Working with Final Cut Pro X and AJA

Information in This Bulletin is Subject to Change

For use with Final Cut Pro X Version 10.0.4 and AJA Version 10.3 Drivers

April 10, 2012

Bulletin

Because it matters.

AJA
VIDEO SYSTEMS

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Fax: 530.274.9442
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Final Cut Pro X and AJA

Introduction

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 and Io XT, 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.

Note: The information in this bulletin applies to Final Cut Pro X version 10.0.4 and AJA Version 10.3 driver software for KONA and Io XT.

AJA Recommendations for Configuring Your Final Cut Pro X System

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 Lion 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. 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.

Ensure You Have Current AJA Software

Ensure you've downloaded and installed the very latest current AJA Driver software for your product that supports Final Cut Pro X. Go to the AJA website support section to get that software:
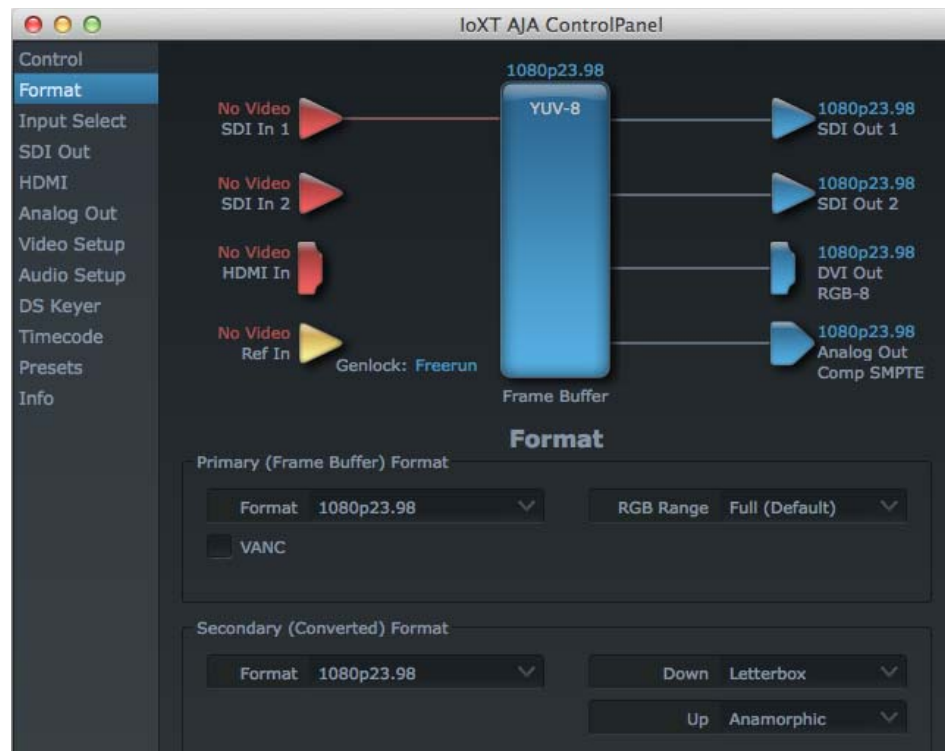
   http://www.aja.com/support/

Launch the AJA Control Panel

Go to your Applications folder, locate the AJA Control Panel, and then run it.
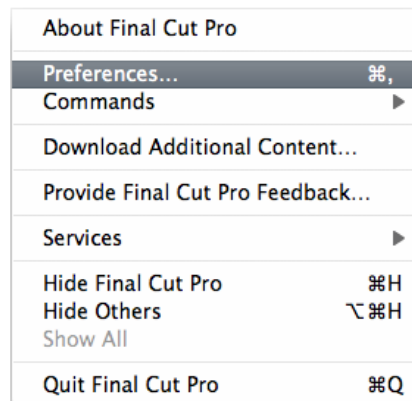

Go to the Format Tab

Set the format and frame rate in the Format tab for the output format/frame rate you'd like to obtain from FCP X.
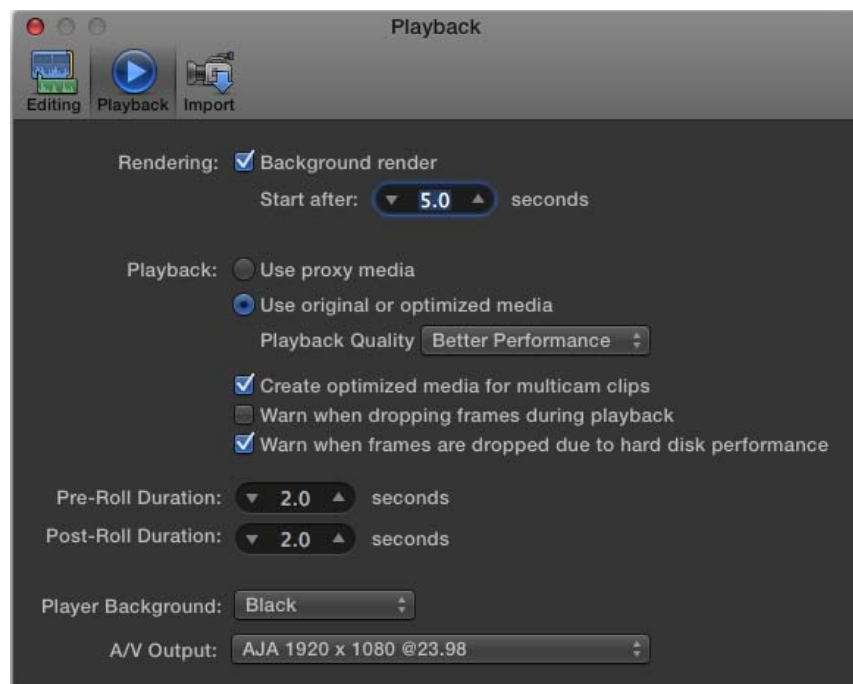
Go to Final Cut Pro X Preferences and Verify AJA A/V Output
In Final Cut Pro X, go to the Final Cut Pro pull-down menu and select Preferences.

