VIXIA

ImageMixer 3

Simple Video Editing

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Precautions When Installing ImageMixer 3 SE (ImageMixer)

ImageMixer 3 must be installed in a personal computer in order to edit video, and record video on DVDs and Blu-ray discs. Find the serial number of the camcorder and install ImageMixer 3 according to the separate installation guide.
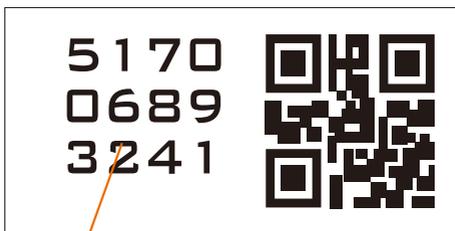
Finding the Serial Number

The serial number is necessary to install ImageMixer 3

When ImageMixer 3 is installed, it will ask for the serial number. Input the 12-digit serial number without any spaces.

* Refer to the separate installation guide for details.

The serial number is printed on the camcorder in a four-digit by three-line format. The location of the serial number will vary depending on the model, so find it by referring to the illustrations below.


This is the serial number. The 12-digit number is printed in three four-digit lines. In this example the serial number is 517006893241.

Locations of Serial Numbers by Model

Where is the serial number on the VIXIA HF M31 / HF M30 / HF M300

It is on the bottom of the camcorder body. Refer to the illustration on the right to find the serial number.

● Location of the serial number on the VIXIA HF M31 / HF M30 / HF M300
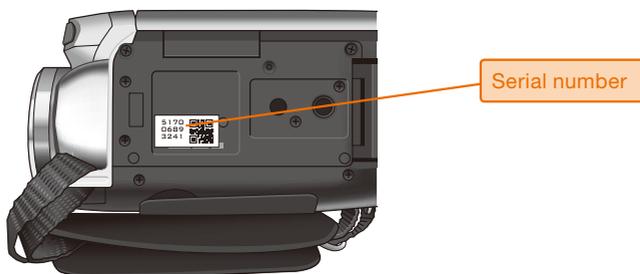
Serial number

● Location of the serial number on the VIXIA HF R11 / HF R10 / HF R100

Where is the serial number on the VIXIA HF R11 / HF R10 / HF R100

It is on the bottom of the camcorder body. Refer to the illustration on the left to find the serial number.

Serial number

● Location of the serial number on the VIXIA HF S21 / HF S20 / HF S200

Where is the serial number on the VIXIA HF S21 / HF S20 / HF S200

It is below the viewfinder. Refer to the illustration on the left and remove the battery to find the serial number.

Remove the battery.

DC IN

START/ STOP

Serial number

Importing Video from the Camcorder

In order to edit video, it must first be imported into the computer. ImageMixer 3 will start automatically when the camcorder and computer are connected with a USB cable. Follow the steps below to import the video into the personal computer.

Connect the Camcorder to a Wall Outlet

Install ImageMixer 3
Refer to the separately included instructions and install ImageMixer 3. See pages 2 and 3 of this manual on how to find the serial number.

The location of the DC IN terminal differs according to the camcorder model
The location of the DC IN terminal differs according to the camcorder model. Refer to the illustrations on the right to find where to connect the compact power adapter.

● Connecting the VIXIA HF M31 / HF M30 / HF M300 to a wall outlet

❶ Connect the power cord and compact power adapter.
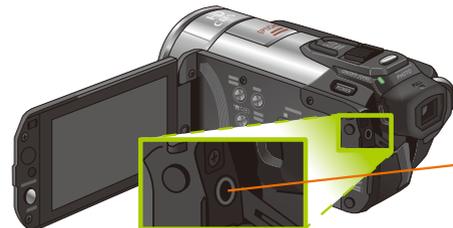
❷ Plug the power cord into a wall outlet.

❸ Connect the compact power adapter to the DC IN connection on the camcorder.

● Connecting the VIXIA HF R11 / HF R10 / HF R100 to a wall outlet

❸ Connect the compact power adapter to the DC IN connection on the camcorder.
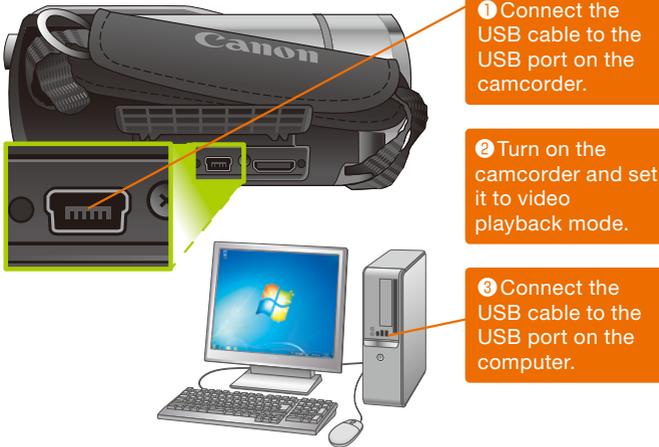
● Connecting the VIXIA HF S21 / HF S20 / HF S200 to a wall outlet

❸ Connect the compact power adapter to the DC IN connection on the camcorder.

Connect the Camcorder to the Computer

● Connecting the VIXIA HF M31 / HF M30 / HF M300 and the USB cable
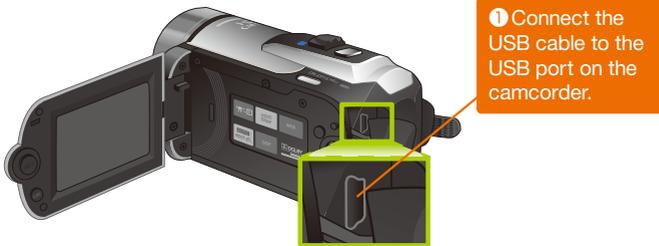
❶ Connect the USB cable to the USB port on the camcorder.

❷ Turn on the camcorder and set it to video playback mode.

❸ Connect the USB cable to the USB port on the computer.

