

Larry's Final Cut Pro Newsletter**Issue #4 -- April, 2004****Editor: Larry Jordan - larry@larryjordan.biz**

Welcome to the fourth edition of my Final Cut Pro newsletter!

I am delighted by your interest and grateful for your comments and suggestions. Please feel free to contribute ideas and requests -- even editor jokes!

The goal of this newsletter is to provide information helpful to the professional user of Final Cut Pro.

This publishes monthly, around the middle of each month. Past issues are not archived, but last month's issue is included as a PDF file at the end of this current issue. Unless otherwise noted, all references are to Final Cut Pro version 4.x, and should not be assumed to work under any other version.

This issue was a bit delayed due to waiting for Apple's latest announcements at NAB. Thanks for your patience.

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Article: Apple's NAB announcements

On April 18th, Apple Computer announced a whole variety of new goodies at NAB (the National Association of Broadcasters convention in Las Vegas).

Specifically, these included:

- An upgrade to Final Cut Pro HD
- An upgrade to DVD Studio Pro 3
- An upgrade to Shake 3

- The announcement of Motion
- The announcement of Xsan

I attended the roll-out party and interviewed the Final Cut Pro product manager.

[Click here](#) to read my article describing these new versions.

What's new this month on larryjordan.biz?

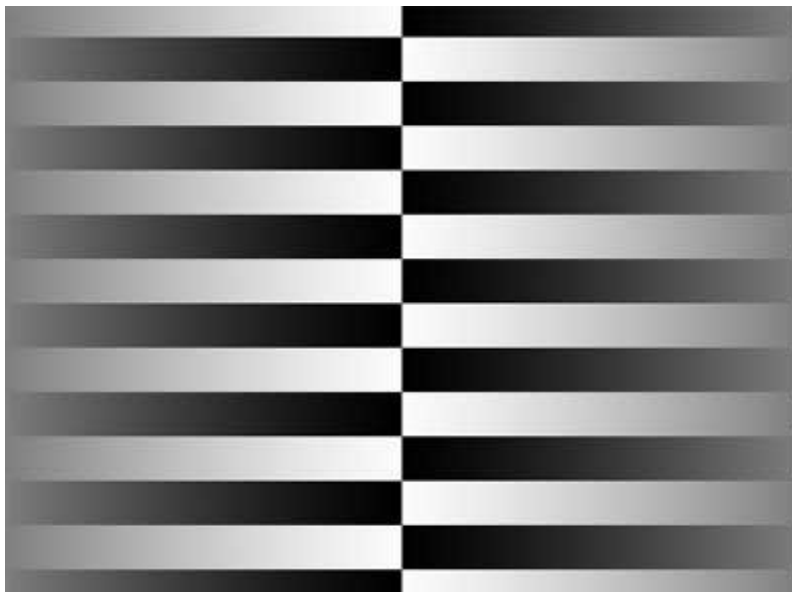
- [Apple Computer's NAB Announcements - Final Cut Goes HD!](#)
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- [Article: Setting proper bit and burn rates for DVDs in Compressor](#)

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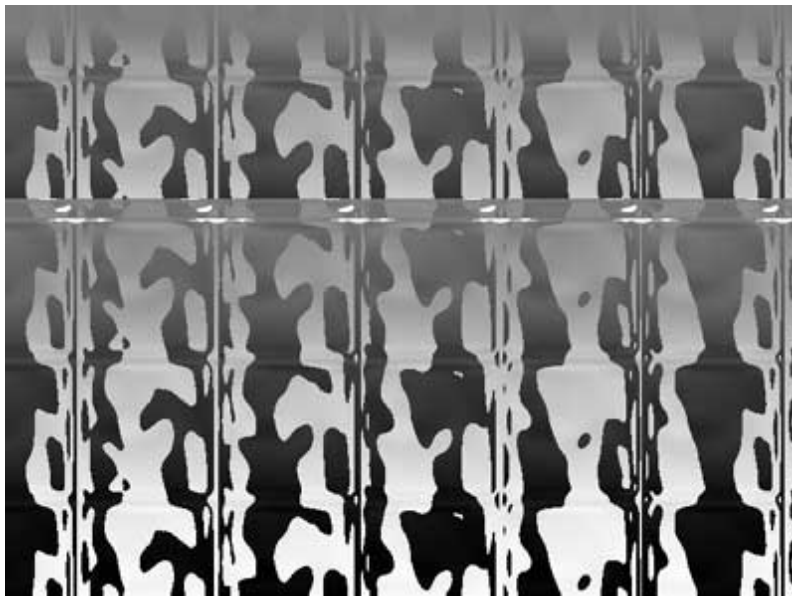
Technique: Improve your Transitions Using a Gradient Wipe

