



# **Editing 4: Advanced Final Cut Pro X**

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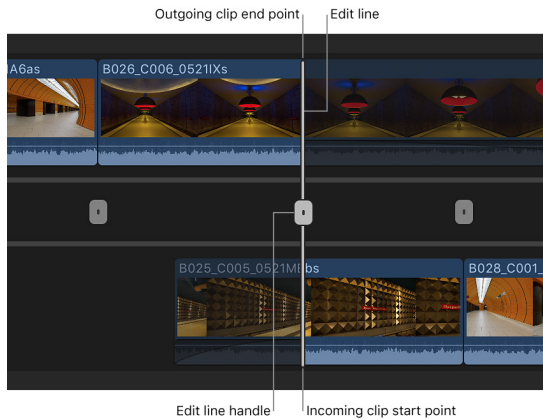
**Access  
Vision**

**Battle Creek Area Community Television**

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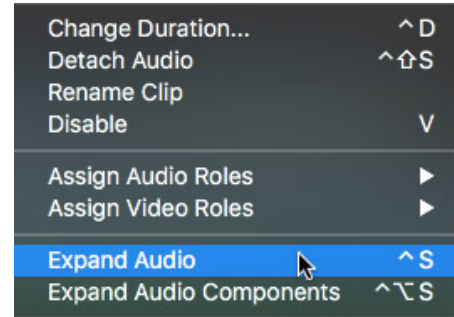


# Advanced Editing Tools and Trimming Methods



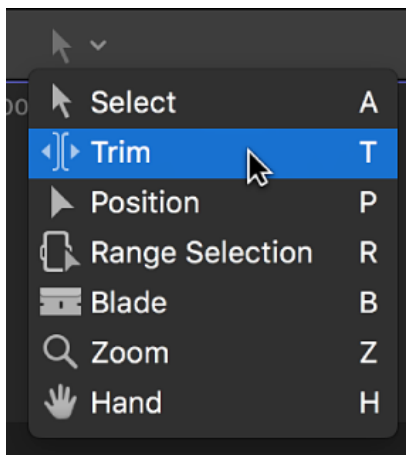
## Select tool (A):

- Use the **Precision Editor** to Roll an edit point:
1. Double-click a cut point to show the Precision Editor.
  2. See handles of A side shot and B-side shot. Drag slider in the middle to Roll the edit point.
  3. When finished, double-click on the slider to exit the Precision Editor.



## Split Edit: trim just video and not audio (or vice versa):

1. Right-click on clip and choose **Expand Audio** (control-s).
2. Drag on audio or video track to trim.
3. When done, right-click and choose **Collapse Audio**.



## Trim tool (T)

Used for precise trimming and matching continuity. You can use the Trim tool to Ripple, Roll, Slip and Slide edits.

## Position tool (P)

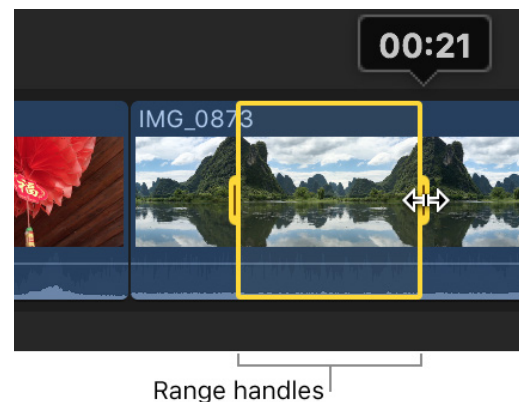
Use to reposition clips in timeline, while leaving a **gap clip** in its place. Gap clips are black placeholder clips that behave just like regular clips.

## Range Selection tool (R)

Use to select a range within any clip, or a range that spans multiple clips. Use range selections to trim parts of a clip without cutting the whole thing. Adjust the range selection start and end points by dragging either side of the selection.

## Blade tool (B)

Use to cut clips into pieces. With the Blade tool selected, click on a clip to make a cut wherever you click.



## Nesting Clips and Using Markers

**Nesting:** Compound clips allow you to group multiple clips together and “nest” clips within other clips. Nesting multiple clips into one container cleans up the timeline by condensing the number of visible elements.

To make a compound clip:

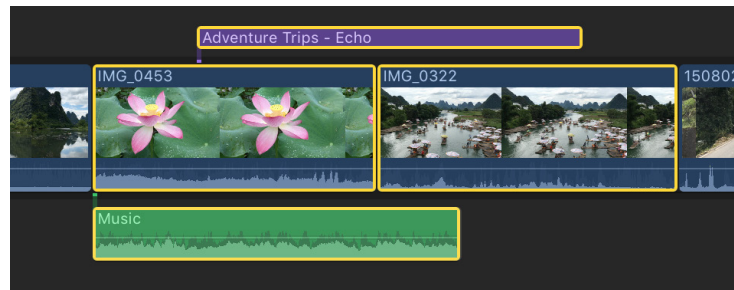
1. Select a bunch of clips,
2. Right-click and choose **New Compound Clip** (option+g)

- When you drag a compound clip around in the timeline, all elements move together.

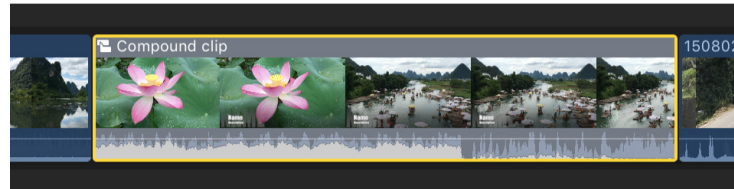
- You can efficiently apply effects to all clips inside of a compound clip all at once.

