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Power Tips

Get the Most out of iMovie
and QuickTime Pro





There's more to iMovie and QuickTime Pro than meets the eye. Both programs offer unexpected functionality and flexibility. In this chapter, we'll dive behind the scenes and discover a few lurking secrets. You'll discover some of my favorite techniques for making the best use of your movie media—the video and sound clips that make up your movie and the project files that put them together. You'll also learn how to manipulate your clips and transfer them between iMovie and QuickTime Pro.

Reveal iMovie's Secret Files

Get Started with QuickTime Pro

Move between iMovie and QuickTime

iMovie Power Edits

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Reveal iMovie's Secret Files

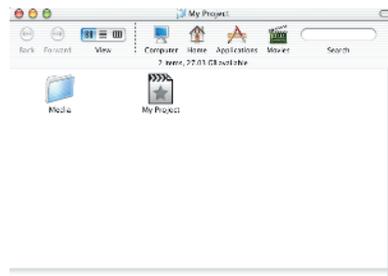
You won't find much mystery in iMovie. It's a friendly and easy-to-understand program with just a few secret files. iMovie stores these files—your settings and project files—as plain text, but it takes a little fiddling to gain access. Once in, you can admire the elegance and power that lies behind the seemingly simple interface. In this section, you'll learn how to sneak past the guard and uncover those gems that iMovie hides away from view. You'll learn how iMovie projects are put together, explore iMovie preferences, and learn how to manipulate media hidden away in your iMovie project folder so you can reuse these elements for other purposes.

Note: Whenever you save your project, iMovie adds an up-to-date movie file to your top-level project folder. This “reference” movie contains links to the resources in your Media folder. To view, open the reference movie in QuickTime and press play.

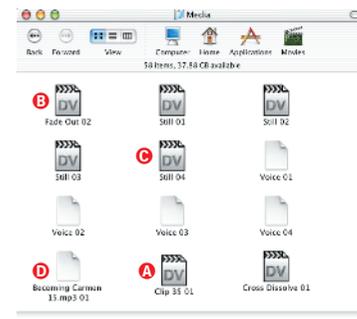


Meet the Project

iMovie projects are very straightforward. In these steps, you'll navigate through the various resources that make up your iMovie project.



1. Whenever you start a new project, iMovie creates a project folder to hold all the materials associated with that project. Opening the project folder reveals a subfolder called Media and a project file. The project file has a distinct icon with a star and a “clapboard”-style top.

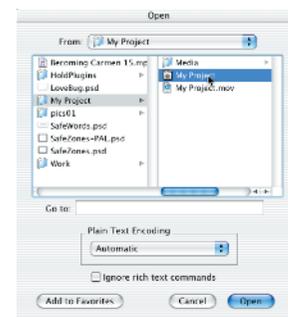


2. Your Media folder holds the multimedia clips associated with your project: all stills, video, and special clips. These clips include the transitions, effects, and titles you have added to your project. Here's a Media folder from a fairly typical project; it includes clips, transitions, stills, and an audio track.

- A** Clip
- B** Transition
- C** Still
- D** Audio clip



3. TextEdit allows you to view and edit your project file. You'll find TextEdit in your OS X Applications directory. Navigate to the TextEdit icon and double-click the icon to launch the program.

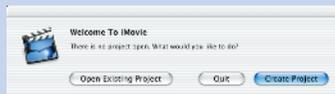


4. Choose File > Open Project (⌘-O). Navigate to your project folder and choose your project file. Click Open to open your project file in TextEdit. You'll be rewarded with an interesting and somewhat readable project description.

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Reset Your iMovie Preferences

At times, you may want to reset your copy of iMovie back to fresh out-of-the-box settings. Doing so couldn't be easier. Just drag your current `com.apple.iMovie3.plist` preferences (from the `~/Library/Preferences` directory) to the Trash. The next time you launch iMovie, it will automatically create a newly initialized preferences file. Further, iMovie will display the dialog shown here that allows you to start a new project, open an existing project, or quit.



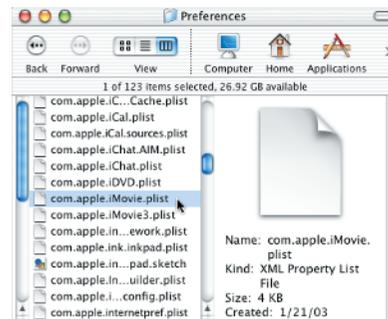
Resetting preferences also helps when iMovie tries switching country systems on you. For example, sometimes it insists on starting an NTSC project when you have a PAL camera attached. To fix this, trash your preferences, restart your computer, and launch iMovie with your PAL camera attached and powered on.

Note: Before attempting to edit your preferences, make sure you save all prior work. You may want to start a new, empty project before beginning, just to be on the safe side.

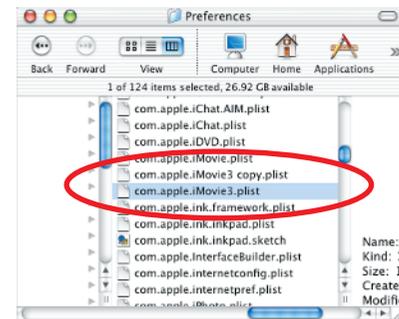


Edit Your Preferences

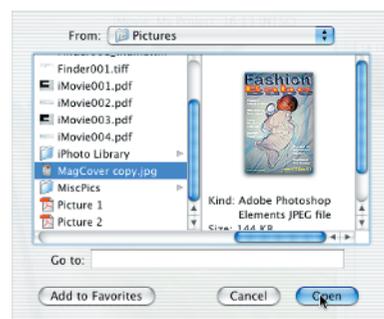
iMovie stores your preferences in a structured XML text-based format. Follow these steps to change preferences using TextEdit. You'll see how to set a preference you cannot change in iMovie itself.



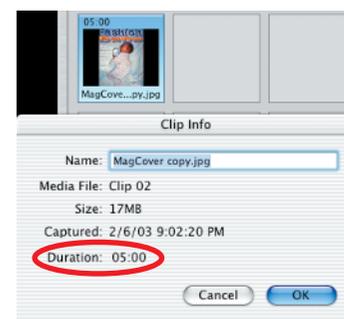
1. Make sure iMovie isn't running, and locate your iMovie preferences file. You'll find it in the library of your home directory: `~/Library/Preferences`. The file is named `com.apple.iMovie3.plist`.



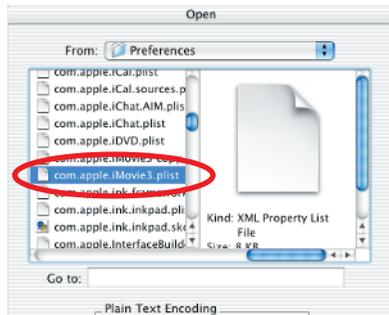
2. Select the preferences file and type `⌘-D` to duplicate it. OS X names this backup copy as `com.apple.iMovie3.copy.plist`. As a rule of thumb, always back up a preference file before you experiment.



3. Launch iMovie. Select `File > Import (⌘-Shift-I)`. Navigate to any image. Click `Open` to import this image into iMovie.



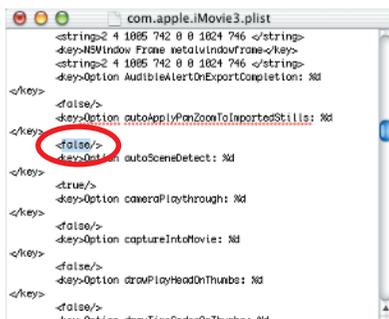
4. Wait as iMovie renders your image with the current Ken Burns effect settings. The red bar at the top indicates iMovie's progress. Select the newly imported clip and play it. The imported image will pan and zoom as rendered. Double-clicked, the Info dialog will not allow you to change the length of your clip.



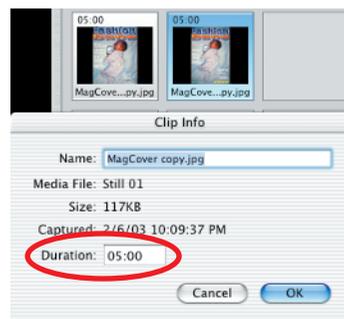
5. Quit iMovie (iMovie > Quit iMovie, ⌘-Q). Launch TextEdit. Select File > Open (⌘-O). Navigate to your preferences file (not the copy), select it, and click Open. The preferences will appear in a new TextEdit window.



6. Your preferences file is a structured XML property list made up of key and value pairs. Keys are bracketed by the tags <key> and </key>. Values vary in type and can include numbers, truth values (“true” or “false”), and other data structures. Find the key labeled autoApplyPanZoomToImportedStills in your file.



7. Change the value of autoApplyPanZoomToImportedStills from <true/> to <false/>. Choose File > Save (⌘-S).



8. Relaunch iMovie. Choose File > Import (⌘-Shift-I). Navigate to the image chosen in step 3 and import it. This time, the image imports without the Ken Burns effect, producing a normal still clip. Confirm this by double-clicking the clip. You'll be able to set the still duration in the Clip Info window.

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Your iMovie Preferences File: Other Changes

iMovie does not respond the same way to all preferences file changes. For example, iMovie will usually ignore a change to the VideoStandard (PAL, NTSC, or SECAM). Other items respond better to simple edits. A little experimentation allows you to discover which items the Apple Development Team left customizable. Scan through the preference file to see which items are more easily updated with simple text edits.

Change only one item at a time to determine if your modification can be applied. Then relaunch iMovie and test the program's behavior. If iMovie uses your change, then you've discovered another user-alterable preference.

Always make sure to quit iMovie before editing the preferences file. If you forget, iMovie will overwrite those preferences you modified as the program exits.

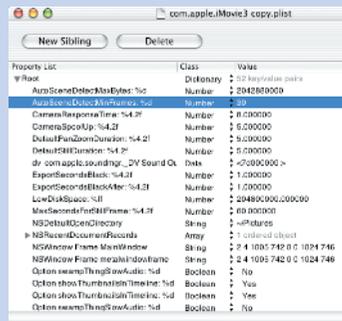
Note: Under OS 9, the iMovie preferences file used to state, “Do not edit this unless you know what you're doing.” The same warning holds true under OS X.



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View Your Preferences with Property List Editor

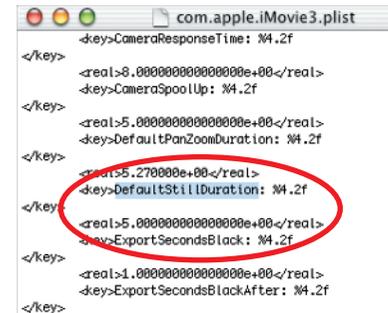
Apple offers a number of useful developer tools for the iMovie aficionado. Property List Editor offers a convenient way to view and edit the property lists (plist) used as OS X preference files. This program is not part of the standard OS X installation. To find a copy, visit <http://developer.apple.com> and sign up for their free ADC online program. Members may download the Mac OS X developer tools directly from the ADC member site and install them on their computer. Once installed, the Property List Editor resides in the **Developer/Applications** folder and acts as the default editor associated with any plist file. To view your preferences file, double-click its icon in the file browser. The Property List Editor will launch.



