Canon
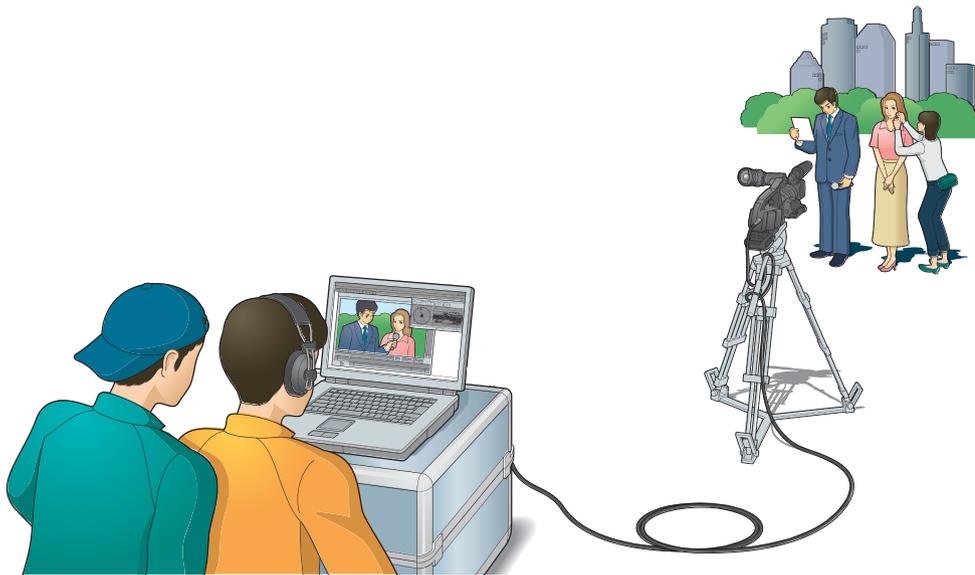
CONSOLE

Image Control & Storage Software
Version 1

CONSOLE is a software that enables you to adjust the settings of a camcorder from a computer and to record on the tape in the camcorder and onto the computer's hard disk by connecting the camcorder using an IEEE1394 (DV) cable. You can adjust and save the Custom Preset settings of the camcorder and analyze a shooting image using a waveform monitor and a vector scope to compose the image you want.

Installing the Software   *1*

CONSOLE Windows   *2*

[Option settings] and [Performance check]   *3*

Camera and Picture Control   *4*

Recording onto the Hard Disk   *5*

Playback the Recorded Files   *6*

Uninstalling the Software   *7*

Troubleshooting   **Shortcut Keys**

This software is for use with Windows® XP (Service Pack 2) only.   **English**

Contents

Read This First

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Canon camcorder compatible with CONSOLE

Following camcorder can be used with CONSOLE.

XL2*	XL H1

*Unable to use some functions

Required Accessories

❍ Canon digital camcorder compatible with CONSOLE
❍ IEEE1394 (DV) Cable
Check the manual of your computer for which type of cable to use:

4-pin: 6-pin:

System Requirements

OS	Microsoft Windows XP Home Edition or Professional* (Installation of Service Pack 2 required) Proper operation is not guaranteed on Windows XP that has been upgraded from a previous version.
CPU	• Pentium M 1.5GHz or better • Pentium 4 2GHz or better (Pentium 4 3.2GHz or better recommended)
RAM	512 MB or more (1 GB or more recommended)
Free Hard Disk Space	For installation Free Hard Disk Space: 30 MB or more
	For video recording Free Hard Disk Space: 1 GB or more File System: NTFS Recordings cannot be made on FAT32 or FAT16 formatted hard disks.
Display	1024 x 768 or more required Full Color (32bit) required
Sound	Windows XP compatible sound system
Interface	IEEE1394 (OHCI compliant)

*The software cannot be operated on Windows XP Professional x64 Edition.

❍ Proper operation is guaranteed only when you are running CONSOLE on Windows XP Home Edition (SP2) or Professional (SP2) English, French, Spanish, German, Italian or Simplified Chinese versions. Proper operation is not guaranteed if the OS you are using operates in a different language.
❍ Proper operation is not guaranteed on a dual CPU PC or on a user-built PC.
❍ Proper operation is not guaranteed on any particular system, even if it meets the requirements outlined above.
❍ If you set the video folder to an external hard disk, an error message "Delayed Write Failed" may be displayed while recording onto the hard disk, and the recording may be lost.
❍ Recordings cannot be saved on a hard disk recognized as [Removable disk].
❍ If you connect 4 or more devices (including the connected computer and the XL H1 itself) by IEEE1394, CONSOLE will not run properly.
- Proper operation cannot be guaranteed if you are using a repeater.
❍ If your computer has an IEEE1394 (DV) board/card in addition to the standard IEEE1394 (DV) board/card, or if you have several IEEE1394 (DV) boards/cards added to the computer, the computer may not recognize the camcorder properly. In such case, see *Camcorder will not be recognized or controlled.* (□ Tr-1)
❍ This software will not operate properly if more than one camcorder is connected to the computer.
❍ Depending on the setting of the power scheme of the laptop PC, the preview images may not be played back smoothly. Select [Always On] in the [Power Options Properties] window. (□ Tr-2)
❍ When the computer enters stand-by mode or hangs up while running CONSOLE, proper operation is not guaranteed after recovering.

Read This First

❍ This software supports both HDV and DV standard recordings. To edit a file recorded in HDV, use editing software that supports the HDV standard.
❍ This software can also be used with the recordings in 24F (NTSC only). Use an editing software that supports the 24F frame rate.

■ What is CONSOLE?

CONSOLE is a software that enables you to adjust the settings of a camcorder from a computer and to record on the tape in the camcorder and onto the computer's hard disk by connecting the camcorder using an IEEE1394 (DV) cable. You can adjust and save the Custom Preset settings of the camcorder and analyze a shooting image using a waveform monitor and a vector scope to compose the image you want.

With CONSOLE you will be able to:
• Record the camcorder image onto the computer's hard disk.
• Output the image recorded on the hard disk to a monitor via the camcorder.
• Adjust the camcorder's settings (Custom Preset) and save them on the computer's hard disk.
• Analyze the image using a waveform monitor and a vector scope.
• Compare the camcorder image and the recorded image by simultaneously displaying both images in the same window.
• Display a safety zone marker, an aspect marker and several other markers on the window and create new markers.
• Perform the cache and frame recording.

■ Functional Comparison

The functions available differ depending on the connected camcorder and the camcorder mode.
• EXT.CONT. mode (EXT. CONT.): This mode is available for remotely controlling the camcorder. When the camcorder is set to EXT.CONT. mode, only the following functions of the camcorder can be used.
  - Camcorder's start/stop button
  - Handle and grip zoom lever
  - ZOOM SPEED switch and dial
  - EJECT switch
  - All audio related adjustments except for AUDIO MONITOR button
• Camera mode (A Tv Av M ⚠ 🌙 ▢): This mode is available for directly controlling the camcorder.
  - Some functions of CONSOLE cannot be used.
• VCR/PLAY mode (VCR/ PLAY): This mode is available to playback or output the picture recorded on the tape.
  - You do not use this mode when you connect the camcorder to the computer.

Camcorder	XL H1		XL2	
Mode	EXT.CONT.	Camera	EXT.CONT.	Camera
Custom Preset Settings	❍	❍	❍	×
Saving the Custom Preset on the camcorder	❍	×	❍	×
Saving the Custom Preset on the memory card	❍	×	×	×
Saving the Custom Preset on the computer's hard disc	❍	❍	❍	❍
Camera Control tab	❍	×	❍	×
Image output	❍	×	❍	×
Copying files from the memory card	❍	×	×	×
HDV recording	❍	❍	×	×
DV recording	❍	❍	❍	❍

■ Limitations During the Trial Period

During the trial period, you can start CONSOLE 50 times limited to within 14 days. During the trial period, the following limitations apply to CONSOLE.
• You can operate CONSOLE for 120 minutes only.
• You can record for 5 minutes only.
• You cannot save or load Custom Preset files.

Chapter 1
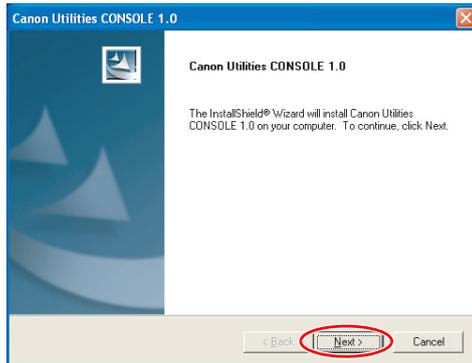# Preparation (Installation, Connection, Launch, Activation)

1 Preparation (Installation, Connection, Launch, Activation)

Installing the Software and the Designated Drivers

⚠️ ❍ Do not connect the camcorder to the computer when installing the software.
❍ You need to log in as an administrator before installing the software.
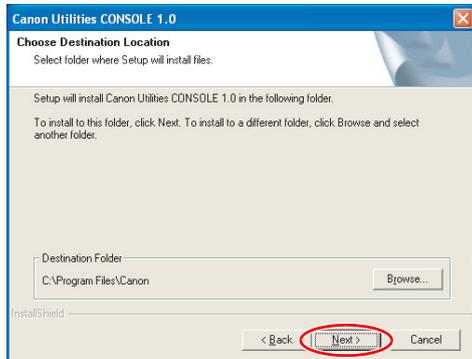❍ Close all programs that are running before installing the software.

1

Canon Utilities CONSOLE 1.0

Canon Utilities CONSOLE 1.0

The InstallShield® Wizard will install Canon Utilities
CONSOLE 1.0 on your computer. To continue, click Next.

< Back   Next >   Cancel

Start the CONSOLE installer and click [Next].

2 Read the license agreement and click [Yes].

3

Canon Utilities CONSOLE 1.0

Choose Destination Location
   Select folder where Setup will install files.

Setup will install Canon Utilities CONSOLE 1.0 in the following folder.

To install to this folder, click Next. To install to a different folder, click Browse and select
another folder.

Destination Folder
C:\Program Files\Canon   Browse...

InstallShield
                          < Back   Next >   Cancel

Confirm the target folder and click [Next].
If a dialog appears asking you whether you wish to create a shortcut for CONSOLE, click [Yes].

4

Canon Utilities CONSOLE 1.0

InstallShield Wizard Complete

Click Finish to launch CONSOLE.

When application is launched first time, a virtual device of
"Canon Virtual VCR" or "AV/C Tape Recorder/Player" will be
detected and "Found New Hardware Wizard" will appear. The
virtual device is necessary for CONSOLE to work. Please
select "Install the software automatically (Recommended)" and
install a driver for the device.

< Back   Finish   Cancel

Click [Finish].
If a warning window concerning the installation is displayed, click [Continue]. The dedicated driver will be installed automatically.

5

Found New Hardware Wizard

Welcome to the Found New
Hardware Wizard

Windows will search for current and updated software by
looking on your computer, on the hardware installation CD, or on
the Windows Update Web site (with your permission).
Read our privacy policy

Can Windows connect to Windows Update to search for
software?

○ Yes, this time only
○ Yes, now and every time I connect a device
● No, not this time

Click Next to continue.

< Back   Next >   Cancel

Select [No, not this time] and click [Next].

6

Found New Hardware Wizard

This wizard helps you install software for:

   Canon Virtual VCR

⚙️ If your hardware came with an installation CD
   or floppy disk, insert it now.

What do you want the wizard to do?

● Install the software automatically (Recommended)
○ Install from a list or specific location (Advanced)

Click Next to continue.

< Back   Next >   Cancel

Select [Install the software automatically (Recommended)] and click [Next].
If a warning message regarding the installation appears, click [Continue Anyway].

Preparation (Installation, Connection, Launch, Activation)

7 Click [Finish].

Installing the AV/C Camera Storage Subunit-WIA Driver

The AV/C Camera Storage Subunit-WIA driver is used for downloading and uploading the Custom Preset file (Camcorder settings) from and to the camcorder. When installing the AV/C Camera Storage Subunit-WIA driver, you need to connect the camcorder to the computer. Refer to *Connecting the Camcorder to the Computer* (📖 1-3).

⚠ ❍ Without Installing the AV/C Camera Storage Subunit-WIA driver, you cannot adjust the Custom Preset settings.
   ❍ You need to log in as an administrator before installing the software.
   ❍ Close all programs that are running before installing CONSOLE.
   ❍ Do not turn the camcorder's power off and do not quit the driver's installation before completing the installation of the driver.

1 Turn the camcorder's power on and activate the DV CONTROL function.

2 Set the camcorder's recording program to EXT.CONT.

3 Connect the camcorder to the computer using the IEEE1394 (DV) cable. (📖 1-3)
   • For details about connecting the camcorder to the computer, refer to *Connecting the Camcorder to the Computer* (📖 1-3).
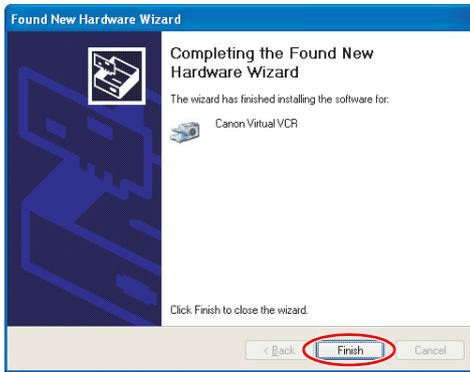   • When the [Found New Hardware Wizard] window appears, select [No, not this time] and click [Next]. In the next window, select [Install the software automatically (Recommended)] and click [Next].
      - If a warning message regarding the installation appears, click [Continue Anyway].
   • Installation of the driver starts automatically.
   • Depending on the setting of the computer, an editing software may be launched. If this happens, close the software.
   • After completing the installation, [Scanner and Camera Wizard] or a window asking you to choose the software may be displayed. Click [Cancel] and close the window.

Preparation (Installation, Connection, Launch, Activation)

4
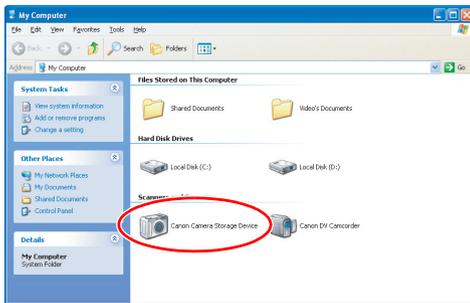
Check if the driver has been installed correctly.

Open [My Computer] and check if the [Canon Camera Storage Device] icon appears. If the icon does not appear, the installation has not been completed properly. Uninstall (📖 7-1) and reinstall the driver.
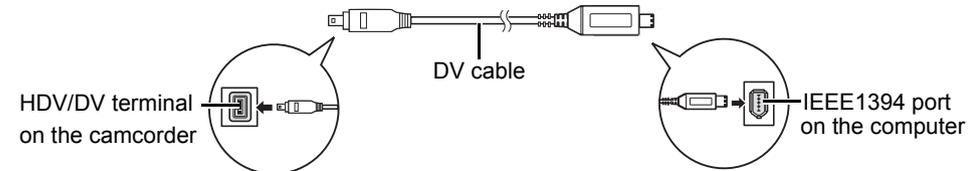
Connecting the Camcorder
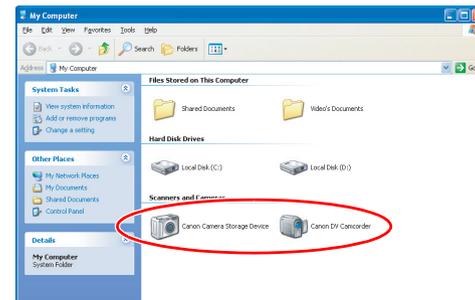
Connecting the Camcorder to the Computer

1 **Turn the camcorder's power on and activate the DV CONTROL function.**

2 **Set the camcorder's recording program to EXT.CONT. or Camera mode.**
- When the camcorder is set to EXT.CONT. mode, only the following functions of the camcorder can be used.
  - Camcorder's start/stop button
  - Handle and grip zoom lever
  - ZOOM SPEED switch and dial
  - EJECT switch
  - All audio related adjustments except for AUDIO MONITOR button

3 **Connect the camcorder to the computer using the IEEE1394 (DV) cable.**
- You do not need to turn off the computer.
- Do not deactivate the DV CONTROL function while the camcorder is connected to the computer.
- Refer to the computer manual for the location of the computer's IEEE1394 (DV) port.