- To edit the elements inside of a compound clip: double-click it to open it in its own timeline. Press the left arrow < key to return to the main storyline.

- To separate clips in a compound clip back into its elements:
  1. Select Compound Clip,
  2. Go to the Clip menu > Break Apart Items (shift+command+g).

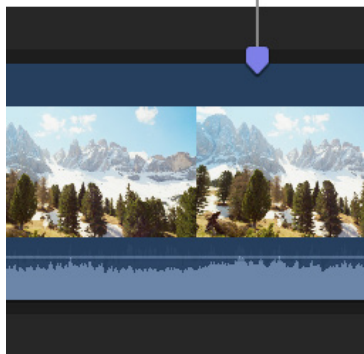


Selected clips in the timeline



New compound clip

Standard marker



### Markers

Markers are reference points you can place within clips to locate, identify, annotate, and navigate to specific frames. They can be used like digital post-it notes to make notes on clips, or to visually mark audio for timing cuts.

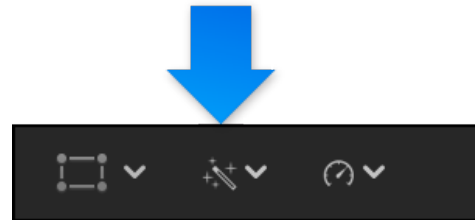
- Press **M** to add a marker
- To remove a marker: right-click > **Delete**

## Color Correction

Final Cut Pro includes an automatic color-balancing feature. You can tell it to automatically adjust color, and you can make manual adjustments.

### Automatic color correction:

1. Place playhead over clip and click on it so that it's selected;
2. Choose **Balance Color** from the Enhancements pop-up menu below the Viewer.



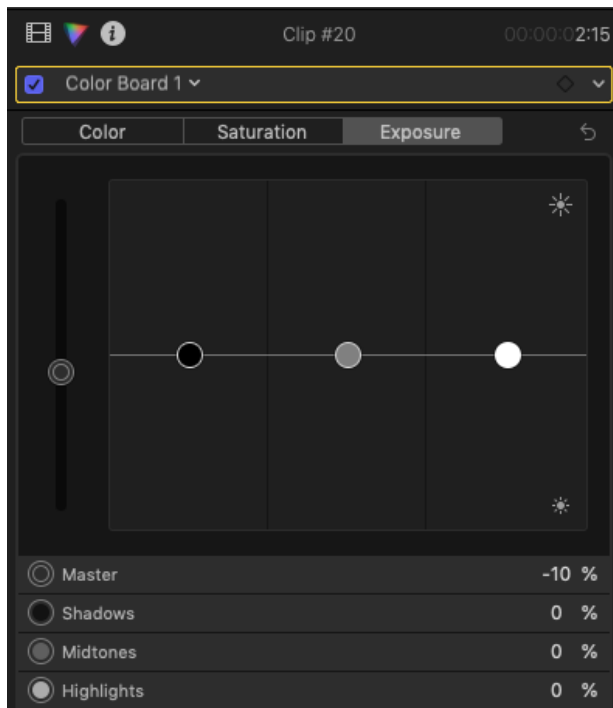
**NOTE:** automatic adjustment will not necessarily look better.

You can compare changes by selecting or deselecting the **Balance Color** checkbox in the Effects section of the Video Inspector.

### Manual color correction:

1. Place playhead over clip and click on it so that it's selected;
2. Choose **Show Color Inspector** from the Enhancements pop-up menu below the Viewer.

In the Color Inspector you can make adjustments by adding any or all of the following four tools to a clip: **Color Board**, **Color Wheels**, **Color Curves** or **Hue/Saturation Curves**.



The **Color Board** has 3 types of adjustment tools: **Color**, **Saturation** and **Exposure**.

