

# **Working with Final Cut Pro X and AJA**

Information in This Bulletin is Subject to Change  
June 20, 2011

## Bulletin

B e c a u s e   i t   m a t t e r s .



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# Final Cut Pro X and AJA

## Introduction

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Final Cut Pro X is the latest update for Apple's popular non-linear editing software. It features a new user interface and boasts new, exciting features for editors. However, the way editors interact with third party tools, like the AJA KONA cards, is different from the previous versions of Final Cut Pro. This document describes how editors can use AJA products with the latest version of Final Cut Pro.

## AJA Recommendations for Configuring Your Final Cut Pro X System

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You may want to use Final Cut Pro X right away, but you are likely to have some projects that you are still working on using a previous version of Final Cut Pro. AJA recommends that instead of installing Final Cut Pro X alongside your current version of Final Cut Pro, you create a new boot drive for your computer with a clean Snow Leopard OS install, then install Final Cut Pro X to this alternate boot drive. This way, you can continue to work on your older version of Final Cut Pro with your AJA products as you have been and begin to work on the new Final Cut Pro X with the AJA KONA X Beta drivers. This will give you the most flexibility if you find you need to use the older or newer version of Final Cut Pro.

**Note:** with respect to the system configurations required for AJA products, refer to the AJA documentation available on the AJA website. For the recommended system requirements for using Apple Final Cut Pro X, refer to the Apple website.

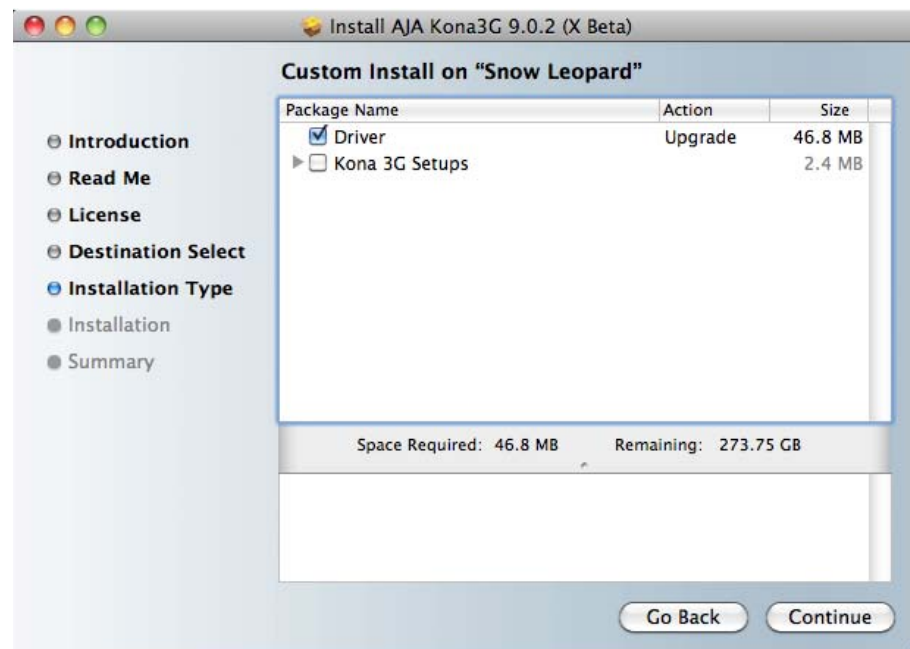
## Part I: Video Output For Final Cut Pro X

### Installing the AJA KONA X Beta Driver

An AJA KONA X Beta driver for your particular AJA KONA product is available for download from the AJA website. AJA recommends the use of this new KONA X Beta driver for any Final Cut Pro X configurations that have a KONA installed.

**Note:** ensure that you download and install the driver that is appropriate for your particular KONA card.

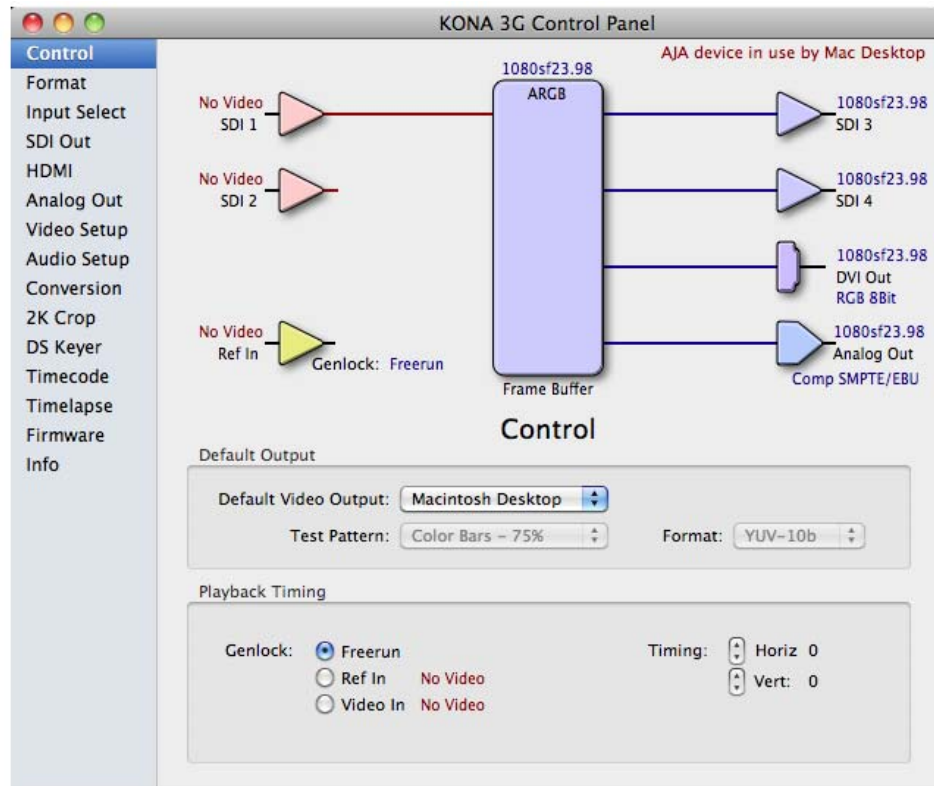
In the past, Final Cut Pro users would normally elect to install a set of AJA-provided Easy Setups for use with Final Cut Pro. Easy Setups are not needed with Final Cut Pro X, so users need not install these when loading the AJA driver.



After the driver is installed, you will be asked to restart your computer.

## Configuring the AJA Control Panel Application for Final Cut Pro X

The first step in configuring the AJA KONA products to work with Final Cut Pro X, is to launch the AJA Control Panel application. The first screen of the AJA Control Panel is the Control screen.