DV cable

HDV/DV terminal on the camcorder

IEEE1394 port on the computer

- When the camcorder is correctly connected to the computer, depending on the camcorder mode, 🎥 (Camcorder icon) and 📷 (Camera icon) appear under [My Computer].

Preparation (Installation, Connection, Launch, Activation)

Launching CONSOLE

Changing the Software Event Setting

When using CONSOLE, you need to deactivate the Windows program that automatically prompts you to choose an application when you connect the camcorder to the computer (set to "Take no action").

1 Set the camcorder's recording program to EXT.CONT. or Camera mode. (📖 1-3)

2
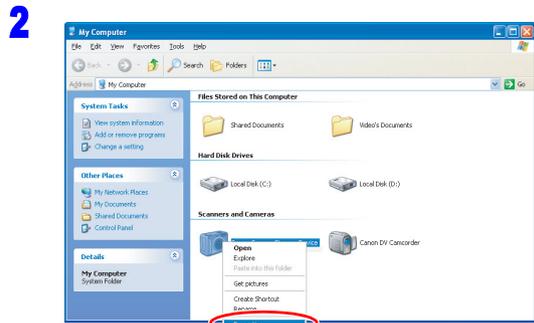
Right-click on [Canon Camera Storage Device] icon in the [My Computer] window and choose [Properties].

3
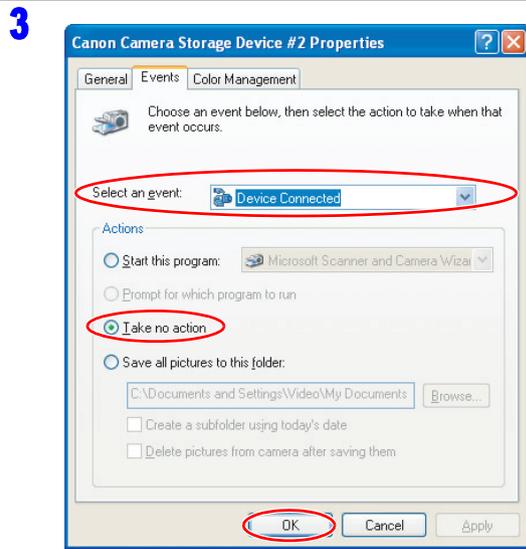
Select [Take no action] under [Device Connected] in the [Events] tab and click [OK].

Starting the Application

⚠️
- ❍ You need to log in as an administrator before installing the software.
- ❍ Do not change the user account while running CONSOLE.
- ❍ If you are running software that displays the time at the title bar, the title bar may not display texts properly.
- ❍ Do not change the settings in Windows [Display Properties] window while launching CONSOLE.

1 Double-click the [CONSOLE] icon on the desktop.
- • When you have not registered the license yet, the remaining trial period and number of times you can start CONSOLE are displayed. Click on [Registration] when you proceed to register the license.
- • When the trial period is expired, or the number of times you can start the CONSOLE is exceeded its limit, a warning window appears. Click on [Registration] and proceed to register the license. (📖 1-5)

2 Confirm the target folder (video folder) and click [OK].
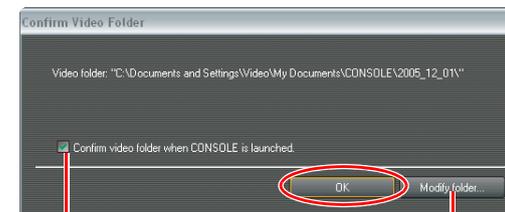
By removing this checkmark, this window will not appear next time you start CONSOLE.

Click [Modify Folder] to change the target folder.

The first time you start CONSOLE, the target folder is set as [Windows drive:\Documents and Settings\login user name\My Documents\CONSOLE\date]. If Windows is not installed on an NTFS formatted hard disk, the following dialog appears. Click [Specify] and select a folder on an NTFS formatted hard disk.

⚠️ If you set the video folder to an external hard disk, an error message "Delayed Write Failed" may be displayed while recording onto the hard disk, and the recording may be lost.

Preparation (Installation, Connection, Launch, Activation)

Activation

You can use all of the functions of this software after registering the license key. During the trial period, you can start CONSOLE 50 times limited to within 14 days.
During the trial period, the following limitat1ions apply to CONSOLE.
  - You can operate CONSOLE for 120 minutes only.
  - You can record for 5 minutes only.
  - You cannot save or load Custom Preset files.

Purchasing the License Key

For details about purchasing and receiving the license key, please visit the Canon's download site.

1 **Set the camcorder's recording program to EXT.CONT. or Camera mode and connect the camcorder to the computer. (📖 1-3)**

2 **Start CONSOLE.**

3 **Click [Registration] in the trial confirmation window.**
If you are already running the software, select [Version] ▸ [Version] ▸ [Registration].

4 **Read the license agreement and note the product ID.**
If an appropriate camcorder is not connected to the computer, the product ID will not be displayed.

5 **Enter the product key and necessary information on the license purchase site.**
For details, visit the Canon's download site.

6 **Receive the license key.**

Registering the License Key

1 **Set the camcorder's recording program to EXT.CONT. or Camera mode and connect the camcorder to the computer. (📖 1-3)**
Connect the same camcorder as the one used for receiving the license key.

2 **Start CONSOLE.**

3 **Click [Registration] in the trial confirmation window.**
When you are in the trial mode and you are already running CONSOLE, select [Version] ▸ [Version] ▸ [Registration].

4 **Read the license agreement and confirm the product ID.**
If the product ID is not the same as the one for receiving the license key, you cannot register the license.

5 **Enter the license key and a user name.**

6 **Read the license agreement, and click [YES].**

Chapter 2
CONSOLE Windows

2 CONSOLE Windows

Main Panel

| 1	Menu	For details, refer to *Menu Bar* (📖2-1).
2	[Play Panel]	Displays [Play Viewer] (📖6-1), [File Browser] (📖6-3) and a Waveform Vector Monitor (📖4-10).
3	Camcorder Information	Shows the camcorder model name and the status of the tape in the camcorder. For details, refer to *Camcorder Status* (📖2-2).
4	Software Status	Displays the status of the software.
5	[Rec Panel]	Displays [Rec Viewer] (📖4-1), [Focus Assist] (📖4-6), [Camera Control] (📖4-6), a Waveform Vector Monitor (📖4-10) and [Custom Preset] (📖4-11).
6	Toolbar	For details, refer to *Toolbar* (📖2-2).

Select [Exit] from the [File] menu to end the application.

Menu Bar

■ [File] Menu
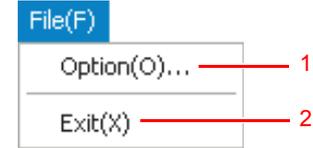
1	Displays the [Option] window (📖3-1).
2	Closes CONSOLE.

■ [View] Menu
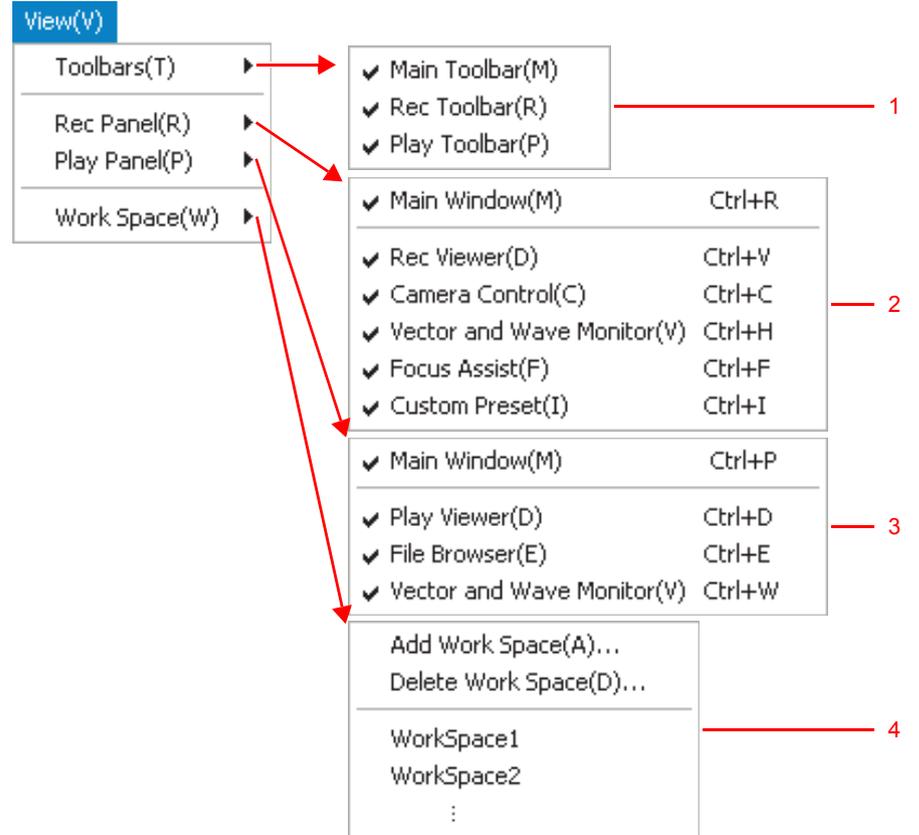
1	Displays/Hides the toolbar (📖2-2).
2	Displays/Hides [Rec Panel] and the recording tools.
3	Displays/Hides [Play Panel] and the playback tools.
4	Adds/Deletes the workspace (📖2-3).

CONSOLE Windows

■ [Version] Menu
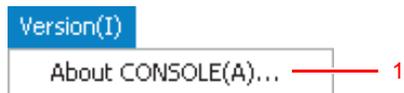
1 Displays the version and the license information.

Camcorder Status

This status shows the name of the camcorder connected and status of the tape.

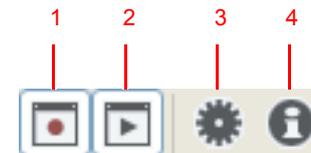| Icon	Status of the tape
	No tape in the camcorder
	Stop mode
	Recording
	Tape reached the end
	Tape is write-protected.
	Tape error

Toolbar

There are "Main Toolbar", "Recording Toolbar" and "Playback Toolbar" in the main panel. Each toolbar can be displayed or hidden, or moved around (docking and floating) with the mouse.

• Docking   • Floating
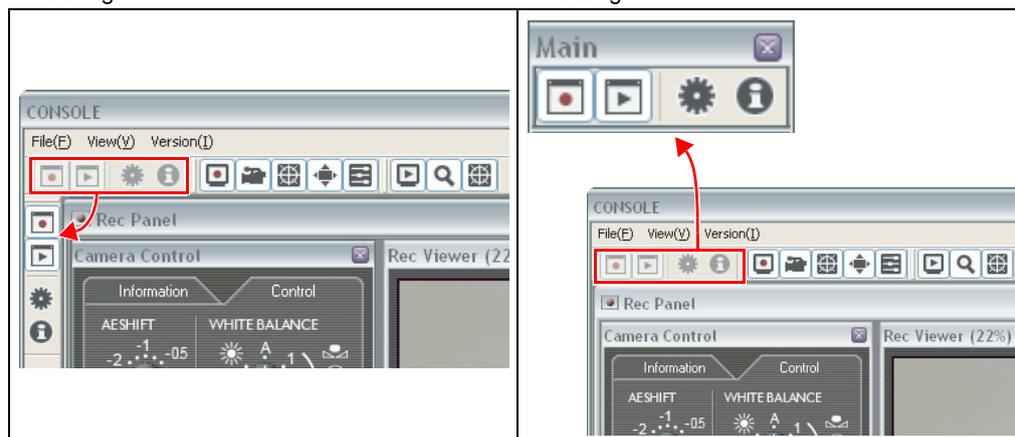
■ Main Toolbar

1	Displays/Hides [Rec Panel].
2	Displays/Hides [Play Panel].
3	Displays the [Option] window (📖3-1).
4	Displays the version information.

■ Recording Toolbar
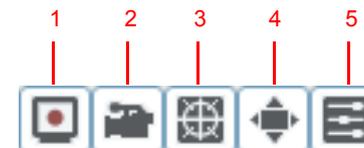
1	Displays/Hides the [Rec Viewer] window.
2	Displays/Hides the [Camera Control] window.
3	Displays/Hides the waveform vector monitor.
4	Displays/Hides the [Focus Assist] window.
5	Displays/Hides the [Custom Preset] window.

■ Playback Toolbar
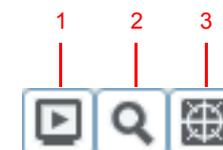
1	Displays/Hides the [Play Viewer] window.
2	Displays/Hides the [File Browser] window.
3	Displays/Hides the waveform vector monitor.

To redisplay the toolbar, select [View] ▶ [Toolbars] and the name of the toolbar you want to redisplay.

2 CONSOLE Windows

Workspace

You can register your own panel layouts to suit the purposes of the projects.

1

Select [View] ▶ [Work Space] ▶ [Add Work Space].
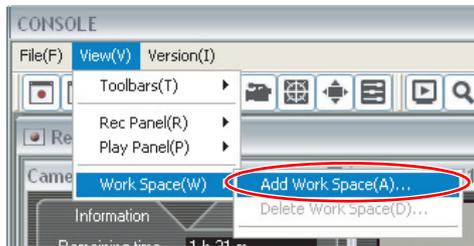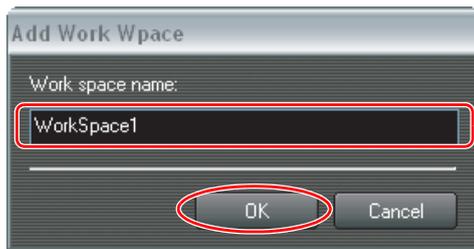
2

Input the name of the workspace and click [OK].

The positions of the windows are registered, and the name of the workspace will be displayed in the menu.

✎ ❍ Up to 10 workspace configurations can be registered. To delete a workspace, select [View] ▶ [Work Space] ▶ [Delete Work Space].
❍ To choose the registered workspace, select [View] ▶ [Work Space] and the name of the registered workspace.

Camcorder Screen

The CONSOLE status and the remaining recording time on the hard disk are displayed on the camcorder screen.

Icon	CONSOLE Status
DV⤳	Not started
DV⤳■	Stop mode
DV⤳●	Recording
DV⤳○	Data dropping occurred (📖5-5).
DV⤳–––	Cannot record (📖Tr-2). Check the setting of the video folder.

