

# Panasonic

## Install Manual

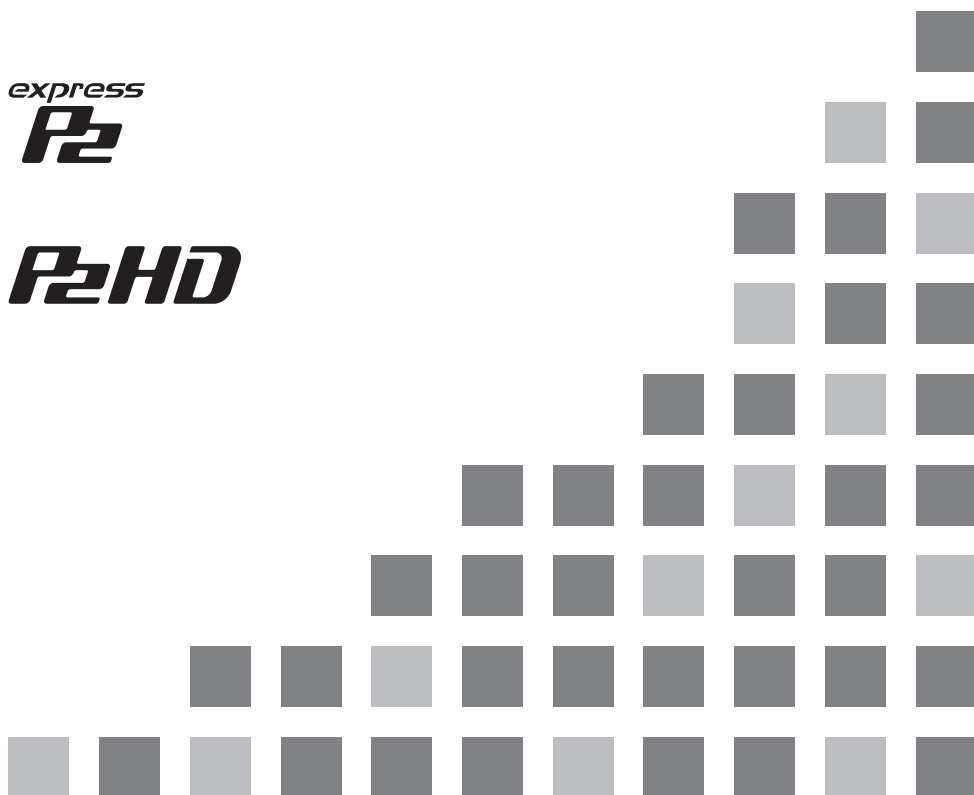
P2 Software

**P2**

*micro*  
**P2**

*express*  
**P2**

**P2HD**



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## Operating Precautions

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- In this manual, Microsoft® Windows®, Windows® 7 Professional, Windows® 7 Ultimate, Windows® 8, Windows® 8.1 and Windows® 10 are referred to as "Windows," "Windows 7 Professional," "Windows 7 Ultimate," "Windows 8," "Windows 8.1," and "Windows 10."
- In this manual, Mac® and macOS® are referred to as "Mac," and "macOS."
- In this manual, Thunderbolt® is referred to as "Thunderbolt."

# When Using Windows

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## 1. Precautions in Handling P2 Cards in a Personal Computer

**When connecting and using P2 cards or P2 devices with a personal computer, be sure to install the P2 driver.**

These devices will not operate properly if they are connected to a personal computer where the P2 driver has not been installed.

**During reading from or writing to a P2 card, do not:**

- **remove the P2 card from the slot**
- **"eject" the P2 card**
- **connect or disconnect the USB cable or change USB connector settings**

Otherwise, the personal computer may not operate normally.

Also, perform the following operation before removing a P2 card from the card slot:

- If the P2 card is inserted directly into the card bus in a personal computer, execute "Safely Remove Hardware" from the system tray on the Windows taskbar.
- If the P2 devices are connected to a personal computer via USB3.0/USB2.0, open Explorer, right-click the hardware item containing the P2 card, and then select "Eject."
- Set up the personal computer system so that it will not go into standby mode or hibernation mode during P2 card use. If the system enters standby mode or hibernation mode during P2 card access, processed files and data may be corrupted.

## 2. Software to be Installed

The following programs will be installed with the P2 software.

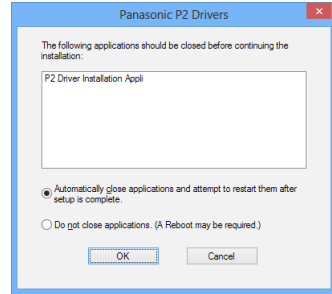
- P2 driver
- Software for each P2 device

You will be able to format P2 cards after you install the P2 software. For details on formatting, refer to "10. P2 Card Formatter" (page 15).