Locate the A/V Playout pull-down menu in Playback Preferences, and note that A/V Output reports the AJA hardware. For example: AJA 1920 x 1080 @23.98.

If the video output from Final Cut Pro X and the AJA hardware is not appearing on a baseband connected broadcast monitor, first scrub over a clip in an Event, or in the Project.

If video out still does not appear, go to the Final Cut Pro Window pull-down menu and ensure that A/V Output is selected.
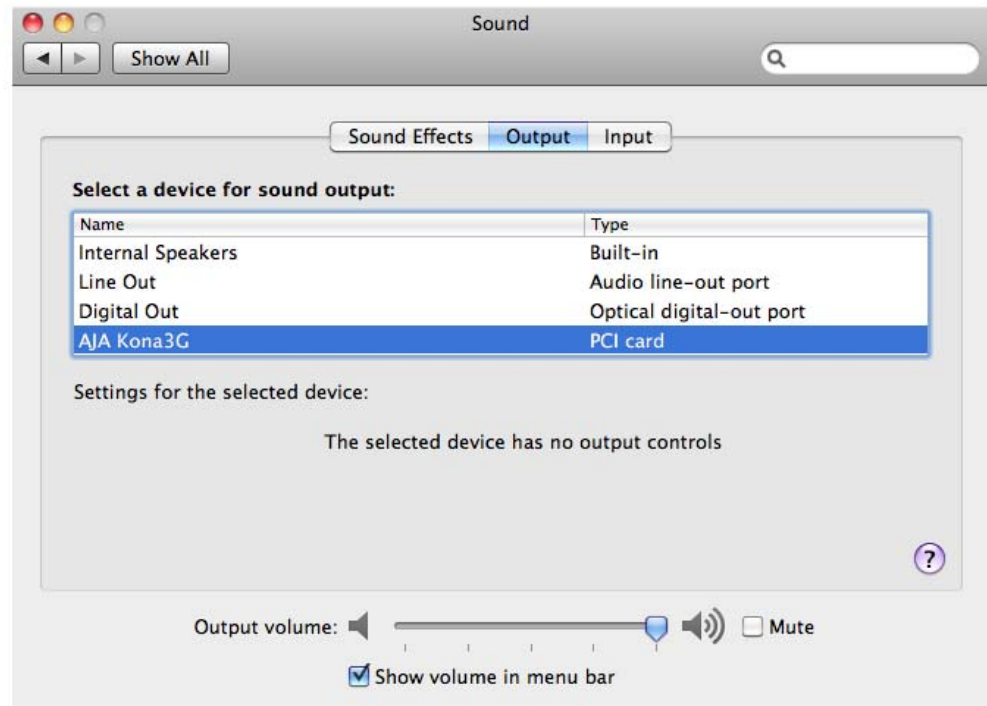

Final Cut Pro video output is set based on the Project. If you need to change from a 23.98 output to a 29.97 output, you may need to quit Final Cut Pro X, change the format in the AJA Control Panel application and relaunch Final Cut Pro X. For ease of use, and clarity about the selected video output format and frame rate, you may keep the AJA Control Panel application open when working with Final Cut Pro X.

How to Set Sound for the Desired Output

The AJA KONA and Io XT products 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 device listed in the Output list.

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

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.

Note: AJA VTR Xchange can be downloaded as a stand-alone application from the AJA support pages for your product. Also note, AJA VTR Xchange only works with AJA devices, so it can not be used to capture from FireWire based cameras or VTRs. Always ensure you have downloaded the very latest version of AJA VTR Xchange.