#### Exposure:

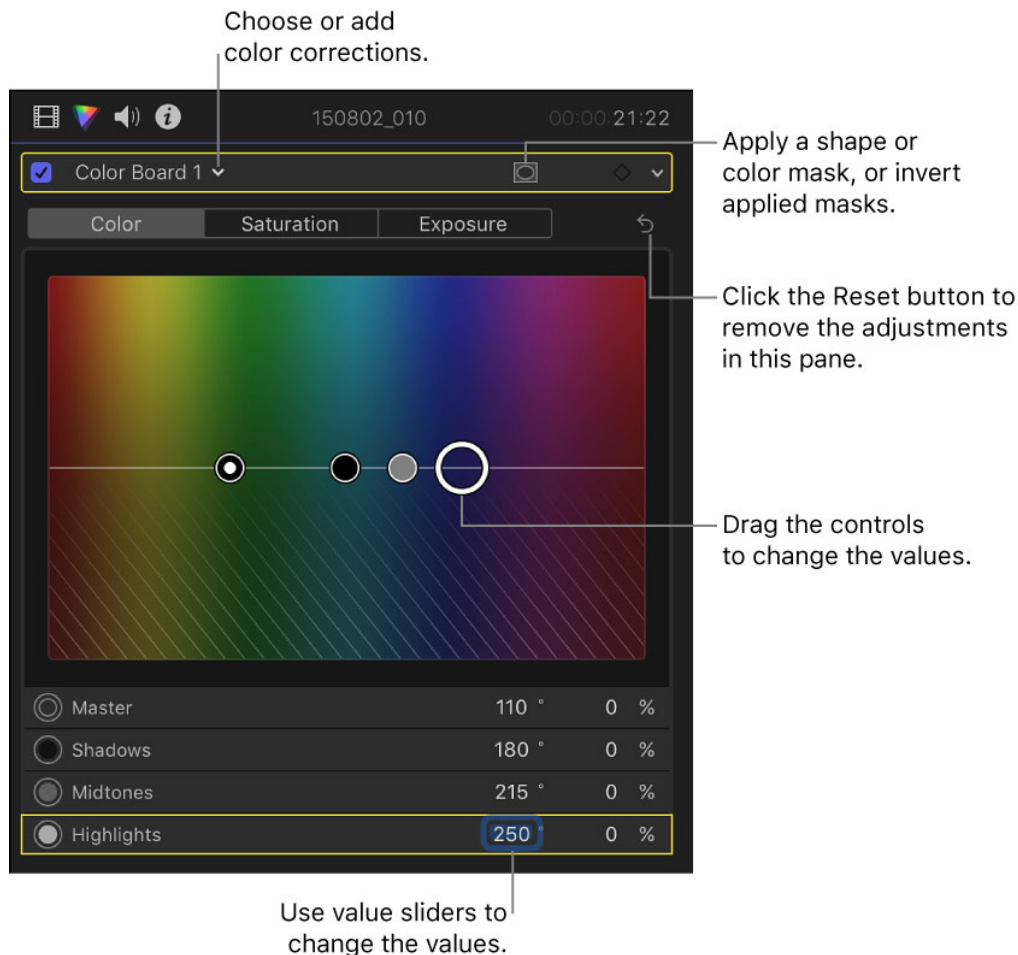
- **Global** slider raises/lowers exposure uniformly across whole image.
- **Shadows** controls dark parts.
- **Highlights** controls lightest parts.
- **Midtones** controls values in between.

The tools in the **Saturation** tab work the same way as the Exposure controls, but adjusts the amount of color.

The **Color** tab allows you to add or subtract colors to the shadows, mids and highlights by

dragging the controls above or below the line. (See next page)

- After making initial adjustments, you may have to go back and forth between **Color** and **Exposure** to make further adjustments.



**Match Color:** Use the Match Color function to match two clips automatically:

1. Select the clip, then go to **Modify** menu > **Match Color**;
2. Skim to a frame you want to match and click it;
3. Click the **Apply Match** button to apply the change.

**Using color correction templates:**

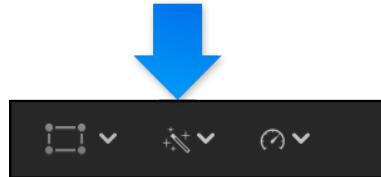
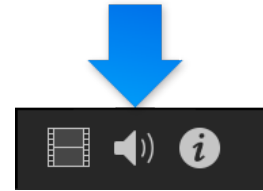
- Go to the **Effects** Browser > '**Looks**' category.
- Auto Balance, Match Color, Effects and Looks can all be used as a starting point and then be manually adjusted further.

**Paste Effects & Attributes:** once you have the work done on one clip, copy and paste attributes effects to easily apply the same changes again to other clips. You can also Copy/Paste **Attributes** such as Color, Transform and Audio Attributes:

1. Select first clip with effect and copy it (command-C)
2. Select other clip(s) to apply the effect to
3. **Edit** menu > **Paste Attributes** (shift-command-v) to add the same **Color Balance** settings to another clip; or > **Paste Effects** to add the same **Color Board** settings to another clip

## Additional Audio Editing

Final Cut Pro includes several powerful tools for automatically analyzing and enhancing the audio in your projects. The **Audio** tab of the Inspector window is the place to adjust **Effects, Volume and Pan, Audio Enhancements** and **Channel Configuration**.



### Audio Enhancements

From the Enhancements drop-down, choose **Auto Enhance Audio**. Final Cut Pro will analyze sound for problems and automatically fix **Loudness** and perform **Background Noise Removal** and **Hum Removal**.

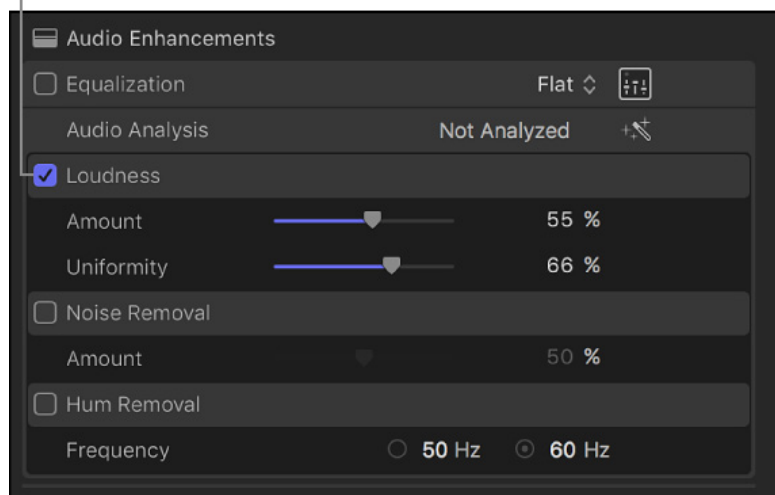
**Loudness:** Improves the main audio signal and makes it more uniform.

**Noise Removal:** Reduces background noise.

**Hum Removal:** Reduces common electrical hum noise.

You can also manually adjust enhancements. Be careful not to overdo it. Uncheck blue boxes to compare changes with/without enhancements.