### 3. Installation of the P2 Software

**<Note>**

- Log on with a user name that has administrator privileges to install the P2 software.
  - The P2 devices should be connected to the personal computer before software installation is started.
  - The P2 card driver needs to be installed for each card bus slot. If you are using a personal computer that has two or more card bus slots, insert a P2 card into every slot.  
The driver will not be installed in slots that do not contain a P2 card and this could lead to P2 card malfunctions. If the PC does not recognize the inserted P2 card, then try re-inserting it.
  - When connecting P2 devices to a personal computer, make sure that the number of free drives that the computer can use is equal to or larger than the number of drives that each P2 device requires.  
(A P2 device requires a free drive for each P2 card slot and the free drives required by built-in hard disks.)
  - Installation, formatting or other operations may bring up the "User Account Control" dialog box. If it does, click "Continue" to continue the operation.
- If a dialog box not described in this manual appears during software installation, click **"Cancel"** to close it.
  - The dialog box shown in Figure 1 may appear when you upgrade the P2 driver. If it does, click the "OK" button.



**Figure 1**

Use the following procedure to install the P2 software on the personal computer.

- 1 Close all applications, then connect the P2 cards or P2 devices you will use to the personal computer.  
**Connecting the devices to the personal computer will bring up the Found New Hardware Wizard box. Click “Cancel” to close it.**

- 2 Open the folder to which the P2 software was downloaded, and run the “setup.exe” file.  
The window shown in Figure 2 appears and the setup process starts. Click “Next”.

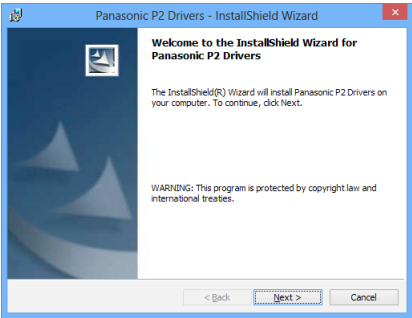


Figure 2

- 3 The License Agreement dialog box shown in Figure 3 appears. If you agree to the terms of the License Agreement, click “I accept the terms in the license agreement,” then click “Next”.

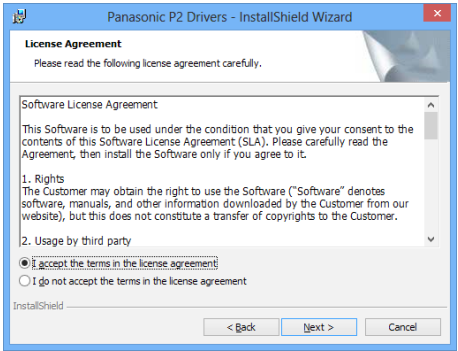


Figure 3

- 4 The installation destination folder setting window shown in Figure 4 appears. To change the installation destination folder, click “Change”, and then create a new folder. Once the new installation destination folder is set, click “Next”.

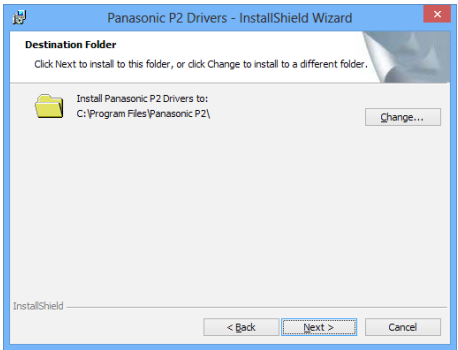


Figure 4

5 The installation start window shown in Figure 5 appears. Click "Install."

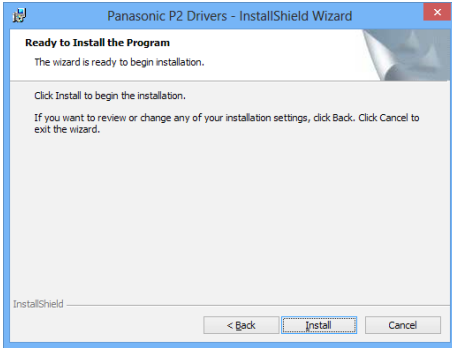


Figure 5

6 The status display window shown in Figure 6 appears indicating that installation is in progress.

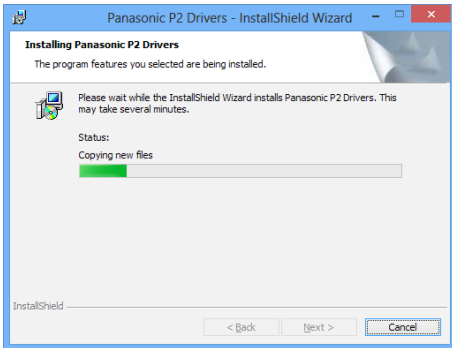


Figure 6

7 The driver installation selection window shown in Figure 7 appears showing each device.

To install drivers other than a USB driver, add a check mark and click "OK."

USB drivers are installed automatically.

- Drivers need not be installed for devices that already have them. For monitoring the installation status, refer to page 11.

