

EPSON

EasyMP™

Operation Guide

Multimedia Projector EMP-1825



Overview of EMP NS Connection

Two connection modes.....	5
Quick Connection Mode.....	5
Advanced Connection Mode	5
Steps up to the making of an EMP NS connection	6
Using the main screen of EMP NS Connection	7
Wireless LAN Security Countermeasures.....	9
Using the Toolbar	10
Icon Names and Functions	10

Convenient EMP NS Connection Functions

Projecting Only a PowerPoint Slideshow (Presentation Mode).....	13
Projecting Movies from a Computer (Movie Sending Mode).....	14
Supported file types	14
Playing back a movie	14
Using Multi-Screen Display	16
Example of Adjusting the Virtual Display	16
Procedure before using the Multi-screen Display Function.....	17
Setting the Virtual Display	18
Allocating the image to be projected.....	23
The allocated image is projected	23

Connecting to a projector on a different sub-net

Connecting to a projector on a different sub-net.....	26
Searching by Specifying the IP Address and Projector Name (For "Advanced Connection Mode" only)	27
Performing a search with a profile.....	28
Making a Profile	28
Searching by Specifying a Profile	30
Managing a Profile	31

Setting the EMP NS Connection Operation

Setting the EMP NS Connection Environment	34
General settings Tab.....	34
Adjust Performance Tab	36

Using a Computer to Set Up, Monitor and Control Projectors

Changing Settings Using a Web Browser (Web Control).....	38
Displaying Web Control	38
Projector Setup	38
Using the Mail Notification Function to Report Problems	39
Setting Mail Notification Function	39
If a Problem Notification is Sent by Mail	39
Management Using SNMP.....	40

Presentations Using PC Free

Files that can be Projected Using PC Free, and Saving.....	42
Files that can be Projected Using PC Free.....	42
Copying a file to, or deleting a file from, a CompactFlash card from the network	43
PC Free Examples.....	45
PC Free Basic Operations	46
Starting and Closing PC Free	46
PC Free Basic Operations	49
Rotating the Image	50
Projecting Scenarios	51
Creating and editing a scenario	51
Playing a Scenario.....	52
Operating During a Presentation	53
Projecting image and movie files	54
Projecting Images/Movies.....	54
Projecting all Image and Movie Files in a Folder in Sequence (Slideshow)	55
Setting Image and Movie File Display Conditions and Operation Mode.....	56

Preparing a Scenario (Using EMP SlideMaker2)

Scenario Summary	58
Files that Can be Included in Scenarios.....	59
Turning a PowerPoint File into a Scenario	60
Converting all files in a single operation without starting up SlideMaker2.....	61
Starting up SlideMaker2 and converting files.....	63
Setting Scenario Properties	63
Including PowerPoint Files in Scenarios	65
Including Image and Movie Files in Scenarios.....	68
Editing a Scenario	69
Sending Scenarios	71
Cases Like These	73
Checking the Projection Scenario Status from a Computer.....	73
Setting Animations	74
Setting the Slide Animation	74

Appendix

Connection Limitations.....	77
Supported Resolutions.....	77
Display Color.....	77
Connection Number	77
Others	77
Troubleshooting	78
Glossary	86

Overview of EMP NS Connection

This chapter provides an overview of EMP NS Connection.

Two connection modes	5
• Quick Connection Mode	5
• Advanced Connection Mode	5
Steps up to the making of an EMP NS connection.....	6
Using the main screen of EMP NS Connection	7
Wireless LAN Security Countermeasures	9
Using the Toolbar	10
• Icon Names and Functions	10

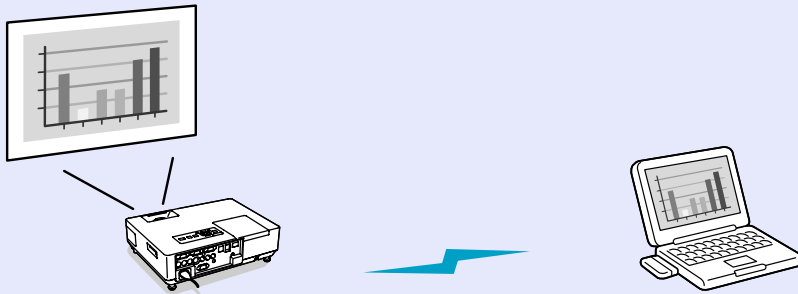
Two connection modes



EMP NS Connection supports two connection modes, namely, "Quick Connection Mode" and "Advanced Connection Mode".

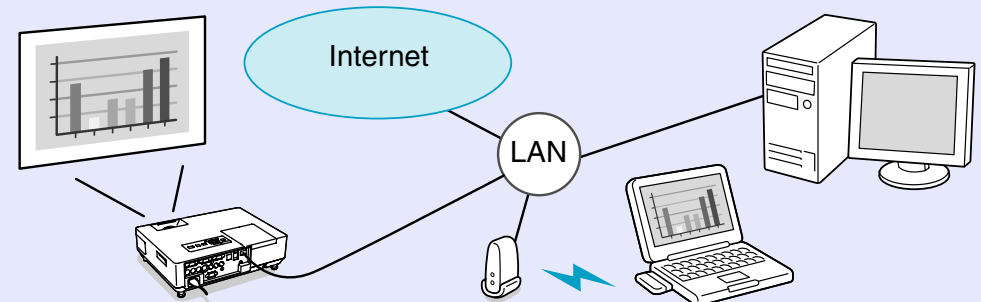
Quick Connection Mode

- With an ad hoc connection, because the projector's SSID is temporarily assigned to the computer, you do not have to perform any setup operations from the computer.
- After the computer has been cut off, its network settings automatically return to their original state.



Advanced Connection Mode

- With an infrastructure connection, the connection is made to an existing network system.
- This type of connection is used when you want to open and project the contents of a file over a network, share the projector, or apply security.



Steps up to the making of an EMP NS connection



The steps leading up to the creation of an EMP NS connection between the computer and the projector are the same in both "Quick Connection Mode" and "Advanced Connection Mode".

For details on the procedure, see the example of setting up a connection in "Quick Connection Mode" in the Wireless LAN Quick Connection Guide, provided separately.

This explains the steps to be taken to establish a connection, while also covering the settings to be made in "Advanced Connection Mode".

Preparing the Computer

- Install EMP NS Connection on the computer to be connected.
- Enable the setup of a network connection.

Preparing the Projector

The projector incorporates the same wireless LAN unit.

Advanced Connection Mode Settings

When using a wired LAN with a Macintosh computer, set "AirPort Off" in the communication state.



- When using a wired LAN to establish the network connection, connect the projector using the likes of a commercially available network cable and hub. [User's Guide "Connecting a LAN Cable \(EMP-1825 Only\)"](#)
- Make the network settings for the projector. [User's Guide "Network Menu \(EMP-1825 Only\)"](#)
- When a WPS (Wi-Fi Protected Setup) compatible device is used as the access point, the projector's WPS feature enables easy connection. [Users Guide "Making a WPS \(Wi-Fi Protected Setup\) Connection"](#)

Establish connection and start projection

Start EMP NS Connection on the computer and then establish a connection with the projector.

The following convenient functions are provided to help users with meetings and presentations

- Multi-Screen Display [p.16](#)
- Movie Sending Mode [p.14](#)
- Presentation Mode [p.13](#)
- Distribution function
The screen being displayed by a remote computer can be simultaneously displayed by up to four projectors with corresponding SSID.
- Switching function
With the meeting switching function and assuming that EMP NS Connection has been installed on all the computers, the participants can take turns and project their own images, without the need to swap cables.



For details on the restrictions imposed on the projection of computer images over a connection with EMP NS Connection, such as the compatible resolution and display colors, see "Connection Limitations". [p.77](#)

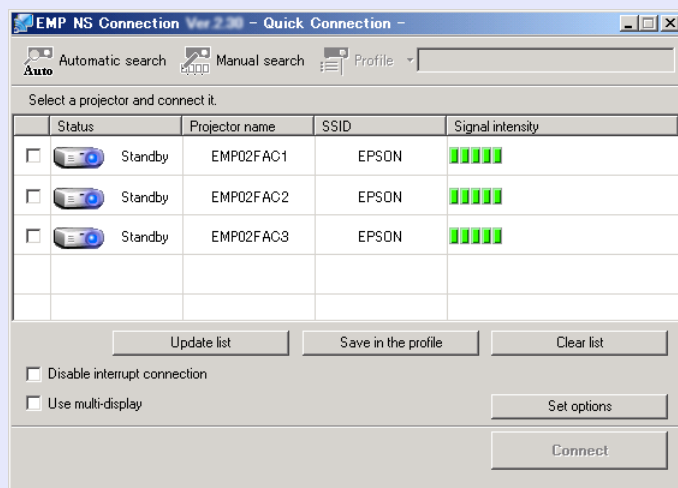
Using the main screen of EMP NS Connection



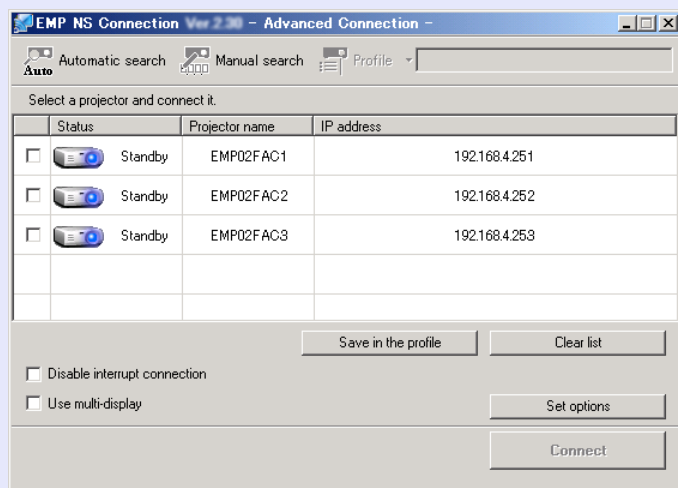
7

When EMP NS Connection is started, the following screen is displayed. The operation of each button or menu item is described in the following table.







When the system has been started in "Quick Connection Mode".



When the system has been started in "Advanced Connection Mode".



Automatic search	In "Quick Connection Mode", a search is made for a projector based on the SSID. In "Advanced Connection Mode", you can search for available projectors on the network system that the computer is connected to.						
Manual search	In "Quick Connection Mode", a search is made for the projector having the SSID selected from a list. In "Advanced Connection Mode", you can search for a projector based on a specified IP address or projector name.						
Profile	You can search for a projector on the network using a profile saved with "Save profile". p.28						
Status	<p>The state of an identified projector is indicated using one of the following six icons.</p> <table><tr><td> Standby</td><td> Busy</td></tr><tr><td> Busy (Disable interrupt connection)</td><td> Currently in use by another application</td></tr><tr><td> Searching</td><td> Not found.</td></tr></table> <p>The status of a projector with a check mark is .</p> <p>In "Quick Connection Mode", a check mark appears only against those projectors with the same SSID. For a projector that is both in the status and checked, clicking "Connect" causes the previously connected computer to be disconnected, and a new connection to be established with your computer. indicates that the projector is currently displaying the Configuration menu. Once the Configuration menu has been cleared, you can retry search and establish a connection.</p>	Standby	Busy	Busy (Disable interrupt connection)	Currently in use by another application	Searching	Not found.
Standby	Busy						
Busy (Disable interrupt connection)	Currently in use by another application						
Searching	Not found.						


	 is displayed to indicate a search for a specified projector or a profile-based search.  is displayed when a projector cannot be found as a result of a search for an IP address.
Projector name	The projector's name is displayed.
IP address (only for "Advanced Connection Mode")	The projector's IP address is displayed.
SSID (only for "Quick Connection Mode")	The projector's SSID is displayed.
Display (When "Use multi-display" is checked)	When "Use multi-display" is checked, select the number of the display to use.  p.23
Update information (only for "Quick Connection Mode")	Updates the status of those projectors displayed in the list.
Save profile	Saves the results of a search for projectors on the network as a profile.  p.28
Clear list	Deletes the currently displayed list of projectors.
Disable interrupt connection	Select this to prevent an interrupt connection by other computers while a connection is established.
Use multi-display	Select this when using the Multi-screen display function. When this is selected, "Display layout" and "Display properties" are displayed at the bottom of the screen. Multi-screen display  p.16
Set options	You can set the environment, such as the processing method, when EMP NS Connection is started. For option settings, see  p.34
Connect	A projector can be clicked once you place a check mark against it. Whenever connection with a projector is possible, a toolbar is displayed.

One of the advantages of using a wireless LAN is that it is possible to communicate easily if you are within the range of the electromagnetic waves, because with a wireless LAN data is exchanged through electromagnetic waves.


On the other hand, since electromagnetic waves extend through obstacles such as walls, the content of the communication can be intercepted, and the network can be breached without using any special tools if security is not set.

To prevent these problems, the projector is provided with the following security functions.

- Data encryption

Encode and transmit data. Even if data is intercepted, it cannot be deciphered. Whenever you establish a connection in "Quick Connection Mode" you should always encrypt your data.  [p.34](#)

- Connection limitation (Authentication)

A user's name and a password are registered in advance, which means that only the registered wireless port can connect to the network and prevents unauthorized third parties from connecting to the network. The projector supports this setting when using a wireless LAN in "Advanced Connection Mode" to establish a connection.  [User's Guide "Network Menu \(EMP-1825 Only\)"](#)

The toolbar is displayed on the computer screen after EMP NS Connection is started and the connection with the projector is established. This toolbar allows you to control and make settings for the projector being used.

Icon Names and Functions



Select target projector

It is possible to specify one particular projector when you want to use to the toolbar to control that projector, despite the distribution function or multi-screen display being used to project images from multiple connected projectors. The indication below the icon indicates that control of that projector is possible.

"ALL" indicates that all of the connected projectors can be controlled. For example, when "1, 3" is displayed, projectors No. 1 and No. 3 can be controlled.

Clicking  causes the following screen to be displayed.

Select target projector			
	No.	Projector name	Display
<input checked="" type="checkbox"/>	1:	EMP02FAC1	1
<input checked="" type="checkbox"/>	2:	EMP02FAC2	1
<input checked="" type="checkbox"/>	3:	EMP02FAC3	1

Indicates the projection status of the projector.

Indicates the number of an assigned projector. When control of a specific projector has been set up, indicates the number of the projector that can be controlled from the toolbar.

Select the projector to be controlled.

Indicates the projection status of the projector.

 Stop  Show  Pause

 Presentation Mode  Movie Sending Mode



Stop

Stops projection of computer images while connecting to the projector. While projection is stopped, a black screen is projected. While audio is being output from a projector, the audio cannot be stopped. To stop the audio, or to display a blue screen or a user-registered logo while projection is stopped, use the A/V mute function.



Show

Also, stop or pause is canceled.




Pause

Pauses projection of computer images when connected to the projector. The image at the point it was paused is projected. While audio is being output from a projector, the audio cannot be paused.



Presentation Mode

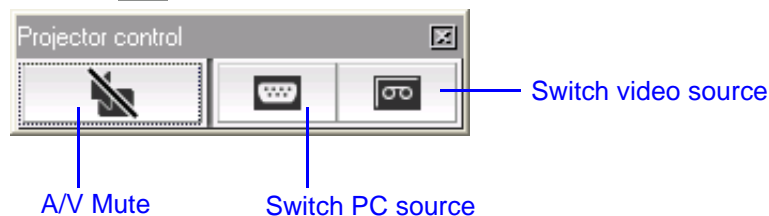
When a PowerPoint Slideshow is being presented, project only the Slideshow images. When the Slideshow is not being presented, a black screen is projected.  p.13




Projector control

While the projector is connected to the network, the unit's "AV Mute", "Switch PC source" and "Switch video source" functions can be controlled from both the remote control and the projector's operating panel.

Clicking  causes the following toolbar to be displayed.



A/V Mute

Operation using this toolbar is the same as when using the remote control.  [User's Guide "Remote Control"](#)



Switch PC source

Each time this is clicked, the image is switched between that being received from the computer connected to the input terminal and that from the computer connected through the EMP NS Connection.



Switch video source

This switches to the image input from equipment connected to the projector's video input or S-video input port.



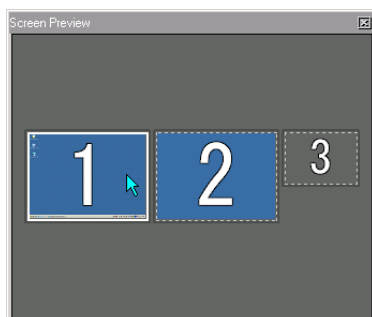
Screen Preview

Displays the multi-screen preview screen.




Screen Preview

Clicking this causes a preview of the display with the settings you have made to appear. Clicking each display causes each preview window to be enlarged to full-screen.




Set options

Transmission performance during the transfer of computer images can be adjusted.  [p.34](#)




Movie Sending Mode

Used to immediately play back a movie file.  [p.14](#)



Disconnect

Disconnects the connection to the projector.  [Wireless LAN Quick Connection Guide](#)



Signal intensity

This is displayed when the connection is made in the "Quick Connection mode". As the signal strength increases, so does the number of lit indicators.



Switch toolbar display

The toolbar display is switched as follows. The toolbar display remains as is until next switched.

Full



Normal



Simple



Convenient EMP NS Connection Functions

This section explains those functions that may be useful during meetings or when making a presentation, such as the ability to send a movie file directly to a projector for playback ("Movie Sending Mode") or that which allows you to send images to multiple projectors from a single computer ("Multi-Screen Display").

Projecting Only a PowerPoint Slideshow (Presentation Mode) 13

Projecting Movies from a Computer (Movie Sending Mode)..... 14

- Supported file types14
- Playing back a movie14

Using Multi-Screen Display 16

- Example of Adjusting the Virtual Display 16
- Procedure before using the Multi-screen Display
Function..... 17
- Setting the Virtual Display 18
 - Enable the virtual display driver (Windows only)..... 18
 - Virtual display arrangement..... 18
- Allocating the image to be projected 23
- The allocated image is projected 23

Projecting Only a PowerPoint Slideshow (Presentation Mode)






13

In Presentation Mode, only when performing a PowerPoint Slideshow on a computer, the images are displayed. This is useful when you only want to display the Slideshow.

In addition to PowerPoint, Keynote is compatible with Presentation Mode with the Macintosh.

Procedure

- 1** If necessary, select another projector to be controlled.  [p.10](#)
- 2** Click the  button on the toolbar.
Presentation Mode begins.
- 3** When in Presentation Mode, click the  button again to exit Presentation Mode.

In Movie Sending Mode, movie files can be sent directly to a projector. As a result, a movie can be projected much more smoother than when it is being sent from an application running on a PC.

Also, because the audio is sent at the same time as the video, there is no need for an audio cable between the computer and the projector. When you select multiple files, they are played back repeatedly and in sequence.



- *Movie Sending Mode is valid for one projector only. It is not possible to apply Movie Sending Mode to more than one projector.*
- *Depending on the communication method and the available reception, the image and sound may skip or stall.*

Supported file types

The file types supported by Movie Sending Mode are listed in the following table.

File type (extension)	Notes
.mpg	MPEG2 The reproducible audio format is MPEG1 Layer 1/2. Linear PCM and AC-3 audio cannot be played back. MPEG contents with no sound can be played back.
.wmv	WMV9 The reproducible audio format is WMA99.

Playing back a movie

Procedure



Click the  button on the toolbar.

The projector selection screen is displayed.

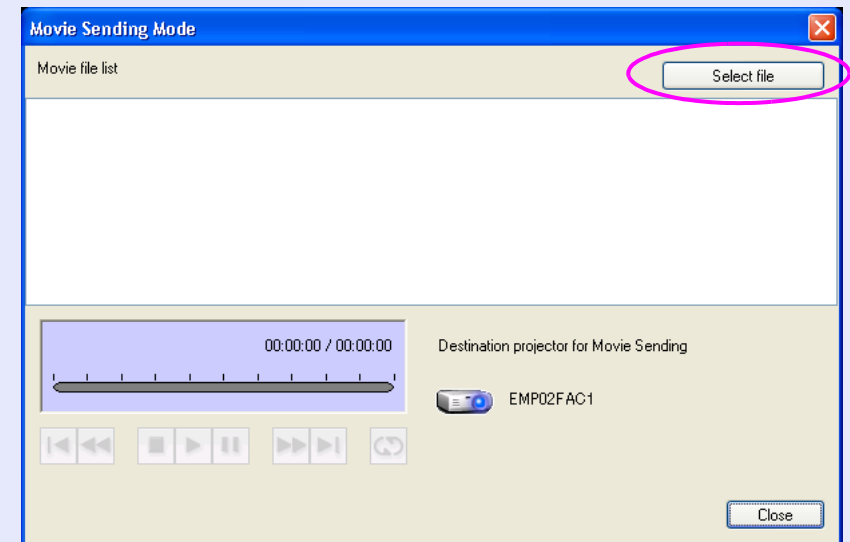


Select the destination projector for Movie Sending and click the "OK" button.