Blue checkbox



**Audio Configuration:** change from **Stereo** to **Dual Mono** if you recorded split audio, with two different audio sources going into the camera.

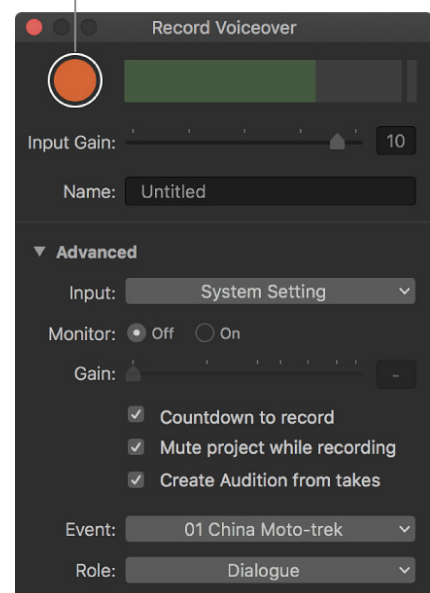
### Recording voiceover:

You can record your own voiceover narration right into Final Cut Pro:

1. Position the play head where you want to start in Timeline;
2. Go to the **Window** menu > **Record Audio**;
3. Choose which Event the recording should go in;
4. Test the levels and adjust **Gain**: your voice should peak between -12 to -6dB
5. Press the red button to start recording; press it again to stop

Audio is recorded right into the Timeline and saved to the Event Library. You can trim and adjust recorded sound clips just like any other clip.

Click the Record button to start or stop recording.



## Working with Still Photos and Graphics

Photos can be imported just like video clips. Still clips default to 4 seconds long, but you can shorten or lengthen to any length.

After adding a photo to the timeline, go to the bottom of the **Video Inspector** and select the **Spatial Conform** type to use. Choose between **Fit**, **Fill** and **None**:



- **Fit**: shrinks the image to fit the video frame. Black bars are added to fill any empty space;
- **Fill**: automatically zooms image to fill screen. Anything outside of the screen will be cropped off;
- **None**: leaves the image as-is, without enlarging or shrinking it.

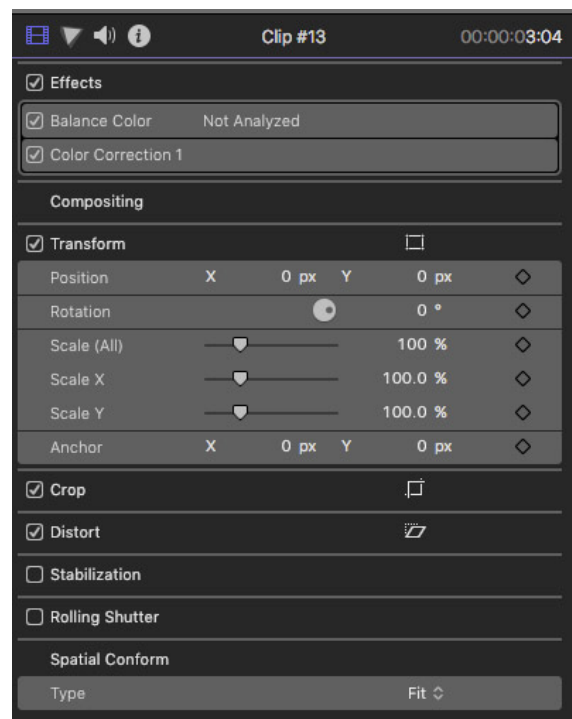
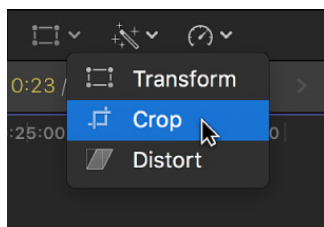
For best results, use large/high-resolution photos. Using files with a transparent background will allow you to composite a graphic so that you see the layer underneath. Layered Photoshop files import as a compound clips. After adding it to a project, double-click to access the layers. Now you can move/keyframe each layer separately to create animation.

## Built-In Motion Effects

**Transform**, **Crop** and **Distort** adjustments are built into every clip, whether it's a still photo or a video clip. These adjustments can be accessed from the **Transform** drop-down in the bottom left corner of the Viewer.

**Transform**: change **Scale**, **Position** and **Rotation**.

The wireframe allows you to drag directly on the clip to make changes, or you can make changes in the Video Inspector.

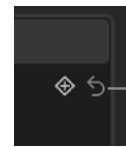


**Crop** has 3 different options - **Trim/Crop/Ken Burns**:

- **Trim**: masks off portions of a clip, allowing you to see behind it.
- **Crop**: crops off both dimensions allowing you to reframe the clip.
- **Ken Burns**: creates panning/scanning movement by animating changes in scale and position. Use the start frame (green) to tell it where to begin the animation, and the end frame (red) to tell it where to end the animation. This is useful for adding movement to still photos.

**Distort:** you can work with this in the Inspector or the wireframe tool. It gives you real-time feedback as you drag the corners to reshape the clip.

