

**IEEE 1394 OHCI PCI Board
for Windows 98SE/2000/Me**

PCIFW3U

User's Guide

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 RATOC Systems, Inc.

PCIFW3U User's Guide

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1. Introduction

This User's Guide describes how to install, use, and troubleshoot the RATO PCIFW3U 1394 PCI Board(called PCIFW3U in this User's Guide).

The information in the README.TXT file on the CD-ROM may include the latest information. Be sure to read the README.TXT file as well.

1-1. Before Using the PCIFW3U

- Never attempt to disassemble the PCI Board.
- Do not bend, drop or strike the PCI Board or the cable, or subject it to heavy pressure.
- Information in this document is subject to change without notice.
- If you have any questions or find errors in this guide, do not hesitate to let us know.

1-2. Package Confirmation

- PCIFW3 1394 OHCI PCI Board
- Low Profile Bracket (1pc)
- 6 feet 1394 6pin - DV 4pin cable (1pc)
- HDD power connector extended cable (1pc)
- PCIFW3U capture software (CD-ROM)
- Premiere Plug-In User's Manual
- Ulead Video Studio 5.0 (CD-ROM)
- User's Guide (This document)
- Software License Agreement

NOTE

If any of these items are missing from the PCIFW3U retail package, contact your supplier immediately.

2. Setup the OHCI Driver

This section describes the OHCI driver installation. First, confirm your Windows version.

When your Windows version is Windows 98 SE(Second Edition), go to the section 2-1.

When your Windows version is Windows 2000, go to the section 2-2.

When your Windows version is Windows Me(Millennium Edition), go to the section 2-3.

2-1.Windows 98 SE Installation

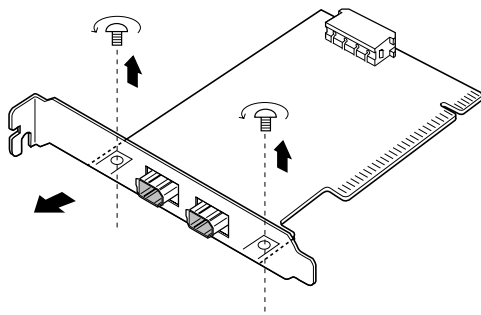
To use the PCIFW3U on Windows 98 Second Edition, follow steps through.

Make sure your Windows is Windows98 Second Edition by checking the **“Properties”** of **“My Computer”**. If you can find **“Second Edition”**, you have Windows98 Second Edition.

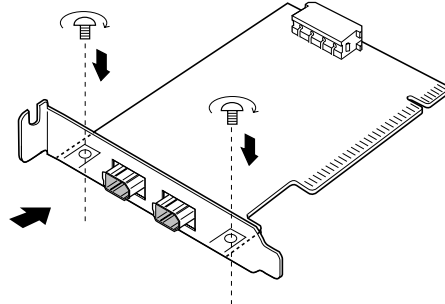


Step1.Install the PCIFW3U into a PCI slot

If a PCI slot in the PC is Low Profile, you need to replace the bracket with the Low Profile Bracket included in this package as shown below before you install the PCIFW3U.



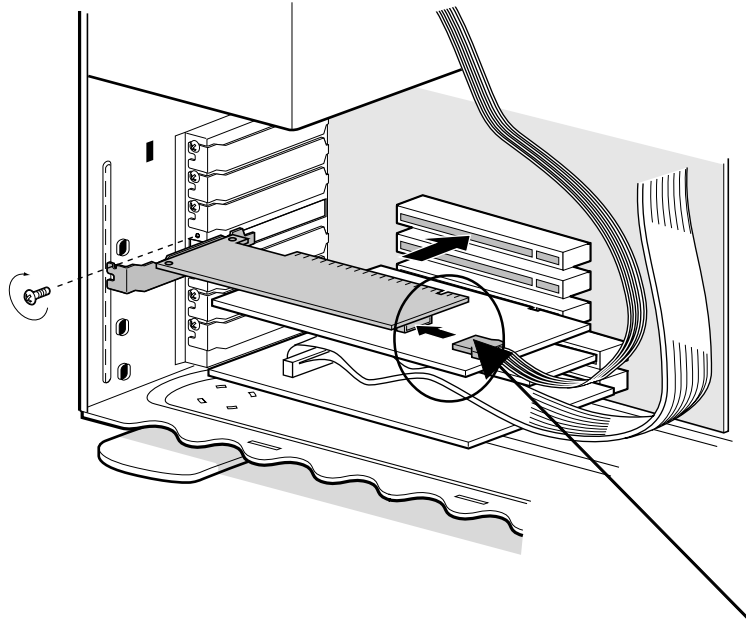
Remove the bracket.



Replace it with the Low Profile Bracket

Then, install the PCIFW3U into a slot and push it in until it is firmly seated.

Connect the white HDD Connector on the PCIFW3U PCI Board(J2 Connector) to a HDD power connector of your PC. If necessary, connect between this J2 connector and a HDD power connector with the HDD power connector extended cable.



J2 Connector

Step2.Install the OHCI driver

1. When the PCIFW3U is installed into a PCI slot, Hardware Wizard will detect the PCIFW3U automatically and you will see the screen below. Click **[Next]**.



2. When the following window appears, select **[Search for the best driver for your device (Recommended)]**. Then click **[Next]**.



3. When the following window appears, click **[Next]**. (You do not have to check any boxes)



4. When the following window appears, select **[The updated driver (Recommended) Texas Instruments OHCI Compliant IEEE 1394 Host Controller]**. Then click **[Next]**.



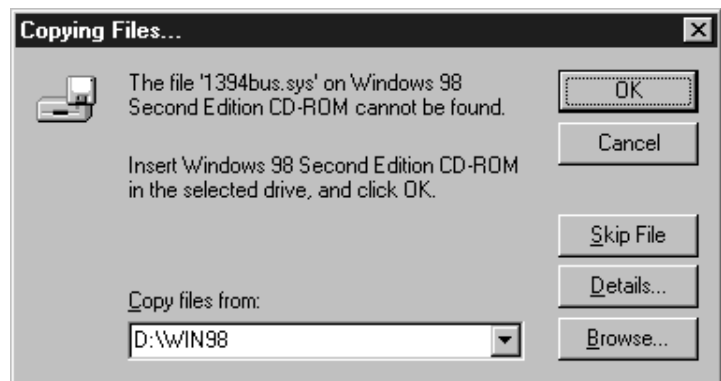
5. When the following window appears, click **[Next]**.



6. When the following window appears, insert the Windows 98 Second Edition CD-ROM into the CD-ROM drive. Then click **[OK]**.



7. If the following window appears, type **"D:\Win98"** or **"C:\Windows\options\cabs"** in the **Copy files from** box, where **"D"** means the CD-ROM drive. After that, click **[OK]**.
If your CD-ROM drive is not **"D"**, you must replace **"D"** to the appropriate drive name.



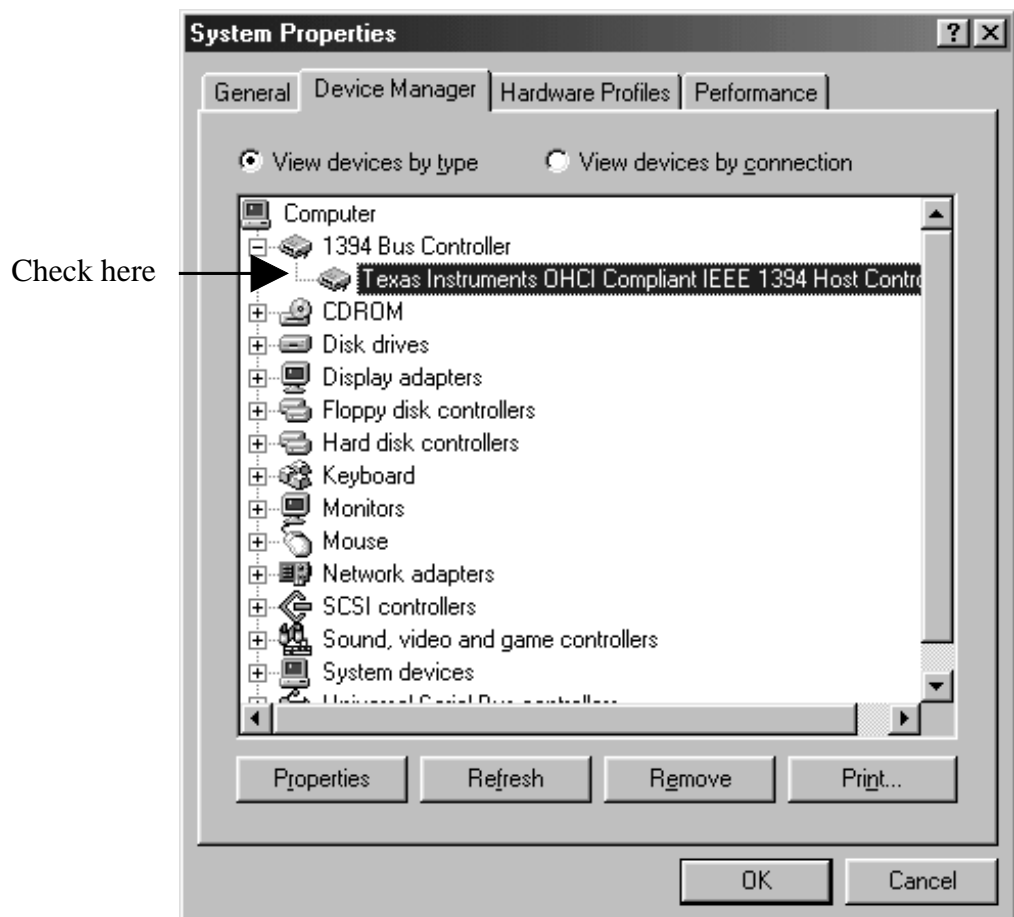
8. When the following window appears, click **[Finish]**.
You have now completed the installation of the OHCI driver.



Step 3. Verify the OHCI driver installation

To verify the OHCI driver installation, follow steps through.

1. Click **My Computer** with the right button of the mouse.
2. Select **Properties**.
3. Click the **Device Manager** tab.
4. Double-click “**1394 Bus Controller**”.
5. If there is a **Texas Instruments OHCI Compliant IEEE 1394 Host Controller** string without any yellow “!” marks or red “X” marks under the **1394 Bus Controller**, the OHCI driver for the PCIFW3U is installed correctly.



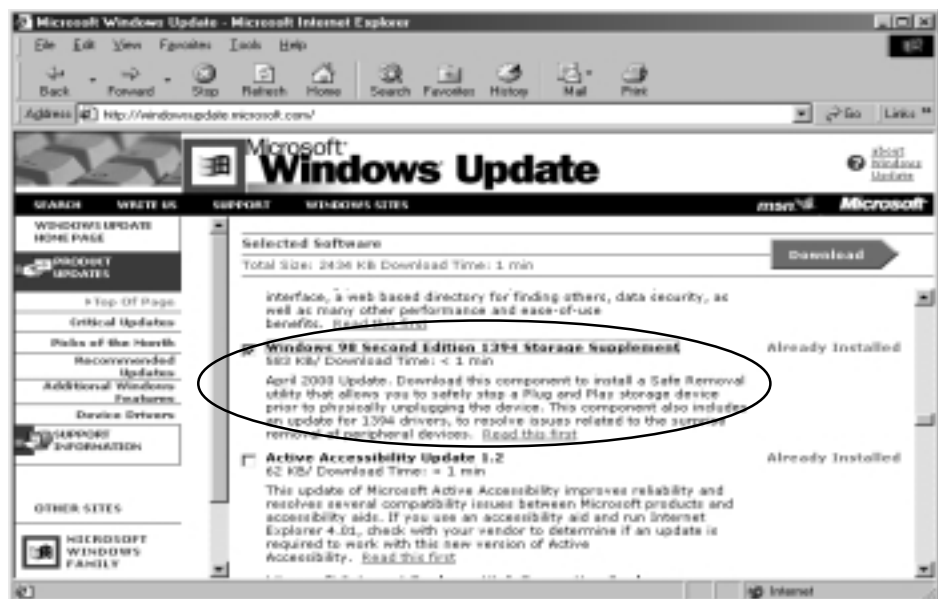
Step4.Microsoft Windows Update

You should update your Windows 98 SE to improve performance. To update your Windows 98 SE, follow steps through.

- 1.Click **Start** with the left button of the mouse.
- 2.Select **Windows Update**.
- 3.You will see the screen below. Click **PRODUCT UPDATES**.



- 4.You will see the screen below.Check **Windows 98 Second Edition 1394 Storage Supplement** and download the component. For more information on the component, refer to **Read this first** on the screen.

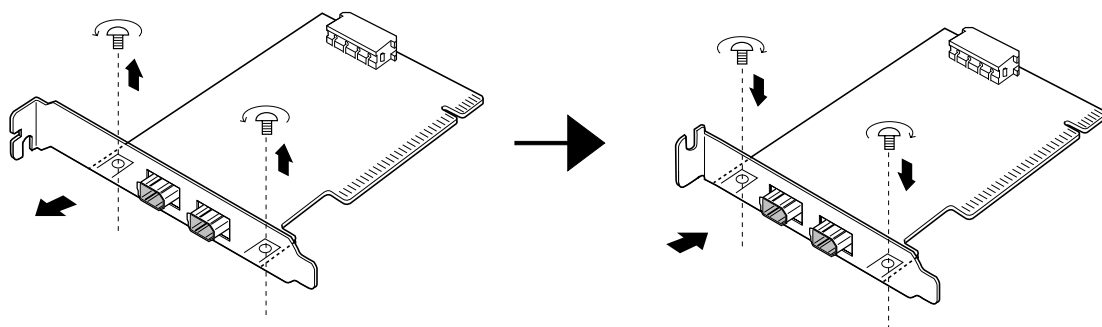


2-2.Windows 2000 Installation

To use the PCIFW3U on Windows 2000, follow steps through.

Step1.Install the PCIFW3U into a PCI slot

If a PCI slot in the PC is Low Profile, you need to replace the bracket with the Low Profile Bracket included in this package as shown below before you install the PCIFW3U.

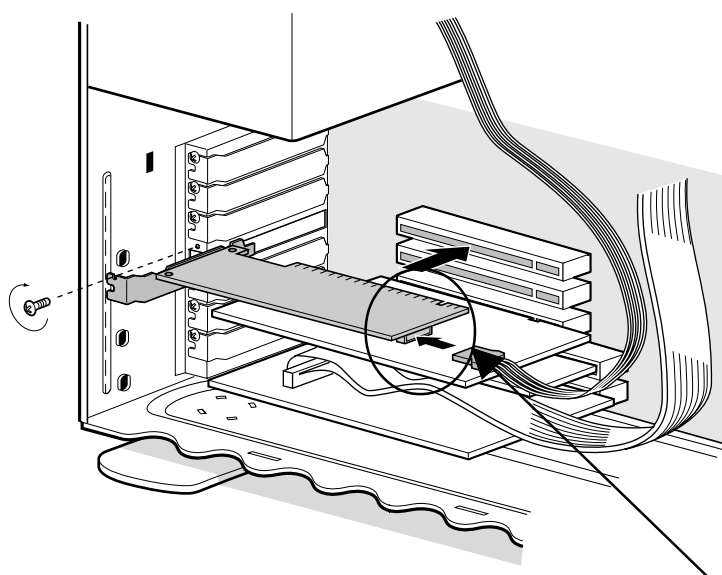


Remove the bracket.

Replace it with the Low Profile Bracket

Then, install the PCIFW3U into a slot and push it in until it is firmly seated.

Connect the white HDD Connector on the PCIFW3U PCI Board(J2 Connector) to a HDD power connector of your PC. If necessary, connect between this J2 connector and a HDD power connector with the HDD power connector extended cable.

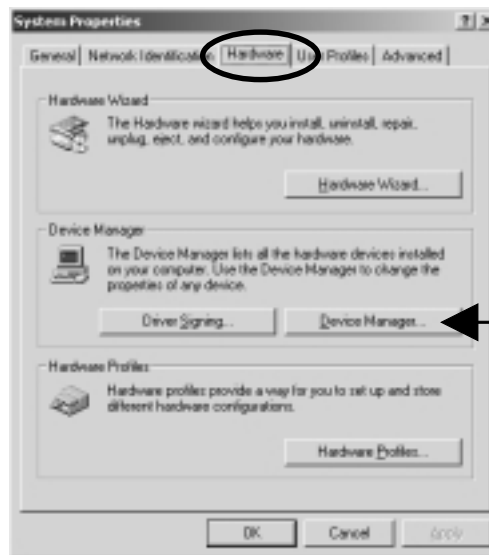


J2 Connector

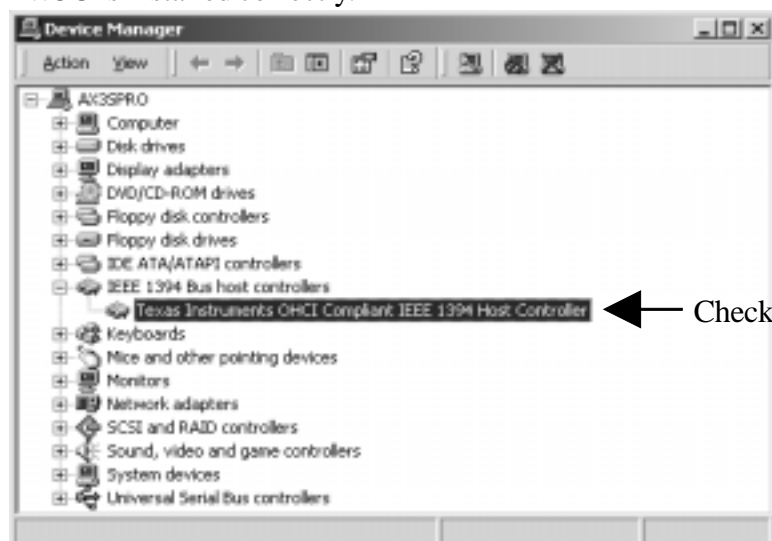
Step2. Verify the OHCI driver installation

When you install the PCIFW3U into a PCI slot, the OHCI driver is installed automatically by the Hardware Wizard. To verify the OHCI driver Installation, follow steps through.

