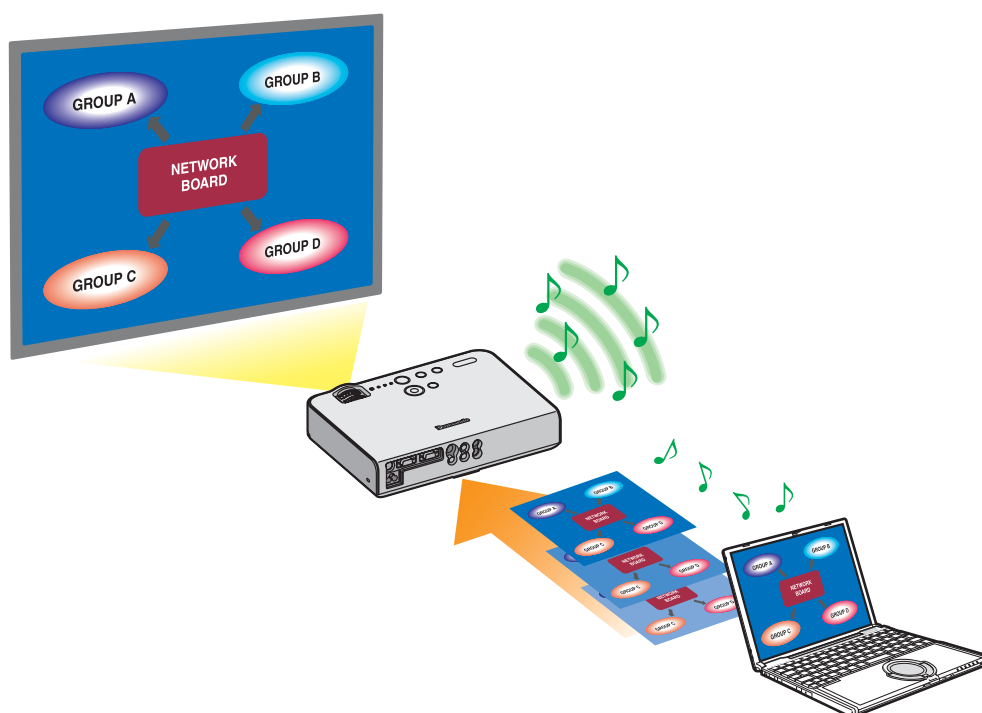Macintosh

Panasonic®

Wireless Function Edition

(PT-LB51NTE)

(PT-LB51NTU)

※ The projectors illustrated as examples are PT-LB51NTE.

Contents

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Wireless Manager uses the following software:
Portion of this software are based in part on the work of the Independent JPEG Group

┌─ **Please note the following.** ───
• Panasonic cannot be held liable for any direct or indirect damages resulting from the use or malfunction of this projector.
• Panasonic cannot be held liable for damages arising from data corruption or loss as a result of using this projector.

Notes on Using Wireless Connection

Wireless connection function of the projector uses radio waves in the 2.4 GHz band.
A radio station license is not required, but be sure to read and fully understand the following items before use.

■Do not use near other wireless equipment.

The following equipment may use radio waves in the same band as the projector.
When the projector is used near these devices, radio wave interference may make communication impossible, or the communication speed may become slower.
• Microwave ovens, etc.
• Industrial, chemical and medical equipment, etc.
• In-plant radio stations for identifying moving objects such as those used in factory manufacturing lines, etc.
• Designated low-power radio stations

■If at all possible, avoid the use of cellular phones, TV sets or radios near the projector.

Cellular phones, TV sets, radios and similar devices use different radio bands from the projector, so there is no effect on wireless communication or the transmission and reception of these devices. However, radio waves from the projector may produce audio or video noise.

■Wireless communication radio waves cannot penetrate steel reinforcements, metal, concrete, etc.

Communication is possible through walls and floors made from materials such as wood and glass (except glass containing wire mesh), but not through walls and floors made from steel reinforcements, metal, concrete, etc.

■Avoid using the projector in locations prone to static electricity.

If the projector is used in a location prone to static electricity, such as on a carpet, the wireless LAN connection may be lost.
If this happens, eliminate the source of static electricity or electromagnetic noise and reconnect to the wireless LAN.
In rare cases static electricity or electromagnetic noise may make it impossible to establish a connection to the LAN.
If this happens, press the power button on the remote control or on the projector to power off the projector temporarily.
After the cooling fan stops operating (after the power monitor on the projector changes from orange to red), power on the projector and reconnect to the LAN.

■Using the projector outside the country

It is forbidden to take the projector outside the country or region where you purchased it, so use it only in the said country or region. Also, note that depending on countries or regions there are restrictions on the channels and frequencies at which you can use the wireless LAN.

Notes on Using Wireless Connection (cont.)

■Channels that can be used

The channels (frequency range) that can be used differ according to the country or region. Refer to the table below.

Country or region	Standard	Channels used	Frequency band (Center frequency)
Japan	ARIB STD-T66	1 - 13	2,412 MHz - 2,472 MHz
China	SRRC		
England, Germany, France, Spain, Italy, Belgium, Austria, Sweden, Norway, Denmark, Switzerland, Holland, Finland, Portugal, Greece, Thailand, South Korea	ETSI 300.328		
Singapore	IDA		
Australia, New Zealand	C-Tick		
Malaysia	SIRIM		
United States	FCC part 15	1 - 11	2,412 MHz - 2,462 MHz
Taiwan	DGT		

What you can do with Wireless Manager mobile edition 4.5

● Network Transmission

You can connect the projector to a computer via the wireless LAN and send moving and still images.
Refer to page 10 for details on how to connect.

<Live mode> (See page 20)
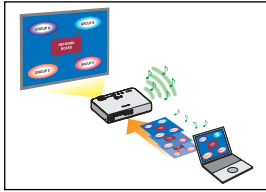
Used for normal presentations.

<WebBrowser control> (See page 32)

The following operations are possible when using WebBrowser control.
• Setting and adjusting the projector
• Displaying the projector status

<One-click Connection> (See page 24)

You can connect to the projector by double-clicking or using drag-and-drop.

<Live mode cut-in function> (See page 30)

During the live mode, a different computer can interrupt and project images in the live mode.

Check your computer

Necessary environment for computers to be connected

• First, check your computer to see whether or not it has a built-in wireless LAN※ function. ※LAN : "Glossary" (See page 39)
• Before connecting the projector to the computer, be sure to check the following settings.
• Operation is not guaranteed for all wireless LAN cards and built-in wireless LAN adapters.

Check 1　**Wireless LAN settings**

• Is your wireless LAN switched on?

Check 2　**Logon user's settings**

• Have you logged in as the [Admin (administrator)]?

Check 3　**Computer's settings**

• When security (firewall) software and utilities for network cards are installed, these may prevent connection of the projector.

Software Installation

System requirements

The computer must meet the following requirements in order to use the supplied software.

OS: Mac OS X v10.4
                Mac OS X v10.5※
CPU: 800 MHz PowerPC G4 or faster, or 1.8 GHz Intel Core processor or faster
RAM: 256 MB or more (512 MB or more recommended)
Empty hard disk capacity:
                60 MB or more
Hardware conditions:
                CD or DVD drive (for software installation and viewing the user's manual)
                An 802.11 b/g built-in wireless LAN adapter must be installed and running properly.
                However, some 802.11 b/g wireless LAN may not allow a 802.11 g connection to projectors.
WebBrowser: Safari 2.0 or later

Operation is not guaranteed for all computers that meet the above conditions.

※ Only for MacBook and MacBook Pro computers with built-in Intel Core 2 Duo processor.
  For the latest information, please see our Web site.
  http://panasonic.co.jp/pavc/global/projector/

Software Installation (cont.)

Contents on Provided CD-ROM

Set the provided CD-ROM into the CD/DVD-ROM drive.

Notes
• Quit all running programs. Otherwise, installation may not be possible.
• [Admin (administrator)] authority is required for installation.

Wireless Manager ME 4.5

This software is used to send screen images from a computer to the projector via a wireless LAN.

1 **Set the provided CD-ROM into the CD/DVD-ROM drive of a computer.**

2 **Double-click [WMmac4.5.dmg] in the CD/DVD-ROM drive.**
[WMmac] appears on the desktop.

> **Note**
> The user's manual (Index.pdf) is on the CD/DVD-ROM disc.
> Double-click it to view it.

3 **Double-click [Wireless Manager.pkg].**
Installation begins.
Follow the instructions on the screen and install the software.