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.
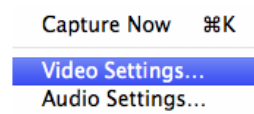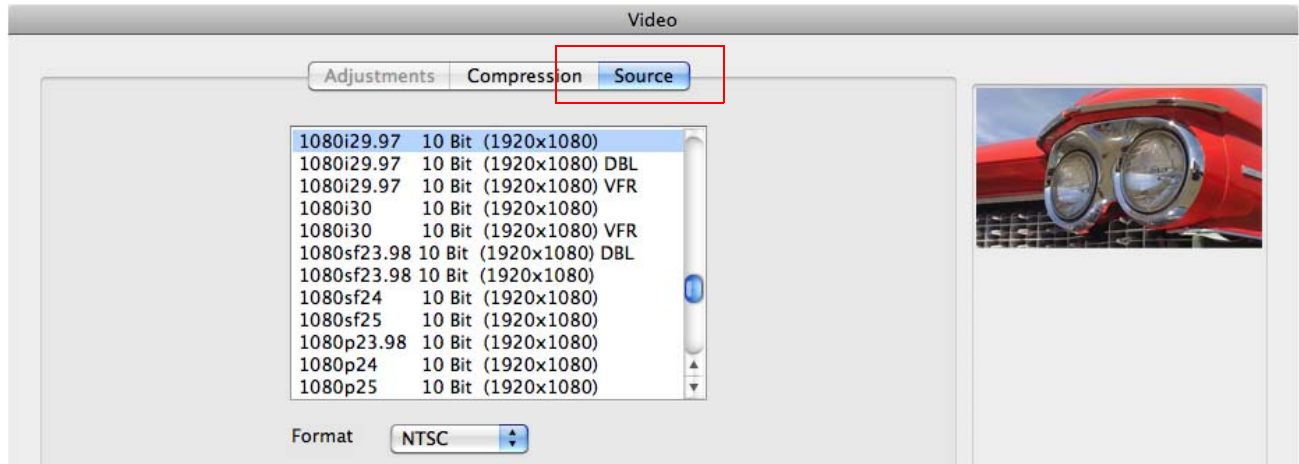
Configuring AJA VTR Xchange

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.
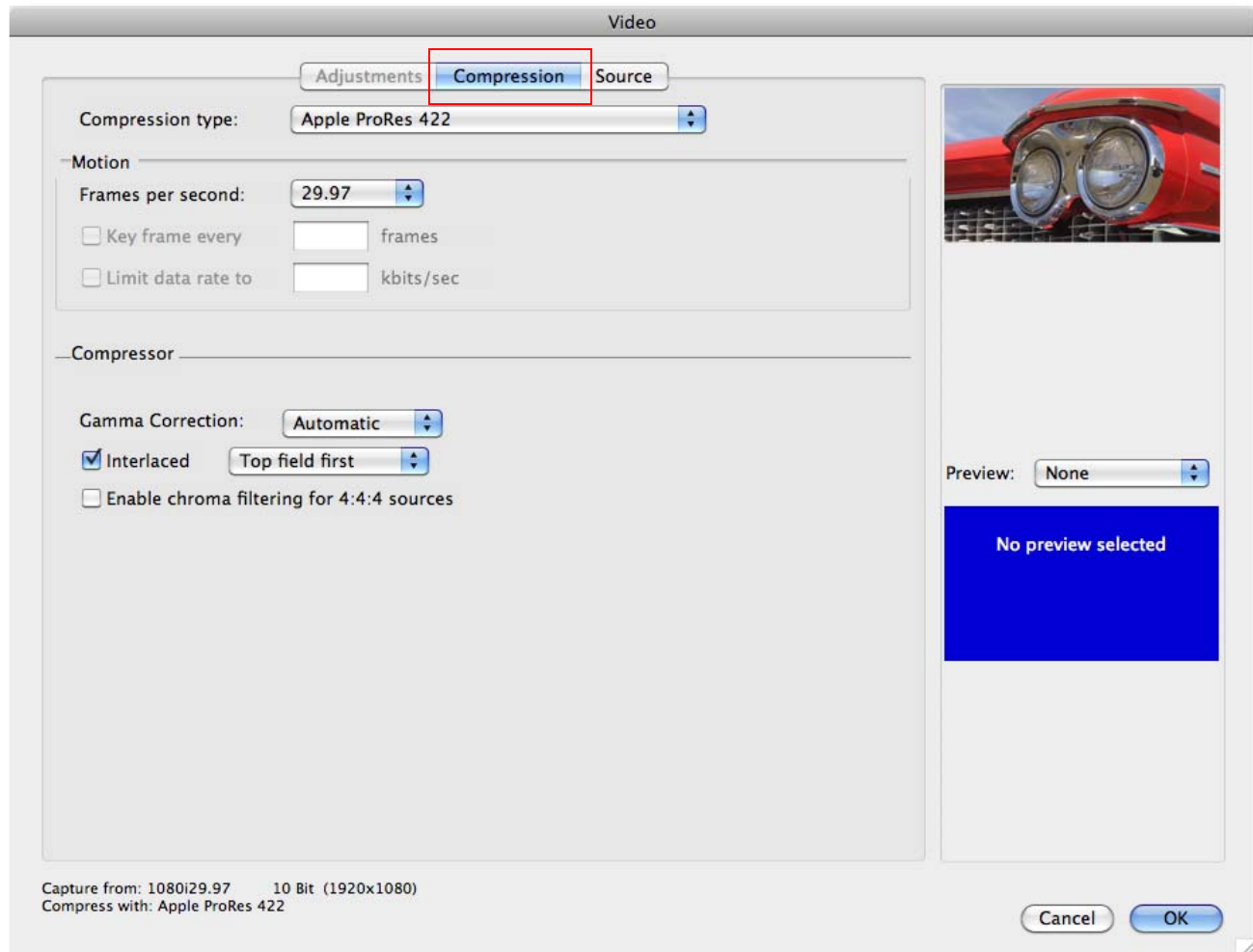

What is auto-configured may or may not be what you want to capture, so you will likely need to make changes in the Capture>Video Settings and the Capture>Audio settings. Capture can be found in the Finder pull-down selections for the application.