In the Control Panel, you will notice a Default Video Output selection. From the pulldown, select Macintosh Desktop. Selecting this as the default video output will momentarily flash the computer screen and then show an extended version of the Macintosh Desktop on the AJA KONA video outputs connected to your video monitors.

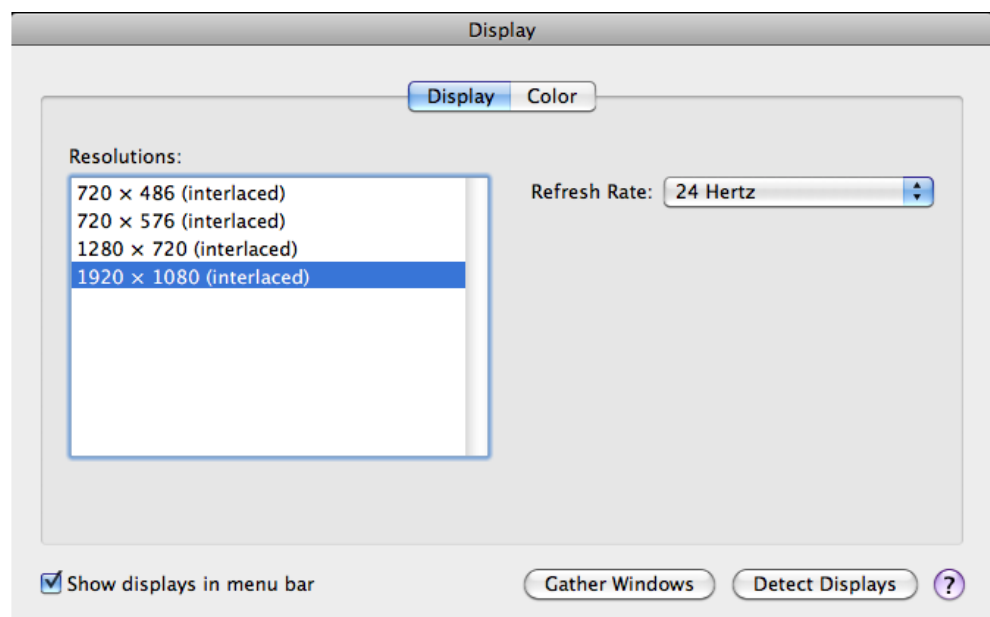
## How to Set the Desktop Output to the Desired Setting

Configuring Desktop parameters requires going into the Mac OS System Preferences and selecting Displays.

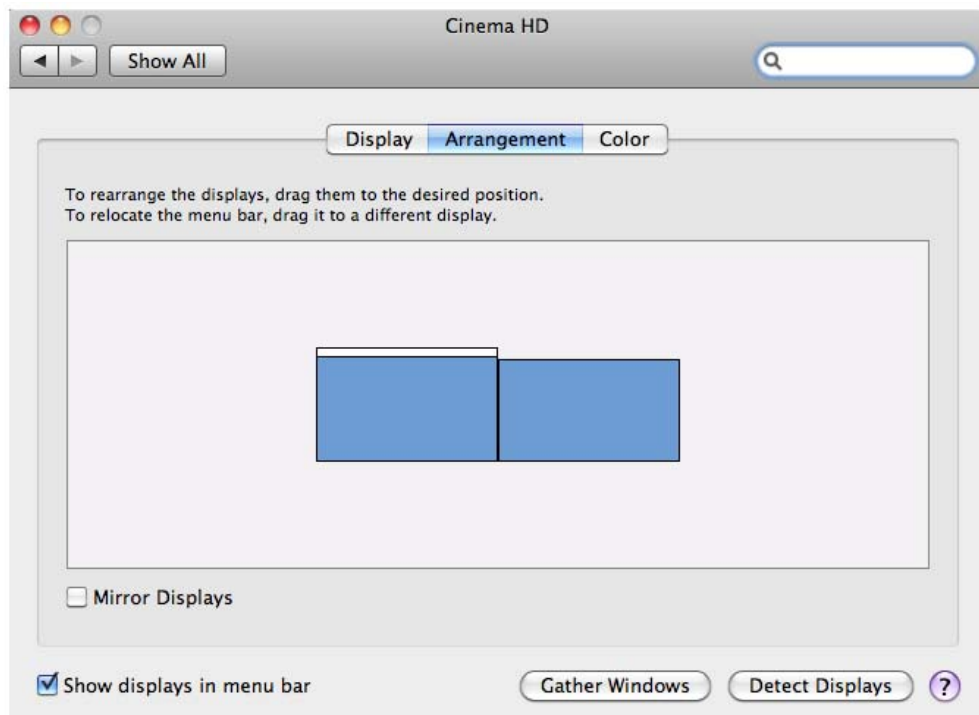


Once you have selected Displays, you will decide which resolution and Hz you want to use.

**Note:** not all video monitors accept all of the frame rates that the AJA KONA products can produce. Select the format and frame rate (Hz) appropriate for your project and supported by your monitor.

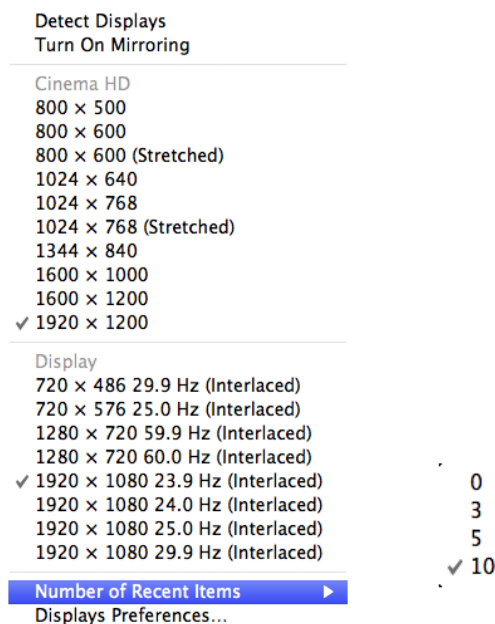


You may also find that it is easiest to arrange the Displays in System Preferences to match your actual physical configuration.



You will likely find it very convenient, should you need to change formats and Hz for your video output, to show the displays in the menu bar in the Finder. Select this checkbox in the lower left hand corner of the UI if you have not already done so. Once you have elected to show the displays in the menu bar, you can navigate to the displays icon in the Finder and pulldown to reveal your various monitor choices.

**Note:** in order to show all of the possible display formats and Hz, you may wish to set the Number of Recent Items parameter to 10.

