Panasonic

User Guide

Upgrade Software Key

Model No. **AJ-SFU3100G**
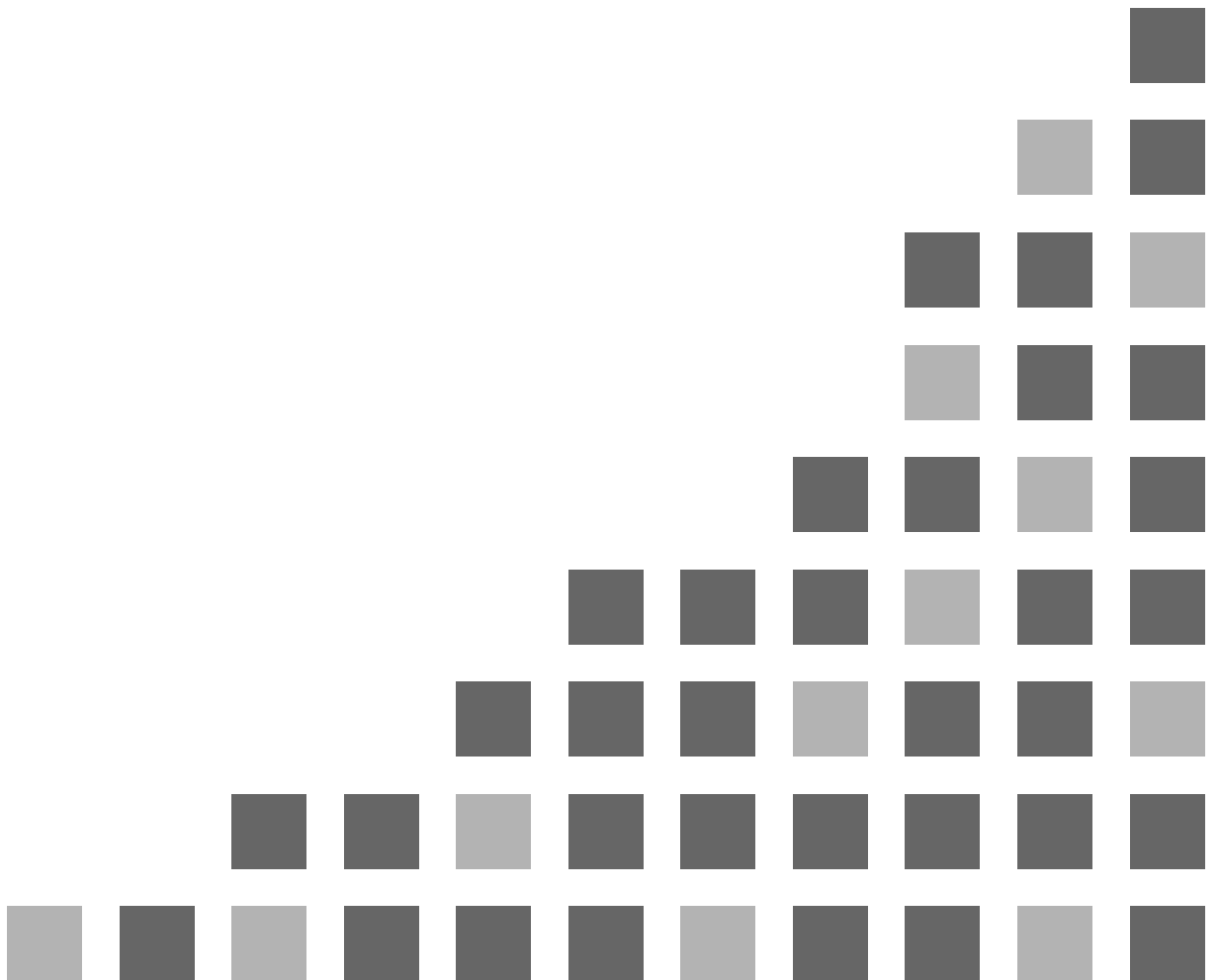
Contents

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  Micorsoft® Windows® 7 operating system

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Before Using

- Descriptions in this document are based on the assumption that settings regarding the wireless LAN on the computer and mobile terminals are completed. For how to setup these settings, please contact the manufacturers of the devices you are using.
- Please note that Panasonic cannot take any responsibility regarding any damages caused by incorrect setting of the network in order to use this function. Please also note that Panasonic cannot take any responsibility regarding any damages caused by using this function.
- Descriptions in this document are based on the assumption that you have read the operating instructions of the P2 Cam (Part number: AJ-HPX3100G) and understand the operation of the memory card and camera recorder (referred as P2 Cam hereafter) .
- This document describes reference pages as (page 00).

■About the illustrations in this document
- Illustrations of the P2 Cam itself or the menu screen may be different from how they actually are.

■About the terms
- Both SD Memory Cards and SDHC Memory Cards are referred to as SD Memory Cards.
- Memory cards with the "P2" logo (optional AJ-P2C064XG, etc.) are referred to as "P2 Card"(s).
- An image created with a single recording operation is referred to as a "clip", and is described as such in this document.

■About the Software Licensing Agreement
- Before using the product, first read the "Software Licensing Agreement". To use the product, you must agree to the terms of this Agreement. If you do not agree to this Agreement, or if you have any questions, do not open the pouch containing the key code, and contact the dealer at the point of purchase.
  If you open the pouch containing the key code, you are agreeing to contents of this license agreement.

■About the Key Code
- Because the key code is required for re-registration of this product, keep it in a safe place together with the associated P2 cam serial number.

Getting Started

The AJ-SFU3100G wireless LAN upgrade software key is an upgrade software key to enable the wireless LAN connection option function for the AJ-HPX3100G P2 cam.
Wireless LAN is compatible with IEEE802.11g and IEEE802.11n.

● Confirmation of the camera status
● Confirmation of the thumbnail images
● Proxy playback
● Download of proxy file/ clip management information
● Displaying/editing of the metadata.
● Adding/deleting of the metadata (Shotmark/Textmemo)
● Proxy streaming*
● Camera remote control (REC operation only)*
* If the version of the AJ-HPX3100G is 30.40-00-0.00 or earlier, an update is required to enable this function.
  For details, please refer to the support and download pages of the website below.
    http://pro-av.panasonic.net/

\<Notes\>
● The optional wireless module (model number: AJ-WM30) is required. Do not attach other commercially-available wireless modules.
● When downloading the proxy file to a PC, make sure that there is enough capacity on the disk for the download before operating.
● For proxy playback, downloading proxy file/clip management information, and proxy streaming, the video encoder board (AJ-YDX30G, optional) is required.
● If the proxy streaming function is updated, network settings must be set once more. Perform the procedure in "Setup the Network" (page 9 to 19). Also, the network settings stored on the SD memory card (page 9) must be changed before update. After update, store these settings again on the P2 Cam.
● If the proxy streaming function is updated, browser history/cookies must be deleted.
  For details, please refer to the support and download pages of the website below.
    http://pro-av.panasonic.net/

IEEE802.11g/n
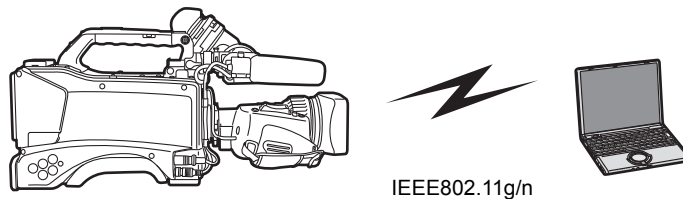
Precautions

■ **Carefully read "Before using" and "Precautions when using" in the Operating Instructions for the wireless module (model number: AJ-WM30) and use after fully understanding the content.**

■ **To avoid mistakes with this product, the following restrictions apply.**

Supported specification	**IEEE802.11g/n** * IEEE802.11a and IEEE802.11b cannot be used
Communication frequency	**2412 MHz - 2462 MHz (1 ch, 6 ch, 11 ch)** * 12 ch or higher cannot be used.

■ **On use abroad**

In order to comply with regulations concerning radio in various regions of the world, the following four AJ-WM30 models are for sale. Note that none of the products may be used outside the countries or regions that support them.

Product name	Region where it can be used
AJ-WM30MC	People's Republic of China
AJ-WM30P	United States of America, Canada, Mexico, Argentina, Peru, Taiwan
AJ-WM30E	EU member nations, EFTA member nations, Australia, New Zealand, Russia, Ukraine, Saudi Arabia, UAE, Kuwait, Oman, Egypt, Republic of South Africa, Republic of Korea, the Philippines, Malaysia, Singapore
AJ-WM30	Japan

■ **In addition, note the following when used in these countries.**

● In France outdoor use is not allowed.

■ **The Wireless Module (AJ-WM30) is installed with the antenna facing the rear of the P2 camera (AJ-HPX3100). Because of this, signal strength is reduced towards the front of the camera (lens side). When performing tasks requiring high transfer speeds, such as viewing or downloading proxies, please use the computer, iPad, iPod touch, iPhone, etc., from a position within 45 degrees of the rear of the camera.**

Major Operations

Computer environment required for connection

- First, confirm that the wireless LAN function is installed on the computer you are using.
- Make sure to confirm the following setting before connecting the wireless module (AJ-WM30) to the computer.
- This does not guarantee the operation between all the wireless LAN adapters and the wireless LAN adapter installed in the computer.

Check 1: Settings of the wireless LAN

◆ Computer with a built-in wireless LAN function
- Is the wireless LAN enabled?

◆ Computer without a built-in wireless LAN function
- Is the wireless LAN adapter correctly recognized?
- Is the wireless LAN adapter enabled?
- Install the driver for the wireless LAN adapter in advance.
  For how to install the driver, refer to the operating instructions of the wireless LAN adapter.

Check 2: Settings of the computer

- You may not be able to connect with the P2 Cam when security (firewall) software or utility software for the wireless LAN adapter is installed.
- Is the network bridge setup?
- Is the firewall disabled?

Required system configuration

A computer fulfilling the following conditions is required to use wireless LAN.

■ Windows PC
Microsoft Windows® 7 Professional 32/64 bit

■ Macintosh
Mac OS X v10.6.x, v10.7.x [*1]
*1 Not guaranteed except for pre-installed or a clean install.
- The latest information regarding the operation check version is published on the following website.

