

Panasonic[®]

Model No.
TH-85PB1U

Operating Instructions Network Operations Interactive Plasma Display



English

Before connecting, operating or adjusting this product,
please read these instructions completely.
Please keep this manual for future reference.

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Request Regarding Security

When using this product, security breaches of the type described below are conceivable.

- Leakage of your private information via this product
- Illegal operation of this product by a malicious third-party
- Harm to or cessation of operation of this product by a malicious third-party

Be sure to implement sufficient security measures.

- Set passwords, and limit the users that are permitted login access.
- Make sure the password is as hard to guess as possible.
- Change the password periodically.
- Panasonic Corporation and its affiliated companies never directly ask customers for their password. Do not give out your password even if directly asked by a third-party representing themselves as Panasonic Corporation.
- Always use on a network that has safety protection such as a firewall implemented.

About Wireless LANs

The advantage of a wireless LAN is that information can be exchanged between a PC or other such equipment and an access point using radio waves as long as you are within range for radio transmissions.

On the other hand, because the radio waves can travel through obstacles (such as walls) and are available everywhere within a given range, problems of the type listed below may occur if security-related settings are not made.

- A malicious third-part may intentionally intercept and monitor transmitted data including the content of e-mail and personal information such as your ID, password, and/or credit card numbers.
- A malicious third-party may access your personal or corporate network without authorization and engage in the following types of behavior.
 - Retrieve personal and/or secret information (information leak)
 - Spread false information by impersonating a particular person (spoofing)
 - Overwrite intercepted communications and issue false data (tampering)
 - Spread harmful software such as a computer virus and crash your data and/or system (system crash)

Since most wireless LAN adapters or access points are equipped with security features to take care of these problems, you can reduce the possibility of these problems occurring when using this product by making the appropriate security settings for the wireless LAN device.

Some wireless LAN devices may not be set for security immediately after purchase. To decrease the possibility of occurrence of security problems, before using any wireless LAN devices, be absolutely sure to make all security-related settings according to the instructions given in the operation manuals supplied with them.

Depending on the specifications of the wireless LAN, a malicious third-party may be able to break security settings by special means.

Please contact Panasonic if you need help taking care of security settings or other such.

If you cannot perform security settings for your wireless LAN by yourself, please contact the Panasonic Support Center.

Panasonic asks customers to thoroughly understand the risk of using this product without making security settings, and recommends that the customer make security settings at their own discretion and responsibility.

What you can do

This unit supports wired LAN and wireless LAN enabling the network functions as below.

<WEB control> (See page 19)

The following operations are possible when using WebBrowser.

- Setting and adjusting the Display
- Displaying the Display status

<PJLink> (See page 27)

Compatible with PJLink Class 1. The following operations can be performed from a computer when PJLink protocol is used.

- Setting the Display
- Querying the Display status

<Command control>

Network function of the unit can control the unit in the same way as serial control from a network.

Supported commands

Commands used in the serial control are supported. (See page 15 of “Operating Instructions, Display Operations”)

Note

When using [WEB control], [PJLink] and [Command control], set [CONTROL I/F SELECT] to [LAN] and [WEB CONTROL] to [ON] in the [NETWORK SETUP] menu. (See page 17)

● Wireless Manager mobile edition 5.5/6.0 (Windows/Macintosh)

Software for sending the computer screen via wireless/wired LAN.

To use this function, a specialized software is required. Please download the software from the following website:

<http://panasonic.net/prodisplays/download/software/index.html>

Note

This unit does not support the following functions.

- Virtual remote control function
- USB display function

● Wireless Display for iOS

Software for sending PDF files/JPEG images saved in an iPad/iPhone/iPod touch to this unit via wireless LAN (WiFi).

For more information, see the website below.

<http://panasonic.net/prodisplays/download/software/index.html>

Notes on Using Wireless Connection

Wireless connection function of the Display 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.

The wireless module (part number: ET-WM200U) sold separately needs to be mounted when using the wireless LAN function with the Display.

■ Do not use near other wireless equipment.

The following equipment may use radio waves in the same band as the Display.

When the Display 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

■ When using the electronic pen

Using the electronic pen with the wireless module (ET-WM200U) connected may result in malfunction of the electronic pen due to radio wave interference as an example. In that case, set "WIRELESS LAN" to "OFF" before using the electronic pen. (See page 11)

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

Cellular phones, TV sets, radios and similar devices use different radio bands from the Display, so there is no effect on wireless communication or the transmission and reception of these devices. However, radio waves from the Display 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 Display in locations prone to static electricity.

If the Display is used in a location prone to static electricity, such as on a carpet, the wireless LAN or wired LAN connection may be lost.

If this happens, eliminate the source of static electricity or electromagnetic noise and reconnect to the wireless LAN or wired LAN.

■ Using the Display outside the country

It is forbidden to take the Display 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

■ Wired LAN

Use straight or crossover LAN cable that is compatible with category 5 or above.

- * Whether straight cable, crossover cable or both can be used varies depending on the system configuration. For details, consult your system administrator.

■ Available wireless LAN channels

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) |
|-------------------|-------------|---------------|--------------------------------------|
| United States | FCC part 15 | 1 – 11 | 2.412 MHz - 2.462 MHz |
| Canada | RSS | | |

Note

The separately sold wireless module (product number: ET-WM200U) needs to be attached to use wireless LAN with this device (See page 8).

Check your computer

Necessary environment for computers to be connected

- First, check your computer to see whether or not it has a wired LAN or a built-in wireless LAN function.
- Before connecting the Display to the computer, be sure to check the following settings.
- Operation is not guaranteed for all wireless LAN adapters and built-in wireless LAN adapters.

■ Wired LAN

Check 1 For LAN cable

- Is the cable properly connected?
- Use LAN cable that is compatible with category 5 or above.

Check 2 Wired LAN settings

<Computer with a built-in wired LAN function>

- Is your wired LAN switched on?

<Computer without a built-in wired LAN function>

- Is your wired LAN adapter properly recognized?
- Is your wired LAN adapter switched on?
- Install the wired LAN adapter driver beforehand.

For details on how to install the driver, refer to the instructions accompanying the wired LAN adapter.

■ Wireless LAN

Check 1 Wireless LAN settings

<Computer with a built-in wireless LAN function>

- Is your wireless LAN switched on?

<Computer without a built-in wireless LAN function>

- Is your wireless LAN adapter properly recognized?
- Is the wireless LAN adapter switched on?
- Install the wireless LAN adapter driver beforehand.

For details on how to install the driver, refer to the instructions accompanying the wireless card.