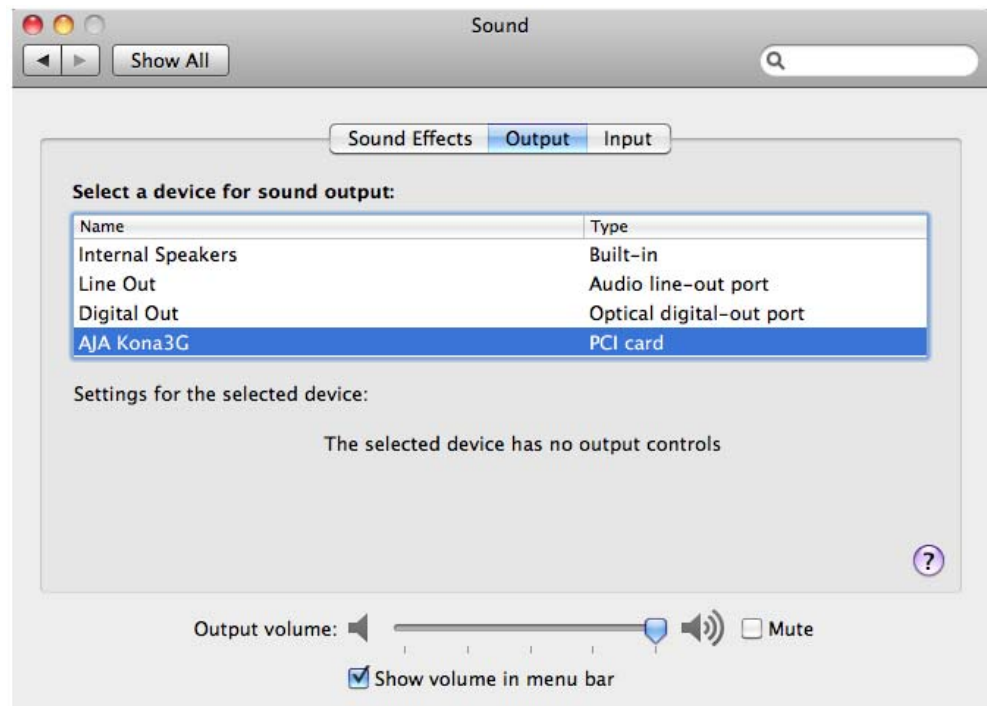


## How to Set Sound for the Desired Output

The AJA KONA cards are Core Audio compliant so you can use them to output system sounds or audio from a variety of applications. In order to enable this, you will need to open the System Preferences>Sound.



Once you have selected Sound, you can then select a device for the sound output. Choose the AJA KONA device listed in the Output list.



You have now made the appropriate video and audio selections for previewing video using your AJA KONA during editorial using Final Cut Pro X.



**Note:** the quality of the output produced during editorial should be considered preview quality.

Also be aware that the use of some graphics cards or the use of multiple graphics cards or monitors, may impact your ability to use the KONA Macintosh Desktop mode. AJA recommends using only one computer monitor connected to one graphics card in your computer for optimal results. Connect your AJA KONA video output to your video monitor.

To ingest material at full quality and to produce master quality outputs, you will use the AJA VTR Xchange application covered later in this document.

## Producing a Video Output with Final Cut Pro X and the AJA KONA

Within the Final Cut Pro X user interface, there is a single Viewer window. In order to preview your edits on the video monitor attached to the AJA KONA card, you will need to choose to show the Viewer on the second display. You can configure this by going to the Window pulldown and selecting Show Viewer on Second Display.

Minimize	⌘M
Minimize All	
Zoom	
Go to Event Browser	⌘1
Go to Viewer	⌘3
Go to Timeline	⌘2
Go to Inspector	⌘4
Show Project Library	⌘0
Hide Event Library	⇧⌘1
Show Timeline Index	⇧⌘2
Hide Inspector	⌘4
Show Color Board	⌘6
Show Video Scopes	⌘7
Show Audio Enhancements	⌘8
Show Audio Meters	⇧⌘8
Media Browser	▶
Record Audio	
Background Tasks	⌘9
Next Tab	⌘→
Previous Tab	⌘←
Show Events on Second Display	
Show Viewer on Second Display	
Revert to Original Layout	
Bring All to Front	
✓ Final Cut Pro	

**Note:** when using the AJA Macintosh Desktop Display for video output from Final Cut Pro X, only a single computer display may be attached to the Mac.

Once the selection has been made, the Viewer and associated UI elements will appear on the video monitor. Move your mouse to the video display and choose the Play full screen option from the lower right hand corner of the Viewer user interface.



The UI elements will now disappear and your video monitor should be filled with the video that is currently in the Viewer. The Viewer will update based on where your mouse is located, whether it is navigating the edit or skimming over clips.

## Part II: Capturing Clips for use in Final Cut Pro X

### AJA VTR Xchange and Final Cut Pro X

One of the changes to the latest version of Final Cut Pro is the absence of Log and Capture within the application. For several years, AJA has offered a free application for capturing clips called AJA VTR Xchange. AJA VTR Xchange, as the name implies, is a program that allows users to ingest and output to VTRs. This simple-to-use application can be used to capture clips for use with the new Final Cut Pro X. The latest version of AJA VTR Xchange offers batch capture capabilities so users can log clips and capture them just as they used to with the Log and Capture tool found in previous versions of Final Cut Pro.

AJA VTR Xchange is included with the AJA KONA X Beta driver.

**Note:** AJA VTR Xchange can be downloaded as a stand-alone application as well. Also note, AJA VTR Xchange only works with AJA devices, so it can not be used to capture from FireWire based cameras or VTRs. This bulletin you are reading outlines the new VTR Xchange v5.0, that is part of the KONA X Beta driver package.

### ***Important:*** Installing Codecs Before Using VTR Xchange

Another difference between previous versions of Final Cut Pro and the new Final Cut Pro X is that additional codec support is not installed when you install Final Cut Pro X. To install additional codecs for use in Final Cut Pro X, such as the Apple ProRes family of codecs, you will need to perform a *Software Update* (from under the Apple icon in the finder) after you have installed Final Cut Pro X *and before* using VTR Xchange. You will be installing the ProAppsQTCodecs.pkg from Software Update.

**Note:** it is very important that you should perform this step prior to using VTR Xchange for capturing clips for use in Final Cut Pro. If the additional codecs from Apple are not installed, a very limited number of QuickTime codecs will appear in the AJA VTR Xchange application.

## Configuring AJA VTR Xchange

By default, the AJA VTR Xchange application, when it launches, will try to auto-configure the main UI viewer so that you see a preview of your incoming video.



