the projector connection permissions on the access point.
Have the IP address, subnet mask and gateway address for the access point and the projector been set correctly?	If not using DHCP, make all of the settings manually. ☛ "Connecting in Access Point Mode or Wired LAN Mode" in the *EasyMP Network Setup Guide*
Have the same subnet masks been set for the access point and the projector?	Select "Use IP connect mode" in EMP NS Connection and connect using IP connect mode. ☛ "If No Connected Projectors Appear" in the *EasyMP Operation Guide*

■ Connection is not possible in easy connection mode (ad hoc mode) (EMP-835 only)

Check	Remedy
Is there an access point manufactured by BUFFALO operating nearby?	Ad hoc connection is not possible if there is a BUFFALO access point set to the same ESSID, operating nearby. Turn off the power to the BUFFALO access point or select an ESSID different to that access point.

■ Network Screen images are not displayed or the speed is slow (EMP-835 only)

Check	Remedy
Are you trying to watch a movie in the Media Player, or preview a screen saver?	Depending on the computer, the Media Player video area may not be displayed, or the screen saver preview may not be displayed correctly.
Are you using WEP encryption, or connecting to multiple projectors?	Display speed falls when WEP encryption or two or more connections are being used.

Check	Remedy
Are you using DHCP when in wireless LAN access point mode or wired LAN connection mode?	If DHCP is enabled when using access point mode or when connecting to a wired LAN, it will take some time for EasyMP to get to standby mode if it cannot locate a DHCP server to connect to.
Was EMP NS Connection started or was the resolution or number of colours changed while a movie was playing? **For Macintosh**	When playing a movie, start EMP NS Connection before starting movie playback. If you start the EMP NS Connection while a movie is being played back, or change the resolution and colour settings of the display after starting the movie, the movie will freeze. In such cases, do something to activate the window such as moving it, or minimizing and restoring it.

■ PowerPoint slideshows will not play back in Network Screen (EMP-835 only)

Check	Remedy
Are you trying to start Network Screen when PowerPoint is running? **For Windows**	Close the PowerPoint application before connecting with Network Screen. If you connect when PowerPoint is already running, you will not be able to project any slideshows.

■ Keynote slideshows cannot be played back with Network Screen

Check	Remedy
Are you using a Mac OS X 10.2.x-based computer? **For Macintosh**	Keynote slideshows may not be displayed correctly with Mac OS X 10.2.x due to limitations of the operating system. Play back Keynote slideshows with Mac OS X 10.3.x or later.

■ Network Screen cannot be used (EMP-835 only)

Check	Remedy
Are you using a personal firewall? **For Windows**	Network Screen may be unusable when a personal firewall other than NS Protect is set up.

■ When running Microsoft Office applications using Network Screen, the screen does not change as required

Check	Remedy
Have you been moving the mouse constantly?	As long as the mouse cursor is moved, the screen does not change. Stop moving the mouse cursor when having trouble changing the screen.

■ Files do not work correctly with EMP SlideMaker2 (EMP-835 only)

Check	Remedy
Are you trying to use a PowerPoint (.ppt) file created in the PowerPoint 95/97 format?	Files that have been created using PowerPoint 95/97 or saved in PowerPoint 95/97 format cannot be edited using EMP SlideMaker2. Resave the file in PowerPoint 2000/2002/2003 format before using it. ☛ "Procedures for Making a Presentation without a Computer" in the *EasyMP Operation Guide*
When PowerPoint files (.ppt) cannot be pasted into a scenario, or thumbnails cannot be displayed, has the Microsoft Office JPEG converter been installed?	Install the JPEG converter. For more information about Microsoft Office JPEG converter installation, refer to the documentation for the Microsoft Office.

■ An error message is displayed

Error messages from EMP NS Connection (EMP-835 only)

Check	Remedy
Failed to connect to a projector.	Try to reconnect. If connection is still not possible, check the network settings at the computer and at the projector. For details on EasyMP network settings: ☛ *EasyMP Network Setup Guide*
Network settings are being made automatically.	If the computer has been set to use DHCP, it may take some time for the IP address to be set. If the IP address has not been determined within about 70 seconds after the message is displayed, an error message will be displayed. If this happens, try closing EMP NS Connection and then restarting it.
Projector detection error. No connectable projector exists, or the projector's power is not turned on.	Carry out the following. • Turn the power on for the projector, complete the projector preparation and then click the "Search Again" button. • Check the projector's configuration setting for EasyMP. • Check the security software settings for the computer, and cancel the port settings if the ports have been limited.
Incorrect keyword. Enter the keyword displayed on the projector.	Check the keyword for the projector that is displayed in the EasyMP standby window, and enter that projector's keyword.

Check	Remedy
Select a connecting projector from the list.	Select the name of each projector for the connection, and click the "Connect" button. ☛ *EasyMP Network Setup Guide*
The selected projector is in use. Continue to connect?	You are attempting to connect to a projector already connected to another computer. Click "Yes" to connect to the projector. The connection between the projector and the other computer will be terminated. Click "No" to end the connection attempt to the projector. The connection to the other computer will not be affected.
Failed to initialize EMP NS Connection.	Uninstall and then reinstall EMP NS Connection. ☛ "If You would like to Uninstall the EasyMP Software" and "Installing EasyMP Software" in the *EasyMP Network Setup Guide*
Communication error occurred. Do you want to retry connection?	A communication error occurred between the computer and the projector, and the connection was closed. If you click the [Yes] button, a reconnection will be attempted. If the connection attempt is not successful, check the network settings at the computer and the EasyMP network settings at the projector. For details on network settings: ☛ *EasyMP Network Setup Guide* If you click the [No] button, the connection will remain closed and the message window will close.
One of the projectors cannot be connected with the keyword entered.	The wrong keyword was entered when trying to connect to a projector with a projector keyword. Check EasyMP standby screen for the correct projector keyword. Terminate the connection, reconnect and enter the projector keyword on the displayed keyword input screen. ☛ "Connecting the Computer and Projector via the Network" in the *EasyMP Network Setup Guide*
Failed to obtain network adaptor information. Check network settings and restart.	Check the following: •Is a network adapter installed in the computer ? •Is the driver for the network adapter installed in the computer ? After checking, restart the computer and try to connect. If connection is still not possible, check the followings. Check the network settings at the computer and the EasyMP network settings at the projector. For details on network setting: ☛ *EasyMP Network Setup Guide*
Some projectors do not support SXGA. Reduce resolution and retry.	One of the projectors you are connecting to is an EMP-735. Change the screen resolution of the computer to SXGA (1280 × 1024) or lower.

Check	Remedy
There is a projector not responding.	One or more projectors failed to connect when an attempt was made to connect simultaneously to multiple projectors. The successfully connected projectors can be used. To connect to the projectors that failed to connect, terminate the connection and try again. If connection is still not possible, check the network settings at the computer and the EasyMP network settings at the projector. For details on network settings: ☛ *EasyMP Network Setup Guide*
Enter the keyword displayed on the projector.	Check the keyword for the projector that is displayed in the EasyMP standby screen, and enter that projector's keyword.
Cannot find a projector of the specified IP address.	Check that "Wired LAN connection mode" or "Access Point Mode (Wireless LAN)" setting is being used in the EasyMP configuration settings for the projector to be connected. In the wireless LAN setting screen, change to "Access Point Mode" if it is set to "Easy Connect Mode". Next, check the "IP Address" setting in the "Wired LAN" - "Basic" or the "Wireless LAN" - "Basic" configuration menu, and specify that IP address when connecting in IP connection mode. ☛ "If No Connected Projectors Appear" in the *EasyMP Operation Guide.* If connection is still not possible, check the network settings at the computer and the EasyMP network settings at the projector. For details on network setting: ☛ "Connecting in Access Point Mode or Wired LAN Mode" in the *EasyMP Network Setup Guide*
Image transfer slows if PC resolution is higher than XGA (1024 × 768 pxl.) Do you want to continue? **For Windows**	The display of the computer being connected to the projector is set to resolution higher than XGA (1024 × 768). Clicking "Yes" connects the projector. However, the display speed of the projection screen will be slow. Clicking "No" aborts the projector connection. To avoid slow display speeds on the projection screen, change the computer display settings to: XGA (1024 × 768) or lower.
Image transfer slows if screen color is more than 24 bits. NS Connection converts it to 16 bits. Do you want to continue? **For Windows**	The display of the computer being connected to the projector is set to a resolution of higher than XGA (1024 × 768), or the screen colour has been set to 24 bits or more. Clicking "Yes" connects the projector. However, the display will be in 16 bit colour.