Edit Your Preferences *continued*



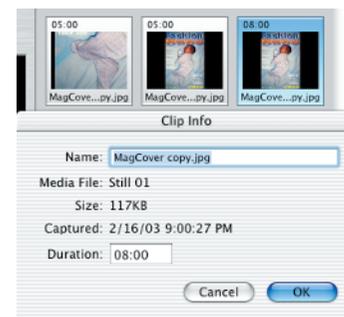
9. Select iMovie >> Preferences (⌘-),). Examine the options presented to you. iMovie 2 users may be dismayed: the default still length option has disappeared from iMovie 3. Quit iMovie.



10. Return to TextEdit and reopen com.apple.iMovie3.plist. Search for the key labeled DefaultStillDuration.



11. Change the default still duration from 5 to 8 seconds. Choose File >> Save (⌘-S) and save your changes to disk. (As of iMovie 3.0.2, you may need to edit DefaultPanZoomDuration instead to achieve the same effect.)



12. Relaunch iMovie. Select File >> Import (⌘-Shift-I). Navigate again to the image chosen in step 3. Click Open to import it. Due to the changes made to the preferences file, the new still imports with a duration of 8 seconds.



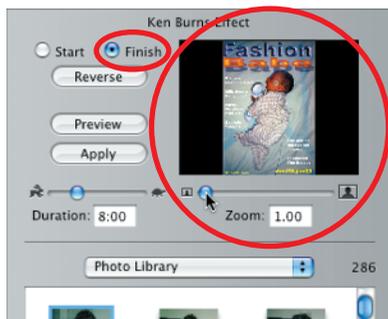
13. It takes just a few steps to apply the Ken Burns effect to your newly imported still. Select your still and drag it down to the Clips viewer.



14. Choose the Photos palette.



15. Select Start. Drag within the Preview to place the start of your zoom effect within your image. The cursor will indicate a clenched dragging hand when repositioning your picture. If desired, adjust the Zoom slider to set the level of zoom.



16. Select Finish. As you just did, set the level and position of your final zoom. Click Apply to accept your settings and apply the Ken Burns effect to your still clip.

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Ways to Disable the Ken Burns Effect

As of iMovie 3 version 3.0.2, users can disable the Ken Burns effect in the following ways:

Stop iMovie in Its Tracks Pressing Esc or $\text{⌘}[-]$ alerts iMovie 3 to stop applying the Ken Burns effect during import. Unfortunately, you must wait for iMovie to acknowledge your keystrokes, a process that can sometimes prove sluggish.

Set the Zooms to 1.00 When you set the Start and Finish zoom levels to 1.00, images import as still clips. If you click any Ken Burns still, the zoom levels revert to those inherent in that clip. You must reset the Zooms to 1.00 before any further imports.

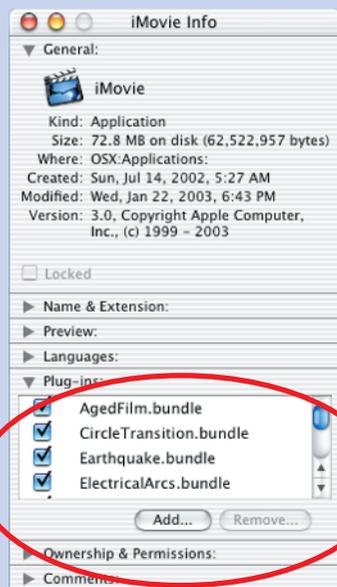
Edit the Preferences File Although scary to the novice user, editing your preferences (as shown in this project) offers the most stable solution for disabling the Ken Burns effect.

Hack the Preferences File My own iMovie Hack Pack (included on the companion CD) offers several preference-setting hacks. These include KBToggle, which toggles the Ken Burns effect on and off, and SetDefaultStillLength, which does what its name suggests. (For iMovie 3.0.2 and later, use SetDefaultPanZoomLength instead.)

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Peek at Your Apple Plug-ins

OS X 10.2.1 and above offer a curious trick that lets you peek at the Apple plug-ins included in your copy of iMovie. Navigate to your Applications folder and select (but do not launch) your iMovie application. Choose File > Get Info (⌘-I). Between **Languages** and **Ownership & Permissions**, you'll find an item labeled **Plug-ins**. Click the triangle to expand this section and reveal the built-in plug-ins. Add and Remove buttons allow you to customize your iMovie application, directly adding and removing plug-ins.

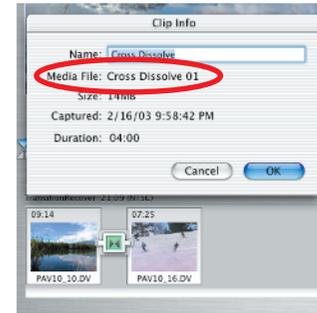


Reuse Your Transitions

iMovie does not allow you to layer effects or transitions over your transition clips. In order to treat your transitions like other clips, you must reimport transitions from your project media folder.



1. In iMovie, open a project that includes transitions on the Timeline. Select any transition. Here you see a 4-second Cross Dissolve transition in place on the Clips Viewer.



2. Choose File > Get Clip Info (Shift-⌘-I, or just double-click the transition) to bring up the associated Clip Info window. Make a note of the name of the media file associated with your transition.



3. Return to the Finder and locate your project folder. Open it and then open the Media folder within. Inside you'll find the materials that make up your iMovie project. This example includes two clips and the Cross Dissolve transition.



4. Return to iMovie. Select File > Import (⌘-Shift-I). Navigate to your project folder and to the media folder within it (as in the previous step). Choose the transition clip. Click Open to reimport it into iMovie.



5. Wait as the transition reimports to your project. This may take several seconds. The new clip appears in the Clips shelf as a fully editable, manipulable clip without any of the restrictions associated with normal transitions.



6. To confirm that the new clip acts like any other, drag it to the Clips viewer and add an effect to it.

iMovie File Types

Every file, whether in OS 9.x or OS X, has a file type and file creator associated with it. This file “metadata” allows your Macintosh to associate your file with an application and open the correct program when you double-click the file icon. iMovie files use the Creator type **Hway** to indicate their association with the program. File types vary, however, as shown in the following table. Imported images, on the other hand, retain their original creator and type.

ELEMENT	TYPE
Sounds (AIFF, MP3, WAV, etc.)	AIFF
Video Clips (clips, stills, titles, effects, transitions)	dvc!
Project file	TeXT

You can discover more about the contents of your project folder by using `GetFileInfo`, a utility provided in Apple's Developer Tools. (developer.apple.com, online membership, and tool download are free). If you feel comfortable using the Unix command-line interface, `GetFileInfo` offers a convenient way to inspect your files and their properties. When you need to change your file attributes, Apple provides another developer utility, `SetFile`.

```
Terminal — tty1
% ls
Clip 01           Fairy Dust 01    PAV10_16.DV 01
Cross Dissolve 01  Icon?
Cross Dissolve 01 01  PAV10_10.DV 01
% GetFileInfo Clip\ 01
file: "Clip 01"
type: "dvc!"
creator: "Hway"
attributes: avbstclinmed
created: 02/16/2003 22:20:35
modified: 02/16/2003 22:20:36
%

```

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Import and Extract Sounds

iMovie allows you to import sounds in AIFF, WAV, or MP3 format—although it converts the latter two to AIFF in your Media folder. (Up-conversion to AIFF will not improve any degraded, tinny MP3 quality.) You can also import audio directly from a CD or record sounds from your microphone using the Audio palette. In addition, you can disassociate the audio from your video clips to gain direct access to the audio track for editing or other purposes. To extract audio, start by selecting all or a portion of a video clip or clips. Then invoke **Advanced** > **Extract Audio** (⌘-J). iMovie duplicates the audio and places it in the voice track on the Timeline, in orange. If you extract just a portion of a clip's audio, iMovie automatically splits the clip as needed to preserve the unseparated portions.

Normalize Sounds

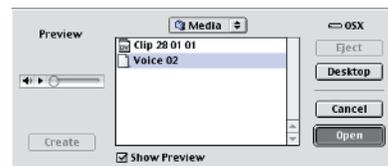
When sound quality is too low, you can “normalize” your audio—extend its dynamic range—using a sound-editing program. Follow these steps to extract and normalize an iMovie audio track.



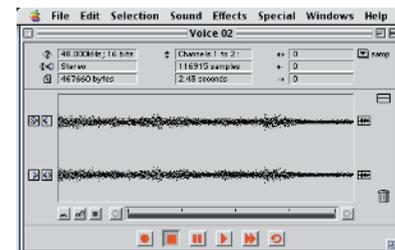
1. Select the clip you wish to work on. Choose **Advanced** > **Extract Audio** (⌘-J).



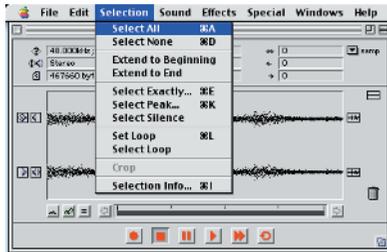
2. iMovie automatically switches to the Timeline display, extracts the audio, and displays it in purple. In doing so, iMovie has copied your clip's sound to a new audio clip, locked it with the start of the original video clip (note the yellow-headed pins), and muted the video clip.



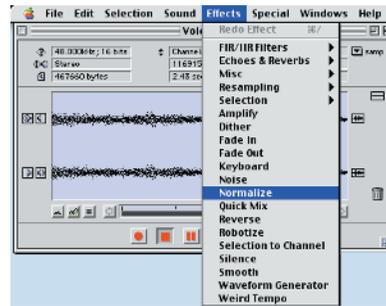
3. Save your project. Launch your favorite sound editing application. (Here, I use SoundEffects, a shareware package on the companion CD that works well in Classic.) Select **File** > **Open** and open the Voice file from your project's Media folder.



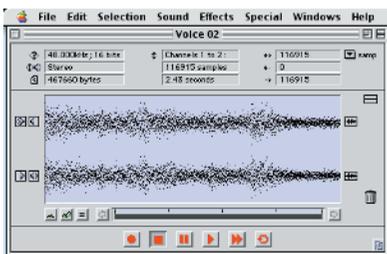
4. Examine your sound's waveform. A poor sound usually has little variation and lies very close to the centerline. When you see a fuzzy waveform, as shown here, do not expect too much in the way of clarity. You'll be able to make things louder, which will help differentiate voices, but the background noise will grow louder too.



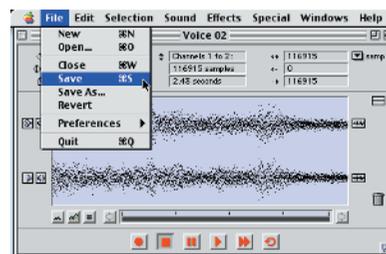
5. Select the entire waveform by choosing Selection > Select All (⌘-A, or Edit > Select All in most other sound editing applications).



6. Determine where your editor offers the normalization function. In the case of SoundEffects, you will find this under Effects > Normalize. This feature varies by editor. Apply the Normalize function to your sound.



7. After normalizing, your waveform looks different. All the amplitudes will extend, offering a much larger dynamic range. Play the sound clip to hear the difference. Note that normalizing is a more profound change than simply adjusting the volume by a certain percentage.



8. If you like the result, select File > Save, which updates your sound file right in place. When you return to iMovie and click Play, the sound plays back as altered. If you feel less brave, use Save As and save to another file. Import that file into iMovie to substitute it without altering the original.

Use Sound Effects Judiciously and Effectively

Although many sound editors offer spiffy special effects, like robotic-sounding voices, tunnel effects, and echoes, use these with care. Every time you alter your sounds, you're more likely to remove quality than add it. There are times, however, when you're looking for a particular result. For those times, be sure to experiment on a copy of your audio file.