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).
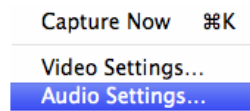

Next, you will be selecting the type of compression that you want to work with: Apple ProRes 422, Apple ProRes 422 (HQ), etc. Click on the Compression tab of the Video Settings window.
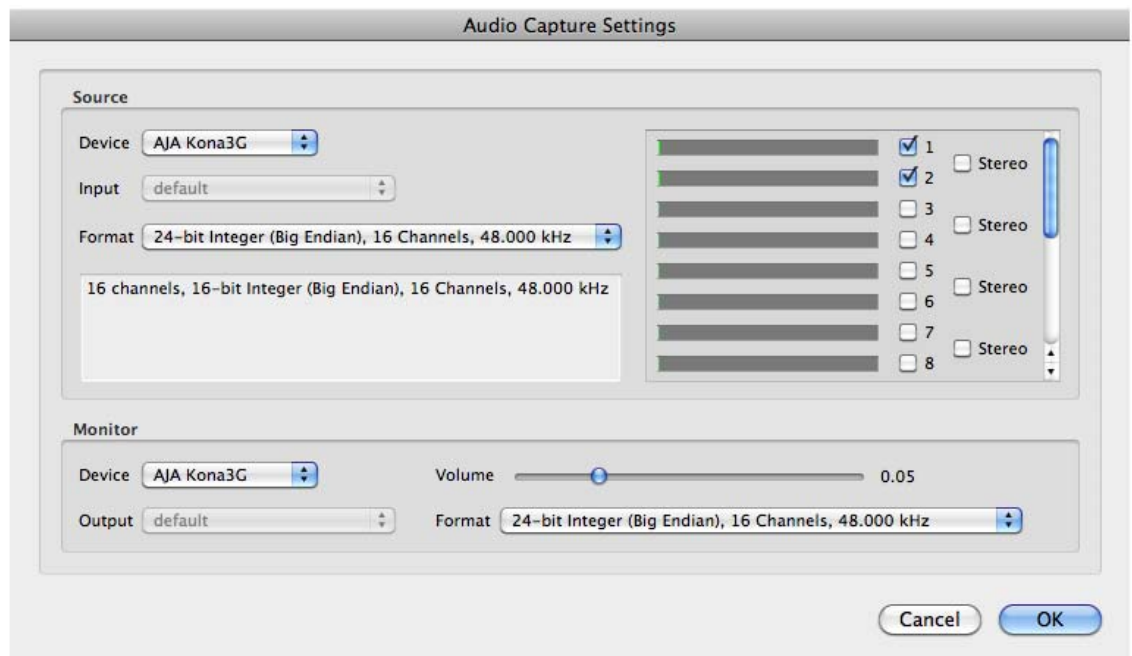
Once you have selected the Source and the Compression, click OK in the lower right hand corner of the window.

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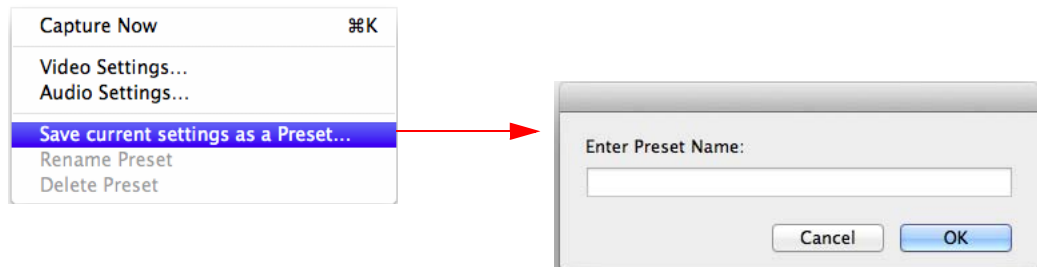

Once you have opened the Audio Capture Settings window, you can elect to change the number of audio channels you will capture, whether they are dual mono or stereo and what format of audio is used.

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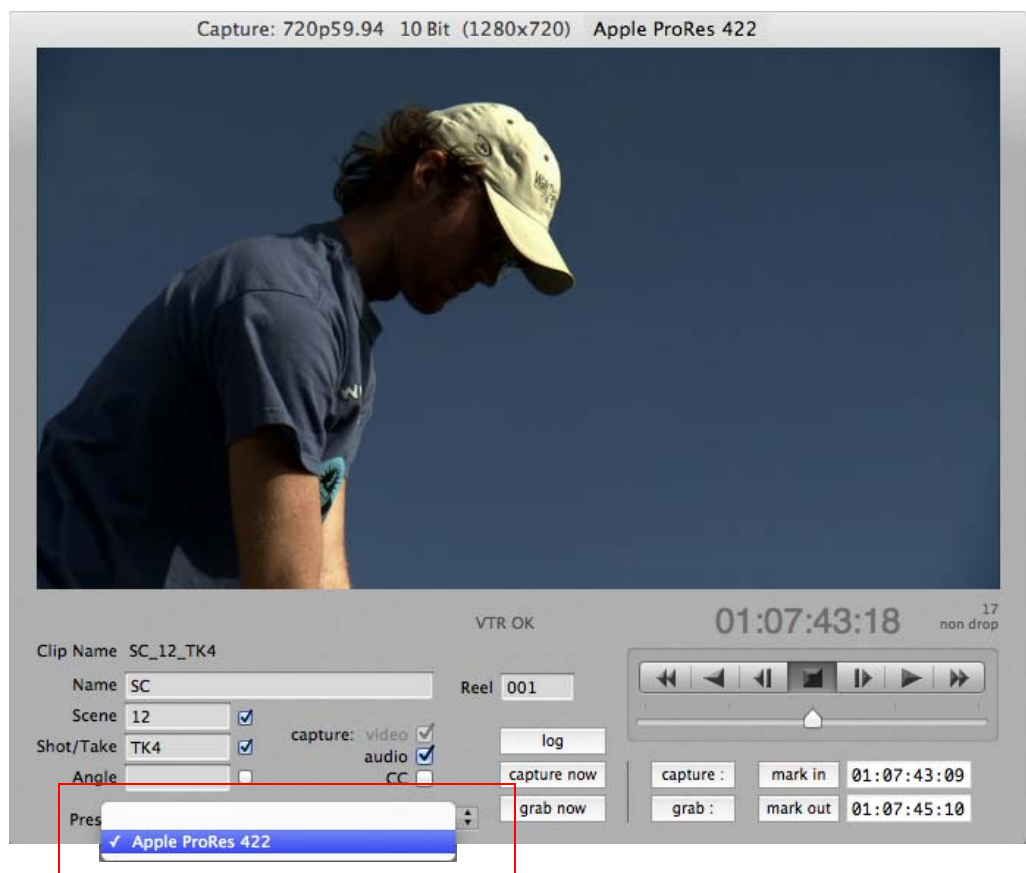
Presets