If an error message not described above is displayed, refer to the EMP NS Connection help.

Error messages from EMP SlideMaker2 (EMP-835 only)

Check	Remedy
****.SIT already registered. (** is the scenario file name.)**	It is not possible to add a scenario file name if it already exists in the "Autorun Scenario List". ☛ "Sending a Scenario" in the *EasyMP Operation Guide*
Not enough disk space.	The drive to which a scenario is being sent has insufficient free space and the scenario cannot be sent. Delete unneeded files on the destination drive to free sufficient disk space to save the scenario on the drive.
**** contains an invalid path. (** is the path name containing the scenario file.)**	The path of the file to be opened could not be found. This could be for the following reasons. •After the last time the scenario file was saved by EMP SlideMaker2, the file was moved to another folder. •After the last time the scenario file was saved by EMP SlideMaker2, the folder name was changed. •The desired scenario file has been deleted. Open the desired scenario file by selecting "File"-"Open", or search for the file using the Windows "Search for Files or Folders" function or other methods.
Disk full while accessing **. (is the path name including the scenario file)**	The drive containing the scenario folder has insufficient free space, and could not save the scenario file. Delete unneeded files on the drive containing the scenario folder to free sufficient disk space allowing the scenario file to be saved.
Cannot open the proposed file.	The PowerPoint file to be added to the scenario is damaged or corrupted and cannot be used. Use a different PowerPoint file.
Change name or directory	A file or scenario folder of the same name already exists. Change the scenario name or the scenario folder name and try saving again.

Error messages from EMP Monitor

Check	Remedy
The password is incorrect.	An incorrect password was entered. Enter the correct password. If you forget the password, check the "Password for WEB control " setting in the "Wired LAN" - "Basic" or the "Wireless LAN" - "Basic" configuration menu.
Cannot connect to the projector of the IP address entered.	•If using the EMP-835 Check that "Wired LAN Connect Mode" or "Access Point Mode (Wireless LAN)" setting is being used in the EasyMP configuration settings for the projector to be connected. If "Easy Connect Mode" is selected in the "Wireless LAN" - "Basic" configuration menu, change the setting to "Access Point Mode". Next, check the "IP Address" setting in the "Wired LAN" - "Basic" or the "Wireless LAN" - "Basic" configuration menu, and specify that IP address when connecting in IP connection mode. ☛ "Registration Using IP Address (Manual Registration)" in the *EMP Monitor Operation Guide* If connection is still not possible, check the network settings at the computer and the EasyMP network settings at the projector. For details on network settings: ☛ "Connecting in Access Point Mode or Wired LAN Mode" in the *EasyMP Network Setup Guide* •If using the EMP-830 Select "Extended" - "Network" in the configuration menu for the projector to be connected, and then check the IP address. Specify this IP address when connecting in IP connection mode. ☛ "Registration Using IP Address (Manual Registration)" in the *EMP Monitor Operation Guide* If connection is still not possible, check the network settings at the computer and at the projector. ☛ p.90

Appendices

This chapter provides information on maintenance procedures to ensure the best level of performance for the projector for a long time.

Maintenance 119

- **Cleaning 119**
  - Cleaning the Projector Case 119
  - Cleaning the Lens.....119
  - Cleaning the Air Filters and Air Intake Vents 119
- **Replacing Consumables.....120**
  - Lamp Replacement Period 120
  - Replacing the Lamp 121
  - Resetting the Lamp Operating Time 123
  - Replacing the Air Filters 124

Saving a User's Logo 125

Optional Accessories and Consumables 128

- **Optional Accessories 128**
- **Consumables.....128**

Glossary 129

List of ESC/VP21 Commands..... 132

- **Command List 132**
- **Communication Protocol 132**
- **Cable Layouts 132**
  - Serial Connection..... 132
  - USB Connection 133
- **USB Connection Setup 133**

PJLink (EMP-835 only)..... 134

List of Supported Monitor Displays 135

- Computer/RGB Video 135
- Component Video 135
- Composite Video/S-Video 135

Specifications..... 136

Appearance..... 138

Maintenance

This section describes maintenance tasks such as cleaning the projector and replacing consumable parts.

Cleaning

You should clean the projector if it becomes dirty or if the quality of projected images starts to deteriorate.

Caution

Be sure to read the separate Safety Instructions/World-Wide Warranty Terms before cleaning.

Cleaning the Projector Case

Clean the projector case by wiping it gently with a soft cloth.
If the projector is particularly dirty, moisten the cloth with water containing a small amount of neutral detergent, and then firmly wring the cloth dry before using it to wipe the projector case. Then wipe the case again with a soft, dry cloth.

Caution

Do not use volatile substances such as wax, alcohol or thinner to clean the projector case. These can cause the case to warp and make the coating finish peel off.

Cleaning the Lens

Use a commercially-available air blower, or use lens cleaning paper to clean the lens.

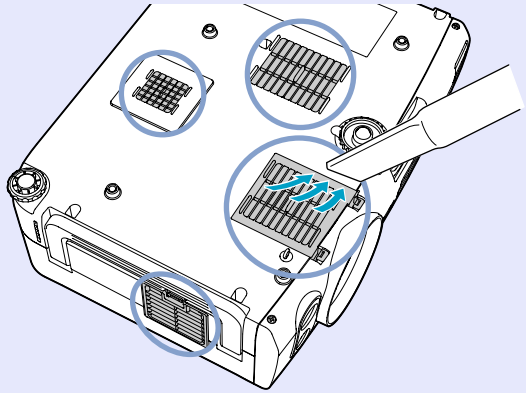
Caution

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

Cleaning the Air Filters and Air Intake Vents

If dust collects on the air filters or air intake vents, it can cause the internal temperature of the projector to rise, and this can lead to problems with operation and shortening of the optical engine's service life.
It is recommended that you clean these parts at lest once every three months. Clean them more often than this if using the projector in particularly dusty environments.

- Air outlets at side and base
  Turn the projector upside-down and use a vacuum cleaner to clean the air intake vents.



TIP

If the air filters are broken or if the warning message reappears after they have been cleaned, they should be replaced. Replace them with new air filters.
☛ *"Replacing the Air Filters" p.124*

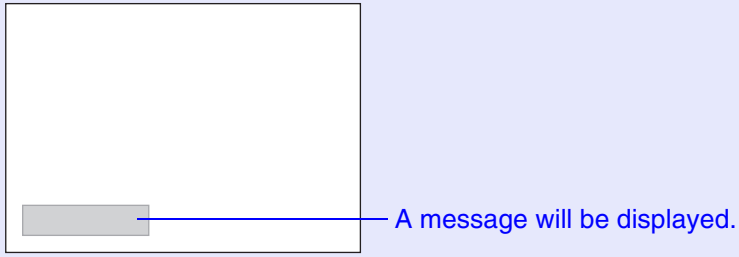
Replacing Consumables

This section describes how to replace the lamp and the air filters.