Each of the two audio tracks in the Timeline is inherently stereo. Use either track for audio content. You can even overlap audio clips on the same track, maintaining full stereo in each clip.



Note: Some sounds can be very short and therefore hard to move in iMovie. Instead of changing your sound clip's position, you may end up resizing or just selecting it. When you find a sound that seems too small to move, crank up the zoom: The Timeline zoom pop-up can magnify your small sounds. At 10x or above, most sounds become large enough to grab and manipulate without having to touch the resizing arrows at either end.

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Free Sample Sounds

Several sites offer excellent, free royalty-free sounds. Two of my favorites include ALC (alcljudprod.se) and Hollywood Edge (hollywoodedge.com/the_acb/webpage.cfm?&DID=9&WebPage_ID=16). You'll find a range of sound effects from rolling balls to steam engines to rain splats.

Several Sounds Make the Category

In iMovie 3 release 3.0.1, the program adds sound categories in the Audio palette only when the added folder includes at least five or six sounds. Otherwise, the added sounds appear in Standard Sound Effects. This behavior may change with later releases.

Note: In step 3, you're directed to `~/Library/iMovie`. If you do not find an existing iMovie folder at that location, you can make the folder yourself. Add the **Plug-ins** and **Sound Effects** subfolders and place your plug-ins accordingly.



Add "Built-In" Sounds

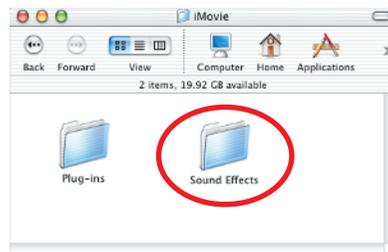
Although iMovie offers access to iTunes's sound library, sometimes it proves convenient to add sound effects to iMovie directly. In these steps, you'll see how to find and manipulate iMovie's secret sound folder.



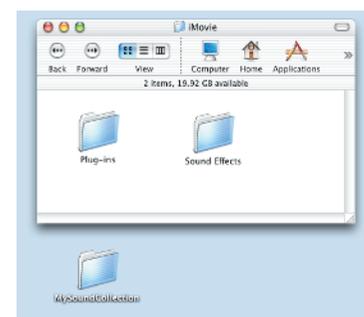
1. In iMovie, select the Audio palette by clicking the Audio button. When the palette appears, select iMovie Sound Effects from the pop-up menu at the top.



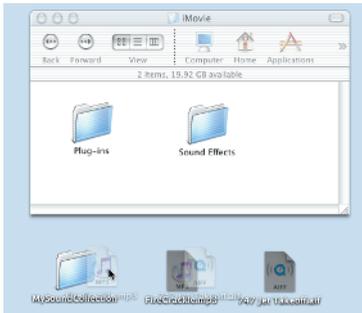
2. Scroll to the bottom of the palette and make note of the Standard Sound Effects built into iMovie. You are about to add a new library of sounds. Select iMovie > Quit iMovie (⌘-Q).



3. Return to the finder. Open a new finder window and navigate to `~/Library/iMovie`. The iMovie folder holds two subfolders: Plug-ins and Sound Effects. Plug-ins holds third-party plug-ins that allow you to add to iMovie's functionality. Sound Effects stores user-added collections of sound effects.



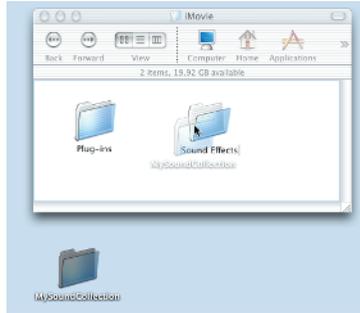
4. In the Finder, create a new folder on the Desktop named MySoundCollection.



5. Select some sounds (AIFF and MP3 sounds *only*) and drag them into MySoundCollection. iMovie 3 only recognizes those sounds stored within subfolders of the Sound Effects folder. By adding your sounds to a folder, you'll allow iMovie to detect them.



7. Relaunch iMovie and return to the Audio palette. Again, select iMovie Sound Effects from the pop-up menu.



6. Drag MySoundCollection into Sound Effects.

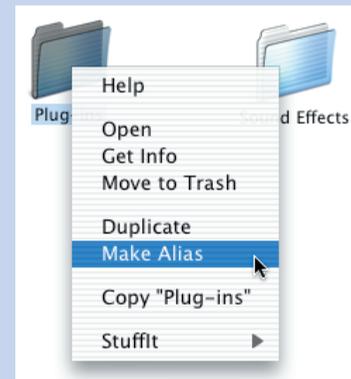


8. Scroll through the Effects list and you'll discover your newly added sounds.

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Make an Alias

Do you find yourself adding and removing sound effects and plug-ins on a regular basis? Consider using a folder alias. Open a Finder Window and navigate to the iMovie folder in your Library (~/**Library/iMovie**). Select either the **Plug-ins** or **Sound Effects** folder. Right-click your selection (Control-click for single-button mice). Choose Make Alias. Drag the aliased folder (it has a small arrow in the bottom left-hand corner) to the Desktop or wherever you find it convenient to add and remove items.



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Preview Your Sounds

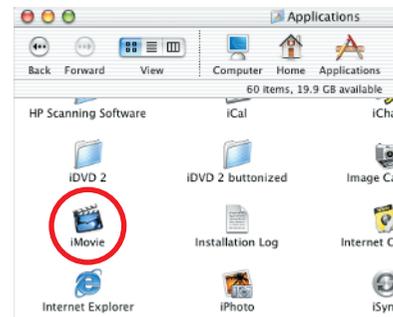
If you're not sure what one of your iMovie effects sounds like, double-click its name in the Audio palette. You'll hear the sound before you use it. If you like what you hear, drag the effect to your Timeline and let iMovie add it to your project.

Edit Your Effect Volume

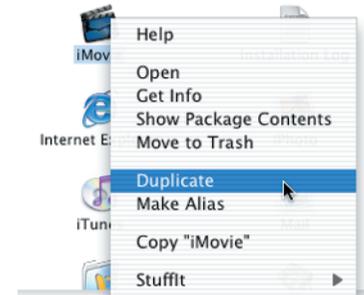
iMovie 3's new Edit Volume control allows you to edit the volume in your sound effects just as it allows you to edit the volume in other audio assets. To start, check the Edit Volume box. When the Volume Lines appear, adjust them as desired to personalize the way your sound effects play back. (See "Sound Power," later in this chapter.)

Add Sounds Directly to Your iMovie Application

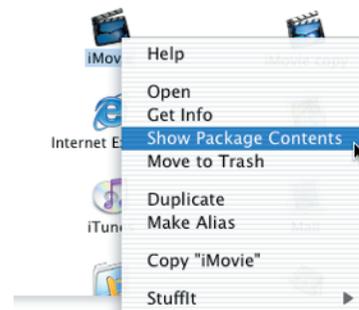
The previous project showed you how to add new sound collections to iMovie. The following steps show how to add sounds directly to the iMovie application.



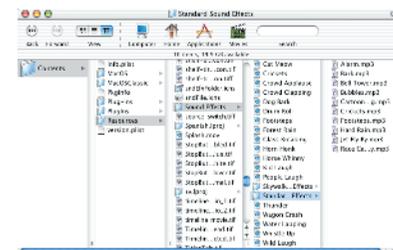
1. Locate the iMovie app in the Applications directory of your computer (typically /Applications). Make sure the application is not running. If it is, quit from within the iMovie program (iMovie > Quit iMovie, **⌘-Q**).



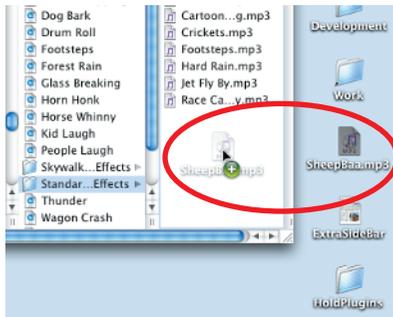
2. Select iMovie and right-click your mouse (Control-click for a one-button mouse). Choose Duplicate. This copies your iMovie application and provides a backup in case things go wrong—always a good strategy when messing directly with an OS X program package.



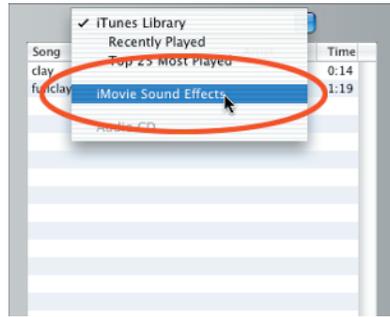
3. With iMovie selected, right-click your mouse (Control-click for one-button mice) and choose Show Package Contents. In the following steps, you will delve inside these hidden files within your iMovie application package.



4. A new Contents window will appear. Navigate to Contents > Resources > Sound Effects > Standard Sound Effects.



5. Choose a favorite MP3 sound effect and drag it into the Standard Sound Effects folder.



6. Launch iMovie. Select the Audio palette and choose iMovie Sound Effects from the pop-up menu at the top of the palette.



7. Navigate to the bottom of the list of built-in sound effects and locate the effect you just added. The list appears in alphabetical order.



8. Drag your new sound effect to the Timeline. It will appear and act just like any other built-in iMovie sound. If desired, quit iMovie and add more MP3 sounds to the Standard Sound Effects folder you revealed in step 4. When finished, close the Contents window.

Remove Sounds, Increase Performance

The iMovie 3 launch process slows dramatically when you add many sounds to the various sound effects folders. This is where resource management comes into play. Look through your sound folders—both within the iMovie package and in your Library—and decide which sounds you really need and use on a regular basis. If you can offload some of your sounds into a temporary storage folder and away from iMovie, you can effectively speed up launch time. For obvious reasons, don't give up the sounds you really need. But when you master the technique from this project, transferring sounds back into iMovie takes a matter of seconds.

Note: For another performance enhancement, launch a terminal window and run `/etc/monthly`, `/etc/weekly`, and `/etc/daily`. These maintenance routines are scheduled for the middle of the night, a problem for machines that sleep or are regularly powered off. To run each program, use `sudo`—e.g., `sudo /etc/monthly`. You'll be prompted for your root password.

Beyond the Still Clip Snap Button

This project allows you to add any number of handy buttons to your iMovie interface. Just select a different function in the following step 6. To experiment with a button you've already created, click Disconnect before connecting to a new function. Here are some more of my favorite button shortcuts.

Undo and Redo Buttons Placing Undo and Redo buttons near my editing area allows me to mouse forward and backward through my editing history.

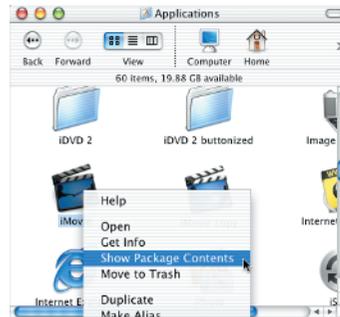
Export Buttons I find it convenient to keep a set of export buttons right next to my playback screen. These include exportMovieToCamera and exportMovieToQuickTime. The latter proves particularly useful as it offers one-button-click access to a function that usually takes several screens to navigate through.

Note: The Snap button you create in this project bears no relation to the Snap buttons that appear in the Practical Plug-ins Pack. Here, Snap refers to creating a Snapshot of your movie at the playhead. In the Plug-ins, Snap refers to a snap-to-grid behavior that allows you to size and align overlays.