1. Click **My Computer** with the right button of the mouse.
2. Select **Properties**.
3. You will see the screen below. Click the **Hardware** tab.
4. Click the “**Device Manager**” button.



5. If there is a **Texas Instruments OHCI Compliant IEEE 1394 Host Controller** string without any yellow “!” marks or red “X” marks under the **IEEE 1394 Bus host controllers**, the OHCI driver for the PCIFW3U is installed correctly.

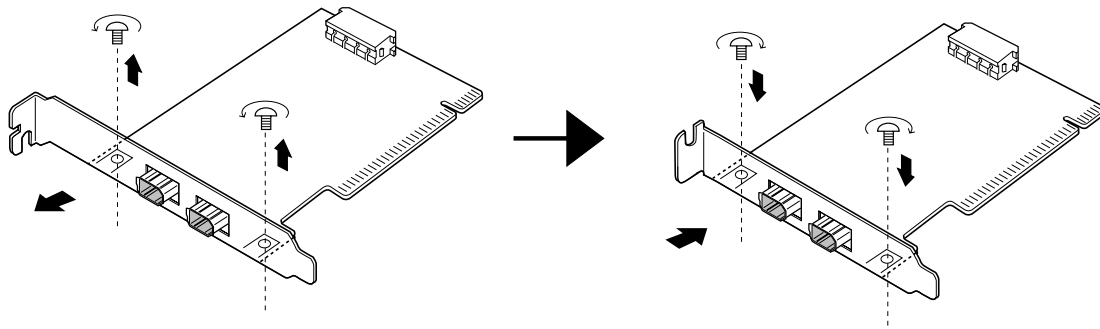


2-3.Windows Me Installation

To use the PCIFW3U on Windows Me, follow steps through.

Step1.Install the PCIFW3U into a PCI slot

If a PCI slot in the PC is Low Profile, you need to replace the bracket with the Low Profile Bracket included in this package as shown below before you install the PCIFW3U.

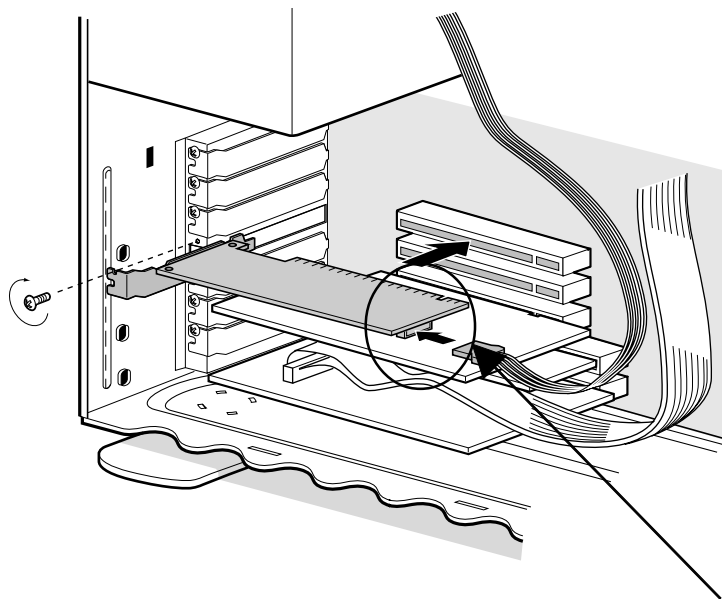


Remove the bracket.

Replace it with the Low Profile Bracket

Then, install the PCIFW3U into a slot and push it in until it is firmly seated.

Connect the white HDD Connector on the PCIFW3U PCI Board(J2 Connector) to a HDD power connector of your PC. If necessary, connect between this J2 connector and a HDD power connector with the HDD power connector extended cable.



J2 Connector

Step2.Install the OHCI driver

1. When the PCIFW3U is installed into a PCI slot, Hardware Wizard will detect the PCIFW3U automatically and you will see the screen below. Select [**Automatic search for a better driver(Recommended)**] and click [**Next**].

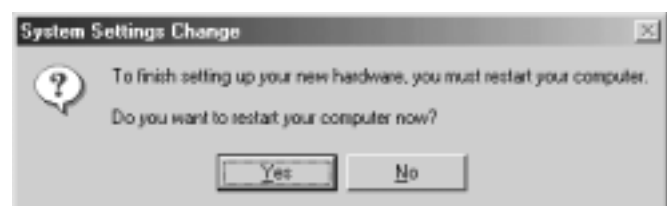


2. When the following window appears, click [**Finish**].

You have now completed the installation of the OHCI driver.



3. When the following window appears, click [**Yes**] to restart your PC.

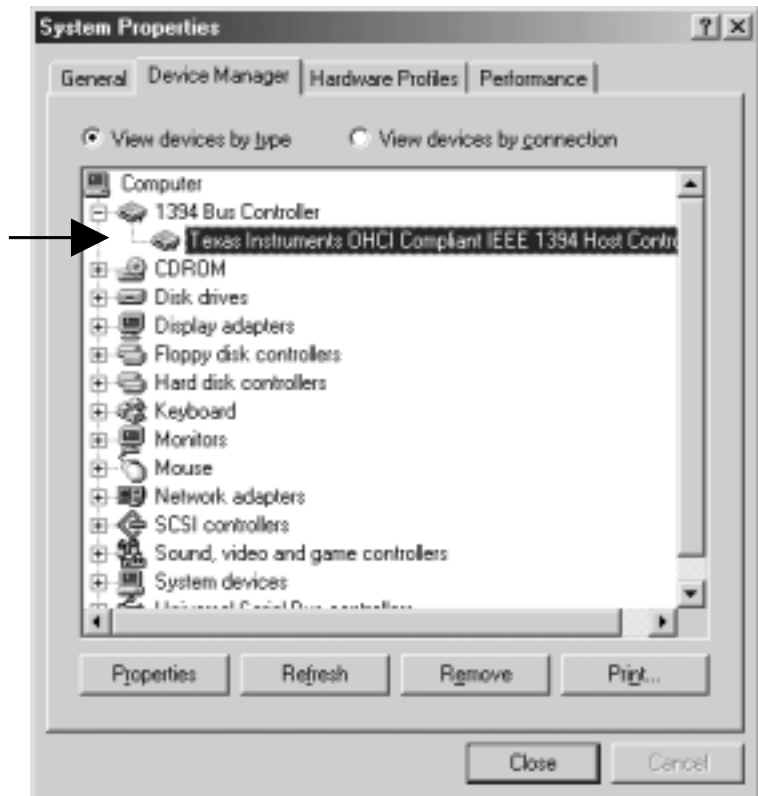


Step3. Verify the OHCI driver installation

To verify the OHCI driver installation, follow steps through.

1. Click **My Computer** with the right button of the mouse.
2. Select **Properties**.
3. You will see the screen below. Click the **Device Manager** tab.
4. Double-click “**1394 Bus Controller**”.
5. If there is a **Texas Instruments OHCI Compliant IEEE 1394 Host Controller** string without any yellow “!” marks or red “X” marks under the **1394 Bus Controller**, the OHCI driver for the PCIFW3U is installed correctly.

Check here



3. Setup the 1394 Device

3-1.DVCAM Installation

This section describes how to connect a DVCAM and install the DV driver.

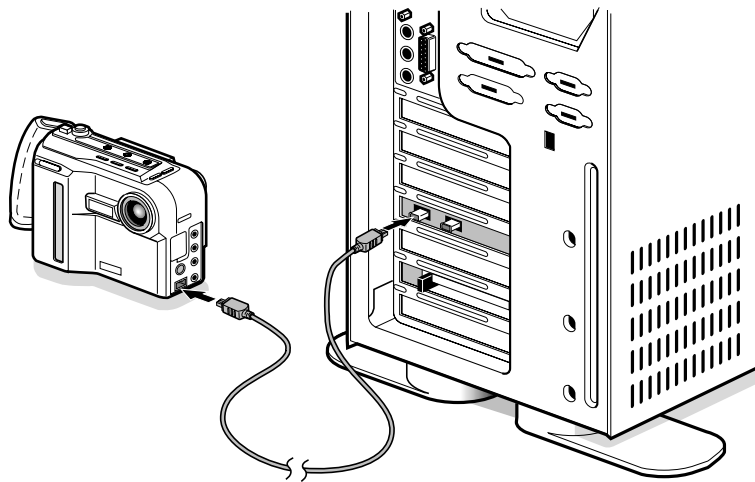
Connect the PCIFW3U and a DVCAM using a 1394 cable attached to the DVCAM as shown

below. And you must turn the DVCAM power switch on.

When your Windows version is Windows 98 SE(Second Edition), go to the section 3-1-1.

When your Windows version is Windows 2000, go to the section 3-1-2.

When your Windows version is Windows Me(Millennium Edition), go to the section 3-1-3.

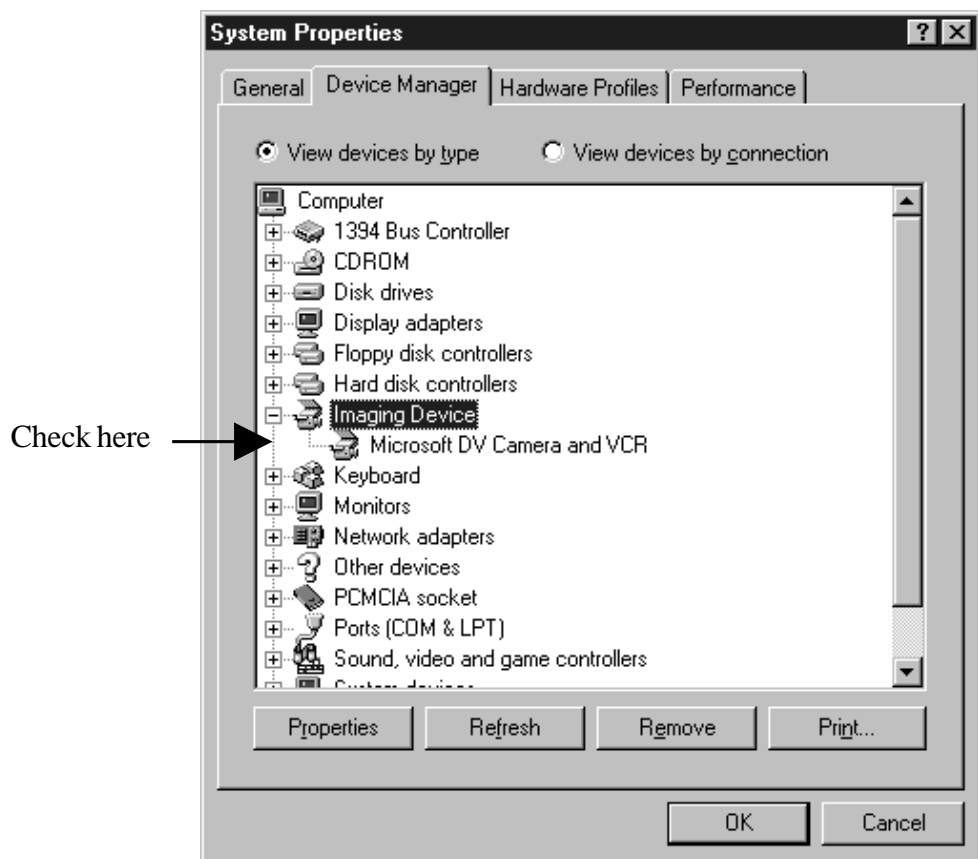


3-1-1.Windows 98 SE DV Driver Setup

Step. Verify the DV driver installation

When you connect a DVCAM on Windows 98 Second Edition, the DV driver will be installed automatically. To verify the DV driver installation, follow steps through.

- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.Click the **Device Manager** tab.
- 4.If there is a “**Microsoft DV Camera and VCR**” string without any yellow “!” marks or red “X” marks under the [**Imaging Device**] as shown below, the DV driver is installed correctly.



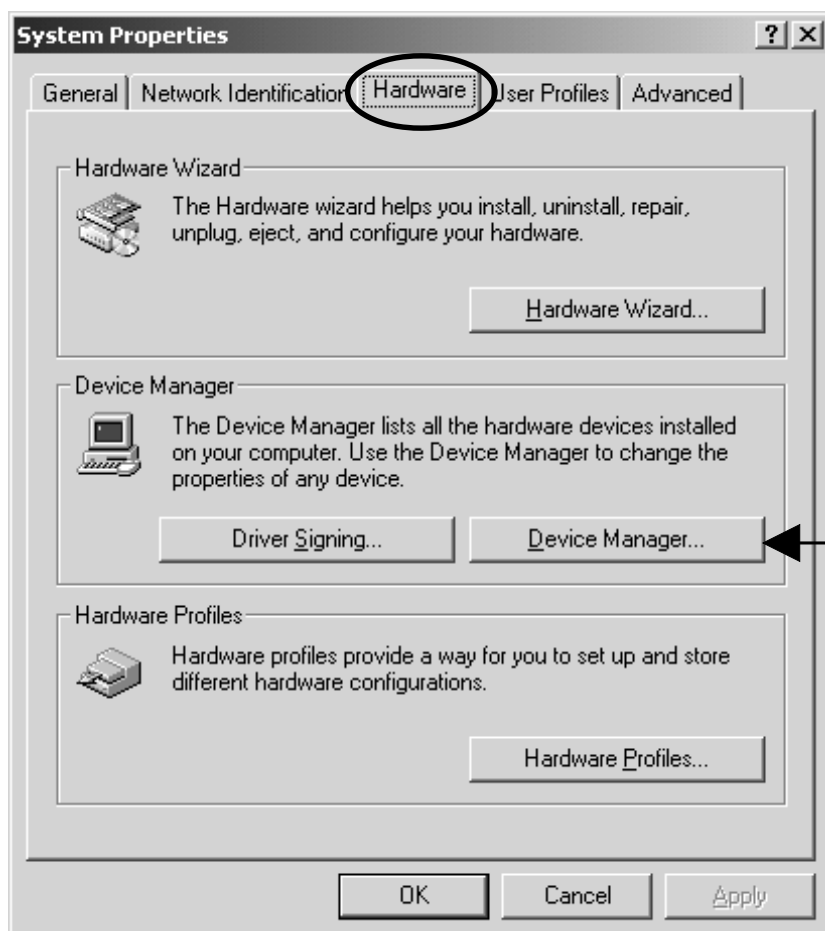
3-1-2.Windows 2000 DV Driver Setup

Step. Verify the DV driver installation

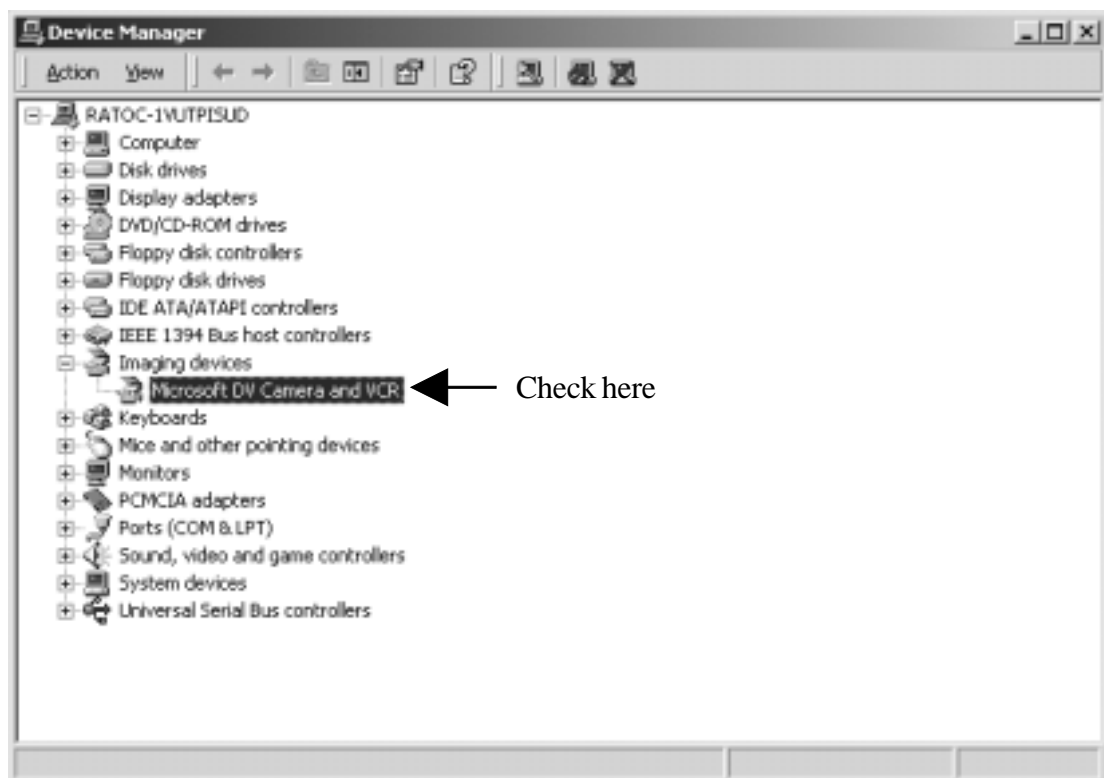
When you connect a DVCAM on Windows 2000, the DV driver will be installed automatically.