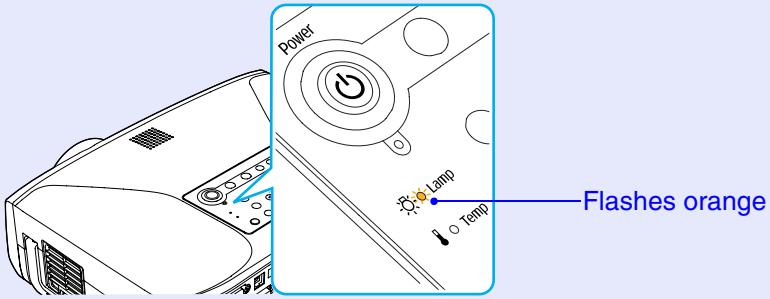
Lamp Replacement Period

It is time to replace the lamp when:

- The message "Replace the lamp." appears on the screen when projection starts



- When the Lamp indicator is flashing orange



- The projected images get darker or start to deteriorate in quality

TIP

- *The replacement warning message is set to appear after the following periods of lamp use, in order to maintain the initial brightness and quality of the projected images.*
  ☛ *"Brightness Control" p.83*
  - *When used continuously at high brightness: about 1900 hours.*
  - *When used continuously at low brightness: about 2900 hours.*
  If you continue to use the lamp after this period, the possibility of the lamp breaking becomes greater. When the lamp replacement message appears, replace the lamp with a new one as soon as possible, even if it is still working.
- *Depending on the characteristics and usage conditions of individual lamps, some lamps may darken or stop operating before the message is displayed. You should always have a spare lamp ready in case it is needed.*
- *Contact your dealer for a spare lamp.*

Replacing the Lamp

Warning

When replacing the lamp because it has stopped illuminating, there is a possibility that the lamp may be broken.

If replacing the lamp of a projector which has been installed on the ceiling, you should always assume that the lamp is broken, and you should stand to the side of the lamp cover, not underneath it. Remove the lamp cover gently. Small pieces of glass may fall out when the lamp cover is opened. If pieces of glass get into your eyes or mouth, seek medical advice immediately.

Caution

Wait until the lamp has cooled down sufficiently before removing the lamp cover. If the lamp is still hot, burns or other injuries may result. It takes about one hour after the power has been turned off for the lamp to be cool enough.

PROCEDURE

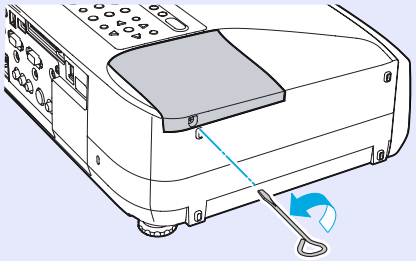
1 **Turn the projector's power off, then disconnect the power cable.**

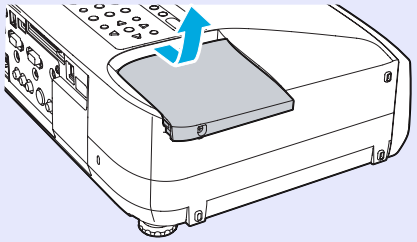
2 **Wait until the lamp has cooled down, and then remove the lamp cover from the base of the projector.**

It takes about one hour after the power has been turned off for the lamp to be cool enough.

Use the screwdriver that is supplied with the spare lamp or your own cross head screwdriver to loosen the lamp cover fixing screw at the side of the projector.

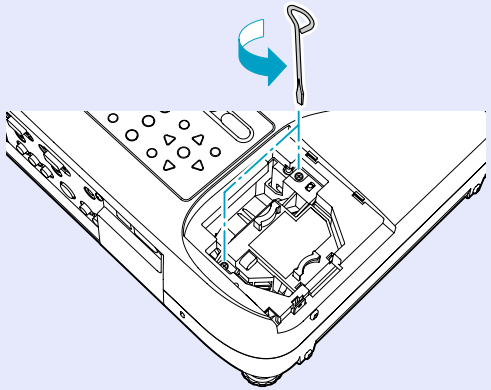
Slide the lamp cover straight, and then lift up the lamp cover to remove it.





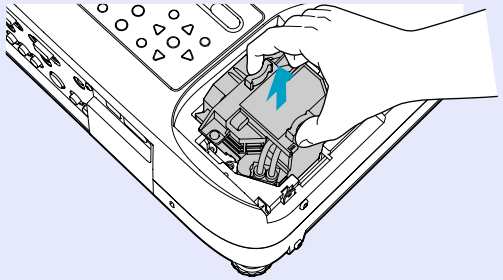
3 Loosen the two lamp fixing screws.

Use the screwdriver that is supplied with the spare lamp or your own cross head screwdriver to loosen the two lamp fixing screws that are securing the lamp to the projector.



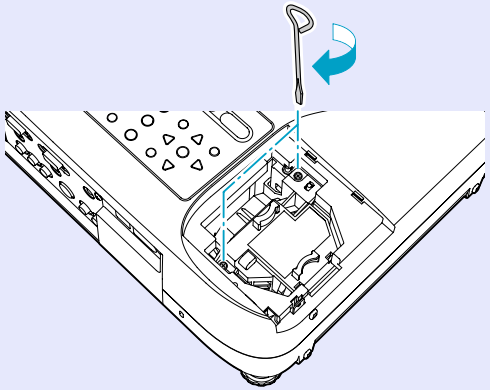
4 Take out the old lamp.

Hold the lamp by its knob as shown below, and pull out the lamp. If the lamp is broken, contact your local dealer for further advice. If replacing the lamp by yourself, be careful to avoid pieces of broken glass.



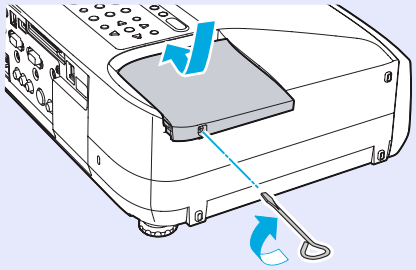
5 Install the new lamp.

Hold the lamp so that it faces the correct way to fit into the projector, and then insert the lamp until it clicks into place and tighten the two lamp fixing screws.



6 Install the lamp cover.

Slide the cover to replace it, and tighten the lamp cover fixing screw on the side of the projector.



Caution

- *Install the lamp securely. If the lamp cover is removed, the lamp turns of automatically as a safety precaution. Moreover, the lamp will not turn on if the lamp or the lamp cover is not installed correctly.*
- *This product includes a lamp component that contains mercury (Hg). Please consult your state and local regurations regarding disposal or recycling. Do not put in the trash.*

Resetting the Lamp Operating Time

Be sure to reset the lamp operating time after replacing the lamp. The projector has a built-in counter which keeps track of the lamp operating time, and this counter is use as the basis for displaying the replacement warning message.

TIP

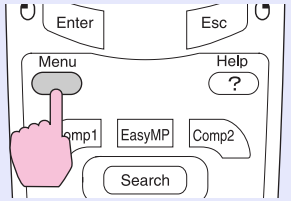
Do not reset the lamp operating time except after the lamp has been replaced. If the lamp operating time is reset at any other time, the lamp replacement period will not be indicated correctly.