> **Notes**
> • When a window for inputting a [Name] and [Password] appears, input the [Admin (administrator)]'s name and password.
> • Install Wireless Manager ME 4.5 in the [Applications] folder (./Applications).
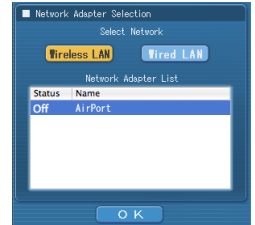
Connect

Detailed settings

Select the projector to connect from the computer.

1 Click the install target or [🖥️] in the Dock.

● **When the <Network Adapter Selection> window appears**
  ① Select the adapter from the list and click [OK].
    If the confirmation dialog box appears, click [Yes].
 ② Set the icon and user name, and click [OK].

Notes
- For details on how to connect, refer to page 15.
- Only the built-in adapter appears on the <Network Adapter Selection> window.
- You cannot connect this model to a computer via the wired LAN.
  The following models are compatible with the wired LAN communication that can be used with this Software.
    PT-F100NT, PT-FW100NT

10

Connect (cont.)

The projectors that can be connected are displayed on the <Select Access Port> window.
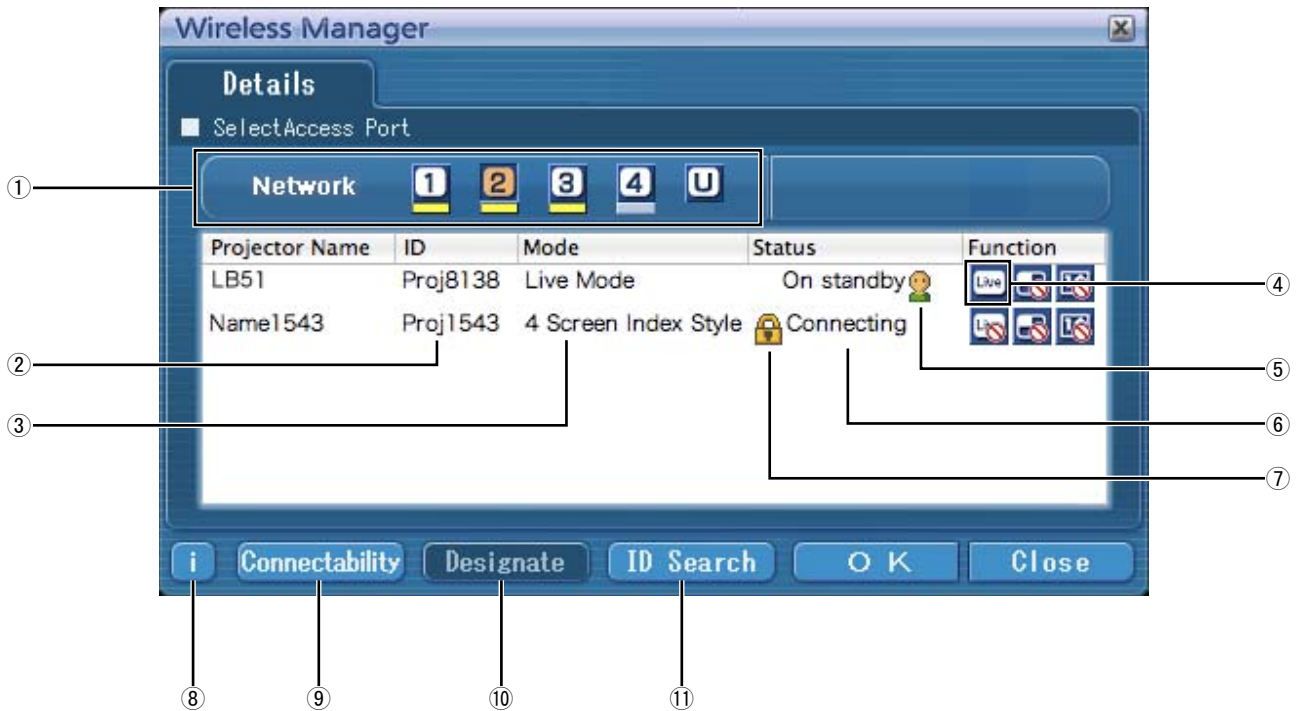
① **Network**
When you specify the network number (See page 26) set on the projector from one of [1], [2], [3], [4], and [U (USER)]※1, projectors that are presently switched on in the selected network number are displayed in [Projector Name]. The initial value for both the computer and the projector is [1]※2.
※1-2 (See page 12)

② **ID** (See page 17)
Display projector's ID.

③ **Mode** (See page 20)
Display projector's mode or style.

④ **Available mode and functions**
Unavailable modes/functions among [Live mode], [Multi live mode], and [One shot] are displayed with [🚫] overlaid on them.

⑤ **The number of people connected to this projector**

⑥ **The status of this projector**

⑦ **[🔒] appears when password entry is needed for connection.** (See page 16)

⑧ **Connection message** (See page 13)
Blinks when connection is not possible.
Click to display information on resolving the issue.

⑨ **Connectability**
When you click [Connectability], the projector name and ID are displayed at top left of the projector screen. If the projector name and ID are displayed correctly, the message "Projector is available." will appear on the computer screen.

⑩ **Designate** (See page 16)
Designate projectors to be connected when ① is set to [U].

⑪ **ID Search** (See page 17)
When you click [ID Search], a search for the projector of the specified ID is carried out from among the projectors that are presently switched on, from all network numbers other than [U].

11

Connect (cont.)

2 **In [Network], select the same network number as is displayed in the [NETWORK] menu of the projector to connect.**

Projectors powered on in the chosen network group are listed.

3 **Select the desired projectors, and click [OK].**

[▣] appears in the menu bar and a connection is established with the projector.
("Menu description" →See page 19)

Notes

• Easy Wireless Set Up cannot be made between the projector and the computer. (See page 41)
• Automatic connection setting (See page 24)

※1
  • In the following situation, connections other than [U] are not possible.
    - When not installed in the [Applications] folder
  • Depending on the computer and wireless LAN card used, Easy Wireless Set Up may not be possible. If this is the case, the [Network] setting of <Select Access Port> window will be switched to [U] automatically. For details of the connection procedure, first close Wireless Manager ME 4.5, and then refer to page 14.

※2
  • The initial network number for both the projector and Wireless Manager ME 4.5 is [1]. These numbers must match for the connection. To check the network number, refer to the network menu of the projector.
  • When importance is placed on security, select the network number [2] - [4], because WEP (wireless communication encryption) is set on these network numbers.
  • Important image data is protected because AES※ encryption processing takes place in advance for all network numbers, even if [ENCRYPTION] is set to [NONE].
  • Other network adapters may not be usable under Easy Wireless Set Up connections.
  • Connections to other networks connected through the wireless LAN card are broken under Easy Wireless Set Up connections.

※ "Glossary" (See page 40)

Connect (cont.)

If a wireless LAN connection cannot be established, click the [i] button in the bottom left of the <Select Access Port> window to display information on resolving the issue as shown below.

Please perform the following checks, when the projector cannot be found.

[Projector setup]
  (1) Is the power on for the projector?
  (2) Is the Network capability on?
  (3) Has the network number correctly been set up?
[Computer setup]
  (1) Is Wireless capability on?
  (2) Is the Firewall application causing a network block?

OK
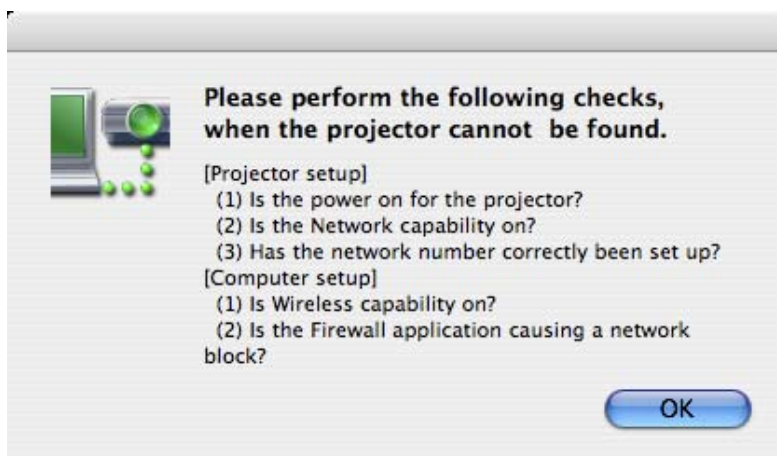
Connect (cont.)