■ iPad/iPod touch/iPhone [*2]
iOS v5.0
*2 For iPod touch and iPhone devices before the 3rd generation, images recorded with HQ and SHQ mode cannot be played.
- The latest information regarding the operation check version is published on the following website.

<Notes>
- Please note that there is no guarantee of operation when used on a system environment other than that mentioned above, or on home-made computers.
- Use the software after logging in with an administrator or a standard user account. Users with a guest account cannot use the software.

■ About the Web browser
- A Web browser is required to perform Web control.
- Regarding supported browsers, the latest information is published on the following website.

■ About The Media Player
- QuickTime is required to play the proxy image.
- VLC Media Player is required for proxy streaming in RTP mode.
- The latest information regarding the operation check version is published on the following website.

■ About Java Runtime
- The camera status display on the computer uses Java Runtime. Java is required for displaying this panel.
- The latest information regarding the operation check version is published on the following website.
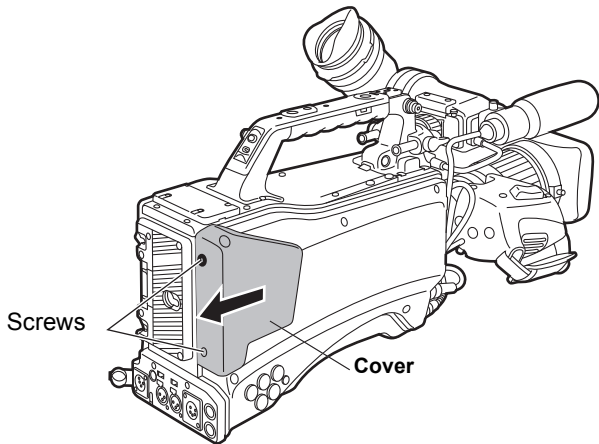 http://pro-av.panasonic.net/

This does not guarantee operation with computers that fulfill the above conditions.
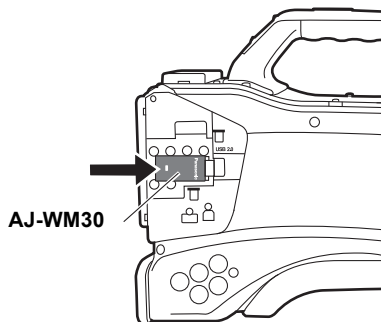
Preparation

Preparing to connect computers, iPad/iPod touch/iPhone to the P2 cam.

Attach the wireless module (AJ-WM30G)

1 Remove 2 screws from the P2 Cam (Part number: AJ-HPX3100G) main body, and remove the cover by sliding it backward of the P2 Cam**.**

Screws

Cover

2 Attach the wireless module (Part number: AJ-WM30) to the USB port**.**

AJ-WM30

3 **Replace the cover removed in** *1***, and fasten the 2 screws.**

<Note>
When using wireless LAN, make sure the cover removed in the foregoing task is firmly fastened.

Enable the wireless LAN function

When connecting the P2 cam with a computer after purchase, enable the function by importing the 30 digit activation code into the P2 cam main unit.
The activation code can be obtained by accessing the site where activation codes are issued, and authenticate the device information exported from the P2 cam and the key code bundled with the product following the displayed procedure.
The procedure requires an SD memory card (formatted with the P2 cam), a computer equipped with an SD memory card slot, and an Internet connection environment.

1 **Export the device information of the P2 cam to the SD memory card**
Start the P2 cam, insert the SD memory card and press the THUMBNAIL button, when you select [ACTIVATE]-[EXPORT PRODUCT SERIAL #] - [YES], the folder, private/meigroup/pavcn/sbg/p2sd/actv/ is created inside the SD memory card, and the P2 cam device information is saved in the file, SERIAL.LST.
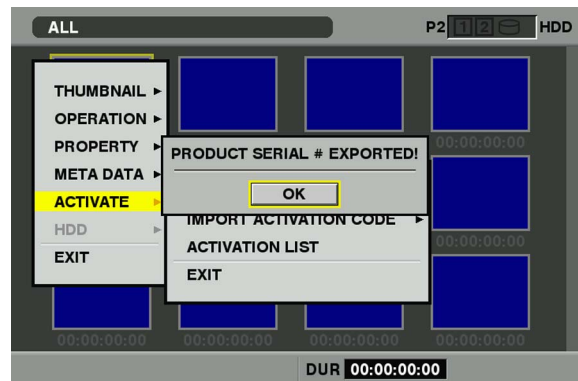
Close the dialog display by pressing the [SET] button.

● When the [ACTIVATE] menu does not appear, it is necessary to update the firmware version in the AJ-HPX3100G.
See the latest information about firmware on the P2 support page on the following website.
http://pro-av.panasonic.net/
● Perform the update after seeing "Updating the Firmware incorporated into the unit" (page 199) in the AJ-HPX3100G Operating Instructions for how to update the firmware.

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- Device information for a maximum of 100 devices can be stored in one SD memory card by repeating the operations in step 1 for P2 cams that you want to issue the activation code for. The site that issues the activation code can read all device information for multiple devices stored on the SD memory card, and batch issue activation codes for the multiple devices.
- When an error dialog appears, check insertion of the SD memory card, write inhibit setting, free space, etc.
- It is recommended that you use an SD memory card formatted with the P2 cam to prevent unexpected errors.

2 **Remove the SD memory card from the P2 Cam. Insert it in a computer and connect to the activation code publication site below from a browser. Follow the procedures described in the site to acquire the activation code.**

http://panasonic.biz/sav/actkey_e

<Notes>
- The private/meigroup/pavcn/sbg/p2sd/actv/ folder created in step *1* will be required in step *3*, so do not delete the folder, or format the SD memory card.
- When a file named ACTIVE.LST already exists in the private/meigroup/pavcn/sbg/p2sd/actv/ folder of the SD memory card, the file name may automatically change depending on the browser that you are using. Save the file after confirming that ACTIVE.LST does not exist in the folder mentioned above.

3 **Save the acquired activation code in the private/ meigroup/pavcn/sbg/p2sd/actv/ folder of the SD Memory Card created in Step *1* following the instructions from the site then remove the SD Memory Card from the computer.**
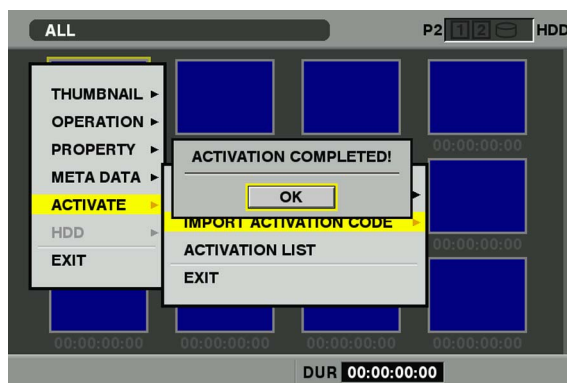
<Note>
Depending on the computer and the OS type, sometimes operations are required before removing the SD memory card.
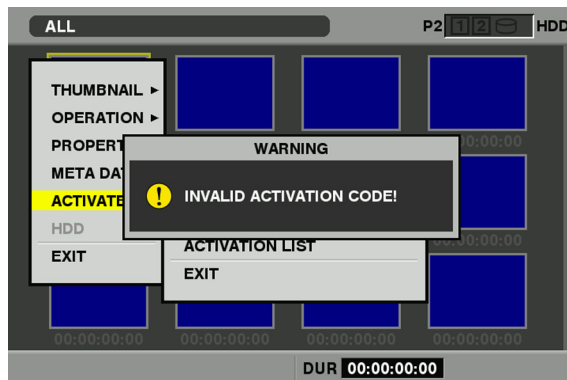
4 **Insert the SD memory card where the P2 cam activation code is stored, press the THUMBNAIL MENU button, and select [ACTIVATE] - [IMPORT ACTIVATION CODE] - [YES]**
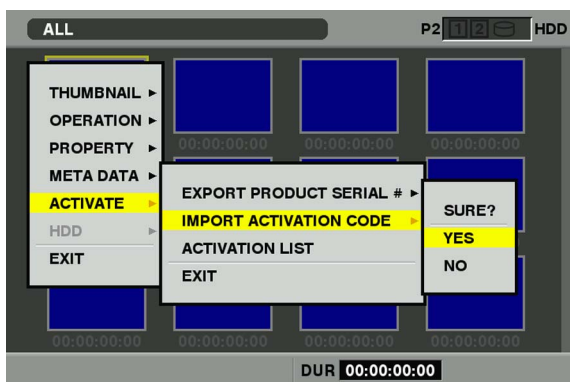
After activation, the message [ACTIVATION COMPLETED!] will be displayed.

If activation fails, the following message will appear.

<Notes>
- If an error dialog is displayed, check the insertion of the SD memory card and the storage location of the file where the activation code was stored in step *3* (file name: ACTIVE.LST).
- Activation codes acquired based on information for other P2 devices than AJ-HPX3100 or other key codes for other products do not work.

5 **Restart the P2 cam**

<Notes>
- During the above operations, if you perform operations not mentioned in the above procedures on data in the SD memory card, you may not be able to continue the activation process.
- When activation is completed, the menu required for setting the wireless LAN network will appear.
- The activated function can be checked on the [ACTIVATE] - [ACTIVATION LIST] menu.
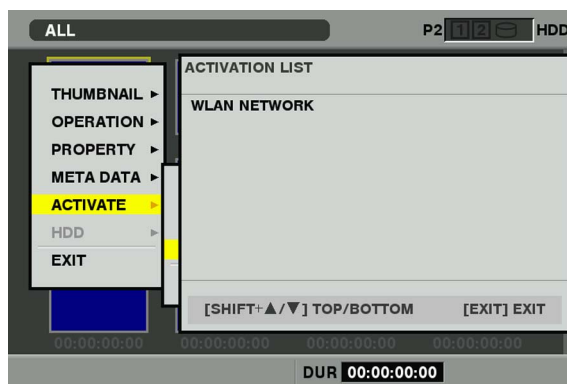
Setup the Network

Setup with the following procedure to connect with the wireless LAN.