Once you have set up capture settings, you can save them at any time by going to the Capture menu and selecting "Save current settings as a Preset..". This opens a dialog asking you to enter a name that the preset will be stored under for later recall.

Save Current Settings as a Preset

To manage your stored Presets, you can rename or delete them—also from the Capture menu.

To use a stored preset, simply select it from a pull-down menu at the bottom of the Capture window:
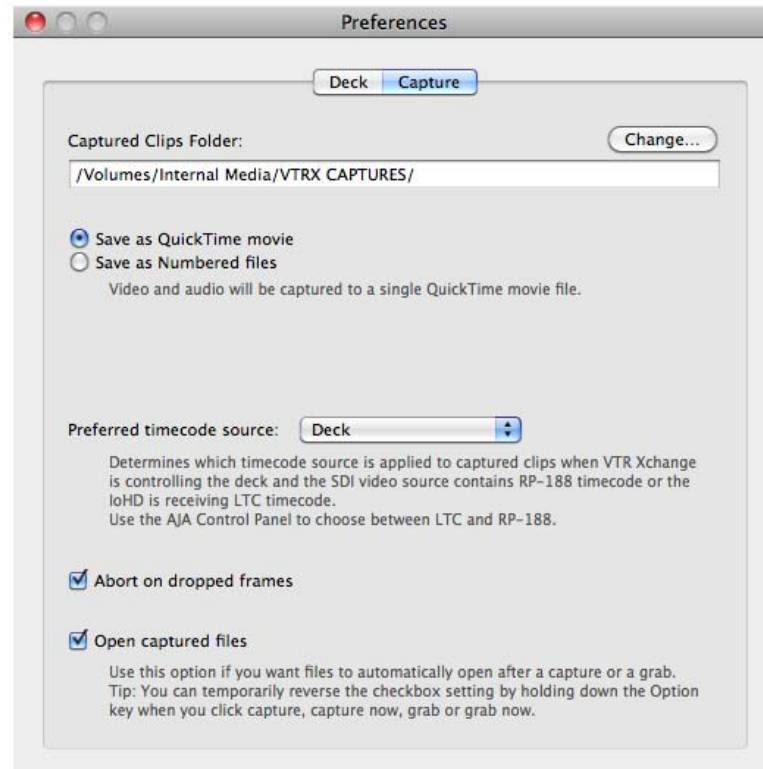

VTR Xchange, Main Window—View Current Preset or Select Another Preset

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 pull-down 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.
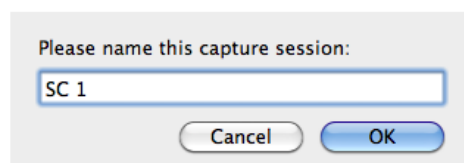