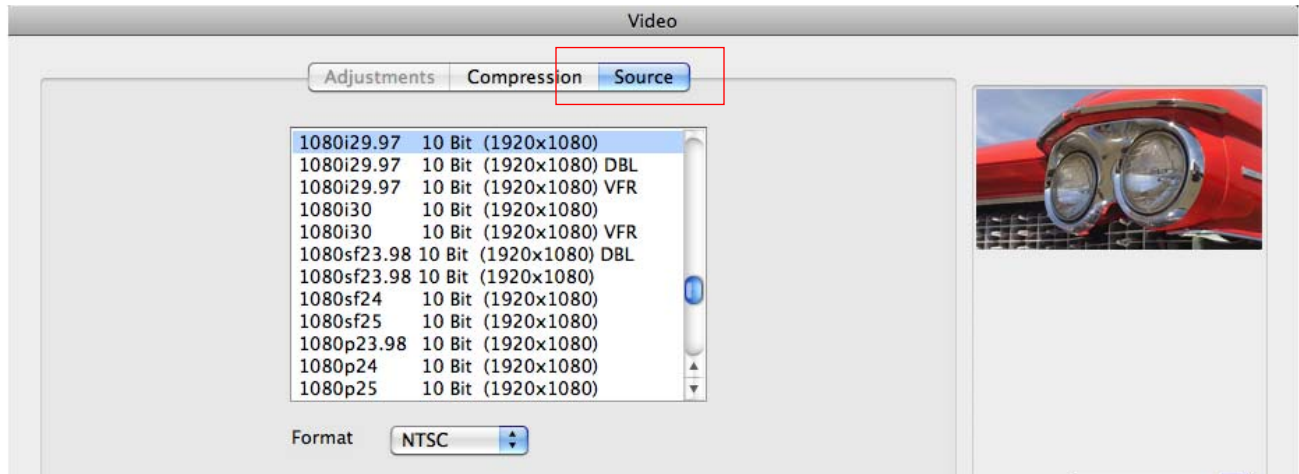
What is auto-configured may or may not be what you want to capture, so you will likely need to make changes in the Capture>Video Settings and the Capture>Audio settings. Capture can be found in the Finder pulldown selections for the application.

Capture Now ⌘K

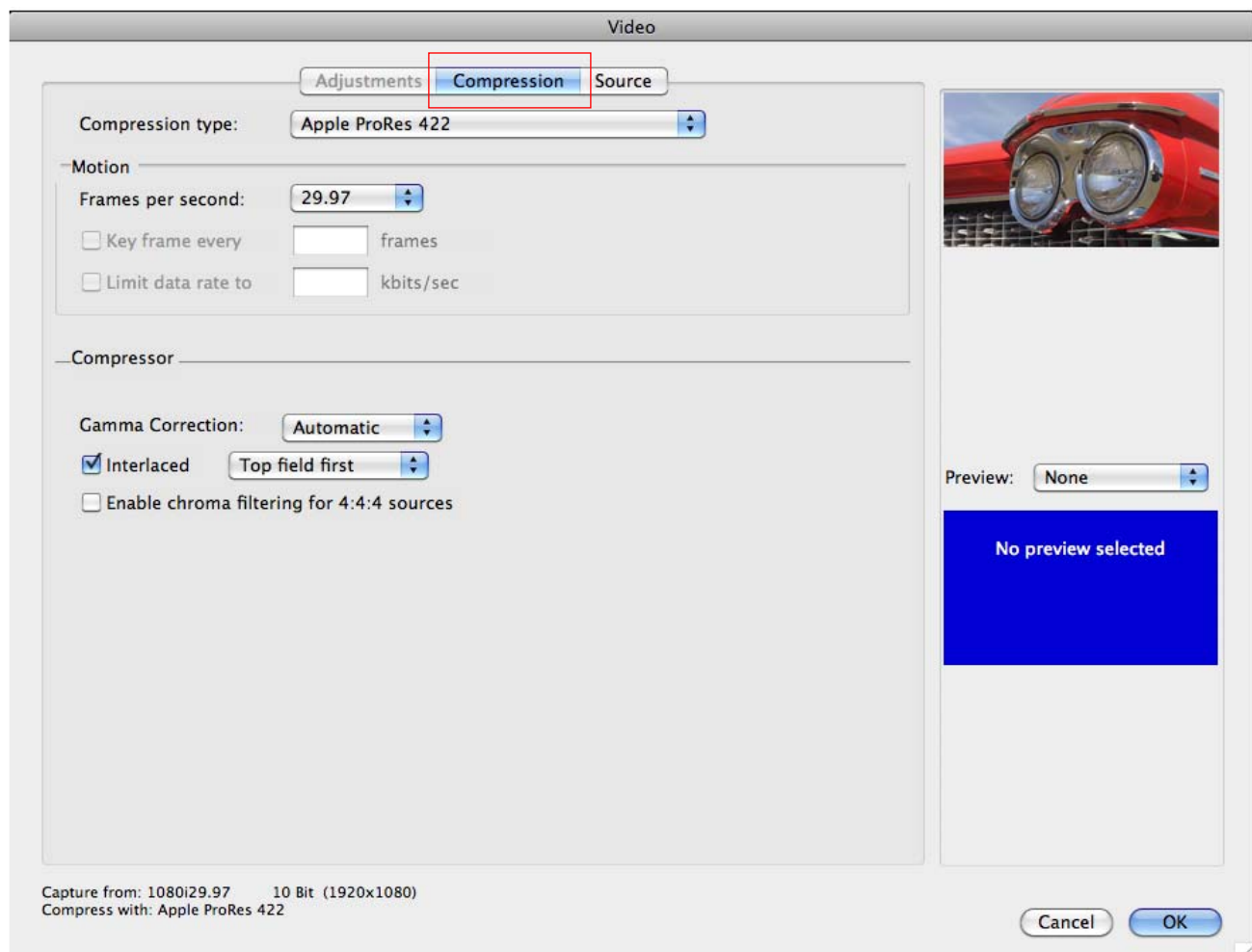
Video Settings...

Audio Settings...

In most cases, you will likely want to capture to one of the Apple ProRes codecs for use within Final Cut Pro X. To configure the AJA VTR Xchange application to capture to one of the Apple ProRes codecs, go into the Capture > Video Settings selection and choose the Source tab first. Within Source, you will see a list of format types. Since Apple ProRes codecs are 10-bit, you will want to choose the appropriate format with the 10-bit indication—for example, 1080i 29.97 10 Bit (1920x1080).



Next, you will be selecting the type of compression that you want to work with: Apple ProRes 422, Apple ProRes 422 (HQ), etc. Click on the Compression tab of the Video Settings window.