To verify the DV driver installation, follow steps through.

- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.You will see the screen below. Click the **Hardware** tab.
- 4.Click the **Device Manager** button.



5.If there is a “**Microsoft DV Camera and VCR**” string without any yellow “!” marks or red “X” marks under the [Imaging devices] as shown below, the DV driver is installed correctly.



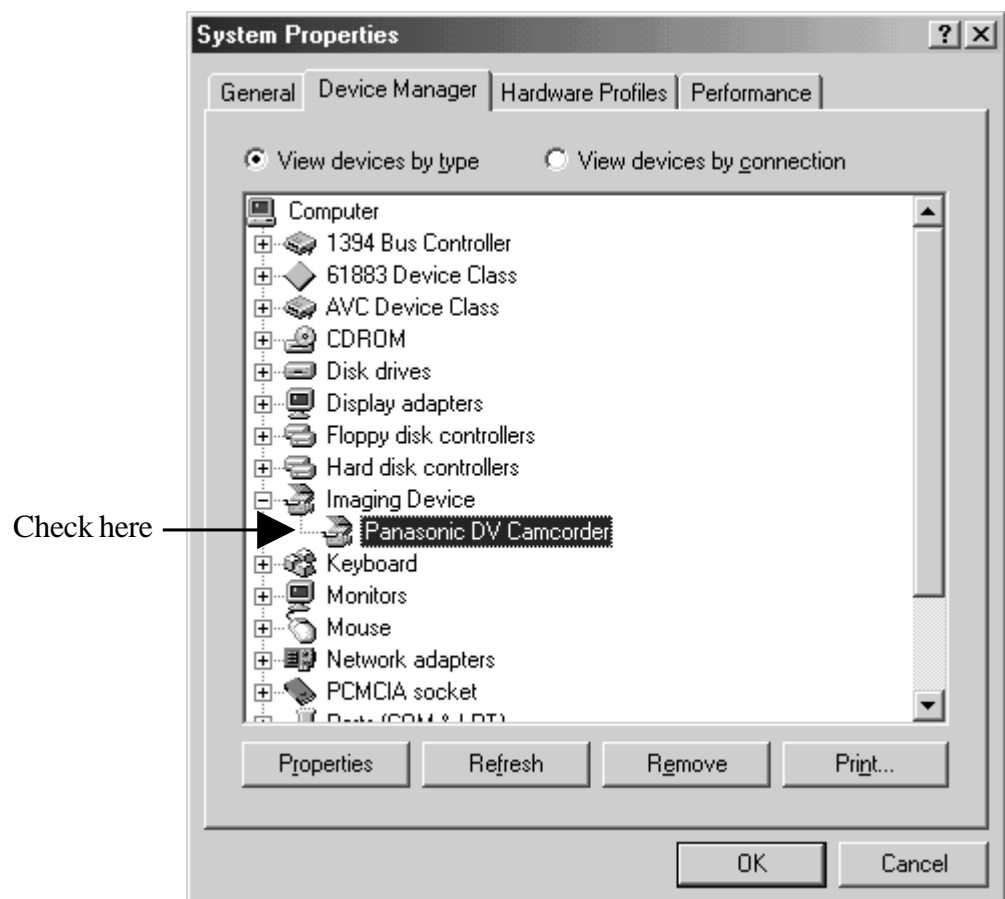
3-1-3.Windows Me DV Driver Setup

Step. Verify the DV driver installation

When you connect a DVCAM on Windows Me, the DV driver will be installed automatically.

But it may take some minutes to install it. To verify the DV driver installation, follow steps through.

- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.Click the **Device Manager** tab.
- 4.If there is a camera name string without any yellow “!” marks or red “X” marks under the **[Imaging Device]** as shown below, the DV driver is installed correctly.



3-2.Desktop CCD Camera Installation

This section describes how to connect a CCD camera and install the driver.

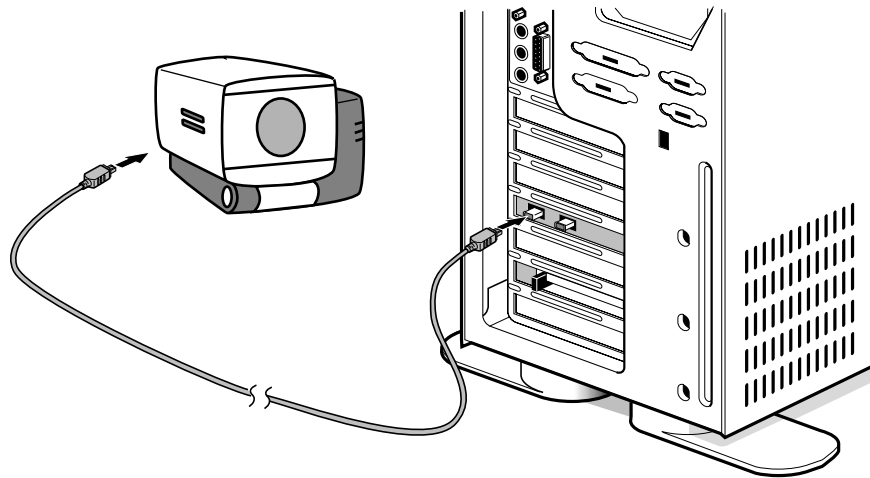
Follow steps through to connect a CCD camera.

- 1.Connect a CCD camera to the PCIFW3U with a 1394 6pin-6pin cable.
- 2.You can connect the CCD camera without turning off the PC or CCD camera.

When your Windows version is Windows 98 SE(Second Edition), go to the section 3-2-1.

When your Windows version is Windows 2000, go to the section 3-2-2.

When your Windows version is Windows Me(Millennium Edition), go to the section 3-2-3.



NOTE

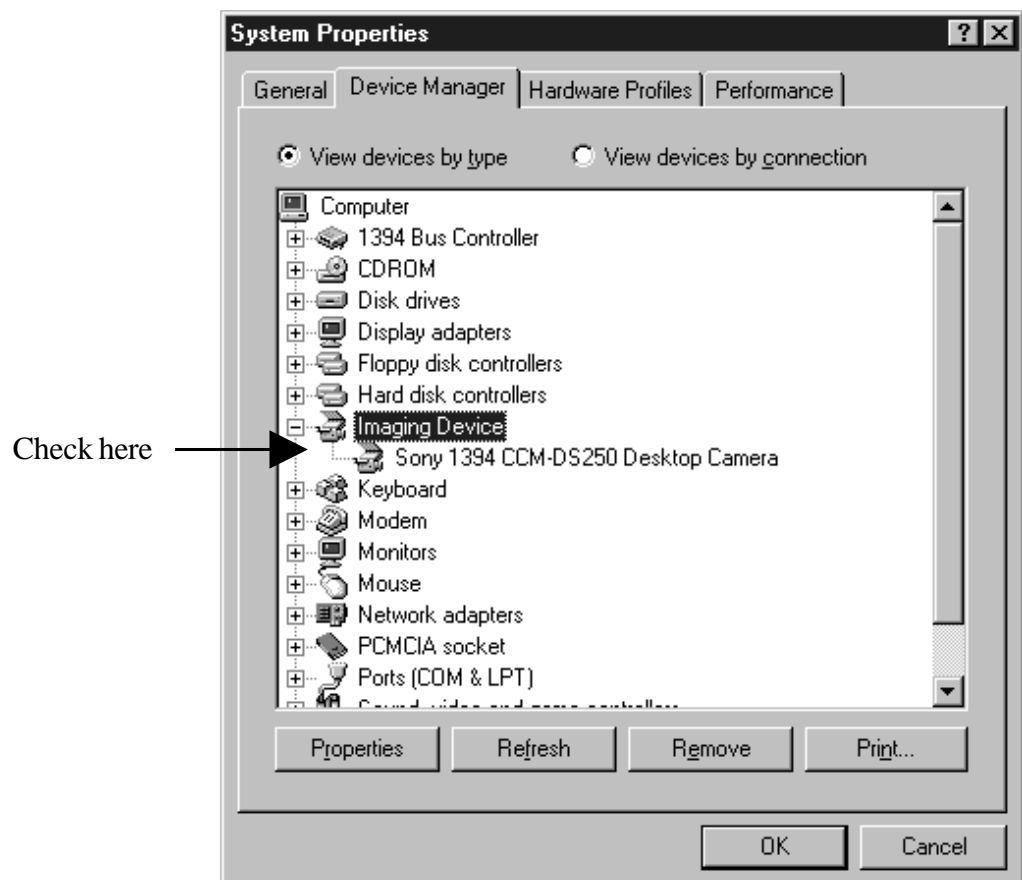
The 6 pin to 6 pin cable is not included in the PCIFW3U package.

3-2-1.Windows 98SE CCD Camera Setup

When the CCD camera is connected, the CCD camera will be recognized automatically.

To verify the CCD driver installation, follow steps through.

- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.Click the **Device Manager** tab.
- 4.Double-click “**Imaging Device**”.
- 5.If there is a CCD camera name string without any yellow “!” marks or red “X” marks under the **[Imaging Device]** as shown below, the driver is installed correctly.

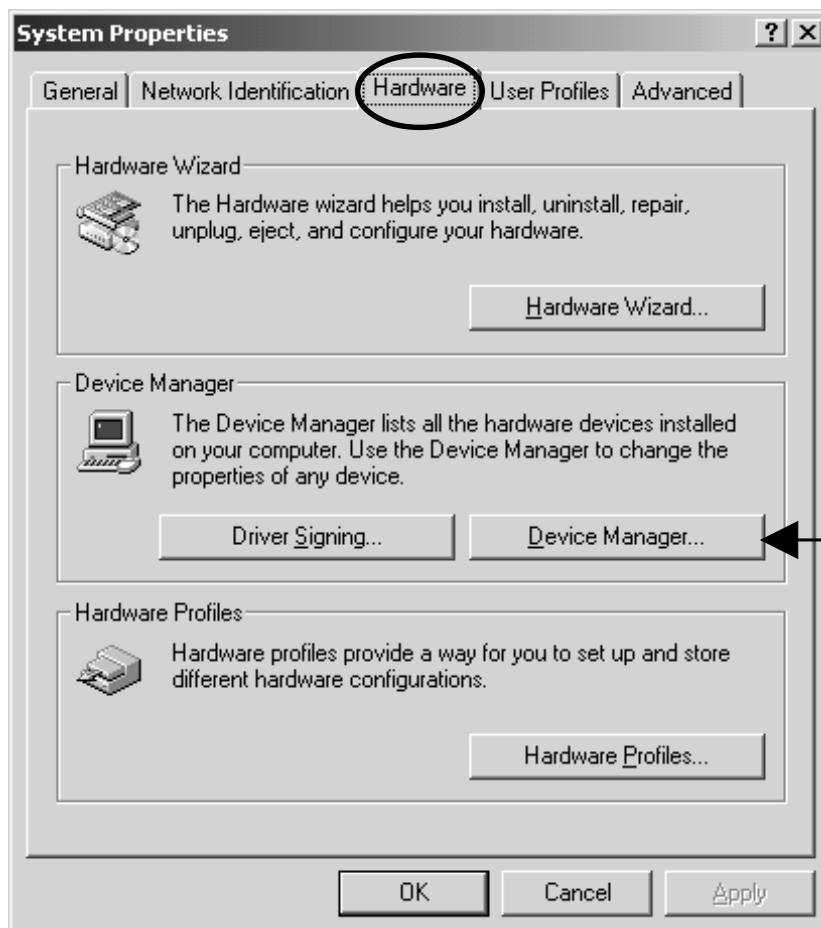


3-2-2.Windows 2000 CCD Camera Setup

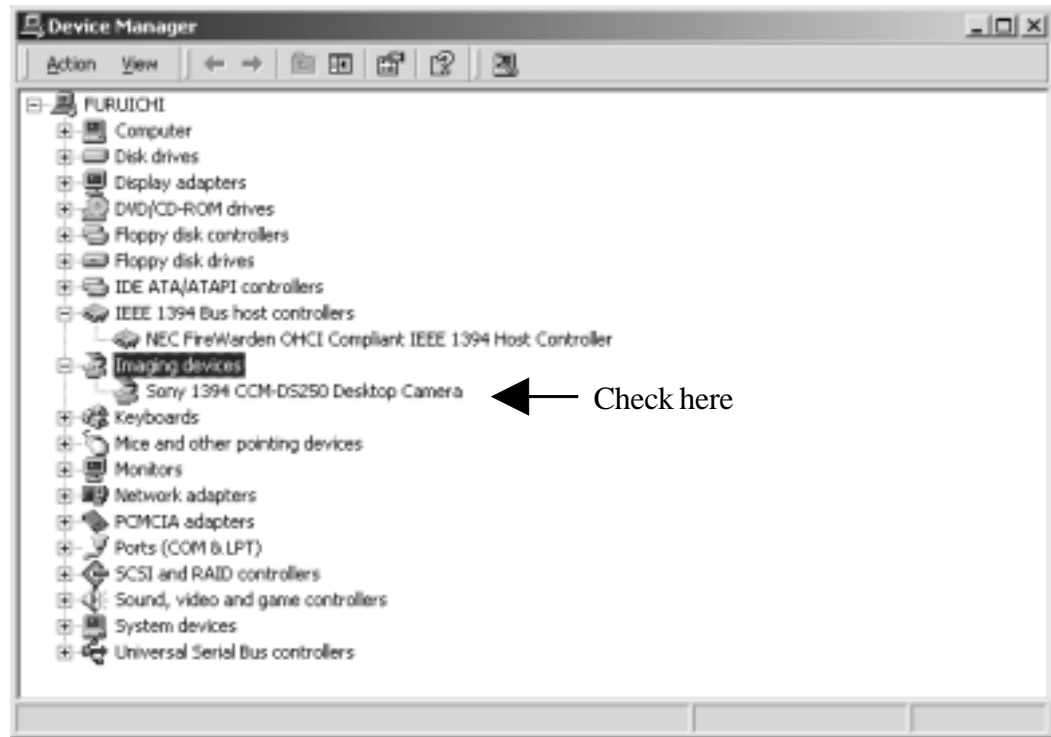
When the CCD camera is connected, the CCD camera will be recognized automatically.

To verify the CCD driver installation, follow steps through.

- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.You will see the screen below. Click the **Hardware** tab.
- 4.Click the **Device Manager** button.



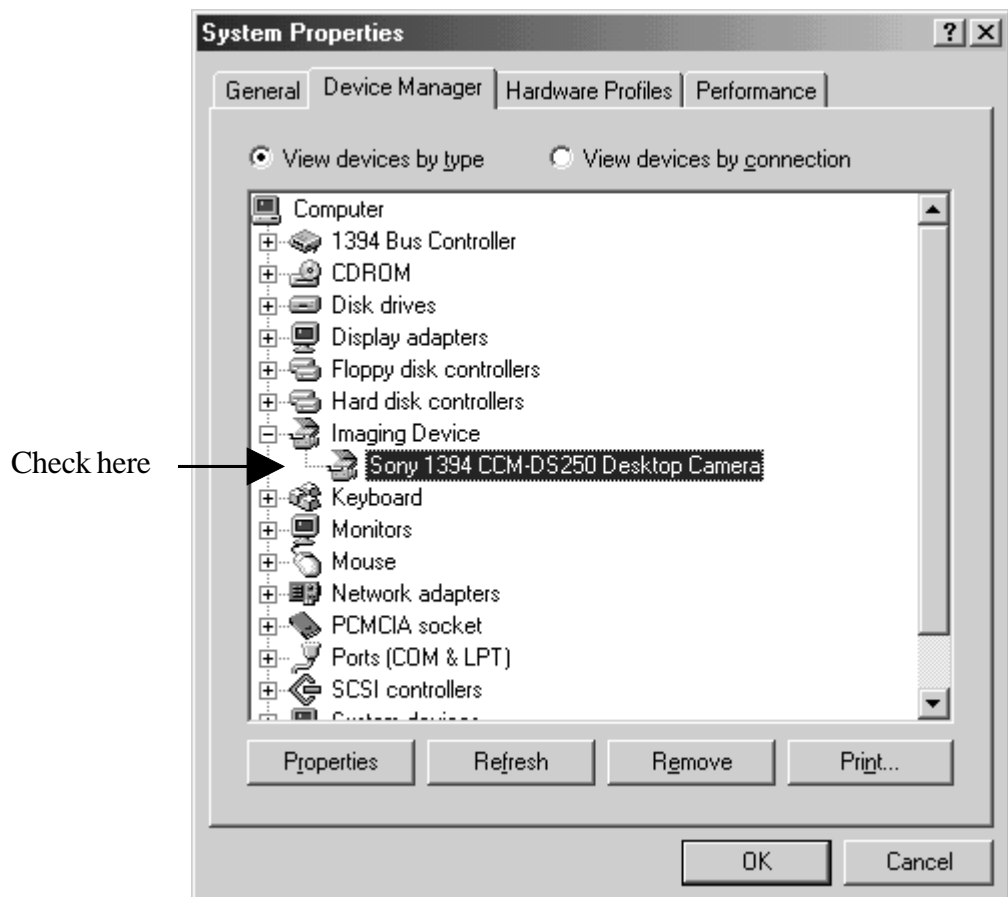
5.If there is a CCD camera name string without any yellow “!” marks or red “X” marks under the **[Imaging devices]** as shown below, the driver is installed correctly.