Check 2 Computer's settings

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

<Windows XP/Windows Vista/Windows 7>

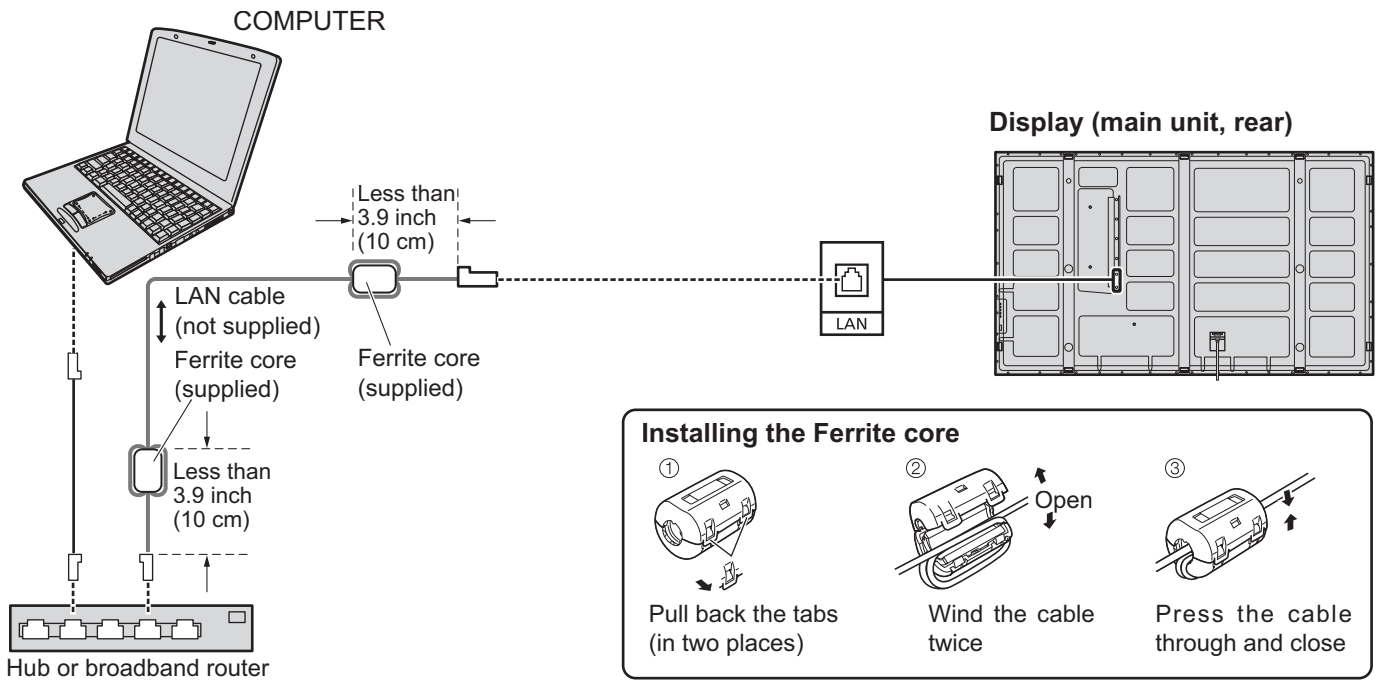
- Is Network Bridge enabled?
- Has your firewall been disabled?

■ For WebBrowser

- WebBrowser is necessary to use WEB control.
- Compatible OS : Windows XP/Windows Vista/Windows 7, Mac OS X v10.4/v10.5/v10.6/v10.7
- Compatible WebBrowser : Internet Explorer 7.0/8.0/9.0, Safari 4.0/5.0 (Mac OS)

Connection

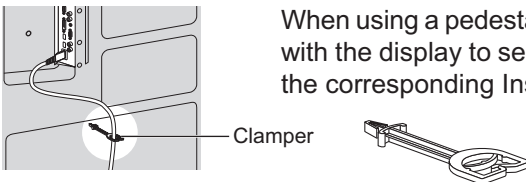
Example of Network Connection (Wired LAN)



Notes

- Lay the LAN cable away from other connection cables (excluding the power cord).
- Make sure the broadband router or hub supports 10BASE-T/100BASE-TX.
- To connect a device using 100BASE-TX, use “category 5” LAN cable.
- Touching the LAN terminal with a statically charged hand (body) may cause damage due to its discharge. Do not touch the LAN terminal or a metal part of the LAN cable.
- For instructions on how to connect, consult your network administrator.

Securing the LAN cable



When using a pedestal (TY-ST85P12) for the installation of the display, use a clamper supplied with the display to secure the LAN cable. For use with another method of installation, refer to the corresponding Installation Instructions.

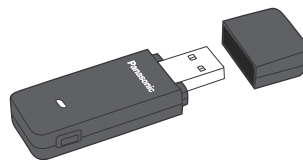
Note

In accordance with the Installation Instructions, secure the LAN cable so that it will not become near the display unit.

Connecting Wireless Module (Wireless LAN)

To use the wireless function, the wireless module (ET-WM200U) (sold separately) is necessary.

When connecting the wireless module to the display, remove the protective film and cap.

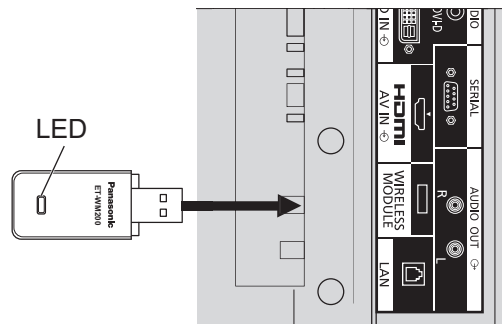


Connecting procedure

Hold the wireless module with its LED on the near side and connect it to the wireless module connection terminal.

Note

Do not connect any other device than the wireless module (ET-WM200U).



Network Setup

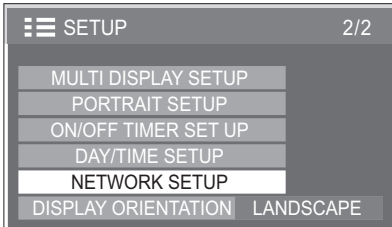
Make the various settings to use the network function.

Note

For network settings, contact your network administrator.

Displaying the NETWORK SETUP menu

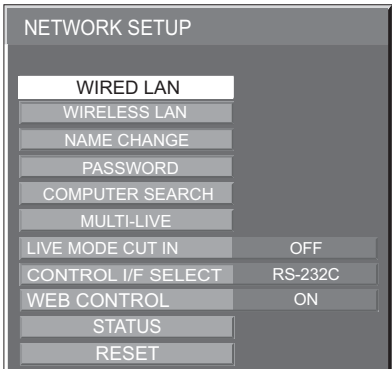
1 Press  to display [SETUP] menu.




[Starting up the network]

It takes some time for the network to start up just after the Display power is turned on. During that time, "NETWORK SETUP" in the "SETUP" menu is grayed out and cannot be set.