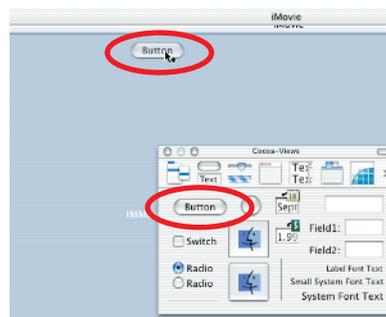


Super Geek Tricks

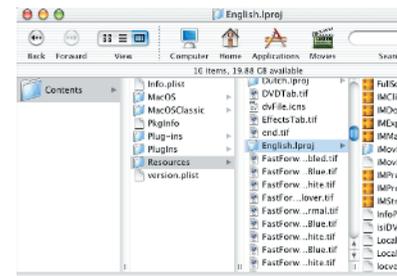
These steps show how to customize your iMovie application. Warning: this project is for Super Geeks only. This project requires Apple's developer tools (developer.apple.com).



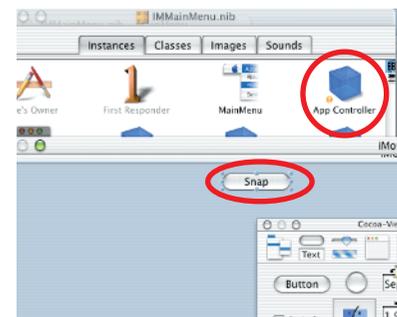
1. Ensure that iMovie is not running. Follow steps 1 through 3 of the preceding project (“Add Sounds Directly to Your iMovie Application”) to back up your iMovie application and reveal iMovie’s package contents. Revert to this backup copy to undo changes or before installing any Apple iMovie updates.



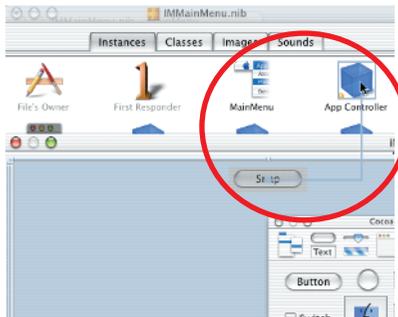
3. Drag a button from the Cocoa-Views palette onto the top of your main iMovie window. Double-click the new button and edit the name to “Snap”.



2. Navigate to Contents > Resources > English.lproj. Double-click IMMMainMenu.nib to launch Interface Builder.



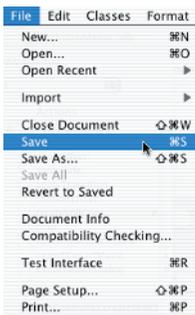
4. Adjust the windows so you can see both the main iMovie layout window (the one with the new button) and the iMovie IMMMainMenu.nib window (Windows > IMMMainMenu.nib), as shown here. Most importantly, you must see both the Snap button and the App Controller at the same time.



5. Press and hold the Control key. Drag *from* the new button to the App Controller cube. A square appears around the App Controller cube to show you're in the right location. Release the mouse. Release the Control key.



6. If you've performed step 5 correctly, the Info window (Tools > Show Info, ⌘ -Shift-I) appears with the Connections palette active. The left side will say Target. The right side offers a scrolling list. Scroll to createStillClip and select it. Click Connect.



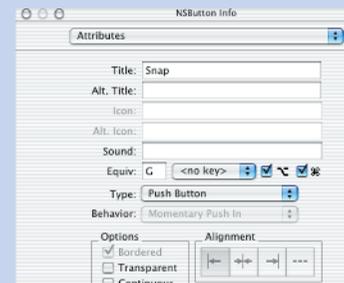
7. Choose File > Save (⌘ -S) to save your work. (Remember you made a back-up copy of iMovie just in case!) Leave Interface Builder and launch iMovie.



8. iMovie now offers the Snap button you created in the previous steps. Move the playhead to any frame and click Snap to create a still clip of that frame. To revert your copy of iMovie, quit the program, trash your altered version, and rename iMovie copy to iMovie.

Beyond the Valley of the Geeks

If you want to achieve super-super-geekiness, consider adding keyboard equivalents to your custom buttons. In Interface Builder, select your button and choose Tools > Show Info (⌘ -Shift-I). Select Attributes from the pop-up menu at the top. Enter a keyboard equivalent and check off the Option or Command keys as desired. The equivalent shown below is ⌘ -Option-Shift-G. (Use lowercase to skip the Shift modifier.) Don't forget to Save and relaunch iMovie.



Note: Your new button will move when you resize the iMovie application unless you lock it in place. Select the button and choose Layout > Lock Frame (⌘ -Option-L).



Get Started with QuickTime Pro

QuickTime Pro is a powerful movie-editing tool. It works with multiple video tracks, creates cool special effects, and far surpasses iMovie in power. iMovie, in contrast, works only with a single video track and, without third-party plug-ins, does not handle such professional features as masking, transparency, and video resizing. Unfortunately, QuickTime Pro does not provide the friendliness and usability that make iMovie such a pleasure. Don't let this dissuade you from using QuickTime Pro. It is an amazingly flexible and useful program, and you can get up to speed quickly. The overviews and examples presented here will get you running in short order.

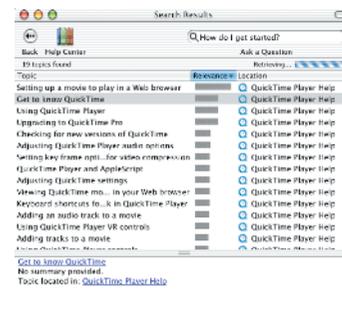
Note: You'll find the basic QuickTime 6 player on the companion CD. Visit www.apple.com/quicktime to buy a license to unlock the Pro features (\$29.99; the viewer-only version is free). Be sure, either way, that you're using version 5 or later. Versions 5 and 6 offer all the power you need for the projects in this book.

Getting Help and Learning QuickTime Pro

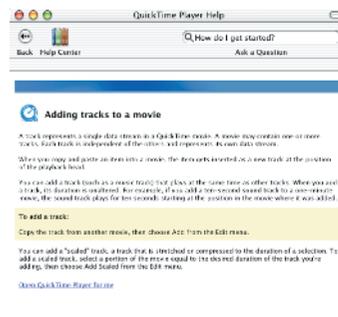
Apple offers a variety of QuickTime Pro resources through your computer's Help menu and the online QuickTime help site. In these steps, you'll see how to find these resources.



1. To access the QuickTime Help Center, select **Help** > **Mac Help** from the Finder. Scroll down to **QuickTime Player Help** and click it. QuickTime Player Help includes topics for both the basic player and QuickTime Pro.



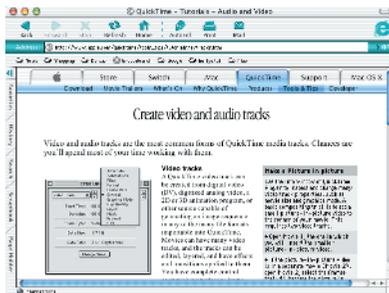
2. Enter a question into the text field in the upper-right corner and press **Return**. Help Center returns a list of topics related to your query.



3. Double-click any topic. Help Center displays the information for you.



4. The QuickTime Tutorial offers an excellent resource for learning about QuickTime and QuickTime Pro. Launch your browser and navigate to www.apple.com/quicktime/tools_tips/tutorials/.



5. Select a title and click the link to open the actual tutorial. Tutorials include overviews, step-by-step instructions, and lots of helpful pictures.



6. For more QuickTime Pro help, visit <http://helpqt.apple.com/qthelpcr1/english/QuickTimeHelp/>. You'll find more tutorials and information.

QuickTime Pro Playback Shortcuts

Use these shortcuts to help you control the playback of your QuickTime movie.

SHORTCUT	ACTION
Spacebar, Return, or Control-M	Toggles playback on and off.
⌘-left arrow or ⌘-right arrow	Plays movie in the direction indicated.
Left arrow or right arrow	Moves the playhead one frame in the direction indicated.
Option-left arrow or Option-right arrow	Moves to the next major feature in the direction indicated. Major features include movie start, left crop marker, right crop marker, and movie end.
Up arrow or down arrow	Adjusts volume up or down.
Option-up arrow or Option-down arrow	Adjusts volume to the maximum setting or mute.
Control-[or Control-]	These two key shortcuts act as the left and right arrows, respectively, if your keyboard does not have separate arrow keys.
⌘-. (period) or click the movie image	Stops playback.
Control button with Play button in the window	Plays the movie without sound.
Shift-double-click the movie image	Plays the movie backward.
⌘-L	Sets/resets Loop Mode.
⌘-0, ⌘-1, ⌘-2, ⌘-3	Sets playback at half, normal, double, or quadruple sizes.
⌘-F	Plays back full-screen.

Other Resources

You can find other QuickTime Pro resources on the Internet. Here are just a few.

Usenet The comp.sys.mac newsgroups may be able to help with your QuickTime questions.

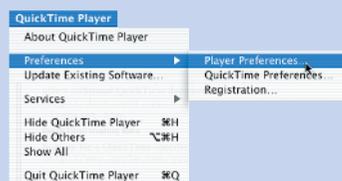
Apple Support Apple offers a comprehensive, searchable knowledge base at <http://kbase.info.apple.com/>. Plug in your QuickTime question and discover what answers Apple has on hand. Visit Apple's QuickTime specific Ice Floe at <http://developer.apple.com/quicktime/icefloe/>. Apple offers additional QuickTime documentation at <http://developer.apple.com/techpubs/quicktime/qtdevdocs/RM/frameset.htm>.

QuickTime Mailing Lists Sign up for a QuickTime-specific mailing list at www.apple.com/quicktime/tools_tips/mailling_list.html.

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Set Your QuickTime Pro Preferences

When you first start to work with QuickTime Pro, you'll want to set your preferences. Establishing these will make your life a lot easier when you actually sit down to work. Select QuickTime Player > Preferences > Player Preferences.



There's one particular preference I find vital. Ensure that Open Movies In New Players has been selected and click OK. This changes the default File > Open Movie option to File > Open Movie In New Player. When you open a movie, QuickTime adds a new window without automatically closing any windows that are already open.

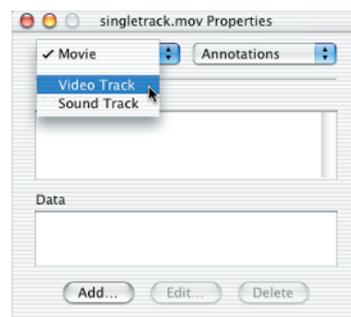


Know Your Tracks

Follow these steps to view and work with the tracks that form your movie.



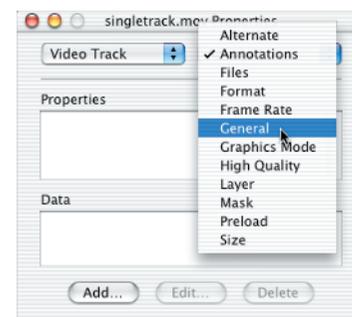
1. To open a movie, select File > Open Movie In New Player. (If you haven't set your preferences, the menu item will read File > Open Movie. Press the Option key before you click File to reveal the alternate menu item.) Navigate to your movie and click Open.



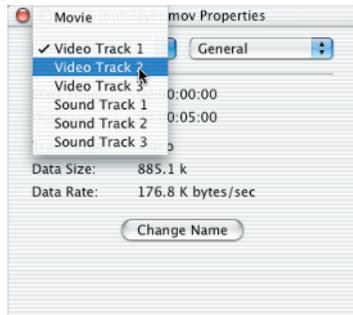
3. The Movie Properties window offers two pull-down menus. The left menu gives you direct access to each track in your movie, including all audio, video, and the main "movie" track. Here you see what a standard movie with a single audio and video track looks like.