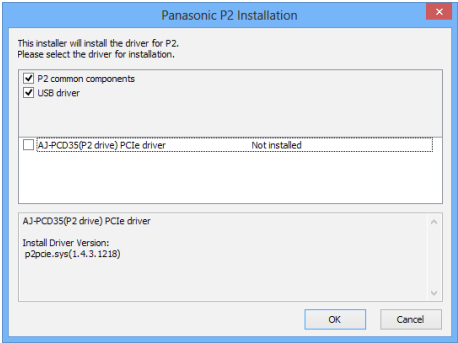


Figure 7

8 When a check mark is added in Step 7 and "OK" is clicked, the dialog box shown in Figure 8 appears to prompt you to connect to a P2 card or P2 device.

If you need to install them, connect them, then click "Install." If you do not wish to use them, just click "Cancel."

If at some future time you want to add a device that was skipped in the initial setup, execute the installer again to perform an overwrite installation of the device. Please refer to "4. Adding a New P2 Device" for more information.

**<Note>**

When the focus shifts to another window during installation, this box may be hidden behind that window. If the box shown in Figure 6 stays on and its status display does not change, check whether the box shown in Figure 8 is hidden behind another window.

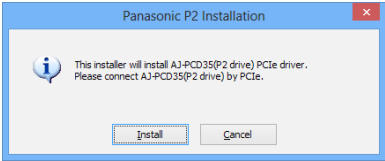


Figure 8

9 The message window shown in Figure 9 may appear. Click "Install this driver software anyway". The message window may appear several times.

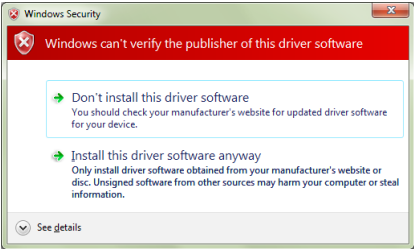


Figure 9

10 As shown in Figure 10, the installation completion window appears signifying completion of the installation.

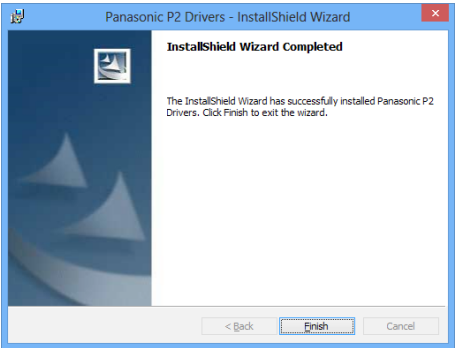
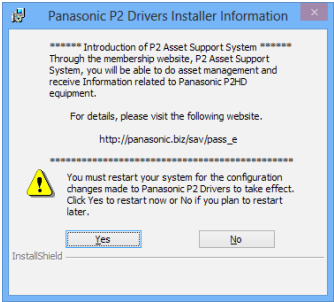


Figure 10

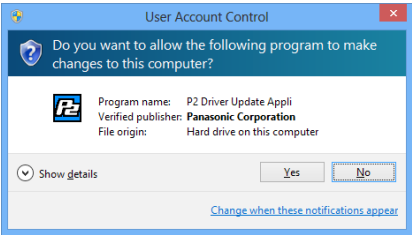
**11** The dialog box shown in Figure 11 appears prompting you to restart the personal computer. Click "Yes" to restart.



**Figure 11**

**12** To connect P2 devices using USB, restart the personal computer and install a USB driver according to the following procedure.

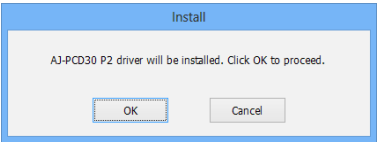
1. Connect one P2 device.
2. The message window shown in Figure 12 may appear. If it does, click "Yes."



**Figure 12**

3. If the USB driver required by the connected P2 device has not been installed, the dialog box shown in Figure 13 appears.

The dialog box in Figure 13 does not appear if the USB driver has been installed and there is no need to install it.



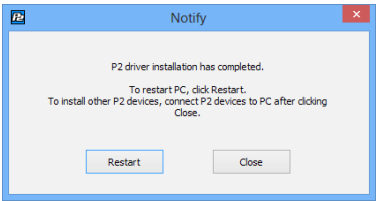
**Figure 13**

4. Clicking "OK" in the dialog box shown in Figure 13 starts USB driver installation.

5. When USB driver installation finishes, the dialog box shown in Figure 14 appears.

If you want to continue installing USB drivers for other P2 devices, click "Close" to close the dialog. Then disconnect the connected P2 device and again perform the installation procedure from Step 1..

To connect two P2 drives, click "Close" to close the dialog. Then connect a second P2 drive while letting the connected P2 drive remain connected and perform the installation procedure from Step 2.. Click "Restart" to restart the personal computer when USB driver installation finishes.