Once you have selected the Source and the Compression, click OK in the lower right hand corner of the window.

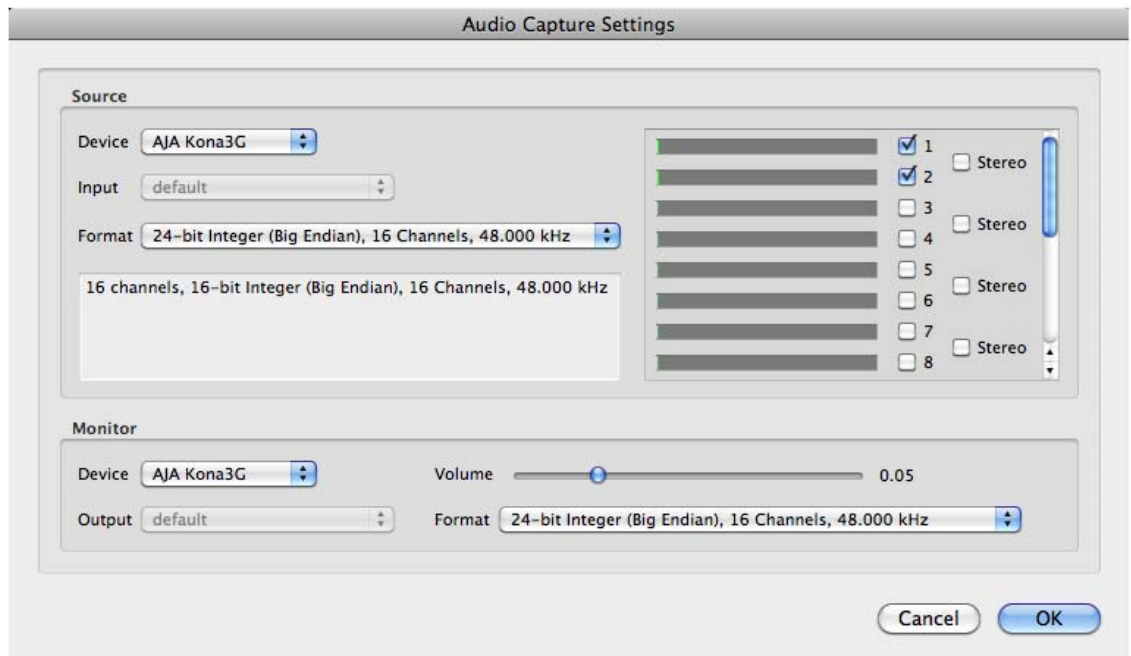
The next step in configuring your settings is the Capture>Audio Settings. Again, select Capture from the Finder pulldown and then Audio Settings.

Capture Now ⌘K

Video Settings...

Audio Settings...

Once you have opened the Audio Capture Settings window, you can elect to change the number of audio channels you will capture, whether they are dual mono or stereo and what format of audio is used.



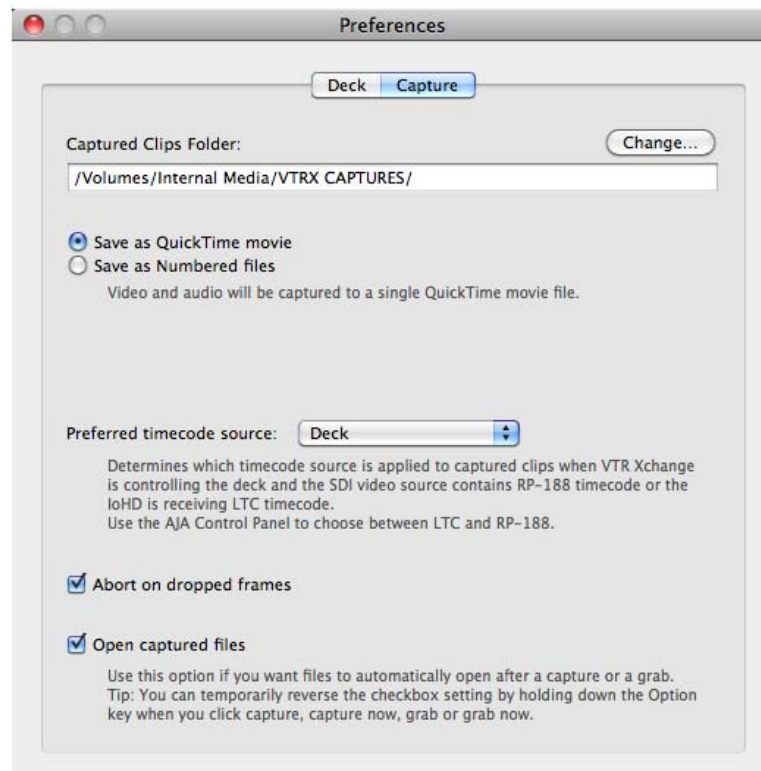
Once you have made the settings appropriate for your project, click OK in the lower right corner of the window.



## Logging and Capturing Clips with AJA VTR Xchange

Before you begin logging and capturing clips, you will want to determine where your clips are saved. Go to the AJA VTR Xchange pulldown and select Preferences. On the Capture tab of the window, select a location for the Captured Clips Folder by choosing the Change button.

**Note:** ensure you select a disk that has an adequate amount of storage space as well as adequate bandwidth capabilities for the type of codec, format and frame rate that you are trying to capture.

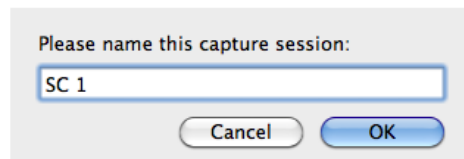


After you have selected the desired location for your clips, simply close the Preferences window.