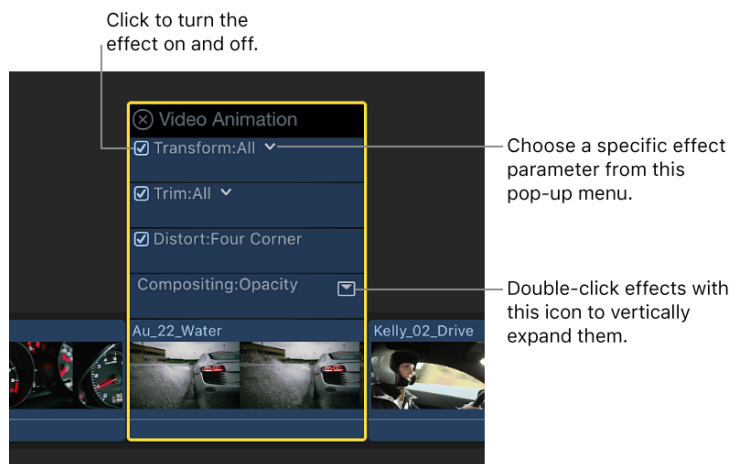
Use the reset arrows to revert any Transform/Crop/Distort parameters back to their default values. Press the **Done** button to apply any changes made.



Click to reset the effect's settings.

## Keyframing

A **Keyframe** is a control that denotes the value of a video or audio effect parameter at a particular point in time. When two keyframes with different values are set, a transition from one value to another is calculated, resulting in a dynamic change to that parameter.

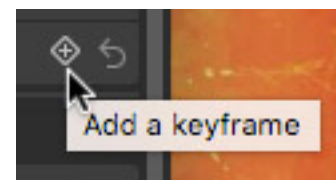


**Keyframing** video or audio effects allows you to change an effect over time - start at one value at the beginning of a clip, and end at another value so that you see changes happen as the clip is playing. You can keyframe motion, effect changes, volume changes, etc.; any alteration done to a clip can be keyframed to change over time.

Keyframe animation requires at least **two** keyframes: one to set the starting value at the beginning and another to set the ending. You set the starting keyframe, make a change later in time; Final Cut Pro sets the ending keyframe and figures out all of the in-between values.

To create a keyframe animation:

1. Move the playhead to the beginning of a clip and apply the Effect or make changes to the Transform attribute;
2. Use the **Add Keyframe** button in the Video Inspector to add a keyframe;
3. Move the playhead to a later time, and make changes to that effect or attribute. The second keyframe is automatically generated, causing the effect to gradually change over time.

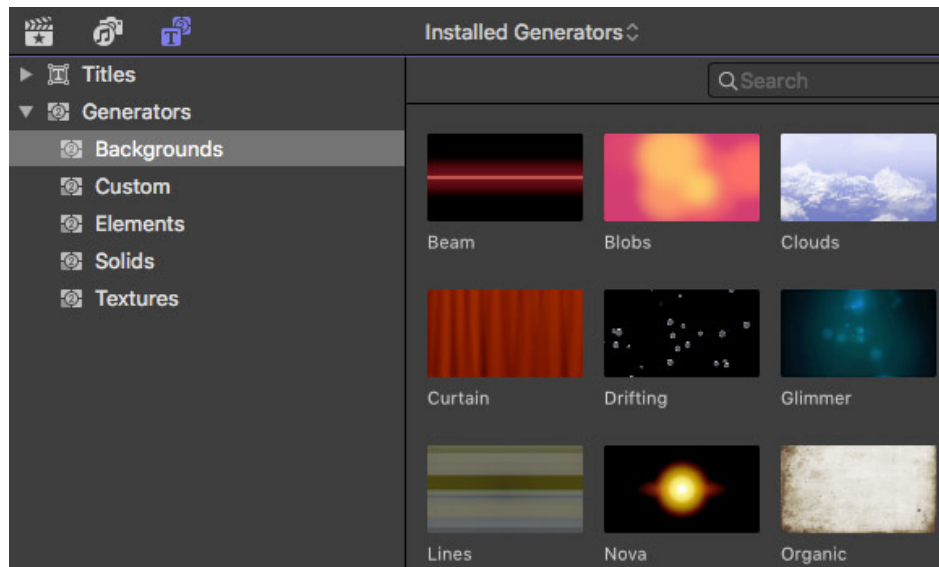


You can add as many sets of keyframes as you want to a clip.

- To view keyframes in the timeline: right-click on the clip and choose **Show Video Animation**.
- Option-click to add keyframes in the timeline.

## Working with Generators

**Generators** are clips that Final Cut Pro creates from scratch or *generates*, like backgrounds and shapes. Access generators in the **Titles & Generators sidebar**.



- The Generators sidebar works just like the Titles sidebar: categories are on the left and thumbnail clips are on the right. Hover your cursor over them to preview what they look like.
- To use a Generator clip, simply drag it from the browser and drop into the timeline. You can then change its parameters in the Inspector.

### **Jumpbacks:**

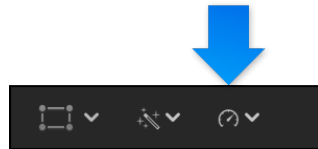
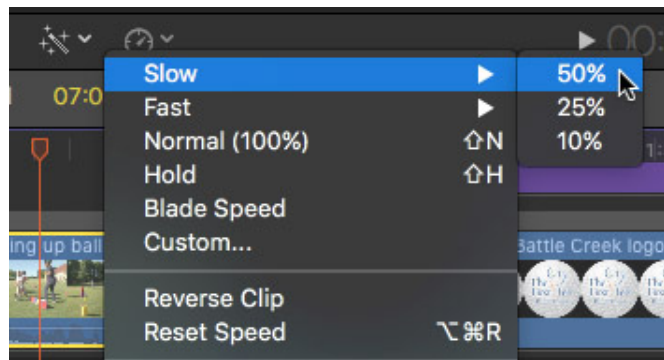
In addition to the generators inside Final Cut Pro, you can find over 500 animated background video clips to use inside the **Shared Documents** folder, on the desktop of the computers in the edit rooms. Jumpback volumes are categorized by folder and clips can be imported into Final Cut Pro the same as any other video files. Most are short but can be seamlessly looped by copying and pasting the clip back-to-back in the timeline.