**Figure 14**



**<Note>**

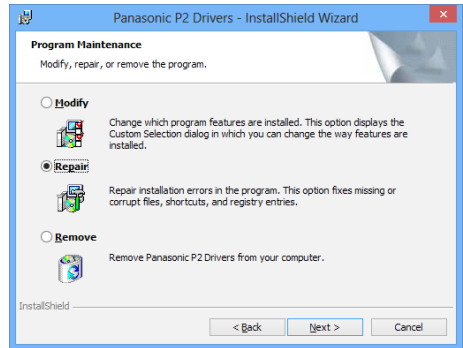
When two P2 drives are connected, the dialog box shown in Figure 13 may appear again after the personal computer is restarted. If it does, click "OK" and perform USB driver installation.

## 4. Adding a New P2 Device

To connect a new P2 card or P2 device through means other than a USB cable to a personal computer where the P2 software has already been installed, use the procedure described in "3. Installation of the P2 Software" to perform an overwrite installation of the P2 software.

During the overwrite installation, the window shown in Figure 15 appears, but the License Agreement box shown in Figure 3 will not reappear.

In this window, check "Repair", then click "Next". After following the instructions displayed on the screen, restart the personal computer.



**Figure 15**

**<Note>**

The above screen will be displayed when the installed P2 software and the installer have the same version.

# 5. Uninstallation of the P2 Software

To uninstall the P2 software, use the following procedure:

In the “Programs and Features” window in the “Programs” window of the Control Panel, select “Panasonic P2 Drivers”, then click “Uninstall.”

After following the instructions displayed on the screen to complete the uninstallation, follow the on-screen instructions to restart the personal computer.

## <Note>

- Uninstalling the software will delete all installed data so if you have to install the software again, you will also have to install the drivers for all the devices that you will need.
- The dialog box shown in Figure 16 may appear when you uninstall the P2 driver. If it does, click the “OK” button.

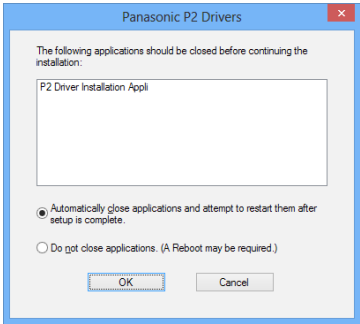


Figure 16

# 6. Setting up an internal P2 drive

To use a personal computer that integrates a P2 drive in a 5 type bay, install the P2 card software, connect the P2 drive to the personal computer. Then make the following setting:

## 1 For Windows 10

From the “Start” menu, select “Enable Internal Drive” in the “Panasonic P2” group.

### For Windows 8

Move the cursor to the top right corner or bottom right corner of the desktop, and click “Search” in the bar that appears. Select “Enable Internal Drive” in the “Panasonic P2” group of the application list that appears.

### For Windows 8.1

Move the cursor to the top right corner or bottom right corner of the desktop, and click “Start” in the bar that appears. Select “Enable Internal Drive” in the “Panasonic P2” group of the application list that appears.

### For Windows 7

Select the following: “Start” > “All Programs” > “Panasonic P2” > “Set P2 Drive Settings” > “Enable Internal Drive”.

- 2 The box shown in Figure 17 appears. Click “OK”.

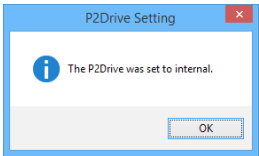


Figure 17

## 7. Checking P2 Driver Installation Status

If the standard Windows driver is installed or the P2 driver is uninstalled for some reason, the P2 device will not operate properly.

If any of the following events occur, check whether the P2 driver is properly installed. If it is not, reinstall it.

- The P2 card or P2 device is not recognized.
- The P2 card or P2 device cannot be read.
- The P2 card or P2 device cannot be written to.
- Image frame dropping occurs frequently during playback from the P2 card or P2 device indicating that there is a performance problem.

### **Method for checking 1394 drivers for AJ-PCD20 and PCI EXPRESS drivers for AJ-PCD35**

Refer to the instruction manuals supplied with the AJ-PCD20 and AJ-PCD35.

### **Method for checking P2 card drivers and USB drivers for P2 devices**

#### **<Note>**

To check whether the P2 driver is properly installed, connect the appropriate device to the personal computer. Devices not connected to the personal computer cannot be checked using the following method:

#### **1 For Windows 10, Windows 8 and Windows 8.1**

Move the cursor to the bottom left corner of the desktop and right-click the mouse.

In the menu that appears, click on Device Manager.

#### **For Windows 7**

Select "Start", right-click "Computer", and select "Property". The System Properties window appears. Click on Device Manager at the top left of the window.

## 2 Check the P2 device driver display.

### Checking the P2 card driver

"IDE ATA/ATAPI controllers" - "Panasonic P2 Card" is set.

"P2 Disk Drive" - "P2Card Series Cached Disk" is set.

### Checking P2 USB devices drivers

"Universal Serial Bus controllers" - "Panasonic P2 Series USB Device" is set.