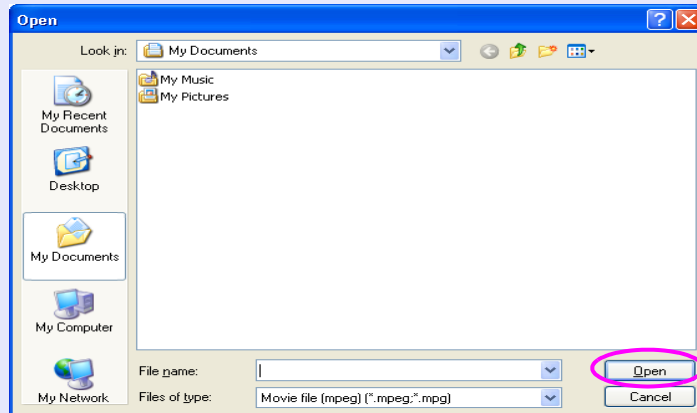
The "Movie Sending Mode" screen appears.



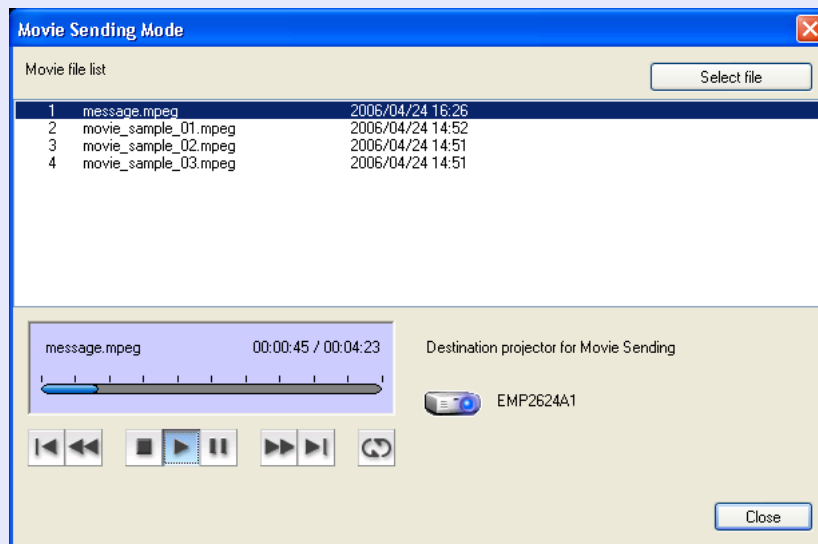
Click the "Select file" button.



- 4** Select the movie file you want to play back and then click the "Open" button.











The "Movie Sending Mode" screen reappears. The file you selected is added to the movie file list.



- 5** Use the operation buttons below to play and stop the movie files.



	Plays back from the beginning of the file that is playing.
	Quickly rewinds the file that is playing.
	Stops play back.
	Plays back the file.
	Pauses play back.
	Quickly fast-forwards the file that is playing.
	Plays back from the beginning of the next file.
	Repeatedly plays back the file list in order. When there are multiple files in the list, it is not possible to repeatedly play back only some of those files.

- 6** Click the "Close" button to end Movie Sending Mode.

Using Multi-Screen Display



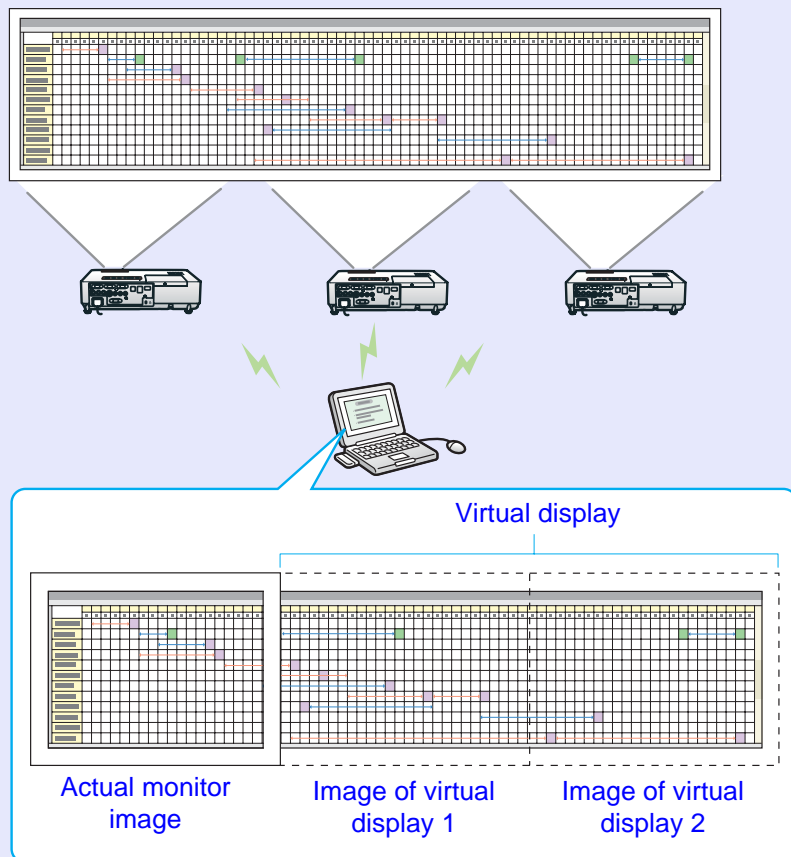
16

Multi-screen display mode allows you to project different images from multiple projectors that are connected to a single computer.

With Windows, multiple virtual displays can be set in the computer, and each image can be projected by the projector. This function is not available with Windows Vista due to restrictions in the Windows Vista specifications.

For the Macintosh, an external monitor must be connected to the computer to enable the use of the multi-screen display function.

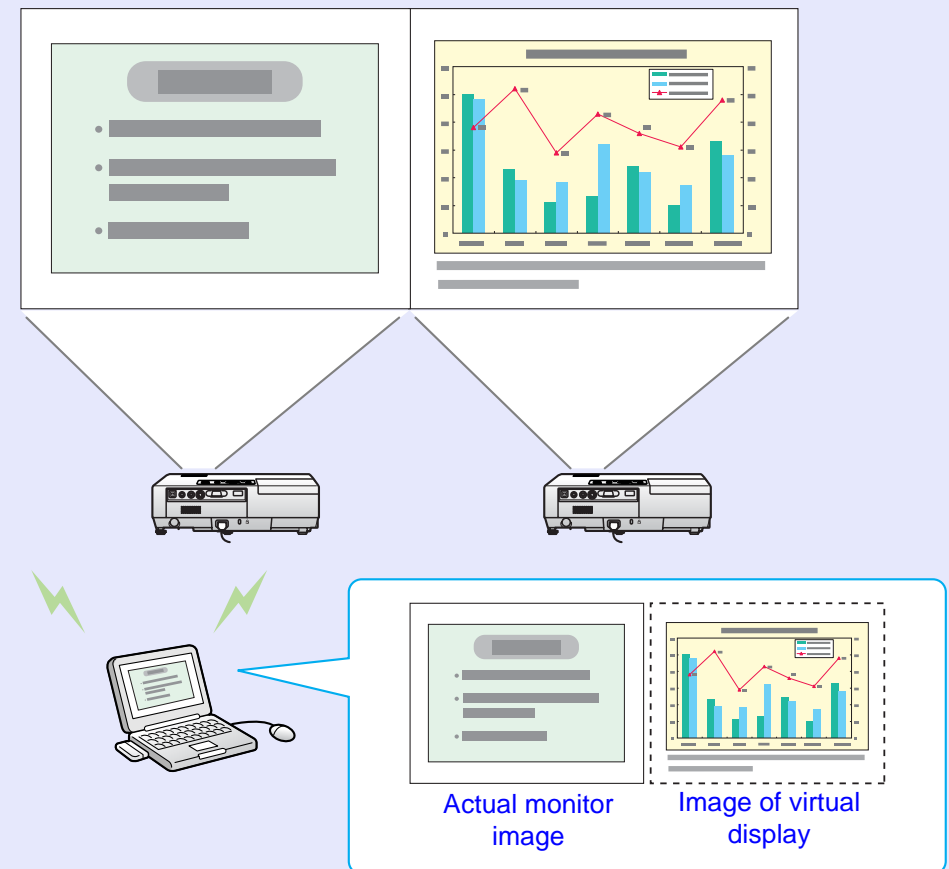
Whereas the above explanation has referred to "virtual display", in the case of the Macintosh, the operation relates to the screens displayed on the physically connected monitor.



Example of Adjusting the Virtual Display

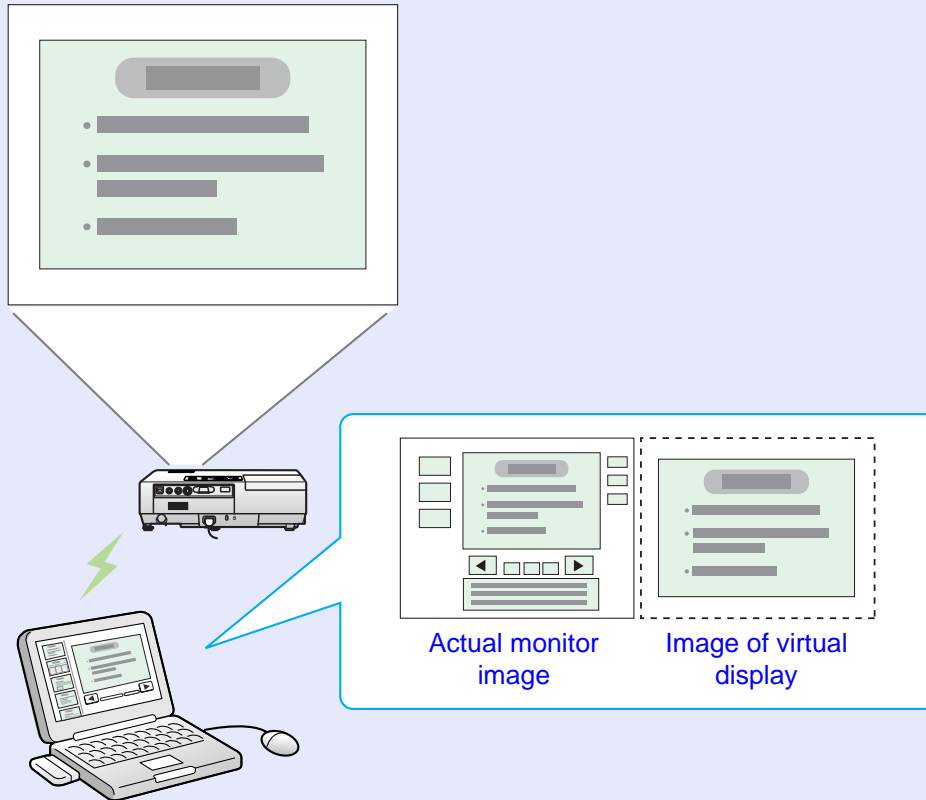
By arranging the virtual display allocation, you can project only the image that you want to show when making a presentation or project different images from left to right.

Arrangement example 1



Actual monitor	PowerPoint file
Virtual display	Excel file

Arrangement example 2



Actual monitor	PowerPoint file presenter tools
Virtual display	Slideshow using a PowerPoint file

Procedure before using the Multi-screen Display Function

1. Adjusting the Virtual Display p.18

In a Windows environment, enable the virtual display driver as necessary. And, for both Windows and the Macintosh, set up the virtual display arrangement.



2. Allocating the image to be projected p.23

Open the file to be projected, and then move the screen to the virtual display according to the actual projection arrangement.




3. The allocated image is projected p.23

Allocate a virtual display number to a projector that is connected through the network, and then start projection.

Setting the Virtual Display

The following explains how to allocate the computer image using [arrangement example 1 on page 16](#).

■ Enable the virtual display driver (Windows only)

Enable the virtual display driver. Those users listed below do not have to perform this operation. Perform the "Virtual display arrangement" (Windows), or "Virtual display arrangement" (Macintosh).  [p.18](#)

- Those users who have enabled virtual displays installing EMP NS Connection.
- Those users who are using Macintosh computers.

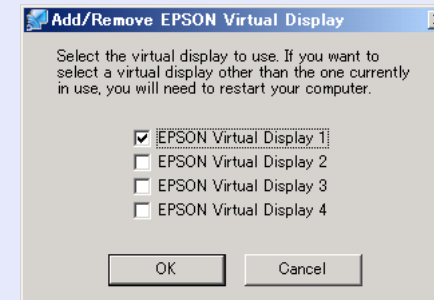
Procedure

① Start Windows on the computer, then select "Start" - "Programs" (or "All Programs") - "EPSON Projector" - "Add/Remove Epson Virtual Display".

The "Add/Remove EPSON Virtual Display" screen is displayed. Place a check mark against the virtual display to be used. Up to four monitors can be added. In this case, a single virtual display is to be used, so select one. When, for example, using three projectors, such that you have to set multiple virtual displays, only select as many displays as is necessary. Any one of the displays can be selected.



Click the "OK" button.




When you click "OK", the drivers for the virtual display are enabled. At this point, it is normal for the display to flicker. Wait for the "Add/Remove Epson Virtual Display" screen to close.

■ Virtual display arrangement

After starting EMP NS Connection, the setting up of the virtual displays varies between Windows and the Macintosh. The procedures are explained separately, below.

For Windows, follow the procedure below.

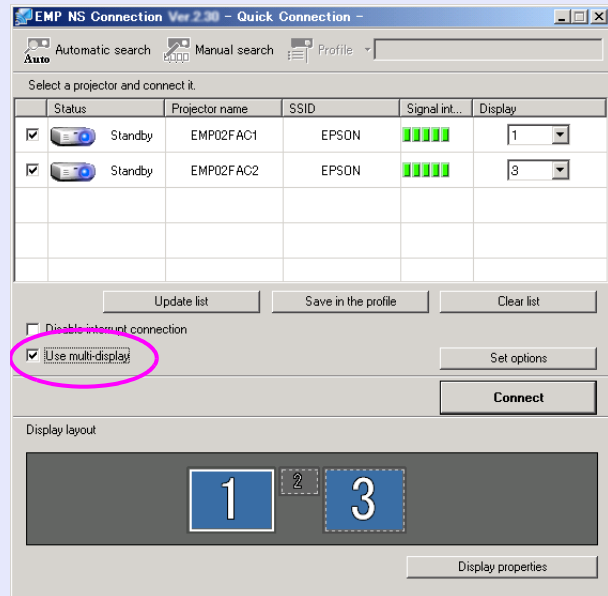
For the Macintosh, go to  [p.21](#).

Procedure

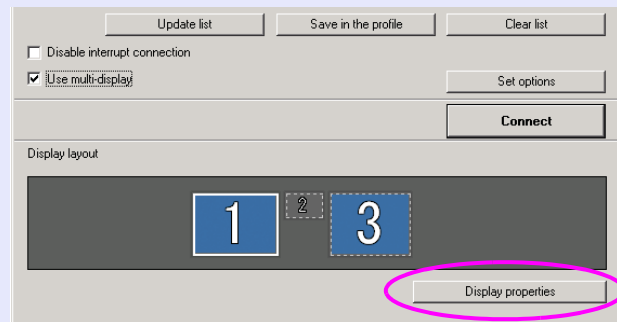
For Windows



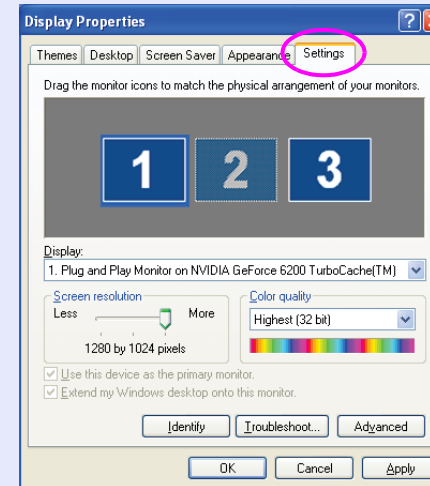
To start EMP NS Connection, select "Start" - "Programs" (or "All Programs") - "EPSON Projector" - "EMP NS Connection".

2 Select the "Use multi-display" check box.

"Display layout" and "Display properties" buttons are added at the bottom of the screen.

3 Click the "Display properties" button.

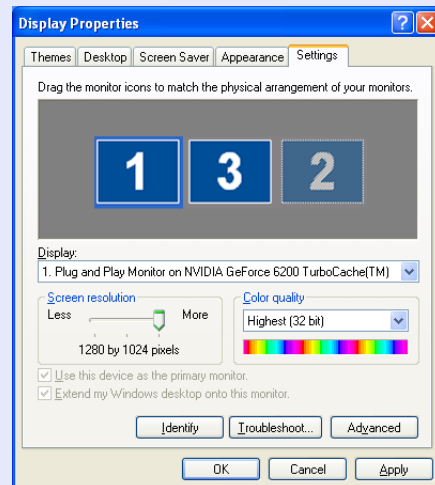
The "Display Properties" screen will be displayed.

4 Click the "Settings" tab.

5 Drag the displayed monitor icon and place it where desired.

Here, the actual monitor (1) is placed on the left, while the virtual monitor (3) is placed on the right.


When the PC has multiple display output terminals, the numbers assigned to the virtual terminals will be sequential to those of the physical terminals.



When the monitor icon appears as follows, a virtual display is connected.



6 Click the "OK" button. The "Display Properties" screen closes.

Up to this point, the virtual display layout has been fixed.
Go to  [p.23](#).



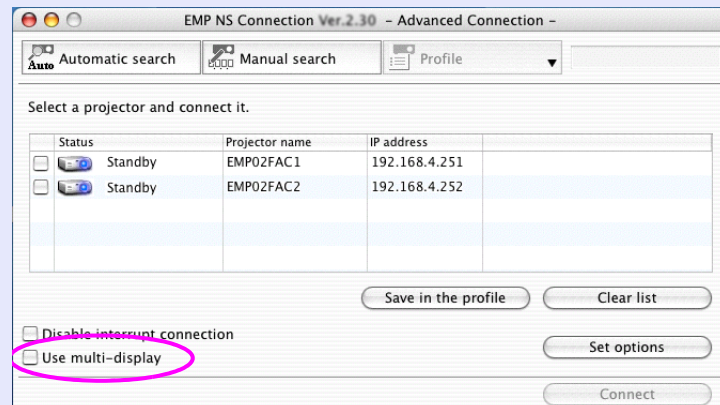
- *When an external monitor is connected as a secondary monitor, the image for that screen cannot be projected.*
- *Depending on the hardware, the number of the secondary monitor may be other than "2". When the monitor icon is displayed on the screen, click the icon and confirm that the monitor type shown under "Display" is other than "secondary".*

For Macintosh

- 1 Start EMP NS Connection. Double-click the "Applications" folder of the hard drive volume in which EMP NS Connection is installed, and then double-click the EMP NS Connection icon. EMP NS Connection starts.

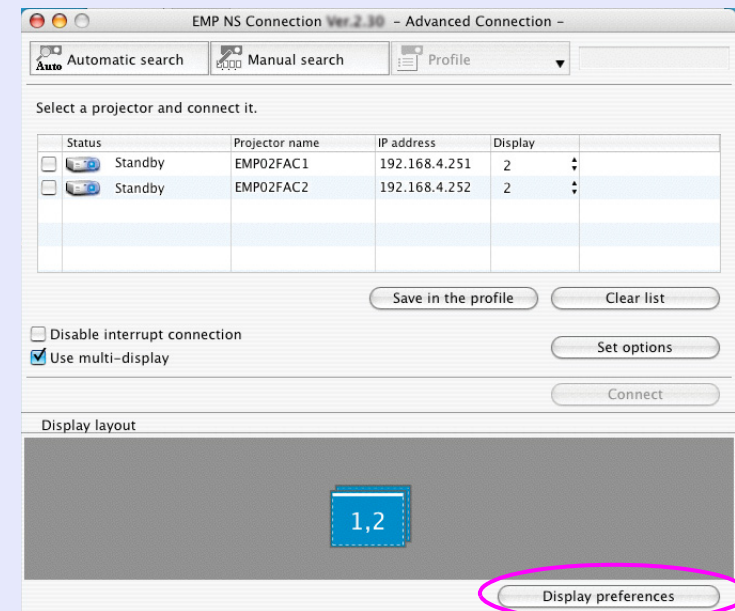
Select "Advanced Connection Mode" and then perform startup. The "Advanced Connection Mode" screen is displayed.

- 2 Select the "Use multi-display" check box.