2 Select [NETWORK SETUP] with the ▲▼ and press  button. The [NETWORK SETUP] menu appears.



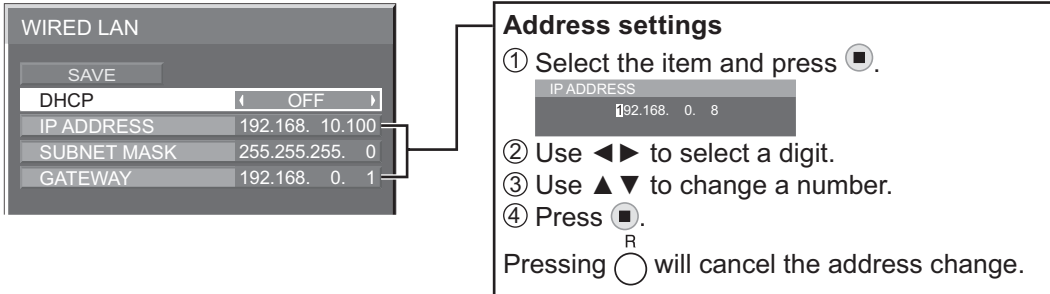
3 Press ▲▼ to select the item and set with ◀▶. Press  to display sub menu.

Network Setup







WIRED LAN


You can make detailed wired LAN settings.

1 Select [WIRED LAN] in [NETWORK SETUP] menu and press  button.



Address settings

- ① Select the item and press .
- ② Use   to select a digit.
- ③ Use   to change a number.
- ④ Press .

Pressing  will cancel the address change.


2 Set [DHCP].

When [OFF] is selected, IP ADDRESS and other settings can be set manually.

| | |
|--|--|
| DHCP (DHCP client function) | ON: If a DHCP server exists in the network to which the display is connected, the IP address will automatically be acquired. OFF: If a DHCP server does not exist in the network to which the display is connected, additionally set [IP ADDRESS], [SUBNET MASK] and [GATEWAY]. |
| IP ADDRESS (Display of IP address and setting) | Enter the IP address if DHCP server is not used. |
| SUBNET MASK (Displaying and setting the subnet mask) | If not using a DHCP server, enter the subnet mask. |
| GATEWAY (Display of gateway address and setting) | Enter the gateway address if DHCP server is not used. |

Note

If [DHCP] is set to [ON], the IP address and other items are not displayed. Check the [STATUS] page for the current IP address and other items. (See page 17)

3 Select [SAVE] and press  button.

Save the current network settings.

If message indicating a duplicate IP address is displayed in [STATUS] (see page 17), check the same IP address is not used within the same network.

Notes

- Before using the DHCP server, make sure the DHCP server is already functioning.
- For details of IP address, subnet mask, and gateway, ask the network administrator.
- A wired LAN and wireless LAN cannot be used in the same segment.

Default wired LAN settings

The following settings are set before the Display leaves the factory.

| | |
|-------------|----------------|
| DHCP | OFF |
| IP ADDRESS | 192.168.10.100 |
| SUBNET MASK | 255.255.255.0 |
| GATEWAY | 192.168.10.1 |

Network Setup

WIRELESS LAN

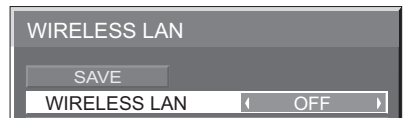
You can make detailed wireless LAN settings.
 You can configure settings when the wireless module (ET-WM200U) is mounted.

Setting network number

1 Select [WIRELESS LAN] in [NETWORK SETUP] menu and press button.

2 Select the number to be connected for [WIRELESS LAN].

- [OFF], [S-DIRECT], [M-DIRECT], [S-MAP], [1]-[4], [USER1]-[USER3]



Notes

- Selecting [OFF] disables the wireless LAN.
- Network number: [S-DIRECT], [S-MAP] and [1]-[4] are available only when connecting via wireless LAN with the application software the "Wireless Manager". [S-MAP] is for showing connectable displays on the network according to their levels of radio wave intensity. For details, refer to the operation manual of the "Wireless Manager".
- [M-DIRECT] and [S-DIRECT] are not supported in "Wireless Manager mobile edition 5.5".

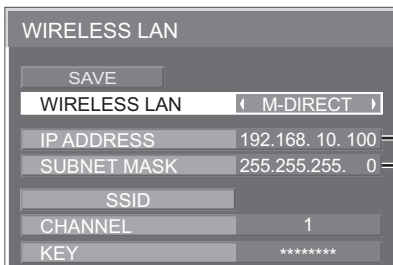
You can configure more precise network settings, if you select [M-DIRECT] or [USER1] - [USER3] (user) for [WIRELESS LAN].

Configuration of WIRELESS LAN [M-DIRECT]

Even if there is no access point, you can still connect the Display to computer via the infrastructure. In addition, the connection with the iPad / iPhone / iPod touch is much easier.

For more information, see the website below.
<http://panasonic.net/prodisplays/download/software/index.html>

1 Select [M-DIRECT] for [WIRELESS LAN].



Address settings

- ① Select the item and press .
- ② Use to select a digit.
- ③ Use to change a number.
- ④ Press .

Pressing will cancel the address change.

2 Press to go to the next item.

| | |
|--|--|
| IP ADDRESS (Displaying and setting the IP address) | Enter the IP address. |
| SUBNET MASK (Displaying and setting the SUBNET MASK) | Enter the subnet mask. |
| SSID | Select [M-DIRECT] in [WIRELESS LAN], then the SSID can be set. Entering characters ➔ page 15 |
| CHANNEL | Select [M-DIRECT] in [WIRELESS LAN], then the CHANNEL can be set. Select a channel for the access point (➔ page 6). |
| KEY | Select [M-DIRECT] in [WIRELESS LAN], then the KEY can be set. Setting a key for the access point. Input either 8 to 63 alphanumeric or a 64 digit string in the hexadecimal format. |

Network Setup

3 Select [SAVE] and press button.

Save the current network settings.

■ Default settings of [M-DIRECT]

The following settings as [M-DIRECT] in the [WIRELESS LAN] are set before the Display leaves the factory.

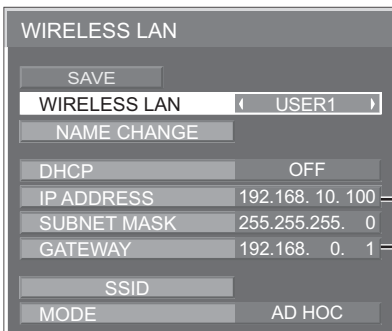
| | |
|-------------|--|
| IP ADDRESS | 192.168.11.100 |
| SUBNET MASK | 255.255.255.0 |
| SSID | M-DIRECT + The last 4 digits of the Display ID |
| CHANNEL | 1 |
| KEY | The same string as the SSID |

Notes

- The authentication method is WPA2-PSK, and the encryption method is AES. Both methods are fixed.
- When you need to change initial configuration of [M-DIRECT], please contact your network administrator.
- Make sure the initial Key is changed for safety.
- As the DHCP server is already functioning, select [ON] before connecting a computer.

Configuration of WIRELESS LAN [USER1] - [USER3]

1 Select [USER1] – [USER3] for [WIRELESS LAN].



Address settings

① Select the item and press .