The location of the USB port differs according to the camcorder model

The location of the USB port also differs according to the camcorder model. Refer to the illustrations on the left to find the location of the USB port.

● Connecting the VIXIA HF R11 / HF R10 / HF R100 and the USB cable

❶ Connect the USB cable to the USB port on the camcorder.

Refer to the instructions for the VIXIA HF M31 / HF M30 / HF M300 and connect the camcorder to the computer.

● Connecting the VIXIA HF S21 / HF S20 / HF S200 and the USB cable

❶ Connect the USB cable to the USB port on the camcorder.

Refer to the instructions for the VIXIA HF M31 / HF M30 / HF M300 and connect the camcorder to the computer.

Importing from SD Memory Cards

It is also possible to import video from SD memory cards by using a card reader/writer with a USB connection. In this case, the card reader/writer is connected to the computer and the media on which the video is recorded is inserted into the reader/writer.

* ImageMixer 3 can only import video from the camcorder with which it was bundled.

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Importing Video

ImageMixer 3 System Requirements

ImageMixer 3 operating environment

OS: Windows XP/Vista/7 *1

CPU: Intel Pentium D 3.0 GHz or faster
Intel Core 2 Duo 2.13 GHz or faster

RAM: 1 GB or more for XP, 2 GB or more for Vista or 7

Hard disk: More than 300 MB of free capacity

Display: 1280 x 1024 pixels or more, 32-bit color or higher
Intel G965 (on-board VGA) or higher

Sound: Microsoft Direct Sound compatible sound card

Drive: DVD-writable drive

Others: USB 2.0, DirectX 9.0c, and an Internet connection

*1 When using Windows XP, only compatible with Service Pack 2 or Service Pack 3.

*2 When creating a disc, free capacity that is equivalent to two times the capacity of the disc is necessary.

What about other ways to start ImageMixer 3?

If ImageMixer 3 doesn't start automatically, then start it with either of the two methods below.

- Double click the "Image Mixer 3 SE Ver. 6" shortcut icon on the desktop.
- From the [Start] menu click [All Programs] - [PIXELA] - [ImageMixer 3 SE Ver. 6] - [ImageMixer 3 SE Ver. 6].
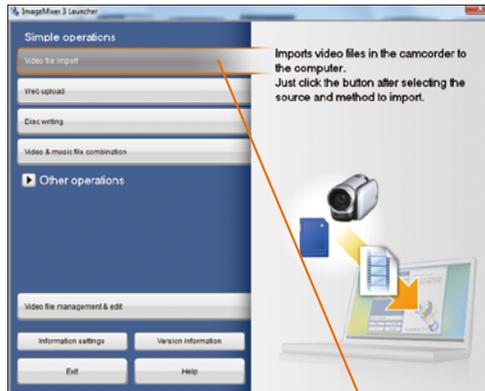

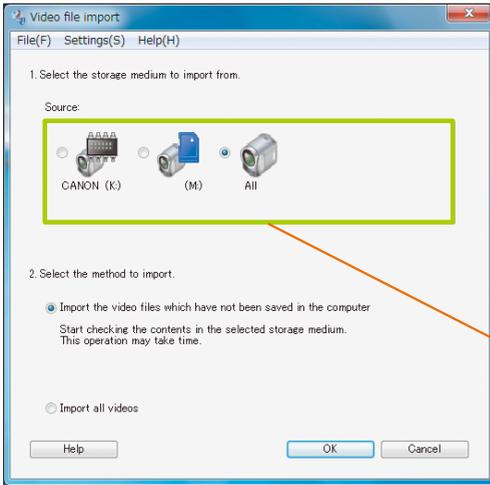A screen similar to this will be displayed on the camcorder LCD.

Select the type of device for the USB connection

DVD Burner | Computer/Printer

❶ Select [Compurer/Printer].

The operation will differ according to the camcorder model.
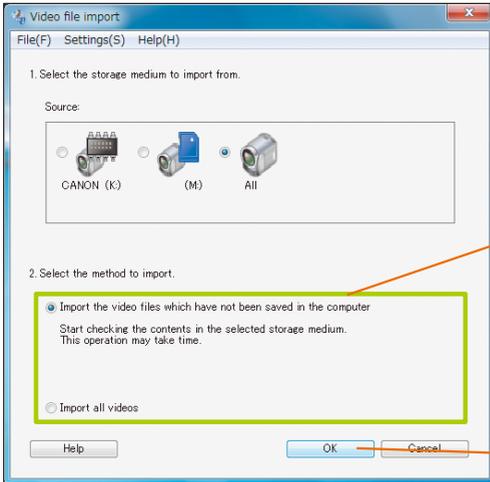
The ImageMixer 3 launcher will start.

Simple operations

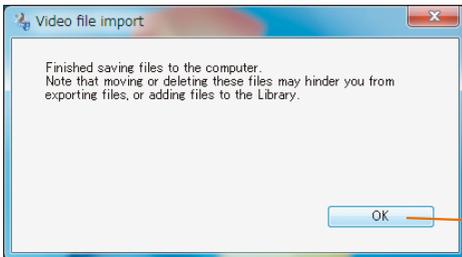Video file import — Imports video files in the camcorder to the computer.
Just click the button after selecting the source and method to import.

Web upload

Disc writing

Video & music file combination

▶ Other operations

Video file management & edit

Information settings | Version information

Exit | Help

❷ Click [Video file import].

The [Video file import] dialog is displayed.

❸ Select the source.

Which media to select?
The icons displayed as the "Sources" correspond to the following media:

…SD memory card inserted in the camcorder

…Built-in camcorder memory

…SD memory card inserted in the camcorder and built-in memory

…SD memory card inserted in a card reader/writer

❹ Select the import method

❺ Click [OK].

What is the difference between "video not saved in the computer" and "all video"?
When "Import the video files which have not been saved in the computer" is selected, only video that has not been saved will be imported. When "Import all videos" is selected, all the video files in the "Source" are imported. In the latter case, all video will be imported, including video that is already in the computer.

The [Video file import] dialog is displayed.

❻ Click [OK].