Connecting through the access point

You can make the setting for infrastructure mode※ (connection through the access point※); however, confirm to your system administrator on network settings before changing any settings.
※"Glossary" (See pages 39 - 40)

① **Projector settings**

1 **Turn on the projector and press the [NETWORK] button on the remote control.**

2 **Select [USER 1]- [USER 3] from [NETWORK] at the wireless menu and press the [ENTER] button.**

3 **Set the details of network and select [OK].**
As for network setting items, see pages 26 - 28.
Confirm to your system administrator on network settings before changing any settings.

> **Note**
> The projector's MAC address※ can be checked with [STATUS] in the wireless menu of the projector unit.
> ("Verifying settings"→ see page 31) ※"Glossary" (See page 39)

② **Computer settings**

4 **Turn on the computer.**

5 **Make the network setting according to your system administrator.**

> **Note**
> When the user does not have the [Admin (administrator)] authority, the [Admin (administrator)]'s name and password are required to make network settings.

6 **Connect to your access point.**

7 **Start Wireless Manager ME 4.5, click [Wireless LAN] on the <Network Adapter Selection> window and select the network adapter connected to the access port.**
A confirmation message appears asking whether to switch the projector to the network or not. Select [No].

8 **Select the desired projector on the <Select Access Port> window and click [OK].**
[ ] appears in the menu bar and a connection is established with the projector.
("Menu description" →See page 19)

> **Note**
> If the projector is not displayed, click [Designate] followed by [ADD], then enter the IP address set in the projector using the <Access Port Registration> window, and click [REGISTER]. (See page 16)

> **Note**
> If you are unable to connect to the wireless LAN through the access point even after performing the steps in "① Projector settings," contact the manufacturer of the access point.

Selecting the connection method
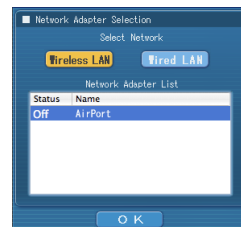
You cannot connect this model to a computer via the wired LAN.
The following models are compatible with the wired LAN communication that can be used with this Software.
  PT-F100NT, PT-FW100NT

When the <Network Adapter Selection> window appears, select [Wireless LAN] and the connection destination, then click [OK]. The wireless adapter is used for the connection.

Other operations for connection

When a projector with the [🔒] mark is selected, the window shown to the right appears. Enter the password and click [OK]. (See page 29)

Notes

• Clicking [CANCEL] on the password input window displays [🖵] in the menu bar (see page 19), without establishing a connection.
• When an incorrect password is entered, an error message appears.
  Click [OK] to return to the password entry window and enter the correct password again.

Adding and deleting connections

When [Network] is set to [U] and the desired projector is not displayed at the <Select Access Port> window, connections can be added and deleted by the following operations.

■Adding a connection

1 **Click [Designate] at the <Select Access Port> window.**
   The window shown to the right appears.
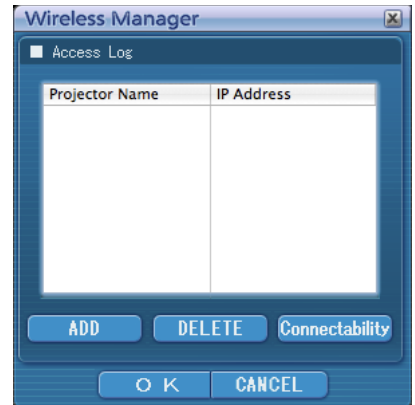
2 **Click [ADD] and enter the IP address※ (including its periods) of the connection to be added, and then click [REGISTER].**
   ※ "Glossary" (See page 39)
   The newly registered connection is added to the connection list in the window shown in step 1.
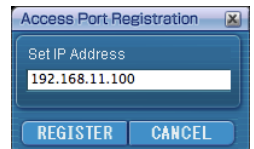
■Deleting a connection

Select the connection to be deleted at the window shown in step 1 and click [DELETE].

Other operations for connection (cont.)

Even if there are two or more projectors with the same name, an ID ([Proj] + 4-digit number) is assigned to each projector to enable the projectors to be identified.

When you click [ID Search], a search for the projector of the specified ID is carried out from among the projectors that are presently switched on, from all network numbers other than [U].

It is necessary to know ID in advance. When input selection is switched to [NETWORK] on a projector, the ID appears on the upper right of the projection screen for approximately 5 seconds. If you write down the ID displayed in the [ID] column of the [Details] screen on the <Select Access Port> window in advance, you can search a projector by the ID from next time.

1 **Click [Select Access Port] in the menu.**

The <Select Access Port> window appears.

> **Note**
> For procedures for displaying menus, see page 19.

2 **Click [ID Search].**
<Projector ID Search> window appears.
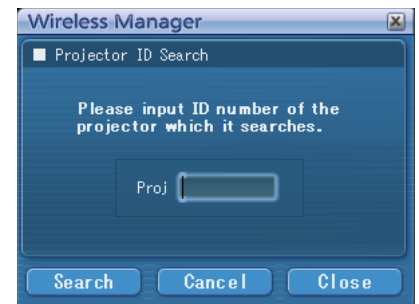
3 **Enter four figures of desired projector's ID, and click [Search].**
Start Searching.

4 **When the projector of the applicable ID is found, the computer will be connected to that projector, and the status display of the menu bar will turn green.**
If appropriate ID is not found, an error message appears.

Other operations for connection (cont.)

1 Click [🖥] in the menu bar, followed by [Quit Wireless Manager].

The following window appears.

Close Wireless Manager?

NO   YES

2 Click [Yes].

The computer returns to the original network settings when the connection is ended.
However, note that some time may be needed to return to the original network settings.
Click [No] to return to the menu bar.

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Various projection methods

Menu description

Operations are performed from the menu.
• Clicking [⬛] in the menu bar displays the menu.

Status

Menu
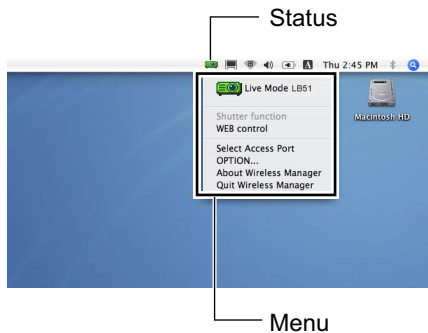
■ Status indication

Status : Indicate the connecting status.

(Green, lit):   Transmission possible

(Blue, lit):   Own computer currently transmitting (When in live mode)

(Yellow, lit):   Other user currently transmitting

(Red, lit):   Communication impossible

(Black, lit):   When the projector has not been selected

■ Menu

Live Mode LB51 ——————— 20 page

Shutter function ——————— 21 page
WEB control ——————————— 33 page

Select Access Port ——————— 11 page
OPTION... ——————————————— 22 page
About Wireless Manager ————— 24 page
Quit Wireless Manager ————— 18 page

19

Various projection methods (cont.)

Live mode

Connect a computer to a projector, and display the computer screen over the entire projection screen.

1 **Check the status indication in the menu bar to make sure that transmission is possible (check that the green lamp is lit).**

2 **Click [Live Mode] from the menu.**

The current computer screen is transmitted to the selected projector. In the live mode the projector is occupied by a single computer, so operations from other computers are not possible.
Picture quality and other options can be set on the <Option> window by clicking [OPTION...] from the menu.

> **Notes**
> • For presentations in live mode, the [PAGE ▲ ▼] buttons on the remote control will function in the same way as the computer's Page Up and Page Down keys. This means that if you run a computer application that supports the Page Up and Page Down keys, the presentation screen can be changed using the remote control.
> • If the connection error occurs during projection, the message [Stop "Live mode"] will appear, then restart projection from menu.
> • Set the [LIVE MODE CUT IN] of the unit to [ON] in advance to enable a different computer to interrupt and project images in live mode. (See page 30)

■Notes on sharing projectors with Windows PCs

After selecting a projector, the live mode screen cannot be projected in the below index style.

In this case, use the [MULTI-LIVE] button on the remote control to cancel the index style.

■Quitting live mode

Click [Live Mode] in the menu again.

Useful Functions

Shutter function

Blanks the screen for a moment.

1 **Click [Shutter function] from the menu.**

The image is turned off.

2 **Click [Shutter function] from the menu again.**

The image comes back.

Note

The shutter function is available in the live mode.

Setting options

You can make various settings related to Wireless Manager ME 4.5.

Setting option window

1 **Click [OPTION...] from the menu.**

The <Option> window shown to the right appears.