1. **Set wireless LAN for the P2 cam**
2. **Activate the wireless LAN function**
3. **Set wireless LAN for computer/cell phone terminals**

Set wireless LAN for the P2 cam

Perform the wireless LAN setting

Open the wireless LAN setting screen and perform the settings with the following procedure.

1 **Press the THUMBNAIL button to open the thumbnail screen and then open the menu with the MENU button where you select [OPERATION] - [DEVICE SETUP] - [WLAN]**
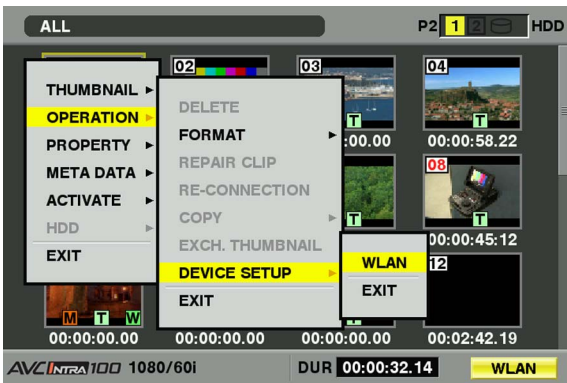

<Note>
[WLAN] items are not displayed when the wireless LAN function on the P2 Cam is not enabled. Enable the wireless LAN function of the P2 Cam following [Enable the wireless LAN function] (page 7).

2 **When performing wireless LAN setting for the first time, press the MENU button again, and select [INITIALIZE] to perform the initialization setting process**
When the initialization setting process is completed, the factory settings are displayed.

3 **Set each item when necessary**
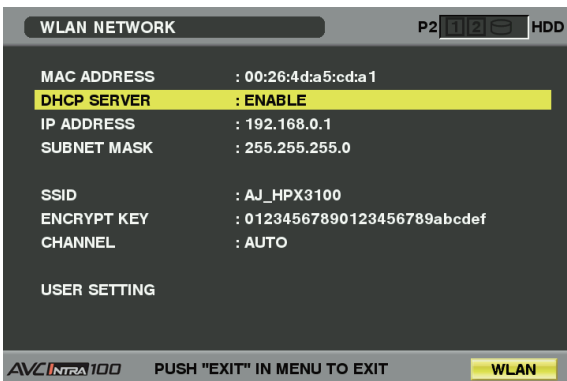
Setting item:

Item name	Content
MAC ADDRESS	MAC address of the wireless LAN adapter (cannot be changed)
DHCP SERVER	Setting for usage of DHCP SERVER function ENABLE: Will use the DHCP DISABLE: Will not use the DHCP (Factory default setting: ENABLE)
IP ADDRESS	IP address (Factory default setting: 192.168.0.1)
SUBNET MASK	Subnet mask (Factory default setting: 255.255.255.0)
SSID	Network name (SSID) (Factory default setting: AJ_HPX3100)
ENCRYPT KEY	WPA2 encryption key (see below) (Factory default setting: 01234567890123456789abcdef)
CHANNEL	Used channel (Factory default setting: AUTO)
USER SETTING	Move to user setting screen

<Notes>
- Depending on the setting items, there may be a limit on the characters or values that can be input.
- The address assignment range of the DHCP server is the 15 values after the set IP address.
  IP address may not be assigned correctly when a value larger or equal to [240] is set, so make sure to use a value between [0] and [239].
  Example: When the IP address of the P2 cam is [192.168.0.1], from [192.168.0.2] to [192.168.0.16] are allocated to the terminal.
- The channel to be used can be selected from AUTO, ch 1, ch 6 or ch 11. When a channel is selected, this channel is prioritized for allocation but in some cases a channel that differs from that set is allocated depending on the usage environment.
- The WPA2 encryption key is set with either of the following inputs. Note: a WPA2 encryption key must be entered, as described below.

Setting content	Input content
Character string	A character string of 8 to 63 characters
Hexadecimal	64 digit hexadecimal

- Press the MENU button to perform actions such as storing settings excluding [USER SETTING] and [USER PASSWORD] of the client setting screen on an SD memory card and reading stored content.
  - When storing, select [SAVE TO SD CARD] from the menu, then a dialog appears to input the name of the file to be stored. Numbers corresponding to month, day and time will appear as the name in the default setting, but you can modify it if necessary and then store the new setting by pressing OK.
  - When you want to read out, select [LOAD FROM SD CARD] from the menu, then a list of stored files will appear and you can choose what you want to read and press the SET button.
- Settings other than the [MAC ADRESS] will be restored to factory settings when the initialization setting process in Step *2* is performed.

4 **Select [USER SETTING] in the setting item and display the user setting screen**

5 **Perform user registration by selecting [NEW USER] from the menu as required**

<Notes>
- User registration will be required when connecting from the WEB browser (page 20).
- You can move between the items with the THUMBNAIL MENU button in the user registration dialog.
- User name is 31 characters or less.
- Password is between 6 and 15 characters (inclusive).
- [guest] is registered in the factory setting. (Password is [p2guest])
- Up to three users can be registered
- From the menu, you can also remove the registered users (DELETE USER) and change the password (CHANGE PASSWORD).
  User settings will be restored to factory settings when the initialization setting process in Step **2** is performed. You will still be able to carry out the initialization process even if you have forgotten your user name or password. However, since the [DHCP SERVER], [IP ADDRESS], [SUBNET MASK], [SSID], [ENCRYPT KEY] and [CHANNEL] settings will also be restored to factory settings, make note of these settings before executing the initialization process.

6 Return to the thumbnail button by pressing the EXIT button once or twice

<Notes>
- Depending on the setting item, its content will not be reflected until you return to the thumbnail screen.
- It may take a while for the operation in the thumbnail screen to become available due to the reflect settings processing.

7 Exit the thumbnail screen by pressing the THUMBNAIL button

<Note>
Make sure to change the WPA2 encryption key and USER SETTING from the factory settings for security purposes.

Activate the wireless LAN function

The wireless LAN function MENU in the P2 cam is set by the [WLAN MODE] on the [SYSTEM MODE] screen in the SYSTEM SETTING page of the setting menu.

Items/ Data Saved	Adjustable Range	Remarks
WLAN MODE	OFF ON ON(+REC)	Select ON/OFF of the wireless LAN function. OFF: Stop the wireless LAN function. ON: Use the wireless LAN function. ON(+REC): Use the wireless LAN function. Remote control of start and stop of recording with the P2 Cam is possible from devices connected to the wireless LAN. Refer to Camera Control panel in "P2 Browser". (page 21)
- C U F -		

You can check the operational status of the wireless LAN with the USB lamp or MODE CHECK screen.

USB lamp	MODE CHECK screen	Wireless operational status
Green lights	"WLAN" lights	Operating normally.
Green blinks	"WLAN ERR " blinks	Not operating normally.

When it is not operating normally, check the installation of the wireless module, etc.

<Notes>
- [WLAN MODE] items are not displayed when the wireless LAN function on the P2 Cam is not enabled. Enable the wireless LAN function of the P2 Cam following [Enable the wireless LAN function] (page 7).
- When the [ACCESS LED] item is turned "OFF" on the [OPTION MODE] screen in the SYSTEM SETTING page of the setting menu, the USB lamp showing the wireless LAN operational status is turned off along with the P2 card access LED.
- The [WLAN MODE] settings may change to [OFF] when data written in the SD memory card (using WRITE from the <SD CARD READ/WRITE> screen of the Settings Menu's file page on a P2 Cam prior to activation) is read using an activated P2 Cam. Therefore, check the menu and reset.

Activate the proxy streaming function

To activate the function for streaming video shot with the P2 Cam to a computer or mobile terminal connected via a wireless LAN, set [STREAMING MODE] on the [PROXY SETTING] screen of the SYSTEM SETTING page of the setting menu with the P2 Cam.

Items/ Data Saved	Adjustable Range	Remarks
STREAMING MODE - C U F -	OFF RTP HTTP	Selects the mode for the proxy streaming function. OFF :Stops the proxy streaming function. RTP :Selects RTP mode. HTTP :Selects HTTP live streaming mode.

The underlined item in the adjustable range is the factory setting.

Also, select the proxy mode HQ 2CH MOV or LOW 2CH MOV in REC MODE (HD) or REC MODE (SD) on the same screen. Streaming cannot be performed in modes other than those above.

```
          < PROXY SETTING >
    REC MEDIA          :P2&SD
    REC MODE(HD)       :HQ 2CH MOV ——————— *
    TC SUPER           :UPPER
    PROXY DISP         :ON
   →STREAMING MODE     :RTP



```

* Select HQ 2CH MOV or LOW 2CH MOVE

The characteristics of each mode are as follows. Select the appropriate mode for the computer or mobile terminal connected to the wireless LAN.

RTP mode:
For use with a computer, streaming is possible. Streaming is possible to 1 destination computer only.

HTTP mode:
Simultaneous transmission to 3 mobile terminals (iPad/iPod touch/iPhone) is possible. Not supported for a computer.

<Notes>
- To enable streaming, the video encoder board (AJ-YDX30G, optional) must be attached.
- To change the STREAMING MODE setting, activation of the wireless LAN function is required. (page 7)
- When the P2 Cam is configured so that both proxy recording and the PRE RECORDING function operate, streaming cannot be performed.
- If the proxy streaming function is set to operate in STREAMING MODE, the PRE RECORDING function from the thumbnail display does not operate.
- A delay occurs in streaming video. The delay in streaming video varies depending on the type of STREAMING MODE, computer, or mobile terminal.
- The streaming video may be disturbed at the start and end of recording, or depending on the wireless LAN environment, but this is not a malfunction.
- If a streaming related menu change, a video input signal switching, or a Genlock disturbance etc. stops the streaming, re-read the page.