Preparing to Edit Video

You can edit the video after it has been imported into the computer. First, select the video to edit from among the imported files and then save the information as a project.
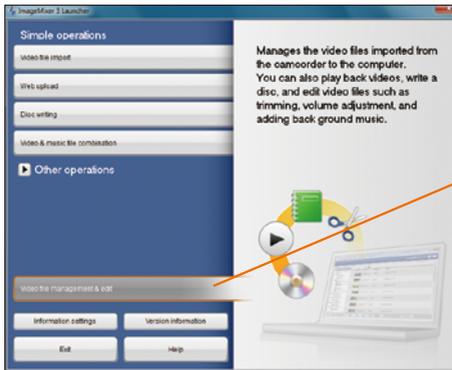
Selecting the Video File to Edit

What is a project?

When editing video, one production can be made up of multiple video files, and text and music can be added. A project is a record of all of these steps. The selected video files and edited information can be saved as a project. When you start editing video, think of it as, "Starting to create a project."

Start ImageMixer 3 as described in Lesson 1.

❶ Click [Video file management & edit].

How to select multiple video files

After selecting one video, hold down the [Shift] key and select another. All of the video files in between will also be selected. Holding down the [Ctrl] key and clicking video files will select all the files that were clicked.
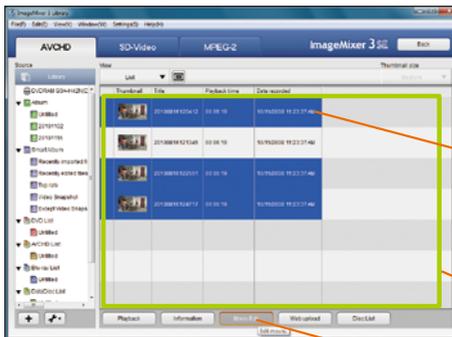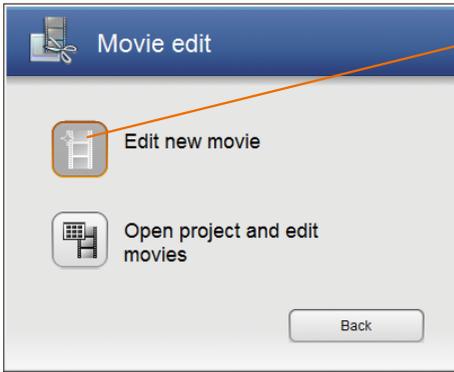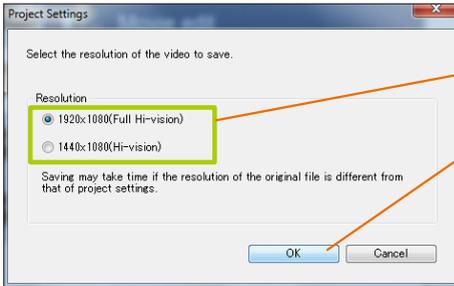

Double click a video file to start playing it to check its contents.

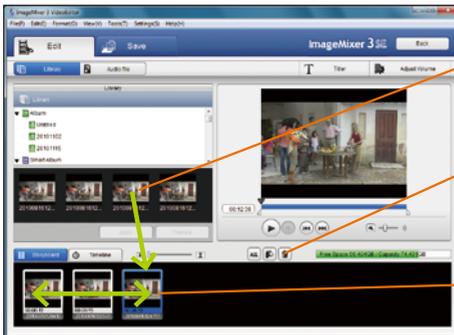❷ Select the video file to be edited.

❸ Click [Movie Edit].

Movie edit

Edit new movie

Open project and edit movies

Back

❹ Click [Edit new movie].

Project Settings

Select the resolution of the video to save.

Resolution
- 1920x1080(Full Hi-vision)
- 1440x1080(Hi-vision)

Saving may take time if the resolution of the original file is different from that of project settings.

OK   Cancel

❺ Click the resolution.

❻ Click [OK].

How to select the resolution
This is where you select "Full Hi-vision" or "Hi-vision" resolution for the edited video file.

Add a video file by dragging it to the storyboard.

Select a video file and click this button to delete it.

Drag and drop a video file to change the sequence.

How to add, delete and change the order of video files
Videos can be added to the project by dragging the files from the library to the storyboard. A video can be deleted from a project by selecting the video in the storyboard and clicking on the "wastebasket" icon. Dragging and dropping a video file to the left or right in the storyboard will change the order of the videos.

Saving the Project

❶ Click [File].

When to save a project
The project should be saved after deleting unneeded videos, adding text, adding music or doing any other editing.
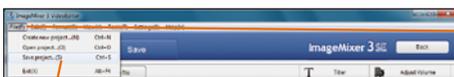
❷ Click [Save project].

Input the file name in the displayed screen, and then click [Save] to save the project.

Cutting Unwanted Video

Recorded video sometimes includes unwanted scenes. In such cases, you can cut the unnecessary scenes and keep only the scenes you want. This process is called trimming. ImageMixer 3 allows trimming of multiple scenes from one video.

Trimming One Scene

What are the IN-point slider and OUT-point slider?
"The range of the video to be kept" is specified with two points. The IN-point slider is used to specify the starting point of "the range of the video to be kept," then the OUT-point slider is used to specify the end point.

Select the video file as described in Lesson 2.

Select the starting point of the scene to be kept.

❶ Drag the [IN-point slider] to the desired location.

Select the end point of the scene to be kept.
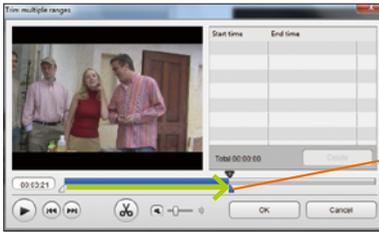
❷ Drag the [OUT-point slider] to the desired location.