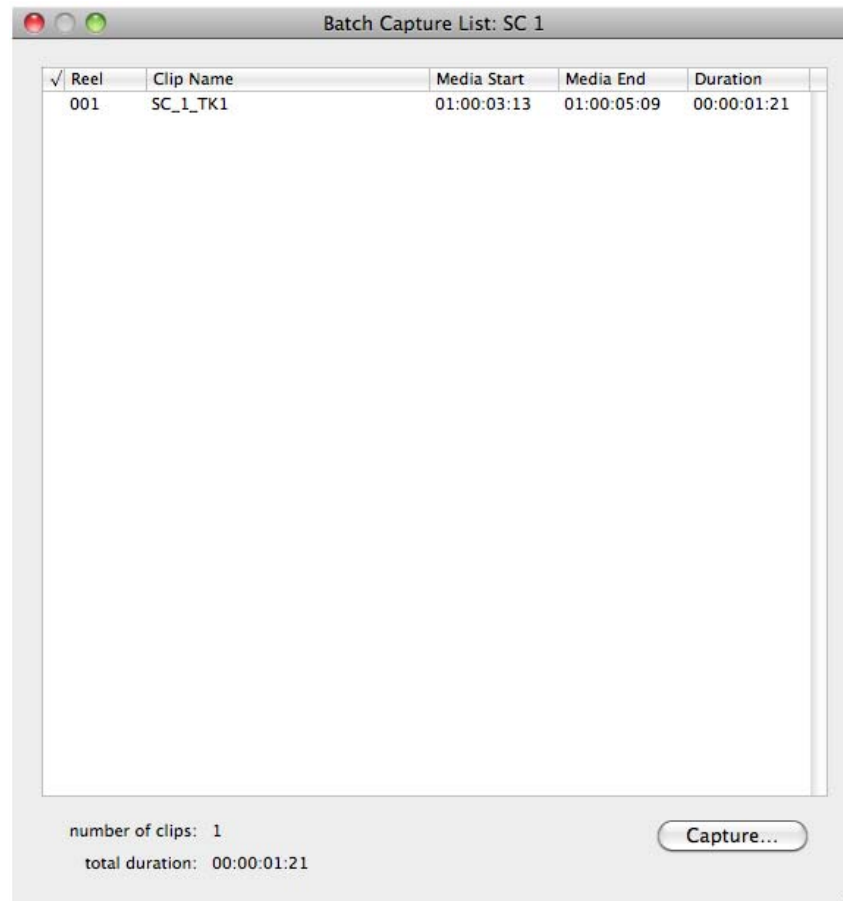After you have selected the desired location for your clips, simply close the Preferences window.

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.
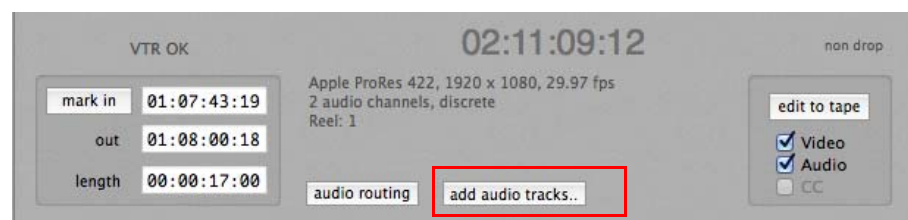
Clip Window

The Clip window gives information on the media that is captured, such as format. It also allows for marking an in-point for performing an edit to tape at a specific point, and selecting whether or not video, audio, and closed captioning will be included when the edit is performed.

Clip Window

The Clip Window allows you to output compatible framerates by enabling a checkbox at the bottom of the window. In order to output 23.98fps material at either a compatible 29.97fps or 59.94fps (depending on format), enable the checkbox.

Another feature of the Clip Window is the ability to add audio tracks to an output by clicking on the "add audio tracks" button. Audio tracks from another QuickTime movie file or AIFF audio files may be used. Once tracks are added, the number of audio channels reported in the UI will increase accordingly. Once the "audio routing" is clicked, you can then use the audio routing tool to decide which tracks go to which physical outputs (see "Working with Audio" earlier in this manual). This functionality can be particularly useful when working with audio which has been assigned Roles from Apple's Final Cut Pro X software or when receiving audio tracks from a digital audio mixing or sweetening application that need to be married to the picture for mastering back to tape.
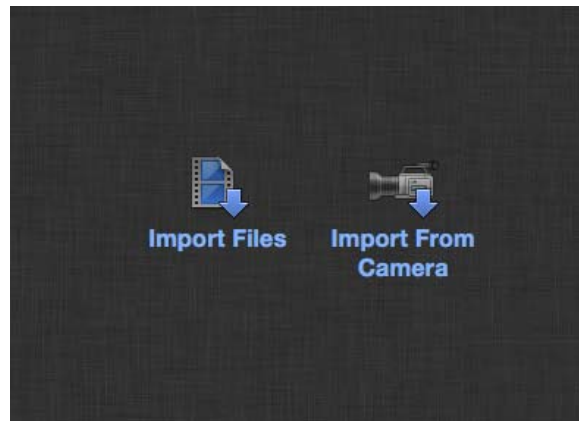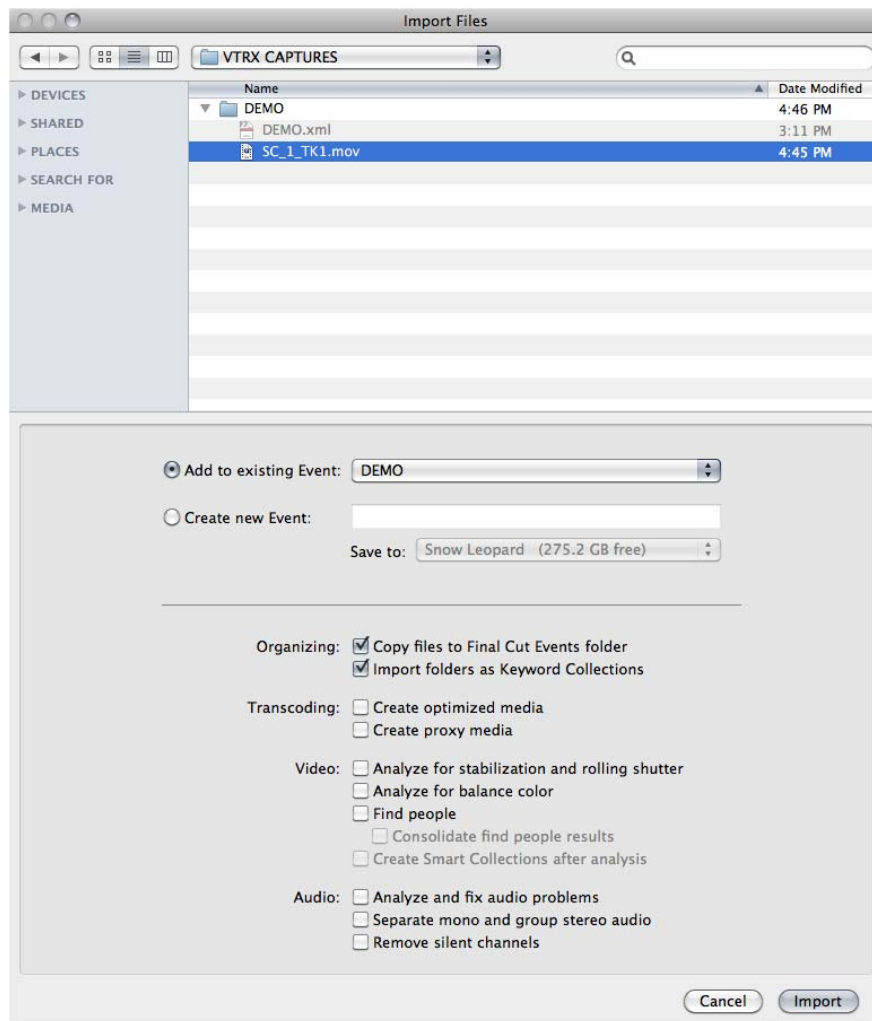
Importing Clips into Final Cut Pro X