3-2-3.Windows Me CCD Camera Setup

When the CCD camera is connected, the CCD camera will be recognized automatically. But it may take some minutes to install it. To verify the CCD driver installation, follow steps through.

- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.Click the **Device Manager** tab.
- 4.Double-click “**Imaging Device**”.
- 5.If there is a CCD camera name string without any yellow “!” marks or red “X” marks under the **[Imaging Device]** as shown below, the driver is installed correctly.



3-3.1394 Storage Installation

This section describes how to connect a 1394 storage and install the driver. 1394 storage means Hard Disk Drives(HDDs), Magneto Optical Disks(MOs), etc. Only Windows98 Second Edition, Windows 2000 or Windows Me support such 1394 storage.

Follow steps through to connect a 1394 Hard Disk Drive(HDD).

1. Connect a 1394 HDD to the PCIFW3U with an 1394 6pin-6pin cable.
2. You can connect the 1394 HDD without turning off the PC or 1394 HDD.

When your Windows version is Windows 98 SE(Second Edition), go to the section 3-3-1.

When your Windows version is Windows 2000, go to the section 3-3-2.

When your Windows version is Windows Me(Millennium Edition), go to the section 3-3-3.

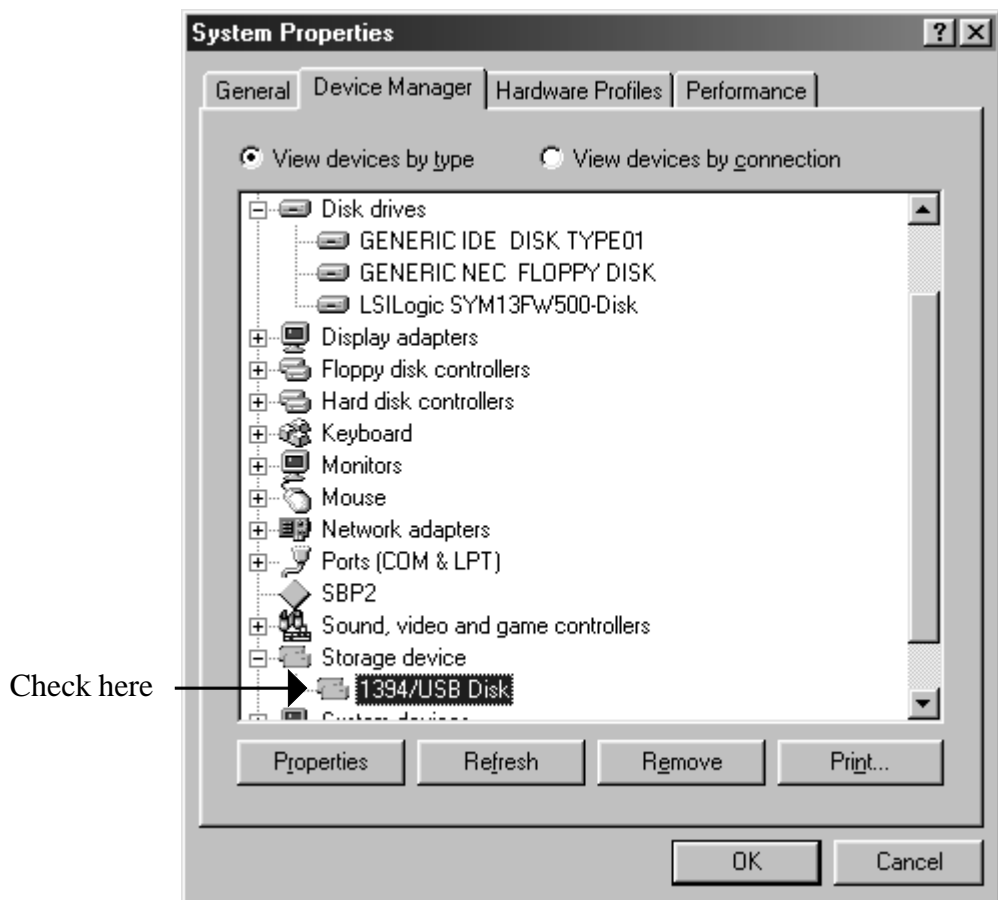
NOTE

The 6 pin to 6 pin cable is not included in the PCIFW3U package.

3-3-1.Windows 98 SE 1394 Storage Setup

When the 1394 HDD is connected, Window98 Second Edition will install the driver automatically. To verify the 1394 storage driver installation, follow steps through.

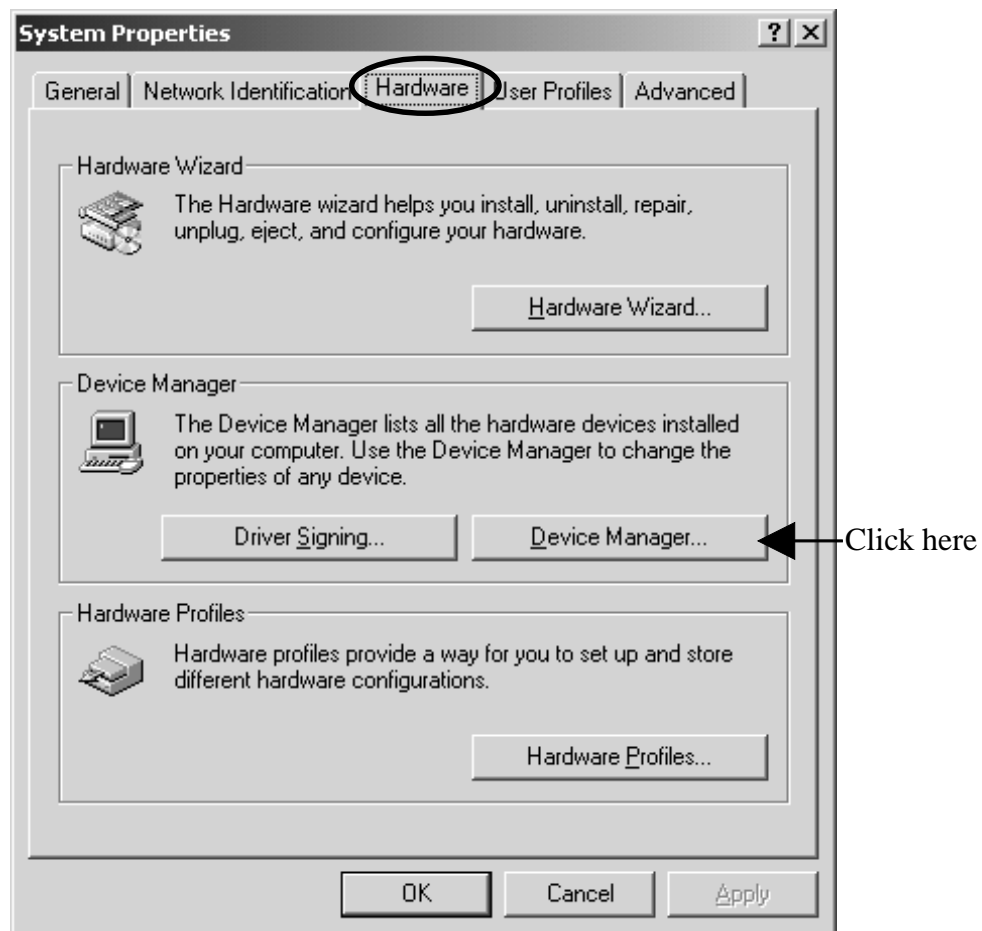
- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.You will see the screen below. Click the **Device Manager** tab.
- 4.Doble-click “**Storage device**”.
- 5.If there is a **1394/USB Disk** string without any yellow “!” marks or red “X” marks under the [Storage device] as shown below, the 1394 storage driver is installed correctly.



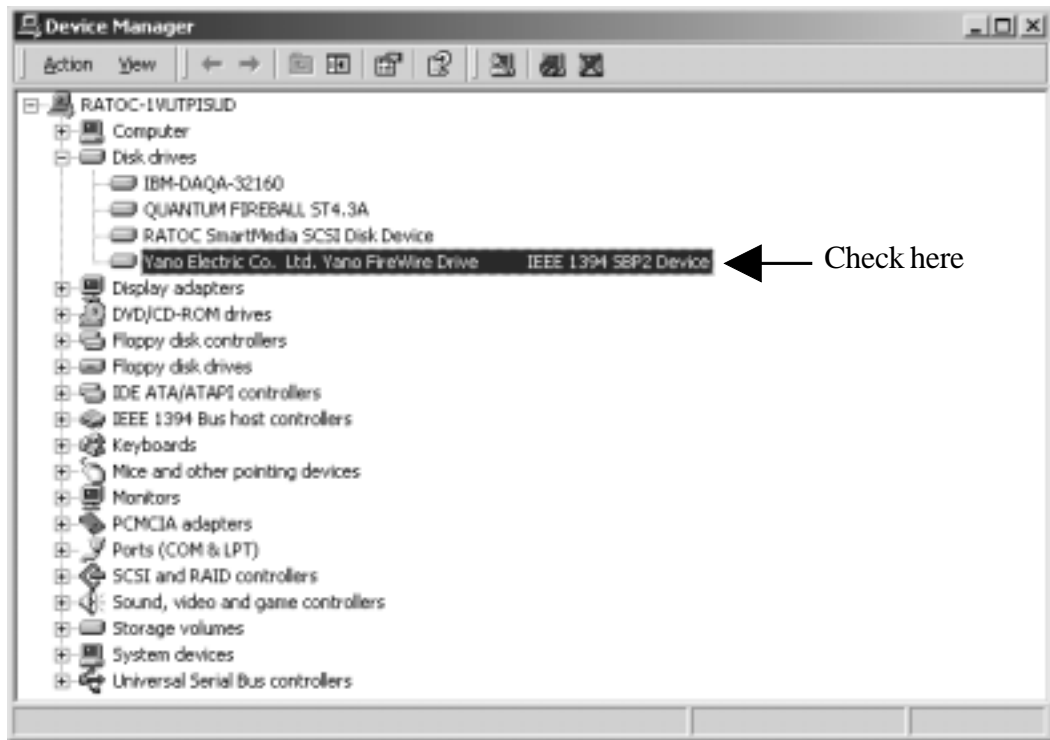
3-3-2.Windows 2000 1394 Storage Setup

When the 1394 HDD is connected, Window2000 will install the driver automatically.
To verify the 1394 storage driver installation,follow steps through.

- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.You will see the screen below. Click the **Hardware** tab.
- 4.Click the **Device Manager** button.



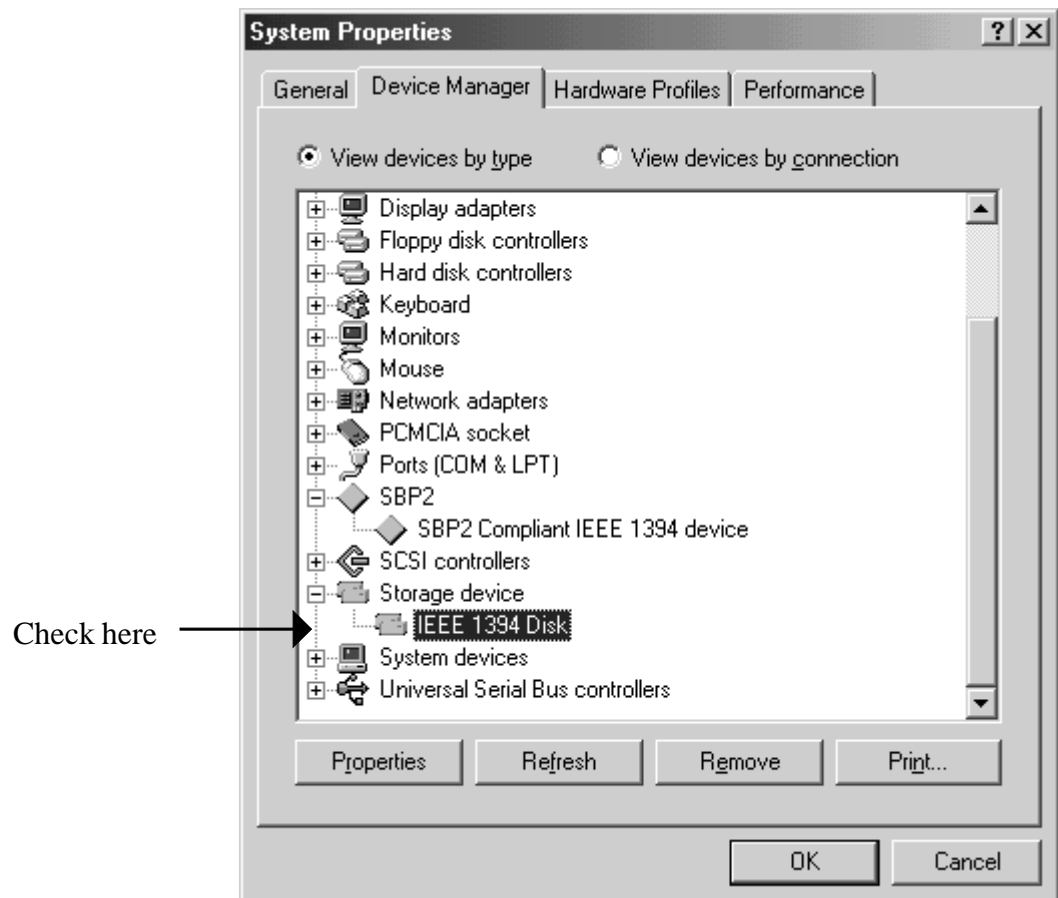
5.If there is a 1394 HDD name string without any yellow “!” marks or red “X” marks under the [Disk drives] as shown below, the 1394 storage driver is installed correctly.



3-3-3.Windows Me 1394 Storage Setup

When the 1394 HDD is connected, Window Me will install the driver automatically.
But it may take some minutes to install it. To verify the 1394 storage driver installation, follow steps through.

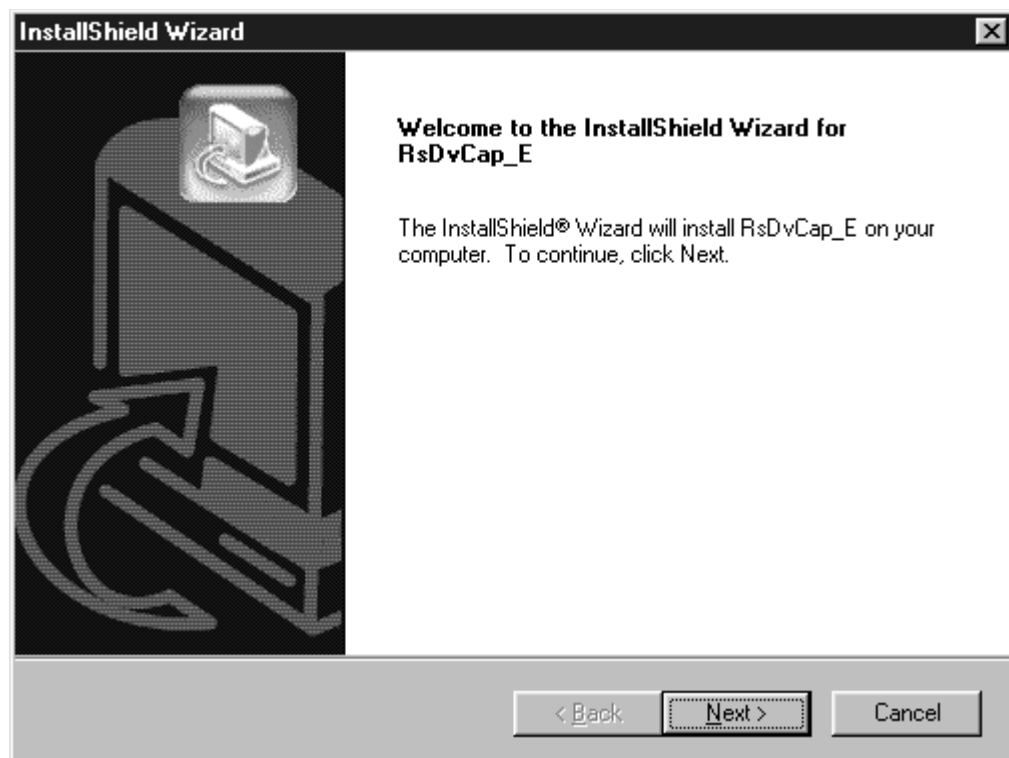
- 1.Click **My Computer** with the right button of the mouse.
- 2.Select **Properties**.
- 3.You will see the screen below. Click the **Device Manager** tab.
- 4.Doubl-click “**Storage device**”.
- 5.If there is a **IEEE 1394 Disk** string without any yellow “!” marks or red “X” marks under the [Storage device] as shown below, the 1394 storage driver is installed correctly.