IP ADDRESS
192.168. 0. 8

② Use ◀▶ to select a digit.

③ Use ▲▼ to change a number.

④ Press .

Pressing  will cancel the address change.

2 Set [DHCP].

When "OFF" is selected, IP ADDRESS and other settings can be set manually.

| | |
|--|--|
| NAME CHANGE | You can change the user name. Entering characters ➔ page 15 |
| DHCP (DHCP client function) | ON: If a DHCP server exists in the network to which the display is connected, the IP address will automatically be acquired. OFF: If a DHCP server does not exist in the network to which the display is connected, additionally set [IP ADDRESS], [SUBNET MASK] and [DEFAULT GATEWAY]. |
| IP ADDRESS (Display of IP address and setting) | Enter the IP address if DHCP server is not used. |
| SUBNET MASK (Displaying and setting the subnet mask) | If not using a DHCP server, enter the subnet mask. |
| GATEWAY (Display of gateway address and setting) | Enter the gateway address if DHCP server is not used. |

Notes

- If [DHCP] is set to [ON], the IP address and other items are not displayed. Check the [STATUS] page for the current IP address and other items. (See page 17)
- Before using the DHCP server, make sure the DHCP server is already functioning.
- For details of IP address, subnet mask, and gateway, ask the network administrator.
- A wired LAN and wireless LAN cannot be used in the same segment.

Network Setup

3 Press ▼ to go to the next item.

Make the settings related to the wireless connection between the Display and the network.

| | |
|----------------|--------|
| SSID | |
| MODE | AD HOC |
| AUTHENTICATION | OPEN |
| ENCRYPTION | NONE |
| CHANNEL | 10 |

- **SSID** : If the mode is [AD HOC], enter the same character string as that of SSID set on the computer to be connected. If the mode is [INFRASTRUCTURE], enter the SSID registered at the access point.
Entering characters ➡ page 15

Notes

- SSID has to be entered in alphanumeric letters.
- You cannot set “any” or “ANY” for SSID.

- **MODE**
 - AD HOC : Connect Display 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 *
 - WPA2-PSK *
 - WPA-EAP/
 - WPA2-EAP *
 - WPA-EAP *
 - WPA2-EAP *

* : Available when the mode is set to [INFRASTRUCTURE].

- **ENCRYPTION** : Select the encryption method to be used for communication between the Display 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 either [WPA-PSK], [WPA2-PSK], [WPA-EAP], [WPA2-EAP].
 - AES : Select when ENCRYPTION is AES. Selectable when [AUTHENTICATION] is either [WPA-PSK], [WPA2-PSK], [WPA-EAP], [WPA2-EAP].

- **CHANNEL** : Refer to page 6 for usable channels.

Note

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

Network Setup

4 Press ▼ to go to the next item.

In addition, further perform the following setting depending on [AUTHENTICATION] and [ENCRYPTION] settings.

| | |
|-------------|-------|
| DEFAULT KEY | 1 |
| KEY 1 | ***** |
| KEY 2 | ***** |
| KEY 3 | ***** |
| KEY 4 | ***** |

● **When setting [OPEN] or [SHARED] as authentication and setting [WEP] as the encryption method:**

DEFAULT KEY : Set 1 – 4 numerals for the default key.

KEY1 – 4 : Set a WEP key to the key number selected with [DEFAULT KEY].
 Either the 64-bit or 128-bit WEP key can be set. For the 64-bit key, input five alphanumeric (or a 10-digit string for the hexadecimal format) for the 128-bit key, input 13 alphanumeric (or a 26-digit string for the hexadecimal format).

● **When using [WPA-PSK] or [WPA2-PSK] :**

Set a key.

Input either 8 to 63 alphanumeric or a 64 digit string in the hexadecimal format.

● **When the authentication method is [WPA-EAP/WPA2-EAP], [WPA-EAP], [WPA2-EAP]:**

Set [EAP], [USER NAME], and [PASSWORD].

EAP: Select the EAP setup in the RADIUS server. Types of EAP that can be selected are as follows.

PEAP (MS-CHAPv2), PEAP (GTC), EAP-TTLS (MD5),

EAP-TTLS (MS-CHAPv2), EAP-FAST(MS-CHAPv2), EAP-FAST(GTC), EAP-TLS *

USER NAME: Input a user name used for authentication (excluding spaces)(maximum 64 characters).

PASSWORD: Input a password used for authentication (maximum 64 characters).

Entering characters ➡ page 15

* : When [EAP-TLS] is selected as EAP, it is required to setup “USER NAME”, “PASSWORD”, “DIGITAL CERTIFICATE”, and “CA CERTIFICATE” with the WEB browser. (See page 24 – 25)

Notes

- If you are unable to connect to the wireless LAN through the access point, contact the manufacturer of the access point.
- When using EAP, the display needs to be set according to the setting of the RADIUS server. Check with the network administrator for the setting of the RADIUS server.
- When using an EAP together with an access point with invalid SSID broadcast, select WAP-EAP or WAP2-EAP for the authentication method even if the authentication method of the access point is WPA-EAP/WPA2-EAP.

5 Select [SAVE] and press button.

Save the current network settings.

■ **Default settings of [USER1] – [USER3]**

The following settings as [USER1] – [USER3] in the [WIRELESS LAN] are set before the Display leaves the factory.

| | | | |
|-------------|-------------------|----------------|--------|
| SSID | Panasonic Display | MODE | AD HOC |
| DHCP | OFF | AUTHENTICATION | OPEN |
| IP ADDRESS | 192.168.11.100 | ENCRYPTION | NONE |
| SUBNET MASK | 255.255.255.0 | CHANNEL | 11 |
| GATEWAY | 192.168.11.1 | | |

Network Setup

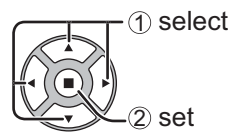
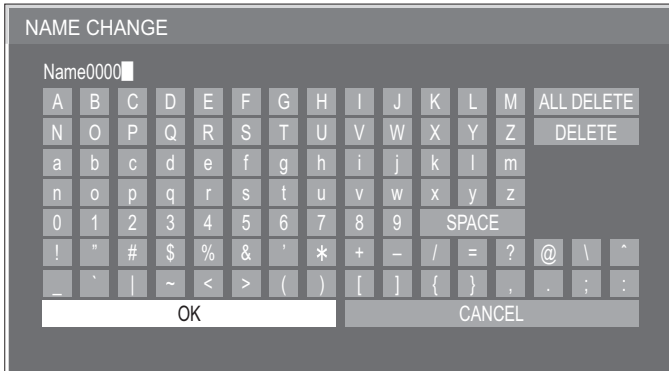
NAME CHANGE

You can change the Display name to be displayed on the network.

1 Select [NAME CHANGE] in [NETWORK SETUP] menu and press button.

The keyboard is displayed.

Up to 8 characters can be entered for the Display name.



[Entering characters]

To enter text, select characters in the on-screen keyboard.

Example: Specifying "PDP 01"

① Select "ALL DELETE".