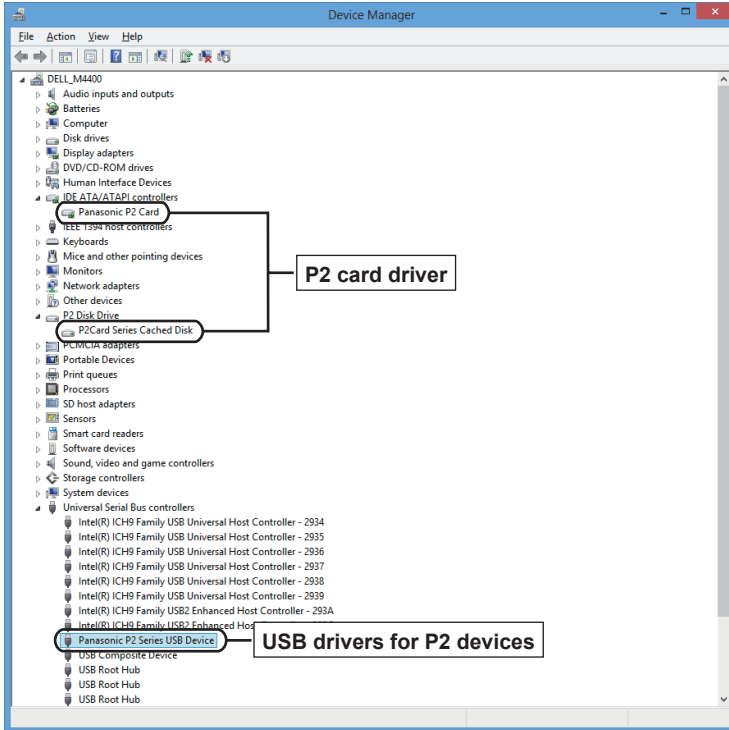


Figure 18

## Checking the AU-XP3 Thunderbolt driver

Follow the instructions in “Method for checking P2 card drivers and USB drivers for P2 devices” (page 11) to open Device Manager, and check the following.

“Disk drives” – “MATSHITA AU-XP3 SCSI Disk Device” is set.

“Storage controllers” – “Panasonic XPD3 Drive” is set.

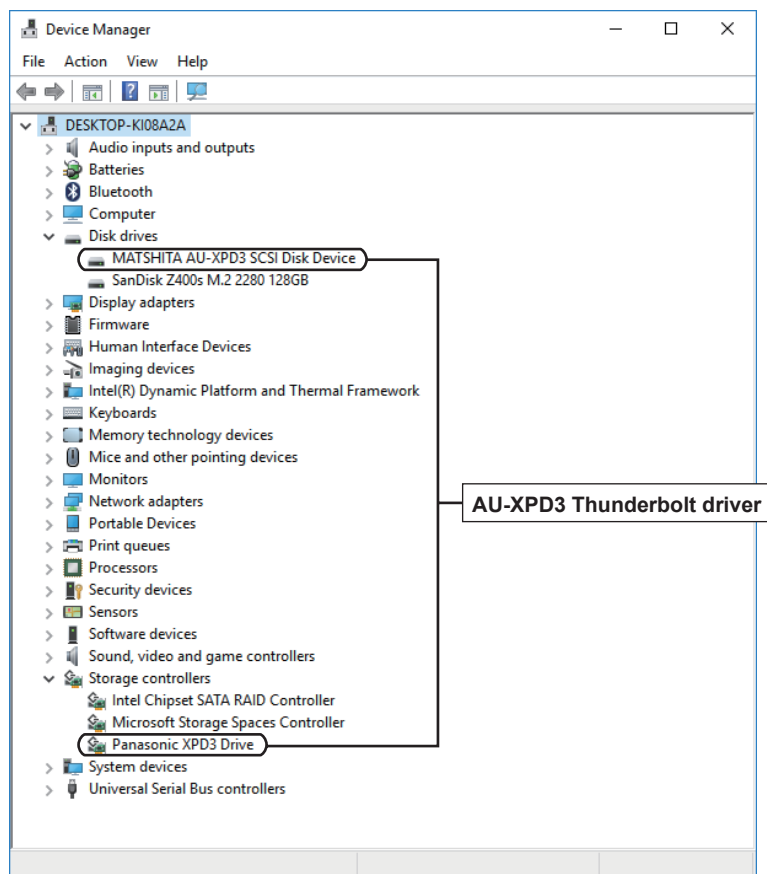


Figure 19

## **8. Checking P2 Driver Version**

Select: "Control Panel" > "Program" > "Uninstall a program". A list screen that displays the version appears.

## **9. Software for each P2 device**

After installation of the P2 software, software for each P2 device will be installed simultaneously. For information on software for each device, refer to the instruction manual of the respective software.

# 10. P2 Card Formatter

The P2 card formatter can format P2 cards, micro P2 cards or express P2 cards for P2 devices.

## Formatting procedure

1 In Windows Explorer, right-click the drive containing the card you want to format. In the menu that appears select "Format".