2 **Click the desired tab to be set.**

3 **Click [OK].**
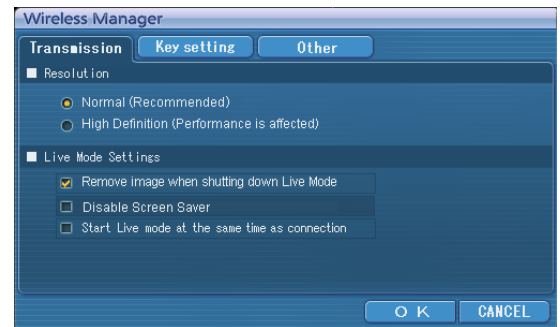
Transmission

■Resolution
Select the quality of the image transmitted from the computer to the projector.

■Live Mode Settings
• [Remove image when shutting down Live Mode]
Check this box to clear the projection screen from the projector when live mode ends.

• [Disable Screen Saver]
This disables the computer screen saver function while Wireless Manager ME 4.5 is operating. Check this box to disable screen saver operation during live mode.

• [Start Live mode at the same time as connection]
Projection starts when the connection is made without having to click the live button.

Setting options (cont.)

You can set shortcut key combinations that let you control the Wireless Manager ME 4.5 functions by computer keyboard operations.

1 **Select the mode or the function to be set for the shortcut key, and click it.**

2 **Click one from [Cmd], [Alt], [Ctrl], and [Shift].**

3 **Select one alphabet to be used with the key chosen in step 2.**

4 **Click [Setting].**
The shortcut key set in step 2-3 appears in the blank space.
If click [Clear], the shortcut settings are canceled.

23
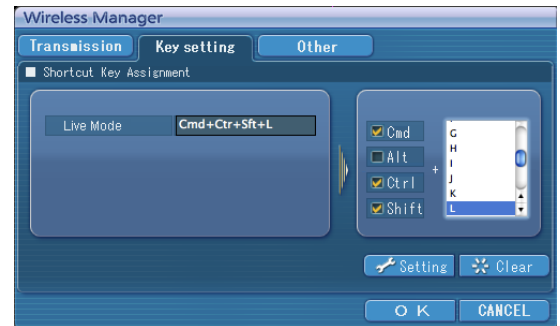
Setting options (cont.)

Other

■Automatic connection setting

You can perform automatic settings for newly connected projectors.

- If the [Make an automatic connection] box is checked and a projector is registered as a destination for automatic connection when Wireless Manager ME 4.5 is started, <Select Access Port> window does not appear and connection is performed automatically.
- When [Setting] is clicked, <Access Log> window appears and you can select projector(s) for automatic connections.
  Up to 5 projectors may be displayed in the order of most recent connection history.
  When it is desired to remove a projector from the display list, select it and press the [DELETE] → [OK] button.
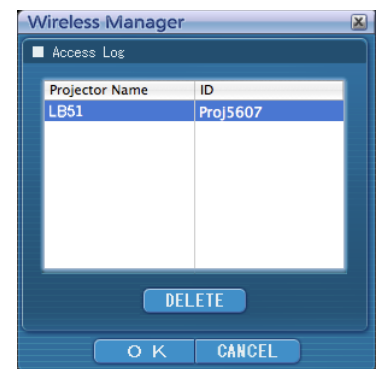
- When [Profile Creation] is clicked, the <Save> window appears.
  Create profiles with information about connected projectors.
  You can use the created profile to connect automatically.
  This function is called "One-click Connection."
  ① Double-click the profile.
  ② Drag-and-drop the profile on [🖥].
     The projector that in connection when the profile was created will be connected to.
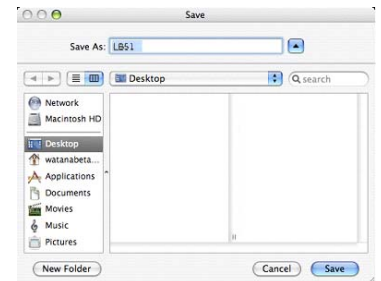
Version information

Version information for Wireless Manager ME 4.5 is displayed by clicking [About Wireless Manager] from the menu.

Network setting of the projector

When making a connection between a computer and a projector with settings other than the default settings, perform the procedure below to display the menu required when changing the initial settings.

Displaying the Wireless Menu

1 Press the [MENU] button on the projector.

The main menu appears.

PT-LB51NT		
PICTURE	PICTURE MODE	DYNAMIC
POSITION	CONTRAST	0 - — +
LANGUAGE	BRIGHTNESS	0 - — +
OPTION	SHARPNESS	0 - — +
SECURITY	COLOR TEMPERATURE	STANDARD
WIRELESS	DAYLIGHT VIEW	AUTO
	AI	OFF

RETURN
SELECT
ENTER
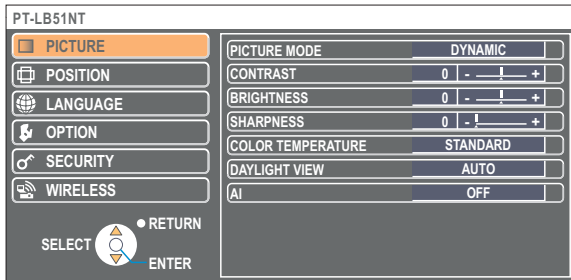
2 Select [WIRELESS] with the [▲ ▼] buttons.

The wireless menu appears.

PT-LB51NTE		
PICTURE	NETWORK	1
POSITION	NAME CHANGE	
LANGUAGE	INPUT PASSWORD	OFF
OPTION	PASSWORD CHANGE	
SECURITY	WEB CONTROL	ON
WIRELESS	LIVE MODE CUT IN	OFF
	STATUS	
	INITIALIZE	

RETURN
SELECT
ENTER
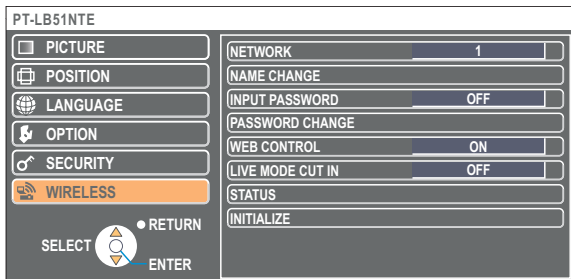
Note

Depending on the signals which are input to the projector, it may not be possible to adjust some of the items and use some of the functions.
In the case of an item that cannot be adjusted or a function that cannot be used, the corresponding on-screen item will not be displayed, and you will not be able to execute it even when you press the [ENTER] button.

Network setting of the projector (cont.)

Changing the network number

1 **Select [NETWORK] at the wireless menu.**

2 **Select the number to be connected with the [◄ ►] buttons.**

```
PT-LB51NTE
┌─────────────────┐  ┌─────────────────────────────┐
│ ☐  PICTURE      │  │ NETWORK      ◄  USER1  ►     │
│ ⊡  POSITION     │  │ NAME CHANGE                  │
│ 🌐  LANGUAGE    │  │ INPUT PASSWORD        OFF    │
│ ⚙  OPTION       │  │ PASSWORD CHANGE              │
│ ♂  SECURITY     │  │ WEB CONTROL           ON     │
│ 📶  WIRELESS    │  │ LIVE MODE CUT IN      OFF    │
│        ● RETURN │  │ STATUS                       │
│ SELECT          │  │ INITIALIZE                   │
│        ENTER    │  │                              │
└─────────────────┘  └─────────────────────────────┘
```

[User] settings

If you selected one of [USER1] to [USER3] for [NETWORK] at the wireless menu, you can make detailed network settings. Confirm to your system administrator before changing any settings.