Proxy streaming status display

Status display on the menu screen

If streaming cannot be performed even when RTP/HTTP is selected with the P2 Cam settings, an error message is displayed at the bottom of the [PROXY SETTING] menu screen.

```
          < PROXY SETTING >
    REC MEDIA          :P2&SD
    REC MODE(HD)       :HQ 2CH MOV
    TC SUPER           :UPPER
    PROXY DISP         :ON
   →STREAMING MODE     :RTP


    STREAMING ERROR!
    SEE MODE CHECK DISPLAY
```

Status confirmation screen display (MODE CHK function)

The operational status of proxy streaming and the wireless LAN as well as the cause of any error can be checked on the STATUS screen and FUNCTION screen of MODE CHECK. The screen display switches in following order when the MARKER SEL MODE CHK/MENU CANCEL on the P2 Cam is moved in the direction of the user.
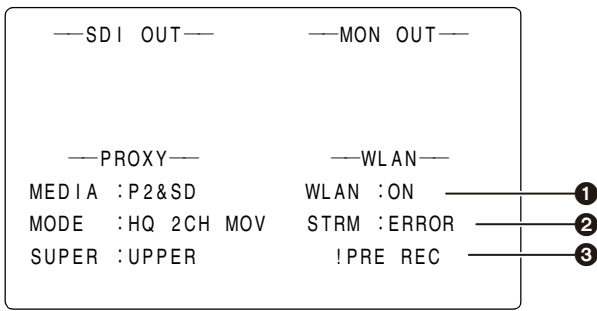
[STATUS] → [!LED] → [FUNCTION] → [AUDIO] → [CAC] → [USER SW STATUS] → Normal screen

■ Example of STATUS screen of MODE CHECK

```
                          STRM ERR ————— ❷
                          WLAN ————— ❶

```

Display item	Display content	Status when displayed
❶ Operational status of wireless LAN	"Activate the wireless LAN function" (page 10)	
❷ Operational status of proxy streaming	STREAM	When the WLAN display illuminates (wireless LAN is operating normally) and streaming output is possible
	STRM ERR	When the WLAN display illuminates (wireless LAN is operating normally) and streaming output is not possible
	(not displayed)	● When the wireless LAN is not operating normally (WLAN display is switched off or WLAN ERR display illuminates) ● When the proxy streaming function is set to OFF in the menu

■Example of FUCTION screen of MODE CHECK

```
 ──SDI OUT──          ──MON OUT──




    ──PROXY──            ──WLAN──
 MEDIA :P2&SD        WLAN :ON ──────── ❶
 MODE  :HQ 2CH MOV   STRM :ERROR ───── ❷
 SUPER :UPPER           !PRE REC ───── ❸
```

Display item	Display content	Status when displayed
WLAN	Wireless LAN status and proxy streaming status display	
	❶WLAN :***	Wireless LAN status display (***) ON :Operating normally ERROR :Not operating normally OFF :WLAN MODE in the menu is set to OFF Not displayed : the wireless LAN function has not been activated
	❷STRM :***	Streaming mode and status display (***) RTP :RTP mode is selected HTTP :HTTP mode is selected ERROR :Streaming cannot be performed OFF :STREAMING MODE in the menu is set to OFF Not displayed : Wireless LAN function is not active, or the video encoder board (AJ-YDX30G, optional) is not attached
	❸ STRM:ERROR Cause	Displays the reason that streaming operation is not possible !PROXY MODE: When the PROXY is set to a format that does not support streaming !PRE REC: When the PRE RECORDING function is set to ON and proxy recording is selected

Set wireless LAN for computer/cell phone terminals

Perform the setting of the computer and mobile terminal connecting to the P2 Cam.

<Notes>
- Confirm that computer and mobile terminal are enabled to connect to a wireless LAN connection. For how to confirm, refer to the operating instructions of the device.
- This product cannot be connected with IEEE802.11a and IEEE802.11b.
- This product supports only the WPA2 wireless LAN encryption method.
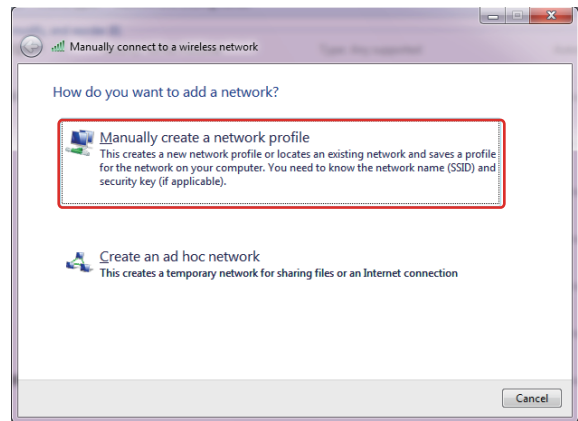
Perform Windows 7 settings

1 Turn off the P2 cam

2 Display the Windows [Network and Sharing Center] screen
Click [Start] - [Control Panel] - [Network and Sharing Center] in sequence.
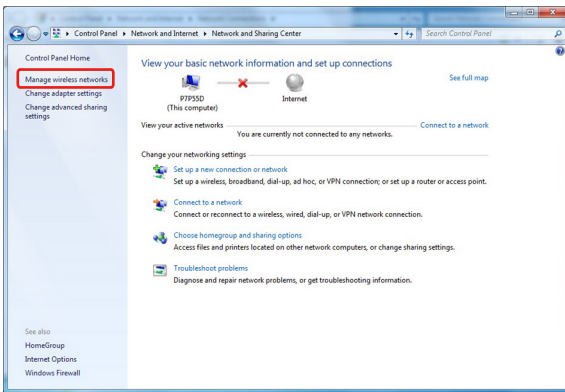
3 Click [Manage wireless networks] - [Add]
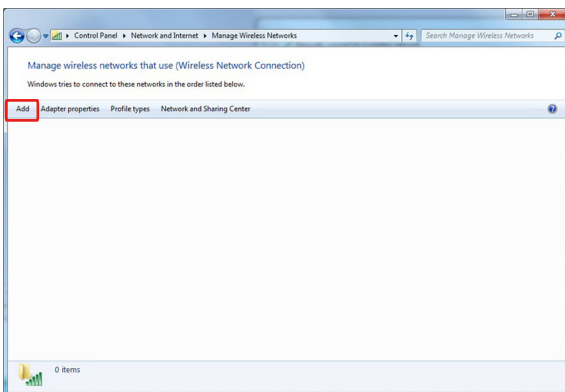
4 Click [Manually create a network profile]

5 Set up the wireless LAN on the screen below and click [Next]
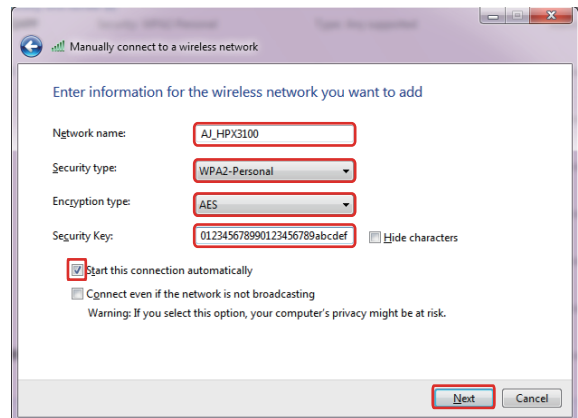
- [Network Name]: Enter the SSID set in the P2 cam (factory default: AJ_HPX3100).
- Security type: Select [WPA2-Personal].
- Encryption type: Select [AES].
- Security key: Enter the "Encrypt Key" set in the P2 cam.
  (Factory default: 01234567890123456789abcdef)
- Enter a check for [Start this connection automatically].

### 6 Click [Close]
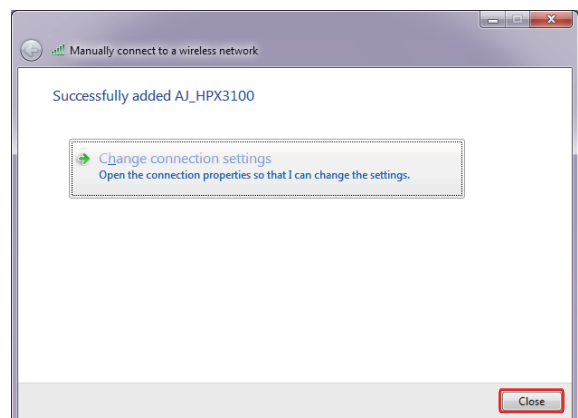
7 **Click [Adapter properties]**
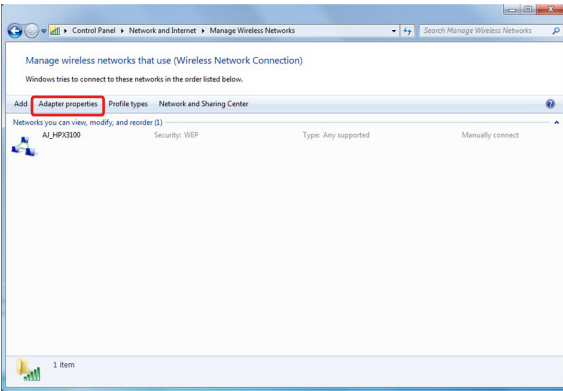
8 **Click [Internet Protocol Version 4 (TCP/IPv4) Properties] and set up either of the following depending on the DHCP setting of the P2 cam setting of the P2 cam**