PROCEDURE

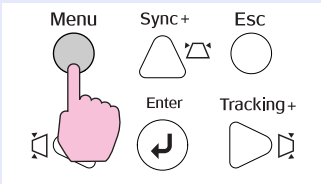
1 Connect the power cable and turn the projector on, then press the [Menu] button on either the remote control or the projector's control panel.

The configuration menu will be displayed.

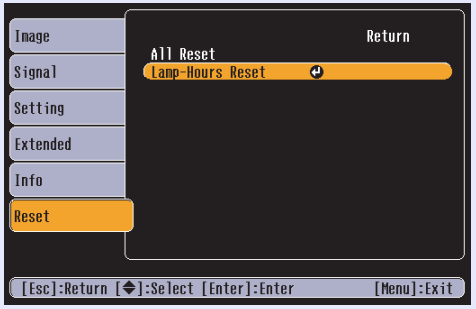
Remote control



Projector

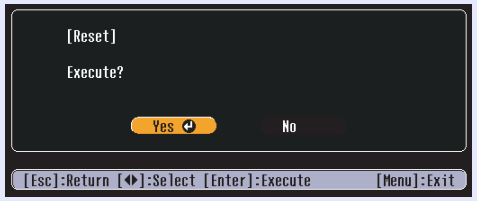


2 Select "Lamp-Hours Reset" from the "Reset" menu and then press the [Enter] button on either the remote control or the projector's control panel.



3 **Select "Yes" and then press the [Enter] button on either the remote control or the projector's control panel.**

The lamp operating time will then be reset.



Replacing the Air Filters

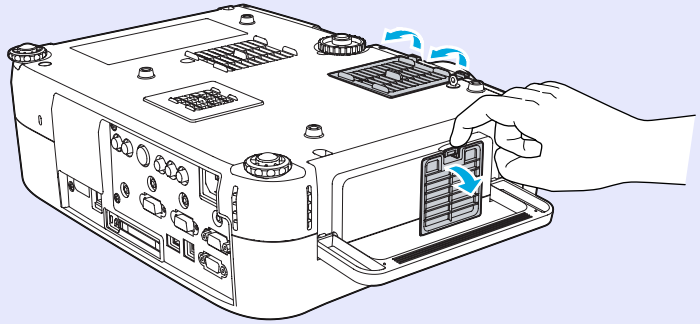
If the air filters are broken or if the warning message reappears after they have been cleaned, they should be replaced.
The air filter can be replaced even if the projector is installed on a ceiling.

PROCEDURE

1 **Turn the projector's power off, then disconnect the power cable.**

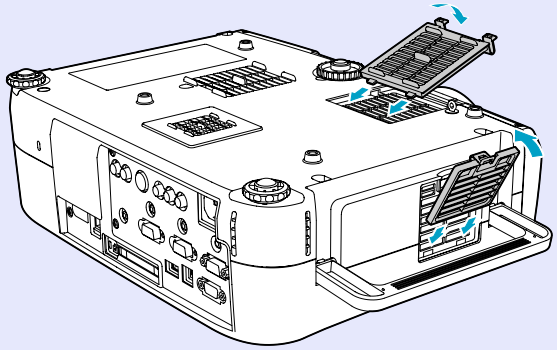
2 **Remove the air filters.**
Press the tabs to release the lock, and lift the air filters to remove them.

The projector has two air filters.



3 **Install the new air filters.**

Insert the one tab of the air filter into the projector, and press the other tab until it clicks in the place.



Caution

Dispose of used air filters properly in accordance with your local regulations.
Air filter frame : Plastic (PC + ABS resin)
Filter : Polyurethane foam

Saving a User's Logo

You can record the image that is currently being projected as a user's logo.

Caution

If you use Direct Power Off while a user's logo is being saved, the user's logo may not be saved correctly. If this happens, repeat the user's logo saving procedure from the start.

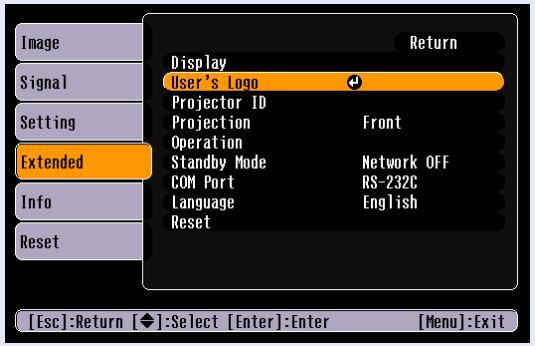
TIP

- *When a user's logo is recorded, the previous user's logo will be erased.*
- *You cannot save a new user's logo if "User's Logo Protect" in the Password Protect settings has been set to "ON". Set "User's Logo Protect" to "OFF" and then save the new user's logo.* ☛ *p.47*

PROCEDURE

1 **Project the image that you would like to use as a user's logo, and then press the [Menu] button on either the remote control or the projector's control panel.**

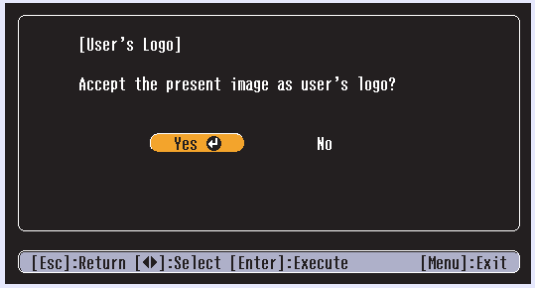
2 **Select "Extended" - "User's Logo" in the configuration menu, and then press the [Enter] button on either the remote control or the projector's control panel.**



TIP

If keystone correction or the E-Zoom function have been used, they will be cancelled when the "User's Logo" menu is selected.

3 **Select "Yes" in the sub-menu, and then press the [Enter] button on either the remote control or the projector's control panel.**

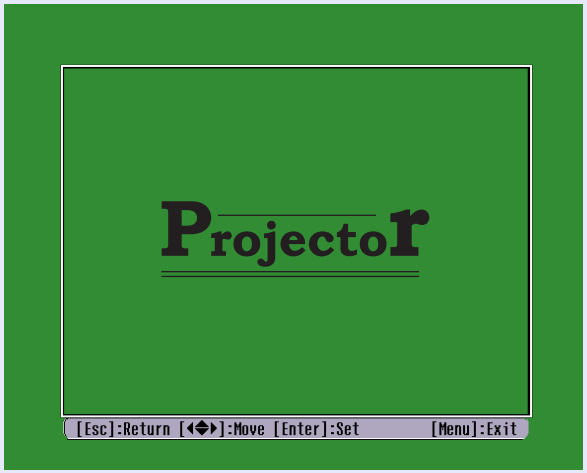


TIP

If "Yes" is accepted, since the image will be projected at their original image signal resolution, images with the different resolution from the projector's and video images will be projected at different size.

4 **The image to be recorded and a selection marquee box will be displayed, so move the marquee box to select the part of the image to use.**

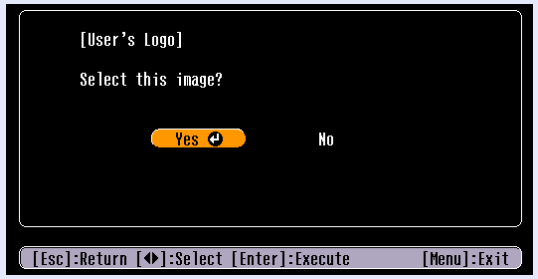
Tilt the [◎] button on the remote control or press the [⏢], [⏢], [◁] and [▷] buttons on the projector's control panel to select the part of the image to use as the user's logo, and then press the [Enter] button on either the remote control or the projector's control panel.