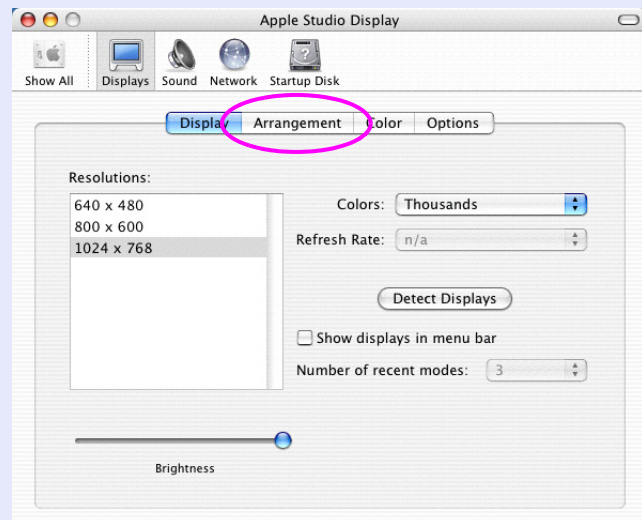
"Display layout" and "Display preferences" buttons are added at the bottom of the screen.

- 3 Click the "Display preferences" button.

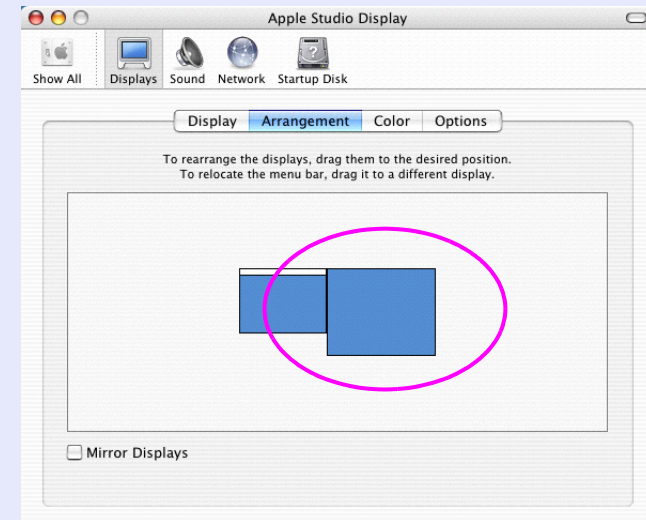


The display setting screen is displayed.

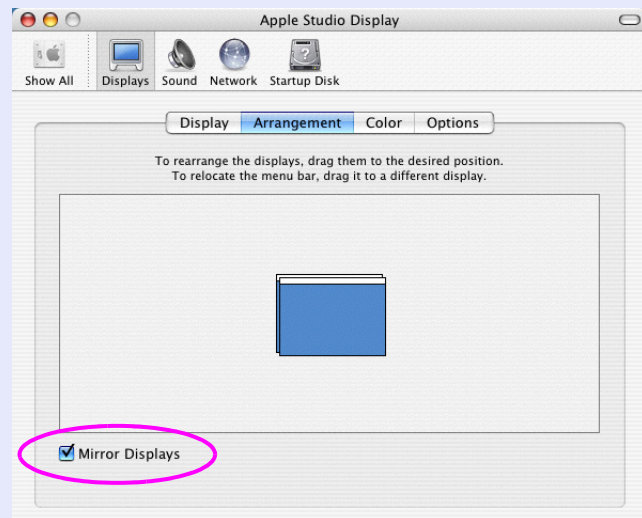
4 Click the "Arrangement" button.




6 Drag the displayed monitor icon and place it where desired.



5 Deselect Mirror Displays.



7 Close the display setting screen.

Up to this point, the screen layout has been fixed.
Go to  [p.23](#).

Allocating the image to be projected

The following explains how to allocate the computer image using arrangement example 1 on page 16.

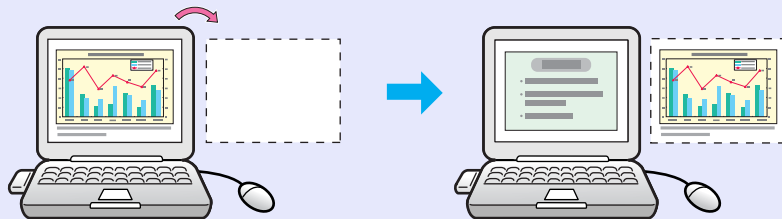
Procedure

1 Open the file to be projected.

For arrangement example 1 on page 16, open the PowerPoint file and Excel file.

2 Drag the window to the desired virtual display monitor, and allocate it where the image is to be projected.

In the example in which the PowerPoint and Excel files are opened, drag the Excel window to the right until it can no longer be seen. As a result, the PowerPoint window appears on the actual monitor, while the Excel window appears on the virtual display on the right.

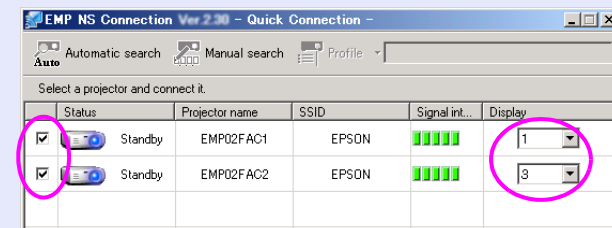


The allocated image is projected

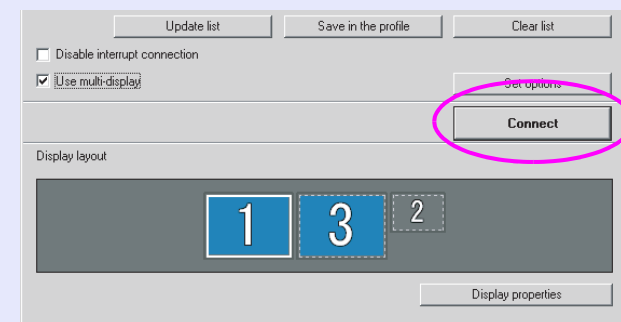
The following explains how to allocate the computer image using arrangement example 1 on page 16.

Procedure

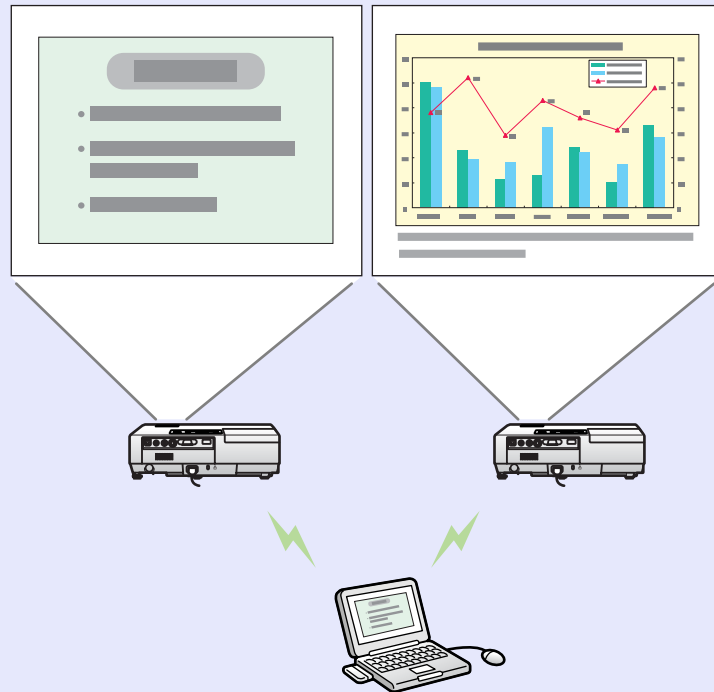
1 Select the number of the virtual display to allocate to "Display", and set which image to be projected from which projector.



2 Click the "Connect" button.



The image allocated to each projector is projected.




In a Windows environment, you cannot view the image being sent to a virtual display on the computer. To adjust the image on the virtual display, you must do so while viewing the projected image. To perform mouse-based operations on the virtual display, move the mouse pointer in the direction of the virtual display, such that the pointer appears on the virtual display.



To terminate multi-screen display, click "Disconnect" on the toolbar.



• In a Windows environment, if the virtual display driver has been enabled such that the mouse pointer can be moved outside the limits of the screen, there may be occasions when you lose track of the location of the pointer. When you are not using a virtual display, clear the check mark against the under "Add/Remove EPSON Virtual Display", such that the mouse pointer cannot be moved outside the limits of the screen. To subsequently use multi-screen display again, again place a check mark against the required display under "Add/Remove EPSON Virtual Display".

To clear a check mark, see the following.  p.18

• You can adjust each projector's color tone.
 *User's Guide "Adjusting Color for Several Projectors (Multi-Screen Color Adjustment)"*

Connecting to a projector on a different sub-net

This chapter explains how to connect a computer to a projector on a different sub-net via a wired LAN or a wireless LAN access point on an existing network system.

Connecting to a projector on a different sub-net.....	26
Searching by Specifying the IP Address and Projector Name (For "Advanced Connection Mode" only)	27
Performing a search with a profile	28
• Making a Profile.....	28
• Searching by Specifying a Profile	30
• Managing a Profile.....	31

By default, this application only searches for projectors on the same sub-net as the computer. Therefore, even if you perform a search for projectors on the network, one on a different sub-net will not be found. You can, however, identify and connect to a projector on a different sub-net, as follows.

- Specify either an IP address or projector name and perform a search.

The IP address can be input directly. Also, provided the name of the connected server has been registered on the DNS server, you perform a search simply by inputting that name. ➡ [p.27](#)

- Performing a search based on a profile

Once you have performed a search for a projector on a different sub-net by specifying either an IP address or a projector name, you can save the search as a profile with an easy-to-remember name, and then use that profile whenever you subsequently want to search for a projector on a different sub-net. ➡ [p.28](#)



If a search fails to find a projector, the most likely causes are as follows. Proceed as appropriate, depending on the cause of the failure.

For both Windows and the Macintosh

- *The wireless LAN signal is either out of range or weak. Check whether there is anything that could be interfering with the signal.*

For the Macintosh

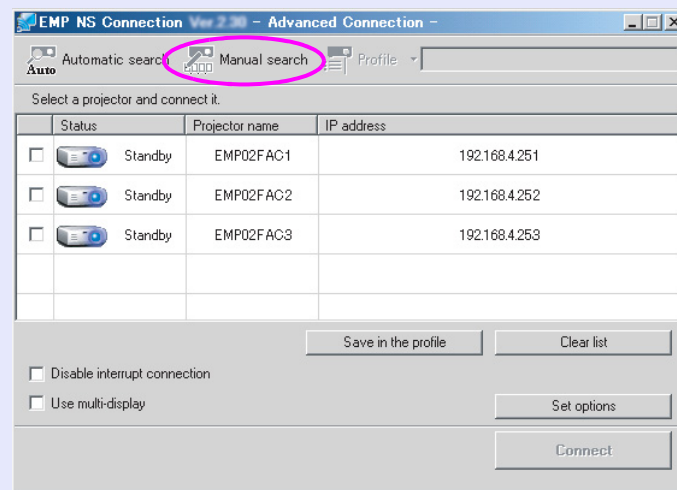
- *"AirPort: On" is not set, or an appropriate access point is not selected. Check whether AirPort is set to "On". Or, check whether an appropriate access has been selected.*

In the following explanations, unless otherwise noted, Windows screen shots are used.

You see a similar screen even when using Macintosh.

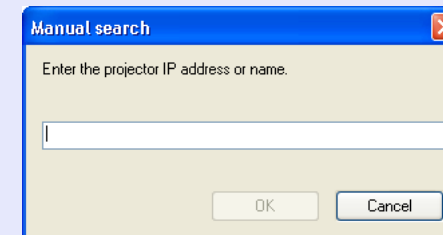
Procedure

- 1 Click "Manual search" on the EMP NS Connection projector selection screen.



2

- 2 Enter the IP address or the projector name for the projector you want to connect to, and click the "OK" button.



The results of the search are shown on the EMP NS Connection projector selection screen.

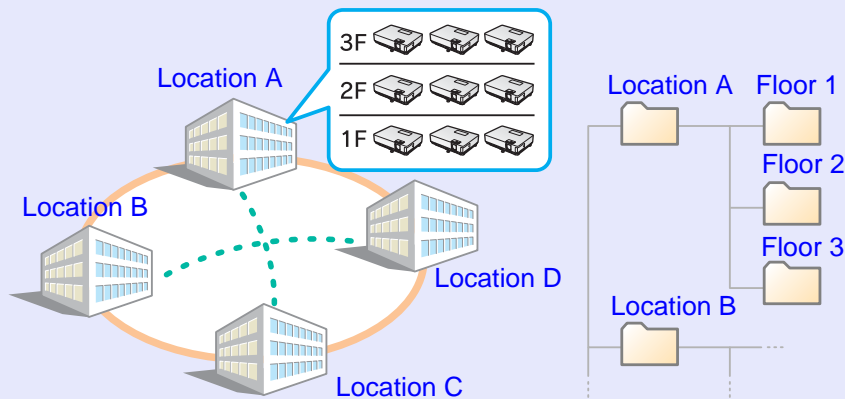
Assuming that the desired projector has been found by the search, select that projector and then click the "Connect" button to establish a connection.

When you will always be using that projector, save the search as a profile, such that you do not have to specify the relevant details every time you perform a search. [p.28](#)



When you use "Manual search" in "Quick Connection Mode", you can specify the SSID. When there are a lot of projectors you can narrow the search field by using SSID.


You can save a search for a frequently used projector as a profile. A "profile" is a file containing all of the information pertaining to a given projector, such as the projector name, its IP address, and SSID. By specifying that profile whenever you subsequently perform a search, the search will be performed using the saved IP address and projector name. For example, by creating a group of profiles for each place where a projector is setup and managing them with folders, the target projector can be found quickly.




This section explains how to create and edit a profile.

Making a Profile

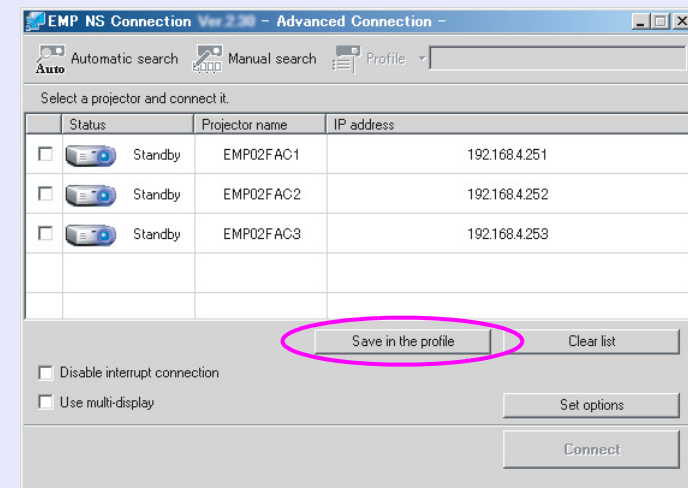
Profiles are made by saving searched results.

For details on how to edit a previously saved profile, see "Managing a Profile".  [p.31](#)

For details on how to locate a projector on a different sub-net, see "Searching by Specifying the IP Address and Projector Name (For "Advanced Connection Mode" only)".  [p.27](#)

Procedure

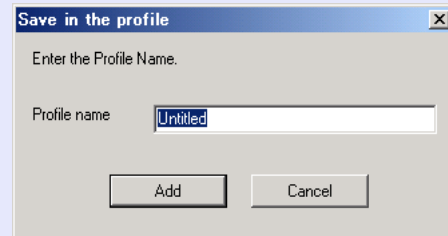
- 1 When the projector is displayed on the EMP NS Connection projector selection screen, click the "Save in the profile" button.



The "Save in the profile" screen is displayed.

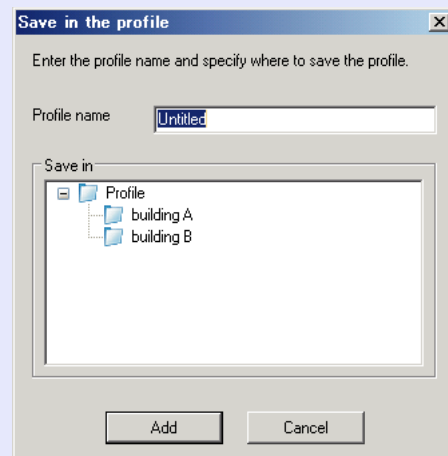
2

Enter a profile name and then click the "Add" button.

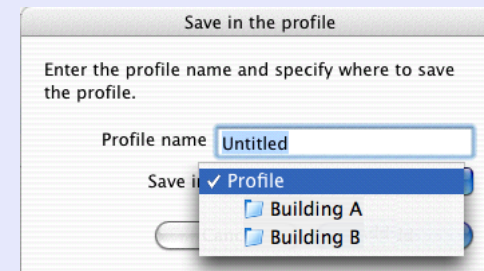


Projector information is registered in the profile
If you have previously saved a profile, you are prompted to confirm whether that profile can be overwritten. To save a profile with a different name, select "Save as". If you have created a folder for a profile, the following screens are displayed. After entering the profile name and selecting the save destination, click the "Add" button.

For Windows



For Macintosh



For details on how to create a folder for a profile, see "Managing a Profile". [p.31](#)

Searching by Specifying a Profile

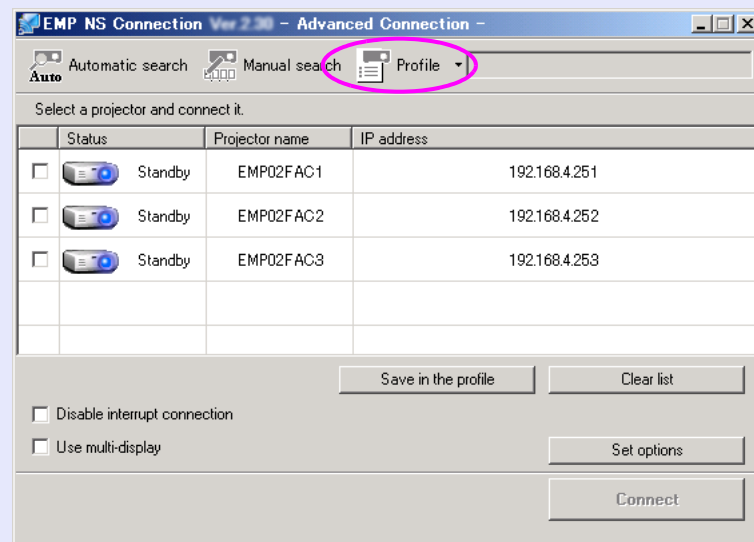
You can search by specifying the profile you created.

Procedure

1

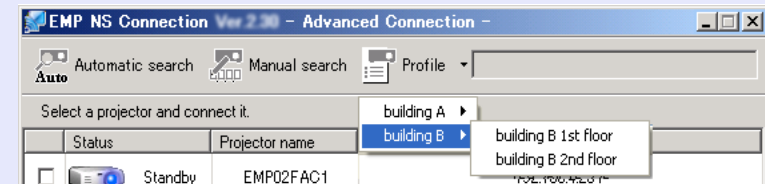
Click "Profile" on the EMP NS Connection projector selection screen.

If no profile is registered, you cannot select "Profile".



2

From the menu that is displayed, select the projector you want to connect to.



The search results are displayed on the EMP NS Connection projector selection screen.

Provided the target projector has been identified, select that projector, and then click "Connect" to establish a connection.

Managing a Profile

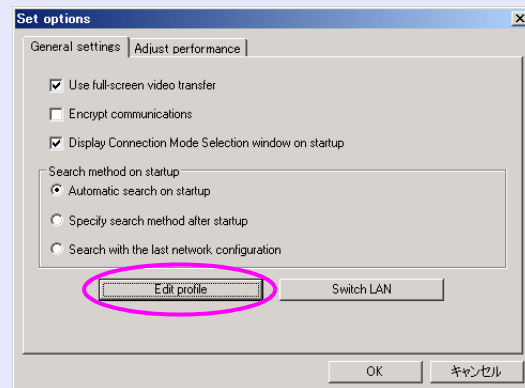
You can change the name and the hierarchical structure of the profile.

Procedure

- 1 Click the "Set options" button on the EMP NS Connection's main screen.

The configuration screen is displayed.

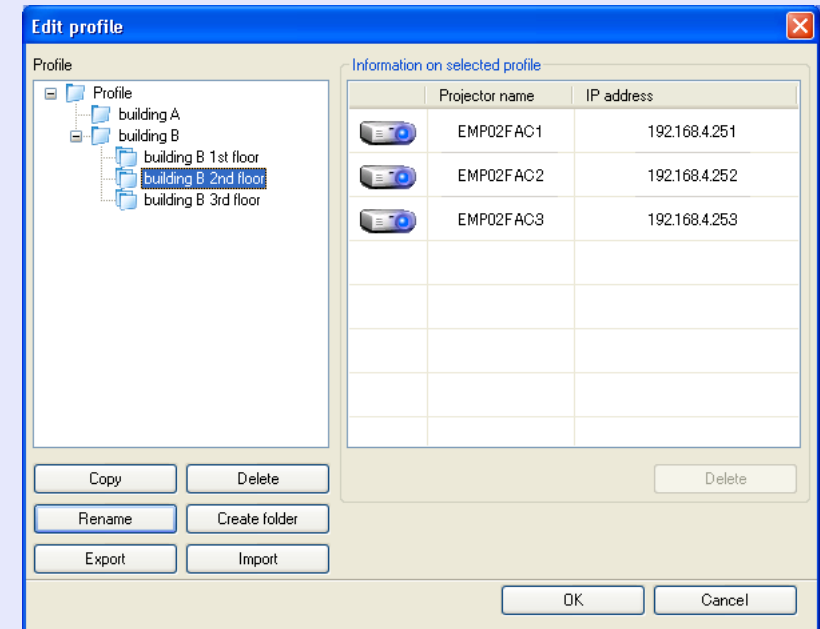
- 2 Click the "Edit profile" button.