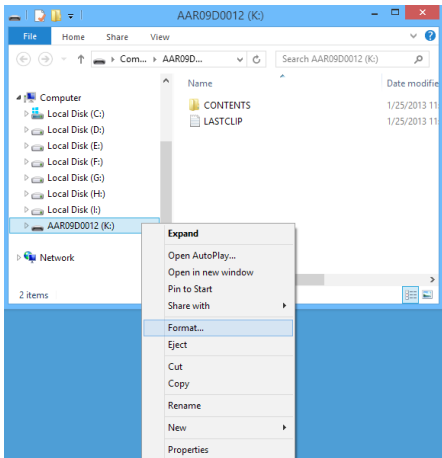


Figure 20

2 The window shown in Figure 21 appears.

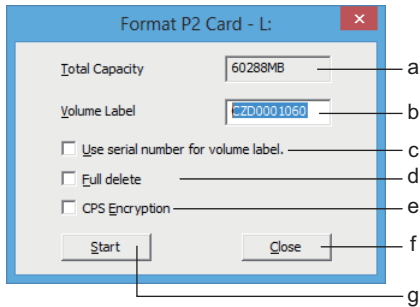


Figure 21

- a Displays the total capacity of the card.
- b Enter the desired volume label name.
- c Enter a checkmark to use the card serial number as the volume label.
- You can enter the checkmark only when using P2 cards, micro P2 cards or express P2 cards (CPS authenticated).

d Enter a checkmark to delete all data from a card.

You can enter the checkmark only when using P2 cards, micro P2 cards or express P2 cards.

e Enter a checkmark to activate the CPS encryption function of the card.

You can enter the checkmark only when a password for automatic authentication has been set on a personal computer, and when using micro P2 cards or express P2 cards.

For details on the CPS encryption function, refer to "CPS Encryption Function" (page 22).

f Closes the window.

g Starts the formatting.

3 Set the volume label etc. and click "Start." When using an E series P2 card or an F series P2 card / micro P2 card / express P2 card (CPS authenticated), the Remain life time is indicated in a window like the one shown in Figure 22. Check the Remain life time and click "OK."

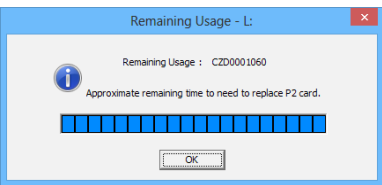


Figure 22

4 When you have not checked the "Full delete" checkbox in the window shown in Figure 21, the warning window shown in Figure 23 appears. If you are sure you wish to format, click the "OK" button to begin formatting.

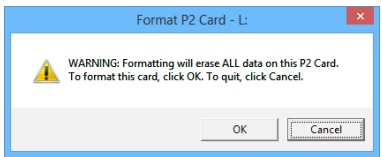


Figure 23

When you have checked the “Full delete” checkbox in the window shown in Figure 21, the warning window shown in Figure 24 appears. If you are sure you wish to format, click the “OK” button.

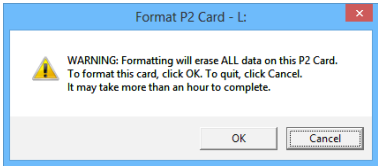


Figure 24

Then another warning window like the one shown in Figure 25 appears. If you are sure you wish to format, click the “OK” button to begin.

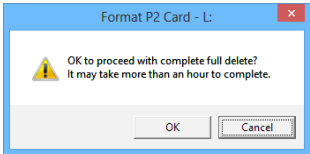


Figure 25

5 During formatting, progress is indicated by the progress bar shown in Figure 26.

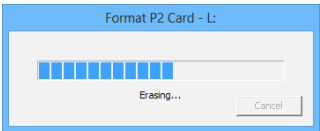


Figure 26

6 When formatting is completed, the window shown in Figure 27 appears. Click the “OK” button to close the window.

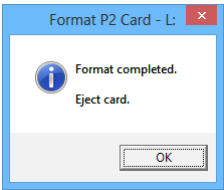


Figure 27

<Note>

- You cannot recover data erased by formatting. Always check the data before formatting.
- You must log in under a user name with Administrator privileges to format.
- If you enter a checkmark in “Use serial number for volume label”, the serial number of the card will automatically be entered as the volume label. If you then change the serial number to a different character string, the new character string will be set as the volume label.
- When using an E series P2 card or an F series P2 card / micro P2 card / express P2 card (CPS authenticated), the Remain life time of the P2 card is displayed as follows.

Remain life time	Display color	Display
100% to 61%	Blue	<div><div></div></div>
60% to 21%	Green	<div><div></div></div>
20% to 9%	Yellow	<div><div></div></div>
8% to 1%	Red	<div><div></div></div>
0%	Red	<div><div>RUN DOWN CARD</div></div>

- When “RUN DOWN CARD” is displayed, formatting cannot be performed correctly. We recommend that you back up the data on the card and change cards within one week. If you continue using the old card, normal recording and playback may not be possible.
- The processing for fully erasing the P2 card is equivalent to a writing operation and therefore reduces the Remain life time.
- The Explorer display may not be updated after formatting. If it is not, quit Explorer and restart the personal computer.