■ When the P2 cam DHCP is set as [Enable]
● [General] tag: Select [Obtain an IP address automatically] and [Obtain DNS server address automatically]
● [Alternate Configuration]: Select [Automatic private IP address].
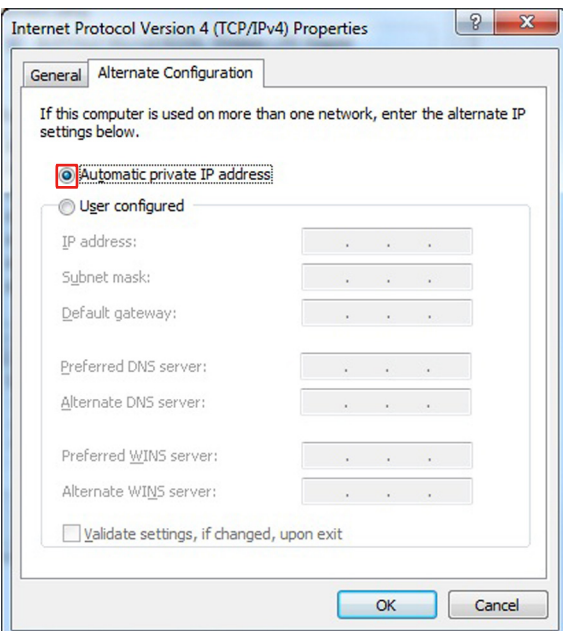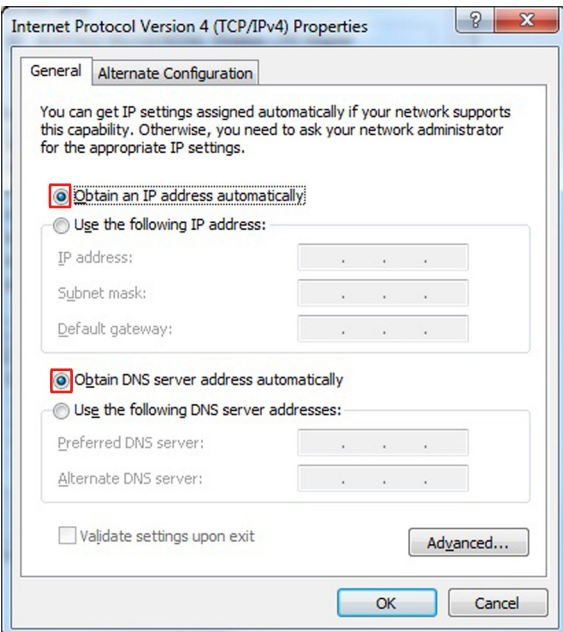
■ When the P2 cam DHCP is set as [Disable]
● [General] tag: Select [Use the following IP address] and enter the setting shown below
  ● IP address:
    - Network Address:
      The same address as the P2 Cam
    - Host Address:
      Address that doesn't overlap with the address of the P2 Cam and peripheral devices
  ● Subnet mask:
    Same value as the P2 Cam
● [Default gateway], [Preferred DNS server], and [Alternate DNS server] are not required so leave them blank.
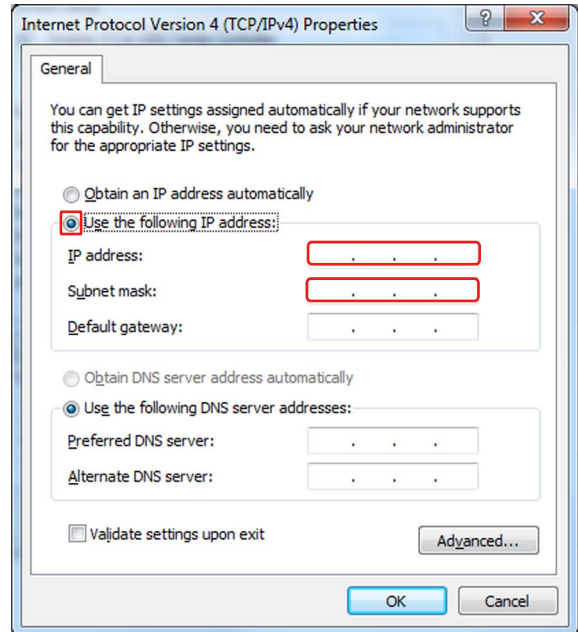
9 **Click [OK] twice**

10 **Turn on the P2 cam**

**11** **Click [Network and Sharing Center] - [Connect Network] and check the connection**
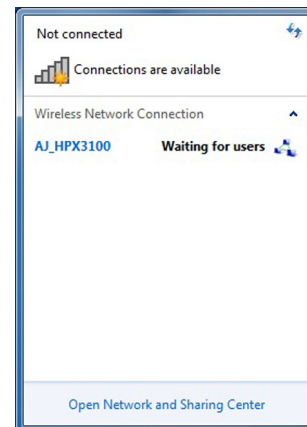
<Notes>
● It takes several seconds after the P2 Cam main unit is turned on before the wireless LAN starts operation. Wait a few moments before checking the connection.
● The connection status may be displayed as limited access, but the P2 Cam is connected correctly.

Perform Mac OS X settings

1 **Turn on the P2 Cam**

2 **Click [Open Network Preferences...] among the menu bar AirMac status icons**
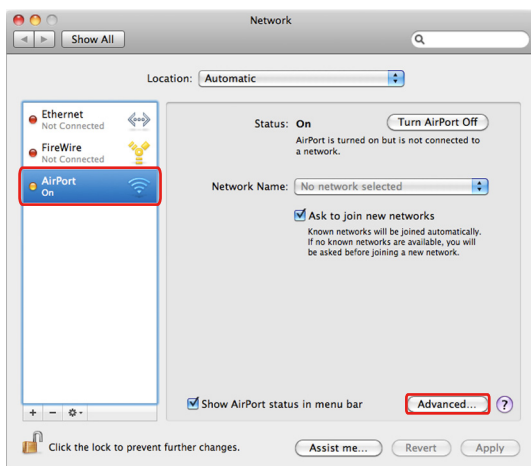When icons are not displayed on the menu bar, click [Apple] menu- [SYSTEM Preferences] and then click [Network].
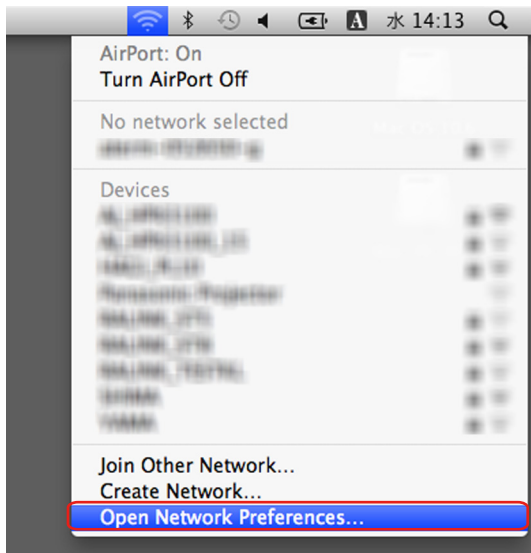
<Note>
Depending on the MacOS used, the "AirMac" display denoted here is displayed as "Wi-Fi" in some cases.
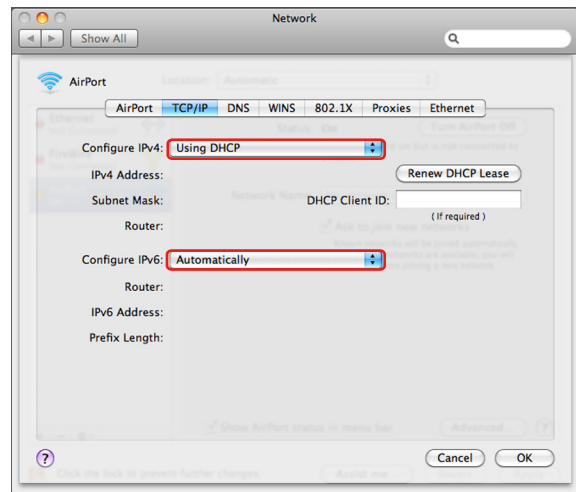
3 **Select AirMac in the service and click [Advanced...] of [Show Airport status in menu bar] at the bottom right**

Select TCP/IP from the detailed items.

4 **Set up either of the following depending on the DHCP setting in the P2 cam**
■ When the P2 cam DHCP is set as [Enable]
● [Configure IPv4]: Select [Using DHCP].
● [Configure IPv6]: Select [Automatically].

■ When the P2 cam DHCP is set as [Disable]
● [Configure IPv4]: Select [Manually] and enter the following settings.
    ● IP address:
     - Network Address:
      The same address as the P2 Cam
     - Host Address:
      Address that doesn't overlap with the address of the P2 Cam and peripheral devices
    ● Subnet mask:
      Same value as the P2 Cam
     - Router: This is unnecesary. Leave blank
● [Configure IPv6]: Select [Automatically].
● [Default gateway], [Preferred DNS server], and [Alternate DNS server] are not required so leave them blank.


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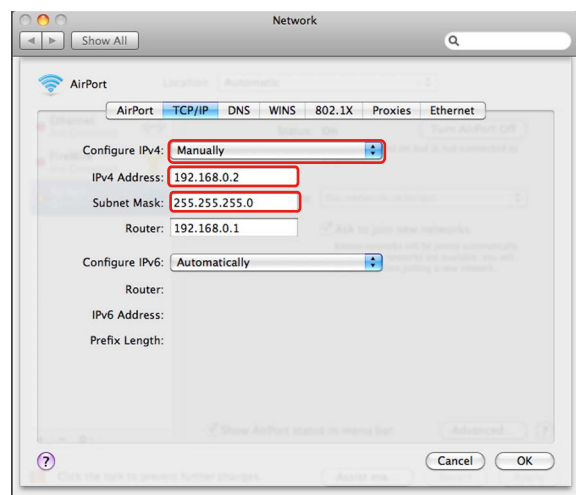
5 **Select the target network (factory default: AJ_HPX3100) in [Network Name] item**