The profile management screen is displayed.

3

- 3 Edit the contents registered in the profile.



 : Indicates a folder.

 : Indicates a profile.

Profile	
Item	Function
Profile	You can display the registered profile. You can manage it by creating a folder. You can change the order of the profile or the folder by dragging & dropping.
Copy	You can copy the profile. The copied profile is saved in the same folder as the original with the same name.
Delete	You can delete the profile and the folder.
Rename	You can display the rename dialog box and rename the folder or the profile. You can enter up to 32 characters in the rename dialog box.
Create folder	You can create a new folder.
Export	You can export a profile, as well as import and use a profile.
Import	Used when you want to read and use an exported profile.
Information on selected profile	
Item	Function
IP Address or Projector Name	You can display the projector information registered in the profile.
Delete	You can delete the projector information. When all projector information is deleted, the profile is also deleted.



Click "OK".

Save and close the profile management screen.

Setting the EMP NS Connection Operation

You can set the environment, such as the processing method, when EMP NS Connection is started.

Setting the EMP NS Connection Environment.....	34
• General settings Tab	34
• Adjust Performance Tab	36

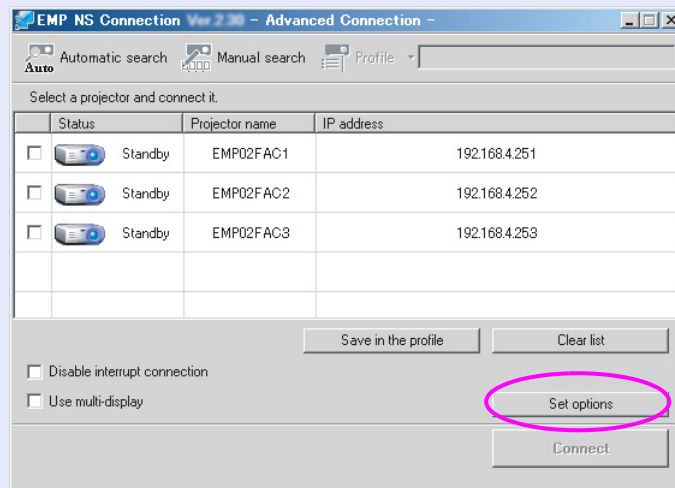
Setting the EMP NS Connection Environment



You can set the environment, such as the processing method, when EMP NS Connection is started.
Call the option settings from the EMP NS Connection's main screen.

Procedure

- 1 Click the "Set options" button on the EMP NS Connection main screen.

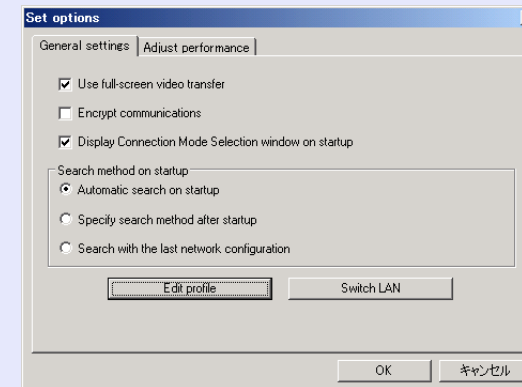



The "Set options" screen is displayed.

- 2 Set each of the items.

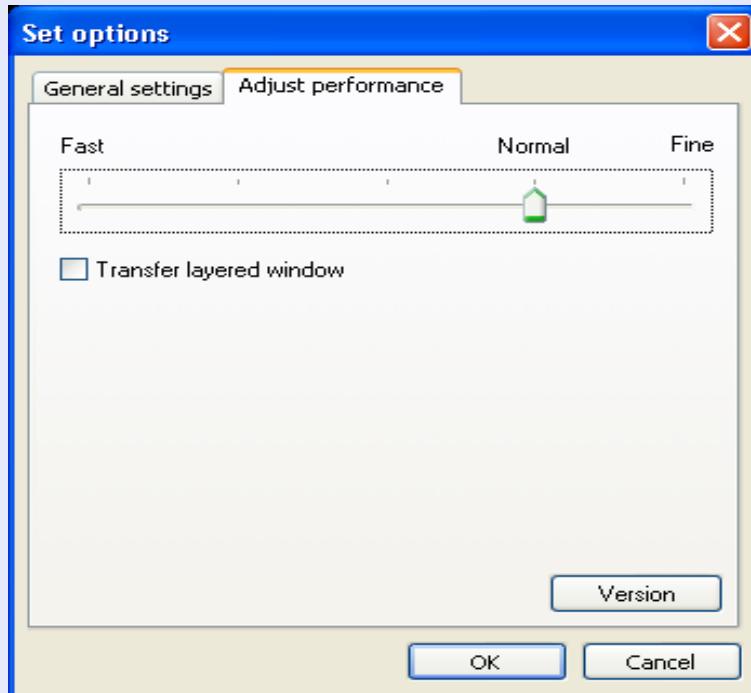
Confirm the details of the set items in the next step. After you have made all the required settings, click the "OK" button to close the "Set options" screen.

General settings Tab




Use full-screen video transfer	Windows only (excluding Windows Vista) When displaying Windows Media Player in full screen, select the "Use full-screen video transfer" checkbox. If, however, you feel that the video is jerky, set "Do not use full-screen video transfer".
Encrypt communications	Encode and transmit data. Even if data is intercepted, it cannot be deciphered. When using "Quick Connection Mode", always set "Encrypt".
Display Connection Mode Selection window on startup	Set whether or not the "Quick Connection Mode"/ "Advanced Connection Mode" screen is displayed when EMP NS Connection is started. When the startup method is already determined, do not select the "Display Connection Mode window on startup" checkbox.
Search method on startup	Select one of the following methods to search the projector that is to be performed when EMP NS Connection is started. "Automatic search on startup" "Specify search method after startup" "Search with the last network configuration"
Edit profile	The "Edit profile" dialog box is displayed.  p.31
Switch LAN	Windows only The "Switch LAN" dialog box is displayed. This is used when it is necessary to switch the network adapter to be used for a search when a computer has multiple adapters. By default, all of the network adapters are used to perform a search. For example, when a wired LAN is always used as the connection method, select "Ethernet".

Adjust Performance Tab



Performance adjustment slider	The performance can be set to "Fast", "Normal", and "Fine". Set to "Fast" when movie projections are interrupted.
Transfer layered window	Windows only Set whether or not to transfer a layered window. The layered window is in use when contents such as messages displayed on the computer are not projected by the projector. Set this to "Send" to display them on the projector.



When you click  on the toolbar, only the Adjust performance tab is displayed.

Using a Computer to Set Up, Monitor and Control Projectors

This chapter describes how to use a computer that is connected to the network to change projector settings and to control the projector.

Changing Settings Using a Web Browser (Web Control)	38
• Displaying Web Control	38
Entering the IP address of the projector	38
• Projector Setup.....	38
Items in the configuration menu that cannot be set by the web browser.....	38
Using the Mail Notification Function to Report Problems	39
• Setting Mail Notification Function	39
• If a Problem Notification is Sent by Mail	39
Management Using SNMP	40

You can set up and control the projector from a computer by using the Web browser of a computer that is connected to the projector via a network. Setup and control operations can be performed remotely if this function is used. In addition, since you can use the computer's keyboard, entering characters required for the setup is easier. Use Microsoft Internet Explorer 6.0 or later as the Web browser. If using a Macintosh, you can also use Safari. If, however, you are using Safari under Macintosh 10.2.8, some of the Web control radio buttons may not display properly.



Setup and control with a Web browser are possible if set to "Network ON" in the "Extended" menu of the projector's configuration menu, even if the projector is in standby mode (when the power is off).

Displaying Web Control

Display Web control with the following procedure.



If your Web browser is set up to connect via a proxy server, Web control cannot be displayed. To use the Web control, you need to make network connection settings with other than a proxy server.

■ Entering the IP address of the projector

Web control can be opened by specifying the IP address of the projector as follows when using "Advanced Connection Mode".

Procedure



Start the Web browser on the computer.



Enter the IP address of the projector in the address bar of the Web browser, and press the [Enter] key on the computer's keyboard.

Web Control is displayed.

Projector Setup

You can set items that are usually set in the projector's configuration menu. The contents set are reflected in the configuration menu.

■ Items in the configuration menu that cannot be set by the web browser

All items in the configuration menu can be set with the exception of the following items.

- "Settings" - "Pointer Shape", "EasyMP Audio Out"
- Registering a user's logo using "Extended" - "User's Logo"
- "Extended" - "Operation" - "High Altitude Mode"
- "Extended" - "Link21L", "Language"
- "Reset" - "Reset All", "Reset Lamp Hours"

The items available on each menu are the same as the configuration menu of the projector.

 [User's Guide "List of Functions"](#)

 [User's Guide "Network Menu \(EMP-1825 Only\)"](#)


The "MAC Address" is not displayed.

By setting the mail notification function from network settings in the configuration menu, notification messages will be sent to preset e-mail addresses when a problem or warning occurs with a projector. This will enable the operator to be notified of problems with projectors even at locations away from the projectors.




- *Up to a maximum of three notification destinations (addresses) can be recorded, and notification messages can be sent to all three destinations at once.*
- *If a projector develops a critical problem and suddenly stops working, it may not be able to send a message notifying an operator of the problem.*
- *Setup and control with a Web browser are possible if set to "Network ON" in the "Extended" menu of the projector's configuration menu, even if the projector is in standby mode (when the power is off).*

Setting Mail Notification Function

Select "Mail" from network settings in the projector's configuration menu and set the mail notification function.  [User's Guide "Network Menu \(EMP-1825 Only\)" "Mail Menu"](#)

Also, confirm the following points.

- Network settings have been made to allow the projector and computer to connect via a wireless LAN in the "Advanced Connection Mode" or the wired LAN unit.

 [User's Guide "Network Menu \(EMP-1825 Only\)" "Mail Menu"](#)

If a Problem Notification is Sent by Mail


When the mail notification function is set to "On" and the projector enters an abnormal/warning state, the following mail is sent.

Subject: EPSON Projector

First line: The projector name of the projector where the abnormality occurs

Second line: The IP address set for the projector where the abnormality occurs

Third line and on: Details of the abnormality

The details of the abnormality are described one by one, one line at a time. The following table explains the details shown in the message. For details on dealing with abnormalities/warnings, see  [User's Guide "Reading the Indicators"](#).

Item	Details shown
Internal error	An internal error has occurred.
Fan related error	A fan error has occurred.
Sensor error	A sensor error has occurred.
Lamp timer failure	Lamp failure has occurred.
Lamp out	A lamp error has occurred.
Lamp cover is open.	The lamp cover is open.
Internal temperature error	A high temperature error has occurred. (Overheating)
High-speed cooling in progress	A high temperature warning has occurred.
Lamp replacement notification	It is time to replace the lamp.
No-signal	No Signal No image signal is being input to the projector. Check the connection status for the projector and that the power supply for the connected equipment is turned on.

The (+) or (-) at the beginning of the sentence

(+): An error has occurred in the projector

(-): An error in the projector has been dealt with

By setting SNMP in the EasyMP network setting, notification messages will be sent to preset e-mail addresses when a problem or warning occurs with a projector. This is useful when controlling projectors centrally at a point distant from them.



- *SNMP should be managed by a network administrator or someone who is familiar with the network.*
- *The SNMP function to monitor the projector requires SNMP Manager to be installed on the computer.*
- *The managing function using SNMP cannot be used via a wireless LAN in the "Quick Connection Mode".*
- *Up to two destination IP addresses can be saved.*

To set SNMP, select "SNMP" from network settings on the projector's configuration menu.  [User's Guide "Network Menu \(EMP-1825 Only\)" "Others Menu"](#)



Presentations Using PC Free

This chapter explains scenarios made with EMP SlideMaker2 and how to project image and movie files using PC Free.

Files that can be Projected Using PC Free, and Saving.....42

- **Files that can be Projected Using PC Free42**
- **Copying a file to, or deleting a file from,
a CompactFlash card from the network43**
- **PC Free Examples45**
 - Projecting images stored in USB storage45
 - Slideshow using a PowerPoint file stored on the computer45

PC Free Basic Operations.....46

- **Starting and Closing PC Free46**
 - Starting PC Free46
 - Closing PC Free.....48
- **PC Free Basic Operations49**
- **Rotating the Image.....50**

Projecting Scenarios51

- **Creating and editing a scenario 51**
 - Basic scenario editing 51
- **Playing a Scenario 52**
- **Operating During a Presentation..... 53**

Projecting image and movie files54

- **Projecting Images/Movies..... 54**
- **Projecting all Image and Movie Files in a Folder in
Sequence (Slideshow) 55**

Setting Image and Movie File Display Conditions and Operation Mode.....56

Files that can be Projected Using PC Free, and Saving



42

You can use PC Free to project files stored in digital cameras, USB storage devices and CompactFlash cards. By leaving a CompactFlash card inserted into the slot in the projector, you can use the network to copy and delete files on that card. [☛ p.43](#)



USB storage devices that incorporate security functions sometimes cannot be used.

The following files can be projected using PC Free.

Files that can be Projected Using PC Free

Type	File type (extension)	Notes
Scenario	.sit	These are scenario files created using SlideMaker2. You can convert PowerPoint files as they are or create scenarios by combining images and movie files. For instructions on creating a scenario, see ☛ p.51 . You can also play audio (.wav) files set as BGM at the time of scenario creation. You can also project scenarios created using the EMP SlideMaker that is supplied with the EMP-1815/1715/1705/7950/7850/765/755/745/737, ELP-735/715/505.
Image	.bmp	Cannot project images with a resolution greater than 1024 x 768.
	.gif	Cannot project images with a resolution greater than 1024 x 768.
	.jpg	Cannot project images in CMYK color format, progressive mode, and with a resolution greater than 4608 x 7072.
	.png	Cannot project images with a resolution greater than 1024 x 768.

Type	File type (extension)	Notes
Movie	.mpg	MPEG2 The reproducible audio format is MPEG1 Layer 1/2. Linear PCM and AC-3 audio cannot be played back. MPEG contents with no sound can be played back.
	.mp4	MPEG4, H.264/MPEG-4 AVC The reproducible audio format is MPEG4AAC-LC.
	.wmv	WMV8/9 The reproducible audio format is WMA.
<u>DPOF</u> ▶▶	.mrk	For DPOF version 1.10, only files named AUTPLAYx.mrk (where x is a number between 0 to 9) can be projected.




- *Files to which DRM (Digital Rights Management) is applied cannot be projected.*
- *JPEG files with the extension ".jpeg" and MPEG files with the extension ".mpeg" cannot be projected.*
- *When projecting JPEG files, the image will not be projected clearly if compression is set too high.*
- *If you use a USB storage device with a slow access speed when playing back movies and scenarios with BGM (when transmitting at higher bit rates), the movie files may not play back correctly or the sound may skip or not be output. When using a USB hard disk, we recommend using an AC adaptor power supply.*
- *When projecting images or movies in media, use a USB MultiCard Reader connected to the projector. The projector does not support media formatted on some file systems. If you have trouble with projecting, use media formatted under Windows.*
- *Format the media using the FAT16/32 file system.*

Copying a file to, or deleting a file from, a CompactFlash card from the network

Even when the projector is hung from the ceiling or in a remote location, files on the CompactFlash card inserted in the projector can be copied or deleted. This operation is possible with a single computer and a single projector. It is not possible to copy or delete files in USB storage.

The following explains how to copy files to a CompactFlash card.

Procedure

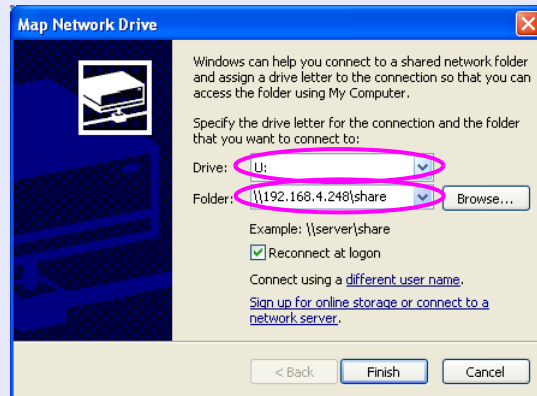
Perform file operations to a CompactFlash card when the EasyMP standby screen ( p.48) is displayed.

For Windows



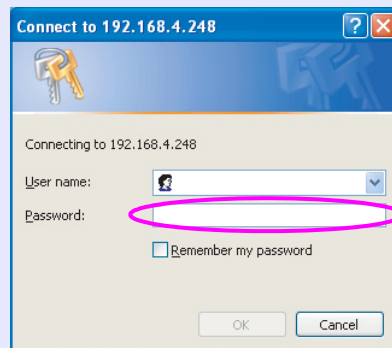
On your PC, go to "My Computer" and then open "Map Network Drive".

- 2 For "Drive", input a drive name that is not being used. For "Folder", input \\Projector IP address\share. Then, click "Finish".



The CompactFlash folder is displayed.

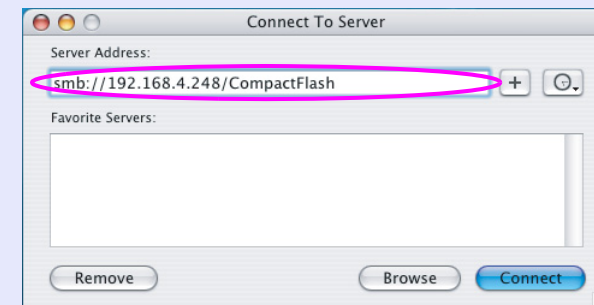
- 3 Double-click the CompactFlash folder and then, for the password, enter the "network drive password" set for the projector. Then, click "OK".



- 4 Copy the target folder(s) or file(s) to the CompactFlash card.

For Macintosh

- 1 Click the "Finder" icon.
- 2 From the "Transfer" menu, select "Connect to Server".
- 3 In the address field of the "Connect to Server" dialog, enter "smb://Projector IP address/CompactFlash".



- 4 Click "Connect".



- You can write to a CompactFlash card by connecting to the projector from Internet Explorer as well. Use alphanumeric characters for folder names to write the data to.
- When a "Web Control Password" is set, a dialog box is displayed. Enter your user name and "Web Control Password" and then connect to the projector.

PC Free Examples

■ Projecting images stored in USB storage

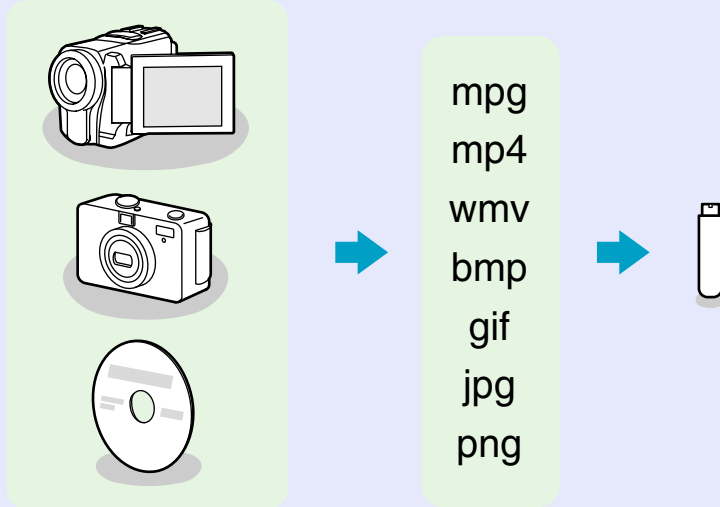



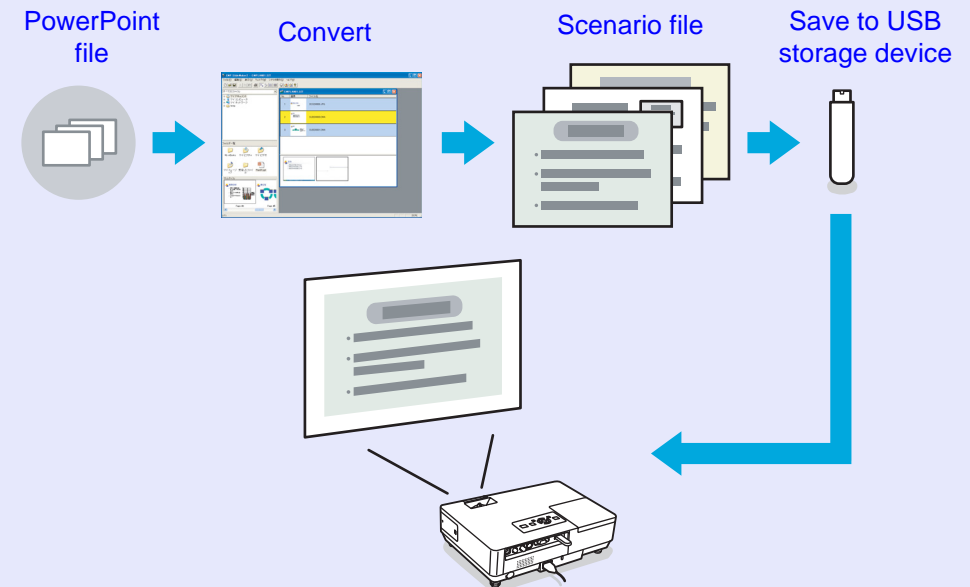
Image and movie files can be played back using either of the following two methods. One movie can be sent to the projector while another application is displayed on the computer's screen.