IP address settings

■**How to display IP address setting menu**

  Press [NETWORK]→[USER1]-[USER3]→[ENTER] at the wireless menu.

```
DETAILED SETUP
                ┌──────────────────────────────────┐
                │ USER1                       1/3   │
                │ NAME CHANGE          USER1        │
                │ DHCP                 OFF          │
                │ IP ADDRESS           192.168. 11.100 │
      ● RETURN  │ SUBNETMASK           255.255.255.  0 │
 SELECT         │ GATEWAY              192.168. 11.  1 │
      ENTER     │        [ NEXT ]   [ CANCEL ]      │
                └──────────────────────────────────┘
```
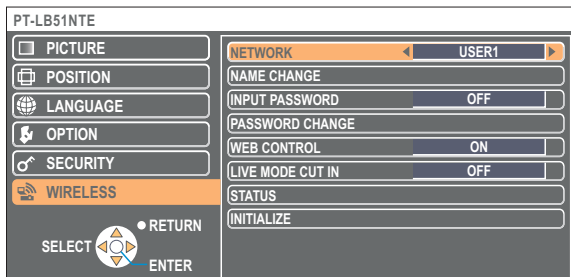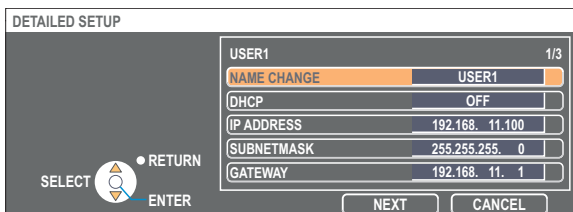
DHCP※:
    ON : If a DHCP server exists in the network to which the projector is connected, the IP address will automatically be
          acquired.
    OFF : If a DHCP server does not exist in the network to which the projector is connected, additionally set [IP
          ADDRESS※], [SUBNETMASK※] and [GATEWAY※].

※ "Glossary" (See page 39)

Network setting of the projector (cont.)

Wireless settings

Select [NEXT] on the IP address setting window to switch to the wireless setting window.
Make the settings related to the wireless connection between the projector and the network.

```
DETAILED SETUP

  USER1                                        2/3
  SSID            Panasonic Projector
  MODE                         AD HOC
  AUTHENTICATION               OPEN
  ENCRYPTION                   NONE
  CHANNEL                        1
        ● RETURN
SELECT                RETURN    NEXT    CANCEL
        ENTER
```

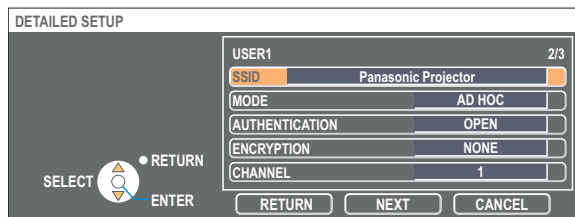■ SSID※ : If the mode is [INFRASTRUCTURE※], enter the SSID registered at the access point. If the mode is [AD HOC], enter the same character string as that of SSID set on the computer to be connected.

■ MODE : Select [AD HOC] or [INFRASTRUCTURE].
AD HOC※ : Connect projector and computer directly without access point.
INFRASTRUCTURE※ : Connect through access point.

■ AUTHENTICATION : Set the user authentication method used by the network to be connected.
OPEN : Select when making a connection using [AD HOC], or when the access point authentication method is OpenSystem※.
SHARED : Select when making a connection using [AD HOC], or when the access point authentication method is Shared Key※.
WPA-PSK※ : Select when the access point authentication method is WPA-PSK.

■ ENCRYPTION : Select the encryption method to be used for communication between the projector and the network.
NONE : Select when transmit without encryption. It is selectable only when [AUTHENTICATION] is [OPEN] or [SHARED].
WEP※ : Select when ENCRYPTION is WEP.
TKIP※ : Select when ENCRYPTION is TKIP.
Selectable when [AUTHENTICATION] is [WPA-PSK].
AES※ : Select when ENCRYPTION is AES.
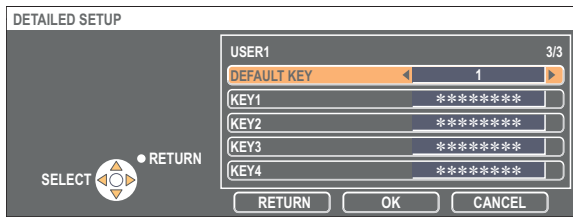Selectable when [AUTHENTICATION] is [WPA-PSK].

※ "Glossary" (See page 40)

Note

If you are unable to connect to the wireless LAN through the access point even after performing the steps in "① Projector settings (See page 14)," contact the manufacturer of the access point.

Network setting of the projector (cont.)

Additionally perform the following setting using the [AUTHENTICATION] setting.

```
DETAILED SETUP
┌─────────────────────────────────────────────┐
│  USER1                                 3/3   │
│  DEFAULT KEY          ◄      1       ►        │
│  KEY1                      ********           │
│  KEY2                      ********           │
│  KEY3                      ********           │
│  KEY4                      ********           │
│         ● RETURN                              │
│  SELECT ◄○►    [ RETURN ] [ OK ] [ CANCEL ]   │
└─────────────────────────────────────────────┘
```

■ When setting [OPEN] or [SHARED] as authentication and setting [WEP※] as the encryption method:
DEFAULT KEY : Set 1 – 4 numerals for the default key.
KEY 1 – 4   : Set these to match the WEP key registered in [DEFAULT KEY].
Either the 64-bit or 128-bit WEP key can be set. For the 64-bit key, input five alphanumerics (or a 10-digit string for the hexadecimal format) for the 128-bit key, input 13 alphanumerics (or a 26-digit string for the hexadecimal format).

■ When setting [WPA-PSK※] as authentication : Set key and select [OK].
Input either 8 to 63 alphanumerics or a 64 digit string in the hexadecimal format.

※ "Glossary" (See page 40)

> **Note**
>
> Important video/audio data is protected because AES※ encryption processing takes place in advance for all network numbers, even if [ENCRYPTION] is set to [NONE].

※ "Glossary" (See page 40)

Default settings of [USER1]-[USER3]

The following settings as [USER1]-[USER3] in the wireless LAN are set before the projector leaves the factory.

|	
SSID	: Panasonic Projector
DHCP	: OFF
IP ADDRESS	: 192.168.11.100
SUBNETMASK	: 255.255.255.0
GATEWAY	: 192.168.11.1
MODE	: AD HOC
AUTHENTICATION	: OPEN
ENCRYPTION	: NONE

Network setting of the projector (cont.)

Changing the projector name

You can change the projector name on the network.
It makes easy to recognize projectors in <Select Access Port> window.

1 **Select [NAME CHANGE] at the wireless menu and press the [ENTER] button.**
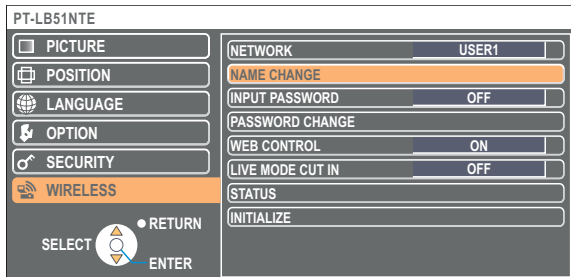
2 **Enter the projector name using the [◄ ► ▲ ▼ ENTER] buttons.**

3 **After entering the projector name, select [OK] and click [ENTER].**

To cancel the change, select [CANCEL] and press the [ENTER] button.
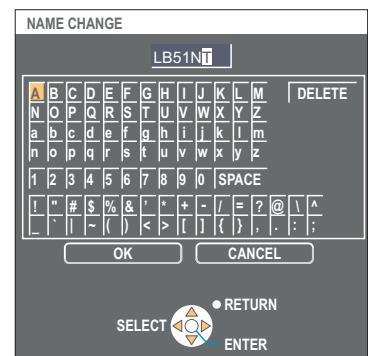
Password setting

This setting is used to limit the users that can connect to the projector.

1 **Select [INPUT PASSWORD] at the wireless menu.**
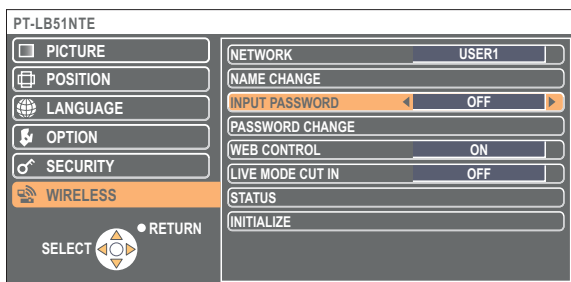

2 **Select [ON] with the [◄ ►] buttons.**

3 **Select [PASSWORD CHANGE] at the wireless menu and press the [ENTER] button.**

Network setting of the projector (cont.)