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 pull-down 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.
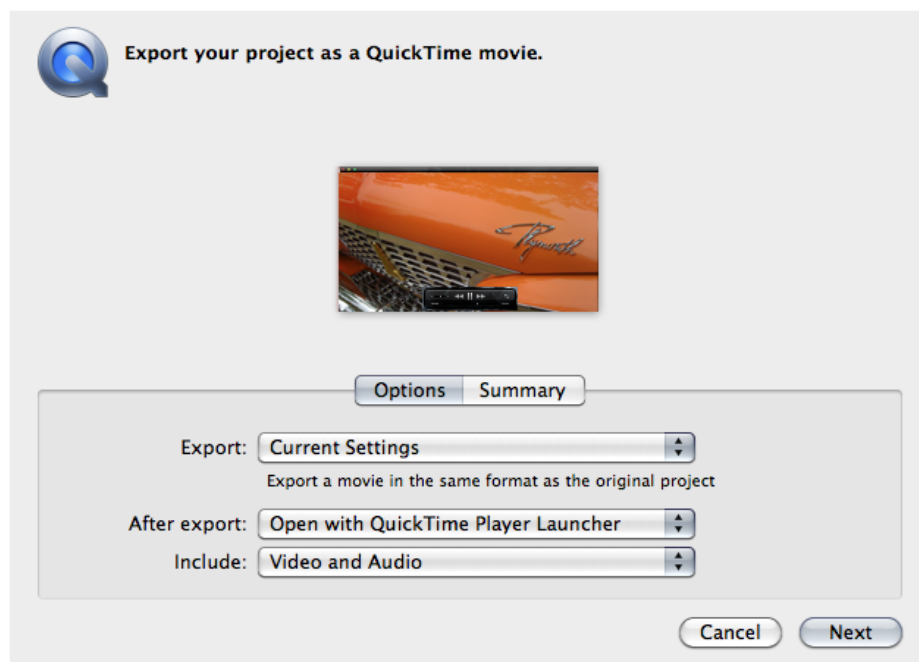
Exporting from Final Cut Pro X and Using AJA VTR Xchange to Edit to Tape

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 pull-down menu and select Export Movie.
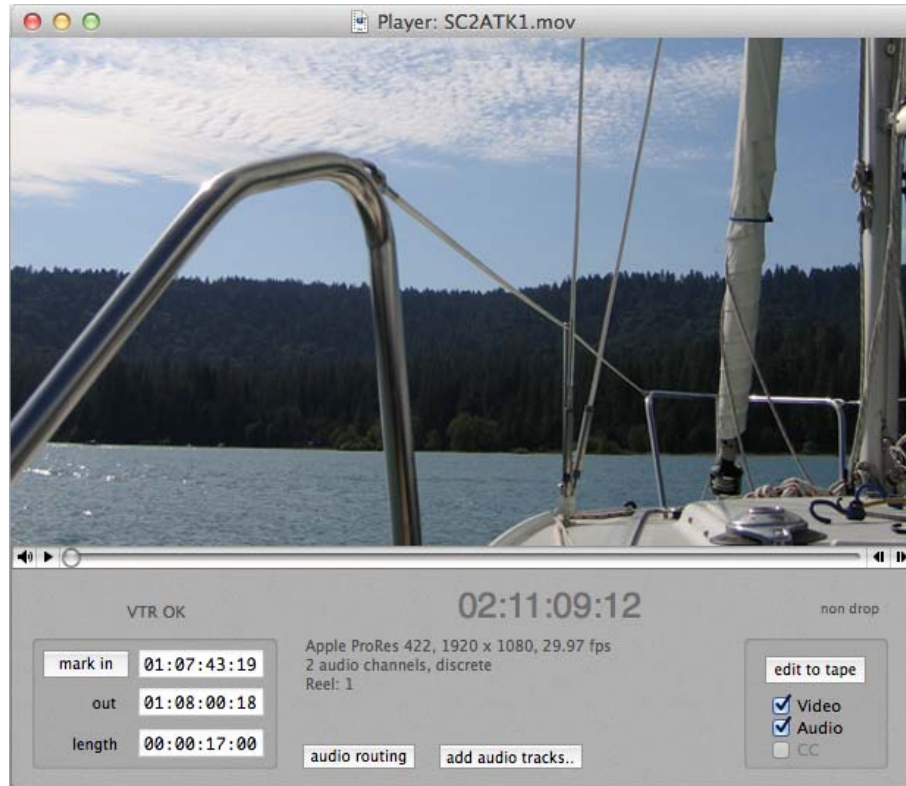