■ **Example 1: Prepare multiple images and project them continuously (Slideshow)**  [p.55](#)

■ **Example 2: Select image files and movie files one at a time and project it**  [p.56](#)


■ Slideshow using a PowerPoint file stored on the computer

Using EMP SlideMaker2, convert the PowerPoint file into scenario format. If that is then stored into USB memory or a CompactFlash card, then you can project a PowerPoint Slideshow without the need for a computer.



The playback method for the file to be projected can be set as follows at conversion.

■ **Example 1: Convert a PowerPoint file into a scenario and project it**
 "Turning a PowerPoint File into a Scenario" [p.60](#)
 "Projecting Scenarios" [p.51](#)

■ **Example 2: Set presentation to automatic playback (autorun)**
 "Sending Scenarios" [p.71](#)

■ **Example 3: Project presentation with BGM**  [p.63](#)

PC Free lets you play back and project scenarios, image files, and movie files in USB storage devices and CompactFlash cards, and image files in digital cameras.

This section explains the basic operation of PC Free.




Starting and Closing PC Free

■ Starting PC Free

Procedure

1

Connect one of the following devices to the projector.

- Digital Cameras or USB Storage  [User's Guide "Connecting USB Devices \(Digital Camera, Hard Disk Drive or Memory Devices\) \(EMP-1825 Only\)"](#)
- USB MultiCard Reader (when a memory card is inserted)
 [User's Guide "Connecting USB Devices \(Digital Camera, Hard Disk Drive or Memory Devices\) \(EMP-1825 Only\)"](#)
- CompactFlash  [User's Guide "Inserting and Ejecting CompactFlash Cards \(EMP-1825 Only\)"](#)

2

Press the [EasyMP] button on the remote control. Then, the EasyMP standby screen is displayed.

When multiple USB storage devices are connected, multiple icons of USB storage devices or CompactFlash cards are displayed on the standby screen.



3










Tilt the [] button on the remote control to move the cursor to the icon for the projection target, and then press the [Enter] button.

PC Free will start and display the contents of the USB storage device or CompactFlash card.



JPEG files and MPEG files are displayed as thumbnails (file contents are displayed as small images). Other files or folders are displayed as icons.

Files that cannot be displayed as thumbnails are displayed as the following icons.

Icon	File Type	Icon	File Type
	Scenario file		JPEG file
	Digital camera format		PNG file
	MPEG file		Electronic certificate file
	WMV files		
	BMP file		
	GIF file		



- If the USB storage device contains a scenario that is set for autorun, this scenario will be played back as the highest priority. If you want to stop it from playing back, press the [Esc] button on the remote control.
- If the digital camera and USB storage device is connected to the projector, the following screen is displayed.



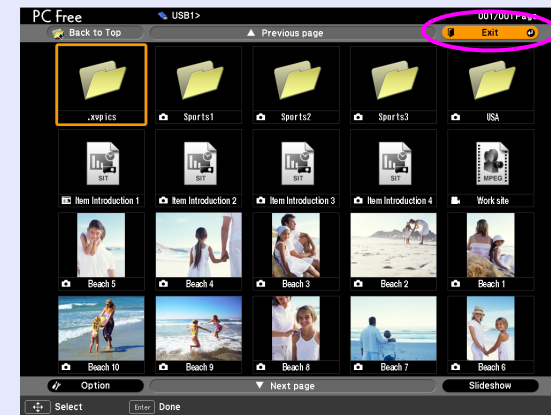
- Some JPEG files may be displayed as icons instead of thumbnails. In this event, a file icon is displayed.

Closing PC Free

Procedure



Tilt the [⦿] button on the remote control up to position the cursor on the "Exit" button.



Press the [Enter] button on the remote control. PC Free shuts down and the next standby screen is displayed.



3

After turning off the power supply to the digital camera or the USB storage device, disconnect it from the projector's USB Type A port.

When a CompactFlash card is in use, check the status of the access indicator at the card slot before removing the card.



If you leave the USB storage device connected when you close PC Free and the EasyMP standby screen is displayed, disconnect the USB storage device and reconnect it before starting PC Free again.

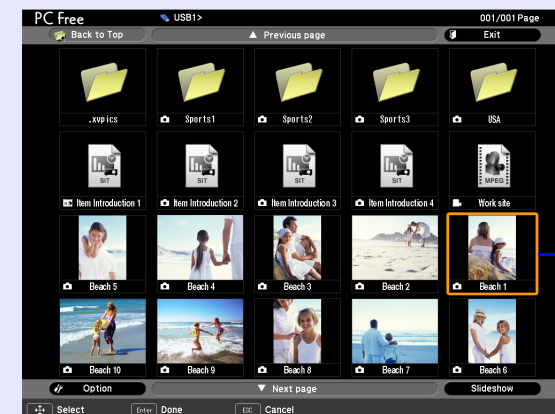
PC Free Basic Operations

The following describes the procedures for playing scenarios, images, and movies using PC Free.

Procedure

1

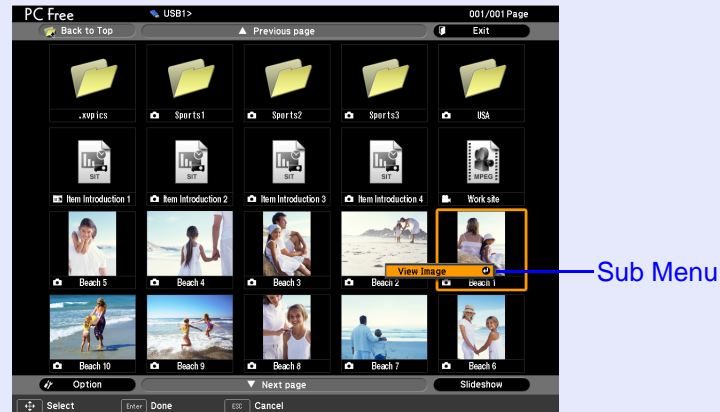
Tilt the [⊙] button on the remote control to position the cursor on the file or folder you want to access.



If all files and folders cannot be displayed at the same time in the current window, press the [↵] button on the remote control or move the cursor to the "Next page" button and press the [Enter] button on the remote control. To return to the previous screen, press the [↵] button on the remote control, or position the cursor on the "Previous page" button and press the [Enter] button on the remote control.



2 Press the [Enter] button on the remote control.

The sub menu is displayed.



3 Select the target item from the display menu and press the [Enter] button on the remote control.

When a folder is selected


Open Folder	Opens a folder and displays the files within the folder. Select "Return" on the screen that opened and press the [Enter] button to return to the previous screen.
Play Slideshow	Plays the image or movie files in the folder in order.  p.55
Options	Displays the options setting screen. Sets the Slideshow operation for image files and movie files in sequence.  p.56


Rotating the Image

You can rotate JPEG images in 90° increments when playing them with PC Free. The rotating function is also available during the Slideshow. Rotate JPEG images in the following way.

Procedure

1 Play images or scenarios in JPEG format, or perform a Slideshow.

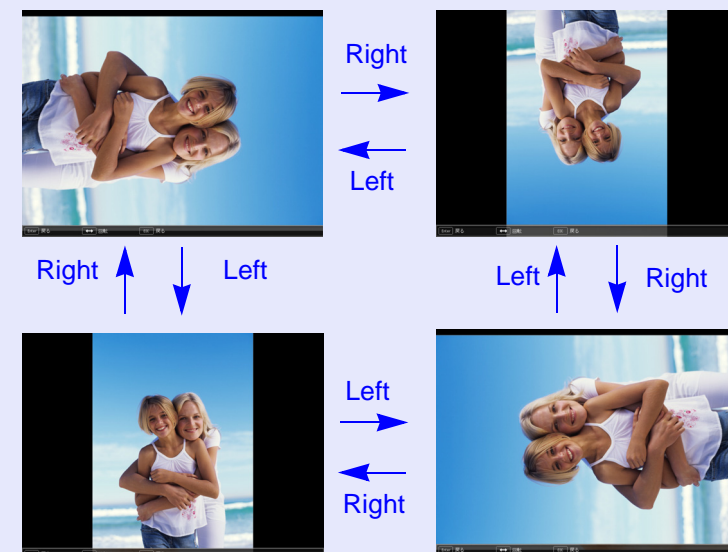
To play JPEG images  p.54

To play scenarios  p.51

To play Slideshows  p.55

2 While projecting a JPEG image, tilt the [⦿] button on the remote control to the left or right.

The image rotates when the [⦿] button is tilted in a certain direction as shown below.



This section describes the method for playing scenarios stored in a USB storage device or CompactFlash card, and the operations during scenario playback.

Creating and editing a scenario

Create the scenario beforehand by using EMP SlideMaker2, and then transfer it to the CompactFlash card in the projector or a USB storage device by using the "Send Scenario" function. [p.71](#)



While transferring the scenario you can set autorun and continuous play. [p.71](#)

Basic scenario editing

For a scenario stored on a USB storage device or CompactFlash card, it is possible to change the order in which images are projected, or set display/non-display of the individual images.

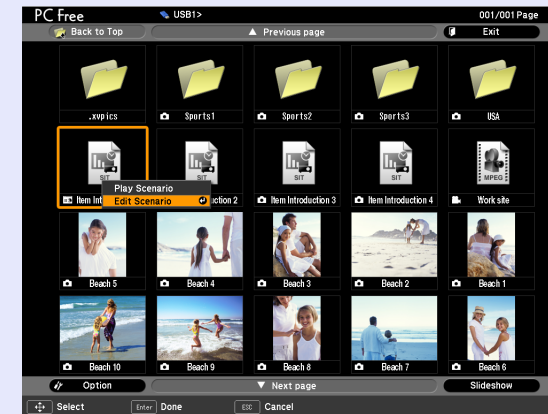
Procedure

1

Tilt the [⊙] button on the remote control to move the cursor to the icon corresponding to the scenario to be edited, and then press the [Esc] button.

2

Select "Edit Scenario" and press the [Enter] button.



3

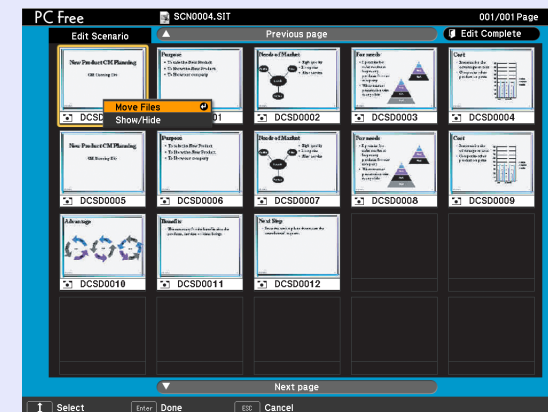
Position the cursor to the desired slide, and then press the [Esc] button.

Position the cursor to the desired slide.

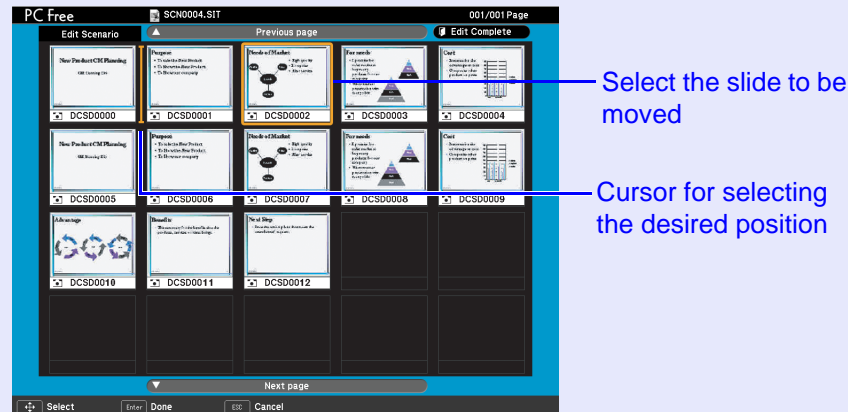
To change the order of the slides - Go to step 4.

To set non-display for a slide - Press the [Enter] button.

After selecting whether to change the order in which the slides are projected, or to set display/non-display, press the [Enter] button.



- ④ Move the cursor to the desired position, and then press the [Enter] button.



- ⑤ Once you have completed editing, tilt the [⏏] button on the remote control up to position the cursor to the "Edit Complete" button, and then press [Enter] on the remote control.

The edited content can only be accessed while the CompactFlash card or USB storage device is inserted into the projector.

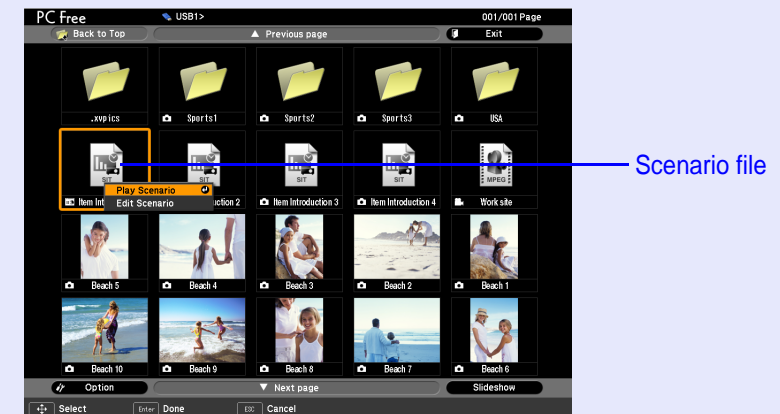
Playing a Scenario

Procedure

- ① Start PC Free. p.46
The contents of the USB storage device are displayed.

- ② Tilt the [⏏] button on the remote control up to position the cursor on the target scenario folder.

- ③ Press the [Enter] button on the remote control.



- ④ If "Advance" is set to "Automatically after", once play has reached the end, it returns to the file list screen. If "Repeat" is selected, the scenario is repeated from the beginning.

See "Operating During a Presentation" for how to operate the scenario when "Advance" is set to "On mouse click", and how to stop and cancel.



- You can rotate JPEG format images in the scenario while they are being projected. p.50
- The movie files that are included in scenarios can be fast-forwarded, rewind and paused during playback. p.55
- The slide changing time for scenarios can be set using the "Advance" command in EMP SlideMaker2. p.75


Operating During a Presentation

The following operations using the remote control are possible while playing a scenario.

Screen Switching	Proceed to the next screen by pressing [Enter] or [↓]. Return to the previous screen by pressing [↑].
Stopping Playing	The message "Do you want to quit playing the scenario?" is displayed when you press the "Esc" button. Close by selecting the "Exit" button and pressing the [Enter] button. Continue playback by selecting the "Return" button and pressing the [Enter] button.

The following functions of the projector can be used when projecting a scenario or image file with PC Free.

- Freeze
- A/V Mute
- E-Zoom

For details concerning each function  [User's Guide "Freezing the Image \(Freeze\)", "Hiding the Image and Sound Temporarily \(A/V Mute\)", "Enlarging Part of the Image \(E-Zoom\)"](#)

Projecting image and movie files



54

Image files from a digital camera and image files and movie files stored on a USB storage device or CompactFlash card can be projected using PC Free by either of the following two methods.

- Projecting image and movie files
This is a function to project single files.
- Sequential projection of image and movie files in a folder (Slideshow).
This is a function for projecting the file contents of a folder in order, one file at a time.

Attention

The USB storage device is accessed frequently when playing back movie files. Do not disconnect the USB storage device at this time. PC Free may not operate correctly.

Projecting Images/Movies

Procedure

1 Start PC Free. p.46

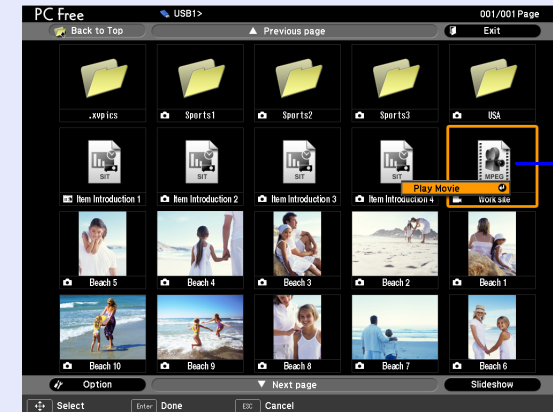
The content of the connected digital camera, USB storage device or CompactFlash card is displayed.

2 Tilt the button on the remote control to position the cursor on the image file or movie file to be projected.

3

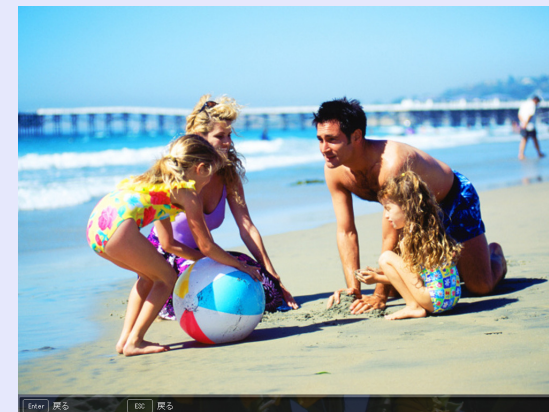
Press the [Enter] button on the remote control.

The image or movie starts to play back.




4

If the [Enter] button or the [Esc] button on the remote control are pressed while projecting an image or movie, it returns to the file list screen.






- *JPEG format images can be rotated during projection.*  [p.50](#)
- *You can make the following operations using the remote control while playing movie files.*
 - Fast-forward: Tilt the [⏮] button to the right*
 - Rewind: Tilt the [⏮] button to the left*
 - Freeze (Pause): Tilt the [⏮] button down*
 - Three fast-forward/rewind speeds are available, and the speed changes each time the button is pressed.*
 - To return to normal playback, press the [Enter] button.*
 - Audio is not output while fast-forwarding, rewinding, or pausing is in progress.*

Projecting all Image and Movie Files in a Folder in Sequence (Slideshow)

You can project the image and movie files in a folder in sequence, one at a time. This function is called "Slideshow". Perform the Slideshow by the following procedure.



You can set display conditions, such as projecting repeatedly and adding effects to the display when files are being switched. To change the movie files and image files automatically when you run Slideshow, set the screen switching time in the PC Free option menu to anything other than "No". Default setting: "No"  [p.56](#)

Procedure



1 Start PC Free. [p.46](#)


The content of the connected digital camera, USB storage device or CompactFlash card is displayed.




2 Tilt the [⏮] button on the remote control to position the cursor on the folder to perform the Slideshow.



3 The Slideshow will be performed and the image and movie files in the folder will be projected in sequence one at a time.

When the last file is projected, the file list will be displayed again automatically. If you set "Continuous Play" to "ON" in the Options window, projection will start from the beginning again when the end is reached.  [p.56](#)

Just as with a scenario, you can proceed to the next screen, return to the previous screen, or stop playback during projection of a Slideshow.  "Operating During a Presentation" [p.53](#)



If the screen switching time setting has been set to "No", the files will not change automatically when you run a Slideshow. Press the [Enter] or [↵] button on the remote control to continue to the next file.

You can set the display conditions and operation mode for playing back image or movie files as a Slideshow in PC Free.

Procedure

1 Tilt the [] button on the remote control to position the cursor on the folder where display conditions are to be set.

2 Set each of the items.

Enable settings by positioning the cursor on the target item and pressing the [Enter] button on the remote control. Details of the items are given below.



Display order	You can set the order of the files to be displayed. You can select sorting of the files into either file name order or revision date order.
Continuous Play	You can determine whether to repeat the Slideshow.
Screen switching time	You can set the time for a single file to be displayed when running a Slideshow. You can set a time between 0 and 60 s. When you set 0 s, auto play is disabled.
Effect	This sets the transition effects between files.

3 Tilt the [] button on the remote control up to position the cursor on the "OK" button, and then press the [Enter] button.

The settings are applied.

If you do not want to apply the settings, position the cursor on the "Cancel" button and press the [Enter] button.

Preparing a Scenario (Using EMP SlideMaker2)

This chapter describes how to create and send scenario.