# 11. Notes on Using Windows

## Drive display settings

Under the default settings, an empty drive that does not contain a P2 card will not appear in Computer or the tree view of Explorer.

To display the drive at all times, change the Windows “Folder Options” settings.

## Drive name assignments

- Do not assign P2 devices to drive A or drive B.
- When a P2 drive is connected, drive names may not be assigned according to slot order. If this occurs, change the drive name assignments in “Disk Management”.

## IEEE1394b support in Windows 7

- When using the AJ-PCD20 P2 drive in the IEEE1394b interface, the drive name cannot be changed.
- When installing the IEEE1394b driver for the AJ-PCD20 P2 drive in a P2 driver update, a message indicating that the driver has already been installed may appear. Even if this happens, be sure to proceed with installation of the IEEE1394b driver.

## IEEE1394b support in Windows 8

The IEEE1394b interface on the AJ-PCD20 is not guaranteed to operate.

Use the USB interface on the AJ-PCD20.

## CardBus support in Windows 8.1

CardBus operations for P2 cards are not supported.

# When Using Mac

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## 1. Precautions in Handling P2 Cards

**Set up the personal computer system so that it will not go into sleep mode during P2 card use.**

The personal computer may not operate properly when it resumes from sleep mode during P2 card access.

## 2. Installation of the P2 Software

P2 software must be installed to reference P2 card data and handle P2 cards on a Mac.

A P2 software installation installs the following software.

- USB driver
- IEEE1394b driver for AJ-PCD20
- PCI Express driver for AJ-PCD35
- AU-XPD3 Thunderbolt driver
- P2 Card Formatter

Install the software in the following order.

- 1** Double-click the “P2Software” folder of the downloaded P2 software.
- 2** Double-click the “P2Software Install.dmg” disk image module in the “P2Software” folder.
- 3** Double-click the “P2Software Install.mpkg”.  
If a warning window informs you that ““P2Software Install.mpkg” can’t be opened because it is from an unidentified developer.”, click “OK.”  
Again, click the “P2Software Install.mpkg” while holding down the “Ctrl” key, and select “Open” in the menu that appears.  
““P2Software Install.mpkg” is from an unidentified developer. Are you sure you want to open it?” When a confirmation window like this appears, click the “Open” button.

- 4** The installation of the software will begin. Follow the instructions on the screen to complete the install.  
If a warning window concerning the Kernel Extension developer appears during installation, click the “OK” button to close the window.

### <Note>

- Adequate operating speeds will not be obtained unless the P2 software is installed.
- For the most recent information on P2 software, visit the web site listed below.  
<http://pro-av.panasonic.net/>

### 3. P2 Card Formatter

The P2 card formatter can format P2 cards, micro P2 cards or express P2 cards for P2 devices.

#### Formatting procedure

- 1 Double-click the P2Formatter icon in the application folder.
- When a warning window like the one shown in Figure 28 appears, click the “OK” button.

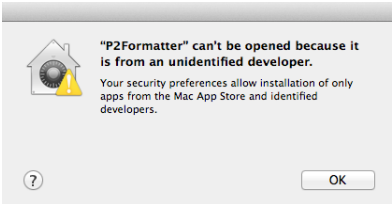


Figure 28

Again, click the P2Formatter icon while holding down the “Ctrl” key, and select “Open” in the menu that appears.

When a confirmation window like the one shown in Figure 29 appears, click the “Open” button.

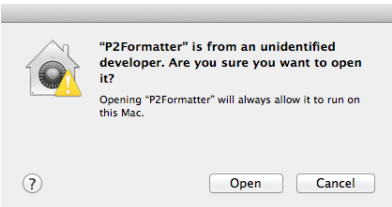


Figure 29

- 2 When an input window like the one shown in Figure 30 appears, enter a user name and password for a user account with administrator privileges and click the “OK” button.
- The formatter will not start up without the access permission of an administrator.

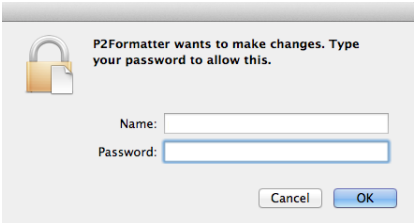


Figure 30

- 3 When the P2Formatter starts up, the P2 card formatter window shown in Figure 31 appears.

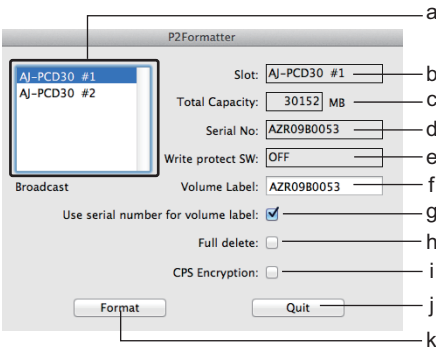


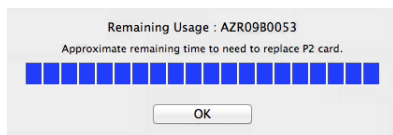
Figure 31

- a Select the slot containing the card you want to format.
- b Displays the selected slot.
- c Displays the total capacity of the card.
- d Displays the serial number of the inserted card.  
It remains blank when an SDHC or SDXC card is used.
- e Displays the status of the write protection switch.