✎ ❍ If [DV⤳] is not displayed, activate the DV CONTROL function of the camcorder.
❍ When the hard disk does not allow recording (e.g. hard disk space is running out), recording is made only on the tape.
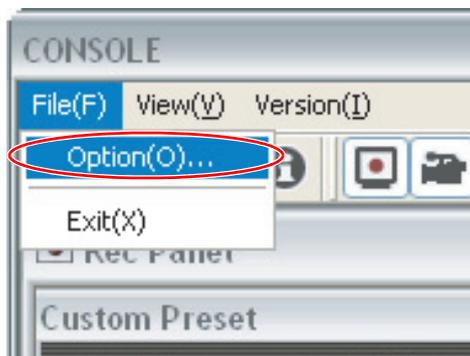
Chapter 3

[Option settings] and [Performance check]

3 [Option settings] and [Performance check]

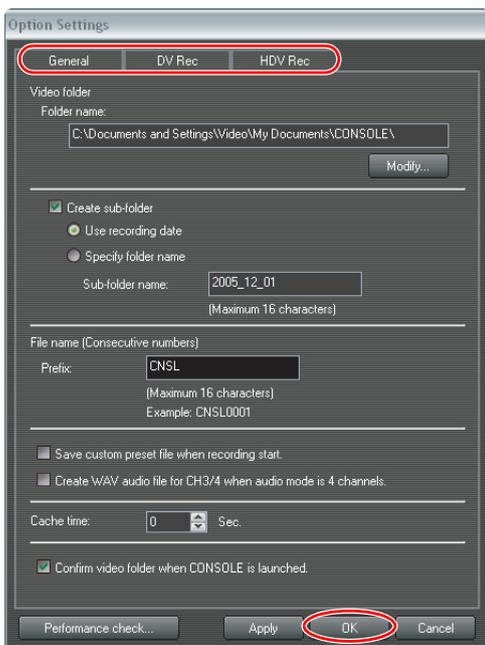## Video Folder and Recording Settings

You need to specify the video folder (a target folder), file name and other settings before you start the recording the camcorder pictures onto the hard disk.
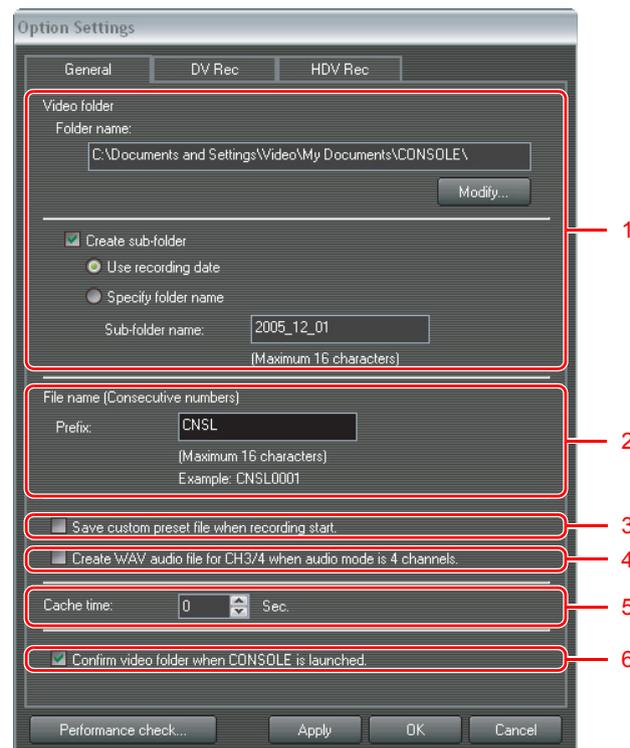
1

Select [Option] from the file menu, or click [Option...].

2

Choose one of the tabs, set the option settings and click [OK].

[General] Tab

1	[Video folder]	Shows the selected folder.
	[Modify]	Selects a different folder.
	[Create sub-folder]	Creates a subfolder within the folder shown under [Video folder]. You can name the folder after the date by selecting [Use recording date] or specify a new folder name under [Specify folder name].
2	Specify the file name of the video recording. A sequence number (up to 9999999) will be allocated after the specified prefix (e.g."CNSL0001.avi").	
3	• Place a check mark to record the Custom Preset settings of the camcorder onto the hard disk. CONSOLE only saves the settings of the camcorder when the recoding is started. The name of the Custom Preset file will be the recording file name, and the extension is ".cpf". • When [Sequence] or [Frame] mode is selected in the [DV Rec] tab of the [Option settings] window, the Custom Preset file will be recorded only when you started the recording.	
4	When the camcorder's sound setting is set to 4ch, channel 3 and 4 sounds will be recorded separately from the recording file. For example, when "DVPC0001.avi" is recorded, "DVPC0001_sub.wav" is recorded in video folder.	
5	Sets the cache recording time (📖5-3).	
6	Placing a check mark displays a dialog confirming the video folder each time you start CONSOLE.	

3 [Option settings] and [Performance check]

[DV Rec] Tab

This tab is for the DV standard recording settings when you record in DV.
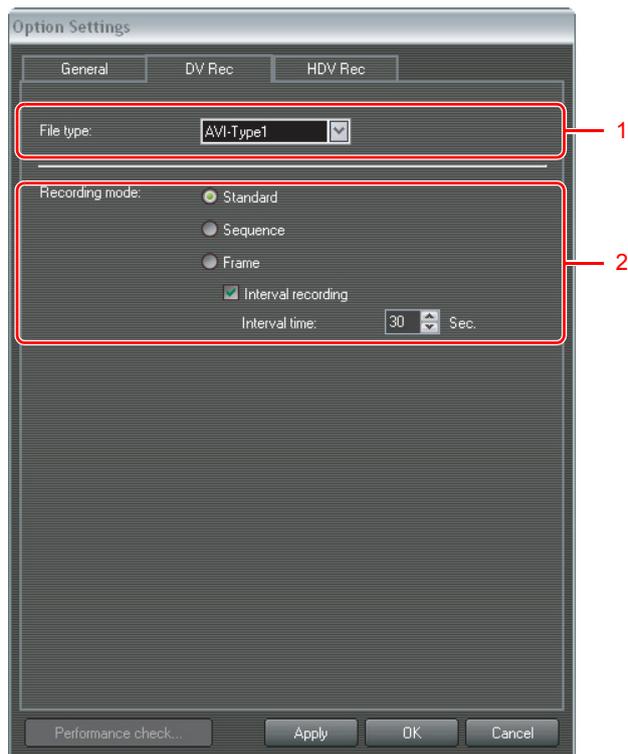
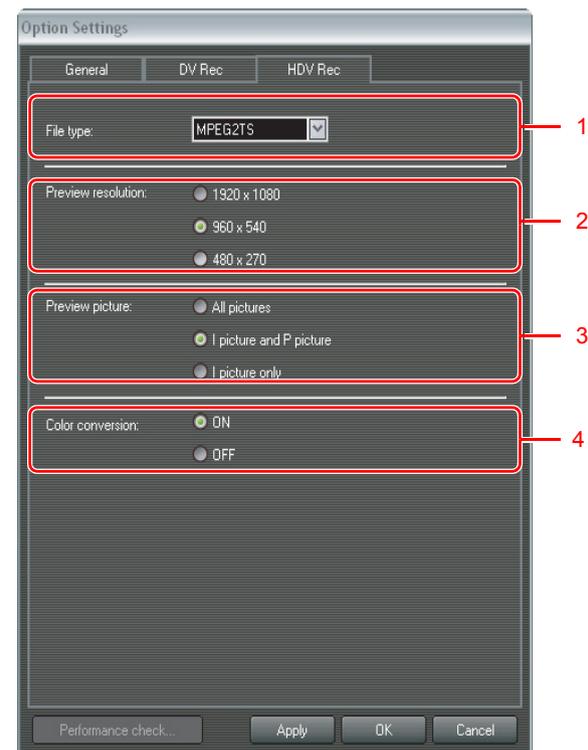| **1**	Select the recording file type.
	Select the AVI type that is compatible with your editing software. You can select the file type from [AVI-Type1], [AVI-Type2] or [MXF]. For details, refer to the instruction manual of the software or consult the software manufacturer.
2	Select a mode for recoding onto the hard disk.
	[Standard] A new file will be created each time you start recording a new scene.
	[Sequence] The new scene will be added to the same file.
	[Frame] 1 frame is recorded and added to the same file each time you press the recording button. (📖5-4)
	Placing a check mark at [Interval recording] makes CONSOLE to repeatedly record the frame image at the specified interval time.

⚠️ ❍ Avid Xpress® can properly read 60i, 30F, 50i or 25F MSF files recorded by CONSOLE; it cannot read 24F MXF files recorded by CONSOLE.
❍ When recording an [MXF] picture, WAV sound files with the same file name as the recording file will be saved. The sounds on channel 1 and 2 will be recorded in "File Name.WAV". When the audio mode is set to 4CH, the sounds on channel 3 and 4 will be recorded in "File Name_sub.WAV". When using the editing software, load all the sound files.

[HDV Rec] Tab

This tab is for the HDV standard recording settings when you record in HDV.

1	Select the recording file type.
	Select the AVI type that is compatible with your editing software. You can select the file type from [MPEG2TS] or [MPEG2ES]. For details, refer to the instruction manual of the software.
2	Select the [Preview resolution] of the HDV standard data. The size of the recording picture will not be changed.
3	Select the type of MPEG2 for the picture displayed in the preview. The types of the recording picture will not be changed.
4	Select whether or not you need to convert the color of the preview image. When the color of the preview image appears odd, select [OFF].

⚠️ ❍ When recording an [MPEG2ES] picture, WAV sound files with the same file name as the recording file will be saved. The sounds on channel 1 and 2 will be recorded in "File Name.WAV". When the audio mode is set to 4CH, the sounds on channel 3 and 4 will be recorded in "File Name_sub.WAV". When using the editing software, load all the sound files.
❍ The recorded [MPEG2ES] picture cannot be output to the camcorder.
❍ When [All pictures] or [I picture and P picture] is selected, data dropping (📖 5-5) may occur.

[Option settings] and [Performance check]

[Performance check]

You can check whether the selected video folder can be used for saving the recordings before you start recording on the hard disk.

1
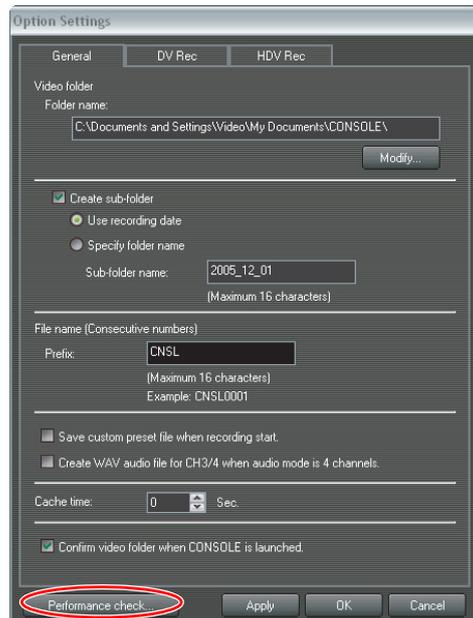
Set the recording settings and click [Performance check].
When the [Performance check] button is not being activated, click the [Apply] button.

2 **Click [Start] on the left side.**
The performance check of the hard disk starts.
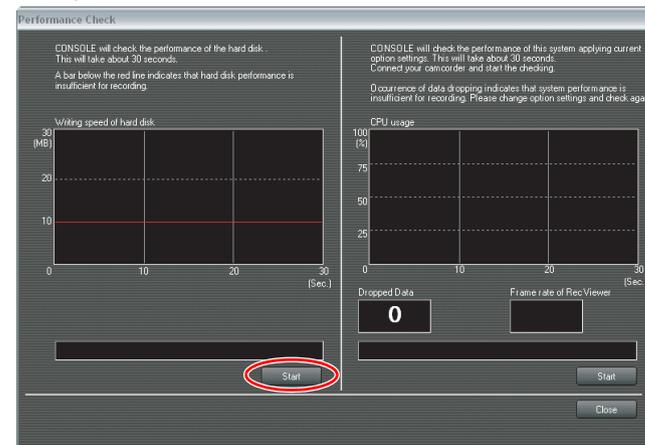
• CONSOLE writes the data to the selected folder to evaluate the performance of the hard disk and graphs out the results every second.
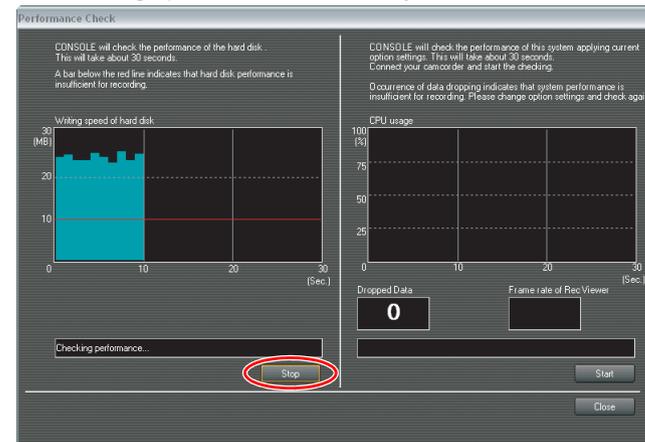
• The performance check takes 30 seconds.
• To cancel the performance check, click [Stop].

3

[Option settings] and [Performance check]

3 Click [Start] on the right side.

The performance check of the system starts.

- CONSOLE writes the data to the selected folder to evaluate the CPU usage ratio and graphs out the results every second; furthermore, it evaluates the occurrences of the data dropping and the frame rate of the preview.

- The performance check takes 30 seconds.
- To cancel the performance check, click [Stop].

○ When CONSOLE executes the performance check, the recording data type used for writing (DV or HDV) will be according to the recording settings in the [DV Rec] tab.
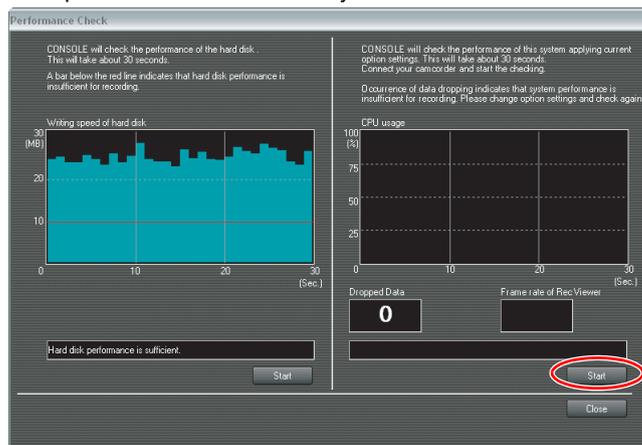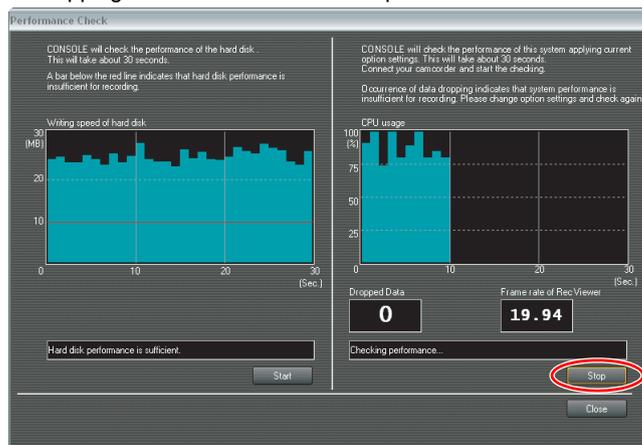 - When receiving the DV standard data from the camcorder while [Frame] is selected in the [DV Rec] tab, the writing test of the performance check will not be executed.

⚠ The performance check cannot be executed when CONSOLE cannot access to the hard disc.

4 Review the result and click [Close].

○ **Even if all bars are above the red line after executing the hard disk performance check or no data dropping has occurred during the system performance check, data may be dropped when a program accessing the hard disk (e.g. anti-virus software) is activated.**
○ A bar below the red line indicates that data may be dropped during recording (a part of the picture may not be written to the file).
○ When recording in HDV standard is selected and data dropping occurs, select a smaller size at [Preview Resolution] or [I picture only] at [Preview picture] in the [HDV Rec] tab. (📖 3-2) The recording picture will not be affected even if you change the [Preview resolution] or [Preview picture].

Chapter 4
Camera and Picture Control

4 Camera and Picture Control

Using the Recording tool to adjust the picture settings of the camcorder to create a picture in the [Rec Panel].