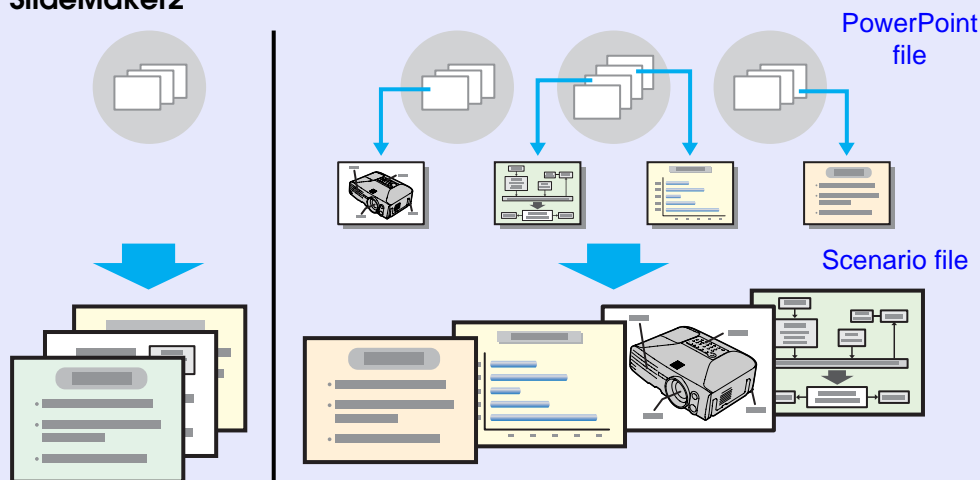
Scenario Summary	58	Sending Scenarios	71
Files that Can be Included in Scenarios	59	Cases Like These	73
Turning a PowerPoint File into a Scenario.....	60	• Checking the Projection Scenario Status	
Converting all files in a single operation		from a Computer	73
without starting up SlideMaker2	61	• Setting Animations	74
Starting up SlideMaker2 and		• Setting the Slide Animation	74
converting files	63		
Scenario creation procedure	63		
• Setting Scenario Properties	63		
• Including PowerPoint Files in Scenarios	65		
Including all slides in a PowerPoint file.....	66		
Including only selected slides while checking thumbnails	68		
• Including Image and Movie Files in Scenarios.....	68		
• Editing a Scenario	69		
Adding files and slides	69		
Deleting a slide.....	70		
Changing the order of slides.....	70		

A scenario is a combination of PowerPoint, image, and movie files, arranged in a projection order and saved as a single file, created with EMP SlideMaker2.

Making a scenario allows you to easily and efficiently prepare presentation material by extracting the necessary parts of files, and arranging them in order without editing the original files.

Converting all files in a single operation without starting up SlideMaker2

Starting up SlideMaker2 and converting files



Transfer the created scenarios to store them on a USB storage device or CompactFlash card connected to the computer. Then, connect the USB storage device or CompactFlash card to the projector so that you can use the projector's PC Free function to project the scenario.

For Connection of USB storage devices (☛ [User's Guide "Connecting USB Devices \(Digital Camera, Hard Disk Drive or Memory Devices\) \(EMP-1825 Only\)"](#))



EMP SlideMaker2 should be installed into the computer.
For details on installing EMP SlideMaker2 (☛ [Wireless LAN Quick Connection Guide "Installing EasyMP Software"](#))

Creating PowerPoint files, image files, and movie files.

From a computer



EMP SlideMaker2

There are two ways of using EMP SlideMaker2 to convert a PowerPoint presentation into a scenario.

- On the desktop, drag the EMP SlideMaker2 icon and drop it on the PowerPoint file. Conversion starts (☛ [p.65](#))
- Starting up SlideMaker2 and converting files. (☛ [p.63](#))

From a computer



Sending Scenarios (☛ [p.71](#))

From the projector



PC Free

Projecting Scenarios (☛ [p.51](#))


Any of the following file types can be combined into a single file to create a scenario.


Type	File Type (Extension)	Notes
PowerPoint	.ppt	Microsoft PowerPoint 2000/2002/2003
	.pptx	Microsoft PowerPoint 2007
Image	.bmp	Cannot reproduce images with a resolution greater than 1024 x 768.
	.jpg	Any version. However, CMYK color formats and progressive formats cannot be played back.
Movie	.mpg	MPEG2-PS Movies that exceed a maximum size of 720 x 576 or are not in the same format as a DVD (sequence header arranged for each GOP) cannot be played back. The reproducible audio format is MPEG1 Layer 2. Linear PCM and AC-3 audio cannot be played back.
Audio	.wav	PCM, 22.05/44.1/48.0 kHz, 8/16 bit



• *The following slide transition effects and animation settings in the PowerPoint "Slideshow" menu are reflected in a scenario.*

- | | | |
|---------------|--------------|-----------|
| •Fly | •Blinds | •Box |
| •Checkerboard | •Crawl | •Dissolve |
| •Peek | •Random Bars | •Spiral |
| •Split | •Stretch | •Strips |
| •Swivel | •Wipe | •Zoom |

Effects for screen transitions other than those mentioned above are converted to "Cut", and animation is converted to "Animation Rules (Default: Cut)".  [p.74](#)

• *In the event that the image and movie files in the table on the left are to be played back as file units, they need not be made into scenarios. After saving the file to a USB storage device, direct playback and projection with PC Free are possible by connecting the USB storage device to the projector.*  [p.54](#)

The following table indicates whether scenarios created by the included software of other projectors can be opened by EMP SlideMaker2 of this projector.

Projector	Software	Can be Opened with this Projector's EMP SlideMaker2
EMP-1815/1825 EMP-1715/1705 EMP-7950/7850 EMP-835 EMP-765/755/745/737 ELP-735	EMP SlideMaker2	Can
ELP-8150/8150NL	EMP Scenario	Cannot
ELP-715/505	EMP SlideMaker	Cannot

PowerPoint files can be converted to scenarios by the following four methods. When you want to use a PowerPoint file as is, use either method 1 or 2.

1 Batch conversion without starting EMP Slidemaker2

All of the slides in a PowerPoint presentation can be batch-converted into a scenario. (☛ "Converting all files in a single operation without starting up SlideMaker2" [p.61](#))

2 Include a PowerPoint file from the file list

After the PowerPoint files have been batch converted to create scenarios, an image or movie file can then be converted to create another scenario.

(☛ "Starting up SlideMaker2 and converting files" [p.63](#))

3 Include only the slides you want from the thumbnails

Select only the PowerPoint slides you need and then convert them to a scenario. (☛ [p.63](#))



• *When creating scenarios with methods 1 to 2, the following animations set in PowerPoint are also reflected in the scenario.*

- | | | |
|---------------|--------------|-----------|
| •Fly | •Blinds | •Box |
| •Checkerboard | •Crawl | •Dissolve |
| •Peek | •Random Bars | •Spiral |
| •Split | •Stretch | •Strips |
| •Swivel | •Wipe | •Zoom |

• *Animations other than those mentioned above are replaced by the animations in "Animation Rules (Default: Cut)".* (☛ [p.74](#))

• *The picture quality for scenarios created with method 1 is "Normal" from a possible, "Highest Quality", "High Quality", and "Normal". When you want to create a scenario with a high image quality, use methods 2 to 3.*

The following table shows the differences among methods 1 to 3.

	Image Quality	Animation Reflection	Send Scenario
1	"Normal" fixed	Reflected	Continuous operation ^{*1}
2	Select from "Highest Quality", "High Quality" and "Normal"	Reflected	Continuous operation ^{*1}
3	Select from "Highest Quality", "High Quality" and "Normal"	Not reflected	Operating later ^{*2}

^{*1} When scenario creation is complete, the "Send Scenario" screen is automatically displayed.

^{*2} After creating the scenario, perform "Send Scenario" (☛ [p.71](#)).

Converting all files in a single operation without starting up SlideMaker2



61

The following explains how a scenario can be created easily, without starting EMP SlideMaker2.



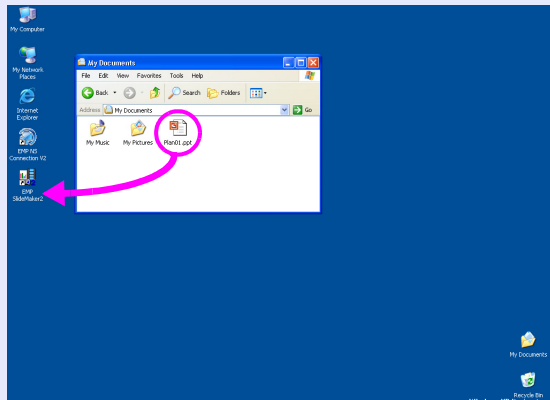
- *Note that the following is not possible if EMP SlideMaker2 has been started. Close EMP SlideMaker2 first.*
- *After the scenarios have been incorporated, they will include the animation set with PowerPoint. When projecting with PCFree, this animation will be enabled. 🐼 p.60*

Procedure

1 Connect the USB storage device or CompactFlash card that contains the scenario to the computer.

2 Drag & drop the PowerPoint file icon to the program icon of EMP SlideMaker2 on the desktop.

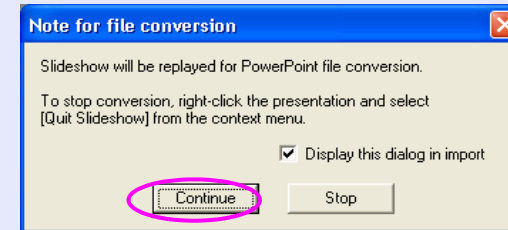
Note that, in this case, it is not possible to select multiple PowerPoint files and convert them as a batch. Select only one file for conversion.



EMP SlideMaker2 starts.

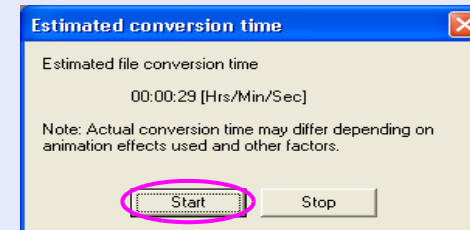
3

Check the message and click the "Continue" button.



4

Check the message and click the "Start" button.



It starts converting the file to a scenario. The Slideshow is displayed during conversion.

If you stop the Slideshow midway, the scenario closes without being created.

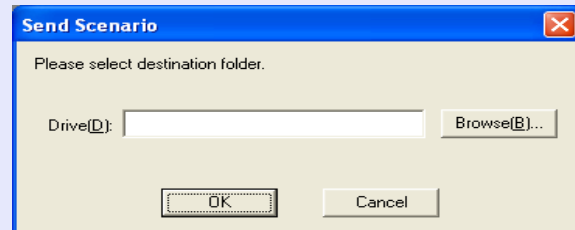
5


Once the Slideshow reaches the end, click the screen.

The scenario transfer destination dialog box is displayed.

6

Select the drive and the folder where the USB storage or CompactFlash card is connected and click the "OK" button.




Go to procedure 3 of  p.71.




Scenarios made by dragging & dropping are automatically named "Scnxxxx" (where xxxx is a number).

Verify the following points before creating a scenario.

- The data to be combined to create a scenario, such as PowerPoint, image and movie files, must be created in advance.
- Only file types listed under "Files that Can be Included in Scenarios" can be used.  [p.59](#)

■ Scenario creation procedure

Scenarios are created with the following procedure.

Start EMP SlideMaker2 and set the scenario properties (such as scenario name, background color, and image quality).  [p.63](#)



Include the files to be used in the scenario.

-  "Including PowerPoint Files in Scenarios" [p.65](#)
-  "Including Image and Movie Files in Scenarios" [p.68](#)



Sort the included files into the desired order to complete the scenario.  [p.69](#)



Once the scenario has been created, carry out the steps in "Send Scenario".  [p.71](#)

Setting Scenario Properties

Procedure

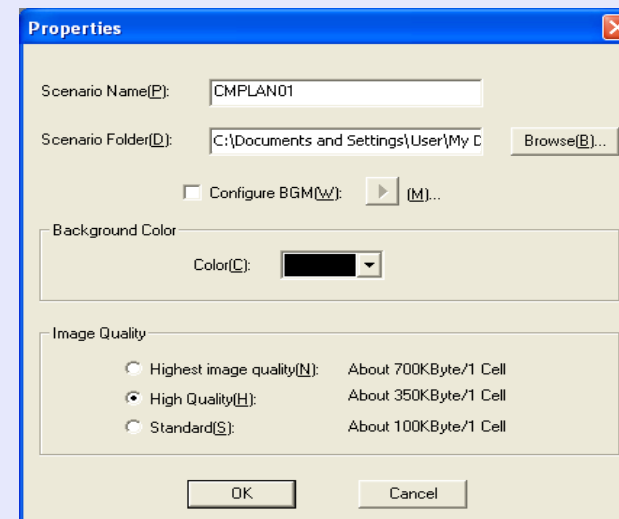


Start Windows on the computer, then select "Start" - "Programs" (or "All Programs") - "EPSON Projector" - "EMP SlideMaker2".

EMP SlideMaker2 starts, and the scenario properties are displayed.



Enter each of the items with reference to the following table, then click the "OK" button.

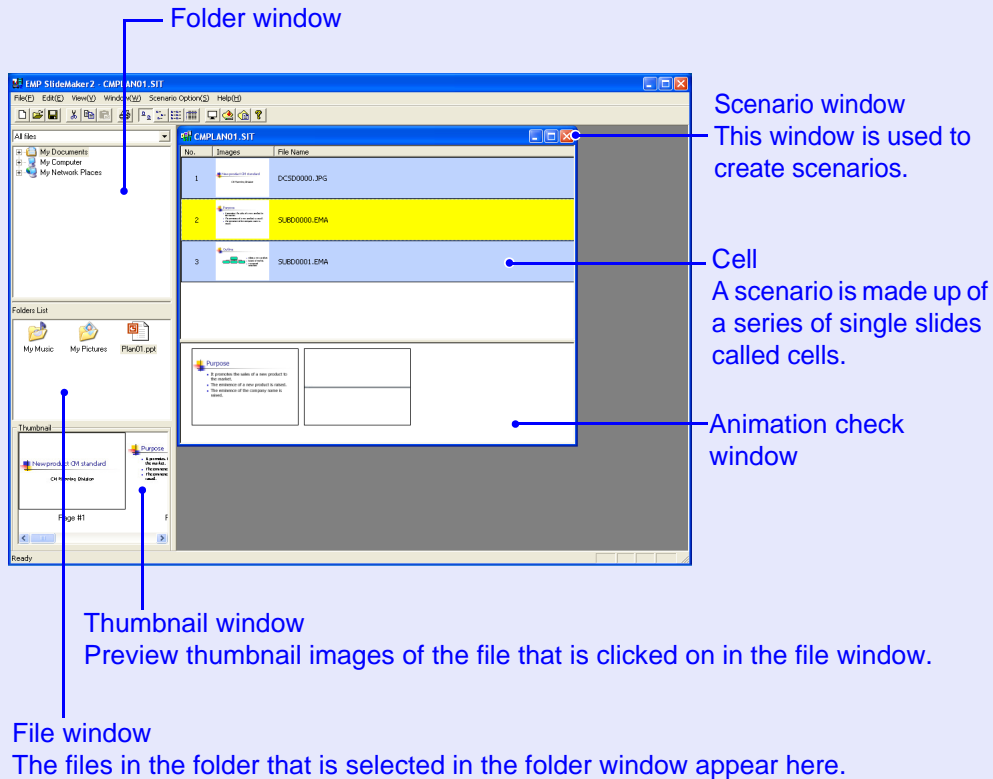


Scenario Name	Enter the file name for the created scenario. Be sure to enter the file name. The file name can consist of up to 8 uppercase alphabetic characters and numerals. Limit the total number of characters of the file name and the directory name for the scenario folder to 127 or less.
Scenario Folder	Specify where to create the scenario folder to be used while creating the scenario. The name of the scenario folder will be the same as the name of the scenario.
Configure BGM	<p>If you would like to play BGM during the scenario, check the box. The audio file (WAVE format) selection window is displayed if this is selected. On this window, select the file to be used as BGM.</p> <p>After selecting the audio file, play the file by clicking the "▶" button on the right.</p> <p>Stop playback by clicking the "■" button.</p>
Background Color	Selects the background color for image data in the scenario.
Image Quality	<p>With EMP SlideMaker2, each slide in a PowerPoint file will be converted into a JPEG file and saved. This item lets you select the image quality when the slides are converted to JPEG files.</p> <p>You can select the quality from "Highest image quality", "High Quality" and "Standard". If you select "Standard", the quality will be lower compared to other settings. "Highest image quality" and "High Quality" are recommended.</p> <p>If JPEG files have been included directly into a scenario, this setting will be ignored and the JPEG file will be projected with its original image quality.</p>



The setting details can be changed in the "File" - "Properties" menu of EMP SlideMaker2.

The following window will be displayed.



Including PowerPoint Files in Scenarios

PowerPoint files can be included into scenarios with the following two methods. The person including the files into a scenario can release an animation set in the PowerPoint presentation.

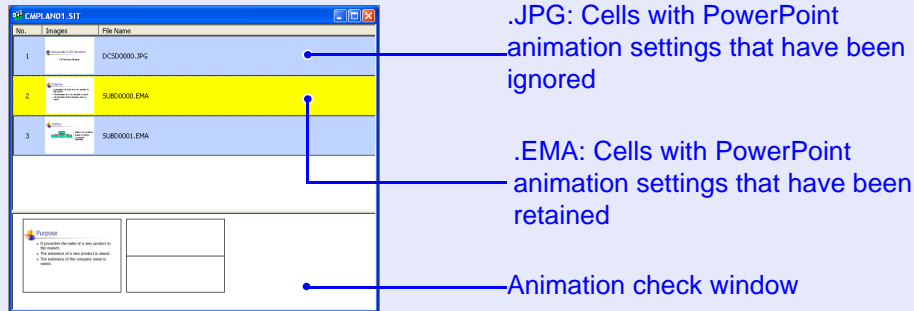
- **Batch Including PowerPoint Files** [p.66](#)
After the scenarios have been incorporated, they will include the animation set with PowerPoint. When projecting with PCFree, this animation will be enabled.
- **Including only selected slides when checking thumbnails**
If you include only a selection of slides, the animation settings that have been made using PowerPoint are ignored. [p.68](#)



Movie files included in a PowerPoint file cannot be played back on the scenario. Movie files must be individually converted to scenarios.



Refer to the EMP SlideMaker2 help for details on the EMP SlideMaker2 menu functions.



- *Thumbnails cannot be displayed if PowerPoint is not installed on your computer.*
- *Although animations can be set in the properties window of EMP SlideMaker2, animations set in advance in the PowerPoint file operate more smoothly when played in the scenario. To set animations in PowerPoint slides, we recommend you set them in the PowerPoint file itself. If you want to make animation settings for images, or if you want to add animation settings to slides that lost their animation settings when they were included in the scenario, make the settings in the properties window of EMP SlideMaker2. [p.75](#)*

Including all slides in a PowerPoint file

Drag & Drop the PowerPoint file in the file window to the scenario window to create a scenario. When scenario creation is complete, the "Send Scenario" screen is automatically displayed and the scenario can be transferred.

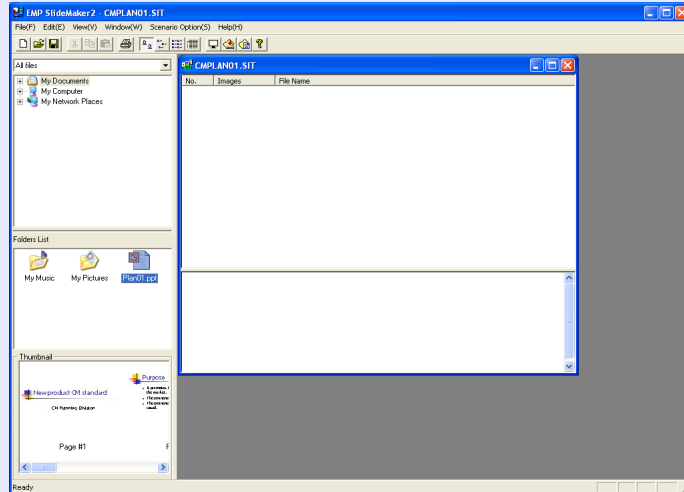
When slides are included with this method, animation set in PowerPoint remains effective.

Procedure

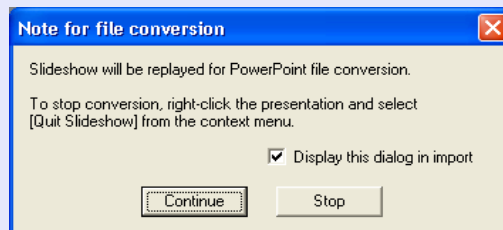
- 1 Connect the USB storage device or CompactFlash card that contains the scenario to the computer.
- 2 Start Windows on the computer, then select "Start" - "Programs" (or "All Programs") - "EPSON Projector" - "EMP SlideMaker2".
EMP SlideMaker2 starts, and the scenario properties are displayed.
- 3 Set the scenario properties. [p.63](#)
- 4 Select the folder containing the target PowerPoint file in the folder window.