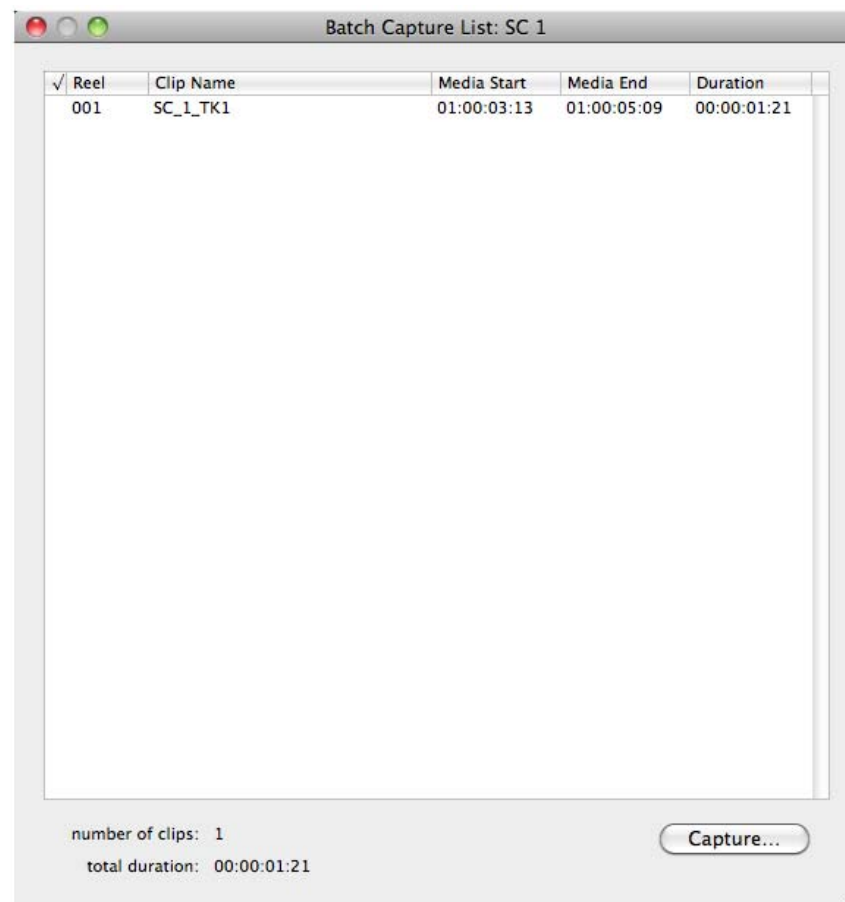
The AJA VTR Xchange main window is very easy to operate. It consists of transport buttons for controlling your VTR (as well as familiar keyboard commands like J-K-L).



You can shuttle through your material and mark an in and an out point and then use the log button to create a new Batch Capture List.







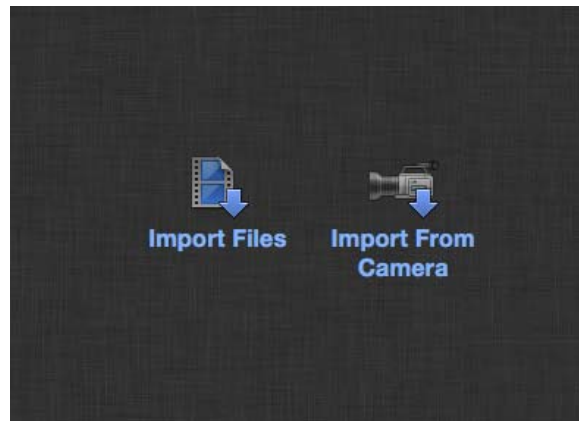
Once you have logged all of your clips to the Batch Capture List, you can elect to capture them all at once. This is as simple as clicking on the Capture button in the lower right hand corner of the window.

**Note:** if you want to log clips but perform the capture process later, an XML file is saved that can be opened and captured from later. Once you have captured clips successfully, you can move on to working with them in Final Cut Pro X.

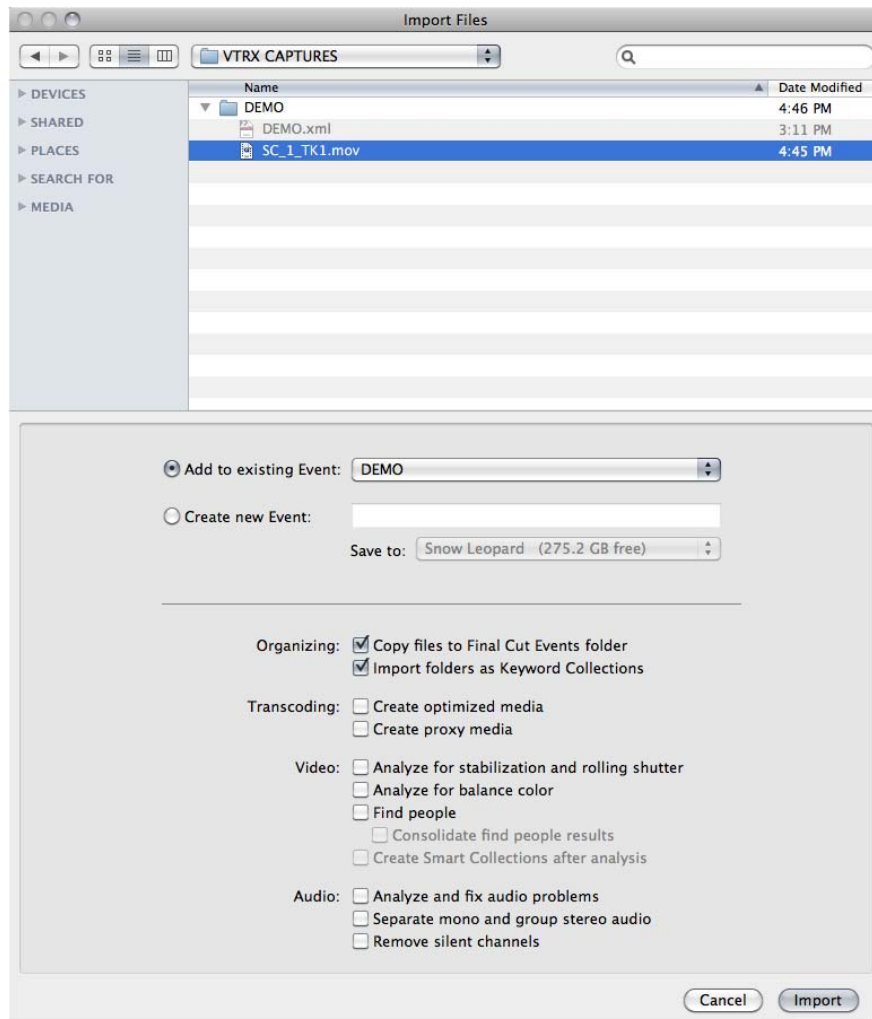
## Part III: Importing Clips into Final Cut Pro X

### Importing Clips into Final Cut Pro X

Final Cut Pro X imports media differently than the previous versions of Final Cut Pro. Final Cut Pro X allows you to import your clips to an Event. By default, the name of the event is the current date. You can elect to change this name to whatever you feel serves your project organization best. You create a New Event via the File pulldown menu and choosing New Event. Once presented with the Event, name it accordingly and then choose the Import Files icon presented in the user interface.



Once you select Import Files, a prompt will appear which allows you to locate the clips you'd like to import.