Selecting and Trimming Multiple Scenes
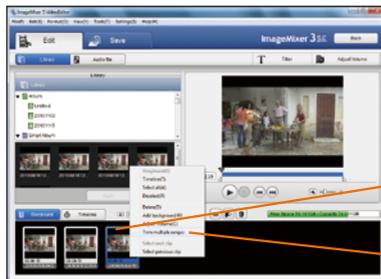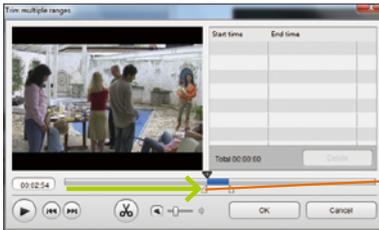

Select the video file as described in Lesson 2.

❶ Right click the video file to be trimmed.
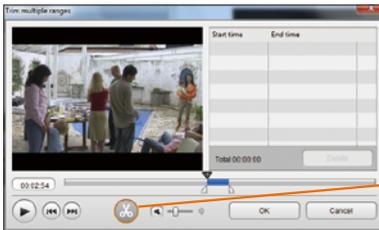
❷ Click [Trim multiple ranges].

Select the ending point of the scene to be kept.

❸ Drag the [OUT-point slider] to the desired location.

Select the starting point of the scene to be kept.

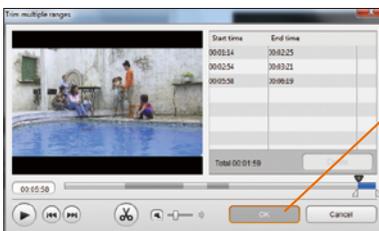❹ Drag the [IN-point slider] to the desired location.

The starting point and ending point have been selected.

❺ Click this button.

The scene to be kept has been selected.

❻ Repeat the steps above to trim multiple clips

❼ Click [OK].

What if a clip is deleted by mistake?

Drag the IN-point and/or OUT-point slider to re-designate "the range of the video to be kept." This method can also be used to recover scenes that have already been cut.

Adding Text to Videos

ImageMixer 3 includes a "Titler" that allows you to add text to videos. Text can be added in the desired color, font and size to any scene. In addition, the text can be animated, so that superimposed text such as that used in television programs can be made.

Select the Scene and Input the Text

How to switch between the storyboard and timeline

The "storyboard" that shows the playback order of the video files and the "timeline" that shows the elapsed time for text, clips and music are displayed at the bottom of the screen. These can be switched by clicking the appropriate tab.
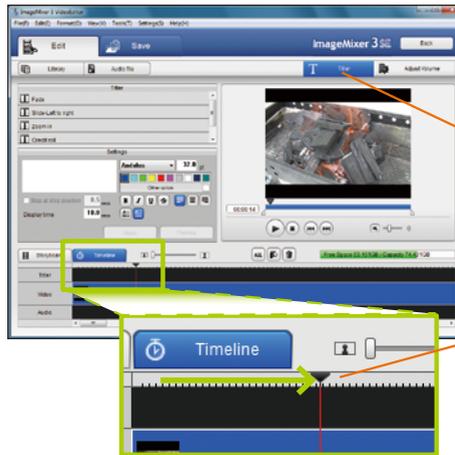
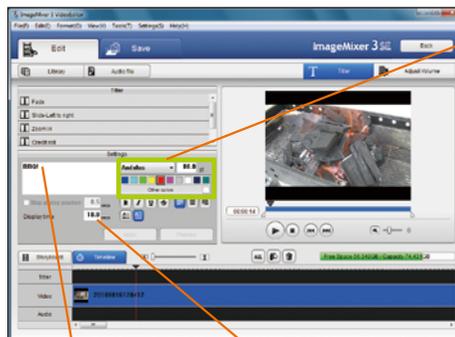

Select the video file as described in Lesson 2.

❶ Click [Titler].

Select the point at which to start displaying the text.

❷ Drag the ▼

What colors to use?

The fundamental is to use "light colors" for dark video clips and "dark colors" for light clips. It is also possible to use colors effectively to show emotions; for example, use red for happy scenes and blue for sad ones.

❸ Select the font color and size.

❹ Input the text.

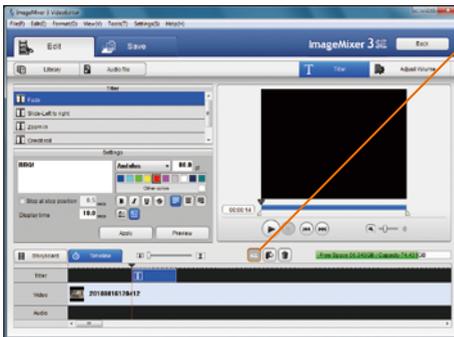❺ Set the text display duration in [Display time].

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❻ Click [Fade].

❼ Click [Apply].

What kinds of display are available?

[Fade] - Text is faded in.
[Slide-Left to right] - Text slides from left to right.
[Zoom in] - Text is gradually made bigger.
[Credit roll] - Text moves from the bottom of the screen to the top.
[Display(Stop)] - Text is displayed as is. (No enhancement)

Checking the Video with the Added Text

❶ Click [ALL].

How to change text after seeing the preview

If [Apply] has not been clicked yet, then the same procedure as that described above can be used to make changes. If [Apply] has been clicked, right-click the Titler (T icon) to delete it, then restart the process from the beginning.

❷ Click the Play button.

A preview is displayed.

Where can text be used effectively?

Text is effective when used in scenes where the location or time/date changes. The Titler can also be used to emphasize the script or to create ending credits for the production staff.

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Adding Music to Videos

ImageMixer 3 has a function to add music to videos. You can make a more professional-looking video by adding sound effects to increase tension or by adding background music to create a certain type of atmosphere. Give it a try.

Selecting the Music File to Add

What kinds of music files can be used?