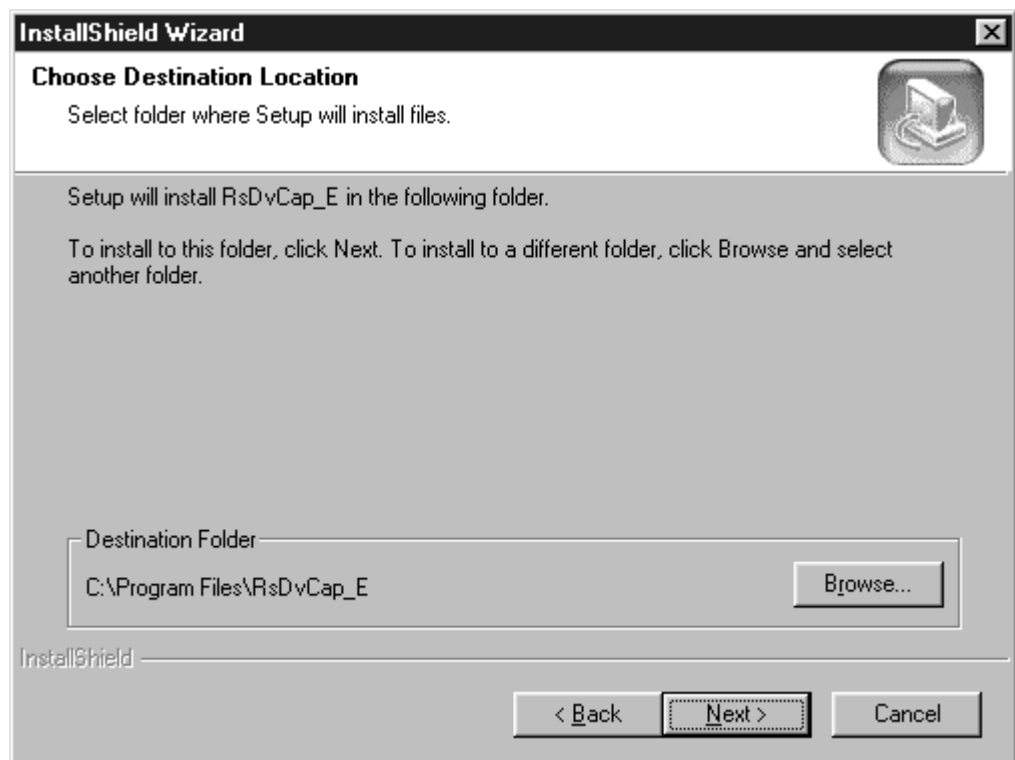
4. Setup RsDvCap

4-1.Installing RsDvCap/RsDvStill/CompressAVI

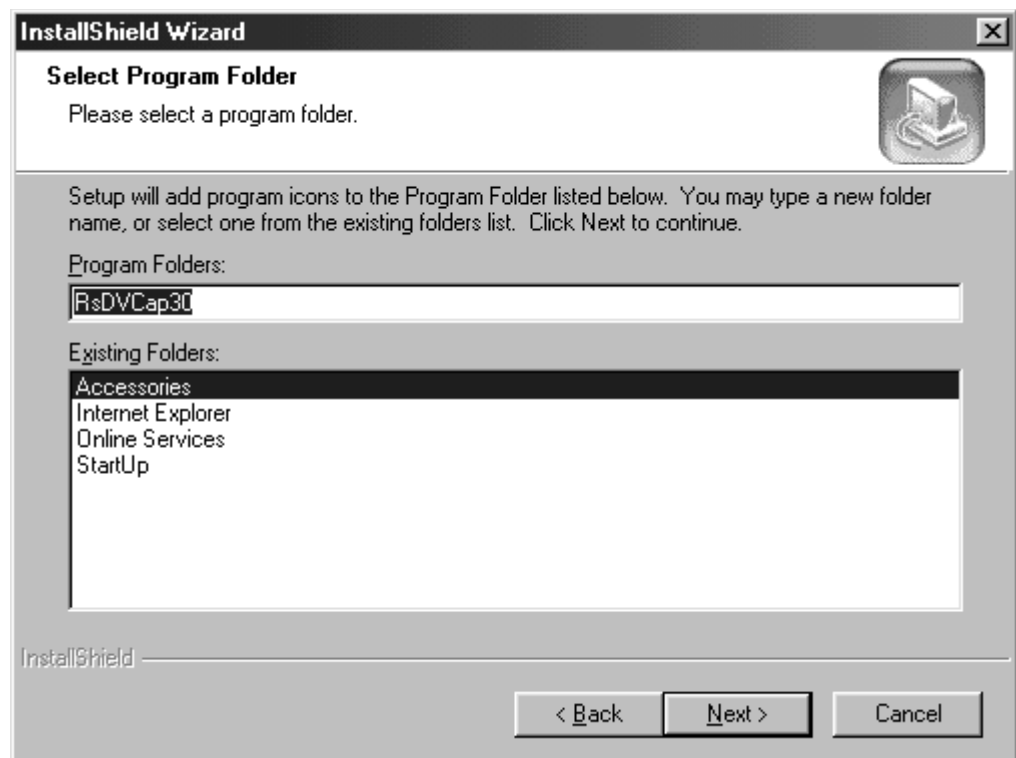
- 1.Close all programs currently running on your computer.
- 2.Set the **RATOC IEEE1394 PCI Board CD-ROM** in your CD-ROM drive.
- 3.Open [**My Computer**] and double-click CD-ROM drive icon.
- 4.Open [**Win98SE**], [**Win2000**] or [**WinMe**] folder.
If your Windows version is Windows98 SE(Second Edition), open [**Win98SE**] folder.
If your Windows version is Windows2000, open [**Win2000**] folder.
If your Windows version is Windows ME(Millennium Edition), open [**WinMe**] folder.
- 5.Double-click the [**RsDvCap**] folder.
- 6.Double-click on [**Setup.exe**] to install the RsDvCap software.
- 7.You will see the screen below.Click [**Next**].



8. You will see the screen below. Click [Next].



9. You will see the screen below. Click [Next].



10. You will see the screen below.

Select **[Yes, I want to restart my computer now]** and click **[Finish]**.

You have now completed installing the capture software.



NOTE

If you have installed this software already and start this installer, this installer will delete this software and end. To install this software, you have to start this installer again.

4-2.Installing MSDV update for Windows98 SE only

Install MSDV update program(**252640USA8.EXE**) only when you use **Windows98 SE(Second Edition)**. If you use Windows2000 or Windows ME(Millennium Edition), skip this installation of MSDV update program.

Follow steps through to install MSDV update program.

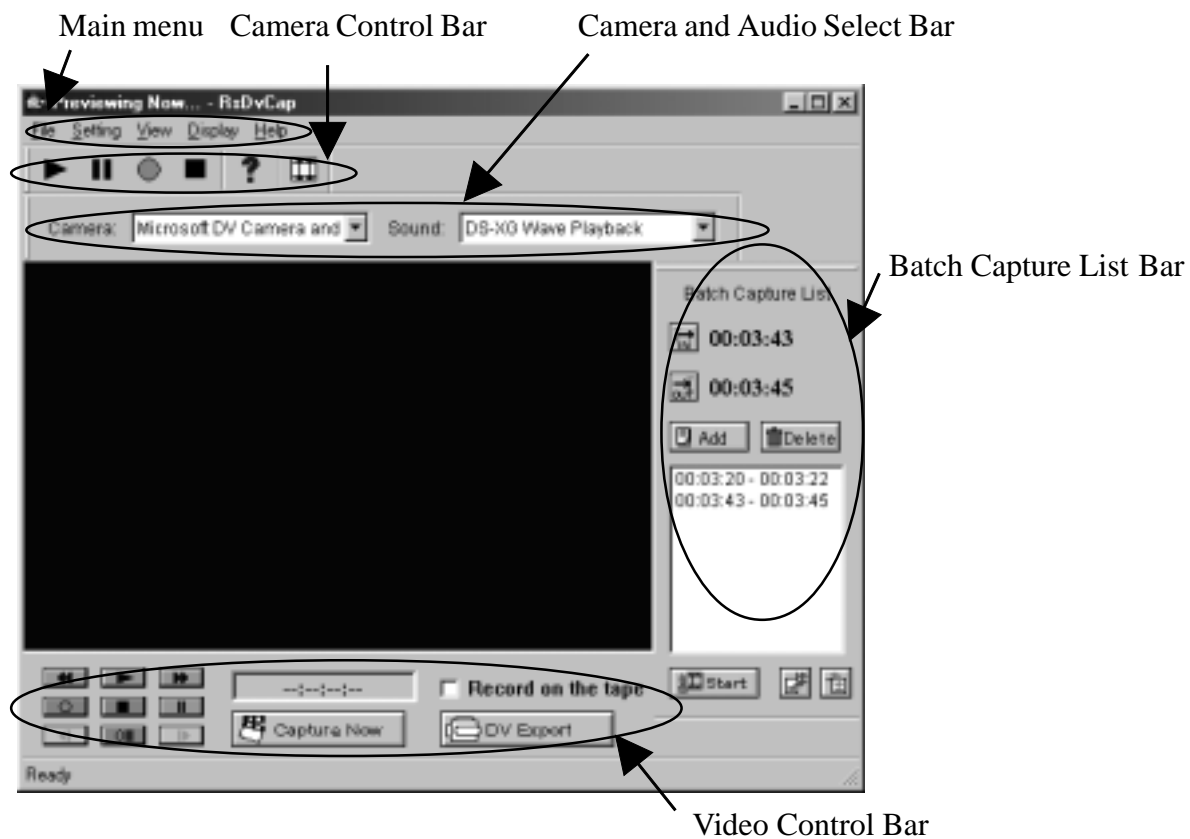
- 1.Set the **RATOC IEEE1394 PCI Board CD-ROM** into your CD-ROM drive.
- 2.Open [**My Computer**] and double-click CD-ROM drive icon.
- 3.Double-click [**Win98se**] folder and double-click the [**DvPatch**] folder.
- 4.Double-click on [**252640USA8.EXE**].

5. How to use RsDvCap

What is the RsDvCap?

This application software has the following functions.

- Preview and capture video/sound data from a DVCAM.
- Preview and capture video data from a CCD camera.
- Export media file from a PC to a DVCAM.
- Playback media file.



RsDvCap Main Screen

NOTE

1. This software uses Microsoft standard DV-AVI2 format video file.
2. To capture correct DV file, you have to use original DV footages which has continuous Timecode(recording). If the original DV footage has intermittent Timecode, sometimes it may cause system freeze or may not be captured.

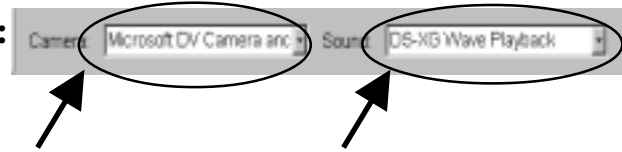
5-1.Main menu:



Top menu	Sub menu	Description
File	Review movie file	Select an AVI file you want to play back.
	END	Terminate this application.
Setting	DV Batch Capture	Show batch capture dialog box.Refer to 5-6.DV Batch Capture .
	Application Setting	Show RsDvCap parameter setting dialog box. Refer to 5-3.Application settings .
	Cam Setting	Show CCD camera control dialog box.
View	Camera Audio Select Bar	Show Camera and Audio Select Bar . Refer to 5-2-1.Camera and Audio Select Bar .
	Camera Control Bar	Show the DVCAM camera mode control bar. You can control a DVCAM.Refer to 5-2-2. Camera Control Bar .
	Video Control Bar	Show the DVCAM video mode control bar. You can control a DVCAM.Refer to 5-2-3. Video Control Bar .
	Batch Capture List	Show the Batch Capture List Bar.You can capture favorite scenes in a DV tape to your HDD.Refer to 5-6.DV Batch Capture .
Display		Select the size of the preview window. The preview window of the [PC] is 4:3. The preview window of the [DV] is 3:2.

5-2.Control Bars

5-2-1.Camera and Audio Select Bar:



Camera list box

Sound device list box

This bar has the **Camera list box** and **Sound device list box** as shown above. **Camera list box** displays a list of camera device connected to your PC. If this list box is blank, your camera isn't recognized. When you use Windows98 SE(Second Edition), Windows 2000 or Windows Me(Millennium Edition), “**Microsoft DV Camera and VCR**” string will appear. **Sound device list box** displays a list of sound device.

5-2-2.Camera Control Bar :



You can preview and capture a video image from the connected DVCAM. The bar will appear automatically when the DVCAM is set to camera mode. The DVCAM have a switch which selects video mode or camera mode. Set this switch to camera mode to preview and capture a video image.



....When you click this button, you can preview a video image.



....When you click this button, you can pause a video image.



....When you click this button, you can capture a video image to the HDD.



....When you click this button, you can stop previewing or capturing a video image.



.....When you click this button, you will see the Help contents.





.....When you click this button, you can play back an AVI file.

5-2-3.Video Control Bar :



You can control a DVCAM from this control bar. The DVCAM have a switch which select video mode or camera mode. If you set this switch to camera mode or a DV tape is not inserted, this control bar will be disabled automatically. Set this switch to video mode to control the DVCAM.

The functions are below:

-  ...Rewind
-  ...Previous frame
-  ...Play
-  ...Next frame
-  ...Pause
-  ...Stop
-  ...Fast forward
-  ...Record
-  ...Pause recording



When you click the **Capture Now** button, you can start to capture DV data from a DVCAM. The [**Capture Now**] will change to [**Capture Stop**].

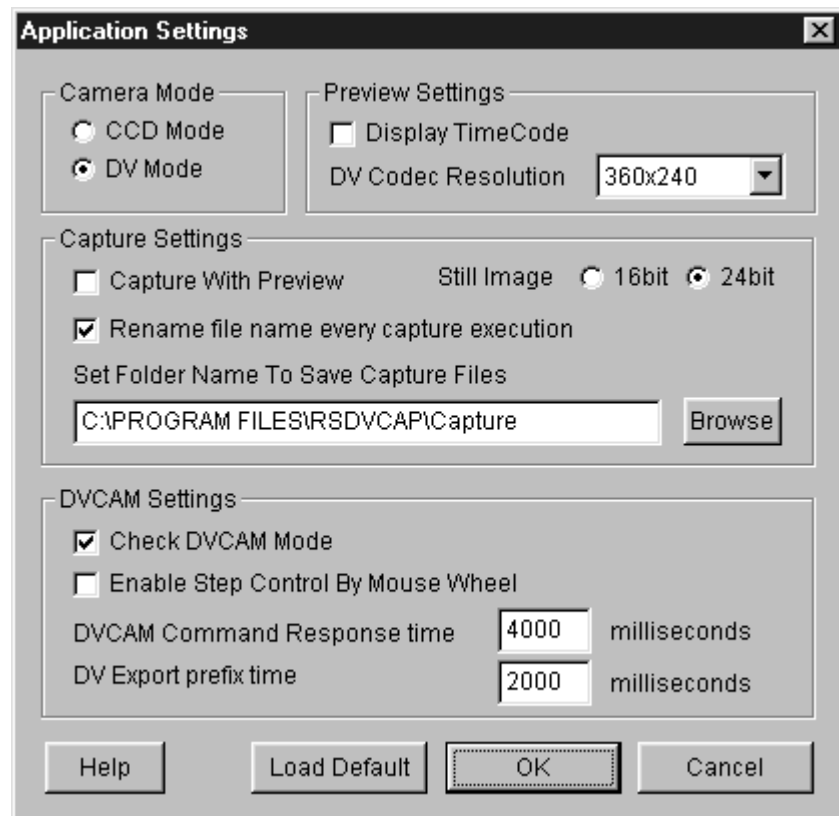


When you click the **DV Export** button, you can export DV data to a DVCAM. You can see the DV data on the screen of the DVCAM.



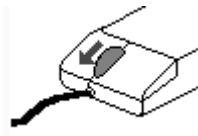

- 1.If you don't want to record DV data onto your DV tape, don't check "**Record on the tape**".
- 2.If you really want to record DV data onto your DV tape, check "**Record on the tape**".

5-3.Application settings

When you select [**Application setting**] of the [**Setting**] menu, you will see the dialog box below.
You can set up this application's behavior.



