Panasonic

Network Function Edition

(PT-LB20NTU / PT-LB30NTU)

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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.

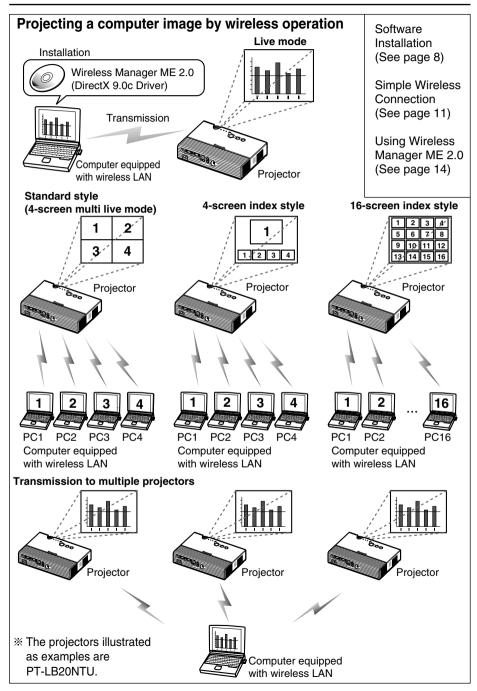
Notes on Using Wireless Connection (cont.)

■ Channels that can be used

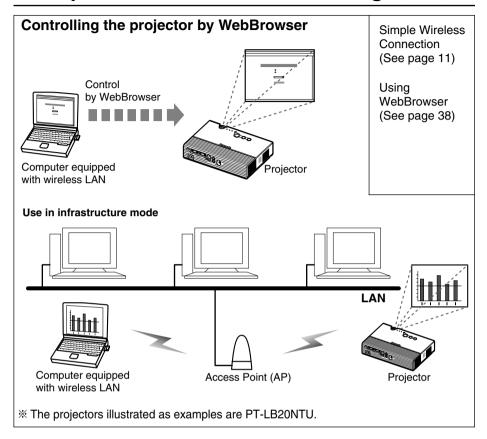
The channels (frequency range) that can be used differ according to the country or region. Refer to the table below.

Country or region	Standard	Channels used	Frequency band (Center frequency)	
Japan	ARIB STD-T66			
England, Germany, France, Spain Italy, Belgium, Austria, Sweden, Norway, Denmark, Switzerland, Holland, Finland, Portugal, Greece, Thailand, South Korea	ETSI 300.328	1 - 13	2,412 MHz - 2,472 MHz	
Singapore	IDA			
Australia, New Zealand	C-Tick			
Malaysia	SIRIM			
United States	FCC part 15	1 - 11	2,412 MHz -	
Taiwan	DGT	1-11	2,464 MHz	

Examples of Network Function Usage



Examples of Network Function Usage (cont.)



Software Installation

System requirements

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

OS: Windows 98SE (Second Edition) /Me (Millennium Edition) /2000

Professional/XP Home Edition/XP Professional

CPU: Pentium III or faster or compatible processor (800 MHz or faster is

recommended when using live mode and 1 GHz or faster is

recommended when playing movies.)

RAM: 128 MB or more (256 MB or more for Windows 2000/XP).

Empty hard disk capacity:

60 MB or more

Hardware conditions:

CD-ROM drive (for software installation and viewing the user's manual) An 802.11 b/g built-in wireless LAN system or an 802.11 b/g wireless

LAN card must be installed and running properly.

However, some 802.11 b/g wireless LAN may not allow connection to

802.11 g projectors.

Web browser: Internet Explorer 6.0 or newer

Netscape Communicator 7.0 or newer

DirectX: Environment required for running Ver.8.1b or newer

Note:

Note that operation is not guaranteed when used with system environments other than the above or on homemade computers.

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

Software Installation (cont.)

Wireless Manager ME (Mobile Edition) 2.0

Wireless Manager ME 2.0:

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

Notes:

- Shut down all software currently active on Windows. Otherwise, installation may not be possible.
- Administrator authority is required for installation with Windows 2000/XP.

1 Set the supplied CD-ROM in the CD-ROM drive. The installer starts up automatically and the following screen appears.



Note:

If the installer does not start up automatically, double-click [EasyInstall] \rightarrow [Easy_Inst.exe] in the CD-ROM.

2

Click [Wireless Manager ME 2.0].

Follow the instructions on the screen and install the software.

Note:

If Wireless Manager ME 1.0 has been installed, uninstall it by following the instructions on the screen.

Software Installation (cont.)

DirectX 9.0c Driver

To transfer moving picture using the projector, your computer must have DirectX driver Ver.8.1b or newer. This CD-ROM has the latest version of DirectX. However, it cannot be installed in a machine which runs Windows 98SE or Windows Me.

Click [DirectX 9.0c Driver] in step 1 on page 9.

The License Agreement for DirectX appears.



Place a check in the [I accept the agreement] checkbox and click [Next].

The DirectX Runtime component install window appears.

Click [Next].

- The DirectX component install progress bar appears.
- Do not perform any other operations until installation is complete.

< Back Newt> Cancel

4 Click [Finish] when the window on the right appears.



Notes:

- Once installed, the DirectX 9.0c Runtime cannot be uninstalled.
- In rare cases, installing DirectX 9.0c may prevent your computer from starting up properly. Before installing, be sure to verify with the customer support office of the manufacturer that the video card of your computer is compatible with DirectX 9.0c.
- No guarantees are made for the operation of Wireless Manager ME 2.0 with a version newer than DirectX driver Ver. 9.0c.

Simple Wireless Connection (Using the Initial Settings)

When making a wireless connection between the projector and the computer using the default settings, if the projector is in the ON condition, and the computer has built-in wireless LAN or has a wireless card installed (with the driver installed and running properly), the necessary settings will be made automatically when Wireless Manager ME 2.0 is started.

However, note that Wireless Manager ME 2.0 must be installed.

For details on changing the initial settings and using the changed settings, refer to pages 29 to 36.