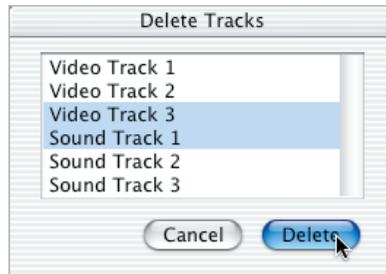
2. With your movie window open, select Movie > Get Movie Properties (⌘-J). This opens the Movie Properties window, which is the heart and soul of QuickTime and allows you to directly control and manipulate the tracks associated with your movie.



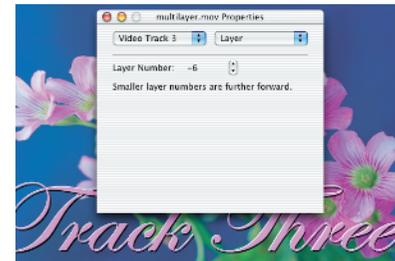
4. The right pull-down menu offers track-specific options. With this menu, you can alter such features as placement (the Size option), layer ordering, and graphics mode.



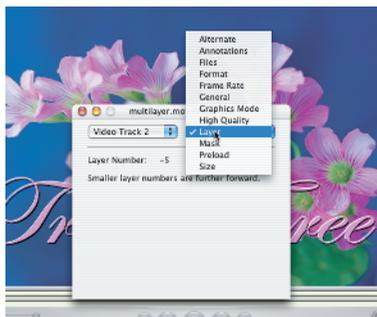
5. When more than one video or audio track are added, they are numbered accordingly. (You can change a track's name from this automatic numbering system with the General palette, if desired.) In this example, I've added three sound and three video tracks to this movie.



6. To remove a track, select Edit > Delete Tracks. Choose the track or tracks you wish to remove, and click Delete. If you remove a track or tracks by accident, select Edit > Undo (⌘-Z) to restore them.



7. QuickTime assigns layer numbers to each video track. Layers with smaller (or, typically, “more negative”) numbers lie on top of—and may obscure—layers with higher numbers. In this example, Video Track 3 (seen in the window at -6) lies above Video Track 2, which in turn lies above Video Track 1.



8. To change track order, adjust the layer number for any track. This example selects Video Track 2. Choose the Layer palette from the right pull-down menu.



9. To lower the layer number, click the small down-arrow. The up and down arrows adjust the layer number one level at a time. Here, at a layer of -8, the second track arrives in front.



10. With QuickTime Pro, you can change more than layer ordering. To change image orientation, select Size from the right pull-down menu. Clicking the first arrow button mirrors your image horizontally; the second mirrors vertically. The last two rotate your image clockwise and counter-clockwise. Click Normal to revert to your original footage.

continues on next page

22 Power Tips

QuickTime Pro Sizing Shortcuts

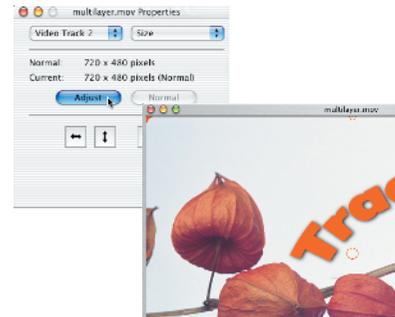
QuickTime Pro does not offer many (or very useful) editing shortcuts, but there are some to be had when working with a track after you click Adjust on the Size palette:

- Hold down the Option key while resizing to automatically snap between full-size and ¼-size.
- Hold down the Shift key to limit movement and resizing along one direction.

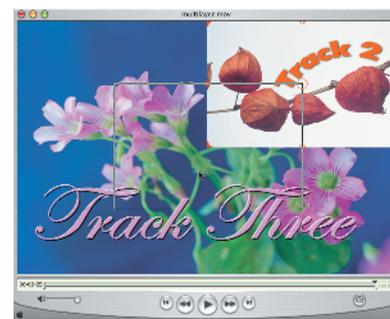
You can also center a ¼-size image fairly accurately by resizing into one corner and then using the original crossed circles as placement guides, as I do here.



Know Your Tracks *continued*



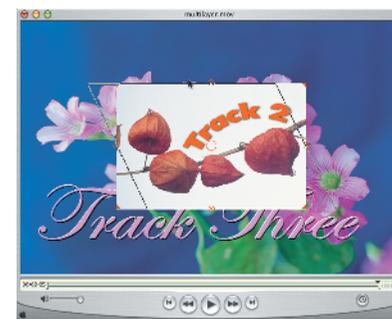
11. To change the image size, click the Adjust button. Small red handles appear in the center, the corners, and the middle of each edge. These handles allow you to size and reorient your image.



13. You can reposition the video by dragging in the middle areas (avoiding the circle at the center). For this example, move the image roughly to the center of the window. (Pressing the Shift key constrains you to only horizontal or vertical movement.)



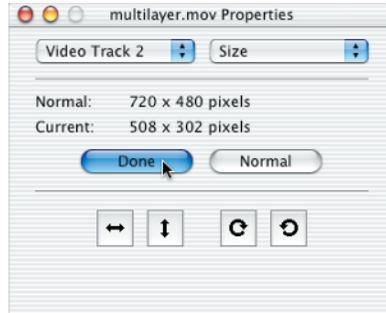
12. Drag any corner handle to resize. If you press the Option key while dragging, you'll automatically snap to full-size or, as shown here, ¼-size. Notice how resizing Video Track 2 reveals Video Track 3 underneath.



14. The small crossed circles, at the middle of each side, allow you to skew your video.



15. To rotate the image, drag out from the center circle. A handle will appear, following your mouse. Use this handle to control the degree of rotation. You may find a longer handle easier to manage than a short one.



16. Click Done to finish adjusting the video track, or click Normal to revert to the original size and orientation.



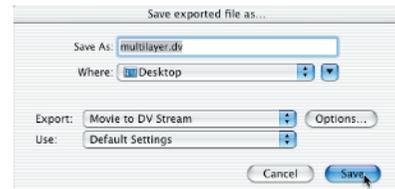
17. Now select another track to resize.



18. Click Adjust and the red handles appear for the newly selected track. Notice that the track ordering does not change. In this example, I resize track 3 in place, as it lies behind track 2.



19. Proceed to adjust the current track. Then click Done to finish.



20. Select File > Export (⌘-E) to export to a new movie that merges your video layers into a single video track.

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Sound Advice

Take care when using Add Scaled to add a movie with a soundtrack. As the video stretches or squashes to fit the selected timeframe, so does the audio. Squeeze it into a shorter space, you'll end up with a high-pitched audio. Similarly, if you stretch your audio track, you'll wind up with a low-toned, slowed-down effect. Any audio overlay without some fade-in and fade-out will produce sharp, noticeable, and uncomfortable transitions between the original and added soundtracks. You can hear an example of audio scaling in `scaled_audio.mov` on the companion CD.

Note: To save your work after adding tracks, use File > Save (⌘-S). Select Make Movie Self Contained to create a file containing all the tracks—originals and new ones. Selecting Normal takes up much less space, but you have to keep all the source files with the movie. Your movie needs these extra files. If you lose one, your movie won't play back properly.



Add Tracks to Your Video

Follow these steps to add new tracks to your video. You can add tracks in a QuickTime video, much as you add layers in a Photoshop or Photoshop Elements image.



1. Open your base movie in QuickTime Pro. This is the movie you'll add tracks to.



2. Open the movie you intend to add to the first. Select the entire movie track (Edit > Select All, ⌘-A) and copy it (Edit > Copy, ⌘-C) it to your computer's memory. After copying, close the window (File > Close, ⌘-W).



3. Position the playhead where you wish to add the second movie. Edit > Add (Option-⌘-V) adds the new track to your movie starting at that position. Do not confuse Add with Paste. The Paste command does not add new tracks.



4. After you add the track, QuickTime Pro moves the playhead to the end of the new material. QuickTime shows your added footage if its duration exceeds that of the original (as it does here) or the original footage if it does not (as shown in step 7).



5. You may wish to specify the exact range of frames to overlay with a new track. This stretches or squeezes your footage to exactly fit the duration of those frames. (This works particularly well when adding still images to moving footage.) To start, revert to your original base movie and select the frames you wish to overlay.



6. Copy the footage you wish to add, as per step 2. Scale this footage over movie with Edit > Add Scaled (Option-Shift-⌘-V).



7. As with Add, Add Scaled causes the playhead to move to the end of the addition. Move the playhead back into the gray selected zone of the scrubber bar. The new footage appears over the original.



8. Open Movie Properties (⌘-J). Select Video Track 2 from the left pull-down menu and Size from the right. Click Adjust. Resize your new track until you see both tracks at once (see “QuickTime Pro Sizing Shortcuts” sidebar earlier in this chapter).



9. Move the playhead outside the dark-gray selected area of the scrubber bar, to either side. The new track disappears—it wasn't added to that part of the movie.



10. Return the playhead into the selected area. The new track reappears. Remember that the key is the playhead location on the scrubber bar, not the selection. To prove this to yourself, type ⌘-B (Edit > Select None) and move the playhead to various locations on the scrubber bar.

Royalty-Free Material

Take care when using clips, sounds, and other elements that you did not capture or create yourself. Know whether you comply with fair use guidelines and whether you need to pay royalties. Royalty-free footage, stills, and sound effects are easily purchased from a variety of vendors. You can use these elements in your videos without having to pay any further fees.

Ulead (rfm.ulead.com) offers a wide range of royalty-free products in their Royalty-Free Media series. Titles include Pick-A-Video, Pick-A-Sound, and Pick-A-Photo. In particular, check out their Pick-A-Video-Pro. These media collections offer high-quality computer-generated art that includes both video backgrounds and animated overlays. Themes include Money, Finance, Festivities, and Seasons, among others.

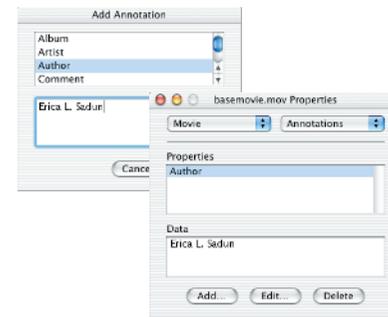
Many, if not most, of the projects in this book use video clips and stock photography from Ulead Royalty Free Media. If you spot a clip you like, stop by their website to discover more.

Annotate Your Movies

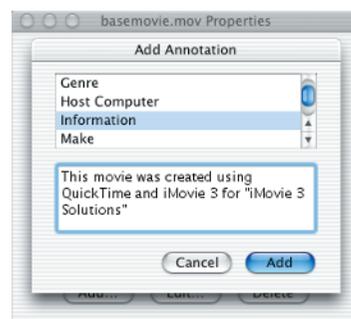
QuickTime Pro offers a handy way to annotate your movies. Annotations (viewable by anyone with a QuickTime player) can take the form of credits, copyright notices, and other labels.



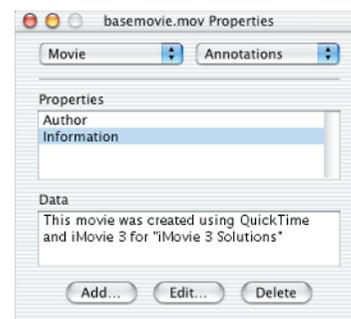
1. Open the Movie Properties window (⌘-J). Select Movie from the left pull-down menu and Annotations from the right. Click Add; the Add Annotation window pops up.