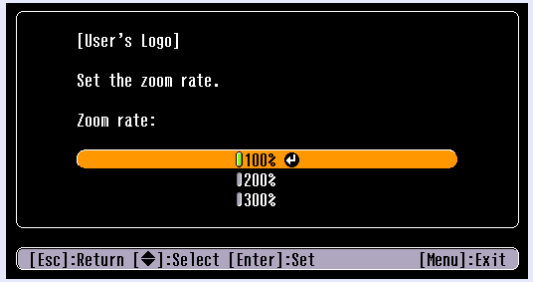
TIP

User's logos can be saved at up to 480 × 360 dots in size.

5 **Select "Yes" at the confirmation screen, and then press the [Enter] button on either the remote control or the projector's control panel.**

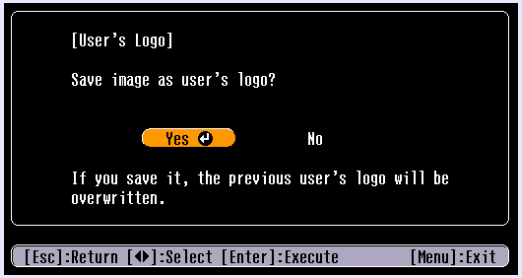


6 **Select the zoom rate in the zoom rate setting screen, and then press the [Enter] button on either the remote control or the projector's control panel.**



7 **Select "Yes" at the confirmation screen, and then press the [Enter] button on either the remote control or the projector's control panel.**

The image will then be saved. Once the image has been saved, the message "Completed." will be displayed.



Caution

- *Saving the user's logo may take a few moments (about 15 seconds). Do not use the projector or any other sources which are connected to the projector while the user's logo is being saved. If this is not observed, it may result in errors in projector operation.*
- *Once a user's logo has been saved, the logo setting cannot be returned to the factory default.*

Optional Accessories and Consumables

The following optional accessories and consumables are available for purchase if required. All items in this list is current as of September 2005. Details of accessories are subject to change without notice. Varies depending on country of purchase.

Optional Accessories

Soft carry case ELPKS52
Hard travel case ELPKS53
Use this case if you need to carry the projector by hand.

60" screen ELPSC07
80" screen ELPSC08
100" screen ELPSC10
A portable roll-type screens. (Aspect ratio 4:3)

50" portable screen ELPSC06
A compact screen which can be carried easily. (Aspect ratio 4:3)

VGA-HD15 PC cable ELPKC02
(1.8 m (6 ft.) - for mini D-Sub 15-pin male/mini D-Sub 15-pin male)
This is the same computer cable as the projector's accessory computer cable.

VGA-HD15 PC cable ELPKC09
(3 m (9.8 ft.) - for mini D-Sub 15-pin/mini D-Sub 15-pin)
VGA-HD15 PC cable ELPKC10
(20 m (65.6 ft.) - for mini D-Sub 15-pin/mini D-Sub 15-pin)
Use these extension cables if the accessory computer cable is too short.

Component video cable ELPKC19
(3 m (9.8 ft.) - for mini D-Sub 15-pin male/3RCA male)
Use when a device that outputs component video signals is connected.

Remote control cable set ELPKC28
(10 m - for 3.5 mm dia. mini plug (male-male))
(10 m - for 3.5 mm dia. mini jack (male-female))
Use in order to operate the projector accurately by remote control from a distance.

Ceiling plate* ELPFC03
Pipe 370 (370 mm (14.57 in.)/silver)* ELPFP04
Pipe 570 (570 mm (22.44 in.)/silver)* ELPFP05
Pipe 770 (770 mm (30.31 in.)/silver)* ELPFP06
Use when installing the projector on a high ceiling or a ceiling with veneer panels.

Ceiling mount* ELPMB07
Use when installing the projector on a ceiling.

Image presentation camera ELPDC04
Use to project books, etc.

* Information in this menu may be required if you ask for service from your dealer or the nearest address provided in the "International Warranty Conditions" section of the *Safety Instructions/World Wide Warranty Terms* booklet.

Consumables

Spare lamp ELPLP31
Use as a replacement for spent lamps.

Air filter set ELPAF07
(2 sets of 2 air filters (total 4))
Use as a replacement for spent air filters.

Glossary

Following is an explanation of some of the terms used in this guide which may be unfamiliar or which were not explained in the text of this guide itself. Further information can be obtained by referring to other commercially-available publications.

3-2 pull-down function	This function directly converts image sources that have been recorded in the same 24-frame format used for movies into 60-frame progressive signals. This allows data such as DVD software that has been recorded in 24-frame format to be played back on large screens with more natural and accurate reproduction, without any loss of image quality from the original movie.
Aspect ratio	The ratio between an image's length and its height. HDTV images have an aspect ratio of 16:9 and appear elongated. The aspect ratio for standard images is 4:3.
Authentication server	This is a server that centrally manages user authentication. By using an authentication server, management of user information and user authentication tasks can be centralised. In addition, many authentication servers use high-level authentication methods and so they also tend to be highly secure.
CCX	Abbreviation for Cisco Compatible Extensions. This is a security technology for wireless LANs developed by Cisco Systems, Inc. It uses RADIUS servers for authentication. Several authentication methods are available for CCX, and this projector uses LEAP authentication.
Channel	Communication speeds will drop if there are too many devices performing wireless communication using the same frequency. In this case, it is possible to avoid interference from other wireless LANs by setting a wireless channel for each wireless LAN network.
Colour temperature	A characteristic that determines the colour tones of images. When the colour temperature is high, colour tones appear bluish, and when the colour temperature is low, images appear reddish.
Component video	Video signals which have the video brightness signals and colour signals separated, in order to provide better image quality. In high-definition TV (HDTV), it refers to images which consist of three independent signals: Y (luminance signal), and Pb and Pr (colour difference signals).
Composite video	Video signals which have the video brightness signals and colour signals mixed together. The type of signals commonly used by household video equipment (NTSC, PAL and SECAM formats). The signals consist of the carrier signal Y (luminance signal) and the chroma (colour) signal which are contained in the colour bar signal.
Contrast	The relative brightness of the light and dark areas of an image can be increased or decreased in order to make text and graphics stand out more clearly, or to make them appear softer. Adjusting this particular property of an image is called "contrast adjustment".
Cool-down	Use this procedure to cool a projector lamp that is hot from use. Cool- down happens automatically when the [Power] button is pressed on the projector or on the remote control to turn the projector off.
DFP	Abbreviation for Digital Flat Panel. Refers to a standard method for digital transmission of video signals.
DHCP	Abbreviation of Dynamic Host Configuration Protocol. This protocol automatically assigns an IP address to a computer connected to a network.
Dolby Digital	A sound format developed by Dolby Laboratories. Normal stereo is a 2-channel format which uses two speakers. Dolby Digital is a 6-channel (5.1-channel) system which adds to this a centre speaker, two rear speakers and a sub-woofer.
DPOF	Abbreviation of Digital Print Order Format, which is a format used to record infomation concerning the printing of photographs taken with a digital camera (which images to print, how many copies, etc.) to recordable media, such as a memory card.
DVI	Abbreviation for Digital Visual Interface. Refers to a standard method for digital transmission of video signals. DVI is a standard which has also been applied to digital household electronic equipment other than computers. It allows images to be transmitted at higher resolutions than for DFP, and also includes a digital signal encoding function.