Here's a simple technique you can use to create some truly interesting transitions using Final Cut's gradient wipe. (And half the fun is in creating the gradient, itself.)

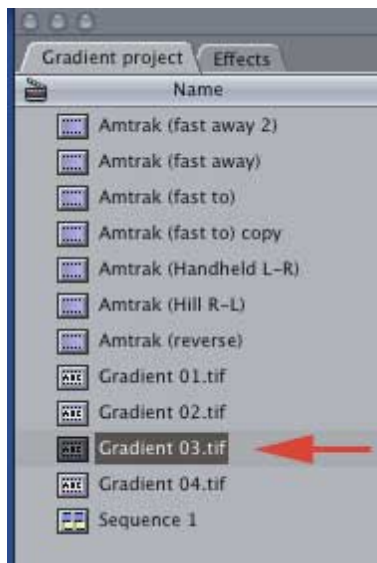
Here's how it works. Final Cut has a transition, called the Gradient Wipe, that transitions between two shots based upon the gray scale value of a graphic that you create and reference as part of the transition. It sounds complex, but it isn't.



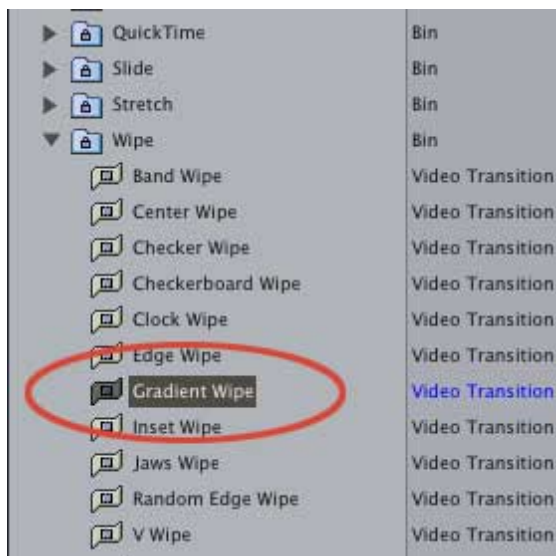
First, start by opening the graphics program of your choice and create an image that gradually shades from pure white to pure black.



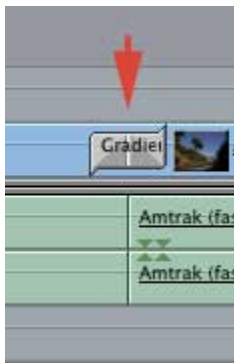
Now, apply an interesting effect. Ones that I like are twirls, or this one -- a glass block effect. The only limits are: don't add colors and don't remove the gradations. (Well, you can, this also makes for an interesting effect; but, for right now, don't.)



Import your newly created gradient into Final Cut.



Now, click on the Effects tab in the Browser (or select your edit point, then go to Effects -> Video Transitions -> Wipes -> Gradient wipe)...



...and drag the Gradient wipe down on your transition.



Double click the transition to open the transition editor and drag your gradient graphic from the Browser into the graphic "well" on the far right side of the transition editor.



Render your effect and watch how the various shades of gray affect your transition. This is a very cool way to create some truly eye-catching transitions.

I've created five simple ideas you can use to experiment with. These are TIFF images in 720 x 534 format. I created them, so they are royalty-free. But the ZIP download is fairly big -- 1.7 MB. [Click here to download.](#)

Enjoy.