Category	Item	Description
Camera Mode	CCD Mode	Select when you use a CCD camera.
	DV Mode	Select when you use a DVCAM.
Preview Settings	Display TimeCode	If checked, timecode will be displayed.
	DV Codec Resolution	You can select DV Codec Resolution. If you select a higher resolution, you will get a better image. This DV Codec Resolution affects only the preview quality.
Capture Settings	Capture With Preview	If checked, video images will be displayed in the preview window during capturing video stream. When you check here, it will be a heavy load on your PC. If you have problems of dropping frames or sounds, don't check this option.
	Rename file name every capture execution	If checked, every time you start and stop capturing a video, the file rename dialog box will appear. You can set a file name and location to save the file in. If you don't check here, a captured file will be saved automatically under the name of CAPTIME+(Time)+Year+(Date).AVI in the folder you set at "Set Folder Name To Save Capture Files" .

Category	Item	Description
DVCAM Settings	Check DVCAM Mode	<p>If you click here, this application will detect whether your DVCAM is in camera mode or video mode automatically. If your DVCAM is in video mode, the Camera Control Bar will disappear. If your DVCAM is in camera mode, the Camera Control Bar will appear and the Video Control Bar will be disabled.</p>
	Enable Step Control By Mouse Wheel	<p>If you check here, you can control a camera with your mouse as shown below.</p> <p>1) When you click wheel, a DVCAM starts to play.</p>  <p>2) When you turn wheel down, a DVCAM starts to rewind.</p>  <p>3) When you turn wheel up, a DVCAM starts to fast forward.</p>  <p>4) When you click the right button, a DVCAM stops.</p> 

Category	Item	Description
	DVCAM Command Response time	When you control a DVCAM from the PC consecutively, it takes some time for the DVCAM to get ready for a next command from the PC. This time depends on the DVCAM. If you have trouble in controlling the DVCAM from the PC consecutively, change this value to a longer time than 4 seconds. Default time is 4 seconds. For example, 5 seconds.
	DV Export prefix time	When you export an AVI file to a DVCAM, there is data prefix time from starting to export the AVI file to recording it onto a DV tape. The data prefix time results in failing to record the beginning of the AVI file onto the DV tape. To avoid this problem, you can set a time here. During the time you set here, blank data will be exported to the DVCAM and it avoids failing to record the beginning of the AVI file onto the DV tape.

5-4. Capturing a video from a DVCAM in camera mode

When you want to capture a video image from a DVCAM set to camera mode, follow steps through.

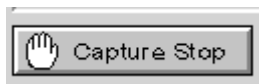
1. Confirm a DVCAM is set to camera mode.

Camera mode means you can capture a video image. If your DVCAM is in video mode, change mode selection switch from video mode to camera mode slowly. Everytime you change DVCAM's Mode Control switch, move this switch to OFF position and confirm that the RsDvCap's Camera device name will disappear. After that, you can change this switch to your choice and the camera device name will appear.

2. Select **[DV mode]** on the **[Application Setting]** as shown in **5-3.Application settings**.

3. Click the  button on the **Camera Control bar**. A video image from a DVCAM will appear.

4. Click the  button to start capturing.

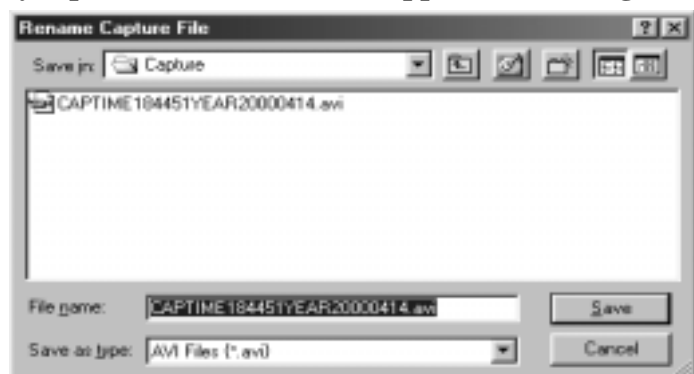
5. Click the  button to stop capturing.

You can also stop capturing by using the  button on the **Camera Control Bar** or pressing **ESC** button on the keyboard.

6. If you checked **[Rename file name every capture execution]** on the **[Application Setting]**,

You will see the window. You can rename the captured file.

7. The file will be saved in the folder you set at **[Set Folder Name To Save Capture Files]** on the **[Application Setting]**.


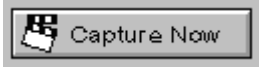
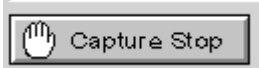


NOTE

When you preview, it puts some load on PCs. If data loss happens, don't check **[Capture With Preview]** on the **[Application Setting]**. For more information, please refer to page **8-2. When playing back the captured file is choppy or jerky in 8. Troubleshooting.**

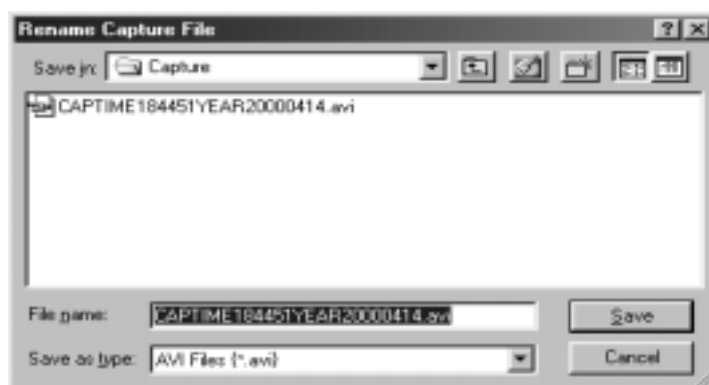
5-5.Capturing a video from a DV tape

When you want to capture a video image from a DV tape, follow steps through.

1. Set a DV tape in a DVCAM and confirm the DVCAM mode is set to video mode.
Video Mode means you can control a video of a DV tape. If your DVCAM is in camera mode, change mode selection switch from camera mode to video mode slowly as mentioned **5-4.Capturing a video from a DVCAM in camera mode**.
- 2.Select **[DV mode]** on the **[Application Setting]** as shown in **5-3.Application settings**.
- 3.When you click the  DV play button on the **Video Control Bar**, the DV tape will start to play and a video image of the DV tape will appear in the preview window.
- 4.Click the  button to start capturing.
- 5.Click the  button to stop capturing.

You can also stop capturing by using the  stop button on the **Video Control Bar** or pressing **ESC** button on the keyboard.

6. If you checked **[Rename file name every capture execution]** on the **[Application Setting]**, You will see the window. You can rename the captured file.
- 7.The file will be saved in the folder you set at **[Set Folder Name To Save Capture Files]** on the **[Application Setting]**.



NOTE


- 1.When you preview, it puts some load on PCs. If data loss happens, don't check **[Capture With Preview]** on the **[Application Setting]**. For more information, please refer to page 8-2.When playing back the captured file is choppy or jerky in 8.Troubleshooting.
- 2.To capture correct DV file, you have to use original DV footages which has continuous Timecode(recording). If the original DV footage has intermittent Time code, sometimes it may cause system freeze or may not be captured.


5-6.DV Batch Capture


Batch capture function saves video images files as your time scheduling. To batch capture video images from a DV tape, follow steps through.


1.To show the Batch Capture Window as shown right, select **[Batch Capture List]** of the **[View]** in the system menu.

2.Set a DV tape in a DVCAM and confirm the DVCAM mode is set to video mode. Video Mode means you can control a video of a DV tape. If your DVCAM is in camera mode,change mode selection switch from camera mode to video mode slowly as mentioned **5-4.Capturing a video from a DVCAM in camera mode.**


3. Click the  DV play button on the **Video Control Bar** to play the DV tape.

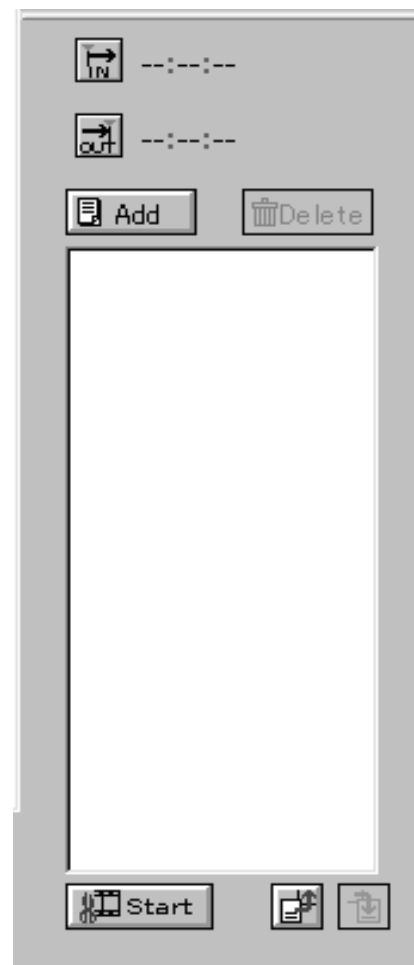
4. Click the  In point button when you want to start capturing.

5. Click the  Out point button when you want to stop capturing.

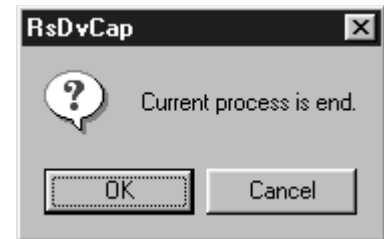
6. Click the  Add button to add time code to the window as shown above.

To capture other Video images of the DV tape, repeat the steps from 4 to 6.

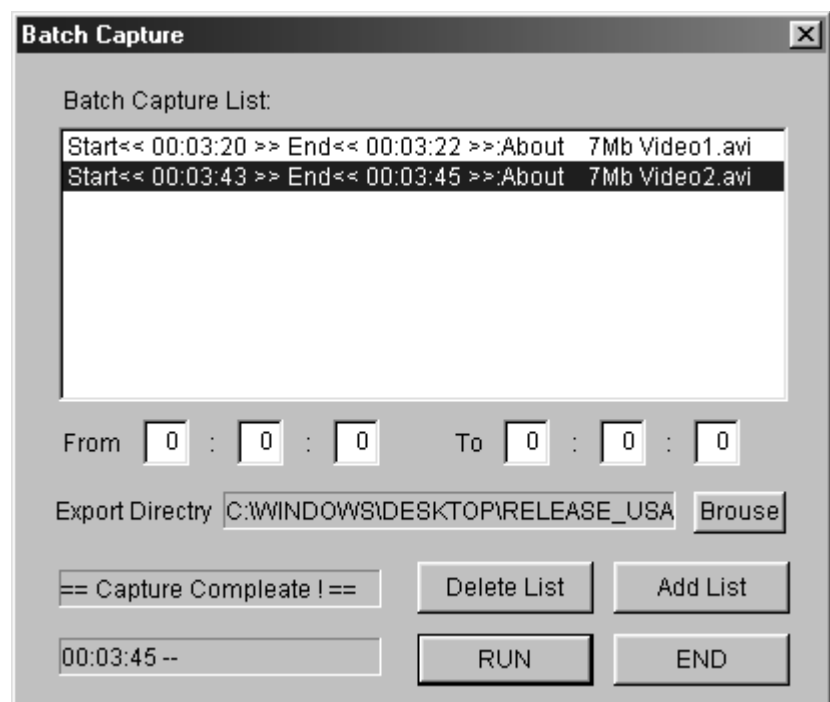
7.Click the  start button to show the Batch Capture dialog box as shown in the next page.



8. You will see the screen. Click **[OK]** to continue.



9. The Batch Capture dialog box will be shown. Click **[RUN]** to start batch capture. This application searches automatically the timecode you have just set and starts to capture video images and saves the file in the folder written in the “**Export Directory**” under the name of **Video + (number)** starting 1 + **.avi** as shown below. When batch capture is finished, “**Capture Complete!**” message will appear. Click **[END]** to finish batch capture.



NOTE

To capture correct DV file, you have to use original DV footages which has continuous Timecode(recording). If the original DV footage has intermittent Timecode, sometimes it may cause system freeze or may not be captured.

5-7.Exporting a video data to a DVCAM

When you want to export an video data to a DVCAM, follow steps through.

1. Set a DVCAM to video mode.

Video Mode means you can control a video of a DV tape.

If your DVCAM is in camera mode, change mode selection switch from camera mode to video mode slowly as mentioned **5-4.Capturing a video from a DVCAM in camera mode.**



2. Click the DV Export button. The file select dialog box will appear. Select an AVI file you want to export, and click [SAVE] button. The AVI data will be exported to the DVCAM.

When you check **“Record on the tape”**, “Video image” and “Rec command” will be sent to the DVCAM. This means the AVI file will be really overwritten to your DV tape. So, you should be careful not to overwrite important DV tapes.

When you don’t check **“Record on the tape”**, only “Video image” will be sent to the DVCAM. This means the AVI file will not be overwritten to your DV tape. You can see the video image on the screen of the DVCAM.

NOTE

There is time-delay between start of video stream and the DVCAM actually starting to record. So for a few seconds at the head of video stream, nothing will be recorded on your DV tape.

- 3.Click the  stop button in the **Camera Control Bar** to stop exporting.

NOTE

Only a Microsoft DV AVI 2.0 with DVSD(Digital Simultaneous Voice and Data) can be exported to a DVCAM.

6. How to use RsDvStill

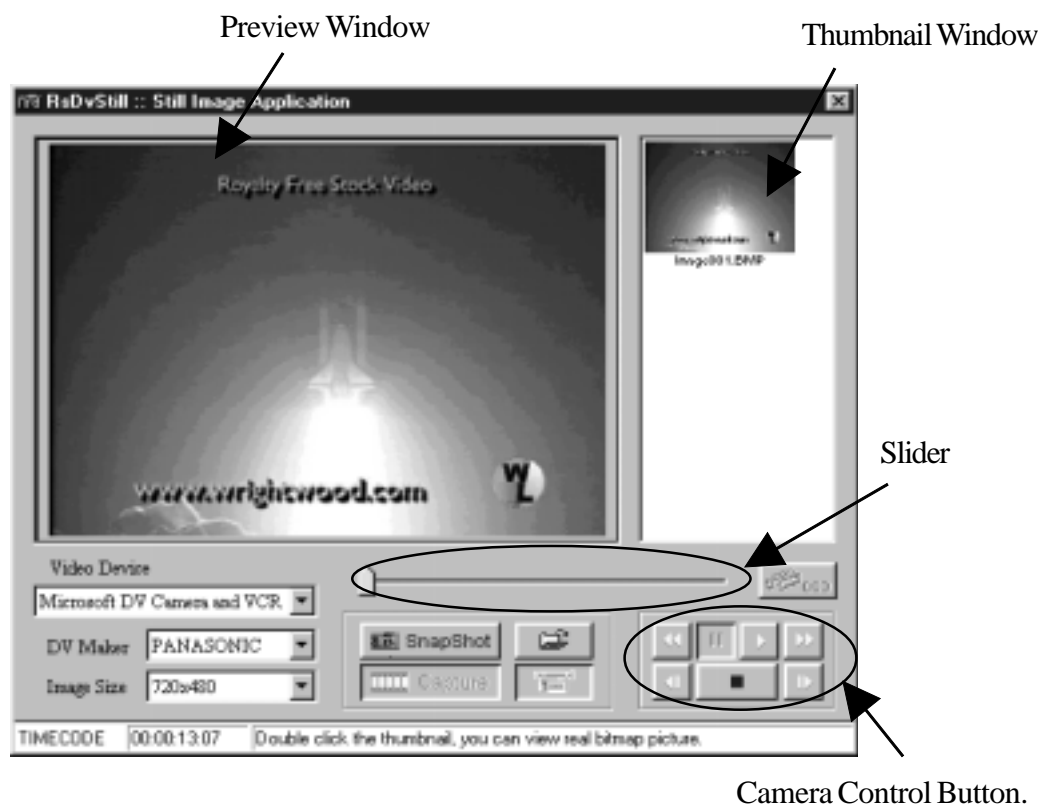
What is the RsDvStill?

This application software has the following functions.

- Preview video data from a DVCAM/a CCD camera.
- Save a still image to a BMP file.


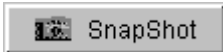







6-1.Main menu


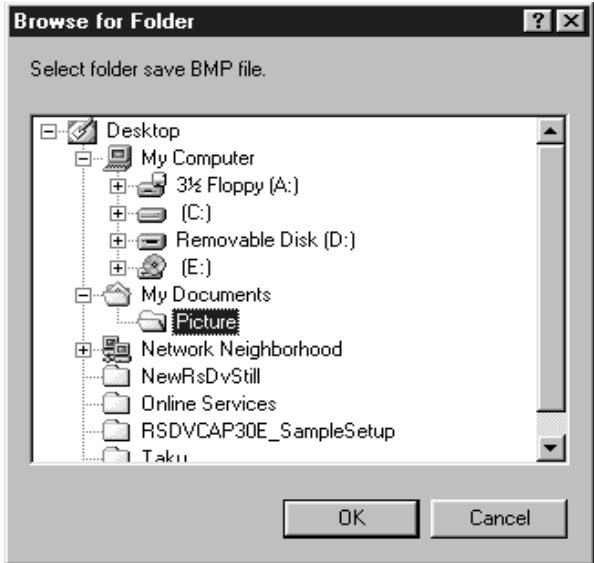






When RsDvStill starts with a DVCAM connected to the PCIFW3U, RsDvStill will detect whether the DVCAM is in camera mode or in video mode automatically and pauses the DV tape if the DVCAM is set to video mode and there is a DV tape in the DVCAM.