<Notes>
- In the [OFF] status, you cannot select the network unless you click [Trun Airport ON] to change the status to [ON] status.
- The target P2 cam will not appear as options unless its WLAN is enabled and its power is on.
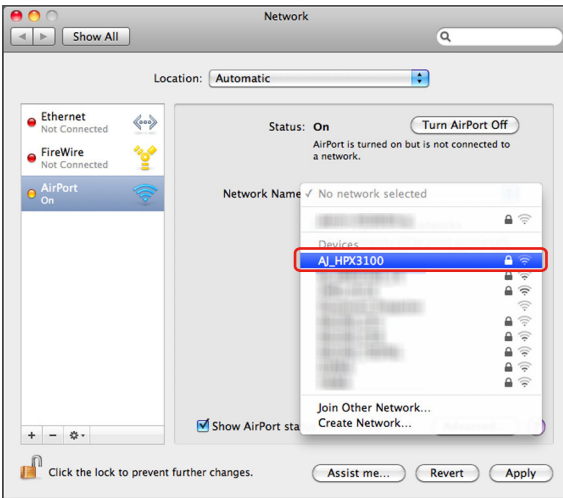
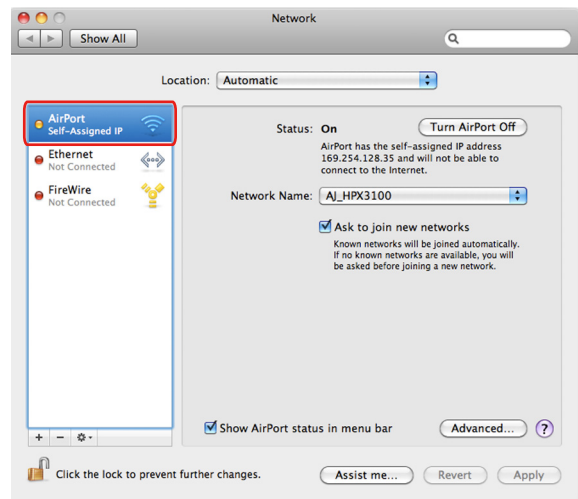**6** **Enter the WPA2 encryption key (factory default: 01234567890123456789abcdef) set in the P2 cam in response to the password request, enter a check for [Remember this network] and click OK**
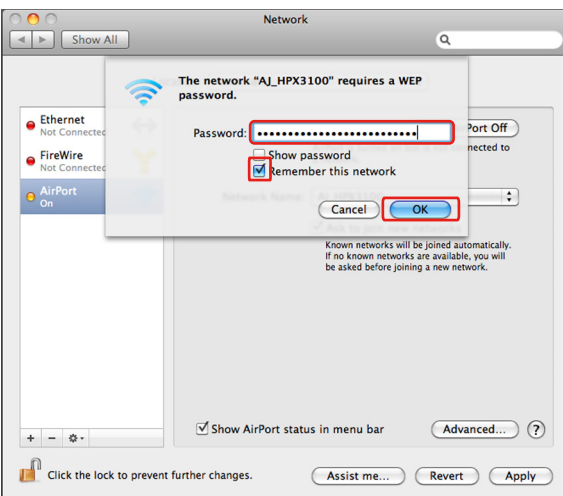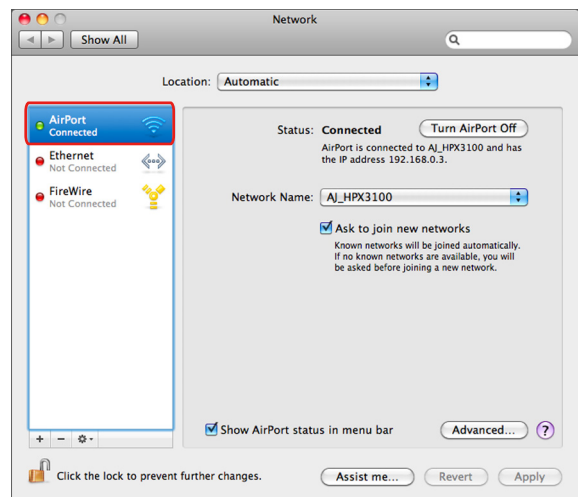

7 **The On status will change to no IP address. Wait a few moments**
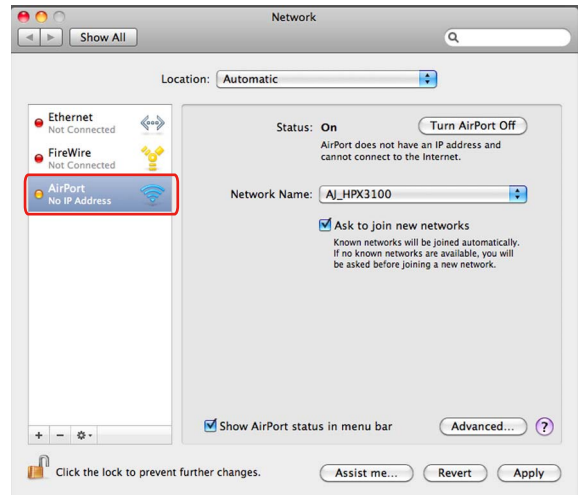
8 **Status will alter to self-assigned IP. Wait a few moments (approximately 1- 2 minutes)**

9 **Confirm that the status changes to connected**

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Mobile devices (iPad/iPod touch/iPhone) (when acquiring IP address automatically by DHCP)

1 **Turn on the P2 Cam**

2 **From the top screen of the iPod touch, open [Settings] - [Wi-Fi] - [Choose a Network...], and confirm that the network name for the P2 Cam is displayed**

3 **Tap on the 🔵 button at the right of the P2 Cam network to connect, and select [DHCP] in the [IP Address]**

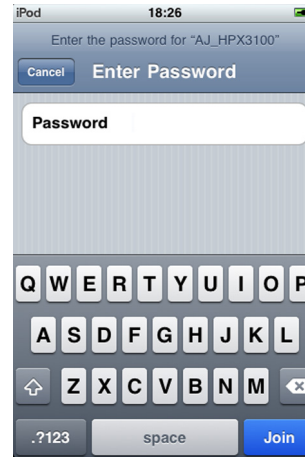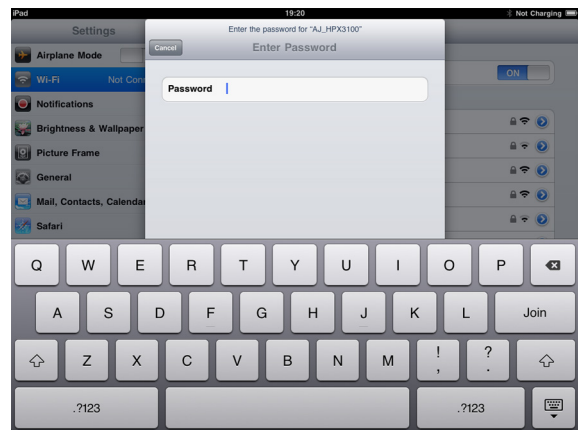### For iPod touch/iPhone

For iPad

4 **Return to [Wi-Fi Network] and touch the key icon**

5 **Enter the password (factory default: 0123456789012345678 9abcdef) correctly, then tap [Join]**

Connection is completed when the Wi-Fi icon 📶 is displayed at the top left of the screen.

For iPod touch/iPhone

For iPad

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Mobile devices (iPad/iPod touch/iPhone) (method to acquire the IP address manually)

1 **From the top screen of the iPod touch, open [Settings] - [Wi-Fi] - [Choose a Network...], and confirm that the network name for the P2 Cam is displayed**

2 **Tap on the** **button at the right of the P2 Cam network to connect, and select [Static] in the [IP Address]**

For iPod touch/iPhone

For iPad

3 **Setup the network**
There are the following 5 items to setup here, but only IP Address and Subnet Mask need to be setup.

- ● IP address
  Address to be assigned to the iPad/iPod touch/iPhone. Enter the following settings.
  Network Address:
  The same address as the P2 Cam
  Host Address:
  Address that doesn't overlap with the address of the P2 Cam and peripheral devices
- ● Subnet Mask
  Use the same value as the P2 Cam.
- ● Router (address)
  This is not required, so keep it blank.
- ● DNS (address)
  This is not required, so keep it blank.
- ● Search Domains
  This is not required, so keep it blank.

For iPod touch/iPhone

For iPad

4 **Return to [Wi-Fi Network]**

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5 **Enter the password (factory default:**
01234567890123456789abcdef) correctly, then tap
[Join]
Connection is completed when the Wi-Fi icon is
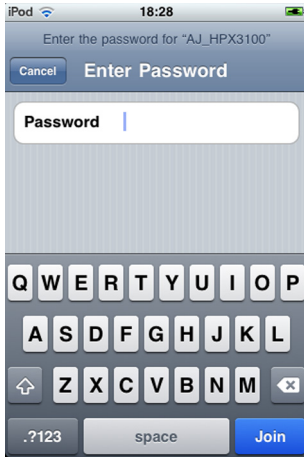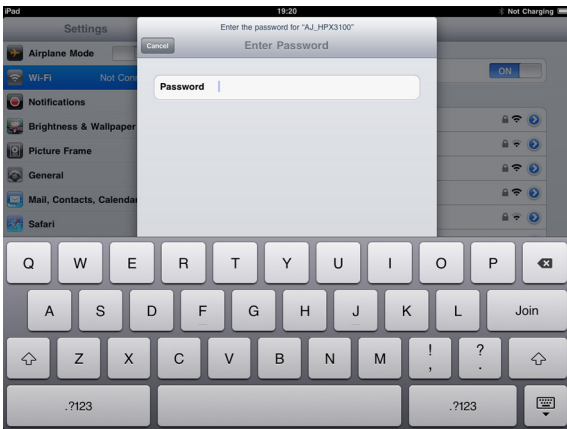displayed at the top left of the screen.

For iPod touch/iPhone

For iPad

Connecting to computer/iPad

Startup the application from the Web browser

Once the network connection setting is completed on the P2 Cam and the computer/iPad, startup the Web browser with the following procedure.

1 **Startup the Web browser**
For Windows 7:
Click [Start] - [All Program] - [Internet Explorer]
For Mac OS X:
Click [Go] - [Application], and double-click [Safari] in the list.
For iPad:
Tap the [Safari] icon in the home screen.

2 **Enter the P2 cam IP address in the Web browser**
Enter the IP address set in the P2 cam (factory default: http://192.168.0.1) in the address bar at the top of the Web browser screen to access the P2 cam.

3 **"P2 Browser" will start up**
[USER NAME] and [PASSWORD] input screen will appear, enter [USER NAME] (factory default: guest) and [PASSWORD] (factory default: p2guest) set in the P2 cam. Connection is completed when a screen similar to the one below is displayed.

Customize the layout

P2 Browser started from a computer/iPad has a function for customizing the screen display.
P2 Browser can assign 1 function to a GUI on the screen which is referred to as a panel, and the panels can be laid out on the screen by selecting 1 from 12 patterns.