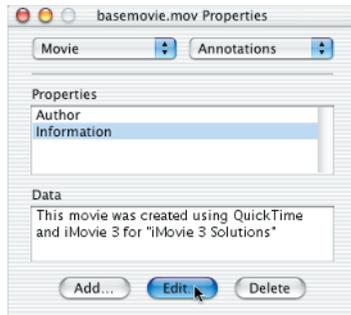
2. Scroll through the list of available annotations and select one. Enter a value for your annotation in the text area and click Add. To view an annotation, click its name in the Properties list. The associated information appears in the Data panel.



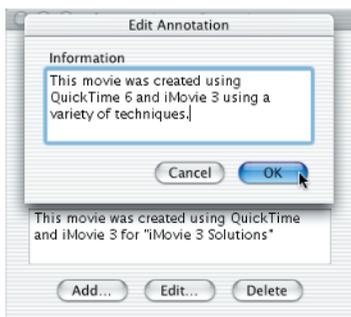
3. In the Movie Properties window, click Add to add another annotation. When the Add Annotation dialog appears, select a new annotation, enter a value, and click Add to finish.



4. The new annotation appears with the original in the Properties panel of the Annotations palette. Click an annotation name to view the associated data.



- To update the stored information select an annotation and click Edit. The Edit Annotation dialog appears, displaying the current data for you to edit.



- Enter a new value into the Information field of the pop-up window and click OK. Select File > Save (⌘-S) to save the annotations with your movie.

Annotations

Don't feel limited to the annotations used in this project. QuickTime Pro offers an extensive collection of predefined annotations. Pick those that best match your documentation needs. The full list includes Album, Artist, Author, Comment, Composer, Copyright, Creation Date, Description, Director, Disclaimer, Encoded By, Full Name, Genre, Host Computer, Information, Make Model, Original Artist, Original Format, Original Source, Performers, Producer, Product, Software, Special Playback Requirements, Track, Warning, Writer, URL Link, and Edit Date 1 through Edit Date 9.

QuickTime Pro Selection Shortcuts

Use these shortcuts to help create selections in a QuickTime Pro editing window.

SHORTCUT	ACTION
⌘-A	Selects the entire movie.
⌘-B	Selects nothing at all; deselects (this is the Select None command).
Control-Shift-[A less-well-behaved equivalent of ⌘-B/Select None.
Shift-left arrow or Shift-right arrow	Moves the playhead one frame in the direction indicated and expands the selection to that frame.
Shift-⌘-left arrow or Shift-⌘-right arrow	Moves the playhead one frame in the direction indicated, expanding the selection to that frame, and then starts movie playback, moving the crop marker with the play of the movie until the ⌘ and Shift keys are released.
Shift-drag	Adjusts the selection according to the placement of the mouse along the scrubber bar.
Control-left arrow or Control-right arrow	Moves right or left to the next major feature: the start or end of the movie or the selection start or selection end markers.
⌘-X	Removes the selection and copies the removed portion to your computer's memory.
⌘-Shift-V	Replaces the selection with a clip from memory.

Move between iMovie and QuickTime

While iMovie and QuickTime Pro are both excellent, powerful programs, the problem at times is that they aren't, in any way, the *same* program. So you end up shuttling your data between one and the other a bit more than you might like to. What's worse, these programs use slightly different shaped pixels. This can turn into a major pain, producing stretched or squashed pictures, or stills lined with black bars. But a funny thing happened on the way to iMovie 3. Apple completely rewrote iMovie and used QuickTime to handle all of its file opening and saving services. Suddenly, the two programs became a lot more compatible. Now, you can export and import all sorts of video from iMovie. You can use lightweight reference movies that keep your video data within your project's Media folder. You can also produce Windows-ready AVI files.

Export and Import Movies

iMovie 3 can export or import nearly any file type that QuickTime supports. From AVI to MOV to DV, iMovie 3 will handle it. Here's how to export your movies.



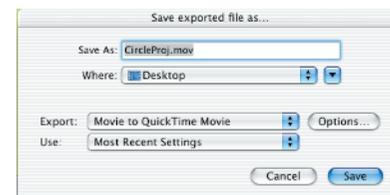
1. From within iMovie, select File > Export Movie (⌘-Shift-E). This instructs iMovie to open the Export dialog. Choose To QuickTime from the pop-up menu.



2. To gain access to the widest variety of export choices, choose Expert Settings from the pop-up list.



3. Click Export. This dismisses the Export dialog and opens the Save Exported File As dialog. From here, you can specify how you wish to save your movie and where to save it.



4. Enter a name for your movie in the Save As field. Choose where to save your movie from the Where pop-up menu. If desired, click the down-pointing arrow on the right to bring up the OS X file browser. This allows you to save to any folder on your computer.

Know Your Still Sizes

QuickTime and iMovie use slightly different pixel shapes. A still that works perfectly in iMovie may appear distorted in QuickTime and vice versa. QuickTime circles may appear as iMovie ovals and iMovie circles as QuickTime ovals. This happens because computers generally use square pixels while television and broadcast video use rectangular pixels. Since iMovie pixels are rectangular, they occupy more “space,” allowing the same-size video to appear with fewer pixels. Fortunately, most image editors easily allow you to resize your image—squeezing or stretching to fit. The exact image size varies by broadcast system, as shown here:

	NTSC	PAL
iMovie	640x480	768x576
QuickTime	720x480	720x576

Note: “Rectangular” and “square” pixels are largely a matter of convention. The physics of computer and television displays are not that different from each other. Also, broadcast engineers and computer scientists don’t always agree on how rectangular pixels are shaped: taller than wide or wider than tall. In the end what really matters is the aspect ratio—the proportion between the width and height of the image.



Transfer Skills

If you want to transfer a single still, you’ll need to resize it in an image editor. Here, you will see how to export a still from QuickTime, resize it, and then properly import it into iMovie.



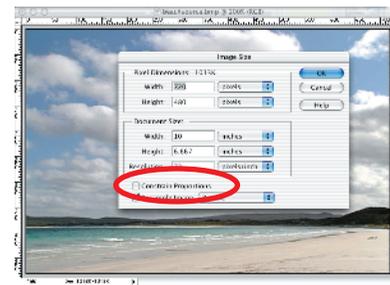
1. Open your movie in QuickTime Pro. Standard DV movies occupy 720x480 pixels (720x576 for PAL systems). Choose Window > Show Movie Info (⌘-I). You may need to click the arrow next to More Info to reveal the size.



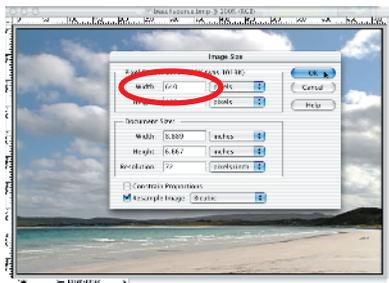
2. Export a still from QuickTime Pro using the bitmap export feature (File > Export or ⌘-E). Choose Movie To BMP and use default settings.



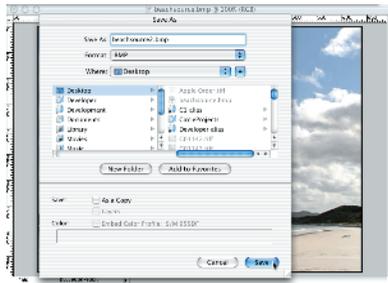
3. Launch iMovie. Choose File > Import (⌘-Shift-I). Navigate to your still and click Import. iMovie imports your image. Notice how the odd size forces black bands above and below the image. It helps here to have turned off the Ken Burns effect (⌘-“Edit Your Preferences”).



4. To correctly import the still, you must first resize it. This example uses Photoshop Elements, a demo of which is available on the companion CD. The same method will work in any good image-editing program. Open the still in Photoshop Elements and select Image > Resize > Image Size. Ensure that Constrain Proportions is unchecked.



5. Enter the correct new pixel dimensions and click OK. In this case, I convert a 720x480 picture to 640x480. Enter 640 in the width field and click OK. To go from iMovie to QuickTime Pro, change 640 to 720 instead.



6. Save the converted file back to disk, in preparation for importing to iMovie.



7. In iMovie, the newly resized image fits perfectly without needing “filler” bands to pad the picture.



8. You can see the size difference clearly in QuickTime. Here's what the resized still looks like when imported into QuickTime and overlaid above the original DV footage.

Create a Still in iMovie

Creating stills in iMovie is as easy, or even easier, than in QuickTime Pro. To create one, just press **⌘-F** (File > Save Frame As), enter a name, and press Save. iMovie saves the frame found at the location of the playhead. You can save in either of two formats: JPEG or PICT; select one from the Save Frame As Image dialog. While JPEG offers smaller files and better transportability between programs and people, PICT offers higher image quality and less compression.



Note: Some early versions of iMovie 3 (notably 3.0.1 and 3.0.2) create inaccurate stills. The bug seems to lie in that iMovie creates a 720x480 image (720x576 PAL) and crops the right 80 pixels to resize it to 640x480 pixels. As you can tell from this project, this is not the proper way to produce an iMovie-sized image from QuickTime-sized data. Hopefully the Apple Engineers will fix this bug before long.

Import Small Videos Directly into iMovie

With iMovie 3, you can import small-sized videos directly, but you may not like the results. iMovie scales your movie to standard DV size (720x480 square pixels for NTSC, 720x576 for PAL). When you enlarge a video in this way, you magnify defects and expand the “blockiness” that results from low resolution. You may prefer to place your smaller video above a solid matte, as shown in this project.

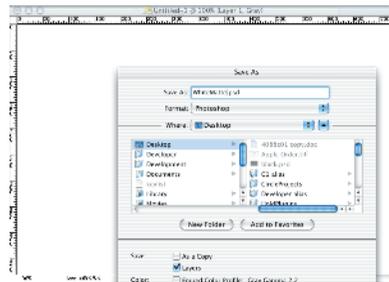
It may seem counterintuitive to add the matte to the video, but there’s a good reason to do it. You add it over the video because you want to scale that matte for the entire video duration. If you were to reverse this procedure, adding the video over the matte, you’d end up with either an extremely short video (when using Add Scaled) or the matte would disappear after a single frame (when using Add). Relayering proves vital when creating a matte track that extends for the full length of your movie.

Note: 720x480 pixels refers to NTSC DV. Have you ever wondered about the name for iMovie’s 640x480 video? The answer is D2. When working with stock footage, you may also encounter 720x486 pixel D1 video. Visit www.uwasa.fi/~f76998/video/conversion for a superb discussion about video standards.

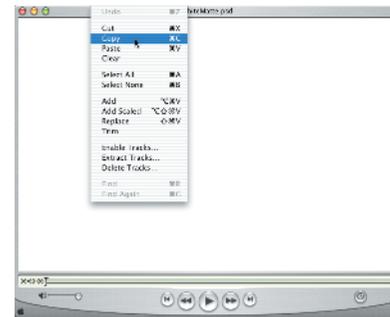


Prepare Nonstandard Sized Video

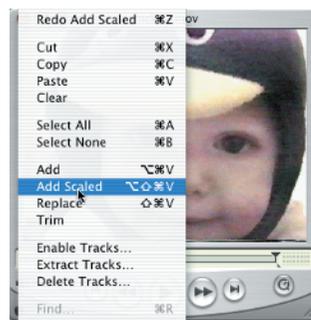
Web cams, USB digitizers, TV cards, and many other sources may all produce small-sized video. In these steps, you’ll create a virtual matte that preserves video size and resolution when exporting to an iMovie-compliant DV stream.