Notes:

- Operation is not guaranteed for all wireless cards and built-in wireless LAN adapters.
- Refer to the following URL for the types of wireless cards that can be used. http://panasonic.co.jp/pavc/global/projector/
- Other network adapters may not be usable under simple connections.
- Connections to other networks connected through the wireless card are broken during simple connections.
- Administrator authority is required for installation of simple connections in Windows 2000/XP. (Refer to page 53 for the procedure if you do not have the authority of the administrator and to page 48 for the restrictions applying in such a case.)

Projector operations

Turn on the projector.

Note:

When using a computer which is not equipped with an built-in wireless LAN, install the wireless card driver beforehand. For details on how to install the driver, refer to the instructions accompanying the wireless card.

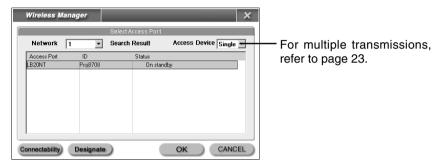
Simple Wireless Connection (Using the Initial Settings) (cont.)

Computer operations

1 Turn on the computer.

2 Select [Start] \rightarrow [Programs] \rightarrow [Panasonic Wireless Display] \rightarrow [Wireless Manager mobile edition 2.0].

Wireless Manager ME 2.0 starts up, and the connection select window shown below appears.



3 Select the connection and click [OK].

The launcher shown below appears and the connection with the projector is established.



Notes:

- The initial network number for both the projector and the computer is "1". These numbers must match for the connection.
 - Also, WEP is enabled when network number is anything but "1", so when security is a concern, use a different number than "1".
 - Image and audio data are encrypted using AES in all networks, so essential data are protected.
- Depending on the computer and wireless card used, automatic setup may not be possible. If this is the case, the [Network] setting on the screen in step 2 above will be switched to [USER] automatically. For details of the connection procedure, first close Wireless Manager ME 2.0, and then refer to page 32.
- When anti-virus software and utilities for network cards are installed, these may prevent connection of the projector. (See pages 51 to 53)

Simple Wireless Connection (Using the Initial Settings) (cont.)

Canceling the connection with the projector

1 Click [X] on the launcher.

The following window appears.



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.

Using Wireless Manager ME 2.0

Startup

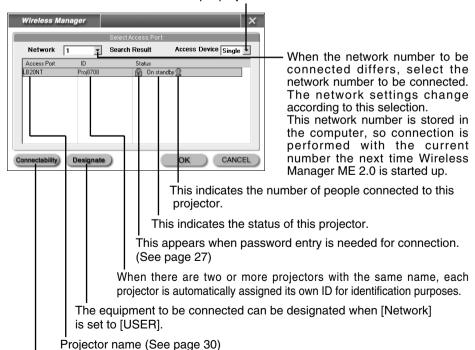
Select [Start] → [Programs] → [Panasonic Wireless Display] → [Wireless Manager mobile edition 2.0].

Description of the connection select window

When the [Make an automatic connection] checkbox in [Automatic connection setting] has been checked in Options (see page 26) and a connection with the projector registered as a destination for automatic connection is possible, connection with the projector will be performed automatically, and the connection select window will not be displayed.

When only one projector is connected, select [Single] and the projector from the list of destination.

When multiple projectors are connected, select [Multi-] and select multiple projectors.



Click this to display the projector name at the upper left of the projection screen for the projector in question.

Description of the launcher and menu

 The launcher always appears on the computer screen, and can be used to perform various operations.

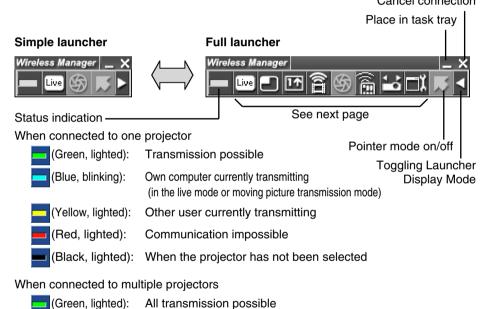
Two types of launchers are available in the Launcher Display Mode, the simple launcher and the full launcher. Ordinarily, the full launcher is displayed. The Launcher Display Mode can be toggled by clicking on the button on the right side of the launcher window.

Two window sizes are allowed the standard and an expanded version. This is

Two window sizes are allowed, the standard and an expanded version. This is controlled in [Launcher size setting] in Options (see page 26).

• Right-click [] on the task tray to display the menu when the menu has been placed on the task tray by the launcher.

Cancel connection



Notes:

(Red, lighted):

• With Windows 2000 or Windows XP, the launcher appears only on the computer screen and is not projected by the projector.

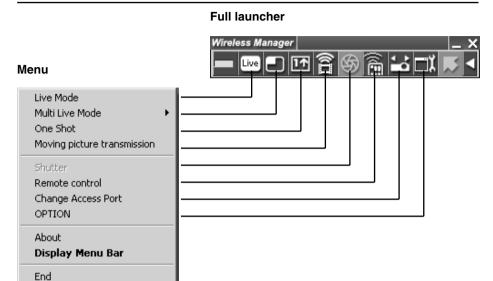
(Yellow, blinking): Communication impossible for more than one unit

All communication impossible

(Blue, blinking): Currently transmitting

• With Windows 98SE or Windows Me, you can place the launcher on the task tray and use it as a menu from the task tray when you do not wish to display the launcher on the projector's projection screen.

(Continued on next page)



Live Mode: Displays the computer screen over the entire projection screen.

(See page 17)

Multi Live Mode: Offers a choice of three styles: the standard style (for displaying

the images on one of the four windows into which the screen has been divided), the 4-screen index style (for displaying 4 indexed images), and the 16-screen index style (for displaying the images on one of the 16 windows into which the screen has

been divided).

In 16-screen index style mode, [] changes to []. (See pages 18 to 21)

Transmits a snapshot of the current computer screen to the

projector one time. (See page 21)

Moving picture transmission:

One Shot:

Displays the movie select window. (See page 22)

However, this menu item does not function with Windows 98SE or Windows Me. When transferring to or closing moving picture transmission, the computer screen blanks for a moment, but

this is not an indication of any malfunction.