The music files must meet the following requirements:
- File format: Linear PCM WAVE files (.wav/.wave)
- File size: Less than 1 GB
- Length: 0.5 second or longer
- Quantized bit rate: 16-bit
- Sampling frequency: 48 kHz or 44.1 kHz
- Channels: 2 channels
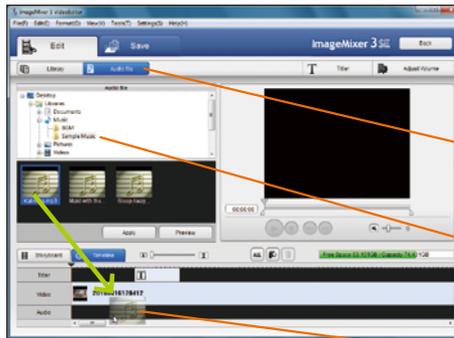
Select the video file as described in Lesson 2.

❶ Click [Audio file].

❷ Select the folder in which music files are saved.

❸ Drag and drop the music file.

Adjusting the Volume of the Added Music File

**The starting point of the music file can be selected**

Dragging the music file to the left or right in the timeline (audio) at the bottom of the screen will allow the music to start at the desired point.

Video file volume can also be adjusted

The sound volume of a video can be adjusted by right-clicking a video on the timeline and selecting [Adjust volume]. The volume is adjusted in the same way as adjusting music file volume.

❶ Click [Adjust volume].
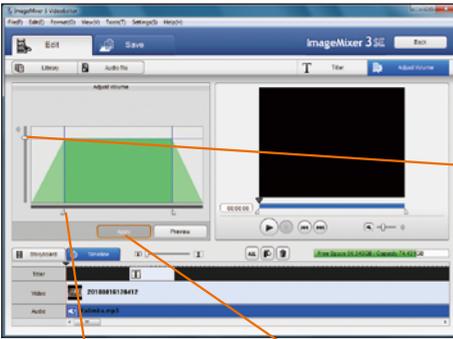
The [Adjust volume] screen is displayed.

❷ Drag the up/down slider to adjust the volume.

❸ Drag the left/right slider to adjust fade-in and fade-out.

❹ Click [Apply].

What are fade-in and fade-out?

Fade-in is when there is no sound and volume is gradually increased. Conversely, fade-out is when volume is gradually reduced to silence.
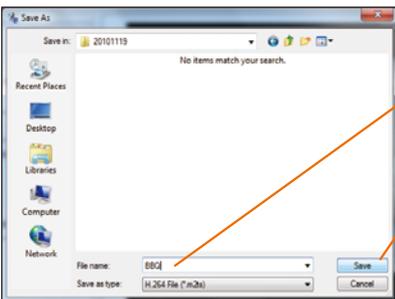
Saving Edited Files

❶ Click [Save].

❷ Click [Save].

❸ Input the file name.

❹ Click [Save].

Click [OK] in the displayed screen.

Why save as an edited file?

Use this function to save files after editing a video file by trimming unnecessary scenes, adding text, or adding music. Unless a file is saved, the edited results will be lost.

Using only background music

A scene in which the video audio is muted and only the background music is audible can be made by reducing the volume of the video to zero for sections where music files have been added. This type of editing is effective for scenes where a character is remembering a past event or similar scenes.

Preparing to Write to DVDs

There are times when you want to write images to a DVD; for example, when you want to show a friend your video. This section describes how to write video to DVDs. First a "DVD List" (or "AVCHD List") must be prepared to write videos to DVD with ImageMixer 3.
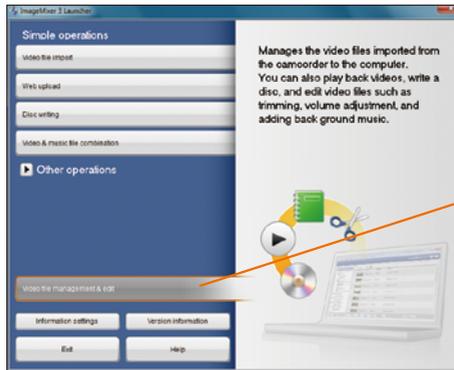
Select the Video Files to be Written

What is AVCHD?

AVCHD is a video file format that allows recording in high definition. The main feature of this format is that by using the high compression rate H.264 standard high quality video can be recorded even with small capacity media.

Start ImageMixer 3 as described in Lesson 1.
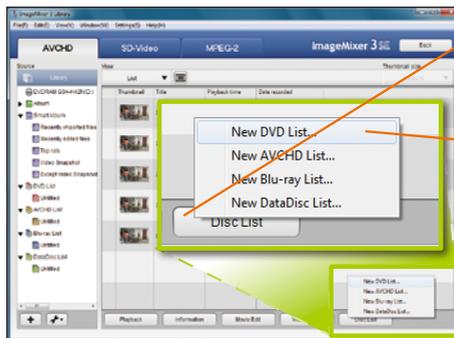
❶ Click [Video file management & edit].

Recently edited files can be selected

A list of only recently edited files can be displayed by selecting [Smart Album] - [Recently Edited Files] from the menu on the left. This is a useful tool when you have many videos and it is difficult to find the ones you want.
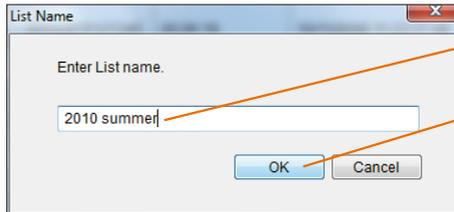
❷ Click [Disc List].

❸ Click [New DVD List].

❹ Input the list name.

❺ Click [OK].

❻ Click [Library].

❼ Drag the video files to be written to the list.
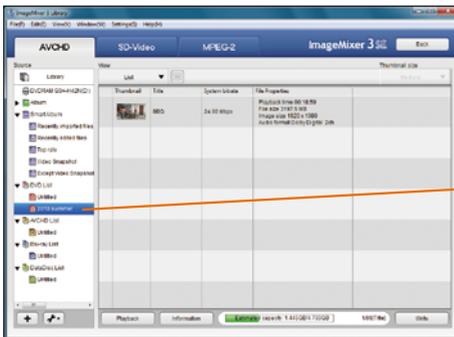
❽ Click [Yes].

The steps above can be repeated to add more video files.

❾ Click the created list to check the contents.

What about the quality of the files written to DVD?