- f** Enter the desired volume label name.
- g** Enter a checkmark to use the serial number of the card as the volume label. You can enter the checkmark only when using P2 cards, micro P2 cards or express P2 cards (CPS authenticated).
- h** Enter a checkmark to delete all card data. You can enter the checkmark only when using P2 cards, micro P2 cards or express P2 cards.
- i** Enter a checkmark to activate the CPS encryption function of the card. You can enter the checkmark only when a password for automatic authentication has been set on a Mac, and when using micro P2 cards or express P2 cards. For details on the CPS encryption function, refer to "CPS Encryption Function" (page 22).
- j** Closes the P2 card formatter window.
- k** Starts the formatting.

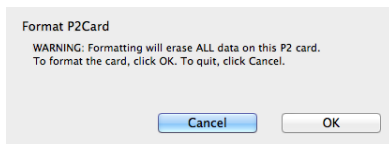
**4** Set the volume label and other settings and click "Format".

When using an E series P2 card or an F series P2 card / micro P2 card / express P2 card (CPS authenticated), the Remain life time is indicated in a window like the one shown in Figure 32. Check the Remain life time and click "OK."



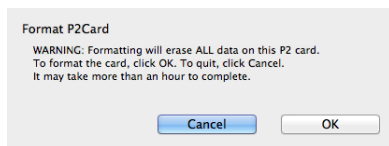
**Figure 32**

**5** When you have not checked the "Full delete" checkbox in the window shown in Figure 31, the warning window shown in Figure 33 appears. If you are sure you wish to format, click the "OK" button to begin formatting.



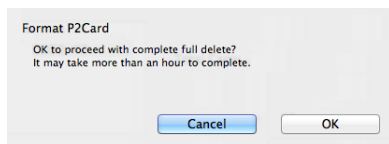
**Figure 33**

When you have checked the "Full delete" checkbox in the window shown in Figure 31, the warning window shown in Figure 34 appears. If you are sure you wish to format, click the "OK" button.



**Figure 34**

Then another warning window like the one shown in Figure 35 appears. If you are sure you wish to format, click the "OK" button to begin.



**Figure 35**

6 During formatting, progress is indicated by the progress bar shown in Figure 36. The P2 card will not be formatted properly if “Cancel” is clicked. Since this will prevent use of the P2 card, format it again.

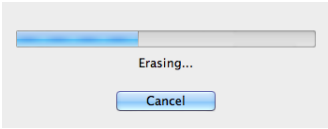


Figure 36

- When an input window like the one shown in Figure 30 appears during formatting, enter a user name and password for a user account with administrator privileges and click the “OK” button.
- If the window shown in Figure 37 appears during formatting, click the “Ignore” button.



Figure 37

7 Click the “Quit” button in the window shown in Figure 31 to end the formatting operation.

<Note>

- You cannot recover data erased by formatting. Always check the data before formatting.
- Do not remove cards while the formatter is in operation.
- Since a P2 drive (except AJ-PCD10) will access other unformatted cards after a card has been formatted, the status indicator will continue flashing after formatting. Do not remove cards while the status indicator is flashing.

- If you enter a checkmark for “Use serial number for volume label”, the serial number of the P2 card will automatically be entered as the volume label. If you then change the serial number to a different character string, the new character string will be set as the volume label.
- When using an E series P2 card or an F series P2 card / micro P2 card / express P2 card (CPS authenticated), the Remain life time of the P2 card is displayed as follows.

Remain life time	Display color	Display
100% to 61%	Blue	
60% to 21%	Green	
20% to 9%	Yellow	
8% to 1%	Red	
0%	Red	

- When “RUN DOWN CARD” is displayed, formatting cannot be performed correctly. We recommend that you back up the data on the card and change cards within one week. If you continue using the old card, normal recording and playback may not be possible.
- The processing for fully erasing the P2 card is equivalent to a writing operation and therefore reduces the Remain life time.

#### 4. Software for each P2 device

For information on how to install and use P2 device software, refer to the instruction manual of the respective P2 device.

# CPS Encryption Function

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CPS encryption is a function that can be used to protect content on micro P2 cards or express P2 cards.

Activating the card CPS encryption function will record all data in encrypted form and a password has to be entered to access the data on the card. The following software will have to be installed on a personal computer to enable use of the CPS encryption function.

- P2 software
- P2 Viewer Plus

You can download and install this software from the website listed below.

<http://pro-av.panasonic.net/>

The P2 Viewer Plus Help provides information on how to use the CPS encryption function.

# Memo

[illegible]

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