[Rec Viewer]

1	[Rec Viewer]	Displays the camcorder picture. Right-clicking on the picture allows you to select the size of the preview panel (📖4-1) and display the overlay markers (📖4-2).
2	Audio Monitor Settings	Selects the audio channel displayed on the audio level indicator and adjusts the monitor volume.
3	Audio Monitor	Turns ON/OFF the computer's audio monitor output.
4	Audio Level Indicator	Displays the audio level output from the camcorder. The sound can be monitored with the computer's sound system.
5	Zebra Pattern	Displays the zebra pattern (📖4-5) in the preview.
6	Split	Splits the preview (📖4-5).
7	Color/Monochrome	Switches the preview between color and monochrome display.
8	Interval Counter	When [Interval recording] is selected, the remaining interval time is displayed.
9	Time Code	Shows the time code of the file.
10	Recording Indicator	The indicator will turn while recording on the hard disk.
11	File Name	Displays the file name of the recording file.

⚠️ When the recording mode is set to HDV, the computer takes a few seconds to display the camcorder picture in the [Rec Viewer] window.

Adjusting the Preview Size

The size of the [Rec Viewer] window can be adjusted freely by dragging the edge of the frame with the mouse. You can also change the size of the preview window with the size option in the right-click menu.

When the preview is in [Full Screen] mode, click the mouse to return to the previous size.

⚠️ ○ The [Rec Viewer] window will be resized according to the specified size or the [Rec Panel] size. When [Rec Panel] cannot resize the [Rec Viewer] window according to the specified size, it will be displayed according to the [Rec Panel] size.
○ The preview size on the title bar is displayed as a percentage of the preview resolution.
- When previewing HDV data, the percentage will be based on 1920 x 1080 resolution.
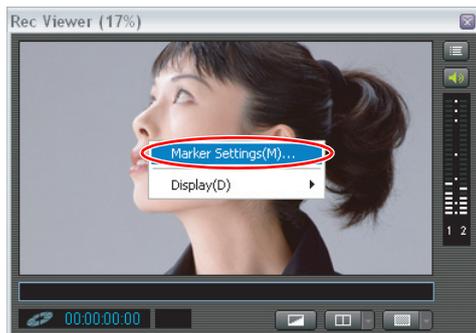
4 Camera and Picture Control

Overlaying Marker

You can display the overlaying marker in the preview. The safety zone (90% and 80% of the preview image size), a center, a level and 8 types of aspect markers are predefined as the default markers.

⚠️ When splitting the preview image (📖4-5), the markers are not displayed.

■ **Displaying Overlaying Markers and Settings**

1

Right click on the preview and select [Marker Settings] from the menu.

Select a marker and click [OK] to display the marker.

1	Marker List	• Placing a check mark displays the marker on the preview. • ⊞ or ⊟ that appears next to a marker name indicates that the marker is a group marker which contains several markers in it. Select one of the markers in the group. Clicking ⊞ opens the group marker set and clicking ⊟ closes the displayed marker set, displaying only the group name. • You can change the name and group that the marker belongs.
2	[Aspect ratio]	Selects the aspect ratio of the marker preview.
3	[Marker preview]	Displays the marker and allows you to edit it.
4	[Coordinate of selected marker]	Taking the upper left corner as a base point, the coordinate of the marker is displayed as a percentage. You can directly enter the coordinates.
5	[OK]	Quits the marker setting, and displays the selected marker in the marker preview.
6	[Up]/[Down]	Moves the marker name in the marker list.
7	[Export]	Saves the marker.
8	[Import]	Adds a new marker in the marker list.
9	[Add]	Creates a new marker.
10	[Delete]	Deletes a marker.
11	Property	The property of the selected marker is displayed. You can change the group name and the marker name.

4 Camera and Picture Control

■ Adding a New Marker

1 Click [Add].

2 Select the marker group.

• If the new marker does not belong to any group, select [None].
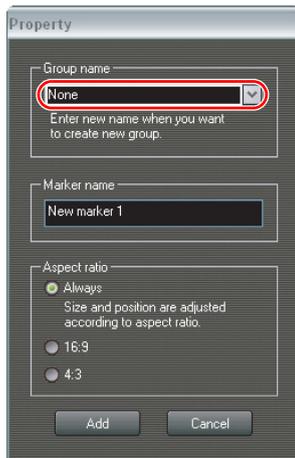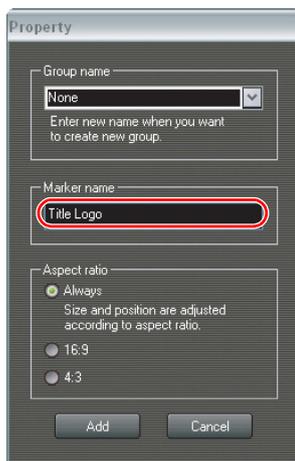• If you want to create a new group, enter the new group name.

3 Enter the marker name.
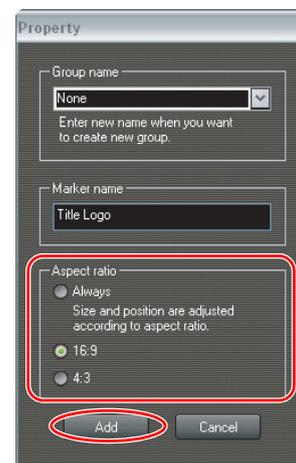
4 Select the [Aspect ratio] and click [Add].
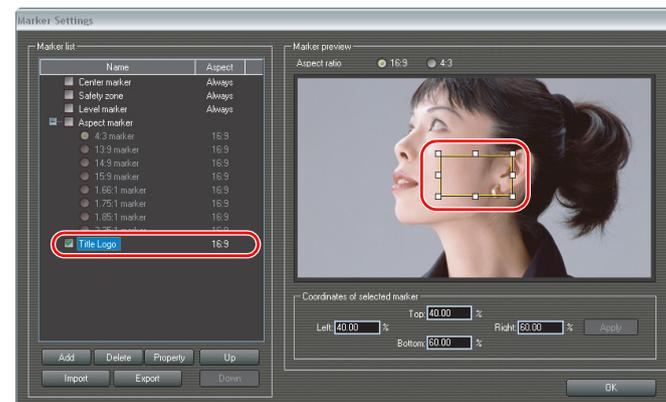
The new marker will be added; it appears as selected and will be displayed in the marker preview.

Camera and Picture Control

■ Editing the Marker

1 **Select a marker by placing a check mark and click the selected marker name.**

The marker is displayed in the marker preview.
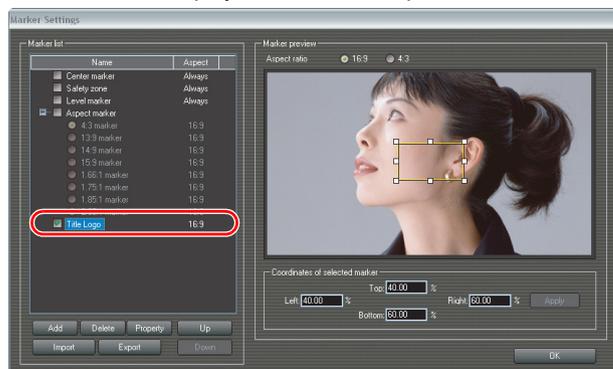
2 **Edit the marker by dragging with the mouse and/or entering the coordinates of the marker.**

• Drag the frame of the marker to move the marker.
• Drag one of the square marks on the frame to change the marker size.
• Taking the upper left corner as the base point, you can enter the coordinates of the marker as a percentage. Clicking [Apply] after entering the coordinates displays the marker at the specified coordinates.
• The safety zone, center, level and aspect markers cannot be edited.

■ Exporting the Marker

1 **Select a marker you wish to save and click [Export].**

When a window asking the destination folder and the file name is displayed, specify the destination folder and the file name.
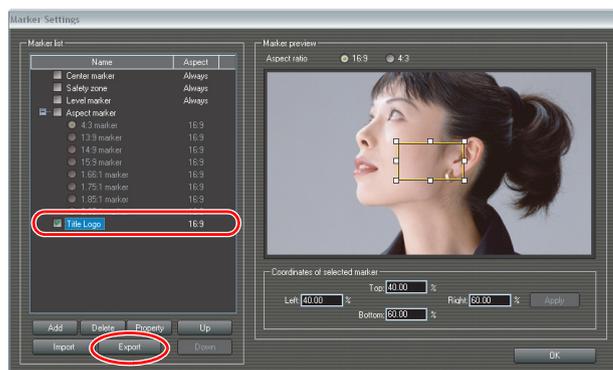
■ Importing the Marker

1 **Click [Import].**

When a window asking which marker to be imported, specify a marker that you wish to import.

2 **Enter the information about the marker and click [OK].**

• [Marker name] and [Aspect ratio] will be automatically entered according to the file.
• Clicking [OK] imports the marker and displays the newly imported marker in the marker list.

■ Deleting the Marker

1 **Select a marker or a group you wish to delete.**

2 **Click [Delete].**

• Click [Yes] when a confirmation window is displayed.
• When deleting a group, the group and all the markers in the group will also be deleted.
• The safety zone, center, level and aspect markers cannot be deleted.

4 Camera and Picture Control

Splitting the Preview Image

You can split the preview image vertically or horizontally and compare the camcorder picture with other picture. The splitting function helps you to compare the picture color or brightness with other picture when you want to adjust or change the settings.

1

Click ▭.

Clicking ▭ cancels the splitting.

• You can drag the splitting line on the preview with the mouse to move the splitting line.
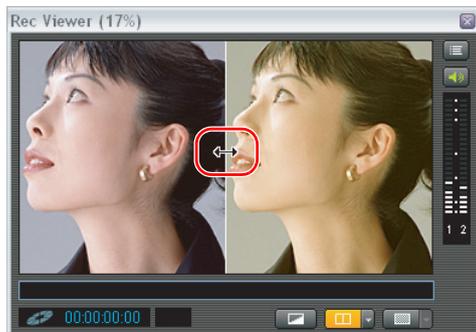
• The mouse cursor will change to 👆 on the splitting preview image. By clicking on the preview image and dragging the mouse, you can reposition the displayed image.
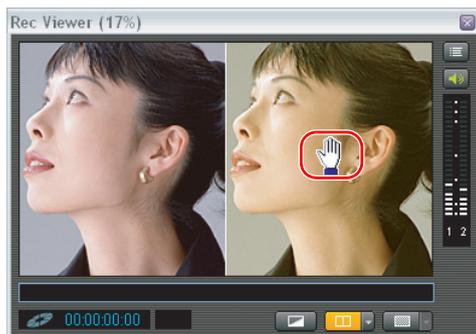
■ Changing the Split Settings

You can change the splitting settings by clicking ▪ while splitting the preview.

	Position of camera preview ▶	— 1
	Reference image ▶	— 2
	Refresh reference camera view	— 3

1	Selects the position of the camcorder picture to be displayed. Selecting [Top] or [Bottom] splits the picture horizontally and [Right] or [Left] splits the picture vertically.
2	Selects the reference picture to be displayed. [Camera]: Displays a still image captured from the camcorder picture. [Play Viewer]: Displays the picture that appears in the [Play Viewer] (📖6-1). [Still Image File]: Displays a selected JPEG image.
3	Refreshes the reference image when [Camera] is selected as a reference image.

Zebra Pattern

You can display a zebra pattern on the preview.

1

Click ▨.

• When the camcorder is set to EXT.CONT. mode, the zebra pattern will be displayed also in the camcorder screen.
• Clicking ▨ cancels the zebra pattern to be displayed.

• Clicking ▪ next to ▨ while displaying the zebra pattern on the preview lets you select the displayed zebra pattern level from the menu.
• The zebra pattern on the preview will not be recorded.

4 Camera and Picture Control

[Focus Assist]

The [Focus Assist] window displays a part of the camcorder picture as in its original size (100%). You can check the focus of the picture while the reduced size [Rec Viewer] is being used.

Focus Assist - Aspect correction : 16:9

1	Focus Preview	Displays a part of the camcorder picture as in its original size. The mouse cursor will change to 🖑 on the [Focus Preview] image. By clicking on the preview image and dragging the mouse, you can reposition the displayed image.
2	Aspect Ratio	Changes the aspect ratio correction mode. When the correction is ON, the aspect ratio of the image is adjusted by CONSOLE to fit the aspect ratio of the monitor. The status of the mode will be displayed on the title bar.
3	Color/Monochrome	Switches over the preview to color and monochrome.

[Camera Control]

This window enables you to control the hard disk recording and set the camcorder settings.

Camera Control

1	[Information]	Displays the [Information] tab.
2	[Control]	Displays the [Control] tab.
3	Finalize	When [Sequence] or [Frame] mode is selected in the [Option settings] window, you can finalize and save the recording file while recording.
4	Start/Stop Recording	Starts/Stops recording onto the hard disk.

4 Camera and Picture Control

[Control] Tab

✎ When the camcorder is set to the Camera mode, you cannot control all settings on [Control] tab. Set the camcorder's recording program to EXT.CONT.
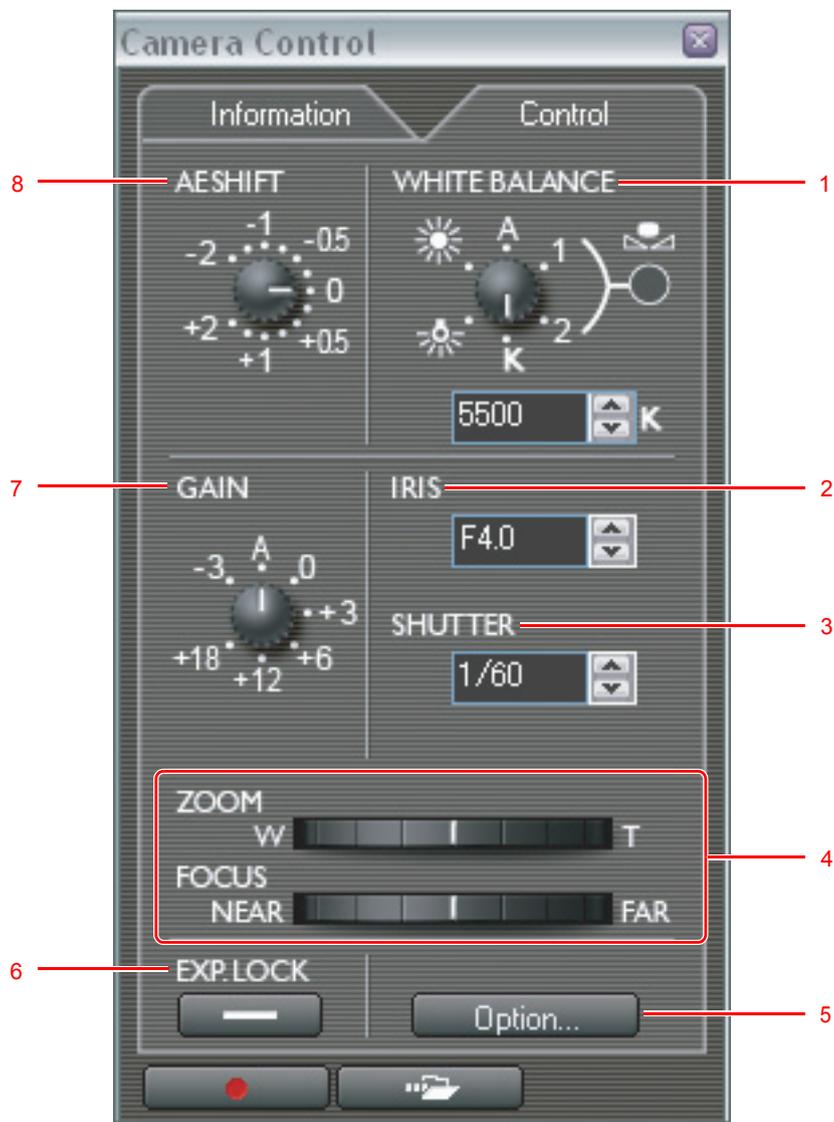
1 [WHITE BALANCE]

You can adjust the white balance by clicking the indicated marks. Placing the mouse cursor on the panel and right clicking the mouse turns the pointer to the right; left clicking the mouse turns the pointer to the left. The panel image differs depending on the camcorder you are connecting. The screen shots below will be displayed when connecting XL H1.
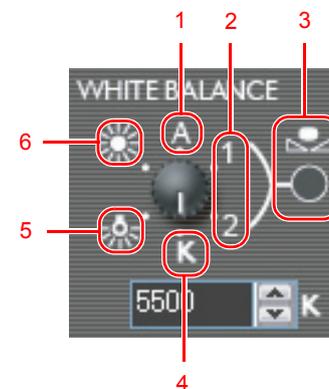
1		Auto	Automated adjustment of the white balance.
2	1 / 2	Preset 1-2	Adjust the white balance to the preset setting.
3		Custom White Balance	While one of the presets is being selected, clicking on this button registers the white balance setting. For details about saving the white balance settings, refer to the camcorder instruction manual.
4		Color Temperature	Specifies the color temperature. Clicking or increases and decreases the value by 100K. You can enter a new value by clicking the Kelvin text box with the mouse and pressing the [Enter] key on the keyboard. Click the [Enter] key again to apply the new value.
5		Indoor (3200K)	Incandescent light.
6		Outdoor (5600K)	Bright sunlight.