All text is deleted.

To delete individual characters, select "DELETE".

② Select "P".



Repeat this process to enter the next character.

③ Select "D" and "P".



④ Select "SPACE".



⑤ Select "0" and "1".



2 When you finished entering the Display name, select [OK] and press .

To cancel saving the Display name, select [CANCEL].

Network Setup

PASSWORD

Set to [ON] to perform password check when connecting with the Display using “Wireless Manager”. By controlling connection with password setting, it is possible to prevent an external device from accidentally connecting and interrupting images, etc.

- 1 Select [PASSWORD] in [NETWORK SETUP] menu and press  button.



- 2 Select [ON] or [OFF] for [PASSWORD].

PASSWORD CHANGE

Password can be registered or changed. No password is set in the default setting.

- 1 Select [PASSWORD CHANGE] and press  button.

The keyboard is displayed.

Up to 8 characters can be entered for the password.

Entering characters ➡ page 15

- 2 When you finished entering the password, select [OK] and press .
To cancel saving the password, select [CANCEL].

Note

It is recommended to change password on a regular basis for keeping it private.

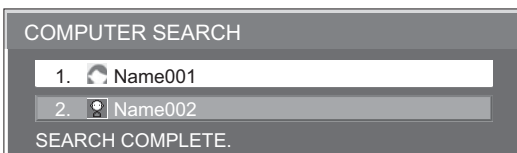
COMPUTER SEARCH

You can search computers that can connect using the “Wireless Manager”. See the “Wireless Manager” operation manual for details.

* You can configure settings when the wireless module (ET-WM200U) is mounted.

- 1 Select [COMPUTER SEARCH] in [NETWORK SETUP] menu and press  button.

The list of connectable computers on the network is displayed.



- 2 Select the computer to be connected and press .

Note

[COMPUTER SEARCH] is not supported in “Wireless Manager mobile edition 6.0”.

MULTI-LIVE

Switch to the MULTI-LIVE mode when using the “Wireless Manager”. See the “Wireless Manager” operation manual for details.

Select [MULTI-LIVE] in [NETWORK SETUP] menu and press  button.

Network Setup

LIVE MODE CUT IN

Set this [ON] to allow interrupt of the Live mode by other users while the Live mode is active (sending image) by the “Wireless Manager”. For details, refer to “Wireless Manager” operating manual.

- 1 Select [LIVE MODE CUT IN] in [NETWORK SETUP] menu and press  button.
- 2 Select [ON] or [OFF].


CONTROL I/F SELECT

Set whether to control with RS-232C (serial) or LAN. When [LAN] is set, the slot power is turned on, and power indicator is lit orange under the condition of power off with remote control (stand-by state), regardless of the [Slot power] setting.

- 1 Select [CONTROL I/F SELECT] in [NETWORK SETUP] menu and press  button.
- 2 Select [RS-232C] or [LAN].

WEB CONTROL

Select [ON] to control the display from the web browser. When [ON] is set, the slot power is turned on, and power indicator is lit orange under the condition of power off with remote control (stand-by state), regardless of the [Slot power] setting.

- 1 Select [WEB CONTROL] in [NETWORK SETUP] menu and press  button.
- 2 Select [ON] or [OFF].

STATUS

Displays the current network status.

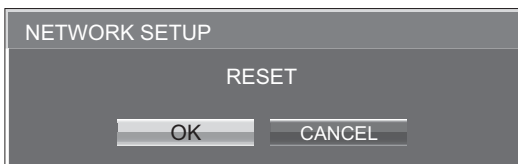
Select [STATUS] in [NETWORK SETUP] menu and press  button.

The Display information, settings of wired LAN and wireless LAN are displayed.

RESET

You can reset the network setting to the factory default of the Display.

- 1 Select [RESET] in [NETWORK SETUP] menu and press  button.



- 2 Select [OK] and press .

Note

It takes some time to restart network while the network settings are initialized. During that time, “NETWORK SETUP” in the “SETUP” menu is grayed out and cannot be set.

Connecting with Wired LAN

Notes

To use the network function, make the necessary settings in [NETWORK SETUP] and be sure to set [CONTROL I/F SELECT] to [LAN]. (See page 9)

When [LAN] is set, the slot power is turned on, and power indicator is lit orange under the condition of power off with remote control (stand-by state), regardless of the [Slot power] setting.

Computer operation

Connection can be made with wired LAN. However, confirm to your system administrator on network settings before changing any settings.

1 Turn on the computer.

2 Make the network setting according to your system administrator.

If the Display settings are the default settings (See page 10), the computer can be used with the following network settings.

| | |
|-------------|----------------|
| IP ADDRESS | 192.168.10.101 |
| SUBNET MASK | 255.255.255.0 |
| GATEWAY | 192.168.10.1 |

Connecting with Wireless LAN

You can configure settings when the wireless module (ET-WM200U) is mounted.

Computer operation

1 Make the network setting according to your system administrator.

- If you select [M-DIRECT] for [WIRELESS LAN] in the [NETWORK SETUP] menu, the IP address will automatically be acquired.
- If you select default settings of [USER1] - [USER3] for [WIRELESS LAN] in the [NETWORK SETUP] menu (see page 14), then the computer can be used with the following network settings.

| | |
|-------------|----------------|
| IP ADDRESS | 192.168.11.101 |
| SUBNET MASK | 255.255.255.0 |
| GATEWAY | 192.168.11.1 |

2 Click [Start]→[Connect To*]→[Wireless Network Connection*], select the wireless network of [SSID] set with the Display, and then click [Connect*].

When you select default settings of [M-DIRECT] for [WIRELESS LAN] in the [NETWORK SETUP] menu, the SSID is [M-DIRECT + The last 4 digits].

When you select default settings of [USER1] - [USER3] for [WIRELESS LAN] in the [NETWORK SETUP] menu, the SSID is [Panasonic Display].

* The names are for Windows XP. In Windows Vista/Windows 7, the procedure will be [Start]→[Connect To]. The names may differ depending on the Operating System. Please connect the network according to the displayed names on your computer.

Notes

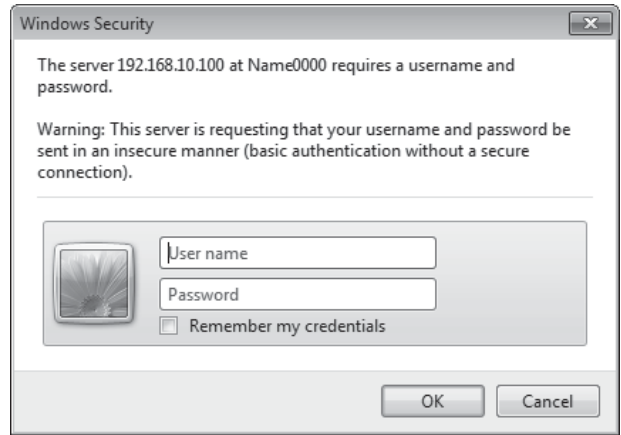
- If you use any wireless utility other than Windows [Wireless Network Connection], follow its operation procedure for connection.
- If you use the access point, configure the Display and each network setting of the computer following the instruction of the network administrator.