Shutter: Blanks the screen for a moment. (This menu item functions only

in the live mode.)

Remote control: Starts up WebBrowser. (See pages 40 to 44)

Change Access Port: Displays the connection select window. (See page 14)

OPTION: Displays the option setting window. (See pages 24 to 26)

About: Displays the Wireless Manager ME 2.0 version information.

Display Menu Bar: Displays the launcher.

■ Screen styles that allow the projection modes to be used

Computer side Projector side	Live mode	Multi Live mode	One shot mode	Moving picture transmission
Standard style	\checkmark	\checkmark	\checkmark	\checkmark
4-screen index style	×	$\sqrt{}$	×	×
16-screen index style	×	V	×	×

$$\sqrt{\ }$$
 = Yes \times = No

Live mode

- Check the status indication on the launcher to make sure that transmission is possible (check that the green lamp is lighted).
- 2 Click [Live] on the launcher.

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.

Notes:

- For presentations in live mode, the [▲▼] 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 [▲▼]buttons, the presentation screen can be changed using the remote control.
- Movie play is slowed if [High Definition] is selected in the Options.
- Some portions of images are not projected under some applications (MS Office Assistant, IME Bar, and others).

■ Quitting live mode

Click [i on the launcher.

Note:

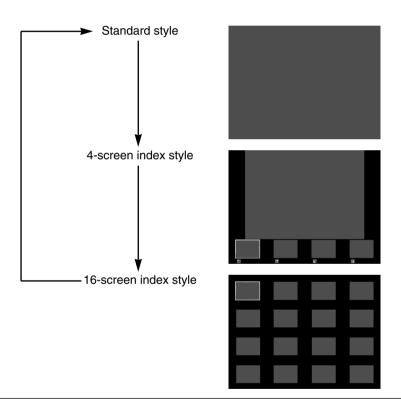
Whether to keep the last image in the projector or clear it after quitting live mode can be set as an option. (See page 25)

Multi live mode

Multi live mode allows simultaneous projection of the contents of the monitors of 4 computers (Standard style, 4-screen index style) and of 16 computers (16-screen index style) onto a single screen.

Switching from one style to another

Either press the [INDEX WINDOW] button on the remote control or select [INDEX WINDOW] on the projector's main menu (See page 28) and press the [ENTER] button.



Notes:

- The default setting is the standard style.
- When the projector starts up, it resumes in the current style the last time the projector was turned off.
- When the style setting is switched, the connection to the computer is broken, so this must be re-established.
- When transferring to the live mode, first select the standard style, and then click on the computer.

- Standard style (4-screen multi live mode)
 - Check the status indication on the launcher to make sure that transmission is possible (check that the green lamp is lighted).
 - 2 Click [] on the launcher.
 - Select and click the projection position. The computer image is transmitted to the selected guarter of the projection screen.





Switching to a different position

Select and click a different projection position in step 3 above.

Quitting multi live mode

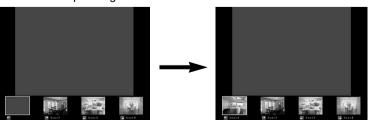
Select and click the checked position in step 3 above.

Note:

In the 4-screen multi live mode, the computer screens from all the computers connected to the projector can be transmitted to the projector. (If an image from another computer has been sent to the image position where an image is already displayed, the existing image is replaced by the new image.)



- 4-screen index style
 - Check the status indication on the launcher to make sure that transmission is possible (check that the green lamp is lighted).
 - 2 Click [🔄] on the launcher.
 - Select and click the projection position. The computer image is transmitted to the area of corresponding window.





Enlarged display

- Use the [◀ ▶] buttons on the remote control to move the focus (yellow box) to the image to be enlarged, and press the [ENTER] button. The image is enlarged and displayed at the top of the projection screen.
- The image display will fill the entire screen if the [ENTER] button is pressed again.



 To return to the 4-screen index style, press the [ENTER] button again.

Note:

While an enlarged image is displayed, the $[\blacktriangle \blacktriangledown]$ 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 $[\blacktriangle \blacktriangledown]$ buttons, the presentation screen can be changed using the remote control.

Now use the $[\blacktriangle \blacktriangledown]$ button to set the window of the application that you want to run to the active status. (If you operate the launcher, you will set the launcher to the active status: as a result, you will need to set the window of the required application to the active status again.)

Quitting multi live mode

Select and click the checked position in step 3 on the previous page.



Note:

In the 4-screen index style mode, the green status display lamp remains lighted. Other computers can send images only to the windows which are not being used.

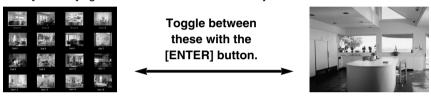
■ 16-screen index style

- Check the status indication on the launcher to make sure that transmission is possible (check that the green lamp is lighted).

The computer images are automatically sent to the empty windows on the 16-screen display.

Enlarged display

- Use the [◀ ▶ ▲▼] buttons on the remote control to move the focus (yellow box) to the image to be enlarged and press [ENTER] to expand that image to fill the display.
- Press [ENTER] again to return to the 16-screen style.



Note:

While an enlarged image is displayed, the [$\triangle \nabla$] 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 [$\triangle \nabla$] buttons, the presentation screen can be changed using the remote control.

Now use the $[\blacktriangle \blacktriangledown]$ button to set the window of the application that you want to run to the active status. (If you operate the launcher, you will set the launcher to the active status: as a result, you will need to set the window of the required application to the active status again.)

Quitting multi live mode

Click [] on the launcher again.

One shot mode

In this mode, a snapshot of the current computer screen is transmitted to the projector.

- Check the status indication on the launcher to make sure that transmission is possible (check that the green lamp is lighted).
- 2 Click [] on the launcher.