4 Enter the password using the [◄ ►▲ ▼ ENTER] buttons.

5 After entering the password, select [OK] and click [ENTER].
To cancel the change, select [CANCEL] and press the [ENTER] button.
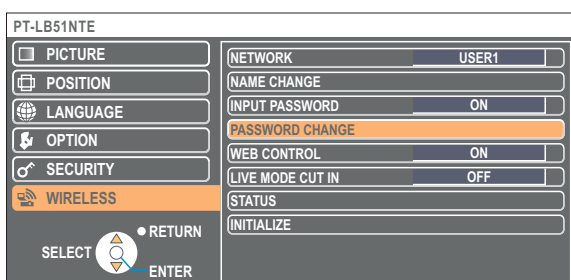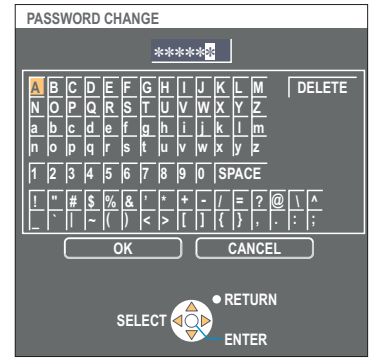
Live mode cut-in

During the live mode, a different computer can interrupt and project images in the live mode.

1 Select [LIVE MODE CUT IN] at the wireless menu.

2 Select [ON] or [OFF] with the [◄ ►] buttons.

Network setting of the projector (cont.)

Verifying settings

Select [STATUS] at the wireless menu and press the [ENTER] button.

Your current settings appear.

```
PT-LB51NTE
┌─────────────────┐  ┌───────────────────────────────┐
│ ☐ PICTURE       │  │ NETWORK              USER1     │
│ ☐ POSITION      │  │ NAME CHANGE                    │
│ 🌐 LANGUAGE     │  │ INPUT PASSWORD       OFF        │
│ 🔧 OPTION       │  │ PASSWORD CHANGE                │
│ ⚐ SECURITY      │  │ WEB CONTROL          ON         │
│ 📶 WIRELESS     │  │ LIVE MODE CUT IN     OFF        │
│         ●RETURN │  │ STATUS                         │
│ SELECT          │  │ INITIALIZE                     │
│         ENTER   │  │                                │
└─────────────────┘  └───────────────────────────────┘
```
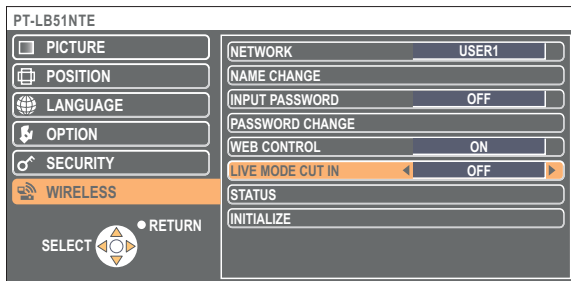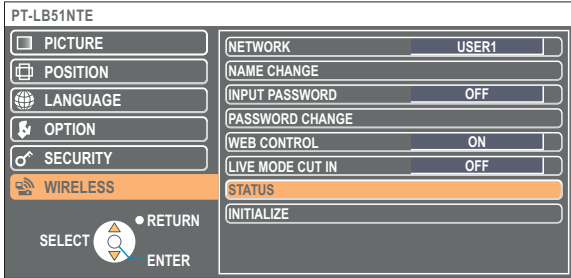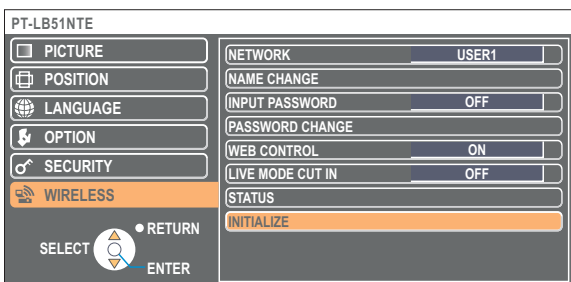
The status of the following will appear.

ANTENNA LEVEL	(The strength of the connection will appear.)
NETWORK	"DISABLE", "– – –", "1" - " 4", "USER1" - "USER3"
MODE	"AD-HOC" - "INFRASTRUCTURE"
CHANNEL	Refer to page 5 for usable channels.
SSID	(See page 27)
AUTHENTICATION	"OPEN" - "SHARED" - "WPA-PSK"
DEFAULT KEY	"-" - "1" - "4"
ENCRYPTION	"NONE" - "WEP" - "TKIP" - "AES"
DHCP	"OFF" - "ON"
IP ADDRESS	(See page 28)
SUBNETMASK	(See page 28)
GATEWAY	(See page 28)
MAC ADDRESS	

Returning to the Initial Settings

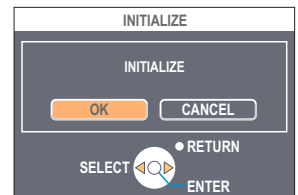You can return the changed settings to the initial conditions.

1 Select [INITIALIZE] at the wireless menu and press the [ENTER] button.

```
PT-LB51NTE
┌─────────────────┐  ┌───────────────────────────────┐
│ ☐ PICTURE       │  │ NETWORK              USER1     │
│ ☐ POSITION      │  │ NAME CHANGE                    │
│ 🌐 LANGUAGE     │  │ INPUT PASSWORD       OFF        │
│ 🔧 OPTION       │  │ PASSWORD CHANGE                │
│ ⚐ SECURITY      │  │ WEB CONTROL          ON         │
│ 📶 WIRELESS     │  │ LIVE MODE CUT IN     OFF        │
│         ●RETURN │  │ STATUS                         │
│ SELECT          │  │ INITIALIZE                     │
│         ENTER   │  │                                │
└─────────────────┘  └───────────────────────────────┘
```

Note

You will be prompted to enter the password if [ON] has been selected as the [INPUT PASSWORD] setting on the [⚐ SECURITY] menu.

2 Select [OK] with the [◄ ►] buttons and press the [ENTER] button.

```
┌───────────────────────┐
│      INITIALIZE        │
│                        │
│      INITIALIZE        │
│                        │
│   [ OK ]  [ CANCEL ]   │
│                        │
│            ●RETURN     │
│  SELECT ◄○►            │
│            ENTER       │
└───────────────────────┘
```

Using WebBrowser

Control a projector through the WebBrowser of a computer. It is called "WEB Control".
(This example uses "Safari" by Apple, Inc.)

Before using the WebBrowser control

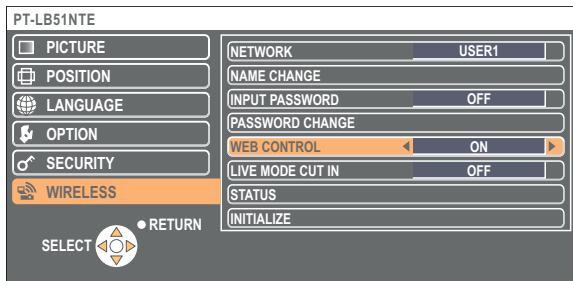Connect projector and computer. (See page 10)

① **Projector settings**
   Set the [WEB CONTROL] of the wireless menu [ON].

1 **Select [WEB CONTROL] at the wireless menu.**

2 **Select [ON] or [OFF] with the [◀ ▶] buttons.**

ON : This enables control on the WebBrowser.
OFF : This disables control on the WebBrowser.

```
PT-LB51NTE
┌──────────────────┐  ┌─────────────────────────────┐
│ □  PICTURE        │  │ NETWORK              USER1  │
│ ⊡  POSITION       │  │ NAME CHANGE                 │
│ 🌐 LANGUAGE       │  │ INPUT PASSWORD        OFF   │
│ ✦  OPTION         │  │ PASSWORD CHANGE             │
│ ♂  SECURITY       │  │ WEB CONTROL     ◀     ON  ▶ │
│ 📶 WIRELESS       │  │ LIVE MODE CUT IN      OFF   │
│         ● RETURN  │  │ STATUS                      │
│   SELECT ◀◉▶      │  │ INITIALIZE                  │
│          ▽        │  │                             │
└──────────────────┘  └─────────────────────────────┘
```

> **Notes**
> • When the projector settings have been changed using a WebBrowser, the projector will not appear on the connection list until the projector network is switched to [USER 1] - [USER 3].
> • After the projector network has been switched to [USER 1] - [USER 3], manually release the proxy settings of the WebBrowser used.

② **Computer settings**

■Proxy server settings

   Release the proxy settings of the WebBrowser used.

1 **Click [Preferences] from the [Safari] menu.**
   The <General> window appears.

2 **Click [Change Settings...] next to [Proxies] on the [Advanced] tab.**
   Click [Proxies] and select a proxy server.