Using Web Browser

Accessing from the Web browser

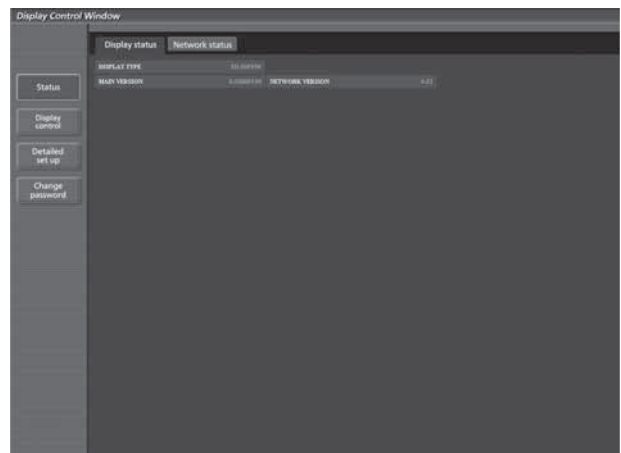
- 1 Activate the Web browser in the personal computer.
- 2 Enter the IP address set by the Display into the URL input field of the Web browser.
- 3 Enter your “User name” and “Password”.

The factory default settings are user1 (user privileges) or admin1 (administrator privileges) for the user name and Panasonic for the password.



- 4 Click [OK] to display the Display status page.

“Display status” page is displayed.

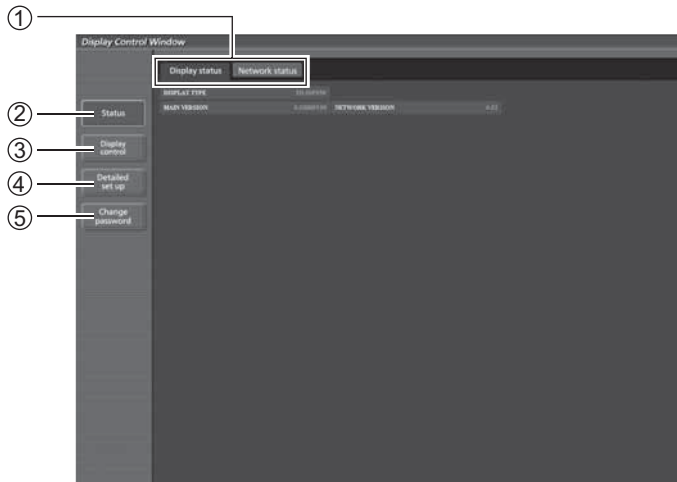


Notes

- Avoid activating two or more Web browser simultaneously to work out setting or control actions.
- Change the password first of all.
- Administrator privileges enable the use of all functions. User privileges enable the use of only “Display status”, “Network status”, “Basic control”, “Advanced control”, and “Change password”.
- If the password is incorrectly entered three times in a row, the lock is set for several minutes.
- If you want to control the Display using a Web browser, set [WEB CONTROL] in [NETWORK SETUP] menu to [ON].

Using Web Browser

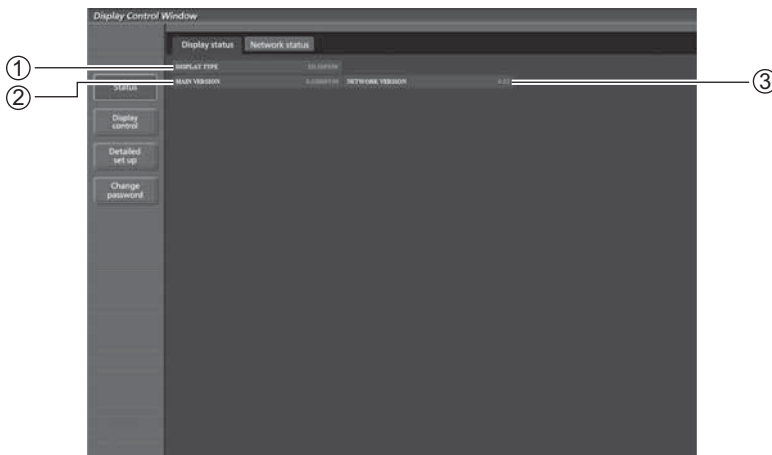
■ Description of each item



- ① Page tab
Click these to switch pages.
- ② Status
Click this item, and the status of the Display is displayed.
- ③ Display control
Click this item to display the Display control page.
- ④ Detailed set up
Click this item to display the advanced settings page.
- ⑤ Change password

Display status page

Click [Status], then [Display status] to display the Status information page.
This page displays the Display statuses established for the items shown below.

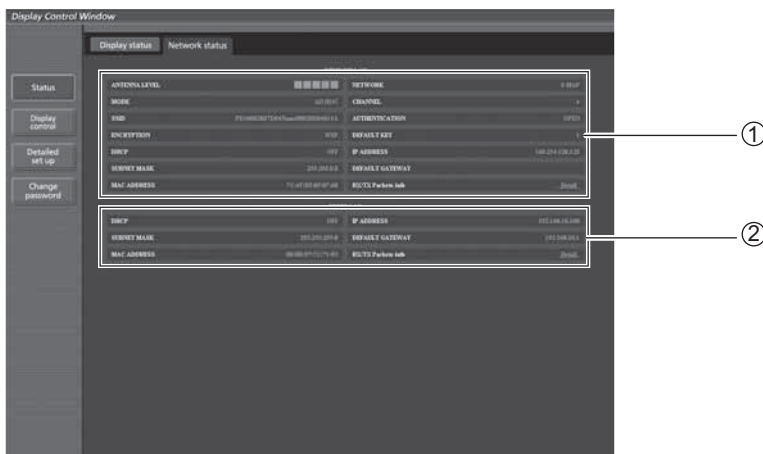


- ① Displays the type of Display.
- ② Displays the firmware version of the Display main unit.
- ③ Displays the firmware version of the network.

Using Web Browser

Network status page

Click [Status], then [Network status] to display the Status information page.
Displays the current configuration information of the network.



- ① Displays the configuration details of wireless LAN.
 - * You can configure settings when the wireless module (ET-WM200U) is mounted.
- ② Displays the configuration details of wired LAN.