In the case of "DVD Lists," the video will be converted to standard definition and then written. In the case of "AVCHD Lists," the videos can be recorded in high definition. However, DVDs that are recorded with the latter method will require an AVCHD-compatible DVD player to play them.

What is the difference between clicking [Yes] and [No] when combining files?

When [Yes] is clicked, the videos in the list are combined into a single title and written. Click [No] to write the videos as separate titles and allow them to be handled as chapters.

Files can be added to lists at a later time

To add videos to a list at a later time, click [Library] and use the steps described above. Conversely, to delete videos from a list, right-click a video on the list confirmation screen and select [Delete].

Writing to DVDs

After a list has been created, it is time to write the videos to a DVD. However, because DVD-R and DVD-R DL discs can only be written to once, make sure that there are no mistakes in the list before starting the process. It is also necessary to make sure that the CD/DVD drive in the computer is compatible with the discs.

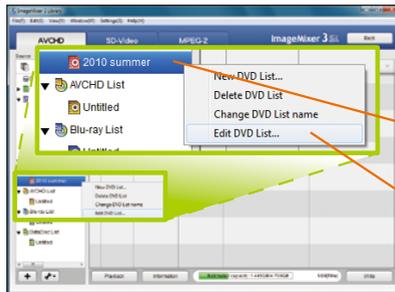## Select the List to Write

What is needed to write?

Three types of discs can be used: DVD-R, DVD-RW and DVD-R DL. Because DVD-R and DVD-R DL discs can only be written to once, be sure to use unrecorded discs. Also, make sure that the drive in the computer can write to DVDs.

Create a list as described in lesson 6.

❶ Right click the list to write to DVD.

❷ Click [Edit DVD List].

The menu screen can be selected

ImageMixer 3 has six menu screens that can be used. They have different backgrounds and designs, so select the one that is most suitable.

❸ Select a menu.

❹ Select the size of the disc.

❺ Click [OK].

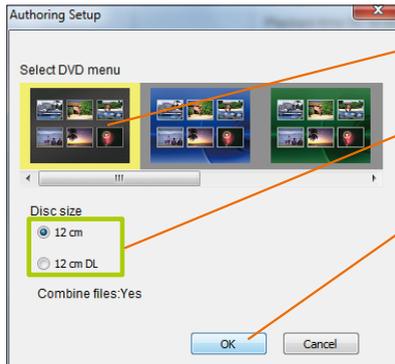### What is the "DL" in "12cm DL"?

There are two types of DVDs: Single layer (about 4.7 GB) and dual layer (about 8.5 GB). "DL" refers to dual layer DVDs. This is where you specify one of these types. When using a single layer DVD-R or DVD-RW, then select "12cm." When using a dual layer DVD-R DL, then select "12cm DL."

Writing to Discs

This describes writing to a DVD-R.

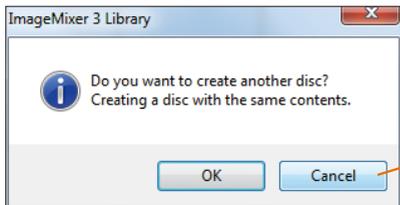❶ Load a DVD in the computer's drive.

❷ Click [Write].

ImageMixer 3 Library

⚠ Create a disc with the files combined.

OK

❸ Click [OK].

Write Setup

Writing Drive:
HL-DT-ST DVDRAM GSA-H42N (D)

Ready to write.
You cannot cancel during writing.

Disc Erase
◉ Quick Erase
○ Complete Erase

☐ Write after testing
☐ Check after writing
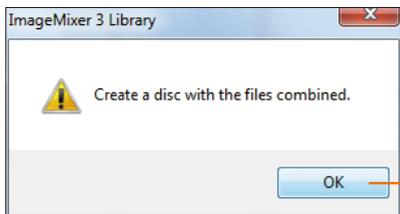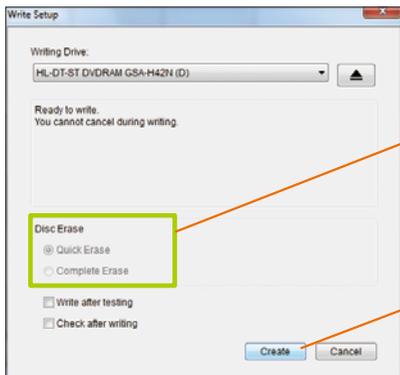
Create   Cancel

When using a DVD-RW, select Disc Erase.

❹ Click [Create].

ImageMixer 3 Library

ⓘ Do you want to create another disc?
Creating a disc with the same contents.

OK   Cancel

Writing to the disc is completed.

❺ Click [Cancel].

What is disc erase?
When using a DVD-RW any data on the disc must be erased before the video can be written. Although "quick erase" erases the data faster, in rare cases it can fail to erase the data. "Complete erase" is more certain, but takes more time to erase the data.

How to create more than one copy of the same disc
It is possible to create many copies of the same DVD. In this case, click [OK], and mount a new DVD in the computer to continue the writing process.

Preparing to Write to Blu-ray Discs

Blu-ray discs are used to write long videos in high definition. This section describes the preparations to write video to Blu-ray discs. Follow the steps described below.

Select the Video File to Write
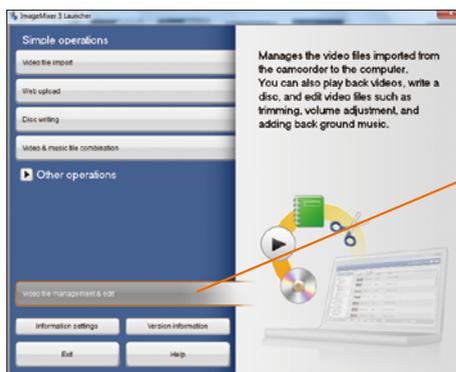
What is AVCHD?

AVCHD is a video file format that allows recording in high definition. The main feature of this format is that by using the high compression rate H.264 standard high quality video can be recorded even with small capacity media.

What are Blu-ray discs?