NOTE

To capture correct DV file, you have to use original DV footages which has continuous Timecode(recording). If the original DV footage has intermittent Timecode, sometimes it may cause system freeze or may not be captured.

Category	Description
DV Maker	This list box shows a list of DVCAM manufacturer such as Sony, JVC, Panasonic, Canon, Sharp, etc. Choose your DVCAM manufacturer. If you can't find it, choose OTHER.
Image Size	There are 3 kinds of resolution: 720 x 480, 360 x 240, 88 x 60. This value means raw data from a DVCAM.
Slider Bar	You can select a favorite scene from video capture data by moving this slider bar. This slider bar is enabled when you click the Capture button.
	You can capture video images for about 1 second by clicking this button. After clicking this button, preview will be stopped.
	You can save a BMP file on the preview window. The BMP file will be saved and be held at the top of the thumbnail window.
Video Device	Video Device displays a list of camera device connected to your PC. If this list box is blank, your camera isn't recognized. When you use Windows98 SE(Second Edition), Windows 2000 or Windows Me(Millennium Edition), “Microsoft DV Camera and VCR” string will appear.
Camera Control Button	When a DVCAM is in video mode, you can control a DV tape as follows.
 , Play, Stop
Pause
 , Fast Rewind, Fast Forward or Slow Rewind, Slow Forward
 , Previous Frame, Next Frame

Category	Description
Time Code	<p>This box shows the timecode information of your DV tape. This timecode format is HOUR:MINUTE:SECOND:FRAME.</p>
	<p>When you click this button, you will see the screen below. You can select a folder where you want to save a BMP file.</p> 
	<p>This button will be enabled only when you click the  Capture button. When you click the  Capture button, preview will be paused. When you want to resume previewing, click the  button.</p>
	<p>This button will be enabled only when you use a CCD camera. When you click this button, you can display the CCD camera control dialog box. With this dialog, you can control a CCD camera. For example, zoom, focus, etc.</p> 


6-2.How to save a BMP file

(1)Save a BMP file from a DV tape


1.Set a DV tape in a DVCAM and confirm the DVCAM mode is set to video mode.

Video Mode means you can control a video of a DV tape. If the DVCAM is in camera mode, change mode selection switch from camera mode to video mode slowly as mentioned 5-4.

Capturing a video from a DVCAM in camera mode.

2.Starting RsDvStill, your DV tape will be paused and the  button is disabled.

Set **DV Maker** and decide **Image Size**.



3.Click the  button. You will see the screen. Select a folder where you want to save a BMP file and click **OK**. If you don't select a folder, a BMP file will be saved in the folder where this application is installed.

4. Find a favorite scene on the DV tape, using the camera control button.


(TIPS)

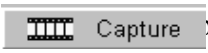


When the  button is disabled, click the  button and the  button.

You can preview slowly. When the  button is enabled, click the  button.

After that,click the  button and the  button. You can preview slowly.

5.There are two ways to save a BMP file as follows.

5-1.Click the  button. The BMP file will be saved in the folder under the name of **“Image+ (number) + .BMP”** and the BMP file will be held at the top of the thumbnail window. If you double-click the thumbnail, you can view it with real BMP file size.


5-2.Click the  button.After capturing, the DV tape will be paused. Then move the slider to a favorite scene and click the  button. The BMP file will be held as mentioned above. If you want to resume previewing, click the  button.

(2) Save a BMP file from a DVCAM in camera mode or a CCD camera


1. Set a DVCAM to camera mode. Camera mode means you can capture a video image. If your DVCAM is in video mode, change mode selection switch from video mode to camera mode slowly as mentioned **5-4. Capturing a video from a DVCAM in camera mode.**

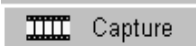


When you use a CCD camera, skip this step.

2. Starting RsDvStill, set **DV Maker** and decide **Image Size**. When you use a CCD camera, **DV Maker** list box is disabled. So, decide **Image Size**.

3. Click the  button. You will see the screen. Select a folder where you want to save a BMP file. Then click **OK**. If you don't select a folder, a BMP file will be saved in the folder where this application is installed.

4. There are two ways to save a BMP file as follows.

4-1. Click the  button. The BMP file will be saved in the folder under the name of **Image+ (number) + .BMP** and the BMP file will be held at the top of the thumbnail window. If you double-click the thumbnail, you can view it with real BMP file.

4-2. Click the  button. After capturing, preview will be paused. Then move the slider to a favorite scene and click the  button. The BMP file will be held as mentioned above. If you want to resume previewing, click the  button.

NOTE

When you use a CCD camera, the  button is enabled. Using this button, you can control the CCD camera. For example, zoom, focus, etc.

7. How to use CompressAVI

What is CompressAVI application software?

This application software has the following functions.

Convert Microsoft DV-AVI2 format video file to another format video file bi-directionally.

As current existent video editing software don't support MS DV-AVI2 format video file, you have to convert the format of video file which is captured by RsDvCap before editing.

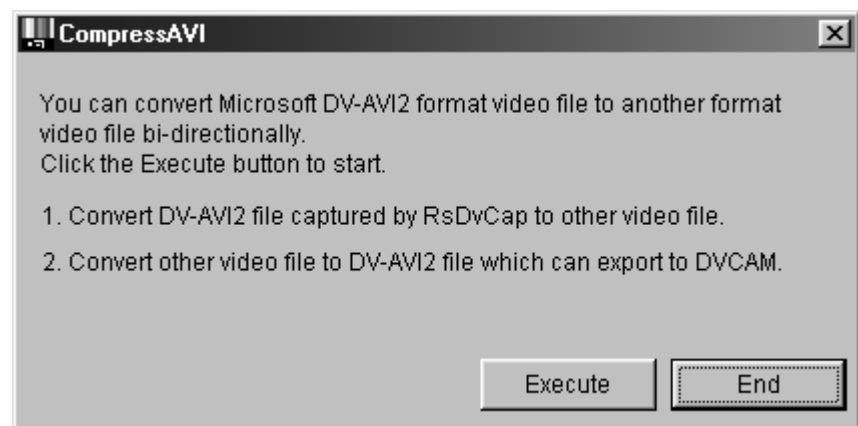
And after editing, if you want to export it to a DVCAM, you have to re-convert video file to MS DV-AVI2 format video file.

Please note, file conversion will take a long time, sometimes over a hour.

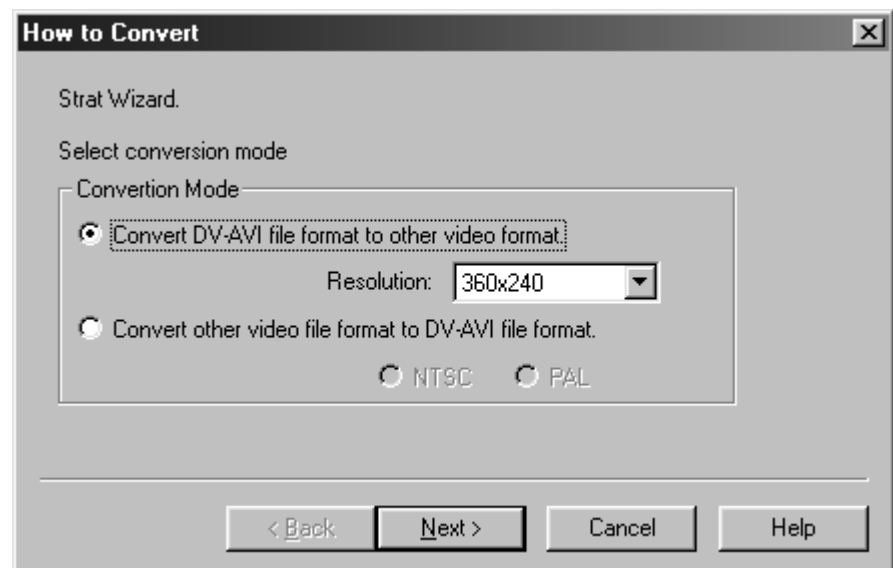
7-1.How to convert the MS DV-AVI2 format into other formats

After you convert the AVI files made by RsDvCap, you can edit it with video editing software.

1.When you start the CompressAVI, you will see the screen below. Click [**Execute**].

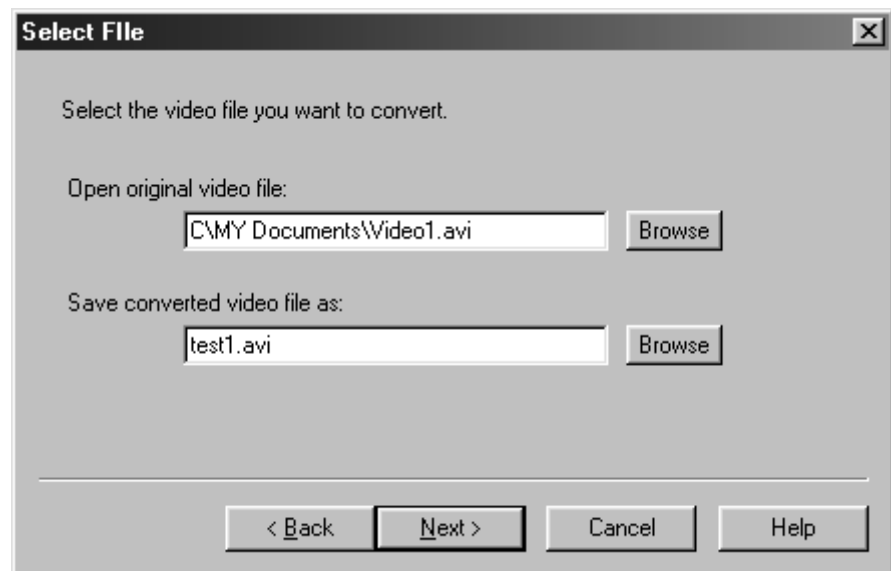


2.Please select “**Convert DV-AVI fomate to other video format**” and select **Resolution**.
Click [**Next**].



3. Please specify an original video file and a converted video file name.

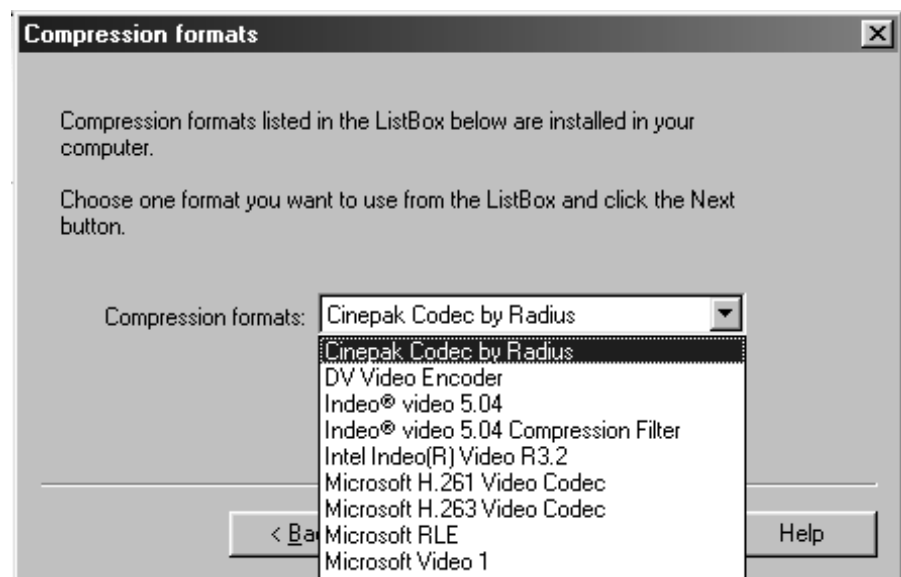
Click [**Next**]. (After conversion, an original video file remains in the HDD.)



4. Please choose a conversion filter from the Compression formats list box.

AVI files made by RsDvCap have a MS DV AVI-2 format.

So, select the other compression formats than **DV Video Encoder**.



There are many kinds of compression formats.

(Compression formats appeared in the [**Compression formats**] list box depend on your system)

Popular compression formats are explained below.

1.Microsoft Video1

It does not take much time to convert because this type will lose quality and cause poor image.

2.Microsoft MPEG4

If you use this type of codec, file size will be compressed to about one-tenth and keep good quality.

3.Intel Indeo(R) video3.2

This type of codec was invented by Intel.

Compression rate and quality get better than Microsoft Video1

4.Intel Indeo(R) video5

Compression rate will get better under MMX(R) or Pentium(R) II processor.

5.CinePak Codec

It takes much time to convert but this type will keep quality.

6.DV Video Encoder

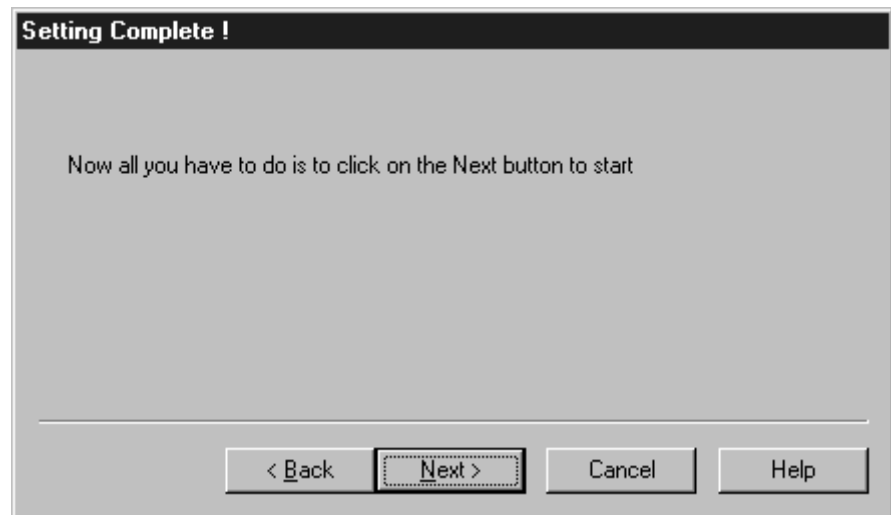
This type of codec can capture a video from a DVCAM in real time.

RsDvCap uses this type of compression and creates AVI files.

7.Non compression

This type saves data without compression. To make data in [**Non compression**], it is necessary to use Windows98 Second Edition, Windows 2000 or Windows ME.

5. Click **[Next]**. The file conversion starts. It takes much time to convert an AVI file.
Conversion time depends on the type of compression format. Please wait patiently.



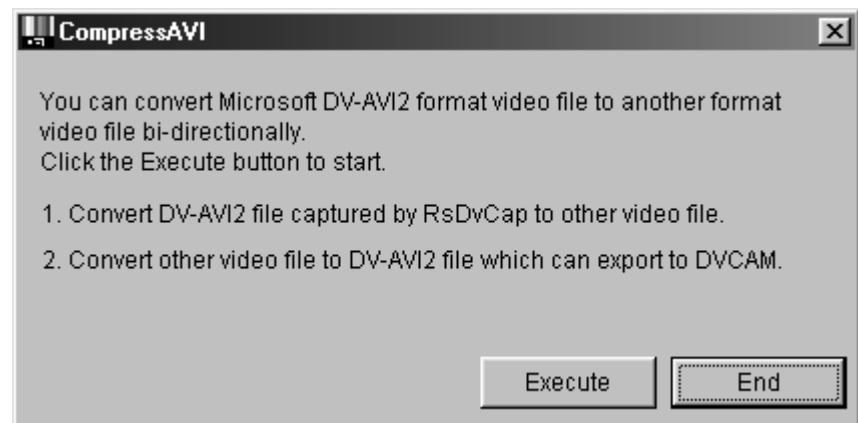
6. When conversion ends, you will see the screen below. Click **[Finish]**.
You can now do a video editing with your video editing software.



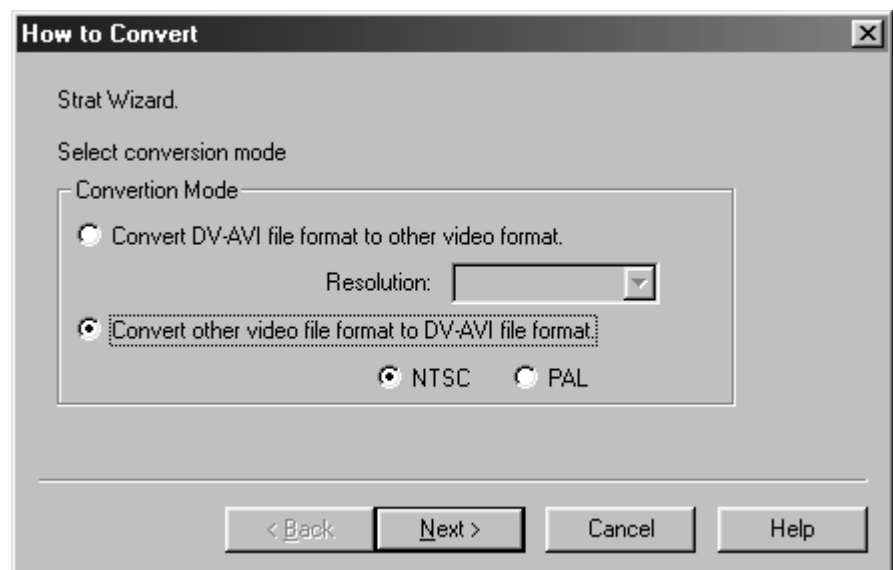
7-2.How to convert other formats to the MS DV-AVI2 format?