Using Web Browser

Basic control page

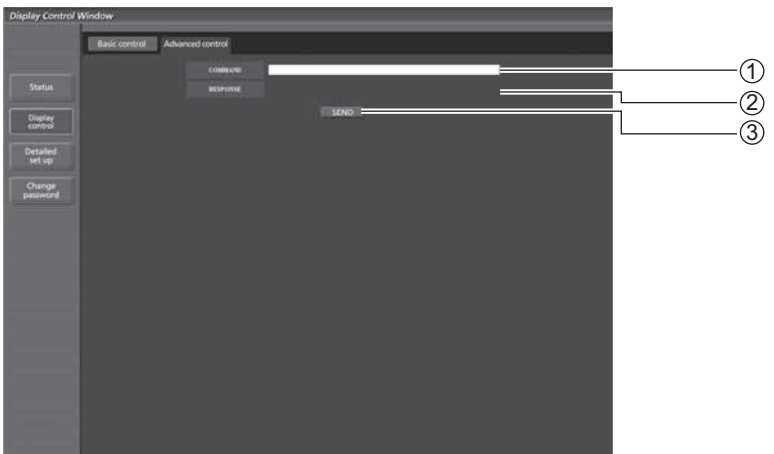
To move from another page, click [Display control], then [Basic control].



- ① Power On/Off control
- ② Use these to select the input signals
- ③ Operation of AV mute
- ④ Switches aspect mode

Detail control page

Click [Display control], then [Advanced control] to display the Detail control page.



- ① Enter a command. Use the same command used for the serial control. (refer to “Operating Instructions, Display Operations”)
- ② Response from the unit is displayed.
- ③ Command is sent and run.

Note

After the settings are changed, it may take a while till the display status is displayed.

Using Web Browser

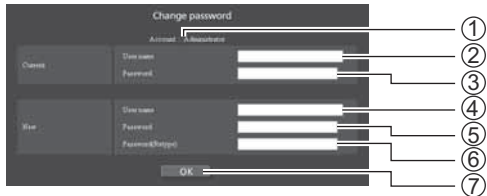
Change Password page

Click [Change password].



- ① Administrator
- ② User

Administrator mode



- ① Account
- ② Current user name input field
- ③ Current password input field
- ④ New user name input field
- ⑤ New password input field
- ⑥ New password input field (re-enter for confirmation)
- ⑦ Button for executing password change

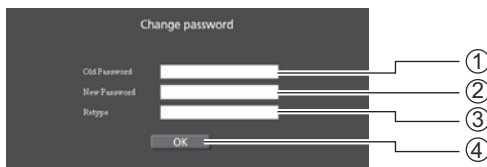
User account



- ① Account
- ② New user name input field
- ③ New password input field
- ④ New password input field (re-enter for confirmation)
- ⑤ Button for executing password change

User mode

A user can change password only.



- ① Current password input field
- ② New password input field
- ③ New password input field (re-enter for confirmation)
- ④ Button for executing password change

Note

When changing the administrator account, both "Current user name" and "Current password" are required.

Using Web Browser

Network config page

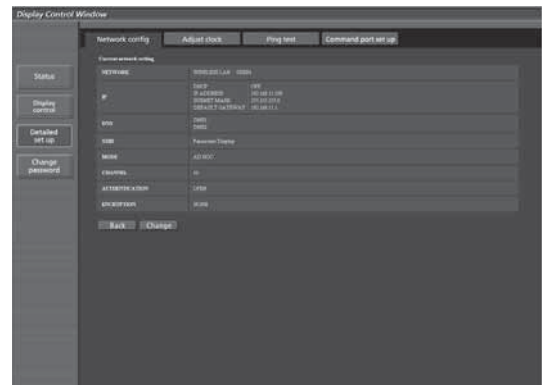
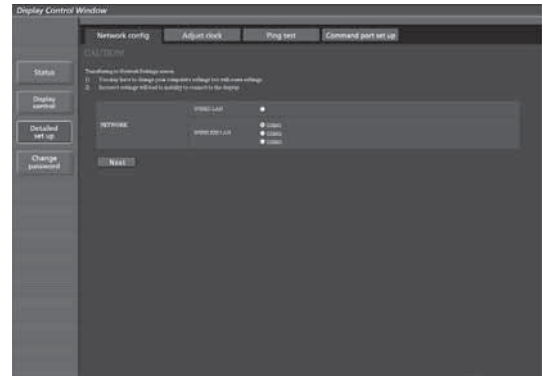
You can make detail network settings on Display, when connecting without the administrator authority or when connecting through an access point (infrastructure mode).

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].



- 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.

Settings performed here are the same as the settings performed with the [NETWORK SETUP] menu of the Display, except when “EAP-TLS” is selected as the EAP.

- WIRED LAN (See page 10)
- WIRELESS LAN (See page 11)

Notes

- Register user name, password, digital certificate, and CA certificate when the authentication method is “EAP-TLS”.

USER NAME : Input a user name used for authentication (excluding spaces) (maximum 64 characters).

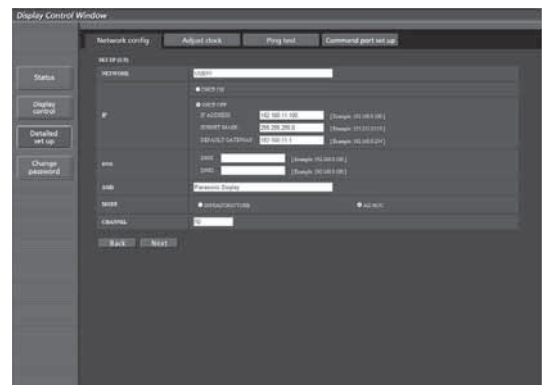
PASSWORD : Input a password used for authentication (maximum 64 characters).

DIGITAL CERTIFICATE : Register a digital certificate (extension: PFX) to be used for authentication.

CA CERTIFICATE : Register a CA certificate (extension: CER) to be used for authentication.

- Authentication error occurs if the time of the Display is not set correctly. Check Adjust clock page [Adjust clock]. (See page 25)

After all required items have been entered, a confirmation window appears.

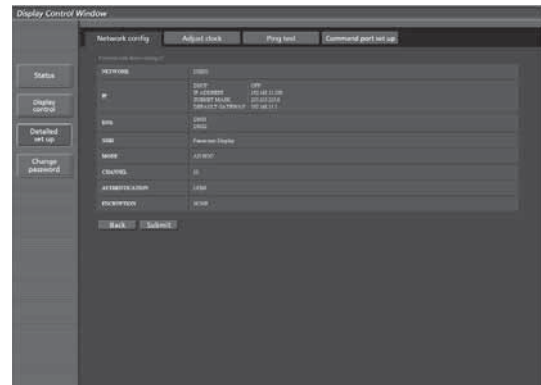


(Wireless LAN screen)

Using Web Browser

4 Click [Submit].

The settings will be registered.



(Wireless LAN screen)

■ Making the above settings effective (Only for wireless LAN)

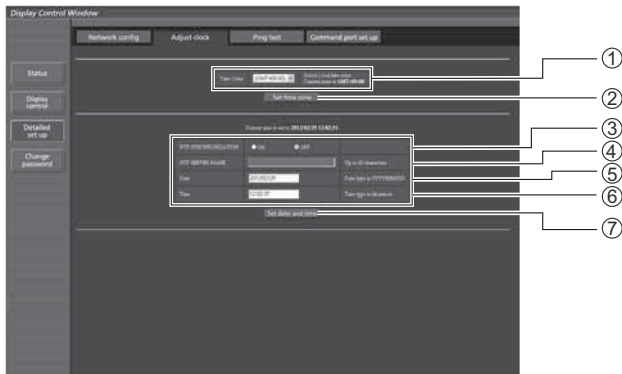
Select [WIRELESS LAN] in [NETWORK SETUP] menu of the Display, and select the network set in this page.