These are discs that were developed mainly to record high definition video. They are able to record more than five times the capacity of DVDs. The discs are the same 12 cm diameter as CDs and DVDs.
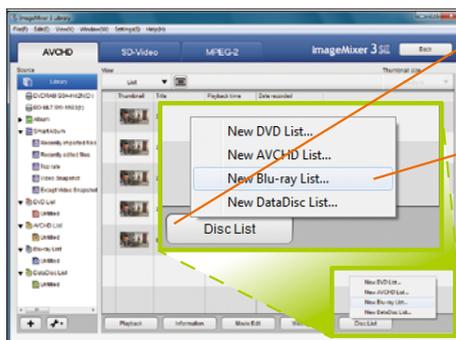
Recently edited files can be selected

A list of only recently edited files can be displayed by selecting [Smart Album] - [Recently Edited Files] from the menu on the left. This is a useful tool when you have many videos and it is difficult to find the ones you want.
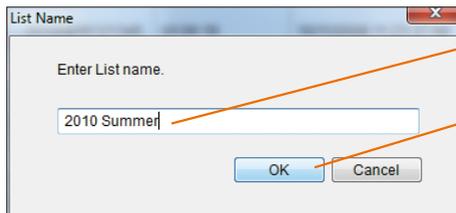
Start ImageMixer 3 as described in Lesson 1.
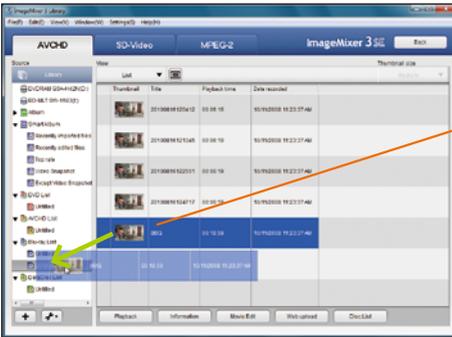
❶ Click [Video file management & edit].

❷ Click [Disc List].
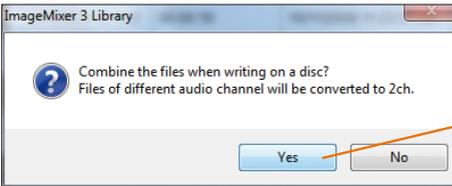
❸ Click [New Blu-ray List].

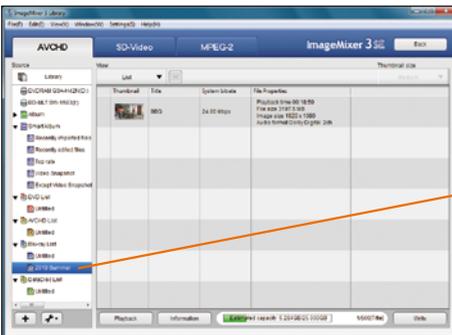❹ Input the list name.

❺ Click [OK].

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❻ Click [Library].

❼ Drag the video files to be written to the list.

ImageMixer 3 Library

Combine the files when writing on a disc?
Files of different audio channel will be converted to 2ch.

Yes   No

❽ Click [Yes].

The steps above can be repeated to add more video files.

❾ Click the created list to check the contents.

What is the difference between clicking [Yes] and [No] when combining files?

When [Yes] is clicked, the videos in the list are combined into a single title and written. Click [No] to write the videos as separate titles and allow them to be handled as chapters.

Files can be added to lists at a later time

To add videos to a list at a later time, click [Library] and use the steps described above. Conversely, to delete videos from a list, right-click a video on the list confirmation screen and select [Delete].

Writing to Blu-ray Discs

After a list has been created, it is time to write the videos to a Blu-ray disc. A drive that can write to Blu-ray discs is necessary for this process. Also, a Blu-ray compatible player is necessary to play back Blu-ray discs.

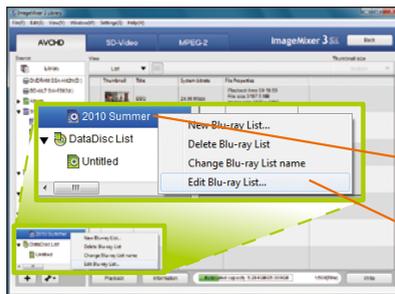## Select the List to Write

What is needed to write?

Four types of discs can be used: BD-R, BD-RE, BD-R DL and BD-RE DL. Because BD-R and BD-R DL discs can only be written to once, be sure to use unrecorded discs. Also, make sure that the drive in the computer can write to Blu-ray discs.

Create a list as described in lesson 8.

❶ Right click the list to write to the Blu-ray disc.

❷ Click [Edit Blu-ray List].

The menu screen can be selected

ImageMixer 3 has six menu screens that can be used. They have different backgrounds and designs, so select the one that is most suitable.

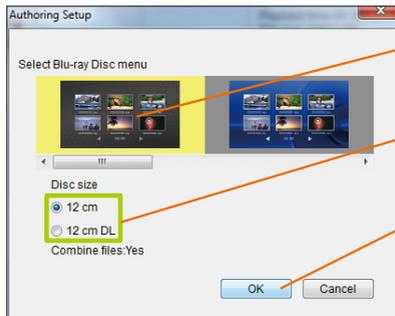### What is the "DL" in "12cm DL"?

There are two types of Blu-ray discs: Single layer (about 25 GB) and dual layer (about 50 GB). "DL" refers to dual layer Blu-ray discs. This is where you specify one of these types. When using a single layer BD-R or BD-RE, then select "12cm." When using a dual layer BD-R DL or BD-RE DL, then select "12cm DL."

❸ Select a menu.
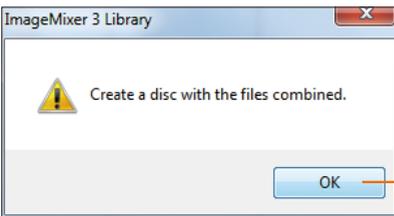
❹ Select the size of the disc.