Note:

Select the standard style before operating. (See page 18)

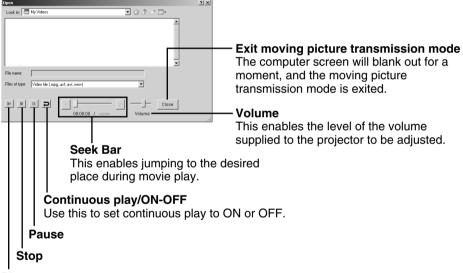
However, this mode cannot be used while any other computer connected over the wireless network to the projector in use is transmitting a snapshot.

Moving picture transmission

- Displaying the moving picture transmission window
 - Check the status indication on the launcher to make sure that transmission is possible (check that the green lamp is lighted).
 - 2 Click [] on the launcher.

The computer screen will blank out for a moment, and the window shown below will then appear.

■ Moving picture transmission window



Play

The movie will be displayed by the projector. It will not be displayed on the computer screen.

Notes:

- Select the standard style before operating. (See page 18)
 However, this mode cannot be used while any other computer connected over the wireless network to the projector in use is transmitting a snapshot.
- The allowed formats are those accepted by Windows Media Player, including asf, wmv, avi and mpeq.
- Some frames may be lost or the audio may be disrupted in some computing environments.
- Moving picture transmission mode does not function with Windows 98SE or Windows Me.

Multiple Source Projection Mode

Transmits to multiple selected projectors.

1 Change [Single] to [Multi-].



- **To do this from the launcher:
- Click[]. The connection select window shown above now appears.
- While holding down the Ctrl key, select the desired projectors, and click [OK].



- Check the status indication on the launcher to make sure that transmission is possible (check that the green lamp is lighted).
- 4 Click [Live] on the launcher.

The projectors selected in Step 2 will begin displaying.

Notes:

- Select the standard style before operating. (See page 18)
 However, this mode cannot be used while any other computer connected over the wireless network to the projector in use is transmitting a snapshot.
- The greater the number of projectors, the slower the transmission.
- Up to 8 projectors can be connected.
- Multiple source projection mode operations can be performed only in the live mode and one-shot mode. However, the sound cannot be output in these modes.

Pointer mode

You can change the shape of the pointer appearing on the projection screen in live mode to one that can be used for presentation purposes [].

Click [] on the launcher.

■ Quitting pointer mode

Click [] on the launcher.

Options

You can make various settings related to Wireless Manager ME 2.0.

Click [] on the launcher.

The window shown to the right appears.



■ Version information

The version information of Wireless Manager ME 2.0 is displayed when [] on the options window is clicked.

■ Picture quality selection

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

Select [Normal] or [High Definition].

Notes:

Selecting [High Definition] imposes the following limits on operation.

- In moving picture transmission, operations are performed in the normal mode.
- When a movie is playing in the live mode, it may not be displayed smoothly.

■ Live mode settings

You can set the computer operation in live mode and multi live mode.

[Remove image when shutting down Live Mode]:

Check this box to clear the projection screen from the projector when live mode ends. Normally the image when live mode ends remains projected.

[Disable Screen Saver]:

This disables the computer screen saver function while Wireless Manager ME 2.0 is operating. Check this box to disable screen saver operation during live mode.

[Display sender's name in Multi Live Mode]:

The characters (max. 8) which have been entered are displayed at the upper right of the transmitted screen.

In the 4-screen and 16-screen index style modes, they are also displayed at the bottom of each image.

(Alphanumerics are not displayed when the check mark has been removed.)

[Produce audio along with video at live mode]:

You can set this when you want to output audio data from a computer while in live mode. However, the sound in the moving picture transmission mode does not reflect this setting but it is determined by the volume level which was adjusted on the moving picture transmission window. (See page 22.) Sound cannot be output in the multi live mode.

■ Shortcut key settings

You can set shortcut key combinations that let you control the Wireless Manager ME 2.0 functions by computer keyboard operations.

Click [Key setting].

[Live Mode]:

Shifts to full screen display.

[Multi Live Mode]:

Shifts to multi screen display.

[One Shot]:

Transmits the entire computer screen one time.

[Use "Pause" key to stop/continue Live Mode]:

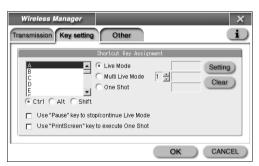
Stops live mode and multi live mode.

[Use "PrintScreen" key to execute One Shot]:

Transmits the entire computer screen one time.

Note:

In live mode and multi live mode, the shortcut key switches the mode without stopping live mode.



■ Launcher size and automatic setting of destinations

You can set the launcher size and can perform automatic settings for a newly connected projector.

Click [Other].



Launcher size setting

Click the [Large button] or the [Small button].

Automatic connection setting

- If the [Make an automatic connection] box is checked and a projector is registered as a destination for automatic connection when Wireless Manager ME 2.0 is started, connection is performed automatically.
- When [Setting] is clicked, projector(s) can be selected for automatic connections.
- Up to 5 projectors may be displayed in the order of most recent connection history.
 However, projectors used in multiple source projection mode are ignored for this ordering.

When it is desired to remove a projector from the display list, select it and press the [DELETE] button.



Operations when password entry is required 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 31)



Notes:

- Click [CANCEL] at the password entry window to return to launcher (See page 12).
- 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 [USER] at the connection select window, connections can be added and deleted by the following operations.

■ Adding a connection

1 Click [Designate] at the connection select window.

The window shown to the right appears.



Click [ADD] and enter the IP address (including its periods) of the connection to be added, and then click [REGISTER].



The newly registered connection is added to the connection list in the window shown in step 1.

■ Deleting a connection

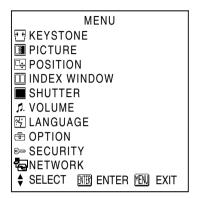
Select the connection to be deleted at the window shown in step 1 and click [DELETE].

Displaying the Network Menu

Perform the procedure below to display the network menu required when changing the initial settings.

Press the [MENU] button on the projector.

The main menu appears.



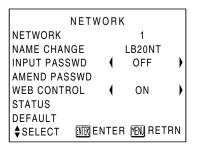
Concerning on-screen items which are not displayed:

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.