### **Stock Music:**

AccessVision also has a large library of licensed music for use in productions. You can access some of it in iTunes and through the Music and Sound Browser. The rest is in a large binder full of audio CDs. **DeWolfe Music's** entire library can be accessed online at [www.dewolfe.co.uk](http://www.dewolfe.co.uk). See a staff person to log in and download from the site.

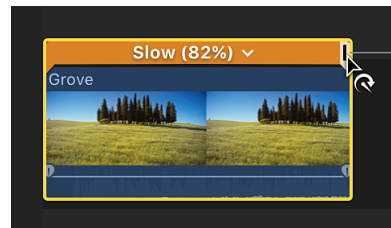
## Speed Effects

Changing the speed of a clip is also called **Retiming**. You can adjust a clip's speed settings to create fast-motion or slow-motion effects. You can also reverse a clip, rewind a segment of a clip, apply variable speed effects (also called speed ramping) to a clip selection, and create instant replays and jump cuts.



To retime a clip, click on it and then go to the Retime pop-up menu and choose speed from the presets (**Slow** > **50%**, **25%** or **10%**; **Fast** > **2X**, **4X**, **8X** or **20X**).

You can then further adjust the speed in any increment by dragging the handle on the bar above the clip in the timeline. Blue = faster; orange = slower; green = 100% (no change).



Drag the retiming handle to the right to create a slow-motion effect.

**Variable speed adjustments**, whereby the speed gradually speeds up or slows down, are accessed in the **Retime** menu by going to **Speed Ramp** > **to 0%** or **from 0%**.

- **Hold**: allows you to stop the footage and freeze on a frame:
  1. In the Timeline, park the playhead on the frame you want to freeze;
  2. Go to the **Retime** menu and select **Hold** (shift h). It defaults to 4 seconds; right-click on it to type in any length.
- If you want to run footage backwards, go to the **Retiming** menu and choose **Reverse Clip**.
- When you alter the speed of a clip, the sound also changes speed.

### **To freeze a frame:**

Place the playhead on the frame you want to freeze, then go to the **Edit** menu > **Add Freeze Frame**.

## Rendering

As you add effects to clips, a dotted line appears along the top edge of the timeline, indicating material that needs to be rendered. **Rendering** is the computer processing effects and writing new media (with effects applied) to the hard drive. Any unrendered material will still play, but may stutter or display in a lower quality if the computer can't keep up.

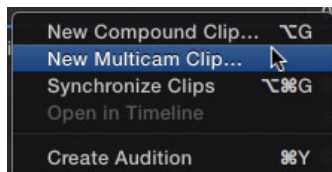
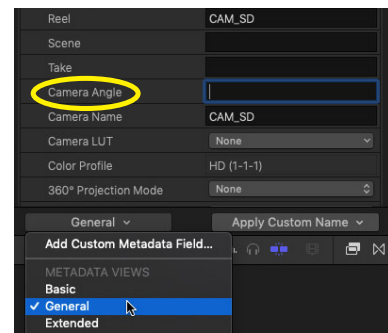
Final Cut Pro X features **automatic rendering**, which starts working in the background if the computer is idle for a certain amount of time. You can also manually start rendering by going to the **Modify** menu and choosing **Render All** or **Render Selection**. Ultimately, anything that isn't already rendered will be when the finished project is shared/exported.

# Multicam Editing

Multicam editing is used to edit overlapping footage shot from multiple camera angles. It requires audio recorded on every camera, even if you don't use all of the audio in the final edit.

## 1. Edit metadata for each clip:

- Select the clip and open the Inspector
- In the **Info** section of the Inspector, select **General** from the drop-down in the bottom left
- Enter a unique number in the **Camera Angle** field for each angle



## 2. Synchronize footage:

- Shift-click to select clips in the Events Library;
- Right-click and choose **New Multicam Clip**.
- Use **Automatic** settings for Angle Clip Ordering and Angle Sync;
- Check the box for **Use audio for synchronization**.

After syncing is finished, you will see a new icon for the Multicam clip in the Event browser. You can add it to the Timeline just like a regular clip.

To see visuals for all angles, go to the **View** menu > **Show In Viewer** > **Show Angles**

## 3. Preparing for a multicam edit:

Before cutting between the angles, double-click the Multicam clip in the timeline to open it in the **Multicam Editor**:

- Make adjustments to whole clips in the Multicam Editor *before* you start cutting. Adjust audio (mute unwanted channels, change levels, add effects) and color correct the video to make camera angles match as closely as possible.
- Any changes made to clips in the Multicam Editor will be applied to the cut clips in the main timeline.

## 4. Performing the edit:

Select to cut only video or audio & video by clicking in the top left corner of the **Angle Viewer**. With the Angle Viewer showing, play the video and click on the best angle in the Angle Viewer, as all angles play in sync in real time. If you make a mistake, it's okay - you can go back and refine the cuts later.



## 5. Refining the edit:

- To change angles in the timeline, right-click on a clip and change the **Active Video Angle**.
- To manipulate cut points, hover the cursor between two clips to get the Roll Tool; then drag left/right to adjust the timing of the cut.
- To remove whole sections of a multicam clip, trim or delete clips just like you would regular clips in the timeline.