3 **If a checkmark appears in the [Web Proxy] checkbox, remove it. If a checkmark appears in the [Automatic Proxy Configuration] checkbox, remove it.**

4 **Click [Apply Now].**
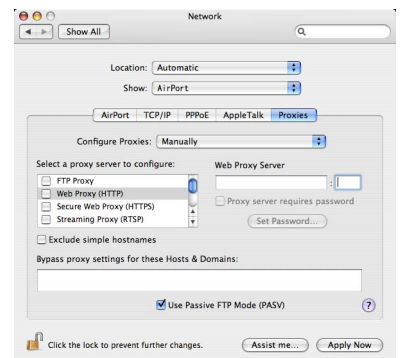
> **Note**
> When the user does not have the [Admin (administrator)] authority, the [Admin (administrator)]'s name and password are required to make network settings.

Using WebBrowser (cont.)

■**Enabling JavaScript**
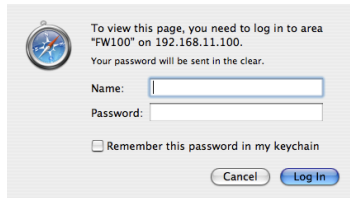   If JavaScript has been set to disable, enable it.

1 **Open the [Security] tab in Safari.**

2 **Place a checkmark in the [Enable JavaScript] checkbox next to [Web Content].**

Accessing from the WebBrowser

1 **Select [WEB control] from the menu.**
   The WebBrowser starts up and the authentication window appears.

<Top window>

2 **Enter the user name and the password.**

3 **Click [OK].**
   <Monitored information> window appears. (Next page)

   Notes
   • The default user name and password settings are as follows.
     User name: user1
     Password: (The password is not set.)
   • Password used in this page is for accessing the web control window. (See page 37)
     This password is different from the password set in page 29 for accessing a projector.
   • If you forget the password, perform [INITIALIZE] using the wireless menu of the projector (See page 31) and set a password
     again using the <Change password> window on the WebBrowser. (See page 37)
   • The top window may not appear depending on the WebBrowser. In this case start up WebBrowser again, or press the [Cmd] +
     [R] keys for example to update the screen.
   • It may take some moments for WebBrowser to start up.
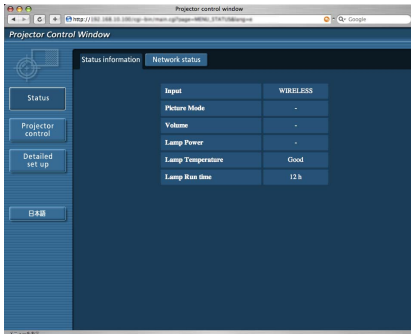
Using WebBrowser (cont.)

Monitor information window

This page indicates the projector status.
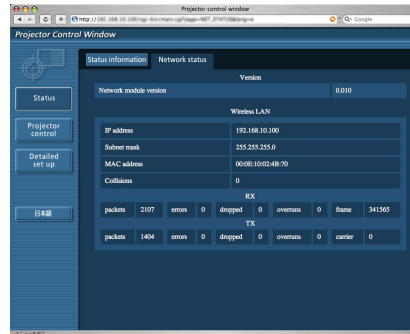**To access this page from other pages, click [Status] at the left of the window.**

■Monitored information

On this window, click the [Status information] tab.

■Network information

On this window, click the [Network status] tab.

> **Note**
>
> The monitor information is refreshed at fixed intervals, but the current exact information can be checked by clicking [View] → [Reload Page].
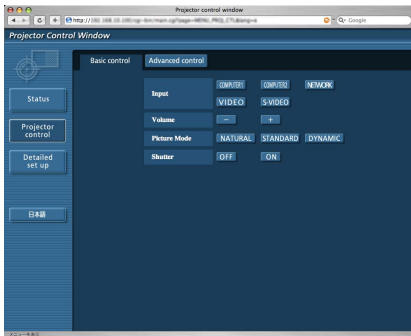
Using WebBrowser (cont.)

Projector control window

You can make various projector settings.
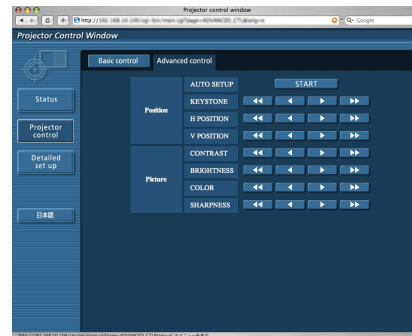**To access this page from other pages, click [Projector control] at the left of the window.**

■Basic control window

On this window, click the [Basic control] tab.

■Advanced control window

On this window, click the [Advanced control] tab.

> **Note**
>
> Connection with the projector may not be possible immediately after the power is turned on. In this case wait a bit and then make the connection again.

Using WebBrowser (cont.)

You can make detail network settings for the projector, when connecting without [Admin (administrator)] authority or when connecting through an access point (infrastructure mode).

■LAN settings

1 **Click [Detailed set up] in the menu.**

2 **Select the items to change and click [NEXT].**

The settings window appears, showing the current settings.
• To change the LAN settings, click [CHANGE].
• To return to the previous window, click [BACK].
Settings in this page are the same when setting [USER 1] - [USER 3] from network menu of the projector. (See page 26)
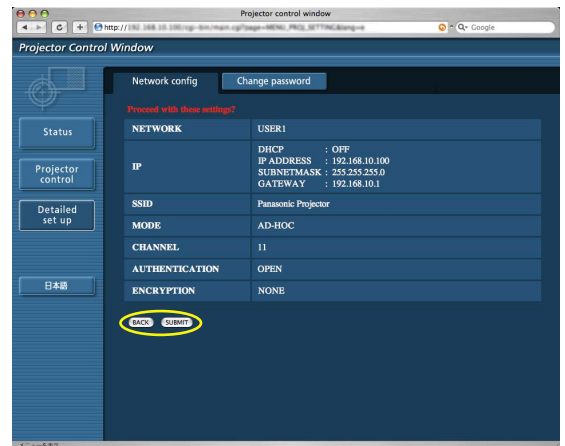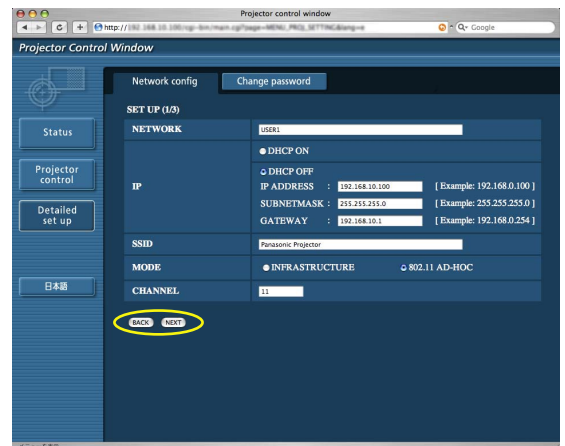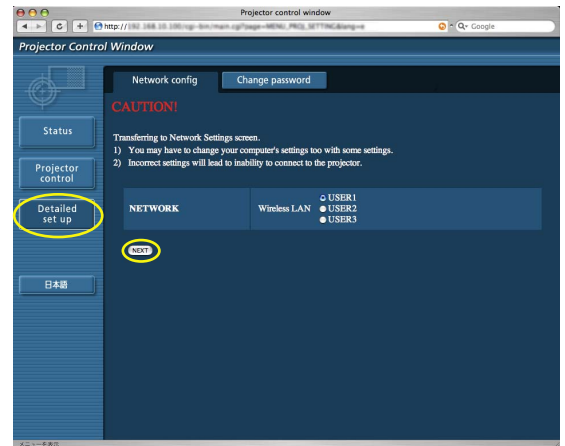
3 **Complete the detailed settings and click [NEXT].**

When [NEXT] is clicked, the next page appears, enabling you to complete the detailed settings as desired.
After all required items have been entered, a confirmation window appears.

4 **Click [SUBMIT].**

The settings will be registered.

■Making the above settings effective

Select [NETWORK] in the wireless menu of the projector, and use the [◄ ►] buttons to select the network set in this page.

Note

Important video/audio data is protected because AES※ encryption processing takes place in advance for all network numbers, even if [ENCRYPTION] is set to [NONE].
※ "Glossary" (See page 40)

Using WebBrowser (cont.)

■Password settings

Click [Detailed set up]→[Change password] in the menu.