You can export a video to a DVCAM after you convert an existing AVI file to the MS DV-AVI2 format.

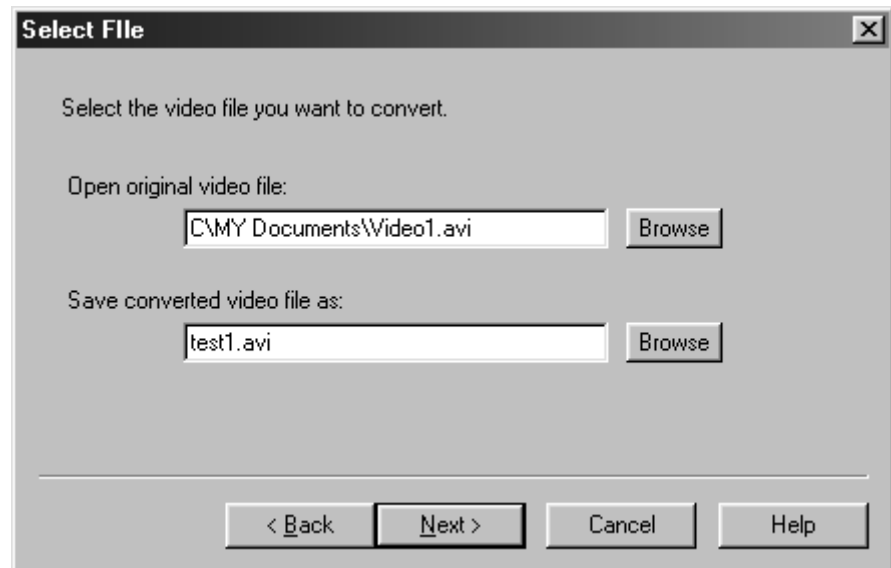
1. When you start the CompressAVI, you will see the screen below. Click **[Execute]**.



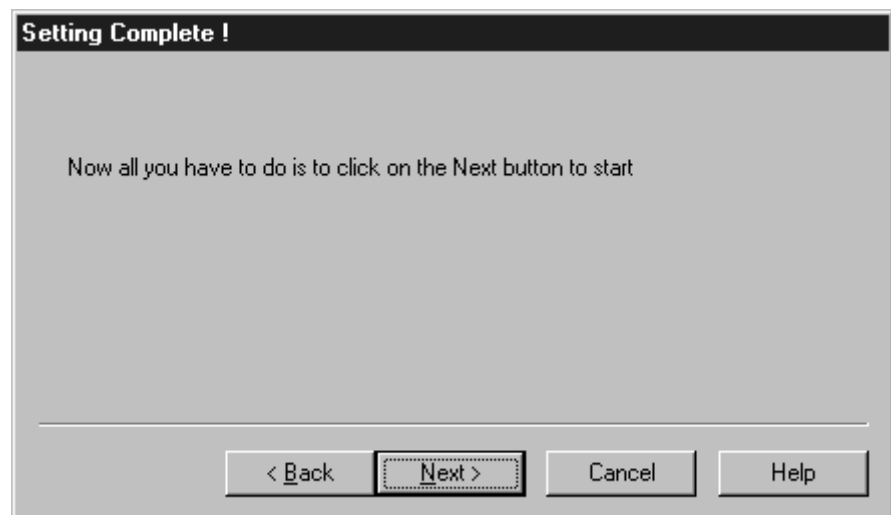
2. Please select **“Convert other video file format to DV-AVI file format”** and choose NTSC or PAL. NTSC is used in the U.S.A. PAL is used in Europe and Asia(except Japan). Then click **[Next]**.



3. Please specify an original video file and a converted video file name. Click **[Next]**.



4. Click **[Next]**. It may take much time to convert an AVI file. Please wait patiently.



5. When conversion ends, you will see the screen below. Click **[Finish]**.

You can now export the converted data to a DVCAM by using RsDvCap.



8. Troubleshooting

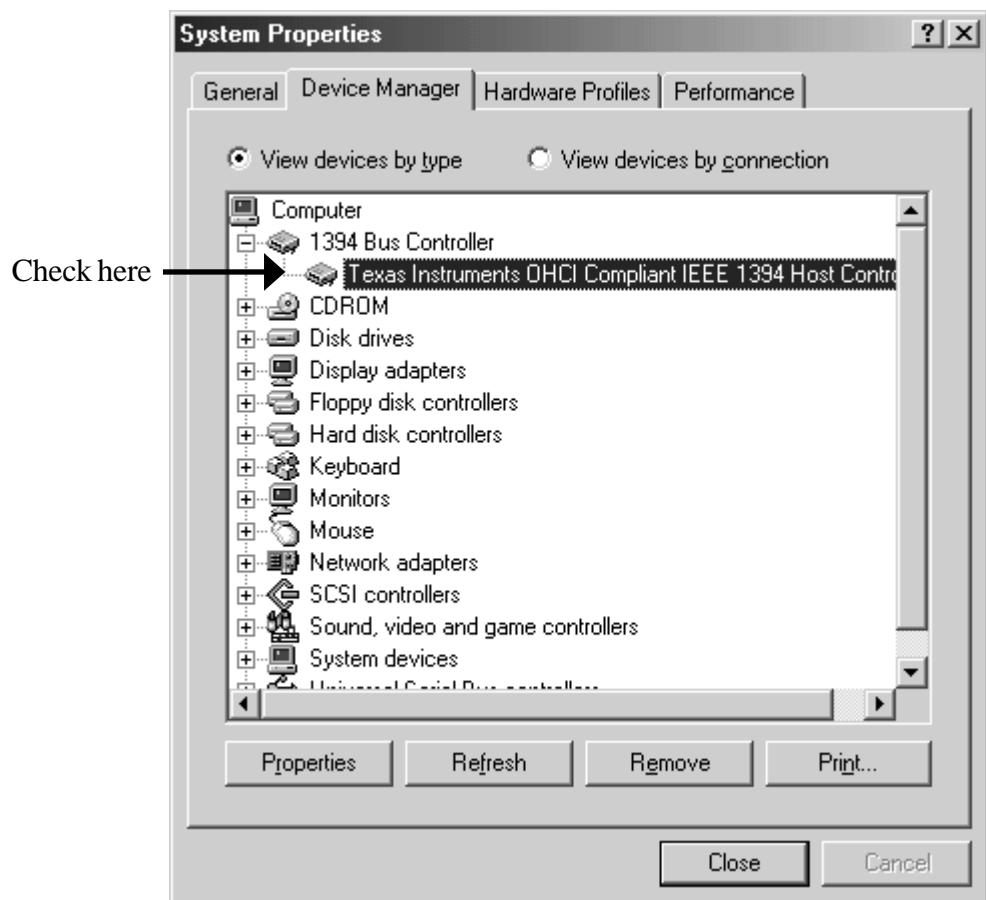
8-1. Camera can not be recognized

If your camera is recognized by our capture software(RsDvCap,RsDvStill), **Camera list box in RsDvCap or Video Device in RsDvStill** shows the string such as **Microsoft DV Camera and VCR**. If the box is blank, camera is not recognized.

General Solution:

1. PCI Board is not firmly seated in the slot.

If your PCI Board is installed correctly, you can find a [**Texas Instruments OHCI Compliant** **IEEE1394 Host Controller**] string.



2.If you use Windows98 SE(Second Edition), there have to be a [**Microsoft DV Camera and VCR**] string under the “**Imaging Device**” in the **Device Manager**. If you can not find it, make sure your DVCAM is powered on.

If you use Windows2000, there have to be a [**Microsoft DV Camera and VCR**] string under the “**Imaging Device**” in the **Device Manager**. If you can not find it, make sure your DVCAM is powered on.

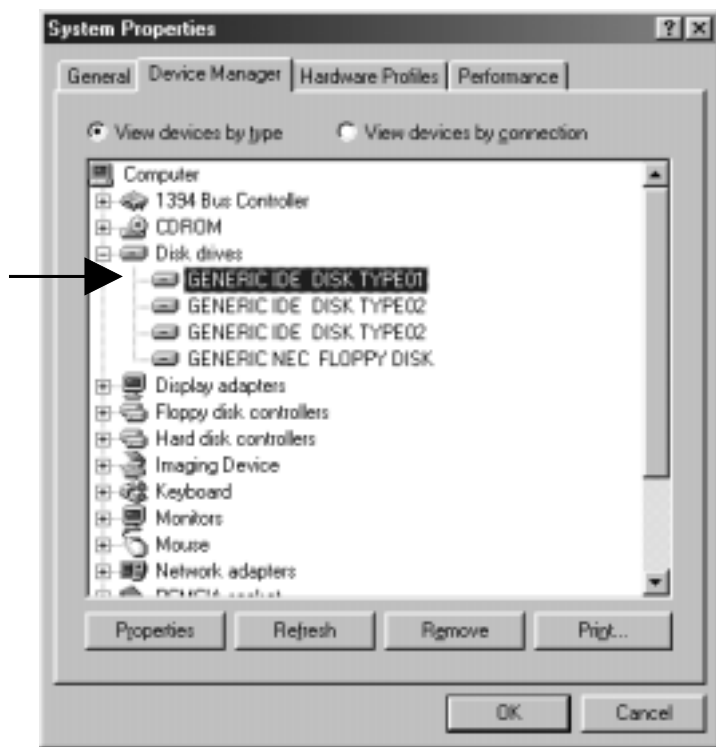
If you use Windows Me(Millennium Edition), there have to be a **camera name** string under the “**Imaging Device**” in the **Device Manager**. If you can not find it, make sure your DVCAM is powered on.

8-2. When playing back the captured file is choppy or jerky.

The data rate from a DVCAM is 3.6MB/sec. If your HDD sustained data write rate is lower than 3.6MB/sec, a captured file may get choppy or jerky when you play back the file.

To avoid this trouble, enable DMA function of your HDD, following steps through.

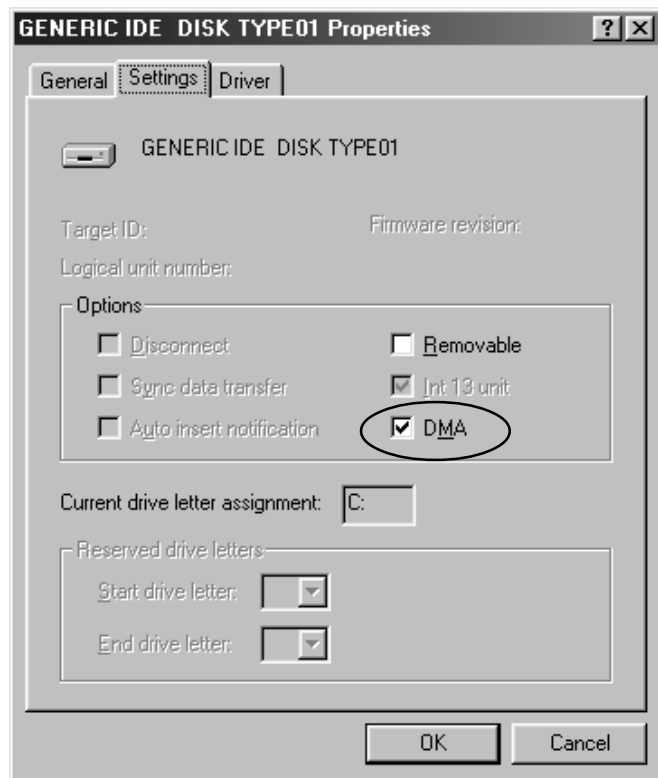
1. Open “**Device Manager**”.
2. Select your **Disk drive** as shown below and click the **Properties** button.



3. Click the **[Settings]** tab and if DMA box is not checked, check here.

But, please note that if your HDD is not Ultra DMA HDD, don't check here.

To make sure that your HDD is Ultra DMA HDD, refer to your HDD manual.



8-3.What kind of Video Editing Software works?

<Video Editing Software>

Microsoft Standard WDM DV filter drivers captures DV data stream and save as an AVI file which consists with original DV data stream. This DV data stream requires 3.6MB/Sec and includes 720x480 resolution video data(NTSC). Also, the file size is restricted up to 4GB (about 19 minutes). As this captured DV file has a different file format from AVI file of Windows3.1/95, you need special Video Editing Software to open and edit it.

If you want to edit video, you have two choices.

- 1.)You have to use Video Editing Software which can treat MS DV-AVI2 format.
- 2.)You have to use CompressAVI application and convert MS DV-AVI2 format to other formats which your Video Editing Software can treat.

You can use bundled VideoStudio without file format conversion. But current existent Video editing software can not treat MS DV-AVI2 format file. So, you need file format conversion both before and after editing.

Adobe Premiere5.1

You have to update your Premiere to 5.1c. 5.1c updater is available at **www.adobe.com**.

Then, please install our Premiere Plug-In included in this package. With the Premiere Plug-In, your Premiere can treat MS DV-AVI2 format file. For more information, refer to Premiere Plug-In user's manual.

MediaStudio Pro 6.0,MGI VideoWaveIII can treat MS DV-AVI2 format.

9. Registration and Tech-Support

9-1. How to Register

We highly recommend to register yourself as our customer through our on-line registration.

1. On the Internet, access our site (<http://www.ratocsystems.com/english/>)
2. Follow window menu guide to register.
3. Fill out and submit the registration form.

9-2. Software Update and Support

-Software Update-

The latest driver and application software are subject to change for improvement or bug fix.

You can download the latest version from our web site.

(<http://www.ratocsystems.com/english/>)

-Technical Support-

You can get a Tech support from RATOC at the following.

(Open Monday - Friday, 9:30 A.M. to 5:00 P.M. (PST))

RATOC Systems International, Inc. Tech support

Address: 1933 O'Toole Avenue Suite A109

San Jose, CA 95131, U.S.A.

Phone : (408)955-9400

Fax : (408)955-9402

E-mail : int-support@rexpccard.co.jp

Web : <http://www.ratocsystems.com/english/>

NOTE

Please include the following information:

- Our product name, serial number, and product description
- Host Computer Name, Windows version
- Application software/driver version

9-3. System Requirements

- One PCI slot
- Windows98 Second Edition/Windows2000/Windows Me
- Pentium II 300MHz or faster
- At least 64 MB memory
- High performance AGP Graphic Board
- High performance Sound Board
- High performance DMA enabled Hard Disk Drive
- Sufficient Hard Disk space for video capture (1 second DV video = 3.6MB)

If your PC can not have sufficient specifications above, Video motion and audio may get choppy.

9-4.Restrictions

- You need to use sufficient Hard Disk space and Hard Disk sustained data write rate for video capture (DV data/1 second = 3.6 MB)
- You need to connect the power connector(J2 connector) on the PCIFW3U to a power connector available in your PC when you connect devices which require power supply.
- Frame drop happens when you capture or export if you use the following DVCAMs made by CANON and 1394 storage devices simultaneously. The DVCAMs causes such a problem.

-OPTURA, ZR, XL1, VISTURA, ELURA, OPTURA Pi

But, the following DVCAMs or later models do not cause such a problem.

-GL1, ZR10, ELURA2, ELURA2 MC

10. Options

Options are available (sold separately) at the web site:

1. <http://www.ratocsystems.com/english/>

2. <http://www.firewireshop.com>

- CBFW-466 (4pin-6pin IEEE1394(FireWire) cable(6 feet))
- CBFW-666 (6pin-6pin IEEE1394(FireWire) cable(6 feet))
- CBFW-463 (4pin-6pin IEEE1394(FireWire) cable(3 feet))
- CBFW-663 (6pin-6pin IEEE1394(FireWire) cable(3 feet))

If you have any questions about these options, contact to:

RATOC Systems International, Inc. Tech Support:

TEL : (408)955-9400

FAX: (408)955-9402

E-mail: int-support@rexpccard.co.jp

11. Specifications

Product Name :PCIFW3U IEEE1394 PCI Board

Transfer :32 Bit Bus Master(PCI Local Bus 2.2 Compliant)

Data Transfer Rate :100/200/400Mbps

Operating Environment :

Temperature : 0C°(32F°) - 55C°(131F°)

Relative humidity: 20-80%(Non-condensing)

Connectors :

2 x IEEE1394 6p connector

1 x power input connector

Features

*Two IEEE1394 6pin ports are available at backside panel

*IEEE-1394.a compatible PHY chip is on board

*Full backward compatibility to IEEE1394-1995 device

*OHCI 1.0 fully compliant Link chip is on board

*100,200 and 400Mbps data rate is automatically supported at each IEEE1394 port

*Class 1(15W) cable power is available through IEEE1394 6pin port

*Fully compatible with PCI bus specification 2.2

*PCI Bus Power Management spec 1.0 compatible

Appendix

Trademarks

- Windows is a registered trademark of Microsoft Corporation.
- Other brand and product names may be registered trademarks or trademarks of their respective holders.

I)FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- (1) Reorient or relocate the receiving antenna.
- (2) Increase the separation between the equipment and receiver.
- (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- (4) Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance may result in this unit not complying with FCC Rules Part 15.

II)CE Statement

This device complies with EN55022(class B) and EN55024.