2 Select [NETWORK] with the [▲▼] buttons, then press the [ENTER] button.

The network menu appears.



When making a wireless connection between a computer and the projector with settings other than the default settings, make the following settings.

Changing the network number

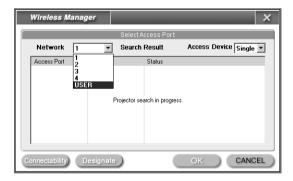
- Projector operations
 - Select [NETWORK] at the network menu and press the [ENTER] button.
 - 2 Select the number to be connected with the [◄▶] buttons and press the [ENTER] button.



■ Computer operations

Perform steps 1 to 2 on page 12, then perform the following operation.

Select the network group from the network number list.



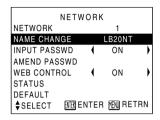
Notes:

- Network number [1] is connected in WEP-disabled Mode, and Networks [2-4] are connected in WEP-enabled mode. AES encryption is used for image and audio data for all networks to protect essential data.
- [USER] is used when the computer's network settings are to be performed manually for connection with the projector. (See pages 33 to 35)

Changing the projector name

You can change the projector name on the network.

Select [NAME CHANGE] at the network menu and press the [ENTER] button.



- 2 Enter the projector name using the [◀▶▲▼] buttons.
- After entering the projector name, select [OK] and press the [ENTER] button.

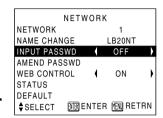
To cancel the change, select [Cancel] and press the [ENTER] button.



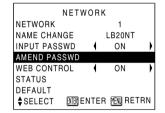
Wireless connection with password

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

- Projector operations
 - Select [INPUT PASSWD] on the network menu.
 - 2 Select [ON] with the [◀▶] buttons.

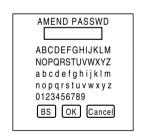


3 Select [AMEND PASSWD] at the network menu and press the [ENTER] button.



- Enter the password using the [◄▶ ▲▼] buttons.
- After entering the password, select [OK] and press the [ENTER] button.

To cancel the change, select [Cancel] and press the [ENTER] button.



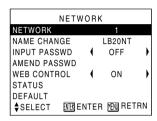
■ Computer operations

Refer to pages 14 and 27.

User connections (not using simple connections)

If the projector and computer could not be connected by following the steps on page 12, connect them by performing the steps below.

- **■** Projector operations (Network number settings)
 - Select [NETWORK] on the network menu, and press the [ENTER] button.



2 Select [USER] with the [◀▶] buttons, and press the [ENTER] button.



- Computer operations (Wireless settings (See page 35))
 - Start up the wireless card utility.
 When using Windows XP, open [Control Panel] →
 [Network Connections].

Make the same SSID, communication mode and WEP settings as the default projector network [USER] settings.

Default projector network [USER] settings
SSID : Panasonic Projector
Communication mode : 802.11 AdHoc
WEP : Off

2 Open the Windows TCP/IP Setting window, and set the TCP/IP. (See page 33 or 34)

Refer to the Windows manual for a detailed description.

For the subnet mask, register the same value as the default projector network [USER] setting.

For the IP address, enter the same value up to the "255" part of the default subnet mask setting for projector network [USER], and then enter a different value for the remainder.

Setting Example

Setting item	Default projector network [USER] setting	Example of computer setting	
Subnet mask	255. 255. 255. <u>0</u>	255. 255. 255. <u>0</u>	
IP address	192. 168. 10. 100	192. 168. 10. 101	

Start up Wireless Manager ME 2.0, select [USER] from the network number list, and set the network. (See page 29)

Wait until the projector's name appears on the connection list, select the name displayed, and proceed with the connections.

TCP/IP settings

Windows 2000/XP:

The screens show the example for Windows XP.

(1) Right-click [My Network Places] to open the Properties window.



(2) Right-click the Wireless LAN icon being used to open the Properties window.



(3) Select Internet Protocol (TCP/IP) and click [Properties].



- (4) Enter the same segment IP address as the IP address set by the projector.
- (5) Enter the same value as the subnet mask set by the projector, set the gateway (only in infrastructure mode), and then click [OK] to return to the previous window.
- (6) Click [OK].

 The new settings can be used without rebooting.



Windows 98SE/Me:

The screens show the example for Windows Me.

Right-click [My Network Places] to open the Properties window.



(2) Right-click the Wireless LAN icon being used to open the Properties window.



- (3) Enter the same segment IP address as the IP address set by the projector.
- (4) Enter the same value as the subnet mask set by the projector.



- (5) Set the gateway (only in infrastructure mode) and click [OK] to return to the previous window.
- (6) Click [OK].



(7) Click [Yes].



Wireless settings

Windows XP (SP2):

The dedicated utility software is not necessary. Refer to the Windows XP manual for a detailed description.

- (1) Turn on the projector.
- (2) Select [Start] → [Connect To] → [Show all connections], and display the [Network connections] window.
- (3) Right-click [Wireless network connection], and left-click [View Available Wireless Network].
- (4) Select the projector's SSID at [Choose a wireless network] ("Panasonic Projector" is the default setting for network [USER]), and then click [Connect To].

Notes:

- When encryption (WEP setting) is set by the projector, enter the WEP key (character input) information to [Network Key] before clicking [Connect To]. (default setting: No WEP)
- To check the detailed network settings, click the [Wireless network settings] icon at the network connection window.

Windows 98SE/Me/2000:

Start the utility software for your wireless LAN card to make the settings. See the User's Manual for your LAN card for details.

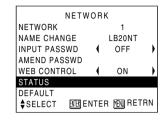
Note:

Do not use the utility software during simple connection, as this may cause a problem in connection with the projector. (For instance, the "Projector search in progress" message may appear on the connection select window list.)

Verifying settings

Select [STATUS] in the network menu (see page 28) and press [ENTER].

Your current settings appear.

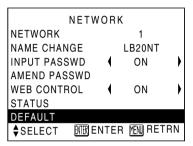


Returning to the Initial Settings

You can return the changed settings to the initial conditions.