2 [IRIS]

You can set an aperture value.

3 [SHUTTER]

You can set the shutter speed.

4 Camera and Picture Control

4 [ZOOM]/[FOCUS]

You can control the zooming and focusing functions of the camcorder by moving the slider. The zoom and focus position moves slowly when the slider is close to the center. When you move the slider further from its center, the camcorder zoom and focus position will move faster. You can also adjust the zoom and focus position of the camcorder with the [←] and [→] keys on the keyboard after clicking the slider with mouse.

❍ When you are using a manual video lens and selecting [Manual], you cannot control the zoom function from CONSOLE.
❍ When the focus switch of the lens is set to AF, or when you are using a manual video lens, you cannot adjust the focus function from CONSOLE.

5 [Option settings]

Clicking [Option...] displays the [Option settings] window.

Option Settings

7 — AE Mode
   M Manual

6 — Aspect ratio: 1 — Frame rate:
   16 : 9   24F

5 — Color bars: 2 — Audio reference signal:
                              OFF

4 — Zoom speed: 3 — Focus speed:
   4   4

Close(X)

1	Selects a frame rate.
2	Selects a test tone when displaying the color bars.
3	Selects a focus speed when operating by keyboard.
4	Selects a zoom speed when operating by keyboard.
5	Displays/Hides the color bars.
6	Selects the aspect ratio when recording in DV.
7	Selects AE mode.

⚠ The AE mode, aspect ratio and frame rate cannot be changed during the recording.

6 [EXP.LOCK]

Click this button to lock the exposure.

7 [GAIN]

You can adjust the gain level by clicking the scale. Placing the mouse cursor on the panel and right clicking the mouse turns the pointer to the right; left clicking the mouse turns the pointer to the left.

⚠ ❍ The gain level can be set only when the AE mode is set to auto, Tv, Av or manual mode.
❍ When you are using XL2 and set the camcorder's frame rate to 24F or 30F (NTSC) or 25F (PAL) the camcorder's gain setting can only go up to +12dB even you set the CONSOLE's gain setting to +18dB.

8 [AE SHIFT]

You can adjust the AE level by clicking the scale. Placing the mouse cursor on the panel and right clicking the mouse turns the pointer to the right; left clicking the mouse turns the pointer to the left.

⚠ [AE SHIFT] can be adjusted only when AE mode is set to Auto, Tv or Av mode.

4 Camera and Picture Control

[Information] Tab

This tab shows information of the hard disk recording.
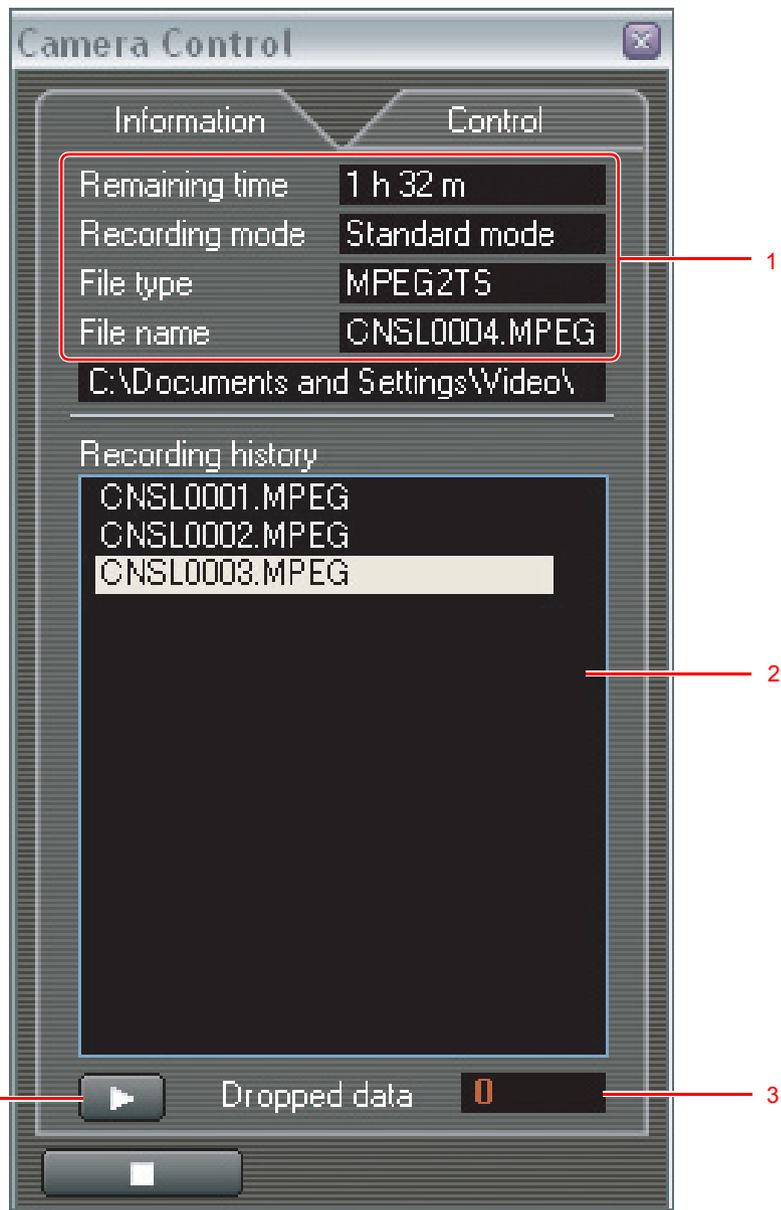
1	Displays the recording file name, a recording mode, a file type and the video folder specified in the [Option] window (📖3-1).
2	Displays [Recording history] (📖5-5).
3	Displays the number of data droppings occurred during recording (📖5-5).
4	Plays back the file selected in [Recording history] (📖5-5).

Camera and Picture Control

Waveform Vector Monitor

This monitor shows a waveform and color information of the picture displayed in the [Rec Viewer].
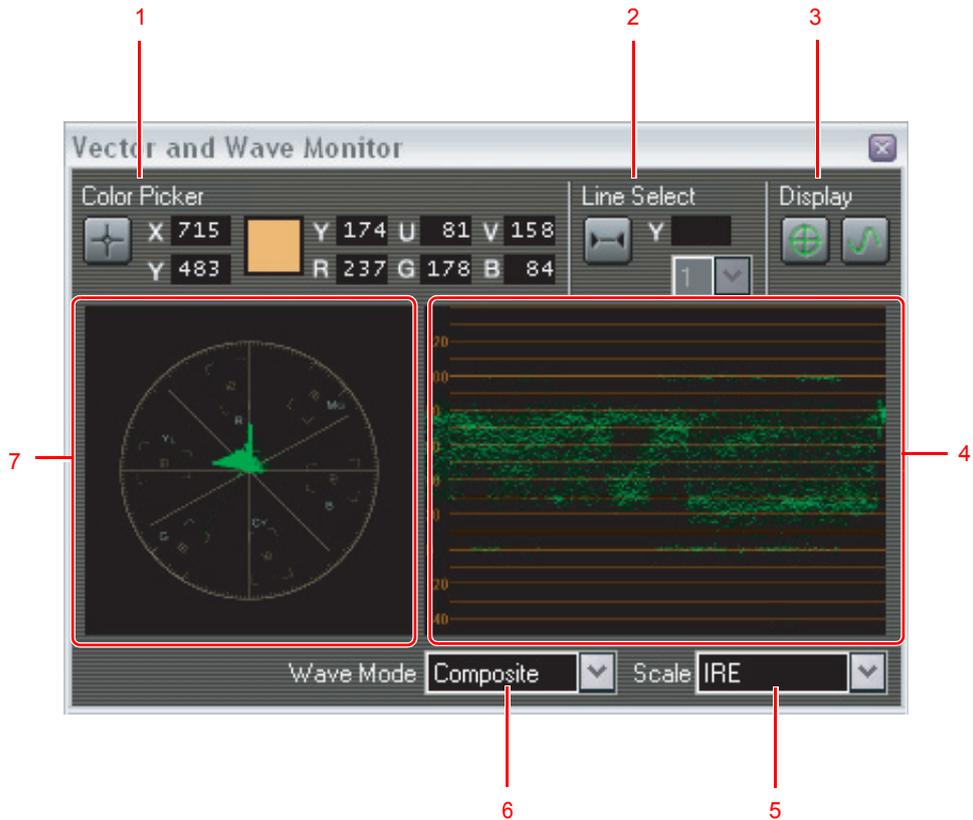
1 [Color Picker]

The values of selected pixel in [Rec Viewer] are displayed.
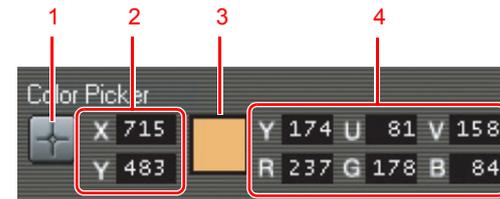
1	Displays/Hides the color picker.
2	Displays the coordinate of the selected pixel.
3	Displays the color of the selected pixel.
4	Displays the values of the selected pixel.

When the color picker is activated, a marker will be displayed on the preview. You can drag the marker to select a pixel.
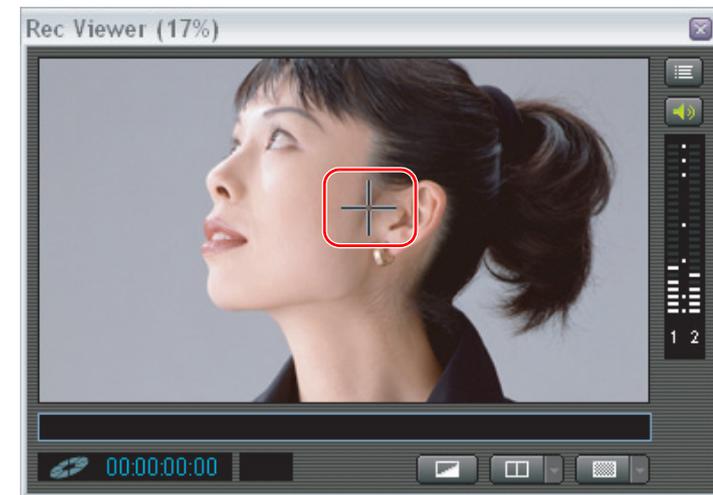
Camera and Picture Control

2 [Line Select]

You can select the image-scanning mode of the waveform monitor and the vector scope.
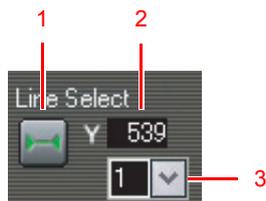
1	Switches over between the line and full scan mode.
2	Displays the selected line number.
3	Selects a number of lines used in the line mode.

A line on the preview will be displayed in the line mode. You can drag up/down the line with the mouse to select a scan line.

A line for scanning

3 [Display]

You can display and hide the waveform monitor and the vector scope.

4 Waveform monitor

A waveform of the preview picture is displayed.

5 Scale

You can select the scale of the waveform monitor.

  [RE]:   -40 IRE – +140 IRE

  [Volt 1]:   -0.3V – +1.0V

  [Volt 2]:   0V – +1.3V

6 [Wave Mode]

You can select the display mode of the waveform monitor. In the PARADE mode, the waveform monitor will be tri-partitioned.

  [Composite]:   Displays a luminance and color-difference signal
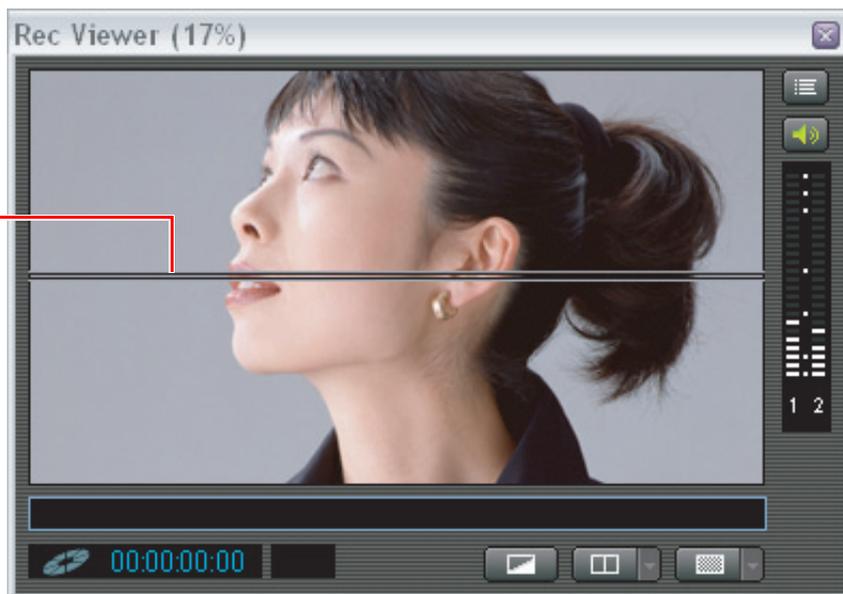
  [Y]:   Displays the luminance signal

  [YUV]:   Displays the luminance signal, the blue differential signal, and the red differential signal in PARADE mode.

  [RGB]:   Displays RGB signals in the PARADE mode in the R, G, B order.

7 Vector scope

Displays the color information of [Rec Viewer]. Depending on the recording standards, the panel changes automatically.

[Custom Preset]

You can adjust and save the Custom Preset settings. For details, refer to the camcorder instruction manual.

○ Depending on the camcorder connected, some parameters differ. For details, refer to the camcorder instruction manual.
○ The [Custom Preset] window cannot be used when recording.
○ When using XL2, you need to set the camcorder's recording program to EXT.CONT.
○ When using XL H1, you need to set the camcorder's recording program to EXT.CONT. to import and export the Custom Preset files.
When using XL H1, CONSOLE will reset the Custom Preset settings in the following cases. Save the Custom Preset file on the camcorder memory or memory card, and apply it to the camcorder.
   - Changing the camcorder mode from Camera mode to other mode
   - Disconnecting the IEEE 1394 (DV) cable
   - Changing the position of the TAPE/CARD switch
   - Follow the procedure below to save the Custom Preset file on the Camcorder's memory or memory card.
     1. Save the Custom Preset file onto the hard disc. (📖 4-13)
     2. Set the Camcorder mode to EXT.CONT.
     3. Load the Custom Preset file (saved on the hard disc) to the Camcorder's memory. (📖 4-12)
     4. Save the Custom Preset file on the Camcorder's memory or memory card. (📖 4-13)

○ You can change the setting using the keyboard.
   - You can select the next item with the [↓] or [Tab] key, and go back to the previous item with the [↑] or [Shift] + [Tab] keys. You can also select items by pressing [2] (down), [4] (left), [6] (right), and [8] (up) keys.
   - The parameters can be changed with the [←] and [→] keys.