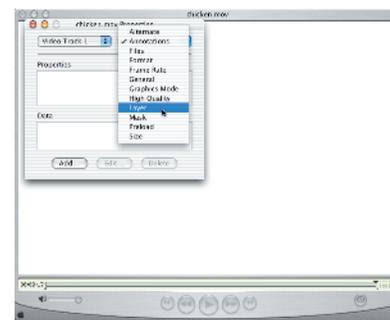
1. In Photoshop Elements, create a new 720x480-pixel blank RGB still (720x576 for PAL) filled with any color. (Screen resolution does not matter. Choose any resolution you like.) Save to disk in a PSD file and open it in QuickTime Pro.



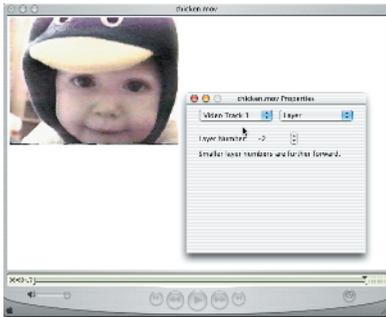
2. In QuickTime Pro, select all of the blank still (⌘-A), copy (⌘-C), and close the matte (⌘-W). This copies the still matte to your computer’s memory.



3. Open your small- or odd-sized movie. (In this example, I use a 320x240 clip imported from an old, analog camera.) Select all (⌘-A). Add the matte with Edit > Add Scaled (Option-Shift-⌘-V). Your QuickTime window will resize and the blank matte will overlay your video.



4. The virtual matte you just added works like the cardboard rectangles used by framing stores. It surrounds your picture and enlarges it. Open Movie Properties (⌘-J). Select Video Track 1 from the left pull-down menu and Layer from the right menu.



5. Click the small down-arrow button to lower the number of your layer. Smaller layer numbers display further forward and are thus more visible. After a few clicks, your video appears in front of the matte. (See more about adjusting layers in “Know Your Tracks.”)



6. Select Size from the right pull-down menu and click the Adjust button.



7. Manually, move your video track into place as desired (see “Know Your Tracks”). Finish by clicking Done.



8. When you are satisfied with your video placement, select File > Export (⌘-E) and save your work to disk. Navigate as needed, name your file, and click Save.

Matte Your Results

You may encounter video with small tracking problems or other flaws around the edges. You'll find this sort of feedback when you import from traditional video sources, such as VHS, Hi-8, and Beta. To fix this problem, you can place a frame with a cut-out over your matted movie. This technique can reveal just the good parts of your video. To accomplish this, use Matte-tastic Lite, included free on the companion CD for purchasers of this book. Feel free to design clever and interesting frames, so long as they do not overly detract attention from your actual footage.



ChickenMatte.mov

34 Power Tips

Safety First

Always keep safety in mind when creating movies for NTSC television. NTSC demands certain accommodations with regard to color and viewable area. Here are the issues you need to know about.

NTSC Safe Colors NTSC televisions often “bleed” when displaying over-saturated colors (particularly red). NTSC color-safe filters limit the dynamic range of your colors in accordance with ITU-R 601 (SMPTE-C).

Action-Safe Area Most picture-tube televisions over-scan to compensate for the aging of display elements. Limit important movement within your movies to an action-safe area, roughly the middle 90 percent of your screen, so your audience won't miss out.

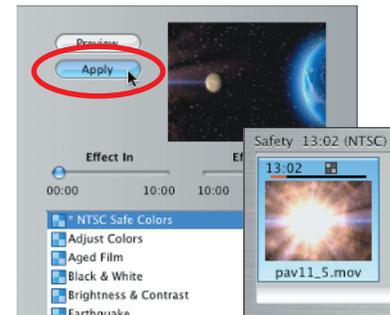
Title-Safe Area Although our minds compensate for action that takes place slightly off-screen, a chopped-off title just looks wrong. To make sure your titles display correctly, limit them to a title-safe area, or about 80 percent of the middle of your screen.

Safety Check: Color and Zones

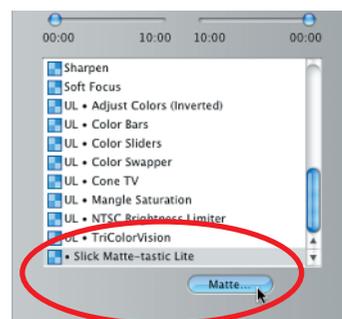
Follow these steps to check broadcast compliance for your NTSC videos. Avoid unsafe colors and stay within the visible boundaries of your television set.



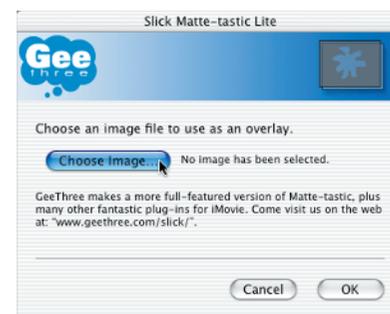
1. In iMovie, select a clip or clips. Open the Effects palette and select NTSC Safe Colors. This free plug-in, part of my Practical Plug-ins Pack, is included on this book's companion CD and is an *iMovie 3 Solutions* exclusive.



2. Click Apply and wait for iMovie to finish applying the effect to your clip. This step limits the number of colors used in your clip to the legal range defined in ITU-R 601 (SMPTE-C). You'll find side-by-side before-and-after sample screens in the Practical Plug-ins package.



3. Choose Slick Matte-tastic Lite from the Effects palette. Click the Matte button to bring up the interactive dialog. (Matte-tastic Lite is included for free as an exclusive to the readers who have purchased this book.)



4. Click Choose Image. This launches a file browser that allows you to select your matte.

iMovie Power Edits

Sometimes, the nonobvious way to do things provides the best results. When using iMovie to edit your footage, be aware of alternative editing techniques. Here, you'll find tricks that I use to edit my movies. They may not be the simplest way, and they may not be the most straightforward way, but they are dependable. For example, my cutaway technique separates the audio before performing the cut, avoiding unpleasant sound glitches that crop up as an iMovie bug. This bug and others may get fixed in later versions of iMovie, but the techniques shown here work correctly now.

Note: Is iMovie 3 acting oddly or running slow? Try resizing its window. Sometimes a smaller window allows iMovie (circa 3.0.1) to run more efficiently.

Note: Is Preview broken in iMovie? Try resizing the window back to its maximum size. A full-sized window allows iMovie (circa 3.0.2) to preview effects, titles, and transitions.

Perfect Cutaways

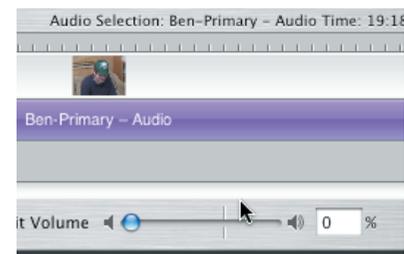
Cutaways allow you to jump from one video source to another while continuing the soundtrack. You've surely seen this on TV and in movies.



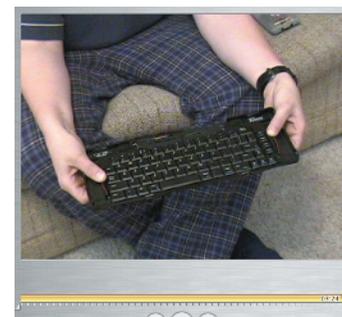
1. Import your primary and cutaway footage into iMovie. This example cuts away to footage of hands opening a keyboard as the subject discusses how the keyboard can be expanded.



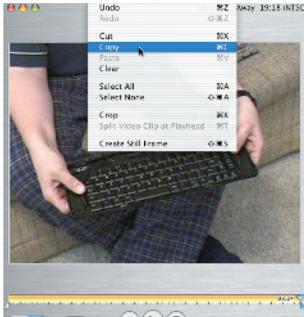
3. Select the cutaway footage on the shelf.



2. Drag the primary footage to the Timeline. Select **Advanced > Extract Audio (⌘-J)** to separate the audio track from the video. The audio appears as a single bright purple line below the video track, regardless of whether it is a mono or stereo track.



4. With the cutaway selected, turn your attention to the Monitor. Drag the right triangular crop marker all the way to the right, to select the entire clip.



5. Choose Edit > Copy (⌘-C).



6. Select the clip in the Timeline. Play through the video and determine exactly where you wish to place the cutaway. Move the playhead to that spot.



7. Choose Advanced > Paste Over At Playhead (Shift-⌘-V).



8. iMovie pastes your cutaway material at the playhead, replacing the original video footage and splitting your clip into three parts: the original start, the new material, and the original end. The audio, having been extracted earlier, remains unchanged. iMovie removes the audio from the cut-in clip, allowing for a true cutaway.

Enhance the Audio

After extracting the audio (step 2), you may want to follow the instructions from “Normalize Sounds” to adjust your sound. Seize this opportunity to enhance your audio without affecting the rest of your movie. This step proves particularly important when you use your camera’s built-in microphone, which may not provide the best sound quality. As my personal camera does not offer an external microphone jack, I have no option other than the built-in. Therefore, I usually normalize my audio with a sound-enhancement program.

Cutaway for Time

Cutaways do more than maintain visual interest. They can also help you edit overly long material. When dealing with an extended stretch of footage (or a particularly boring main subject), you can use a cutaway to move away from the speaker. Rather than return directly to where you left (as done in the project shown here), clever editing allows you to pick up at a later time. Use this technique judiciously, and make sure to edit your sound carefully.

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iMovie Sound Tricks

Crop Markers Drag the triangular crop markers at either end of your sound clips to adjust where sound playback begins and stops. Click a crop marker to snap the playhead to its location.

Trim Sounds iMovie 3 allows you to trim sounds as you do video. Move the playhead into position, select a clip, and choose **Edit > Split Selected Audio Clip at Playhead** (**⌘-T**).

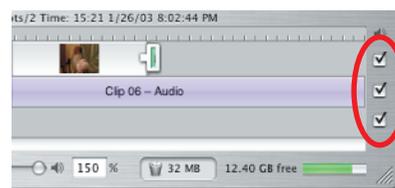
Lock Audio To tie the selected audio clip to the video clip at the current playhead position, choose **Advanced > Lock Audio Clip at Playhead** (**⌘-L**).

Record Sound Optional USB external microphones, such as the Griffin iMic (www.griffintechology.com) allow you to record voice and other sounds. Use the Audio palette to perform your recording.

Extract Sound Choose **Advanced > Extract Audio** (**⌘-J**) to copy a clip's audio to a new Voice file in your project's media file. Choose **File > Export > To QuickTime > Expert Settings > Export > Sound To AIFF** to extract the sound for your entire movie.

Sound Power

In this project, you will explore various ways you can control the volume of sounds within your iMovies.



1. Open up a project in iMovie that contains a variety of sounds. In the Timeline, locate the mute toggles at the very right of the window. You'll find three. Each toggle allows you to mute the track it lies next to. When checked, sounds play normally. When unchecked, the track is silenced.



2. Select any sound on your Timeline. Locate the volume slider at the bottom of your window. Adjust the relative volume of your sound by adjusting the slider between 0% (mute) and 150% (louder-than-recorded).