ESSID	ESS is an abbreviation of Extended Service Set. The ESSID is an identification number for connecting with a counterpart on a wireless LAN. Wireless communication is possible between devices with corresponding ESSID numbers.
Film judgment function	A function for judging whether an image source is a 24 Hz progressive film source or not.
Gateway	A server (router) for communicating across a network divided according to subnet masks.
HDTV	An abbreviation for High-Definition Television. It refers to high-definition systems which satisfy the following conditions. Vertical resolution of 750p or 1125i or greater (p = progressive scanning, i = interlaced scanning) Screen aspect ratio of 16:9 Dolby Digital audio reception and playback (or output)
Interlaced	A method of image scanning whereby the image data is divided into fine horizontal lines which are displayed in sequence starting from left to right and then from the top to the bottom of the screen. The even-numbered lines and odd-numbered lines are displayed alternately.
IP address	A series of numbers that identifies a device that is connected to a network.
LEAP	One of the authentication methods used by CCX. It uses usernames and passwords for authentication without using electronic signatures.
MAC address	MAC is an abbreviation of Media Access Control. The MAC address is an ID number unique to each network card. A unique number is assigned to each network card. Data is transmitted between cards (devices) based on this identification.
NDIS	Abbreviation for Network Driver Interface Specification. This is a standard specification for network drivers that was developed by several companies including Microsoft to enable utilisation of the functions of network cards such as wireless LAN cards. It specifies the protocols for communication between the driver and the operating system and application program, and for communication between the driver and the network card.
Progressive	A method of image scanning whereby the image data from a single image is scanned sequentially from top to bottom to create a single image.
RADIUS server	RADIUS is an abbreviation for Remote Authentication Dialin User Service. It is a protocol that is used for authenticating transmissions for a variety of network servers including wireless LANs. A RADIUS server is an authentication server that stores information such as usernames and passwords and concentrates functions such as authenticating access to wireless LAN access points. By using a RADIUS server, access points and user information can be centrally managed without needing to store user information separately at each access point when there are several access points on a wireless LAN.
Refresh rate	The light-emitting element of a display maintains the same luminosity and colour for an extremely short time. Because of this, the image must be scanned many times per second in order to refresh the light-emitting element. The number of refresh operations per second is called the "refresh rate", and is expressed in hertz (Hz).
Resized display	This function is used to project computer images that have a resolution more than or less than the projector's panel resolution to be projected so that they fill the whole of the projection area.
SDTV	An abbreviation for Standard Definition Television. It refers to standard television systems which do not satisfy the conditions for High-Definition Television.
Security lock	A device consisting of a projector case with a hole in it that a commercially-available theft-prevention cable can be passed through in order to secure the device to a table or pillar. This projector is compatible with the Microsaver Security System manufactured by Kensington.

SNMP	An abbreviation for Simple Network Management Protocol, which is the protocol for monitoring and controlling devices such as routers and computers connected to a TCP/IP network.
Squeeze mode	To reduce the width of a 16:9 wide-screen video image, record the video image as 4:3 in the video software. Setting the aspect ratio to 16:9 on the projector will restore the video image to 16:9 wide-screen format.
sRGB	An international standard for colour intervals that was formulated so that colours which are reproduced by video equipment can be handled easily by computer operating systems (OS) and the Internet.
Subnet mask	This is a number which defines, from the IP address, the number of bits used in network addresses of assigned networks (subnets).
SVGA	A type of video signal with a resolution of 800 (horizontal) × 600 (vertical) dots which is used by IBM PC/AT-compatible computers.
S-Video	A video signal which has the luminance component and colour component separated in order to provide better image quality. It refers to images which consist of two independent signals: Y (luminance signal), and C (colour signal).
SXGA	A type of video signal with a resolution of 1280 (horizontal) × 1024 (vertical) dots which is used by IBM PC/AT-compatible computers.
Sync. (Synchronization)	The signals output from computers have a specific frequency. If the projector frequency does not match this frequency, the resulting images will not be of a good quality. The process of matching the phases of these signals (the relative position of the crests and troughs in the signal) is called "synchronisation". If the signals are not synchronized, problems such as flickering, blurriness and horizontal interference can occur.
TKIP	Abbreviation for Temporal Key Integrity Protocol. This is an encoding method used for WPA. The encryption key is renewed after a certain period of time to make it harder to break the encryption code.
Tracking	The signals output from computers have a specific frequency. If the projector frequency does not match this frequency, the resulting images will not be of a good quality. The process of matching the frequency of these signals (the number of crests in the signal) is called "tracking". If tracking is not carried out correctly, wide vertical stripes will appear in the projected images.
Trap IP address	This is the IP address of the messaged computer used for error notification in SNMP.
USB	An abbreviation for Universal Serial Bus. USB is an interface for connecting personal computers to peripheral devices which only support relatively low data transmission speeds.
UXGA	A type of video signal with a resolution of 1600 (horizontal) × 1200 (vertical) dots which is used by IBM PC/AT-compatible computers.
VGA	A type of video signal with a resolution of 640 (horizontal) × 480 (vertical) dots which is used by IBM PC/AT-compatible computers.
WEP	This is an abbreviation of Wired Equivalent Privacy. This is a security method which encrypts data during transmission. Data communication cannot be performed unless the sending and receiving machines are registered with the same encryption key by the WEP.
WPA	Abbreviation for Wi-Fi Protected Access. This is an encryption standard that improves security which is a weak point of WEP. TKIP is used as the encryption method.
XGA	A type of video signal with a resolution of 1024 (horizontal) × 768 (vertical) dots which is used by IBM PC/AT-compatible computers.
YCbCr	The carrier signal which is contained in the colour bar signal used in modern TV transmissions. The name comes from the Y (luminance) signal and the CbCr (chroma (colour)) signals.
YPbPr	The carrier signal which is contained in the colour bar signal used in high-definition TV (HDTV) transmissions. The name comes from the Y (luminance) signal and the PbPr (colour difference) signals.

List of ESC/VP21 Commands

Command List

When a power on command is sent to the projector, the power will turn on and the projector will change to warm-up mode. When the power has turned on, a colon ":" (3Ah) will be returned.
When the projector executes a command, it returns a ":" and waits for the next command to be sent.
If command processing terminates with an error, the projector outputs an error message and then returns the ":" code.

Item		Command
Power ON/OFF	ON	PWR ON
	OFF	PWR OFF
Signal Selection	Computer1/Component	SOURCE 10
	Computer2/Component	SOURCE 20
	Video	SOURCE 41
	S-Video	SOURCE 42
	EasyMP (EMP-835 only)	SOURCE 50
A/V Mute ON/OFF	ON	MUTE ON
	OFF	MUTE OFF
A/V Mute Selection	Black	MSEL 00
	Blue	MSEL 01
	User's Logo	MSEL 02

* When issuing any of the above commands, tack a Carriage Return (CR) code (0Dh) on to the end.