Camera and Picture Control

Importing the Custom Preset

CONSOLE imports the Custom Preset file in the camcorder or the hard disk and applies to the camcorder.

1

Click Import **.**

2 Select a Custom Preset file.

• When importing a Custom Preset file from the camcorder, select [icon].

• When importing a Custom Preset file from the card, select [icon].

- When selecting [icon], you cannot import Custom Preset files that were recorded separately when recording on a tape. To import such Custom Preset files, first copy them to the hard disk and import the file from the hard disk. (📖 6-3)

• When importing a Custom Preset file from the hard disk, select [icon].

- Selecting [icon] displays a list of the recently imported and saved files. You can select a file from the list. Click [...] to select a file that is not in the list.
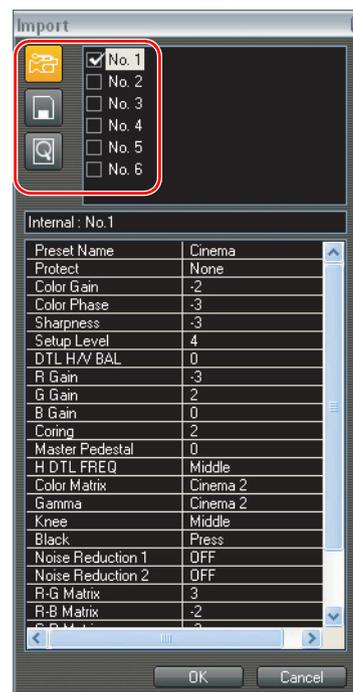
The information of the selected Custom Preset setting is displayed, and the settings are applied to the camcorder only to preview the picture. The camcorder settings have not been set yet.

3 Check the camcorder picture and the settings, and click [OK].

Clicking [Cancel] stops importing the file and returns the camcorder setting to the previous setting.

Camera and Picture Control

Exporting the Custom Preset

You can save the current camcorder setting as a Custom Preset file.

1
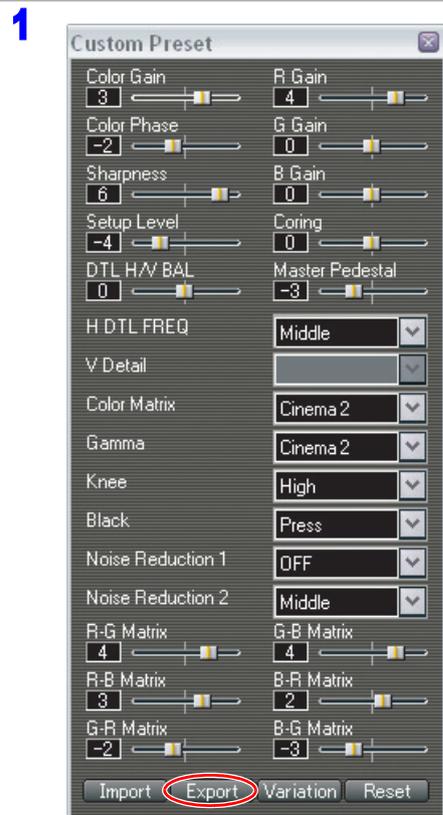
Click Export **.**

2
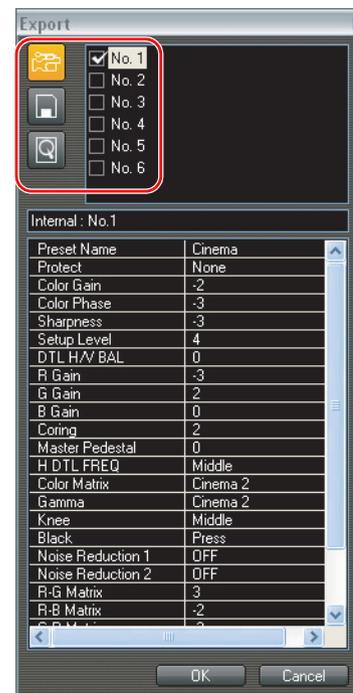
Select a destination to export the file.

The information of the selected Custom Preset setting is displayed and the settings are applied to the camcorder only to preview the picture. The camcorder settings have not been set yet.

• Select the preset number you wish to export when selecting [icon] or [icon].
• When selecting [icon], specify a file name to be saved.
  - Select a file from a list of the recently exported and saved files. If you wish to export a file that is not in the list, click [···] and select a file.

3 **Check the camcorder picture and the settings, and click [OK].**

4 **Input a preset name, specify the protect mode and click [OK].**
  • When a confirmation window appears, click [OK].
  • The Custom Preset file will be saved, and the camcorder settings will be set to the saved Custom Preset file setting.

4

Camera and Picture Control

Preset Variation

Clicking on [Variation] displays the [Variation] window. The [Variation] window shows still images captured from the camcorder picture with different parameters in order to contrast the current settings with alternative settings.

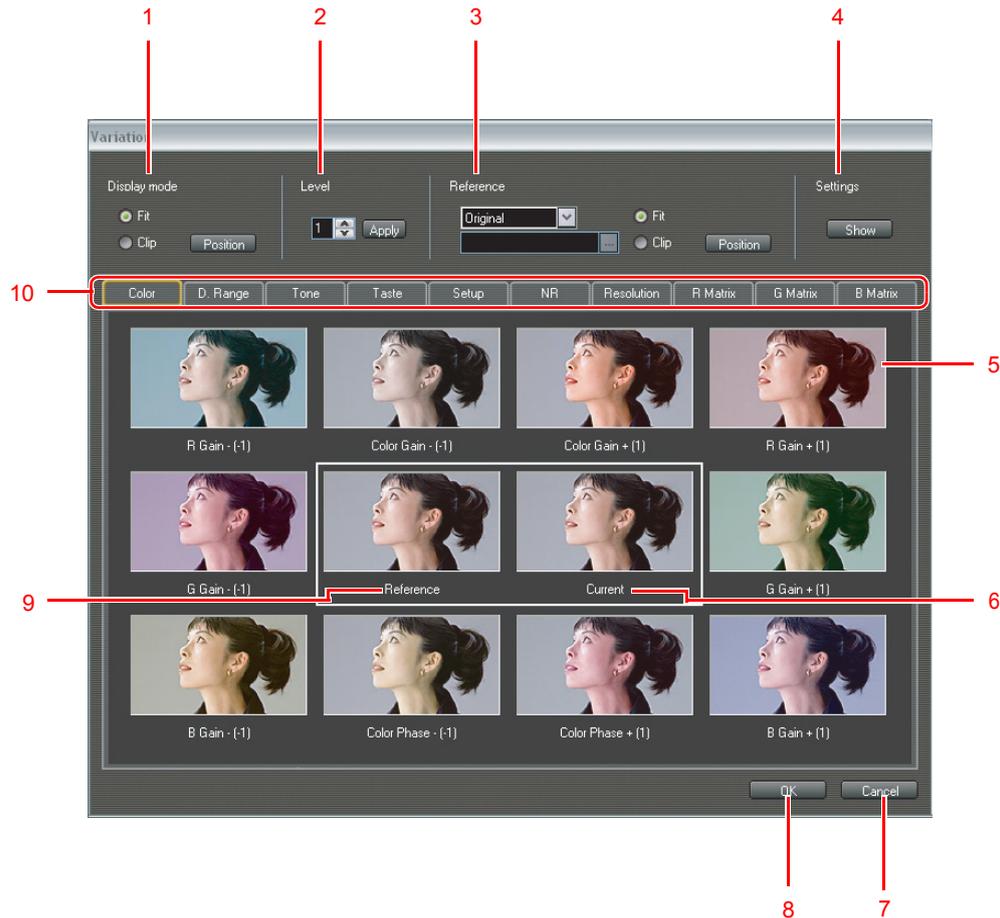| 1 | [Display mode] | Selects the display mode of the current and candidate images. |
		[Fit]: Resizes the still image so the whole image will be displayed in a frame.
		[Clip]: Displays the still image without adjusting its size. To specify which part in the image to be displayed, click [Position], and specify an area to be displayed in the [Position] window.
2	[Level]	Specifies the variation level. Clicking [Apply] redisplays the images in the specified level.
3	[Reference] setting	Specifies the reference image to be displayed.
		[Original]: Applies the same settings as the current image.
		[Image File]: Displays a selected still image file.
		[Play Viewer]: Displays a captured still image of the displayed picture in the [Play Viewer] window (📖6-1).
4	[Settings]	Displays the current Custom Preset setting. Placing the mouse cursor on the candidate image highlights the corresponding setting. You can close the window by clicking the button again.
5	Candidates	Still images with the different Custom Preset settings. Clicking one of the images makes CONSOLE to apply the settings of the selected image to the camcorder, and refreshes the window.
6	[Current]	A still image captured with the current Custom Preset settings.
7	[Cancel]	Closes the [Variation] window. The setting of the camcorder returns to original settings.
8	[OK]	Closes the [Variation] window.
9	[Reference]	A still reference image.
10	Category	Tabs of different categories of the Custom Preset settings.

✎ ❍ When displaying the [Variation] window for the first time in DV and HDV mode, the color bars will be displayed on the camcorder screen.
❍ The images used for the candidate are not the same images. Each of the images is captured separately by the camcorder. When using the [Variation] window, it is recommended to shoot a still object.

Resetting the Custom Preset

Clicking [Reset] resets the current settings.

Chapter 5
Recording onto the Hard Disk

5 Recording onto the Hard Disk

You can record video and audio from a connected camcorder on the hard disk of the computer by operating the camcorder or the recording panel of CONSOLE.

❍ **Before you start recording:**
 - If you set the video folder to an external hard disk, an error message "Delayed Write Failed" may be displayed while recording onto the hard disk, and the recording may be lost.
 - Make a performance check (📖 3-3) to make sure that the recording can be saved to the selected video folder.
 - Make sure that [DV] is displayed on the camcorder screen. If [DV ---] or [DV] is displayed, you cannot record on the hard disk. In such case, check the setting of the video folder (📖 Tr-2).
 - When magnifying the viewfinder image by pressing the EVF MAGNIFYING button, the beginning of the recorded file may be magnified as well. When you are using the frame recording function, the recorded frame-by-frame image will be magnified when enlarging the viewfinder image. Deactivate the magnifying viewfinder before you start the recording.
 - We recommend defragmenting the drive on which the video folder is located.
 - Deactivate all programs that access the hard disk on a regular basis (e.g. as anti-virus software). Data may be dropped when such programs access the hard disk during recording.
 - If you wish to edit using the time code, make sure to record simultaneously on a tape. The time code information will only be written to the hard disk when recording on a tape. The time code will not be written in the cache recording part (📖 5-3).
❍ **In the following cases, recordings cannot be saved on a hard disk:**
 - During option settings or performance check.
 - When the sequence number of the file exceeds the maximum value (e.g. "CNSL9999999.avi").
 - When CONSOLE is started while using the camcorder with another software.
❍ **Observe the followings during recording:**
 - Do not activate any other software. When another software is running, data droppings may occur. Also, when software that accesses the camcorder (e.g. editing software) is started, CONSOLE may not operate correctly.
 - Do not change the settings in Windows [Display Properties] window.
 - Do not lock Windows by pressing the Windows key and [L] key on the keyboard.
 - When the computer shuts down or enters stand-by mode due to the running out of the battery, the recording file may be corrupted and/or may not be played back.
❍ Depending on the status of the camcorder or computer, a delay in recording start/stop may occur when you record on both the hard disk and tape.
❍ When you start recording simultaneously on the tape and the hard disc, the recording on the hard disc will start approximately one second later.

❍ The time limits for recording to a single file depends on the settings of the camcorder and CONSOLE. When the recording reaches the time limit recording pauses and then starts again automatically in a new file. However, there will be some scenes that are not recorded during the interval when recording stops and then restarts in the new file.

Standard	File Type	Creating WAV audio file for CH3/4 when audio mode is 4 channels	Camcorder's Audio Settings	
			2CH	4CH
DV	AVI-Type1 AVI-Type2	Checked	Not Limited	4 hours 30 minutes
		Unchecked	Not Limited	Not Limited
	MXF	Checked	3 hours	3 hours
		Unchecked	3 hours	3 hours
HDV	MPEG2TS	Checked	Not Limited	3 hours
		Unchecked	Not Limited	Not Limited
	MPEG2ES	Checked	3 hours	3 hours
		Unchecked	3 hours	3 hours

5 Recording onto the Hard Disk

Recording a Movie File

By Operating the Camcorder

1 **Press the start/stop button on the camcorder.**
- Recording starts on both the tape in the camcorder and the hard disk.
- When [Save custom preset file when recording start] is selected in the [General] tab setting, the Custom Preset file will be saved in the same folder as the video folder. The name of the Custom Preset file is the same as the recording file name.
- [DV⚡•] appears on the camcorder screen.
- When no tape is inserted, or the tape is write-protected, recording is saved only on the hard disk.
- Even when the tape reaches the end, recording onto the hard disk continues.
- To stop recording, press the start/stop button on the camcorder again.

By Operating CONSOLE

1 Click ● in the [Camera Control] window.

- Recording starts on both the tape in the camcorder and the hard disk.
- When [Save custom preset file when recording start] is selected in the [General] tab setting, the Custom Preset file will be saved in the same folder as the video folder. The name of the Custom Preset file is the same as the recording file name.
- ● changes to ■, and the recording indicator in the [Rec Viewer] window starts rotating.
- When no tape is inserted, or the tape is write-protected, recording is saved only on the hard disk.
- Even when the tape reaches the end, recording onto the hard disk continues. When you restart the recording by pressing the camcorder's start/stop button after changing the tape, the camcorder will start to record on the tape, and CONSOLE will keep recording onto the hard disk.
- When recording in HDV standard on the tape and hard disk, a new file will be created after changing the tape when you restart the recording by pressing the camcorder's Start/Stop button. The computer stops the recording and restarts recording onto the new file.
- To record the next scene as another file in [Sequence] or [Frame] mode, finalize the file by clicking in recording or when recording is stopped.

○ When the frame rate was changed during recording, recording stops, and a new file will be created when recording is resumed.
○ When using a laptop computer, the recording will not stop even if the display is closed.p

5 Recording onto the Hard Disk

Cache Recording

You can set CONSOLE to store the camcorder picture before recording. When you start recording, the last 10 seconds previous to the recording start are also recorded in the file. By using the cache recording, you can reduce the chances of missing the beginning of important scenes.

⚠ When you start a simultaneous recording while receiving the HDV standard signal, the cache recording cannot be performed.
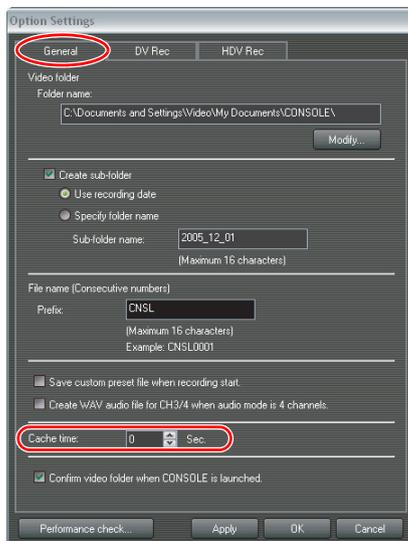
Setting the Cache Time

1
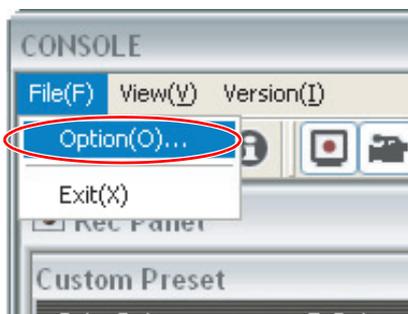
Select [Option] from the [File] menu or click ✷ .

2

Select [General] tab, and set the cache time.
• You can select from "0 Sec." to "10 Sec.".
• Selecting "0 Sec." disables the cache recording function.