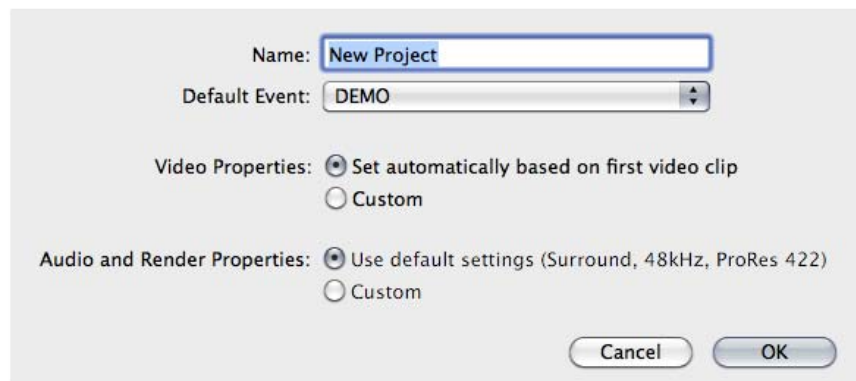


Final Cut Pro X provides a variety of selections that users can choose when importing media. Consult the Final Cut Pro X documentation to decide which settings are appropriate for your clips and your project. Once you have made the selections that you feel are appropriate for your needs, click on the Import button in the lower right corner of the window.

Once your clip is imported into Final Cut Pro X, it will appear in the Event you created.



You can now create a New Project. Like the File Import, decide what settings are right for your project.



You can scrub, mark in and out points, assign keywords, etc. for your clip and add it to your project's timeline. Refer to the Final Cut Pro X documentation for details about editorial.

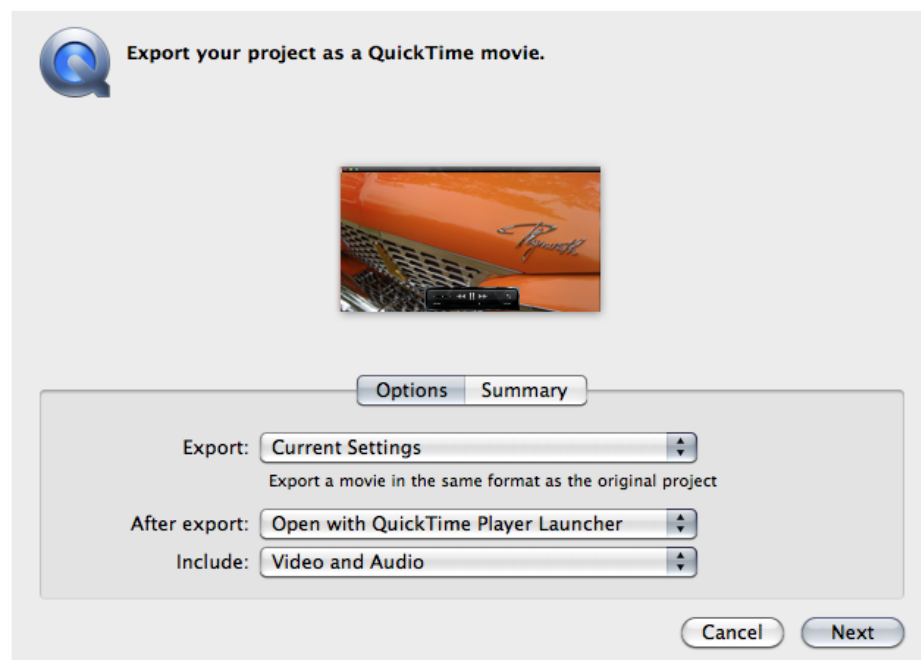
## Part IV: Exporting from Final Cut Pro X and using AJA VTR Xchange to Edit to Tape

### Exporting Clips From Final Cut Pro X

Final Cut Pro X changes the way you output files to tape. In previous versions of Final Cut Pro, an Edit To Tape window was provided for this operation. With Final Cut Pro X, you first export a QuickTime Movie and then use AJA VTR Xchange to perform an edit to tape operation.

**Note:** AJA VTR Xchange only performs insert edits, therefore, you need to be sure to black and code your tape prior to the edit to tape using the VTR's built in signal generators, striping the tape with the timecode required for your output.

With a timeline selected in Final Cut Pro X, choose the Share pulldown menu and select Export Movie.



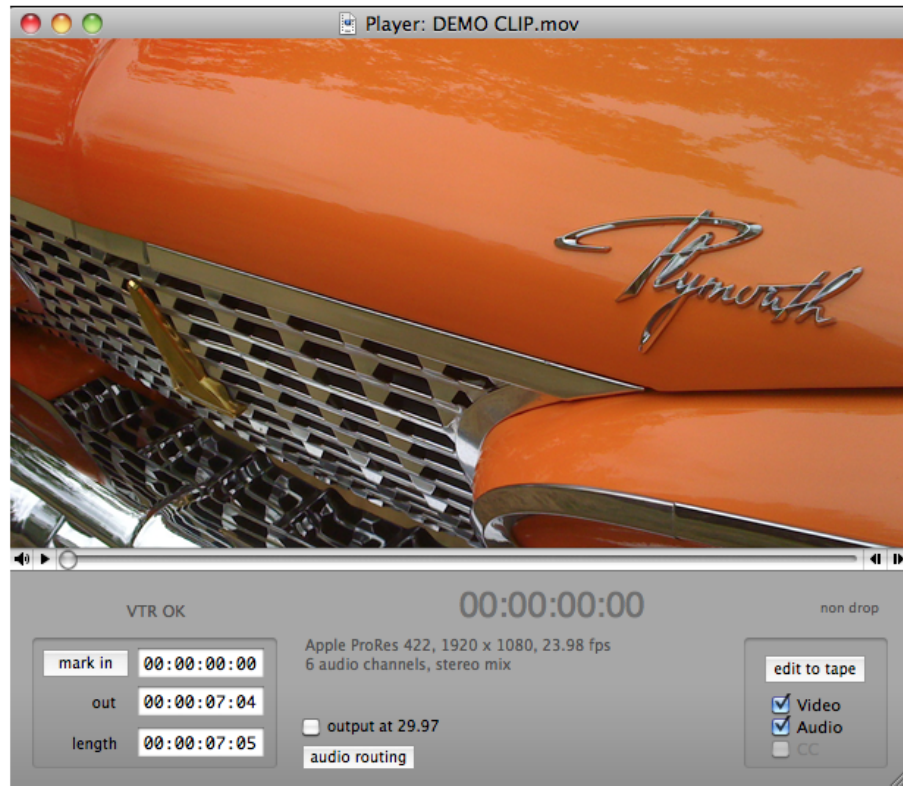
In most cases, you can leave the default values in the QuickTime Movie export window as is. If you want to change the settings, consult the Apple documentation for best practices and recommendations. Once you have made the desired settings, click on the Next button. After you click Next, you will be prompted to name the clip and then to save it. Be sure to export and save the clip to a disk with adequate space and bandwidth for the file type you are exporting.