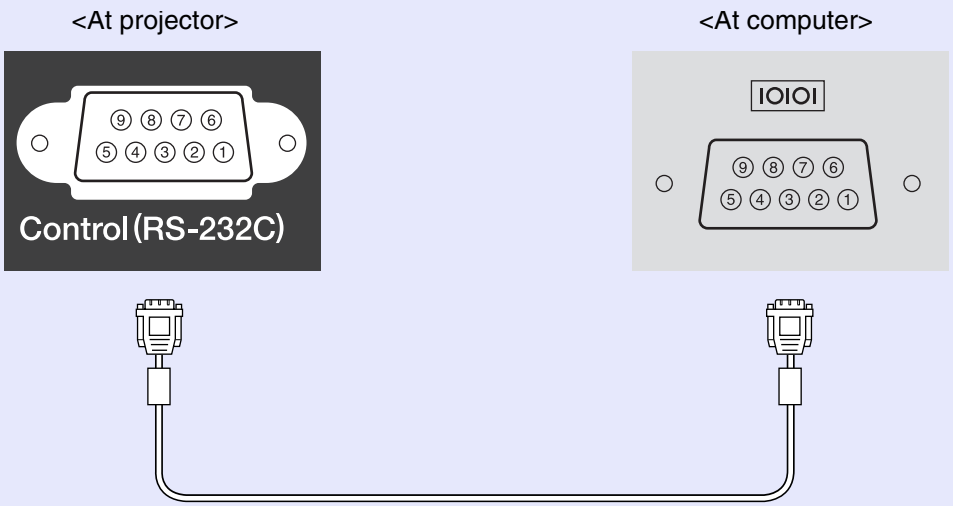
Communication Protocol

- Standard baud rate : 9600 bps
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Flow control : None
- Connector shape : D-Sub 9-pin (male)
- Projector input port : Control (RS-232C)

Cable Layouts

Serial Connection

- Connector shape : D-Sub 9-pin (male)
- Projector input connector : Control (RS-232C)



<At projector>		(PC serial cable)		<At computer>
GND	5	———	5	GND
RD	2	←———	3	TD
TD	3	———→	2	RD
DTR	4	———→	6	DSR
DSR	6	←———	4	DTR

Signal	Function
GND	Signal wire earth
TD	Transmit data
RD	Receive data
DSR	Data set ready
DTR	Data terminal ready

USB Connection

• Connector shape : USB(type B)

* The [USB Type A] port (EMP-835 only) cannot be used as a USB hub.

USB Connection Setup

In order to control the projector using ESC/VP21 commands via a USB connection, the following preparations must be carried out.

PROCEDURE

1. **Download the USB driver (USB-COM Driver) from the EPSON website to your computer.**
   The URL is as follows.
   http://esupport.epson-europe.com/downloads/en/

2. **Install the downloaded USB driver on your computer.**
   Read the instructions displayed on the download screen.

3. **Change the "COM Port" setting in the "Extended" menu to "USB".**

4. **Turn the projector off.**

5. **Turn the projector's power back on.**
   Once the projector's power has turned back on, communication via a USB connection will then be possible.

PJLink (EMP-835 only)

PJLink Class 1 was established by the JBMIA (Japan Business Machine and Information System Industries Association) as a standard protocol for controlling network-compatible projectors as part of their efforts to standardize projector control protocols.
This projector complies with the PJLink Class 1 standard established by the JBMIA.
The projector is compatible with all of the commands defined by PJLink Class 1 except for those commands listed below, and it has been verified to comply with the standard through PJLink standard compatibility inspections.

Non-compatible commands

Function		PJLink command
Muting settings	Image muting set	AVMT 11
	Image muting cancel	AVMT 10
	Sound muting set	AVMT 21
	Sound muting cancel	AVMT 20
Muting status queries	Normal (only images muted)	AVMT=11
	Normal (only sound muted)	AVMT=21

Input names defined by PJLink and corresponding projector connectors

Input connector	PJLink command
Computer1	INPT 11
Computer2	INPT 12
Video	INPT 21
S-Video	INPT 22
EasyMP	INPT 51

Manufacturer name displayed for "Manufacture name information query"
SEIKO EPSON CORPORATION

Model name displayed for "Product name information query"
EMP-835

List of Supported Monitor Displays

Computer/RGB Video

Signal	Refresh rate (Hz)	Resolution (dots)	Resolutions for resized display (dots)
VGAEGA		640×350	1024×560
VGA	60/72/75/85/100/120, iMac*1	640×480	1024×768
SVGA	56/60/72/75/85/100/120, iMac*1	800×600	1024×768
XGA	60/70/75/85/100/120, iMac*1	1024×768	1024×768
SXGA	70/75/85/100	1152×864*2	1024×768
SXGA	60/75/85	1280×960*2	1024×768
		1280×1024*2	960×768
SXGA+	60/75/85	1400×1050*2	1024×768
UXGA	60/65/70/75/80/85	1600×1200*2	1024×768
MAC13"		640×480	1024×768
MAC16"		832×624	1024×768
MAC19"		1024×768	1024×768
MAC21"		1152×870*2	1016×768
SDTV 525i (480i) 525p (480p) 625i (576i) 625p (576p)			1024×768 (4:3 aspect ratio) 1024×576 (16:9 aspect ratio)
HDTV 750p (720p)			1024×576
HDTV 1125i (1080i)			1024×576

*1 Connection is not possible if the equipment does not have a VGA output port.
*2 The resolution for real display is the virtual (window) display resolution.

It may be possible to project signals which are not listed in the above table. However, not all functions may be supportable with such signals.

Component Video

Signal	Display mode (dots)	
	4:3 aspect ratio display	16:9 aspect ratio display
SDTV 525i (480i), 525p (480p), 625i (576i), 625p (576p)	1024×768	1024×576
HDTV 750p (720p) 16:9	–	1024×576
HDTV 1125i (1080i) 16:9	–	1024×576

Composite Video/S-Video

Signal	Display mode (dots)	
	4:3 aspect ratio display	16:9 aspect ratio display
TV(NTSC)	1024×768	1024×576
TV (PAL,SECAM)	1024×768	1024×576

Specifications

Product name	Multimedia Projector EMP-835	Multimedia Projector EMP-830
Dimensions	365 (W) × 114 (H) × 280 (D) mm (Not including projections)	
Panel size	0.8 inches	
Display method	Polysilicon TFT	
Resolution	XGA 786,432 pixels (1024 (W) × 768 (H) dots) × 3	
Focus adjustment	Electronic	
Zoom adjustment	Electronic (approx. 1:1.6)	
Lamp (light source)	UHE lamp, Rated 200 W, Model No.: ELPLP31	
Max. audio output	5 W monaural	
Speaker	1	
Power supply	100–240 VAC 3.3–1.5 A 50/60 Hz	
Electric power consumption	Power Consumption Operating : 300W Standby Network OFF : 1W (100–120V area) 1.4W (200–240V area) Network ON : 38W	Power Consumption Operating : 300W Standby : 1W (100–120V area) 1.4W (200–240V area)
Operating temperature	+5 – +35°C (No condensation)	
Storage temperature	-10 – +60°C (No condensation)	
Operating Altitude	0–2280 m (0–7500 ft.)	
Weight	Approx. 4.7 kg	
Connectors		
Computer1/Component:	1 Mini D-Sub 15-pin (female) Blue	
Audio:	1 Stereo mini jack	
Computer2/Component:	1 Mini D-Sub 15-pin (female) Blue	
Audio:	1 Stereo mini jack	
USB*:	2 USB connector (type A,B)	1 USB connector (type B)
S-Video:	1 Mini DIN 4-pin	
Audio:	1 RCA pin jack × 2 (L, R)	
Video:	1 RCA pin jack	
Audio:	1 RCA pin jack × 2 (L, R)	

Control (RS-232C):	1 D-Sub 9-pin (male)	
Remote:	1 Stereo mini jack	
Monitor Out:	1 Mini D-sub 15-pin (female) Black	
Audio Out:	1 Stereo mini jack	
Network:	RJ45 × 1	
Card Slot	PCMCIA TypeII slot × 1	–
Supported Memory Cards by Projector's Card Slot	•CompactFlash cards (using a PC card adapter) •ATA Flash cards •Memory Sticks (using a PC card adapter) •Smart Media (using a PC card adapter) •SD/MMC cards (using a PC card adapter)	–

*The USB connector is not guaranteed to operate correctly with all USB-compatible devices.

Pixelworks DNX™ICs are used in this Projector.