3　**Click [OK].**

✎ ❍ When recording in DV and [Recording mode] is set to [Frame], the cache recording function is disabled.
❍ When recording in HDV, the cache recording time is actually longer than the time set.
❍ The cache recording data is cleared in the following cases:
- When the frame rate is changed.
- When the sound recording mode is changed.
- When the recording mode is switched from $\frac{EXT.}{CONT.}$ to one of the other modes or from any other mode to $\frac{EXT.}{CONT.}$.
- When the recording standard is changed.
- When IEEE1394 (DV) is disconnected or reconnected.

Cache Recording

1　**Set the cache time. (📖 5-3)**
If you close CONSOLE after setting the cache time, the cache recording will begin automatically the next time you start the software.

2　**Start the recording. (📖 5-2)**
• CONSOLE records the cached picture and the camcorder picture onto the hard disk.
• The cached picture will not be recorded on the tape.
• When the recording is stopped, CONSOLE starts the cache recording again.

5

Recording onto the Hard Disk

Frame Recording

You can record frame by frame in the same file. This function enables you to easily create a stop motion animation movie.

⚠ ○ When recording in HDV or setting the frame rate to 24F, the frame recording function cannot be used.
○ [DV🔲───] will be displayed in the camcorder screen; however, the frame recording cannot be controlled from the camcorder.
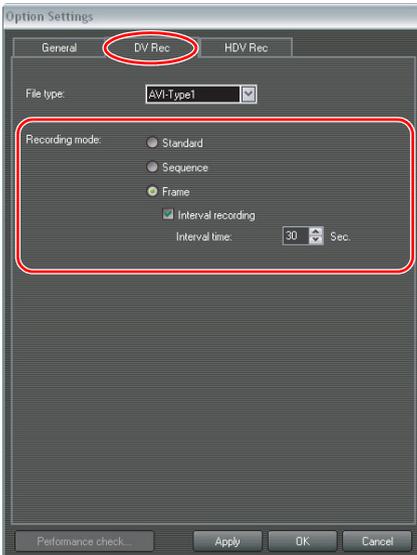
Setting the Frame Recording

1

Select [Option] from the [File] menu or click ✳.

2

Select [DV Rec] tab and select [Frame] as the recording mode.

When [Interval recording] is checked, CONSOLE repeatedly records the frame image at the specified interval time.

3 **Click [OK].**

Frame Recording

1 **Specify the frame recording settings. (📖 5-4)**

2

Click [●] in the [Camera Control] window.

• CONSOLE records onto the hard disk only. You cannot record on the tape when you are recording frame by frame.
• When [Interval recording] is selected in the [Option settings] window, [●] changes to [❚❚], and clicking [❚❚] pauses the recording.
• When [Interval recording] is selected, the remaining time will be displayed in [Rec Viewer].
• If you want to record the next scene to a different file, click [➥] to finalize the file.
• While [❚❚] is appearing, clicking [➥] stops the interval recording. To restart the interval recording, click [●].

5 Recording onto the Hard Disk
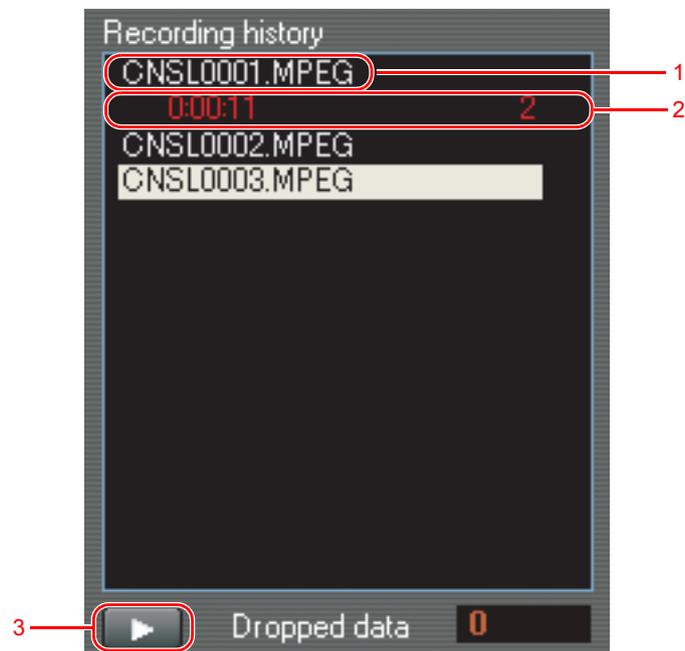
Data Dropping

- When a program accesses the hard disk during recording, a part of the data input from the camcorder may not be written to the file (data dropping). This may happen also when the processing capacity of the computer is insufficient.
- When the data dropping occurs, the number of data droppings occurred in a file will be displayed in the [Information] tab of the [Camera Control] window. When recording in DV, a number of dropped frames and when recording in HDV, a number of dropped blocks are displayed. Dropping one block in HDV recording corresponds to dropping from a few frames to up to 20 frames in DV recording.
- When the data dropping occurs, [DV] changes to [DV] for a few seconds.
- When the file is created on the hard disk after recording, you can check the scenes where data dropping occurred under [Recording history].

Recording History

When you stop recording the picture in [Standard] mode, or when a file is created after finalizing in [Sequence] or [Frame] mode, the created file information will be displayed under [Recording history] in the [Camera Control] window.

⚠ The recording history will disappear when you close CONSOLE. When you wish to review the history after you have closed CONSOLE, open the "CONSOLE.LOG" file in the video folder with a text editor. You can check the file name, recording date, file size, length, file type, and the information about dropped data.

1	File name	Shows the file name recorded with CONSOLE. The file information appears when you leave the mouse pointer on the file name for a moment.
2	Information on dropped data	If data dropping occurred, the position and number of dropped data are shown here.
3	Playback	When a file name is selected: Clicking ▶ starts the playback panel and the file is played back from the beginning. When information on dropped data is selected: Clicking ▶ plays back the file in the [Play Viewer] window from the point where the data dropping occurred.

Chapter 6
Playback the Recorded Files

6 Playback the Recorded Files

You can playback or view the recorded pictures using playback tools in [Play Panel].

[Play Viewer]

You can playback and preview the recorded files.

When the preview image is not smoothly played back, the playing back condition of the image may be improved by hiding the [Rec Panel] or [Rec Viewer], not displaying the camcorder picture.

| 1	Playback Preview	Displays the played back pictures selected in the [File Browser] window. Right clicking on the preview window allows you to select the size of the preview panel (📖4-1) and to display the overlay markers (📖4-2).
2	Audio Monitor Settings	Selects which audio channel to be displayed on the audio level indicator and adjusts the monitor volume.
3	Audio Monitor	Turns ON/OFF the computer's audio monitor output.
4	Audio Level Indicator	Displays the audio level of the playback file.The sound can be monitored with the computer's sound system.
5	Time Slider	Allows you to change the playback position.
6	Special Playback Modes	Specifies the playback speed (Special Playback Modes). There is no sound during special playback. The special playback modes can be applied to fast-forwarding only. DV/HDV: 1/3, 1/2.5, 1/2, 1x, 2x, 4x
7	Output	Displays the playback images on the camcorder screen.
8	▶/⏸	Plays/Pauses the playback file. When you pause the file, click ⏸ to restart the playback.
9	Time Code	Shows the playback position of the file.
10	File Name	Displays the playback file name.

⚠ You cannot monitor the sound on channel 3 and 4 when playing back a MPEG2ES recorded in HDV.

6 Playback the Recorded Files

Output to the Camcorder

By connecting the camcorder to the monitor, you can output the recorded pictures from the computer to the monitor.
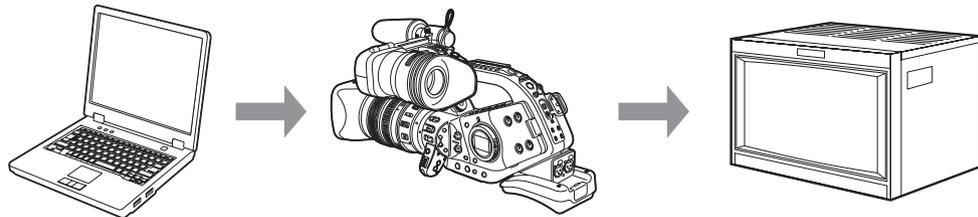
⚠
- ❍ To output the playback pictures to the camcorder, you need to set the camcorder's recording program to EXT.CONT.
- ❍ When using XL H1:
  If you select the HDV mode, only video in HDV standard is displayed on the monitor; if you select the SD mode, only video in DV standard is displayed on the monitor.
  When using XL2:
  Only video in DV standard is displayed on the monitor.
- ❍ The camcorder's SDI terminal cannot be used for outputting pictures from CONSOLE.
- ❍ When setting the camcorder to EXT.CONT. the following limitations apply to CONSOLE.
  - Unable to use the special playback modes.
  - The sound cannot be monitored with the computer's sound system.
  - When pausing the playback, no image is displayed on the monitor.
  - Unable to playback MPEG2ES picture.
  - Unable to record pictures.

1 Click 🔲 in the [Play Viewer] window.
- CONSOLE changes its mode to the output mode, and the camcorder will be set to the receiving mode.
- While the camcorder is set to the receiving mode, recording cannot be performed.

2 Select a file in [File Browser] (📖 6-3).

3 Click [▶] or double-click the selected file in [File Browser].
- The playback file is displayed in [Playback Viewer] and the camcorder.
- Clicking [❙❙] pauses the playback. Clicking [▶] restarts the playback.
- A few frames will not be displayed when you pause and restart the HDV standard file.
- Clicking 🔲 returns the camcorder mode to the recording mode.

Time Slider

You can change the playback position by dragging the slider with the mouse.
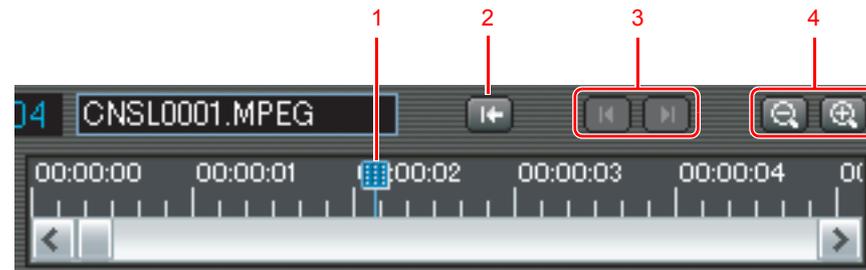
1	Slider
2	The slider returns to the starting point.
3	The slider moves to the data dropping point after the current position.
4	Change the time slider scale.

• Data droppings that occurred during recording are indicated in red.
  - By clicking [▶], the slider moves to the next data dropping point after the current position. By clicking [◀], the slider moves to the previous data dropping point before the current position.


✏
- ❍ While pausing the playback picture, pressing the [←] or [→] key on the keyboard after moving the slider with the mouse allows you to finely adjust the position of the slider.
  - When adjusting the position of the playback picture of an HDV recording with the [←] or [→] key, you cannot adjust the picture frame by frame.

Playback the Recorded Files

File Browser

In the file browser, the files stored in the hard disk are displayed.
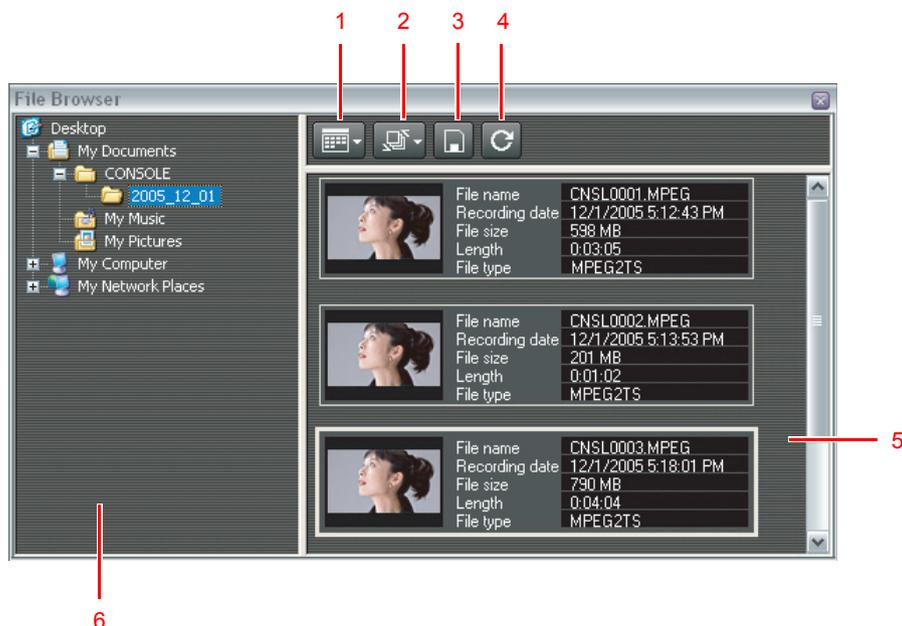
1	Selects the display pattern. You can select to display only the thumbnails or the thumbnails with the file information.
2	Selects the display order of the files.
3	Copies from the memory card (📖6-3).
4	Refreshes the files displayed in the window.
5	Displays the files in the selected folder. Double-clicking a file, the selected file will be played back in [Play Viewer].
6	Displays the explorer view.

❍ Placing the cursor over a file for a few seconds will display the file information.
❍ Files recorded in 24F mode are marked with 🔲 (NTSC only).
❍ To delete a file, right-click the thumbnail and select [Delete] from the displayed menu.
❍ 🔲 will be attached to the thumbnails of all Custom Preset files. By right clicking on the thumbnail, you can check the settings of the Custom Preset and can load the Custom Preset file to the camcorder.

Copying from the Memory Card

You can copy the still image and the Custom Preset files from the memory card to the hard disk.

⚠️ ❍ When using XL2, you cannot use a memory card.
❍ When using XL H1, you need to set the camcorder's recording program to EXT.CONT.
❍ Proper operation cannot be guaranteed if you are not using Canon camcorders to create the image files.

1 **Click 🔲.**
The thumbnails of still image files and the Custom Preset files are displayed.

2 **Select a file you wish to copy.**

• 🔲 is attached to the thumbnails of the still image files that have the corresponding Custom Preset files that were recorded in the separate file at the same time when the images were recorded.
- When selecting a still image with 🔲, the still image and its Custom Preset file also are copied.
• By clicking [Select All] selects all files in the card.
• By clicking [Show Custom Preset file only] displays the Custom Preset files only.

3 **Click [OK].**

4 **Select a folder for storing the copied file.**
To cancel the copying, click [Cancel].

Waveform Vector Monitor

A waveform of the playback picture and the color information are displayed. The functions are the same as the waveform vector monitor (📖4-10) of [Rec Panel].
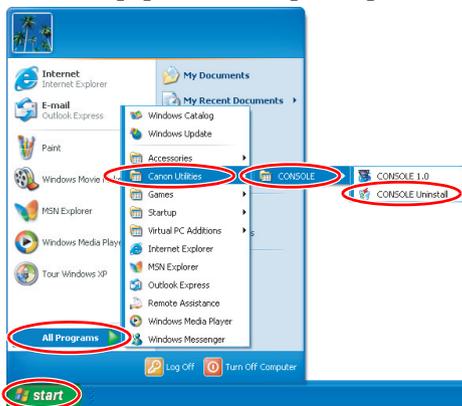
Chapter 7

Uninstall

7 Uninstall

Uninstalling the Software

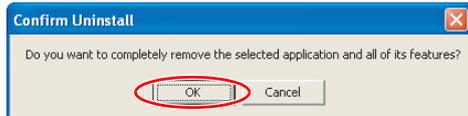Uninstall the software if it has not been installed correctly, or if it is not required anymore.