In most cases, you can leave the default values in the QuickTime Movie export window as is. If you want to change the settings, consult the Apple documentation for best practices and recommendations. Once you have made the desired settings, click on the Next button. After you click Next, you will be 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 pull-down menu, select Open. Navigate to the location where the QuickTime Movie you exported from Final Cut Pro X was saved. Select the QuickTime Movie.

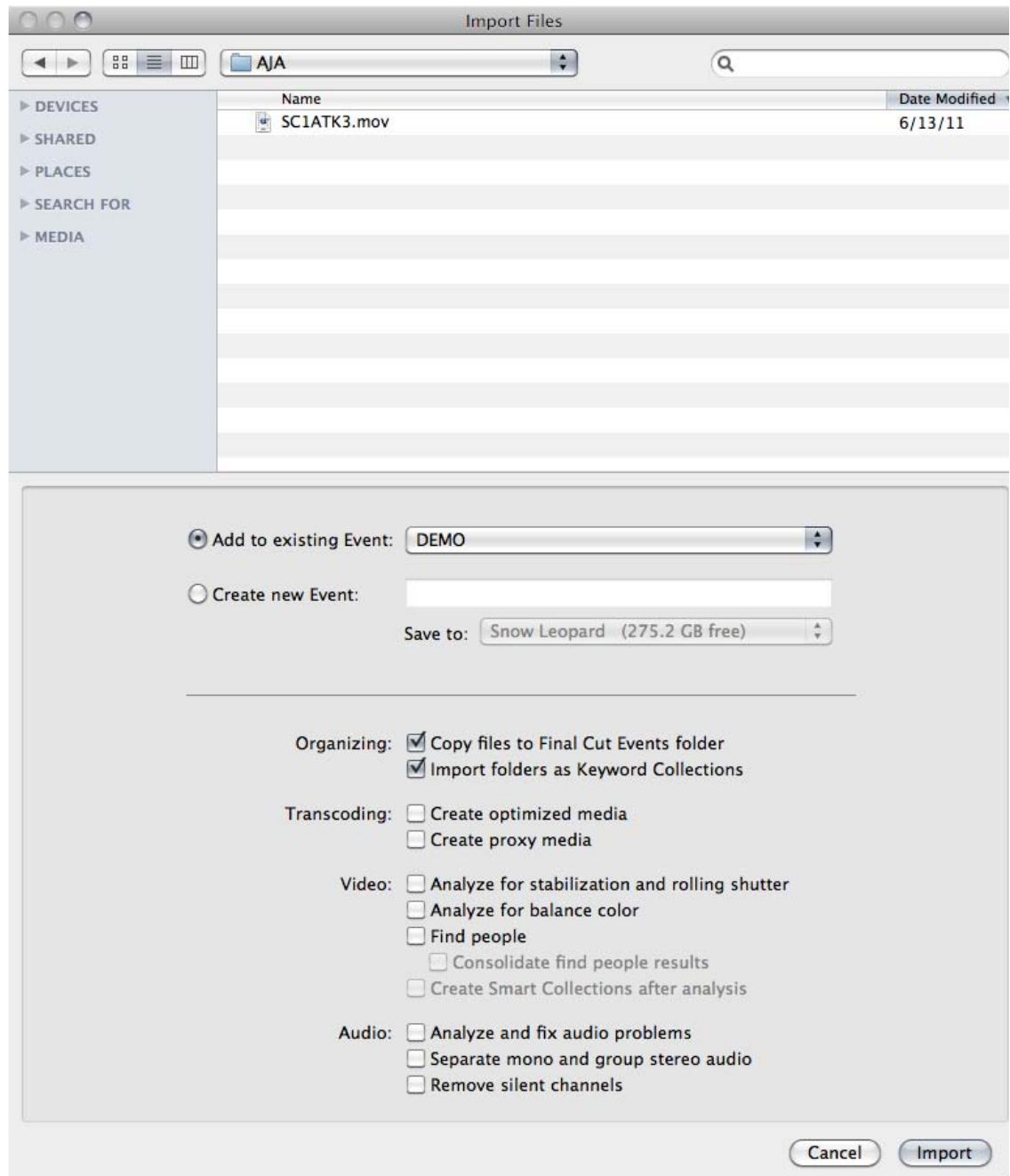VTR Xchange will open a new Player window for the QuickTime Movie.

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.

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 cameras 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.

Summary

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 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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