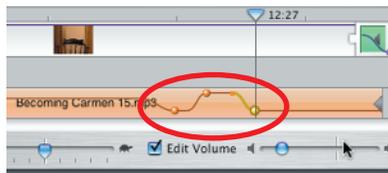
3. Select another sound. Adjust the zoom control so your sound takes up a reasonable fraction of the visible Timeline. You are about to interactively edit your sound's volume. The more of the sound you can see, the better you will be at making precise adjustments.



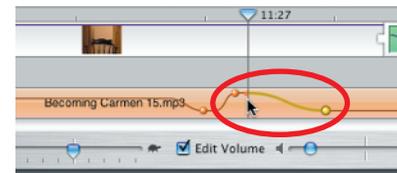
4. Locate the Edit Volume toggle at the bottom of your screen. Check it. Purple volume control lines appear in each of your audio and video assets.



5. Move your pointer to any volume control line. Click it and drag either up or down. A yellow volume control point follows your movement. A smaller orange or purple dot anchors the curve. Drag the yellow point anywhere between the bottom of the track (0 percent, mute) and the top (150 percent, louder-than-recorded).



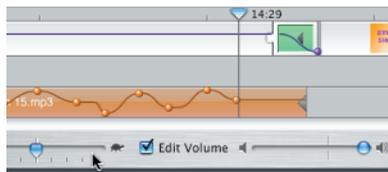
6. Add more volume control points by clicking and/or dragging the volume line. Selected control points appear in yellow and associated orange or purple dots are visible. Unselected points appear in orange or purple and iMovie hides their small dots. If desired, use the volume slider to adjust a selected control point.



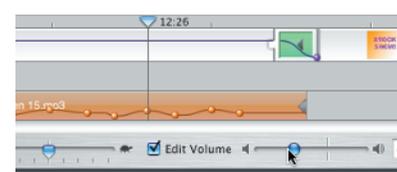
7. To reposition a volume control point, drag it left or right. To control the slope of the curve, drag the small orange or purple dot. Here, I drag the dot left to lengthen the duration of the fade-out. Small dots do not move up or down. Only control points adjust volume.



8. To remove a volume control point from your clip, select a point and choose Edit > Clear (or press the Delete key). iMovie removes the associated orange or purple slope-control dot at the same time.



9. To remove all control points from your clip, do the following. Click away from the volume line to select your clip. Make sure that no control point remains selected.



10. Adjust the volume slider down to zero. All your control points will shrink as the clip volume decreases. At zero, the control points disappear when you release the mouse. Readjust the slider as desired to set the volume for the entire clip.

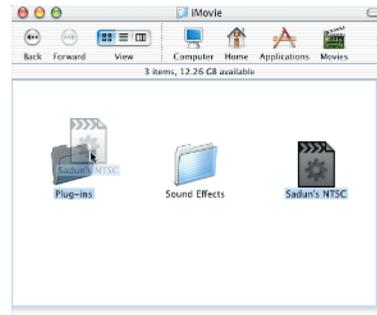
Transform Other Elements

As far as iMovie is concerned, speed and playback direction are a matter of bookkeeping. Reverse a clip and iMovie changes a single line of text in your project file—it doesn't change the clip itself. Even when you force iMovie to render (select File > Export and click the Render Now button), you just optimize playback without really changing the clip. When you import the rendered clip, you end up with more or less the same clip you started with.

When you want to import a reversed clip and have it show up on your clips shelf reversed, use the Title trick described here. Your new clip will work properly with any overlaid effects, titles, and transitions, and you can open and edit it with QuickTime Pro. The same goes for time warping as for reversing. Lengthen or slow down a clip and apply this method to create a well-behaved clip.

Conglomerate Clips

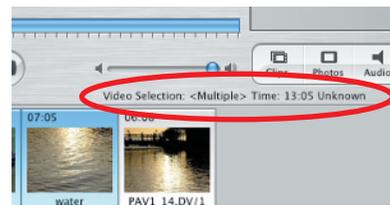
A blank title provides a sneaky but very convenient way to combine a few clips together without having to export and reimport footage.



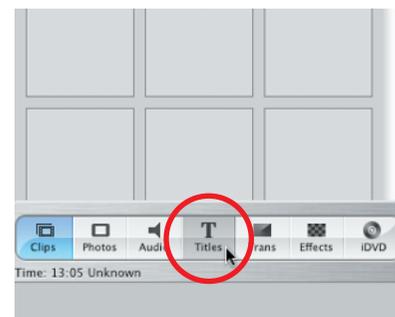
1. If iMovie is running, quit the program. Drag a copy of Sadun's NTSC plug-in to your iMovie Plug-in folder (~/.Library/iMovie/Plug-ins). An *iMovie 3 Solutions* exclusive, you'll find a copy of this and the other Practical Plug-ins on the companion CD-ROM.



2. Launch iMovie. Using the Clip Viewer, select those clips you wish to collapse into a single element. Click the first clip to select it. Then Shift-click the last in the series; iMovie automatically selects all the clips between them.



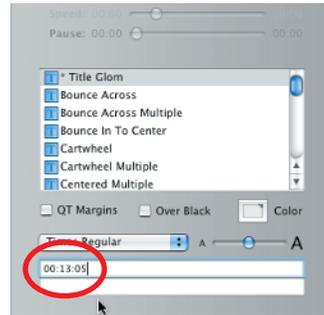
3. Examine the bar on top of the Clip Viewer. It will show that you've selected multiple clips and tell you the combined duration of those clips. Make a note of this number. In this example, the total time selected is 13:05.



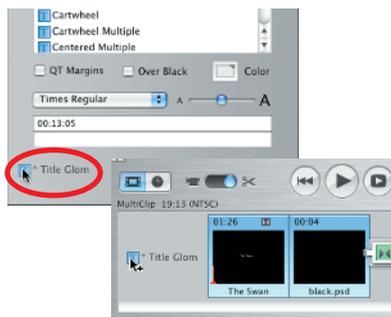
4. Click the Titles button to select the Titles palette.



5. Locate Title Glom. (“Glom” is computer-slang. It’s short for conglomeration). You’ll find it in the Title palette’s scrolling list. If you do not see it after scrolling up and down through the list, revisit step 1 of this project.



6. Locate the first title line toward the bottom of the palette. Enter the time from step 3 in the form of Minutes:Seconds:Frames. For 13 seconds and 5 frames, enter 00:13:05.



7. Move the cursor to the Title Glom label from the scrolling list. Drag it to your Timeline and place it before the first of the clips selected in step 2.



8. Wait as iMovie conglomerates your clips into a single new clip using the duration you specified in step 6. This new clip is not just bookkeeping. It appears in your Media folder and can be imported, reused, and treated like any other clip.

Mind the Time

When programming the Title Glom plug-in, I added several safety features to ensure that clip conglomeration proceeded correctly. Here are a few to keep in mind.

No More Than 8 Minutes Title Glom limits clip conglomeration to 8 minutes. Any longer and your conglomerated clip might exceed OS X’s 2-gigabyte file limit.

Minutes Matter Do not omit the minutes when entering a time for your conglomeration, even if the final clip lasts under a minute. To request a 1-second glom, enter 00:01:00, not 01:00. (00:1:00 or 0:1:0 are acceptable. The plug-in does not demand leading zeros).

Maximum Values Title Glom limits the maximum values for each number. Frames round down to 29, seconds to 59, and minutes to 7. Enter 0:90:00 and Title Glom adds a 59-second title. For 90 seconds, enter 1:30:00 instead.

Overall Format Matters Title Glom rejects negative numbers, words, or badly formatted times. These default to a zero-second title that does not affect the rest of your footage.



Slow Down Your Clips with Stupendous Software

The project on this page demonstrates how to speed up the clips in your project. Slowing down your clips proves more complicated. Instead of discarding frames, iMovie must add frames to your movie so action occurs over a longer period. To accomplish this, iMovie doubles (or triples, or whatever) the frames it encounters. This can produce jerky-looking and unrealistic results.

A better solution involves interpolation. Interpolation is a method that uses mathematical averaging to better approximate differences between consecutive frames. To find an interpolated solution, you must look to third-party software. Stupendous Software (www.stupendous-software.com) sells two plug-in packs (Time Effects 1 and Time Effects 2) that address time and time dilation in this manner.

Speed Up Your Movie

Go beyond iMovie's speed limit. This project demonstrates how to create time-lapse footage from your iMovie clips.



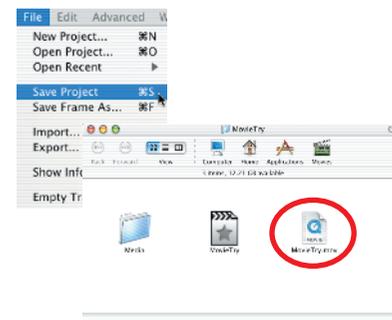
1. In iMovie, drag the clip (or clips) you wish to speed up to the Clip Viewer. Here, I use a 4-minute-long clip that I will eventually speed up by a factor of 25.



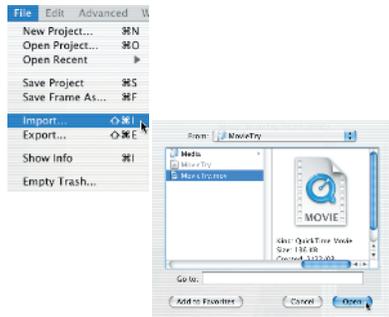
2. Click the Clock button to switch from the Clip Viewer to the Timeline display.



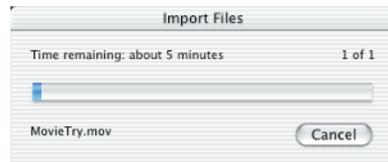
3. Select your clip (or clips). Locate the speed slider at the bottom of the Timeline. Drag the handle all the way to the rabbit and away from the turtle. In iMovie 3.0.1, this speeds your clip by a factor of 5. Here, clip duration reduces from 4:02:07 to 48:13.



4. Select File > Save Project (⌘-S). Whenever you save your work in iMovie 3, the program creates a new reference movie in the top level of your project folder.



5. Select File > Import (⌘ -Shift-I). Navigate to your project folder. Select the reference movie you'll find there and click Open.



6. Wait as iMovie imports your movie and converts it to a standard DV clip. In iMovie 3.0.2, this can take absurdly long periods of time even for relatively short clips. You may wish to take a coffee break.



7. Drag your newly imported clip down to the Clip Viewer and repeat steps 2 through 6.



8. After the import finishes, you will have created a self-contained clip that speeds through time at 25-times the normal rate. The video that accompanies this project demonstrates the overall effect this speed-up produces.



The Clear Trick

Edit > Clear removes titles from any clip labeled with a small T in the top-right corner. Clearing undoes the titling and returns you to an earlier state of editing. If the title extended over multiple clips, combining them, the individual clips will return. If adding the title split any clip in two, this trick will restore the original without the split.

Other clear tricks include the following:

Undo Selecting Undo (Edit > Undo, ⌘ -Z) offers the simplest way to restore your clips to an earlier state. iMovie supports an unlimited number of Undos. Beware of emptying the Trash; when you do, most clip changes become permanent. The state of the restored media will only go back in time to the last time the trash emptied.

Remove a Transition When you delete a transition, you restore the clip material that was used to create the transition. For a two-way transition, the restored material will last twice as long—a two-way transition gathers frames from both sides when it's created.

Restore Clip Media Choose Advanced > Restore Clip Media to return a clip to its original state—at least the latest state available since the last time you emptied the trash.