5 Drag & drop the PowerPoint file from the file window to the scenario window.

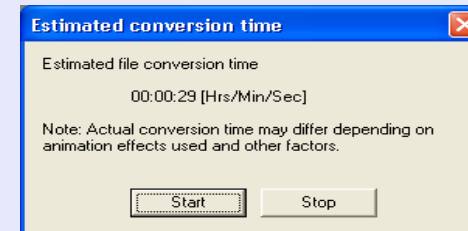
Or, double-click the target PowerPoint file icon in the file window.



6 Check the message and click the "Continue" button.



7 Check the message and click the "Start" button.



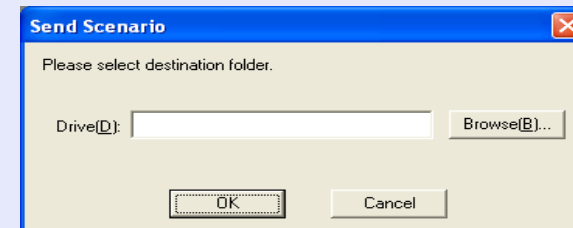
The conversion to a scenario starts and the Slideshow is performed automatically.


If the [Esc] key on the keyboard is pressed during the Slideshow, the Slideshow is canceled. In that case, the scenario closes before it can be created.

8 When the Slideshow ends, click the screen.

The dialog box to specify the transfer destination of the scenario is displayed.

9 Select the drive and the folder where the USB storage or CompactFlash card is connected and click the "OK" button.



Go to procedure 3 of  p.71.



When creating a scenario with only one PowerPoint file, you can do that easily by a drag and drop operation.

 p.61

■ Including only selected slides while checking thumbnails

Use the following procedure to include only selected slides from a PowerPoint file into a scenario. Note that when this method is used to include the slides, any animations that have been set using PowerPoint will be lost.

Procedure

1 Click the target PowerPoint file icon in the file window.

2 Double-click the thumbnails that you want to include into the scenario.

The selected slides will be displayed in the scenario window.

To select more than one slide and include them all at once,

(1) Click the additional slides one at a time in the thumbnail window.

All slides that you click will be selected.

If you click a slide that is already selected, it becomes unselected.

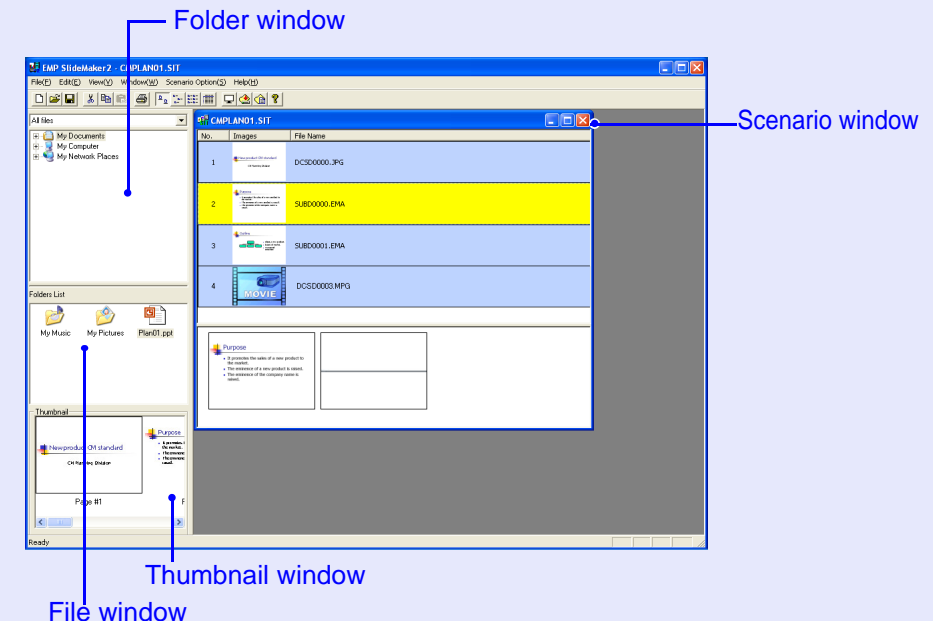
(2) Once all the target slides have been selected, drag one of the selected slides into the scenario window and drop it at the place where it is to be added.

All of the selected slides will then be added to the scenario.

Go to procedure 3 of "Sending Scenarios"  p.71.

Including Image and Movie Files in Scenarios

Image files and movie files can be included into a scenario.



Procedure

1 Click the target folder in the folder window.

The files that are contained in the folder will be displayed as a list in the file window.

2 Click the icon of the image file in the file window.

The contents of the image file are displayed in the thumbnail window.

In the case of a movie file, an icon will be displayed in the thumbnail window.

3 Double-click the icon of the target image file in the file window.

The selected file is displayed in the scenario window and it is included into the scenario.

4 To batch add more than one file, hold down the [Ctrl] key on the keyboard while clicking the files icons to be added. Once all the files to be added have been selected, drag one of the selected files into the scenario window and drop it at the place where it is to be added.

All of the selected files will then be added to the scenario.



To unselect all of the selected files, click the white area outside the icon.

Editing a Scenario

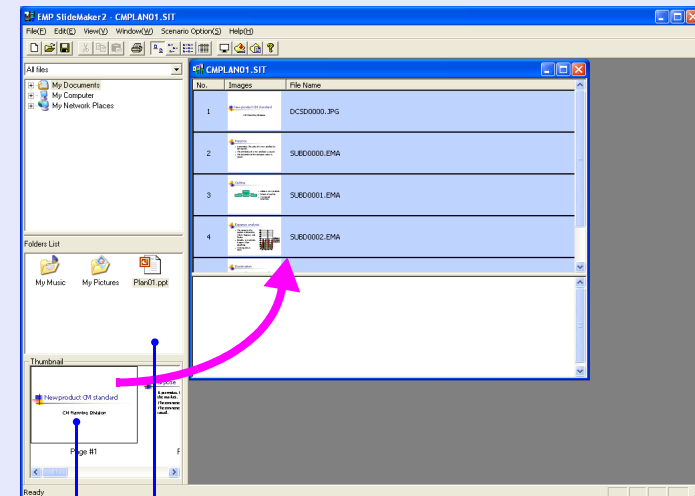
With PC Free, the scenarios in the scenario window are handled in order, starting from the top.

You can add and delete slides and files from a scenario or change their order to edit the scenario.

■ Adding files and slides


Procedure

Drag files that are displayed in the file window or PowerPoint slides that are displayed in the thumbnail window into the scenario window and drop them in the place where they are to be added.



You can drag and drop the target files or slides to add them to the scenario window.

The newly changed scenario will be transferred.

Go to procedure 3  p.71.

■ Deleting a slide

Procedure

Right-click in the cell to be deleted and then select "Clear" or "Cut" from the shortcut menu.


■ Changing the order of slides

Procedure

Drag & drop a cell in the scenario window to change the order of cells.

You can also display the shortcut menu, select "Cut" and then select "Paste".

The newly changed scenario will be transferred.

Go to procedure 3  [p.71](#).

To project a created scenario by the projector, send the scenario to a USB storage device using "Send Scenario" in EMP SlideMaker2. Specify a USB hard disk drive or a USB storage device that is connected to the computer's USB port as the destination. It is also possible to set automatic projection and continuous projection of a scenario at projector startup. The automatic projection function is called "autorun".



- *When "Send Scenario" is performed, the scenario file is saved in the destination under the name "Scenario name.sit". Also, a folder with the same name as the scenario is created and each screen is converted to image files and saved according to image quality. However, in PC Free a folder with the same name as the scenario is not displayed.*
- *If you perform "Send Scenario" without saving, a folder with the same name as the scenario name and a "scenario name.sit" file are created in the scenario folder. Each screen is converted to image files and saved in the created folder according to the image quality.*

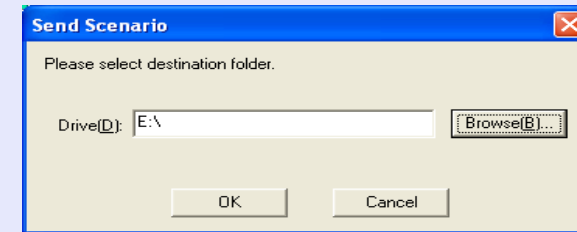
Procedure

1

Once the scenario is complete, connect a USB storage device to the computer, and then select "Scenario Options" - "Send Scenario".

2

A dialog box to specify the destination drive is displayed. Select the drive and the folder where the USB storage is connected and click the "OK" button.



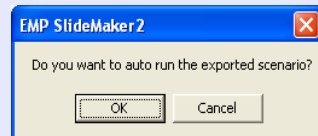
3

When a confirmation message is displayed, click the "OK" button.

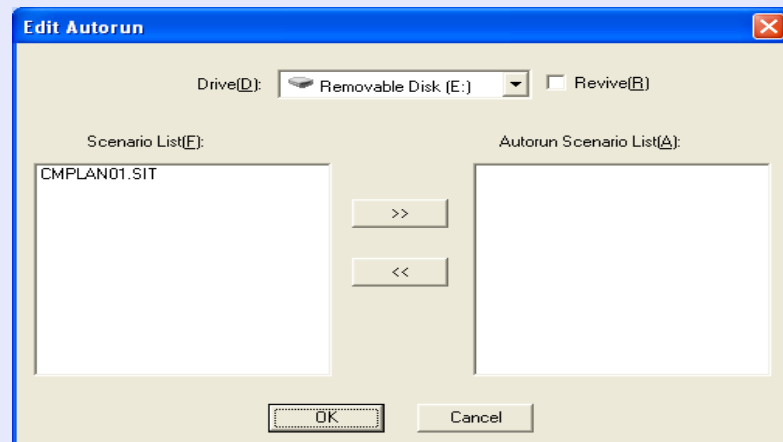
It is sent to the scenario destination selected.

4

When transfer is complete, a message is displayed confirming whether to perform autorun setup. If you want to set autorun, click the "OK" button and continue to the next procedure. Otherwise, click the "Cancel" button to close.



All scenario files within the destination drive are displayed in the scenario list on the left in the format "Folder name/File name".



5

When using autorun

To set a scenario to run automatically when the projector power is turned on, click the target scenario name in the scenario list, and click the "➡" button.

The scenario is displayed in the autorun scenario list on the right and set as an autorun file.

A scenario file in a folder with deep hierarchy or with a long folder name cannot be selected.

When projecting a scenario repeatedly

To start projecting from the first scenario again once projection of all scenarios in the "Autorun Scenario List" is complete, select "Revive".



- *Autorun can also be set by selecting "Scenario Option" - "Edit Autorun".*
- *Autorun setting cannot be specified in the EasyMP's PC Free.*
- *If there are two or more files set for autorun, they are played back in order from the top on the "Autorun Scenario List".*

6


When the scenario for autorun is set, click the "OK" button.

7

Remove the USB storage device from the computer.

See the computer's user's guide for the removal method.

8

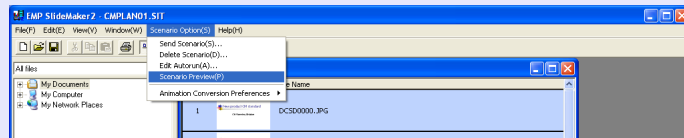
After finishing transferring your scenario, connect the USB storage device to the projector and start projection using PC Free.  [p.51](#)

Checking the Projection Scenario Status from a Computer

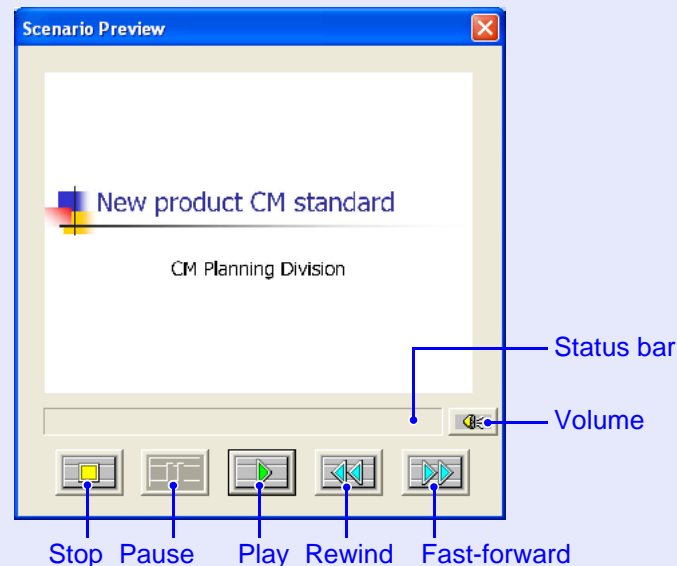
You can check on a computer how a created scenario is played back on a projector by using PC Free. All of the structural elements of the scenario such as images, animation, BGM, can be played.

Procedure









- 1 Open the scenario you want to check in EMP SlideMaker2.
- 2 Select "Scenario Options" - "Scenario Preview".



The "Scenario Preview" screen is displayed.



The following table shows the functions of each button.

 Stop	Stops playback and returns to the first slide.
 Pause	Pauses the slides when "Automatically after" is selected for "Advance".  p.75
 Play	Starts the scenario preview. Also, this restarts stopped or paused scenarios. The following slide is displayed when "On mouse click" is set for "Advance".  p.75
 Rewind	Returns to the previous slide or returns to the screen previous to the animation performance. The animation effects are not performed upon return.
 Fast-forward	Proceeds to the next slide or shows the screen after animation performance. At this time the animation effects are not performed.
 Volume	Performs volume control. Adjusts the volume of BGM.
Status bar	Displays the progress of the scenario on a bar. At first there is no bar display, and then the bar extends from left to right as the scenario progresses. The scenario ends at the right hand side of the bar.

- 3 After you finish checking, click the "X" button at the top right of the window to close the scenario preview screen.

Setting Animations

The following PowerPoint animations are reflected in a scenario as well.

Fly	Blinds	Box	Checkerboard
Crawl	Dissolve	Peek	Random Bars
Spiral	Split	Stretch	Strips
Swivel	Wipe	Zoom	

You can set which animations replace those not mentioned above (Default: Cut).

Procedure

- 1 Start EMP SlideMaker2.**
Click the "Cancel" button if screen properties is displayed.
- 2 Select "Scenario Option" - "Animation Conversion Preferences".**
- 3 Select the set animation.**

Setting the Slide Animation

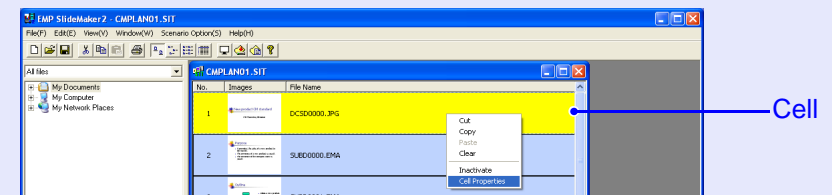
With EMP SlideMaker2, you can set effects similar to the animation effects of PowerPoint for each cell in the scenario. You can project the slides that retain the animation set in PowerPoint by setting projection time or animation for each divided scene. In this case, right-click the target animation in the animation check window and click "Cell Properties".

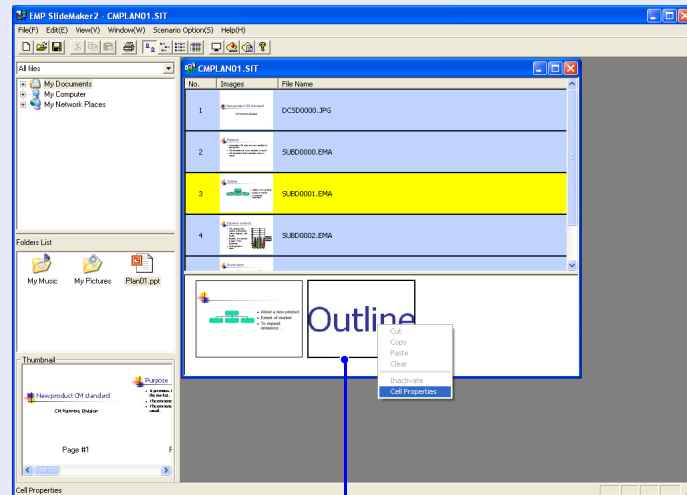


If animations set in PowerPoint in advance are included in a scenario, the animations operate smoothly during scenario playback. To set animations in PowerPoint slides, we recommend you set them in the PowerPoint file itself. If you want to make animation settings for image files, or if you want to add animation settings to slides that lost their animation settings when they were included in the scenario, add the settings using the following method.

Procedure

- 1 Right-click in the target cell or the animation, and select "Cell Properties".**
When making the same settings for multiple cells or animations, select multiple cells by holding down the [Shift] key or the [Ctrl] key on the keyboard, right-click and then select "Cell Properties".



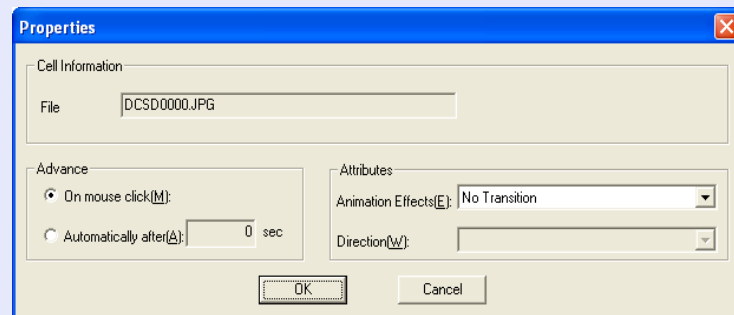


Animation

Advance	When "Automatically after" is selected, you can set the switching time from 0 to 1800 seconds. When "On mouse click" is selected, switch slides by pressing the [↓] or [↑] buttons on the remote control during projection.
Animation Effects	You can specify the effects to use during screen transition. Select the "Direction" depending on the animation selected. The following are examples of the effects. Fly: The image changes from the direction specified. Box In: The image changes from the inside.

2

The "Properties" screen is displayed. Set each of the items with reference to the following table, and then click the "OK" button.



Appendix

Connection Limitations	77
• Supported Resolutions	77
• Display Color	77
• Connection Number	77
• Others	77
Troubleshooting	78
Glossary	86

When projecting computer images during execution of EMP NS Connection, the following restrictions apply. Confirm these points.

Supported Resolutions

The following computer screen resolutions can be projected. For the following resolutions, the image can be projected as it is on the computer screen. You cannot connect to a computer with a resolution higher than UXGA.

- VGA (640 x 480)
- SVGA (800 x 600)*
- XGA (1024 x 768)*
- SXGA (1280 x 960)
- SXGA (1280 x 1024)*
- SXGA+ (1400 x 1050)*
- UXGA (1600 x 1200)

* Supported resolutions when multi-screen display function is on.

When the following messages are displayed, connect after setting the computer's resolution to SXGA or less.

One or more connected projectors do not support resolutions greater than SXGA. Reduce the screen resolution and reconnect.

If a computer with a special screen size is used where the ratio of height and width is not represented, a screen resolution closest to the width is selected from the list of seven above.

In this case, in wide screen the horizontal margins are projected, in narrow screen the empty vertical margins are black.

Display Color

The number of colors for computer screens can be projected.

Windows	Macintosh
16-bit color	About 32,000 colors (16-bit)
24-bit color	-
32-bit color	About 16.7 million colors (32-bit)

The operational guarantee for multi-screen display is 16-bit and 32-bit color.

Connection Number

You can connect up to four projectors to one computer and project simultaneously.

You cannot connect multiple computers to one projector simultaneously.

Others

- If the transmission speed of the wireless LAN is low, the network might be cut off easily even if you connect and shut down at surprising times.
- Audio is not transmitted.
- When videos are played back, they do not play back as smoothly as when displayed on the computer.
- Applications that use part of DirectX functions may not be displayed correctly. (Windows only)
- Cannot project full screen MS-DOS prompts. (Windows only)
- There are times when the image on the computer screen and the image projected by the projector may not match exactly.

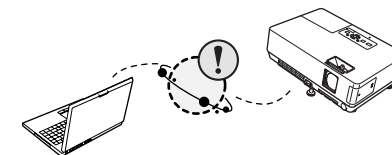
If any of the following problems occur, refer to the pages given for each problem.