Projector operations

1 Select [DEFAULT] at the network menu (See page 28) and press the [ENTER] button.



Note:

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

2 Select [OK] with the [◀▶] buttons and press the [ENTER] button.



Computer operations

Start the Wireless Manager ME 2.0 and set the network number to [1] (see page 29).

Using WebBrowser

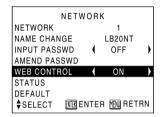
Connect the projector and computer before taking the steps below. (See page 12 or page 32)

Projector settings

- Select [WEB CONTROL] on the network menu (See page 28).
- 2 Select [ON] or [OFF] with the [◀▶] buttons.

WEB CONTROL

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



Note:

The WebBrowser password is not set at the factory, and should be set on the WebBrowser. In addition, if you forget the password, select [DEFAULT] at the network menu and initialize the network settings. (See page 37)

Computer settings

- Click [] on the launcher (See page 15).
- Change the projector settings by WebBrowser. Make the SSID, communication mode, IP address, subnet mask and WEP settings, and then quit WebBrowser.

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].
- After the projector network has been switched to [USER], manually release the proxy settings of the WebBrowser used.

- When a proxy server is already being used
 - 1 Right-click the [Internet Explorer] icon.

Open the Properties window.



2 Open [Connections] → [LAN Settings]. If [Use automatic configuration script] has been checked, remove the check, and click [OK].



The setting window closes.

Note:

Under [Advanced] you must set the IP address of the projector to be connected for not using the proxy server as an exception. However, this setting will be automatically established if network numbers 1 to 4 are used by Internet Explorer.

■ Enabling JavaScript

Select [Security] and set the security level to [Default Level], or select [Custom Level] and check the [Enable] checkbox under [Active scripting].

Note:

When using Netscape, select [Edit] \rightarrow [Preferences] \rightarrow [Advanced] and enable JavaScript.

Starting up WebBrowser

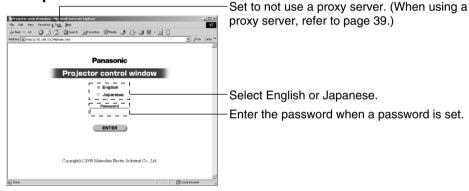
Click [] on the launcher (see page 15) or start up the WebBrowser, and enter the IP address set by the projector.

(The example below describes the case when using Microsoft Internet Explorer.)



WebBrowser starts up.

■ Top window



Notes:

- If you forget the password, set a new password on the projector side. (The former password is protected by security, and cannot be viewed even by the projector.)
- The top window may not appear depending on the WebBrowser. In this case start up WebBrowser again, or press the [Ctrl] + [R] keys.
- Connection cannot be made while the WebBrowser is set to dial-up network. Cancel the dial-up network setting.
- It may take some moments for WebBrowser to start up.

Projector control window

Click [Projector Control] in the menu.

You can make various projector settings.

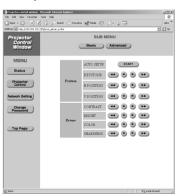
Basic control window



Notes:

- 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.
- When [WEB CONTROL] is not set to [ON] in the projector network settings, the basic controls and option controls do not operate.

■ Option control window



Note:

When the projector does not operate as controlled, check that the [WEB CONTROL] item in the projector's option menu is set to [ON].

Monitor information window



Note:

The monitor information is refreshed at fixed intervals, but the current exact information can be checked by clicking [View] \rightarrow [Refresh].

Password changing window



Enter the old password and new password, and click [OK].

Network setting window

■ Setting the infrastructure mode

You can make the setting for infrastructure mode (connection through the access point (AP)); however, confirm to your system Administrator before changing any settings.

1 Click [Network setting] on the menu.



9 Click [Next].

The Settings window appears.



IP ADDRESS

DHCP ON : Check this if the AP supports DHCP.

DHCP OFF: Check this if the AP does not support DHCP, and make the

following settings:

IP ADDRESS : IP address designated for projector SUBNETMASK : SubNetMask used by the AP

GATEWAY : IP address of GateWay registered in the AP

MODE

Check "INFRASTRUCTURE"

(If this is performed directly at the computer rather than via the AP, check "802.11 AD-HOC.")

SSID

Enter SSID registered in the AP.

(If this is connected in AdHoc mode, set the SSID of the computer.)

(Continued on next page)

WEP

OFF: Check this when the WEP is not registered in the AP.

ON: Check this when the WEP is registered in the AP, and make the following settings.

Authentication

OPEN : Check this when the AP authentication is Open System.
SHARED: Check this when the AP authentication is Shared Key.
(If this is performed in AdHoc mode, select OPEN.
However, some computers may require connection by

SHARED authentication.)

KEYLENGTH

Set the length of the WEP KEY.

64 Bit : Alphanumeric – 5 characters; Hexadecimal – 13 characters 128 Bit : Alphanumeric – 13 characters; Hexadecimal – 26 characters

DEFAULT KEY ID

Set 1 – 4 numerals for the default WEP KEY.

INPUT FORMAT

CHARACTER: Check this when the input is alphanumeric. HEXADECIMAL: Check this when the input is hexadecimal code.

KEY 1 – 4

Set these to match the WEP KEY registered in the AP.

3 Click [Next].

The above settings will be registered in the user settings of the projector.

■ Making the above settings effective

Select [NETWORK] in the network menu of the projector (see page 28), and use the [\blacktriangleleft \blacktriangleright] buttons to select [USER] and press the [ENTER] button.

Notes:

- The projector supports only 64 bit and 128 bit WEP codes.
- WPA and WPA2 are not supported. However, image and audio data are all encrypted using AES, so essential data are protected.

Software Uninstall

Wireless Manager ME 2.0

From the desktop, select [Start] \rightarrow [Programs] \rightarrow [Panasonic Wireless Display] \rightarrow [Uninstall Wireless Manager mobile edition 2.0].

Follow the instructions appearing on the screen and uninstall the software.

Terminology

802.11 AD-HOC (Peer to Peer) mode

This is the mode in which computers communicate with each other directly, rather than via access points.

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.

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.

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.