❺ Click [OK].
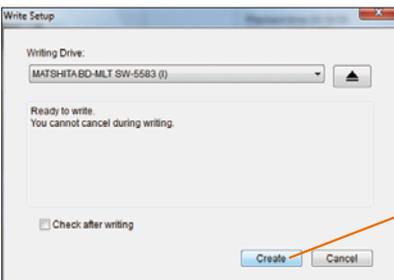
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Writing to Discs

This describes writing to a BD-R.

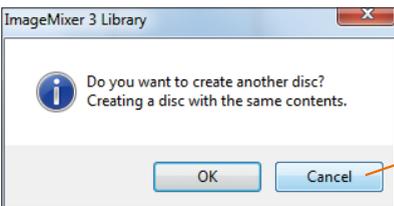❶ Load a Blu-ray disc in an external drive or the computer's drive.

❷ Click [Write].

ImageMixer 3 Library

⚠ Create a disc with the files combined.

OK

❸ Click [OK].

Write Setup

Writing Drive:

MATSHITA BD-MLT SW-5583 (I) ⏏

Ready to write.
You cannot cancel during writing.

☐ Check after writing

Create   Cancel

❹ Click [Create].

ImageMixer 3 Library

ℹ Do you want to create another disc?
Creating a disc with the same contents.

OK   Cancel

Writing to the disc is completed.

❺ Click [Cancel].

How to create more than one copy of the same disc

It is possible to create many copies of the same Blu-ray disc. In this case, click [OK], and mount a new Blu-ray disc in the computer to continue the writing process.

Uploading Camcorder Video Directly to Video Sharing Sites

You can make your recorded videos available around the world through the Internet by uploading them to video sharing web sites. ImageMixer 3 can be used to upload videos. This last section describes how to upload recorded videos to YouTube.

Uploading Video Files to YouTube

How to create files to upload to the Web

In addition to the method described here, the camcorders themselves can be used to create video files for uploading. ImageMixer 3 converts video files to the WMV format for uploading, and the camcorders convert them to the MPEG-2 format.
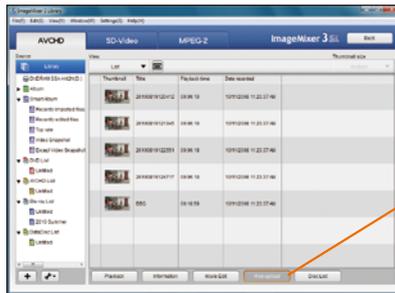
Display the video file as described in Lesson 2.

❶ Click [Web upload].
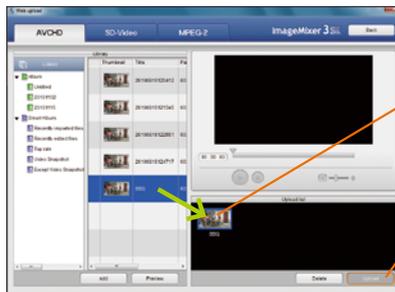
❷ Drag and drop the video file to be uploaded.
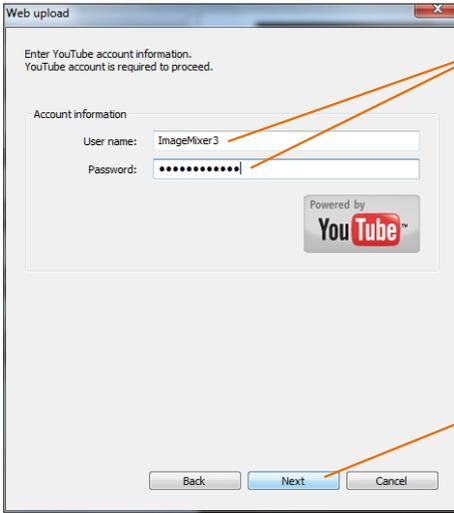
❸ Click [Upload].

What is YouTube?

YouTube is a web site to which individuals can upload videos. Anyone with an Internet connection can see the uploaded videos, so it is possible to show videos to a global audience.

YouTube URL:
http://www.youtube.com/

❹ Select the video quality.

❺ Click [Next].

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❻ Input the YouTube user name and password.

If you do not have a YouTube user name and password, refer to "Acquiring a YouTube account" on the right and create an account.

❼ Click [Next].

Acquiring a YouTube account

Access the URL below and register your user name, e-mail address and password to create an account. YouTube can also be used through a Google account.

YouTube account creation URL:
http://www.youtube.com/create_account
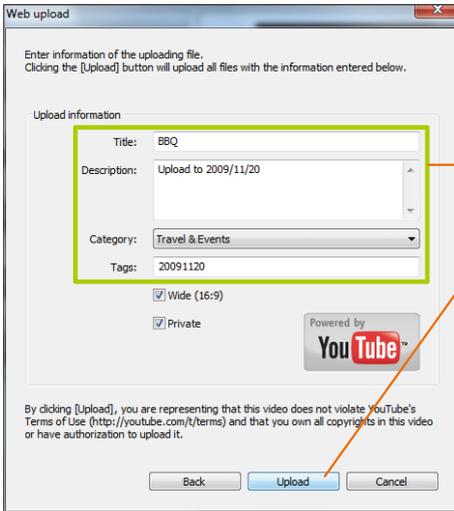
❽ Input the title, description, category and tags.

❾ Click [Upload].

What to input for the title and description

The text you input here will be made public on the YouTube site. The description of the video should be easy to understand, and should also attract the interest of viewers. Including words that others might search for is very effective.
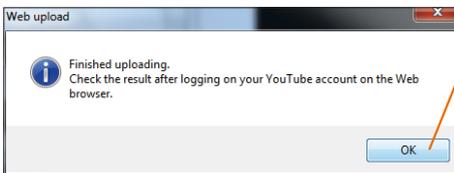
❿ Click [OK].

Refer to "What is YouTube?" on page 24 to access YouTube, and then confirm that the file has been uploaded.

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ImageMixer 3
Simple Video Editing

● Precautions

The screens reproduced in the various procedures in this manual are from a personal computer with a constant Internet connection.
The information in this manual is valid as of December 2009.

● Inquiries concerning PIXELA ImageMixer

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