Notes

- Important video/audio data is protected because AES encryption processing takes place.
- Changing the setting of LAN while connected with LAN might disconnect the connection.

Adjust clock page

Click [Detailed set up], then [Adjust clock] to display the Adjust clock page.



- ① Time zone selection
- ② Button to update time zone setting
- ③ Turn this [ON] to set the date and time automatically.
- ④ When setting the date and time automatically, input the IP address or name of the NTP server. (When inputting the server name, the DNS server must be set.)
- ⑤ New date field
- ⑥ New time field
- ⑦ Button to update time and date settings

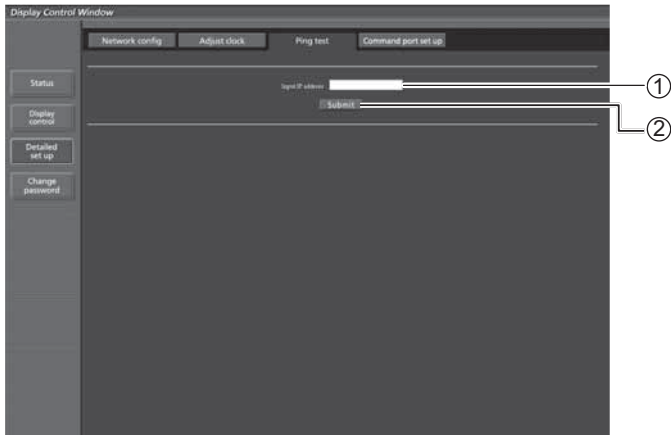
Note

If the time becomes incorrect immediately after setting the correct time, contact the dealer where you bought the Display.

Using Web Browser

Ping test page

This page makes it possible to check whether the network is connected to the DNS server, etc. Click [Detailed set up], then [Ping test] to display the Ping test page.



Display which appears when the connection was successful.

```
PING 198.245.80.20 (198.245.80.20): 56 data bytes
64 bytes from 198.245.80.20: seq=0 ttl=64 time=0.837 ms
64 bytes from 198.245.80.20: seq=1 ttl=64 time=0.488 ms
64 bytes from 198.245.80.20: seq=2 ttl=64 time=0.479 ms
64 bytes from 198.245.80.20: seq=3 ttl=64 time=0.486 ms

--- 198.245.80.20 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max = 0.479/0.571/0.837 ms
```

Display which appears when the connection failed.

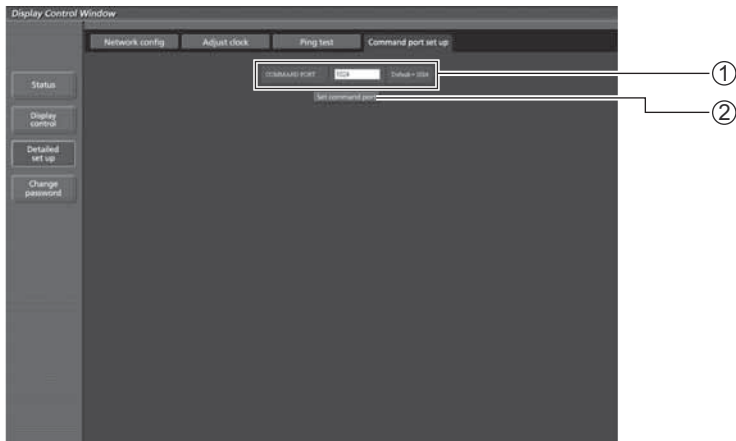
```
PING 198.245.80.15 (198.245.80.15): 56 data bytes

--- 198.245.80.15 ping statistics ---
4 packets transmitted, 0 packets received, 100% packet loss
```

- ① Enter the IP address of the server to be tested.
- ② Button for conducting the test.

Command port set up page

Set the port number to be used with command control. Click [Detailed set up] → [Command port set up].



- ① Input the port number to be used with command control
- ② Setting update button

PJLink™ Protocol

The network function of the unit conforms with PJLink™ class 1 and you can operate the following actions from your computer using PJLink™ protocol.

- Display setup
- Display status query

Supported commands

Commands to control the unit with PJLink™ protocol are shown in the table below.

| Command | Control | Remark |
|---------|-------------------------|--|
| POWR | Power control | Parameter 0 = Standby 1 = Power "On" |
| POWR? | Power status query | Parameter 0 = Standby 1 = Power "On" |
| INPT | Input switch | Parameter |
| INPT? | Input switch query | See the parameter for command INST? |
| AVMT | Shutter control | Parameter 10 = Picture On (picture mute deactivated), 11 = Picture Off (picture on mute) 20 = Audio On (audio mute deactivated), 21 = Audio Off (audio on mute) 30 = Shutter mode Off (picture and audio mute deactivated) 31 = Shutter mode On (picture and audio on mute) |
| AVMT? | Shutter control query | Parameter 11 = Picture Off (picture on mute) 21 = Audio Off (audio on mute) 30 = Shutter mode Off (picture and audio mute deactivated) 31 = Shutter mode On (picture and audio on mute) |
| ERST? | Error status query | Parameter First byte: Means fan error. 0 or 2. Second byte: 0 Third byte: 0 Fourth byte: 0 Fifth byte: 0 Sixth byte: Means other error. 0 or 2. Meaning of the 0 – 2 settings: 0 = Error is not detected, 2 = Error |
| LAMP? | Lamp status query | Not supported |
| INST? | Input switch list query | Parameter Numbers 11 to 13 are depending on the slot installation condition 11: PC IN input (PC) When a single input terminal board is attached 11: SLOT input (SLOT INPUT) 12: PC IN input (PC) 21: VIDEO input (VIDEO) 31: HDMI input (HDMI) 51: Network input (NETWORK) When a dual input terminal board is attached 11: SLOT input (SLOT INPUT A) 12: SLOT input (SLOT INPUT B) 13: PC IN input (PC) 22: COMPONENT/RGB IN input (COMPONENT) 32: DVI-D IN input (DVI) |
| NAME? | Display name query | The name set for [NAME CHANGE] in [NETWORK SETUP] is returned. |
| INF1? | Manufacturer name query | Returns "Panasonic" |
| INF2? | Model name query | Returns "TH-85PB1" |
| INFO? | Other information query | Returns version number |
| CLSS? | Class information query | Returns "1" |

PJLink™ security authentication

When using PJLink with security authorization, either of the password set for administrator privileges and the password set for user privileges with Web browser control can be used as the password for PJLink (See page 19). When using PJLink without security authorization, set use without the password for administrator privileges and the password for user privileges of Web browser control.

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