Infrastructure mode

This is the mode in which communications are performed via the access point.

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.

LAN

Abbreviation for Local Area Network. This is a network with a relatively narrow range such as inside a company. There are wired LAN and wireless LAN.

Open System

This is an authentication of wireless signals employing a public key cryptosystem.

Terminology (cont.)

Shared Key

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".

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.

Subnet mask

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 subnet mask.

TCP/IP

Abbreviation for Transmission Control Protocol/Internet Protocol. This is the standard internet protocol.

This protocol is a set of rules and agreements governing data communications between computers.

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.

Frequently Asked Questions

Check the following points once more before requesting repair.

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 personal 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 in live mode.

- Is the computer CPU speed slow?
 Live mode depends largely upon the computer CPU performance.
- When using Windows 2000/XP, the speed may drop significantly if the user does not have administrator authority.
- The speed may be slower when any other applications are running concurrently.

The Wireless Manager ME 2.0 color display is strange and characters are difficult to read.

• Right-click an empty location on the desktop and select [Properties]. Then, open the [Settings] tab of the [Display Properties] window and set [Color quality] to [Medium (16 bit)] or higher.

Screen saver is not displayed properly in live mode.

Some screen savers may not be displayed properly in the live mode.
 Disable screen saver function using [Live Mode Settings] in Options of Wireless Manager ME 2.0. (See pages 24, 25.)

Movies are slow in the live mode.

 Did you start up Microsoft PowerPoint or Windows Media Player before starting up Wireless Manager ME 2.0?
 If so, start up the application only after you have started up Wireless Manager ME 2.0.

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

• One of the following windows may appear when a wireless connection cannot be made. In a case like this, refer to pages 50 to 53.

When a setting error for the wireless LAN card has been detected



When the Network Bridge setting has been detected



When Windows Firewall has been detected



When another firewall has been detected



When the user does not have the administrator authority



When a change in the settings made by the utility has been detected



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

- Is Wireless Manager mobile edition 2.0 running?
 Wireless Manager mobile edition 2.0 must be started in the computer in order to enable wireless transmissions of images to the projector.
- Is the wireless LAN card effective? Even if your computer has integral LAN, the wireless LAN may still be turned OFF. If so, turn it ON and re-start Wireless Manager mobile edition 2.0. See the User's Manual of your computer to learn how to turn the wireless LAN power ON/OFF.
- Is your wireless LAN card properly recognized on the network?
 Sometimes, cards are not correctly recognized by the network. Check Windows "Device Manager" to make sure your card has been recognized.
 If the Network Adapter is indicated with "?" in [Device Manager], LAN card installation is not complete. See the User's Manual of your card and re-install the card driver.

To display "Device Manager"

Right-click [My Computer] on your desktop (Windows XP – in your [Start] menu) and choose [Properties] in the menu. This will bring up the [System Properties] dialog box.

<Windows 2000/XP>

Click the [Hardware] tab and then [Device Manager].

<Windows 98SF/Me>

Click the [Device Manager] tab.

• Some wireless cards may allow simple connections to function if drivers are updated (consult the manufacturer of your driver about updates).

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

• Is Network Bridge enabled?

Some PCs with Windows XP may have Network Bridge (a built-in function of Windows XP) enabled; this will prevent a wireless connection. The settings in Network Bridge must be changed in order to make a wireless connection. If you do not expect ever to use Network Bridge and see no need for it, delete it from your system.

To verify whether your system has Network Bridge

Choose [Connect to] on the [Start] menu and click [Show all connections]. Verify that [Network Bridge] is displayed in the [Network Connections] window.

How to change settings in Network Bridge

- 1. Select [Connect to] on the [Start] menu and click [Show all connections].
- 2. Right-click [Network Bridge] and click [Properties].
- 3. Remove the check mark from the [Wireless Network Connection] box in the [Network Bridge Properties] dialog box (if the box is not checked, proceed to step 4.)
- 4. Click [Properties] in [Internet Protocol (TCP/IP)] in the [Network Bridge Properties] dialog box.
- 5. Click the [Alternate Configuration] tab in the [Internet protocol (TCP/IP) properties] dialog box.
- Check the [User configured] box and set the [IP address] and [subnet mask] as follows:

IP address : 10. 10. 10. 101 Subnet mask: 255. 255. 0. 0

(If the above IP address is already in use in the LAN environment, change it as appropriate in Class A.)

- 7. Click $[OK] \rightarrow [Close]$.
- 8. Close the [Network Connections] dialog box.

How to delete the network bridge

- 1. Select [Connect to] on the [Start] menu and click [Show all connections].
- 2. Right-click [Network Bridge] and click [Delete].

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

Has your firewall in Windows XP SP1 been disabled?
 The firewall in Windows XP must be disabled in order to connect to a wireless network.

How to disable the firewall in Windows XP

- 1. Click [Start] \rightarrow [Control Panel] \rightarrow [Network Connections].
- Right-click [Wireless Network Connection] and click [Properties] in the pulldown menu.
- 3. Click the [Advanced] tab and set the [Internet Connection Firewall] checkbox to OFF.
- Is Wireless Manager mobile edition 2.0 registered with the Windows XP SP2 Security Center firewall?

Register Wireless Manager mobile edition 2.0 in the Exceptions to Application List of the firewall.

How to register

- 1. Click [Start] → [Control Panel].
- 2. Click [Security Center] when [Control Panel] window opens.
- 3. Click [Windows Firewall] under [Manage security settings for:] when the [Windows Security Center] window opens.
- 4. Click the [Exceptions] tab and then [Add Program...] when the [Windows Firewall] window opens.
- Click [Wireless Manager mobile edition 2.0] (WM.exe) to allow connection with external devices under [Programs] when the [Add a Program] window opens.
 - If Wireless Manager mobile edition 2.0 does not appear on the list of programs, click [Browse...] and select [Wireless Manager mobile edition 2.0] (WM.exe).
- Click the [Change scope...] button at the lower left of the window.
 When the [Change Scope] window opens, select the desired network as described below.
- 7. Select any computer (including computers on the internet).
- 8. Select the scope and click [OK].
- 9. Click [OK] in the [Add a Program] window.
- Click [OK] in the [Windows Firewall] window.
 With this, the Wireless Manager mobile edition 2.0 firewall will be deleted.