⚠ ❍ Close any programs that are running, and disconnect the IEEE1394 (DV) cable from the camcorder and the computer before uninstalling the software.
❍ You need to log in as an administrator before uninstalling the software

1 **From the [start] menu, select [All Programs] followed by [Canon Utilities], [CONSOLE] and [CONSOLE Uninstall].**

2 On the confirmation dialog, click [OK].

3 On the confirmation dialog, click [Finish].

Uninstalling the AV/C Camera Storage Subunit-WIA Driver

Uninstall the AV/C Camera Storage Subunit-WIA driver if it has not been installed correctly or if it is not required anymore.

⚠ ❍ Close all programs that are running before uninstalling the driver.
❍ You need to log in as an administrator before uninstalling the driver.

1 **Turn the camcorder power on and set the camcorder's recording program to EXT.CONT.**

2 **Connect the camcorder to the computer using the IEEE1394 (DV) cable.**
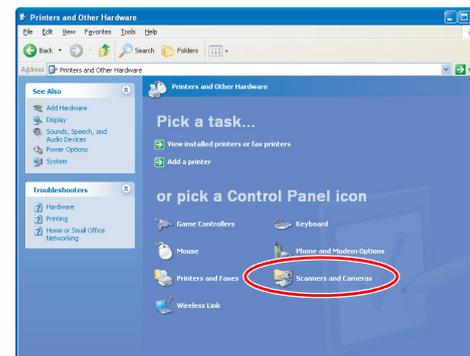If Scanner and Camera Wizard or Explorer is displayed, close the windows.

3 **From the [start] menu, select [Control Panel].**

4 Click [Printers and Other Hardware].
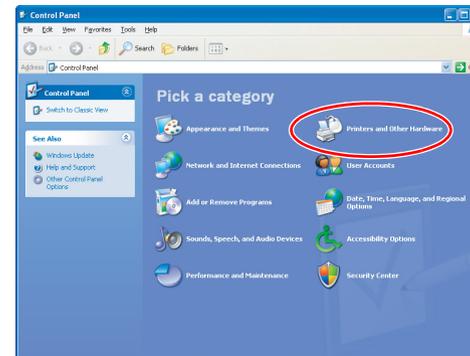
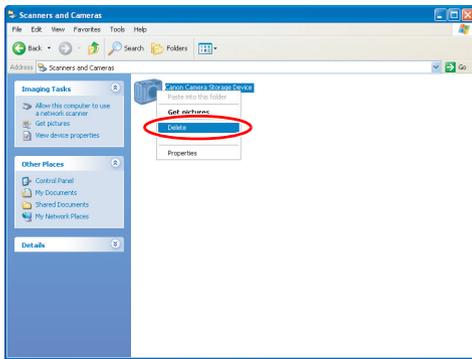**5** Click [Scanners and Cameras].
If you cannot find the [Scanners and Cameras] icon, see *Uninstalling of the Drivers* (📖 7-2).

7 Uninstall

6

Right-click the [Canon Camera Storage Device] icon and select [Delete].

When the icon does not appear, see *Uninstalling of the Drivers* (📖 7-2).

7 **In the confirmation dialog, click [Yes].**

• [#(number)] may appear after [Canon Camera Storage Device], but that would not affect the uninstall process.
• The uninstall process is complete.

Uninstalling of the Drivers

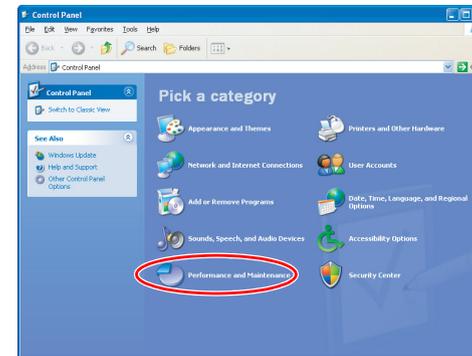If you had problems uninstalling the driver, use the following procedures to remove it.

○ Use the procedures below for the following circumstances too.
   - If you do not find the [Scanners and Cameras] icon in the [Printers and Other Hardware].
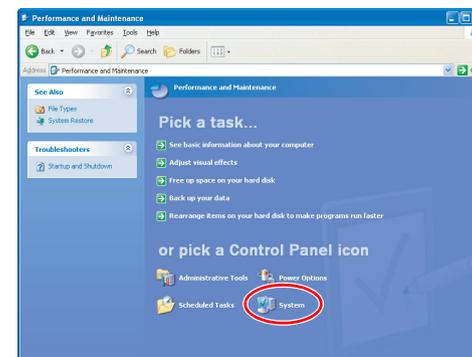   - If the Camera icon does not appear in the [Scanners and Cameras] folder.

1 **From the [start] menu, select [Control Panel].**
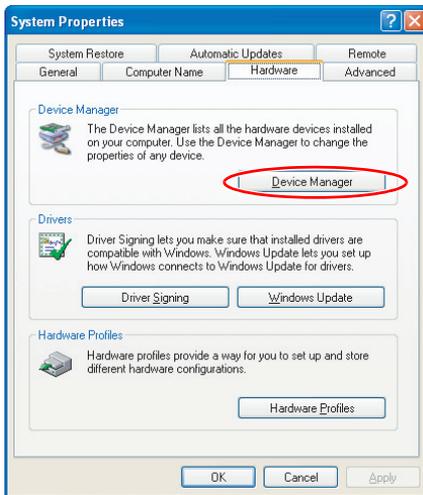
2

Click [Performance and Maintenance].

3

Click [System].

4 **Click the [Hardware] tab on the [System Properties].**
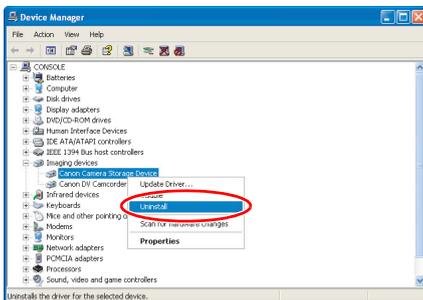
7 Uninstall

5 Click the [Device Manager] button.

6 **If [Canon Camera Storage Device] appears under the [Imaging devices] and/or [Other devices] categories, use the following procedures to delete it.**

1) Right click on [Canon Camera Storage Device] and select [Uninstall] from the menu.

2) In the confirmation dialog, click [OK] and close [System Properties] and [Device Manager]. Remove all copies of the [Canon Camera Storage Device] icon that appear in the [Other devices] or [Imaging devices] categories, or that appear more than once in one category.

7 **From the [start] menu, select [My Computer] and double-click the [C:] (local disk), [WINDOWS] and [INF] folders in succession.**

• If the [INF] folder is not visible in the [WINDOWS] folder, use the following procedures to show all files and folders.
1) Click the [Tools] menu and select [Folder Options].
2) Click the [View] tab.
3) In the [Advanced settings] section, set the [Hidden files and folders] category to the [Show hidden files and folders] option.
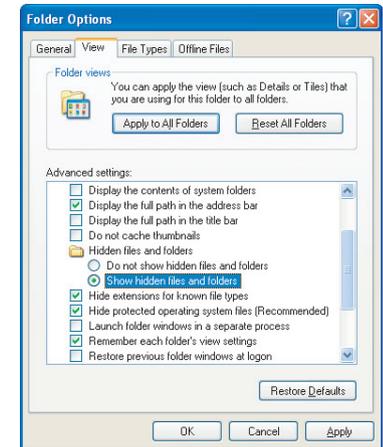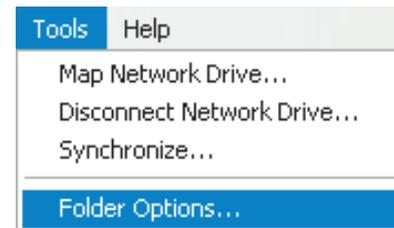
• If [Hide extensions for known file types] is selected, remove its check mark.

7 Uninstall

8 Double-click the [oem*.INF] file.

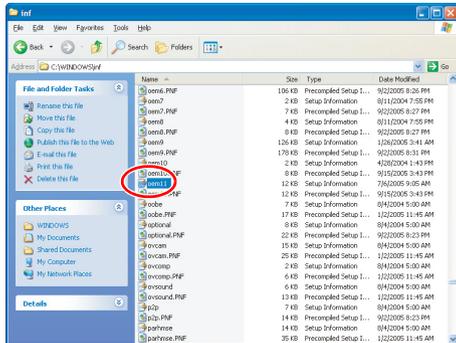- A number such as "0" or "1" appears in place of the asterisk (*) above. You will also find another file called [oem*.PNF], which will have the same number as the [oem*.INF] file. The two constitute one set. There may be many file sets starting with "oem".

- The Windows Notepad program will start and show the file contents.
- When uninstalling the AV/C Camera Storage Subunit-WIA Driver, click each [oem*] file until you find the one that contains [; AV/C Camera Storage WIA driver] in its first line. When you have found the correct file, delete the file set.
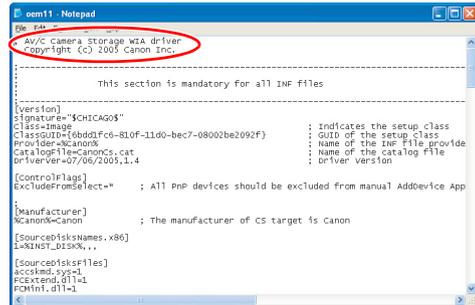
1) Close the Notepad window.
2) Right-click the mouse button and select [Delete].
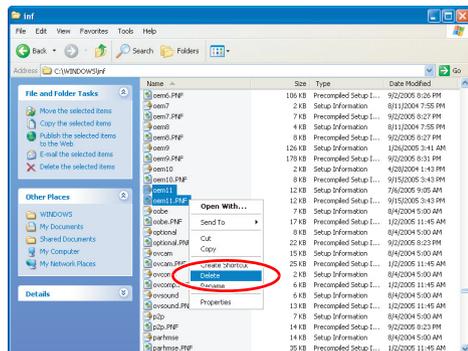
9 Close all windows and restart the computer.

⚠ The [INF] folder contains numerous files that are critical to the computer's operation. Be extremely careful not to delete the wrong files. If you delete the wrong file, you may be unable to restart Windows.

Troubleshooting

? Cannot launch CONSOLE.
➔ [Hardware acceleration] of your computer is not set to [Full].
1) Open the [Control Panel] window and display the [Display Properties] window by clicking the [Appearance and Themes] icon followed by the [Display] icon.
2) Click the [Setting] tab and the [Advanced] button.
3) Click the [Troubleshoot] tab and adjust the [Hardware acceleration] slider to [Full]. Then click [OK].
➔ CONSOLE may not be launched if movie playback software or video editing software is already running. You need to close the software and try to launch CONSOLE.

? Camcorder will not be recognized or controlled.
➔ A camcorder not supported by CONSOLE is connected. Check if your camcorder is supported by CONSOLE (📖 iii).
➔ The DV CONTROL function of the camcorder is set to [OFF]. Set the DV CONTROL function to [ON]. For details, refer to the instruction manual of your camcorder.
➔ More than one camcorder is connected to the computer's IEEE1394 (DV) terminal. Connect only one camcorder to the computer's IEEE1394 (DV) terminal.
➔ If your computer has an IEEE1394 (DV) board/card in addition to the standard IEEE1394 (DV) board/card, or if you have more than 2 IEEE1394 (DV) boards/cards added to the computer, the computer may not recognize the camcorder properly. You need to plug the IEEE1394 (DV) cable to a different board's/card's terminal.
To check if the cable is properly connected, follow the instructions below.
1) Open the [Device Manager] window. (📖 7-2)
2) Select [Devices by connection] from the [View] menu.
3) Look for the IEEE1394 controller with [Canon Virtual VCR].

4) Confirm that [AV/C Tape Device] or [Canon DV Camcorder] is connected.
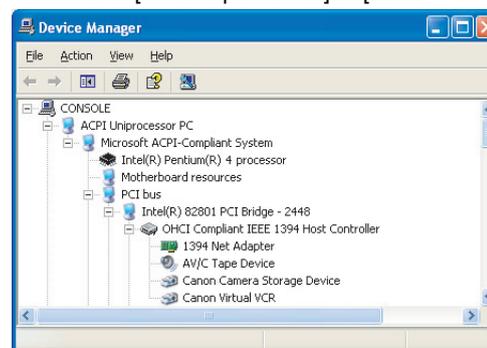
? Even though the dedicated driver (Canon Virtual VCR or AV/C Tape Recorder/Player) is installed already, the [Found New Hardware Wizard] window appears when starting CONSOLE.
➔ When you change the computer's IEEE1394 (DV) card and start CONSOLE, Canon Virtual VCR or AV/C Tape Recorder/Player will be detected as new hardware. Select [Install the software automatically (Recommended)] and click [Next] to install the driver.

? Cannot select a video folder.
➔ Only folders on a NTFS formatted hard disks can be selected as a video folder. You cannot select a folder on FAT32 or FAT16 hard disks.
➔ Removable disks or network drives cannot be selected as a video folder.

Troubleshooting

❓ Recording will not start even when pressing the start/stop button on the camcorder.
➔ The start/stop button on the camcorder is locked. Unlock the button.
➔ When using XL H1: If you connect 4 or more devices (including the connected computer and the XL H1 itself) by IEEE1394 or if the XL H1 and 1 or more other video devices are connected to the computer by IEEE1394, recording onto the hard disk cannot be started by pressing the camcorder's start/stop button.
➔ When using XL2: If the XL2 and 1 or more other devices are connected to the computer by IEEE1394, recording onto the hard disk cannot be started by pressing the camcorder's start/stop button.

❓ [DV ⌕ −−−] appears on the camcorder screen and recordings cannot be made.
➔ Available hard disk space on the drive where the video folder is saved is less than 0.5 GB. Change the drive or delete some files to free more disk space.
➔ The [Option Settings] window is open, or performance check is being carried out. Close the window.
➔ The sequence number of the file exceeds the maximum value (e.g. "DVPC9999999.avi"). Change the video folder or the file name.
➔ The camcorder is in use with another software. Close the software.
➔ The camcorder does not recognize CONSOLE. Close CONSOLE and restart it.

❓ Recording on the hard disk stops in the middle of the recording.
➔ The hard disk capacity is insufficient. Delete files to make space available, or select a video folder on a hard disk with sufficient capacity.

❓ The recorded picture is lacking.
➔ The recording speed of the hard disk is insufficient. Make a performance check (📖 3-3). We recommend defragmenting the drive before you start recording.
➔ A program other than CONSOLE is started. Close all programs other than CONSOLE before recording. If an anti-virus software is activated, deactivate it.
➔ The processing capacity of your computer is insufficient. Reduce the size of [Rec Viewer] or hide it.

❓ The preview image is not played back smoothly.
➔ Depending on the laptop PC's power scheme settings that control the CPU operations, the preview image may not be played back smoothly. Follow the procedure below to change the power scheme settings.
1) Open [Control Panel] and click [Performance and Maintenance].
2) Click [Power Options] and the [Power Options Properties] window will be displayed.
3) Select the [Power Schemes] tab and select [Always On] in [Power schemes].

Appendix

Shortcut Keys

■ **Displaying [Rec Panel]:** [7]

Changing the tools in [Rec Panel]: [+]

■ **Displaying [Play Panel]:** [9]

Changing the tools in [Play Panel]: [+]

■ **[Camera Control]**

Start/Stop recording: [0]
Finalize: [.]
Displaying the [Control] tab: [*]
Displaying the [Information] tab: [/]
Switching the setting item
    Next: [↓], [Tab]
    Previous: [↑], [Shift] + [Tab]
    Up: [8]
    Down: [2]
    Right: [6]
    Left: [4]
    Setting the level:[←], [→]

■ **[Custom Preset]**

Switching the setting item
    Next: [↓], [Tab]
    Previous: [↑], [Shift] + [Tab]
    Up: [8]
    Down: [2]
    Right: [6]
    Left: [4]
Moving the slider
    Increase: [→]
    Decrease: [←]
Changing items in the pull down menu
    Up: [↑]
    Down: [↓]

■ **[Play Viewer]**

Start/Stop Playback: [0]

■ **Full Screen:** [F12]

Canon