## Keying

Keying or Chroma Key is a technique by which a solid color background (often blue or green) can be replaced by another color or image, which allows you to superimpose a subject in the foreground against a different background:

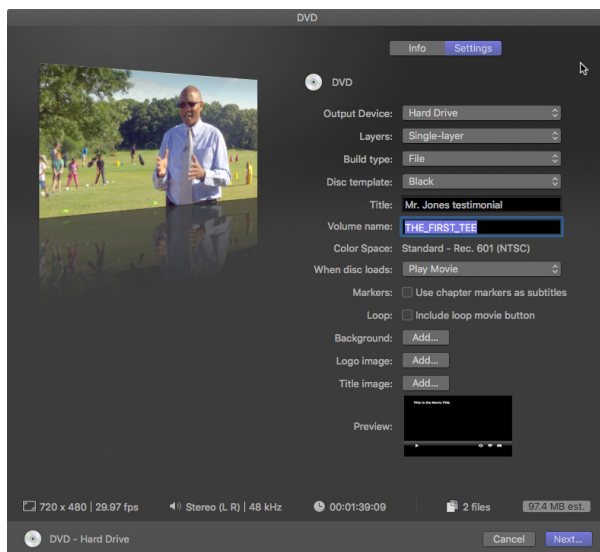
1. In the timeline, add the foreground clip.
2. Drag the background clip so that it's connected *below* the foreground clip.
3. In the Effects browser, find the **Keyer** effect in the **Keying** category. Drag it to the timeline and drop it on the foreground clip.

The Keyer effect automatically analyzes the video to detect a green or blue dominant color and then removes that color. You can further adjust the chroma key effect in the Inspector if needed. A challenging part of creating a good chroma key is shooting the chroma key video and using a good, well-lit background that provides a uniform color to remove.

## Outputting Additional Formats

### To make a DVD:

You are allowed to burn one DVD of your finished program.



1. Go to the **File** menu > **Share** > **DVD...**

2. Click on the **Settings** tab and check the following options:

- Layers: **single layer**;
- When disc loads: **Play movie**.

There are also options for displaying a menu with a custom background.

3. Click the **Share** button and wait. You can view the progress in the Background Tasks window.



### To export a video file for sharing on the web:

To create a compressed MP4 file suitable for uploading to web sites such YouTube, Vimeo, etc.:

1. Go to the **File** menu > **Share** > **Apple Devices 720p...**
2. Click on **Next** and save it to your Firewire Drive.
3. Click on **Save** and wait. You can view the progress in the Background Tasks window.

### To export a still image:

1. Park the playhead on any frame you want to export;
2. Go to the **File** menu > **Share** > **Save Current Frame**;
3. Click on the **Settings** tab and choose **JPEG**;
4. Click **Next** and choose where to save it.

# Managing Media and Project Data



## 1. Cleaning out

Once you've finished editing a project, it's time to clean out any files you no longer need. If you never discard any past projects, eventually you will run out of hard drive space.

There are different ways to approach this, depending on whether you're creating a one-time special program, or editing multiple episodes of an ongoing series. Remember that the **Library** file is a self-contained package that includes all of your media, timeline, etc.



If you created a one-time program and never plan to re-edit or re-use any of the elements:

- After quitting Final Cut Pro, find the Library file on the Firewire Hard Drive in the Finder;
- Simply drag this Library file to the Trash;
- Remember to **Empty Trash**. *Until the trash has been emptied, all of the media, etc. inside the Library is still occupying space on your hard drive. Emptying the trash is permanent and cannot be undone!*

## 2. Repurposing common elements

If you've created a show that is one part of an ongoing series, you may want to re-use some of the common elements in future episodes. These might include an opening sequence, music, Jumpbacks, graphic titles and closing credits. Re-using these elements in future episodes will not only give your series a consistent look, but will also save you the work of re-creating it every time you make a new episode.

1. Create a new Library by going to the **File** menu and selecting **New > Library**. Save the Library to the **Firewire Drive** (from the sidebar on the left, look for Firewire Drive under **DEVICES**). Name this new library **Common Elements**.

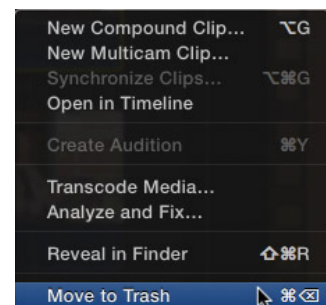
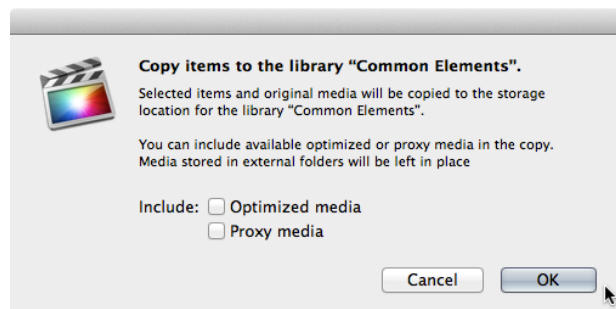
2. With both libraries open, drag the finished episode Project from the old library to the Common Elements library.

3. Close the original library.

4. In the Common Elements library, find the copy of the edited project and rename it **Stuff To Re-use**. Double-click the project to open it. In the timeline, carefully delete all of the video clips that you do not need to re-use. Use shift-delete to avoid accidentally deleting title clips that are connected to unwanted video clips.