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

Are any firewall-containing applications installed?
 If any applications which contain firewalls are installed, the installation may hang up at the [Projector search in progress] display (some firewalls function even when not started).

If this occurs, firewall settings must be changed in order to allow connection to the wireless network. See the User's Manuals for all applications containing firewalls to perform these settings.

Have you logged in as the Administrator?

If you have logged onto a computer running Windows 2000 or Windows XP as a guest, who does not have the privileges of an Administrator, you can not perform a simple connection (Network No. 1-4). If you must perform wireless connection while logged in as a guest, designate [USER] as the network number.

See page 29 or 32 for instructions in how to set [USER] as the network number. Alternatively, log in as the Administrator and set the Hardware acceleration to [None].

How to set the Hardware acceleration to [None]

(may not be applicable in all computers)

- 1. Click [Settings] tab in the [Display Properties] dialog box.
- Click [Advanced] and select the [Troubleshoot] tab in the resulting dialog box. The Hardware acceleration settings menu will be displayed.
- Move the lever all the way to the left end ([None]) and click [Apply].
 Note that when you have set the Hardware acceleration to [None], image transfer functions are degraded.
- I can connect with the projector using the simple connection, but then the connection is lost shortly afterward.

The wireless LAN utility used by the computer may have changed the wireless settings. Close the utility, and then make the connection again using the simple connection.

Supported operating systems

 This projector is supported on Windows 98SE/Me/2000 Professional/XP Home Edition/XP Professional.

It is not compatible with any other systems.

Moving picture transmission does not function with Windows 98SE or Windows Me.

Changing the display style

 The projector is designed to provide three display styles: standard style, 4screen index style, and 16-screen index style.

Press the [INDEX WINDOW] button on the remote control to toggle between styles, or select [INDEX WINDOW] on the projector's main menu (see page 28) and press the [ENTER] button.

When the style is changed, the connection between the computer and the projector is canceled.

The launcher is displayed in the projection screen.

• The launcher is projected in the projection screen of the projector in Windows 98SE/Me. If you do not want this shown, click [■] in the launcher. This stores the launcher in the task tray.

There is a time lag between operations at the computer and results in the projected image.

 Wireless Manager mobile edition 2.0 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.

PowerPoint animations are not displayed smoothly.

• There are some variations in playability of animations depending on computer capabilities; some animation effects are not completely reproduced. If you wish to run PowerPoint animations, we recommend creating them in advance and trying them out on your projector.

Some contents in movies are not displayed.

- Basically, files which can be viewed on Windows Media Player can be viewed with this projector. However, contents protected by DRM*1 cannot be projected nor can such DVDs be played.
 - **1 DRM (Digital Rights Management): Technology for protecting the copyrights of digital data

Movies are not displayed smoothly.

- The playability of movies depends on the capability of the computer you are using and on the wireless environment. We recommend using the powerful computer available when projecting a movie. Wireless reception is disrupted when other wireless equipment is operating nearby; it should be turned off when using the projector.
- In the live mode, operation will slow down also when the Windows Media Player window is not active. Select this window before playing a movie. However, operation may be delayed with some materials even when the Windows Media Player window is set to active.

I can't hear the computer sound from the projector in the live mode.

- Check whether the check mark has been entered for [Produce audio along with video at live mode] from [Live Mode Settings] under the [Transmission] tab selected from Wireless Manager options.
- If there is still no sound even after the action in the above item has been taken, check the settings of the recording device by following the steps below.
 - Select [Start] → [Programs] → [Accessories] → [Entertainment] and then [Volume Control].
 (The same window can be opened by right-clicking the sound icon at the bottom right of the screen and selecting [Open Volume Control].)
 - 2. On the menu bar, select [Options] \rightarrow [Properties].
 - 3. Check whether the selected mixer device is the correct one.
 - 4. Select [Recording] under [Adjust volume for], and enter check marks for all the controls displayed.
 - 5. Click [OK] to display the audio recording adjustment window.
 - 6. Select [Stereo Mixer]. *2
 - 7. Upon completion of the above settings, start playing an audio file, for example, check that sound is heard from the computer, go live, and check whether the sound is output from the projector.
- **2 The control selected here differs depending on the operating system and environment used. Try selecting another control if [Stereo Mixer] is not available or the sound is not output even after selecting [Stereo Mixer].

Making a wireless 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.
- If you use a simple connection with two wireless LAN cards, since which card to be used for the projector will not be clear, you must make the connection between the computer and the projector through the user settings (manually).
- If you have a wired internet connection (Ethernet), this projector allows wireless use with simultaneous wired connection to the internet.

The remote control window does not appear.

- <When a simple connection is used>
- When any WebBrowser except Internet Explorer is used, the proxy settings of the WebBrowser must be manually released.
- <When a user connection is used>
- Manually release the proxy settings of the WebBrowser used.

The connection has been lost in the multi live mode.

• If a computer with a certain version of the Centrino technology (wireless LAN) is connected to the unit, the multi live mode may be released. If this is the case, re-establish the connection from the launcher of Wireless Manager ME 2.0. (See pages 19 to 21.)

The connection cannot be established with IEEE802.11 q.

• Connection is sometimes established under the IEEE802.11 b standard even when an IEEE802.11 g wireless LAN card or a computer with built-in wireless LAN that supports the IEEE802.11 g standard is used. This is, therefore, not an indication of trouble.

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Panasonic

Professional/Industrial Video

Panasonic Broadcast & Television Systems Company

Division of Panasonic Corporation of North America

3330 Cahuenga Blvd West Los Angeles, CA 90068 (323) 436-3500

Technical Support:

(800) 222 -0741

E-Mail: pbtscservice@panasonic.com

Panasonic Canada Inc.

5770 Ambler Drive, Mississauga, Ontario L4W 2T3 (905) 624-5010

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