Changing the partition

1 **After starting up the P2 Browser, click (or tap) the "Partition" button**
A screen similar to the below is displayed.
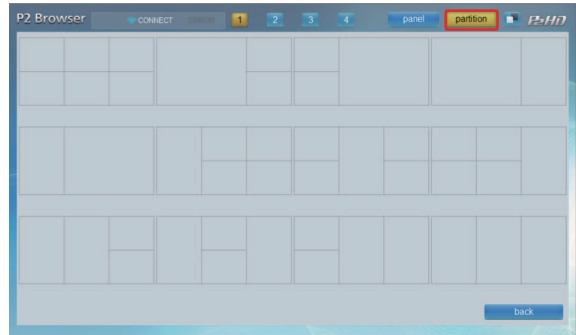
2 **Select 1 pattern from the 12 patterns shown above.**
P2 The layout of the "P2 Browser" will switch to the selected layout screen.
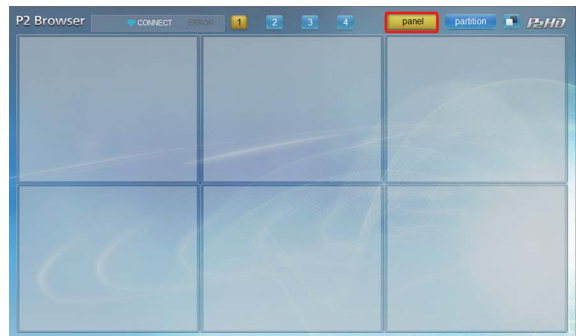
Selecting panel

1 **Click (or tap) on the "Panel" button.**
A screen similar to the below is displayed.
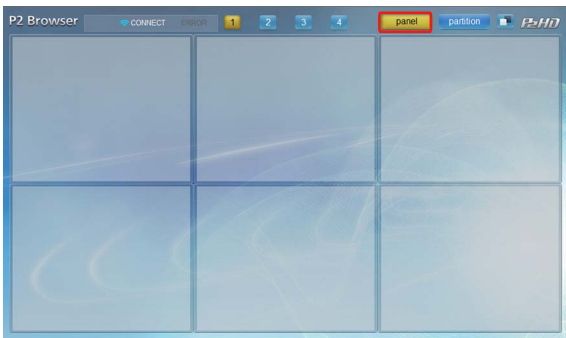
2 **Select the panel to change its display by clicking (or tapping) it**
A list of functions that can be assigned to the panel is displayed.

3 **Select the function to display**
A screen corresponding to the selected function is displayed by selecting a function from the list and clicking (or tapping) the "OK" button.

4 **Setup other panels**
Repeat the operation in steps *2-3*, and assign required functions to other panels.

5 **After completing the panel settings, click (or tap) the "Panel" button.**

Contents that can be displayed

Each panel can select from 1 - 12 of the following table.
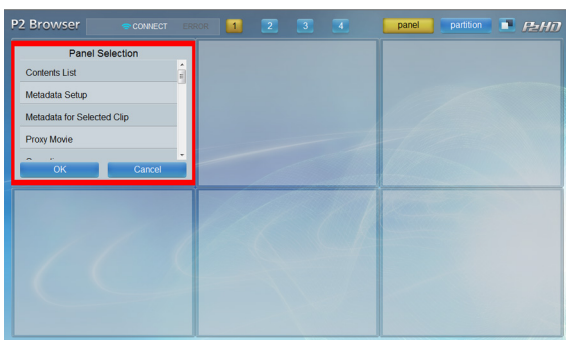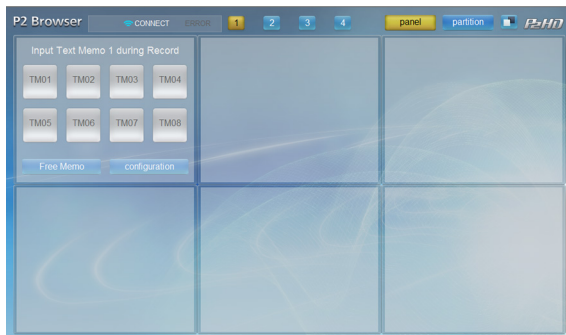For detailed operating instructions, visit the following website.
  http://pro-av.panasonic.net/

1. Camera Status/Camera Control Panel
Selecting this panel enables switching between the P2 Cam status display screen and the remote control screen.

Camera Status Panel
Status of the P2 Cam is displayed.

● Time code
  Displays the value of the time code generator maintained by the P2 Cam.
● Recording format
  Displays the system mode, video codec, shooting recording rate, etc. of the P2 cam.
● MEDA level / usage
  Displays the level and usage of the P2 card inserted in the P2 cam.
  You can switch the display to "remain" or "used".
  The display unit is "minutes".
● Battery level
  Displays the level of the battery inserted in the P2 cam

Camera Control Panel
The P2 Cam remote control (REC operation only) screen is displayed.
<Note>
The P2 Cam must be configured to enable the remote control function. (page 10)

2. Camera Info Panel
Displays the set values or statuses of lenses or filters etc. regarding shooting with the P2 cam.
You can switch the display unit to "feet" or "m" by clicking (or tapping) the button displayed in the FOCUS field.

<Note>
The LENS TYPE, IRIS, FOCUS, and ZOOM values will only be displayed when using a lens with digital control system.

3. Contents List Panel
Thumbnail list of the clips recorded on the P2 Card inserted in the P2 Cam is displayed. Thumbnail list is updated to the most current state by pressing the "update" button.
Shot mark can be added to or cleared from the selected clip by pressing the "SHOT MARKER" button.

<Notes>
● The displayed thumbnails are for the most recent 300 recorded clips on a computer, and for the most recent 100 recorded clips on an iPad.
● Operation with the "SHOT MARKER" button is not available when thumbnails are displayed in the P2 cam.
● Operation by the "update" button or the "SHOT MARKER" button is not possible when operations such as recording, playback, etc., are performed on the P2 Cam.
● Click (or tap) the thumbnail to play the proxy.
● Occasionally thumbnails will not appear properly after recording is finished (For example, "X" is displayed). When this happens, please use the browser's refresh button, rather than the "update" button on the panel.

4. Proxy Movie/Streaming Panel

Selecting this panel enables switching between the proxy playback screen and the proxy streaming screen.

Proxy Movie Panel

Proxy image of the clip selected from the Contents List Panel is played back.

<Notes>
- If the proxy is not recorded on the P2 card, playback is not available. Install the video encoder board (AJ-YDX30G), and set to record the proxy.
- For a clip with multiple clips connected, playback will be for each clip. "prev" and "next" buttons are displayed for these clips, allowing you to playback the previous or next clip by pressing the relevant button.

Streaming Panel

This enables you to check the video you are currently shooting with the P2 Cam.

<Notes>
- The video encoder board (AJ-YDX30G, optional) is required for the P2 Cam. Refer to the AJ-YDX30G Operating Instructions for how to configure the P2 Cam to support proxy streaming.
- When playback is performed with the P2 Cam or when thumbnails are displayed, you cannot check the video with proxy streaming.
- When the setting for streaming mode on the P2 Cam is RTP mode for a computer and HTTP mode for an iPad, you can check the video with proxy streaming. (page 11)

5. Contents Download Panel

The proxy file of the selected clip or the XML file of the management information on the clip can be downloaded. Thumbnail list is updated to the most current state by pressing the "update" button.

Using the "XML"/"PROXY" button, you can choose whether to download the proxy file or the XML file.

<Notes>
- This function cannot be selected with the iPad.
- Perform this after confirming that there is enough capacity on the recording media to be downloaded to.
- To download a file, move the mouse pointer over the thumbnail you wish to download and left click to open a subwindow. Thumbnails of the clips included in the file is displayed in the subwindow, so right-click over the target thumbnail and use the download function of your browser to download. Note, however, that this function may vary depending on the browser used.
- **If tasks such as recording, playback, fast forward, rewind, or removal of P2 card are performed on the P2 camera during a download, the download will be interrupted, and the file will not be created properly. Please do not perform the proceeding operations during download. Please also check after every download that the file hs been properly downloaded. If the beginning of the clip begins to play properly, it can be assumed that the clip is intact, so it is not necessary to watch to the end. If the download was not completed correctly, please try again.**

6. Metadata for Selected Clip Panel

Various metadata for the clip selected in the thumbnail display screen is displayed. By clicking (or tapping) on each metadata, the metadata modification screen is displayed to modify the metadata.

<Note>

Metadata cannot be modified when the P2 card is being accessed while the P2 Cam is recording or playing, or when thumbnails are displayed.

7. Metadata Setup Panel

Modify the various metadata attached to a clip. Clicking the item you want to modify will bring you to the metadata modification screen where you can modify the metadata. The modified value will be applied to succeeding clip recordings.

<Note>

Metadata cannot be modified when the P2 card is being accessed while the P2 Cam is recording or playing, or when thumbnails are displayed.

8. Input Text Memo [#] during Record Panel

A text memo can be added to a clip currently recording. You can switch the input mode to "One Touch"/"Free Memo" using the bottom left button.

In "One Touch" mode, the contents of the 8 buttons that was set in advance will be added as text memos.

The name, color scheme, and attached text memo contents can be set using the "Configuration" button.

In "Free Memo" mode, optional text memos can be added. Entered text memos is added using the "submit" button.

To attach a text memo while watching the proxy streaming screen, place a check in the checkbox.

This panel has 3 preset types. They can be distinguished by the numbers 1 to 3 which is displayed on the [#] portion of the panel name. Multiple panels can be used simultaneously.

9. Input Text Memo [#] for Selected Clip Panel

Add a text memo to the selected clip using the Contents List Panel.

<Notes>
- Text memo cannot be added to the recorded clips when operations such as recording, playback, etc., are performed on the P2 cam.
- For information about "One Touch" mode and "Free Memo" mode, refer to [8.Input Text Memo [#] during Record Panel].

10. Text Memo during Record Panel

Displays the list of text memos added to clips that are currently recoding.

11. Text Memo for Selected Clip Panel

Displays the list of text memos that were added to the selected clip using the Content List panel.

Also, when a proxy image is displayed on the proxy playback screen, clicking (or tapping) a selected text memo in the text memo list will seek the proxy image to the position where that text memo was added.

Text memos that have already been added can be deleted using the "X" button.

<Note>

Metadata cannot be modified when the P2 card is being accessed while the P2 Cam is recording or playing, or when thumbnails are displayed

12. Error List Panel

Addition of the intended metadata may fail in cases such as when the wireless LAN is unstable. This screen will display the history of such failures of addition.

Failed operations are performed again with the "submit" button when the wireless LAN connection becomes stable again.