5. In the Event Browser, select all of the video clips that you do not need to re-use. Right-click on them and select **Move to Trash**. *You can do each file one at a time, or hold down the Shift key to click and select multiple clips.*

6. Close Final Cut Pro. Find the library for the original episode and trash it. Empty the trash to permanently remove these files and free up drive space.



Now when you're ready to edit the next episode, create a new library and project for it as usual. To re-use any of the common elements, simply copy/paste them from the **Stuff To Re-use** project into the new project:

1. Open the **Stuff to Re-use** project.
2. Click on any elements in the timeline you want to re-use to select them; go to the **Edit** menu > **Copy**
3. Open the project for the new episode. Go to the **Edit** menu > **Paste**

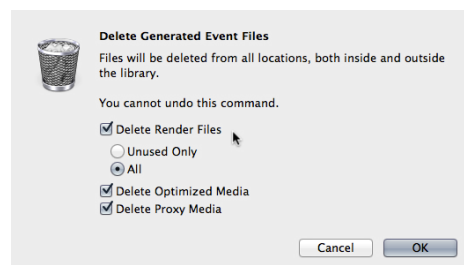
### 3. Archiving without revising

If you don't plan to re-edit, but want to keep a copy of your program in the best quality, go the **File** menu and choose **Share > Master File**. While you will not be able to make revisions to it, this high quality file will be the best source for creating DVDs or other files in the future.

### 4. Archiving to revise later

If you *do* want to be able to re-edit the material in the future, you should archive all of the files associated with your edit. To archive everything Final Cut Pro X needs:

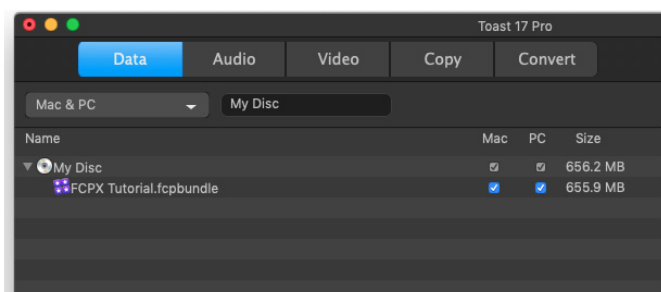
1. Clean out render files. Eliminating render files will make your archive as small as possible, and you can easily re-render later if needed. To do this, in Final Cut Pro, click on the Library to select it. Then go to the File menu and choose **Delete Generated Event Files**. Check **Delete Render Files**, **All** and **Delete Optimized Media** and **Delete Proxy Media**.



2. Quit Final Cut Pro. In the Finder, find your Library file - it should be on the Firewire Drive. You can either copy this file to another drive, or burn it to data DVDs or Blu-rays to make a permanent backup archive.



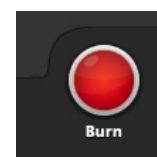
3. Use **Toast Titanium** to burn data archives that span multiple discs if the files are too large to fit on one disc:



- Click on **Toast Titanium** in the dock to open the program
- Select **Data** for the type of disc to burn
- Choose **Mac & PC**
- Near the bottom right corner, select the type of media you plan to use.

DVDs hold 4.37 GB of files and can be burned on any of AccessVision's computers. Blu-rays (BD) hold 23 GB but can only be burned or read in Edit Rooms A & B. *You must supply your own blank discs.*

Simply drag & drop your library file from the Finder into the Mac & PC section of the Toast window. Press the big red button in the bottom right corner and follow the prompts on the screen to burn.



## Final Cut Pro X Important Keyboard Shortcuts

Modifier keys: Shift ⌘ | Control ^ | Option ⌥ | Command ⌘

Go to Beginning	Home	Play Reverse	J
Go to End	End	Stop	K
Go to Previous Frame	←	Play Forward	L
Go to Next Frame	→	Play Selection	/
Connect to Primary Storyline	Q	Zoom In	⌘ =
Insert	W	Zoom Out	⌘ -
Append to Storyline	E	Zoom to Fit	⌘ ↑ Z
Overwrite	D		
Arrow Tool	A	Skimming	S
Hand Tool	H	Snapping	N
Set Selection Start (In)	I	Blade Tool	B
Set Selection End (Out)	O	Position Tool	P
		Trim Tool	T
		Delete	⌘ X
Select All	⌘ A		
Cut	⌘ X	New Compound Clip	⌘ G
Copy	⌘ C	Paste	⌘ V
Retime Editor	⌘ R		
Undo	⌘ Z		
		Add Marker	M
Add Cross Dissolve	⌘ T		
Add Basic Title	^ T	Enable/Disable Clip	V

## Resources for More Learning

- **Help menu** in Final Cut Pro X - built into the program, searchable

- [www.apple.com/final-cut-pro/resources/](http://www.apple.com/final-cut-pro/resources/)

- **Apple Pro Training Series - Final Cut Pro X** book

- [www.lynda.com](http://www.lynda.com)

- [www.rippletraining.com](http://www.rippletraining.com)

- **IzzyVideo:** [www.izzyvideo.com/final-cut-pro-x-tutorial/](http://www.izzyvideo.com/final-cut-pro-x-tutorial/)

- **Apple Support Communities:**

[https://discussions.apple.com/community/professional\\_applications/final\\_cut\\_pro\\_x](https://discussions.apple.com/community/professional_applications/final_cut_pro_x)

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