If you elected to have the clip open in QuickTime Player, review the clip before launching AJA VTR Xchange. If you feel there are any changes that need to be made, make them in your edit and re-export a QuickTime Movie if necessary.

## Using AJA VTR Xchange for Edit to Tape

Launch AJA VTR Xchange. From the File pulldown menu, select Open. Navigate to the location where the QuickTime Movie you exported from Final Cut Pro X was saved. Select the QuickTime Movie.

VTR Xchange will open a new Player window for the QuickTime Movie.



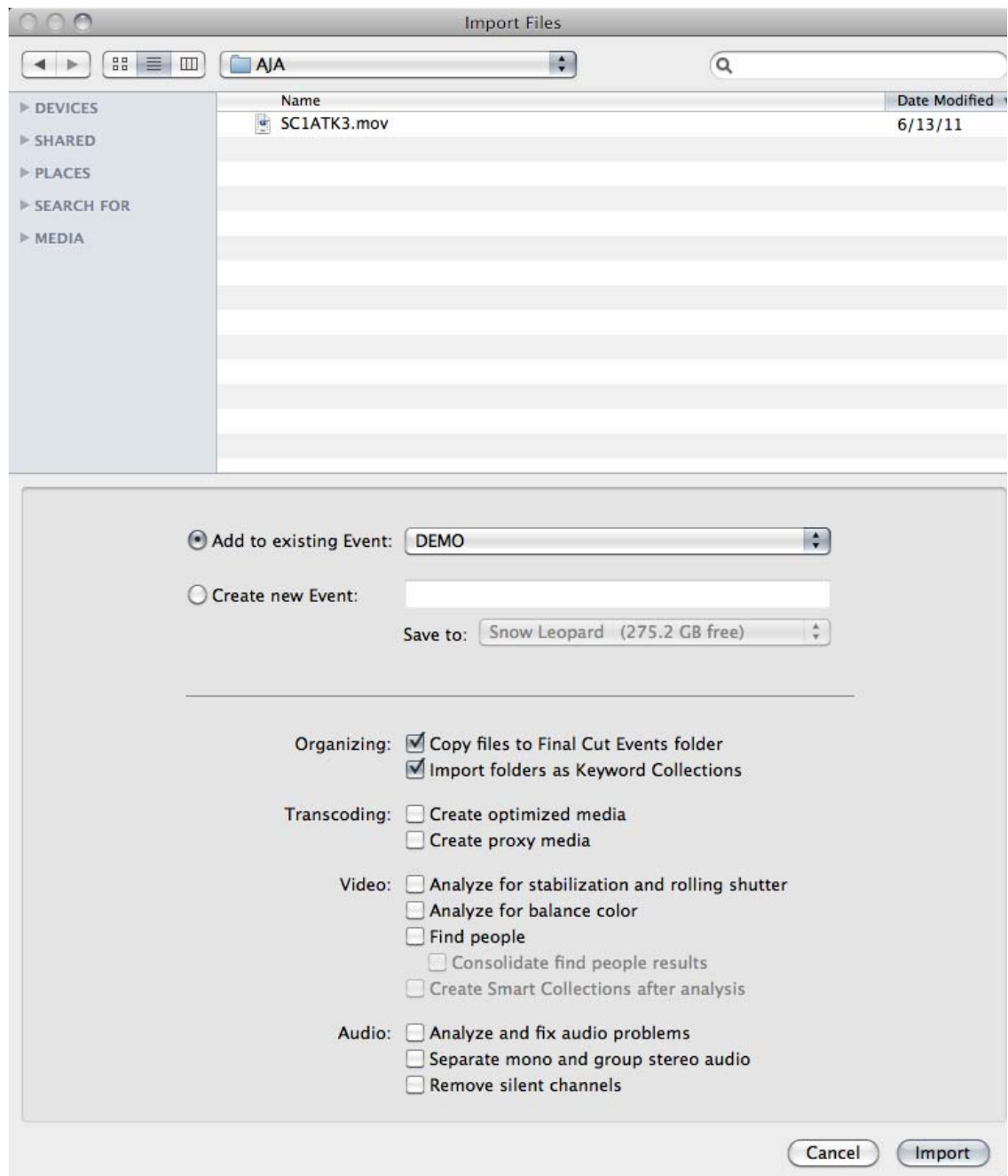
You can review the QuickTime movie before you perform the edit to tape. Make the appropriate selections for the in and out points you want the edit to occur at as well as the audio routing. When you are satisfied with your selections, click on the edit to tape button on the right hand side of the user interface. Note: for detailed information on AJA VTR Xchange operation, refer to the AJA VTR Xchange manual.

After you perform the edit to tape operation, you can review your edit by using the VTR Xchange main UI window or you can review the edit directly from your VTR.

## Part V: Using AJA Ki Pro Apple ProRes Recorders with Final Cut Pro X

### The Value of the AJA Ki Pro and Ki Pro Mini to Apple Final Cut Pro X Users

In 2009, AJA was the first company to introduce an Apple ProRes 422 video recorder, the Ki Pro. The AJA Ki Pro could be paired with a variety of camera to produce ready-to-edit QuickTime Movies for use with Final Cut Pro. In 2010, AJA added the Ki Pro Mini, a more compact device, to this family of products. Both products are ideal for use with Final Cut Pro X because they can create QuickTime Movies that are native to Final Cut Pro X. Ki Pro and Ki Pro Mini files can be copied to your Final Cut Pro X editing system's storage and then imported into your Final Cut Pro X Events.



## Part VI: Summary

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### A New Way of Editing

Final Cut Pro X introduces new ways of working to editors. Some of the items that are familiar to longtime users of Final Cut Pro have changed, but the flexibility of Final Cut Pro X is very compelling. Final Cut Pro X can be paired with AJA desktop KONA products for ingest, editorial and mastering to tape in ways familiar to users. The AJA Ki Pro and Ki Pro Mini acquisition products can be used for the most modern file-based workflow possible when working with Final Cut Pro X. The workflows explained in this document are designed to help users with the transition to this new and exciting phase of Apple non-linear editing. As Apple's Final Cut Pro X evolves, expect AJA to provide new and exciting interactions with the software and expand the workflow possibilities.

If you have further questions beyond the scope of this brief overview document, consult Apple documentation for Final Cut Pro X, AJA documentation for the KONA and Ki Pro products. If you still feel you need assistance, don't hesitate to contact AJA Technical Support via phone or email.

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