Saving/Switching the Layout

"P2 Browser" can individually save 4 different layouts. They can be switched using 4 buttons, "1"- "4" placed at the top, and each can save a separate layout.
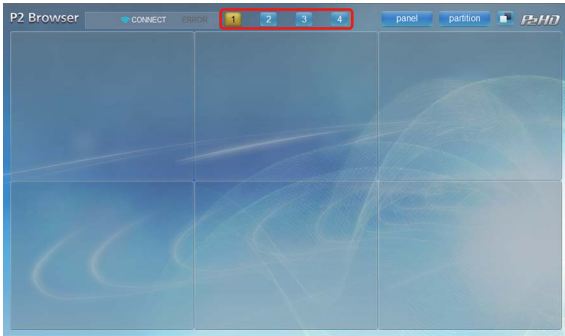
Alter the tone

You can switch two basic tone screens using the " 🔲 " button. You can switch them to suit the surroundings and your taste.

Connecting to iPod touch/iPhone

Startup the application from the Web browser

Once the network connection setting is completed on the P2 Cam and the iPod touch/iPhone, startup the Web browser with the following procedure.

1 Startup the Web browser
Tap the [Safari] icon on the home screen.

2 Enter the P2 cam IP address in the Web browser
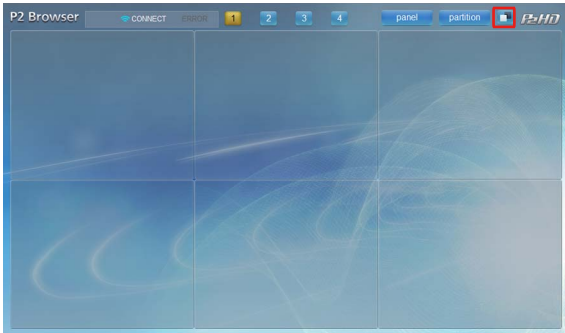Enter the IP address set in the P2 cam (factory default: http://192.168.0.1) in the address bar at the top of the Web browser screen to access the P2 cam.

3 The web application "P2 Browser" will startup
[USER NAME] and [PASSWORD] input screen will appear, enter [USER NAME] (factory default: guest) and [PASSWORD] (factory default: p2guest) set in the P2 cam. Connection is completed when a screen similar to the one below is displayed.

Contents that can be displayed

You can select from 1 to 4 below. For detailed operating instructions, visit the following website.
   http://pro-av.panasonic.net/

1. CONTENTS Panel
Thumbnail list of the clips recorded on the P2 Card inserted in the P2 Cam is displayed.
By selecting a clip, the screen will switch to the proxy playback screen.
The metadata and text memo of the clip being played is displayed in the proxy playback screen.
You can edit the metadata by tapping on it.

<Notes>
- Up to 100 of the most current recorded clips can be displayed in the thumbnail.
- If the proxy is not recorded on the P2 card, playback is not available. Install the video encoder board (AJ-YDX30G), and set to record the proxy.
- For a clip with multiple clips connected, playback will be for each clip. "prev" and "next" buttons are displayed for these clips, allowing you to playback the previous or next clip by pressing the relevant button.
- Text memos cannot be edited.

- The thumbnail screen will not automatically refresh when a P2 card is removed and re-inserted, or when recording is finished. Please push the CONTENTS button on the bottom left of the screen to refresh.

2. INPUT Panel
Text memos and shot marks can be attached to the clip being recorded.

3. STATUS Panel
Various P2 cam statuses as shown below will be displayed.

Time code
   Time code maintained by the P2 Cam is displayed.
Recording format
   Displays the system mode, video codec, shooting recording rate, etc. of the P2 cam.
Media level / usage
   Displays the level and usage of the P2 card inserted in the P2 cam.
   You can switch the display to "remain" or "used". The display unit is "minutes".
Battery level
   Battery level of the P2 Cam is displayed.
Metadata Settings
   The various metadata added to a clip is displayed in a list. Setting details can also be modified by tapping on each metadata.
   The modified value will be applied to succeeding clip recordings.
Proxy Streaming
   This enables you to check the video you are currently shooting with the P2 Cam.
   <Notes>
   - The video encoder board (AJ-YDX30G, optional) is required for the P2 Cam. Refer to the AJ-YDX30G Operating Instructions for how to configure the P2 Cam to support proxy streaming.
   - When playback is performed with the P2 Cam or when thumbnails are displayed, you cannot check the video with proxy streaming.
   - You can check video by proxy stream only when the streaming mode setting of the P2 Cam is HTTP mode. (page 11)
Remote control
   Enables P2 Cam remote control (REC operation only).
   <Note>
   - The P2 Cam must be configured to enable the remote control function. (page 10)

4. INFO Panel
Displays the set values or statuses of lenses or filters etc. regarding shooting with the P2 cam.

<Note>
The LENS TYPE, IRIS, FOCUS, and ZOOM values will only be displayed when using a lens with digital control system.

Glossary

Term	Description
LAN	An abbreviation of Local Area Network. A network in a relatively small area, such as within a company.
DHCP (dynamic)	An abbreviation of Dynamic Host Configuration Protocol. A function for assigning IP addresses automatically to connected equipment. If there is equipment with a DHCP server function connected to the LAN, an IP address will be automatically assigned to the connected equipment.
Static	A connection method not using the DHCP. This is a method where the user sets up the fixed IP address. Setup with this method if you have received a fixed value to setup from the network administrator.
IP address	An address where the data is delivered on the network. IP (Internet Protocol) is a protocol to deliver data, and same IP address cannot be used within a network.
MAC address	An ID number unique to each network adapter. All the network adapters in the world are assigned with a unique number, and data communication between the adapters are performed based on this. This number is a combination of the unique number for each manufacturer managed and assigned by the IEEE, and a number assigned by the manufacturer to each adapter.
Network address	In the bit string that constitutes the IP address, it is the address of the portion set to the binary digit "1" by the subnet mask. So if the IP address is [192.168.0.1] and the subnet mask is [255.255.255.0], the network address will be [192.168.0].
Host address	In the bit string that constitutes the IP address, it is the address of the portion set to the binary digit "0" by the subnet mask. So if the IP address is [192.168.0.1] and the subnet mask is [255.255.255.0], the host address will be [1].
SSID	An abbreviation of Service Set ID. It is required to setup an identification code referred to as an SSID to determine if the access point is the one you want to communicate with using the wireless LAN. It may be displayed as [ESSID] or [Network name] on some of the wireless LAN adapters.
WPA2	An abbreviation of Wi-Fi Protected Access. This is a method for encrypting the data being communicated. By creating an encryption key that is given only to the other party involved in the communication, it prevents decryption of data by a third party.
Subnet Mask	A network may be managed by dividing a large network into numbers of smaller networks called subnets. The value to delimit the IP address in such a case is called a subnet mask.

Compatible Models

Memory Card Camera Recorder: AJ-HPX3100G

List of Contents

● Installation Guide "Read before use"
● Software Licensing Agreement
● User Guide (CD-R)
● "Pouch containing the key code"

*   If you open the pouch containing the key code, you are agreeing to the contents of the license agreement of the bundled software.

After unpacking the product, please dispose of the packaging material properly.

Notice Regarding Security

When using this product, you may encounter the following damages.

● Leaking of customer privacy via this product
● Illegal operation of this product by malicious third parties
● Interference or stopping of this product by malicious third parties

Take appropriate security measures.

● Limit the users that can log in by setting up passwords.
● Use passwords that are hard to guess.
● Change the password periodically.
● Panasonic Corporation and its affiliate companies will not directly inquire as to a customer's password. Do not give your password in answer to any such direct inquiries.

Caution regarding security when using a wireless LAN product

Wireless LAN can communicate information between computers, etc., and the wireless access point using radio waves instead of LAN cables, which allows you to connect to the LAN anywhere as long as the radio waves can reach you.

However, radio waves can reach anywhere in their range even through obstacles (walls, etc.). Therefore, it may give rise to the following problems if you do not perform the settings regarding security.

● Interception of communication contents
Malicious third parties may intercept the radio waves, and private information such as ID, password, or credit card numbers, etc., contents of the mail, may be intercepted.
● Unauthorized invasion
Malicious third party may access a private or corporate network without authorization, and steal private information or classified information (leakage of information), release fraud information by impersonating a specific person (spoofing), rewrite and distribute the intercepted contents (falsification), destroy data or systems by spreading computer viruses, etc. (destruction), etc.

The wireless adapters and wireless access points have security mechanisms to deal with these problems, so just by using these settings when using the product will decrease the chance of these problems occurring.

Security settings may not be setup on the wireless LAN equipment at the time of purchase. To reduce the chance of security problems occurring at the user site, make sure to setup all the settings regarding wireless LAN equipment in accordance with the operating instructions of each item of wireless LAN equipment.

Also, please note that the security settings may be breached by special methods due to the specification of the wireless LAN.

If you cannot setup the security settings by yourself, when using the P2 Cam (Part number: AJ-HPX3100) via wireless LAN, please contact the Service Center in your region.

It is recommended to use the product fully understanding the risk when the security setting is not setup, and to setup the security setting under judgment and responsibility of the customer.

Декларація про Відповідність
Вимогам Технічного Регламенту Обмеження Використання деяких Небезпечних Речовин в електричному та електронному обладнанні
(затвердженого Постановою №1057 Кабінету Міністрів України)

Виріб відповідає вимогам Технічного Регламенту Обмеження Використання деяких Небезпечних Речовин в електричному та електронному обладнанні (ТР ОВНР).

Вміст небезпечних речовин у випадках, не обумовлених в Додатку №2 ТР ОВНР, :

1. свинець(Pb) – не перевищує 0,1 % ваги речовини або в концентрації до 1000 частин на мільйон;
2. кадмій (Cd) – не перевищує 0,01 % ваги речовини або в концентрації до 100 частин на мільйон;
3. ртуть(Hg) – не перевищує 0,1 % ваги речовини або в концентрації до 1000 частин на мільйон;
4. шестивалентний хром (Cr^{6+}) – не перевищує 0,1 % ваги речовини або в концентрації до 1000 частин на мільйон;
5. полібромбіфеноли (PBB) – не перевищує 0,1 % ваги речовини або в концентрації до 1000 частин на мільйон;
6. полібромдефенілові ефіри (PBDE) – не перевищує 0,1 % ваги речовини або в концентрації до 1000 частин на мільйон.

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