Problems concerning EasyMP

- EMP NS Connection cannot be used to make a connection
☞ [p.79](#)
- Suddenly changes to the EasyMP screen ☞ [p.79](#)
- When a connection is made using EMP NS Connection, the projected image remains as is, and a connection cannot be made from another computer. ☞ [p.79](#)
- The projector is not found when EMP NS Connection is started ☞ [p.80](#)
- Cannot connect in "Advanced Connection Mode" or wired LAN connection ☞ [p.81](#)
- The image and sound for movies with EMP NS Connection are not displayed, the image is slow to appear, or either the video or audio stop ☞ [p.82](#)
- When a connection is made using EMP NS Connection, a PowerPoint Slideshow cannot be started ☞ [p.82](#)
- When a connection has been made using EMP NS Connection, the screen will not be refreshed when using an Office application. ☞ [p.82](#)
- Cannot specify files with EMP SlideMaker2 ☞ [p.82](#)
- Error message when starting up EMP NS Connection
☞ [p.83](#)
- Error message when starting up EMP SlideMaker2 ☞ [p.84](#)

Problems concerning watch and control by EMP Monitor

- Mail is not sent even if an abnormality occurs in the projector ☞ [p.84](#)
- Cannot control or monitor the projector with EMP Monitor
☞ [p.85](#)



■ EMP NS Connection cannot be used to make a connection

Check the message at the bottom-left of the screen and then apply the following countermeasures.

Error Messages	Remedy
The application version used is not supported.	You are using an old version of EMP NS Connection. A connection cannot be made. Install EMP NS Connection V2.3, and then establish a connection.

■ Suddenly changes to the EasyMP screen



ERR at the bottom left of the screen: Check the numbers and make the following remedies.

ERR Number	Error Meaning	Remedy
2,50,53,245,-103	Failed to startup EasyMP.	Turn the power for the projector off and then back on again.
51,52,100	Failed to process EasyMP.	When using EMP NS Connection, reconnect EMP NS Connection. When using a USB display, reconnect the USB cable.
-101	Communication was cut off from the access point.	Check the access point operation.
-102,-105	Wireless communication is unstable.	Check the situation of network traffic, and reconnect EMP NS Connection after waiting for a while.





■ When a connection is made using EMP NS Connection, the projected image remains as is, and a connection cannot be made from another computer.

Check	Remedy
Did the presenter leave the conference room without cutting off the network connection?	<p>With EMP NS Connection, the connection with the computer that was previously connected can be cut off when another computer tries to connect with the projector, and it connects with the computer that is trying to connect.</p> <p>Therefore, when a projector keyword is not set for the projector, or if you know the projector keyword, you can cut off the current connection and, if you perform a connection operation, you can connect to the projector.</p> <p>When a projector keyword is set for the projector, if you do not know the projector keyword, cut off projection from the projector and reconnect. To cut off connection from the projector, press the [Esc] button on the remote control, select "Close" from the close menu and press the [Enter] button on the remote control. When it cuts off, you can connect from the target computer.</p> <p>☞ <i>Wireless LAN Quick Connection Guide</i></p>

■ The projector is not found when EMP NS Connection is started

Check	Remedy
Is the wireless LAN unit connected? For Wireless LAN	Check that the wireless LAN unit is securely connected.
Is the projector's configuration menu open?	While the configuration menu is displayed, network connection becomes invalid. Close the configuration menu and return to the EasyMP screen.
Are the computer's LAN card and the built-in LAN function available?	Check that LAN is valid by checking "Control Panel" - "System" in the device manager and so on.
Is the SSID the same as that of the access point? Quick Connection Mode	Set an SSID that is different from that of the access point.  User's Guide "Network Menu (EMP-1825 Only)"
Is the DHCP function for wired LAN turned ON? Quick Connection Mode	Turn OFF the DHCP function for wired LAN from the EasyMP's configuration menu.  User's Guide "Network Menu (EMP-1825 Only)"
Was the network adapter used selected correctly with EMP NS Connection?	If the computer has multiple LAN environments, it cannot connect unless the network adapter used with EMP NS Connection is selected correctly. Start EMP NS Connection and go to "Configuration" - "Switch LAN" (Windows), or "Configuration" - "Network Configuration" (Macintosh) and select the network adapter used.
For wireless LAN connection, is the wireless LAN setting enabled when the computer is in power save mode?	Enable the wireless LAN.
Are there any obstacles between the access point and the computer or projector? For Wireless LAN	Sometimes the electromagnetic wave situation prevents the projector from being found in a search. Check for any obstacles between the access point and the computer or projector, and change their position to improve the electromagnetic wave situation.
Is the computer's wireless LAN electromagnetic wave set to low?	Set the electromagnetic wave strength to maximum.
Does the wireless LAN conform to 802.11g, 802.11b, or 802.11a?	It is only compatible with standards g, 802.11b, and 802.11a, and not with other standards such as 802.11.
Is the firewall turned off, or has the firewall been registered as an exception? For Wireless LAN	When you do not wish to turn off the firewall or register the firewall as an exception, make the necessary settings to open the ports. The ports used by EMP NS Connection are 3260, 3261, and 3629.
Is the network cable connected correctly? For Wired LAN	Check that the network cable is connected correctly. Reconnect it if it is not connected or not connected properly.

■ Cannot connect in "Advanced Connection Mode" or wired LAN connection

Check	Remedy
Is the SSID setting different.	Set the computer, the access point, and the projector to the same SSID.  User's Guide "Network Menu (EMP-1825 Only)"
Is the same WEP key set?	When selecting WEP from "Security", set the access point, the computer, and the projector to the same WEP key.  User's Guide "Network Menu (EMP-1825 Only)"
Are the connection denial functions, such as MAC address restrictions and port restrictions, set correctly at the access point?	Set the projector to allow connections from the access point.
Are the IP address, the subnet mask, and the gateway address for the access point and the projector set correctly?	When not using a DHCP, adjust each setting.  User's Guide "Network Menu (EMP-1825 Only)"
Are the access point and the projector's subnet different?	Select "Manual search" from EMP NS Connection, specify the IP address, and connect.  p.26

■ The Slideshow cannot be displayed on the desired display when the multi-screen display function is being executed.

Check	Remedy
Are you using PowerPoint 2002 or an earlier version? For Windows	To set and use two or more virtual displays, use PowerPoint 2003, or limit the number of virtual displays to one before displaying the Slideshow.

■ Applications are no longer displayed from the computer's screen when the multi-screen display function is executed.

Check	Remedy
Is another application running on the virtual display? For Windows	When EPSON Virtual Display is installed, another application sometimes runs on the virtual display. In this case, set "EPSON VirtualDisplay" to "Off" at "Screen properties".

■ The mouse cursor is not displayed on the computer's screen.

Check	Remedy
Is EPSON Virtual Display installed? For Windows	The mouse cursor was moved onto the virtual display. Move the mouse until the mouse cursor is displayed.

■ The image and sound for movies with EMP NS Connection are not displayed, the image is slow to appear, or either the video or audio stop

Check	Remedy
Did you try to play back movies with Media Player or try to operate the screen saver preview?	Depending on the computer, the movie play back screen in Media Player may not be displayed, and the screen saver preview may not be displayed normally.
Is WEP encryption effective, or are multiple projectors connected?	The display speed decreases when WEP encryption is effective or multiple projectors are connected.
Have you enabled DHCP?	When DHCP is set in "Advanced Connection Mode" or wired LAN connection, if a DHCP server that can be connected to is not found, it takes time to enter EasyMP standby status.
Was EMP NS Connection started while a movie was playing, or were the resolution and color number changed? For Macintosh	When playing back movies, start EMP NS Connection first before starting play back. If EMP NS Connection is started during movie play back and the display screen resolution and color number are changed, in this case move the movie playback window, minimize it, or resize it and so on.
Is wireless LAN 802.11g/b being used in "Quick Connection Mode"?	Depending on the electromagnetic wave environment, there are times when the image and sound for movies may stop. When using the movie sending function, use "Advanced Connection Mode" or wireless LAN 802.11a in "Quick Connection Mode".


■ When a connection is made using EMP NS Connection, a PowerPoint Slideshow cannot be started

Check	Remedy
Was EMP NS Connection started while PowerPoint was starting? For Windows	When making a connecting with EMP NS Connection, make sure you close PowerPoint first. Slideshow might not run if connecting while it is started.






■ When a connection has been made using EMP NS Connection, the screen will not be refreshed when using an Office application.

Check	Remedy
Is the mouse moved continuously?	When you stop moving the mouse cursor, the screen is updated. If the screen does not update quickly, stop moving the mouse cursor.



■ Cannot specify files with EMP SlideMaker2

Check	Remedy
Is a PowerPoint file (.ppt) with a PowerPoint 95/97 format being used?	Files created with PowerPoint 95/97 and files saved in PowerPoint 95/97 format cannot be edited with EMP SlideMaker2. You can use after saving with PowerPoint 2000/2002/2003.  p.59
If a PowerPoint file (.ppt) cannot be included in a scenario, or it cannot be displayed as a thumbnail, is the Microsoft Office JPEG converter installed?	Install the JPEG converter. See the Microsoft Office User's Guide for details on installing the JPEG converter.




■ Error message when starting up EMP NS Connection

Check	Remedy
Failed to connect to the projector.	Try to connect again. If it still does not connect, check the network settings on the computer and the network settings for the projector's EasyMP. For details on the network settings to be made on the projector, see  User's Guide"Network Menu (EMP-1825 Only)" .
The keyword does not match. Check how it is displayed by the projector, and enter the correct keyword.	Check the projector's keyword displayed on the EasyMP screen, and enter the projector's keyword.
The selected projector is busy. Do you want to continue the connection process?	You tried to connect to a projector that is connected to another computer. When the "Yes" button is clicked, it connects to the projector. The connection between the projector and the other computer is cut off. When the "No" button is clicked, it does not connect to the projector. The connection between the projector and the other computer is maintained.
Failed to reset EMP NS Connection.	Restart EMP NS Connection. If the message still appears, uninstall and then reinstall EMP NS Connection.  Wireless LAN Quick Connection Guide - "Installing EasyMP Software"
Cannot connect because the keyword was wrong.	When connecting to a projector for which a projector keyword has been set, the wrong keyword is entered. Check the keyword that is displayed on the projector's connection standby screen. After the connection is cut off and then reconnected, enter the projector keyword on the keyword entry screen that is displayed.  Wireless LAN Quick Connection Guide
Failed to acquire network adaptor information.	Check the following point. <ul style="list-style-type: none"> • Is a network adaptor installed on the computer? • Is the driver for the network adaptor used installed on the computer? After checking, restart the computer and connect again. If you still cannot connect, check the following. Check the network settings on the computer and the network settings on the projector. For details on the network settings to be made on the projector, see  User's Guide"Network Menu (EMP-1825 Only)" .
One or more connected projectors do not support resolutions greater than SXGA. Reduce the screen resolution and reconnect.	There is an ELP-735 projector in the connection destination. Change the computer's screen resolution to SXGA (1280 x 1024) or less.
There are projectors that do not respond.	You cannot connect to multiple projectors simultaneously. Check the network settings on the computer and the network settings for the projector's EasyMP. For details on the network settings to be made on the projector, see  User's Guide"Network Menu (EMP-1825 Only)" .
Enter the keyword displayed in the projector.	Check the projector's keyword displayed on the EasyMP screen, and enter the projector's keyword.




■ Error message when starting up EMP SlideMaker2

Check	Remedy
** .SIT is already registered. (** Scenario file name)	Scenario files that have already been added to "Autorun Scenario List" cannot be added again.  p.71
Because the folder hierarchy is deep, the scenario file cannot be selected.	Because the hierarchy of the folder with the scenario file added to "Autorun Scenario List" is deep, it cannot be selected. Change the destination for sending the target scenario file.  p.71
Insufficient storage capacity on the disk.	Insufficient storage capacity in the drive to transfer scenario, cannot transfer the scenario. Make space in the drive so that the scenario can be sent by deleting any unnecessary files.
** An invalid path is included. (** the path name that includes the scenario file name)	The path for the file to be opened was not found. Because of the following. The scenario file was moved to another folder since it was last saved with EMP SlideMaker2. The folder name containing the scenario file was changed since it was last saved with EMP SlideMaker2. The scenario file you are trying to open was deleted. Select File - Open and open the target scenario file, or search for it by using the Windows search function and so on.
** The disk became full during accessing. (** the path name that includes the scenario file name)	Insufficient storage capacity in the drive containing the work folder, cannot save the scenario file. Make space in the drive containing the work folder so that the scenario file can be saved by deleting any unnecessary files.
The specified document cannot be opened.	The PowerPoint file you are trying to add to the scenario is corrupted or cannot be used because it is incorrect. Use another PowerPoint file.
Specify a different name or a different directory	A file with this name already exists. Change the scenario name and then save.



■ Mail is not sent even if an abnormality occurs in the projector

Check	Remedy
Is the wireless LAN unit connected?	Check that the wireless LAN unit is securely connected.
Is the network connect setting correct?	Check the projector's network settings.  User's Guide "Network Menu (EMP-1825 Only)"
Is "Standby Mode" set to "Network On"?	To use the mail notification function when the projector is in standby, set "Network On" in "Standby Mode" from the configuration menu.  User's Guide "Extended Menu"
Did a fatal abnormality occur and the projector come to a sudden stop?	When the projector comes to a sudden stop, mail cannot be sent. If, after checking the projector, the abnormal state continues, contact your local dealer or the nearest address provided in the <i>Support and Service Guide</i> .  Epson Projector Contact List
Is power being supplied to the projector?	Check that your electrical outlet or power source is functioning correctly.
Is the network cable connected correctly?	Check that the network cable is connected correctly. Reconnect it if it is not connected or not connected properly.
For Wired LAN	

■ Cannot control or monitor the projector with EMP Monitor

Check	Remedy
Is the wireless LAN unit connected? For Wireless LAN	Check that the wireless LAN unit is securely connected.
Is the network connect setting correct?	Check the projector's network settings.  User's Guide "Network Menu (EMP-1825 Only)"
Is EMP Monitor correctly installed in the computer?	Uninstall and then reinstall EMP Monitor.
Are all of the projectors that you want to monitor and control registered to the projector list?	Register them to the projector list.  EMP Monitor Operation Guide "Registering and deleting projectors for monitoring"
Is "Standby Mode" set to "Network On"?	To use the mail notification function when the projector is in standby, set "Network On" in "Standby Mode" from the configuration menu.  User's Guide "Extended Menu"
Is power being supplied to the projector?	Check that your electrical outlet or power source is functioning correctly.
Is the network cable connected correctly? For Wired LAN	Check that the network cable is connected correctly. Reconnect it if it is not connected or not connected properly.

■ Error message when starting up EMP Monitor

Check	Remedy
The password is incorrect.	The wrong password was entered. Enter the correct password. If you forget the password, start "Network Settings" in "Network" from the configuration menu, and check "Web Control Password" in "Basic Settings".
Cannot connect to the projector for the IP address that was entered.	Check whether the network settings for the projector you want to connect to, the wired LAN or "Advanced Connection Mode (wireless LAN)" are the settings that are used. When "Quick Connection Mode" is selected from "Wireless LAN", the setting is changed to "Advanced Connection Mode". Next, check the "IP Address" for the "Wired LAN" or the "Wireless LAN" and register the "IP Address" manually.  EMP Monitor Operation Guide "Registering and deleting projectors for monitoring" If it still does not connect, check the network settings on the computer and the network settings for the projector. For network settings,  Wireless LAN Quick Connection Guide

This section explains easily terms that are used with the projector and difficult terms that are not explained in the text of this guide. For details, refer to other commercially available publications.

DPOF	An abbreviation of Digital Print Order Format, this is a format for recording information (photos that you want to print, number of copies, and so on) to print photos taken with a digital camera in recording media such as memory cards.
DVI	An abbreviation of Digital Visual Interface, this is the standard by which video signals are transmitted digitally. DVI is the standard not only for computers, but also for digital home appliances to be able to transfer images with a resolution greater than DFP, and there is also an encryption function in the digital signal.
MAC address	An abbreviation of Media Access Control. The MAC address is an ID number unique to each network adaptor. A unique number is assigned to each network adaptor, and data is transmitted between network adaptors based on this identification.
NDIS	An abbreviation of Network Driver Interface Specification, this is the standard specification of network drivers to use network cards such as wireless LAN cards set by the Microsoft Company and so on. It provides communication protocols for OS, software, and drivers to communicate, as well as communication protocol regulations for drivers and network cards.
RADIUS Server	"RADIUS" is an abbreviation of Remote Authentication Dial-In User Service, this is a protocol that starts wireless LAN and is used for authentication by a variety of network services. A RADIUS server with an authentication server that uses RADIUS performs authentication for access to a wireless LAN access point with information such as user name and password. When a RADIUS server is used, user information does not need to be individually registered for each access point even when there are multiple wireless LAN access points, and the access point and the users can be controlled.
SVGA	A type of video signal with a resolution of 800 (horizontal) x 600 (vertical) dots that is used by IBM PC/AT-compatible computers.
SXGA	A type of video signal with a resolution of 1,280 (horizontal) x 1,024 (vertical) dots that is used by IBM PC/AT-compatible computers.
USB	An abbreviation of Universal Serial Bus, this is an interface to connect relatively low-speed peripherals between computers.
UXGA	A type of video signal with a resolution of 1,600 (horizontal) x 1,200 (vertical) dots that is used by IBM PC/AT-compatible computers.
VGA	A type of video signal with a resolution of 640 (horizontal) x 480 (vertical) dots that is used by IBM PC/AT-compatible computers.
XGA	A type of video signal with a resolution of 1,024 (horizontal) x 768 (vertical) dots that is used by IBM PC/AT-compatible computers.
Ad hoc	A method of wireless LAN connection that communicates with wireless LAN clients without using an access point. It is not possible to communicate with two or more devices simultaneously.
Virtual display	The screen for one computer is output to multiple displays. A large virtual screen can be created by using multiple displays.
Channel	Communication speeds drop if there are too many devices performing wireless communication by using the same frequency. In this case, interference from other wireless LANs can be avoided by setting a different wireless channel for each wireless LAN network.
Authentication server	A server to perform user authentication. When an authentication server is used, user information management and user authentication operations are unified. Also, because the authentication server often provides an advanced authentication method, it is also effective as a security countermeasure.

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 the 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.

The contents of this guide may be changed or updated without further notice.

Illustrations and screens used in this publication may differ from actual illustrations and screens.

General Notice:

EasyMP is a trademark of Seiko Epson Corporation.

Macintosh, Mac, and iMac are trademarks of Apple Inc.

IBM is a registered trademark of International Business Machines Corporation.

Windows, WindowsNT, Windows Vista and PowerPoint are either registered trademarks or trademarks of Microsoft Corporation in the U.S and/or other countries.

Dolby is a 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.

Portions of this software are based in part on the work of the Independent JPEG Group.

CompactFlash is a registered trademark or trademark of Sandisk Corporation.

This product includes RSA BSAFE® Cryptographic software from RSA Security Inc.

RSA and BSAFE are either registered trademarks or trademarks of RSA Security Inc. in the United States and/or other countries. RSA Security Inc. All rights reserved.

This product includes **NetNucleus® WPA** Cryptographic software from TOSHIBA INFORMATION SYSTEMS CORPORATION.

NetNucleus is a registered trademark of TOSHIBA INFORMATION SYSTEMS CORPORATION in the Japan.

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.

Copyright:

Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation.

Software Copyright:

This product uses free software as well as software to which this company holds the rights.

The following is information on the free software used by this product.

1. LGPL

- (1) This company uses free software for this product under the terms of the GNU LESSER General Public License Version 2, June 1991 (henceforth "LGPL") or later versions.

You can see the full text of the LGPL on the following Web sites.

[LGPL]<http://www.gnu.org/licenses/lgpl.html>

This company, under the terms of the LGPL, discloses the source code for the free software used in this product based on the LGPL. Contact the support personnel as provided in the Epson Projector Contact list to reproduce, modify, and/or distribute the free software concerned.

Please follow the conditions of the LGPL when reproducing, modifying, and/or distributing the free software concerned.

Also, the free software concerned is offered "as is" with no guarantee or warranty what so ever. The term guarantee includes, but is not limited to, appropriate commercialization, business potential, purpose of use, and does not infringe on third person rights (including, but not limited to, patent rights, copyrights, and trade secrets).

- (2) As shown in the above mentioned (1), under the terms of the LGPL, there is no guarantee for the free software included in this product; any problems in this product (including problems that originate with

the free software concerned) do not influence the conditions of the guarantee (written guarantee) issued by this company.

- (3) The free software included in this product under the terms of the LGPL as well as the author are disclosed in the source code indicated in (1).

2. Other free software

As well as the free software used under the terms of the LGPL, this company also uses the following free software for this product. Hereafter, each author, the conditions, and so on are described in the original. Furthermore, there is no guarantee for free software because of the characteristics of the free software that has already used in this product; any problems in this product (including problems that originate with the free software concerned) do not influence the conditions of the guarantee (written guarantee) issued by this company.

(1) libpng

Copyright © 1998-2004 Glenn Randers-Pehrson

Copyright © 1996-1997 Andreas Dilger

Copyright © 1995-1996 Guy Eric Schalnat, Group 42, Inc.

(2) zlib

Copyright © 1995-2003 Jean-loup Gailly and Mark Adler

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright© 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of

freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate

copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
 - a) The modified work must itself be a software library.
 - b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
 - c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
 - d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License,

and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
 - a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.
- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
- 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not

permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>

Copyright© <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library
`Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!