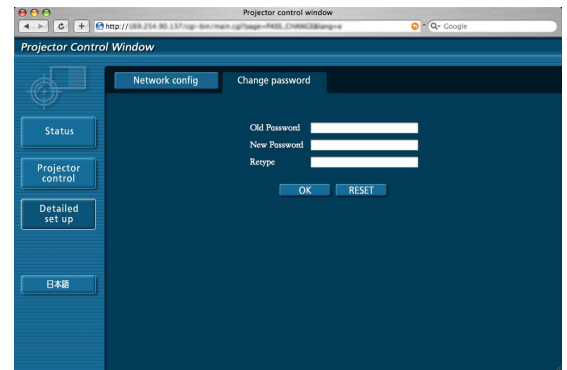Set a password for access of the [Projector control window].
Enter the previous password and the new password.
Enter the new password in [Retype] and click [OK].

> **Note**
>
> You can enter a password up to 16 characters (upper case/lower case) and symbols.

Software Uninstall

1 Drag-and-drop [ ] from the [Applications] folder to the [Trash].

2 Select [Empty Trash...] from the [Finder] menu.

Glossary

Category	Item	Descriptions	Page
Common Setting of connections	**LAN**	Abbreviation for Local Area Network. This is a network with a relatively narrow range such as inside a company.	**7**
	Access point	These are stations for relaying electromagnetic signals between computers in a wireless LAN. When a computer is connected to an access point, it can communicate through the network connected to the access point.	**14**
	MAC ADDRESS	Each network card has its own ID No. A discrete ID No. is assigned to each and every network card around the world. These IDs are used to exchange data between cards. These IDs are a combination of a discrete number managed and assigned by the IEEE to each individual manufacturer and a unique number assigned to each individual card by the manufacturer.	**14**
	IP address	Internet Protocol (IP) is a protocol for distributing data, and the address corresponding to the data distribution destination is called the IP address. The same IP address cannot be used within the same LAN.	**16/ 26**
	DHCP	Abbreviation for Dynamic Host Configuration Protocol. This function automatically assigns IP addresses to the connected equipment. If a device with the DHCP server function is present within a LAN, it automatically assigns IP addresses to the connected equipment.	**26**
	Subnetmask	This limits the range of the IP addresses assigned to computers in order to divide the network into a number of sections during TCP/IP connection. The value used to divide the network at this time is called the subnetmask.	**26**
	Gateway	This is a relay point for connecting different networks. This refers to the hardware and software used when connecting a network with a network that uses a different protocol, etc. It adjusts the protocol and other differences between networks to allow connection with other networks.	**26**

Glossary (cont.)

Category	Item	Descriptions	Page
Advanced setting of connection	**AD_HOC**	This is the mode in which computers communicate with each other directly, rather than via access points.	**27**
	INFRASTRUCTURE (infrastructure mode)	This is the mode in which communications are performed via the access point.	**14/ 27**
	SSID	Abbreviation for Service Set ID. The SSID identification code must be set to distinguish equipment included in a wireless LAN that uses access points from equipment not included in that LAN. This may appear as the "ESSID" or the "network name" for wireless LAN cards made by some manufacturers.	**27**
	Open System/ OPEN	This is an authentication of wireless signals employing a public key encryptosystem.	**27**
	Shared Key/ SHARED	This is a secret key encryptosystem for wireless signals in which authentication is performed with a key pre-set in the WEP. Other terms for this method, in which the same key is used for both encryption and decryption, are "shared key encryptosystem" and "common key encryptosystem".	**27**
	WPA-PSK	This is a standard covering encryption methods used in wireless LAN. It provides greater security than WEP, and has functions such as a user authentication function and also TKIP (encryption protocol) which automatically changes the encryption key at fixed intervals. And this authentication requires no authentication server.	**27/ 28**
	WEP	Abbreviation for Wired Equivalent Privacy. This is a method for encrypting communication data. The encryption key is created and notified only to the communicating user, so the communication data cannot be decrypted by a third party.	**27/ 28**
	TKIP	Abbreviation for Temporal Key Integrity Protocol. This encryption protocol provides even greater security than WEP because it changes the encryption key at fixed intervals.	**27**
	AES	These are the US Government's next-generation standard encryption methods, the selection work of which is performed by the National Institute of Standards and Technology (NIST).	**12/ 27/ 28/ 36**

Frequently Asked Questions

Check the following points once more before requesting repair.

No wireless connection can be made between my projector and my computer.

• **Is Wireless Manager ME 4.5 running?**
Wireless Manager ME 4.5 must be started in the computer in order to enable wireless transmissions of images to the projector.
 	
<When the user does not have the [Admin (administrator) authority>
   • When the user does not have the [Admin (administrator)] authority, the [Admin (administrator)]'s name and password are required to make network settings.
 	
<Network setting error>
   When connecting with Network number [U], make sure whether wireless menu setting of the projector is correct or not. (See page 26)

I get dropped from the network.
• **Did the projector enter [Sleep] mode?** If the projector goes to [Sleep] and is disconnected from the network, quit and restart Wireless Manager ME 4.5. • **Did you connect to the network via an Easy Wireless Set Up ([1], [2], [3] or [4]), use Wireless Manager ME 4.5 and then quit the application?** The projector can be disconnected from the network if you connect via an Easy Wireless Set Up ([1], [2], [3] or [4]), use Wireless Manager ME 4.5 and then quit the application. Set up your wireless LAN again.

I cannot connect to the network via an Easy Wireless Set Up.
• **<[1] to [4] or [U (user)] cannot be selected in access point searches despite selecting [Wireless LAN].>** Is Wireless Manager ME 4.5 installed in the [Applications] folder? For an Easy Wireless Set Up, Wireless Manager ME 4.5 must be installed in the [Applications] folder (./Applications).

I cannot find the projector.
• **Did you make your network settings before starting Wireless Manager ME 4.5?** Set up your network before starting Wireless Manager ME 4.5, in order to connect to the projector in the infrastructure mode (connect via an access point). When the user does not have the [Admin (administrator)] authority, the [Admin (administrator)]'s name and password are required to make network settings.

I cannot lower the display brightness.
• **Is a checkmark placed in the [Disable Screen Saver] checkbox?** The brightness of the built-in display cannot be lowered if a checkmark appears in the [Disable Screen Saver] checkbox of the <Option> window of Wireless Manager ME 4.5.

Frequently Asked Questions (cont.)

Wireless connection is lost shortly.

• If the live mode is canceled or the connection is lost, start the reconnection procedure from the menu.
 If it is still not possible to establish a connection to the LAN, power off the projector, wait for the cooling fan to stop operating (after the power monitor on the projector changes from orange to red), power the projector back on, and then start the connection procedure from the menu once again. (See page 10)

The connection cannot be established with IEEE802.11 g.

• In environments with wireless LAN adapters that support both IEEE802.11b and 802.11g, the connection may be established via 802.11b.
• In some operating environments, the connection may be established via 802.11b, depending on the location, radio signal conditions, distance, or other factors.
• Some wireless LAN adapters only support ad hoc connections via IEEE802.11b.

The transfer rate is slow.

• The transfer rate may be slower in some operating environments (depending on such factors as the location, radio signal conditions or distance).
• Avoid placing metal objects or other conductors near the wireless LAN antenna of a computer, otherwise the transfer rate may be slower.
• When WEP is set the image data is converted, so transfer takes time.

Image display is slow or animation is not displayed smoothly.

• Is the computer CPU speed slow? (See page 8)
 Live mode depends largely upon the computer CPU performance.
• Adverse effects may be exerted if there is any wireless communication in the vicinity.
• When [Resolution] is set to [High Definition] in the <Option> window (See page 22), it may take longer time to display images.
• The speed may be slower when any other applications are running concurrently.

Frequently Asked Questions (cont.)

There is a time lag between operations at the computer and results in the projected image.
• Wireless Manager ME 4.5 reads the screen, compresses the data and transmits it to the projector. In the projector, the received data are extracted and then projected. Some delays occur in this system, due to the processing time and factors in the wireless environment. Different computers may also produce varying lag times.

The Wireless Manager ME 4.5 color display is strange and characters are difficult to read.
• Check the [Colors] setting on the [Display] tab in [System Preferences]. Set [Colors] to [Thousands] or higher. The live mode cannot be projected when set to [256 Colors].

Making a wireless LAN connection while using the internet
• If you have a wireless LAN environment which allows an internet connection, placing the projector on that network will allow you to use the internet and the wireless connection at the same time. (See page 14) • If you have a wired internet connection, this projector allows wireless use simultaneously with a wired connection to the internet.

The web control window does not appear.
• Manually release the proxy settings of the WebBrowser used.

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