Safety

USA
UL60950 Third Edition

Canada
CSA C22.2 No.60950

European Community
The Low Voltage Directive (73/23/EEC)
IEC60950 3rd Edition

EMC

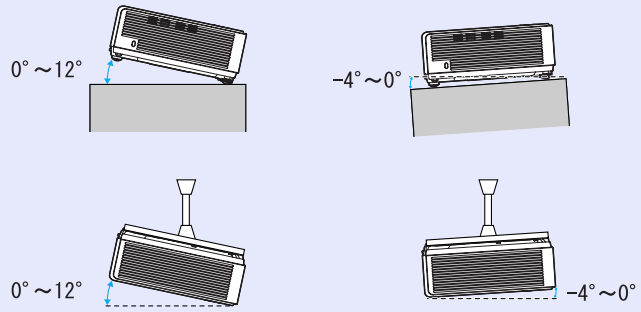
USA
FCC Part15B Class B (DoC)

Canada
ICES-003 Class B

European Community
The EMC Directive (89/336/EEC)
EN55022, 1998 Class B
EN55024, 1998
IEC/EN61000-3-2, IEC/EN61000-3-3

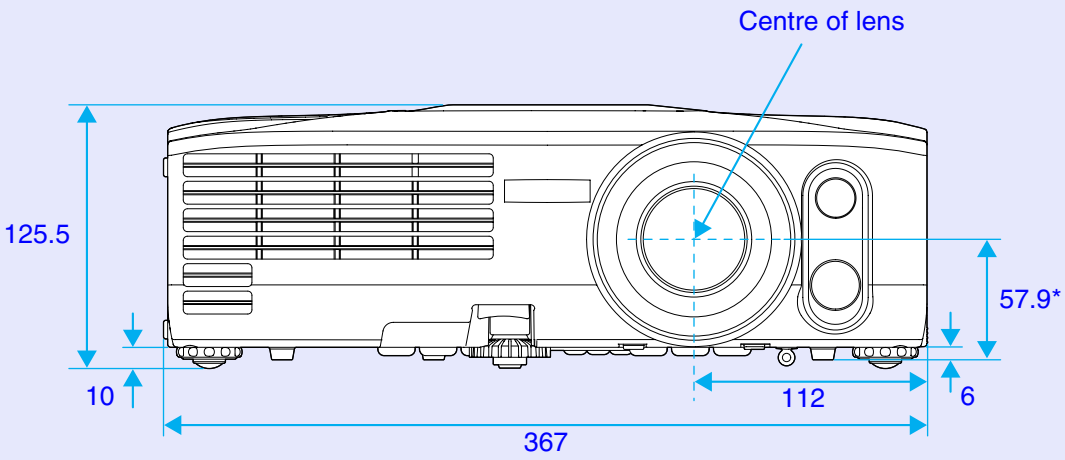
Australia/New Zealand
AS/NZS CISPR 22:2002 Class B

Angle of tilt

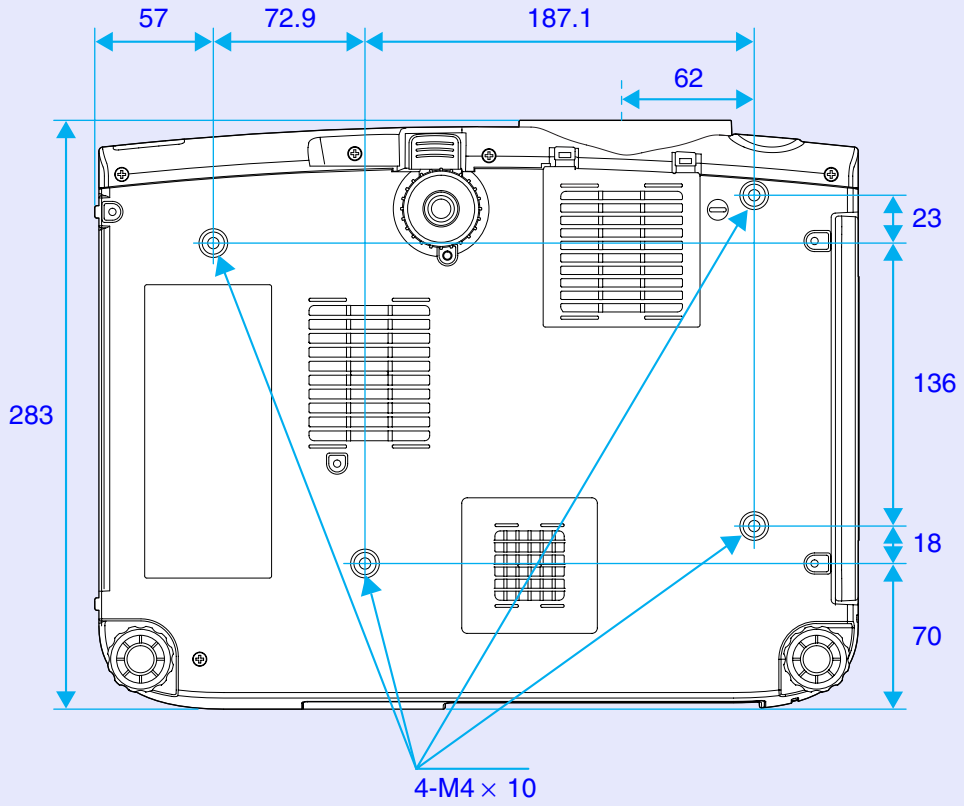


If you set the projector outside the range of -4° to 12° from horizontal, it could damage the projector and cause an accident.

Appearance



*Distance from centre of lens to suspension bracket fixing point



Units: mm

DECLARATION of CONFORMITY
According to 47CFR, Part 2 and 15
Class B Personal Computers and Peripherals; and/or
CPU Boards and Power Supplies used with Class B
Personal Computers

We	:EPSON AMERICA, INC.
Located at	:3840 Kilroy Airport Way MS: 3-13 Long Beach, CA 90806
Tel	:562-290-5254

Declare under sole responsibility that the product identified herein, complies with 47CFR Part 2 and 15 of the FCC rules as a Class B digital device. Each product marketed, is identical to the representative unit tested and found to be compliant with the standards. Records maintained continue to reflect the equipment being produced can be expected to be within the variation accepted, due to quantity production and testing on a statistical basis as required by 47CFR 2.909. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Trade Name	:EPSON
Type of Product	:Projector
Model	:EMP-835/EMP-830

FCC Compliance Statement
For United States Users

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

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

WARNING

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification 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.

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. No patent liability is assumed with respect to the use of the information contained herein. Neither is any liability assumed for damages resulting from the use of the information contained herein.

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 against 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.

General Notice:

EPSON is a registered trademark of SEIKO EPSON CORPORATION.
EasyMP is a trademark of SEIKO EPSON CORPORATION.
Macintosh, Mac, and iMac are registered trademarks of Apple Computer, Inc.
IBM is a registered trademark of International Business Machines Corporation.
Windows, WindowsNT and VGA are trademarks or registered trademarks of Microsoft Corporation in the United States.
Dolby is a registered trademark of Dolby Laboratories.
Cisco Systems is a registered trademark of Cisco Systems Inc. in the United States of America and other countries.
Pixelworks and DNX are trademarks of Pixelworks Inc.
PJLink is a trademark of JBMIA.
Portions of this software are based in part on the work of the Independent JPEG Group.
Portions Copyright©2003 Instant802 Networks Inc. All rights reserved.
Other product names used herein are also for identification purposes only and may be trademarks of their respective owners. EPSON disclaims any and all rights in those marks.
This product uses open source software.

©SEIKO EPSON CORPORATION 2005. All rights reserved.