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Clients and Bug Reports

Capture Now and Audio Sync

One of my client's reported having problems with audio sync when they captured long segments of video using Capture Now in FCP 4. (Both these were written before the release of Final Cut Pro HD, so I don't know if these have been fixed or not.)

In talking recently with Steve McCracken, of www.homerunmedia.com, I learned that there's a problem with Capture Now when you are capturing video that runs longer than 15 minutes. In short, the audio sync drifts.

The solution is to set an In and Out point at the beginning and end of your program, then use either Capture Clip or Batch Capture to capture your video. This locks the audio and time-code so they don't drift.

If you use Capture Now just so you can also use DV Start/Stop Detection, DV Detection will work, regardless of how you capture. So, if you are a habitué of Capture Now, and you care about audio sync, now might be a

good time to change capture methods.

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Another Interesting Bug Report: Sub-clips

In continuing my conversation with Steve McCracken, I also learned another interesting tidbit. Variable speed changes don't work reliably in sub-clips when it's Master clip is longer than fifteen minutes.

So, if you are having problems, simply recapture **just** the portion of the clip to which you want to make speed changes and apply it directly to the timeline.

Of, if recapturing isn't an option, take your existing subclip and export it as a QuickTime Movie. Set the export settings to match your Sequence settings. Then, reimport the new clip, edit it to the Timeline and apply your speed changes.

Final Cut Pro Support

Many clients asked me to develop a system to keep them up and running, and provide their editors with fast-response phone support -- especially when:

- Downtime is critical
- An editor has a question
- Traffic conditions make quick response impossible
- Or when productions are in the field.

I've developed two options:

1. Pre-paid telephone/email support
2. Remote Final Cut Pro support

Sometimes, just getting a question answered is a real challenge. My pre-paid telephone/email support service gives you priority in getting questions answered or systems up and running. You are billed monthly.

For production houses that want to minimize down-time, I've developed a service using new remote computer technology where, with your permission, I can securely and remotely access your editing system to get you back up and running -- fast.

Both services are designed for the independent producer or production company -- which means it's both fast and affordable. [Here's a link for more information.](#)

The best part about the program is that you get answers to your questions fast, minimize downtime and save money on support costs.

For more information, call (818) 879-5105 -- or send an email to: larry@larryjordan.biz.

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Last Month Follow-Up: Trouble-Shooting and Optimization

Well, a flock of new optimization tips fell out of the sky once I published last month's article on "Trouble-Shooting Your FCP System." The article was updated in early April, but, in case you missed the new additions, here are the changes:

Optimize System Preferences (new text only)

To keep things clean, it is generally a good idea to quit out of Final Cut before making changes to System Preferences.

- In the Software Update System Preference Pane, "Automatically check for updates when you have a network connection" should be unchecked.
- Go to the Security Preference Pane and turn OFF File Vault. While having the extra security is nice, your Mac can't decrypt FCP Project, or other files, fast enough to ensure smooth playback.

Notice that our goal is to minimize processes that run in the background, or that call out to the network. You probably won't need to use all these settings. Experiment to see which ones work best for you.

Also, once you stop editing, you can turn on those features that you need (with the exception of File Vault). If you need to use File Vault be sure that NONE of the files used in your project is stored in it. Then, you can leave it on, just not access it during editing.

Finally, after making these changes, quit out of the System Preferences utility before launching any application -- especially Final Cut.

Optimize Your Final Cut System

Here are some additional steps you can take to improve the performance of your Final Cut system.

- Turn off audio waveforms (Command-option-W). If you aren't actually editing audio, displaying these will slow your system down.
- If you have more than 512 MB of RAM and are using still images (say, to create a "Ken Burns" effect) go to Final Cut Pro -> System settings -> Memory and Cache tab and set the still image cache to between 100 MB and 120 MB.
- If you have more than a gigabyte of RAM on your system, also set the Memory allocation to 90%.

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Tip: Automatically Keyframe your Audio Filters

I was teaching a class recently and Pete, one of my students, discovered a trick that I want to pass on to you -- how to automatically create keyframes for an audio filter.

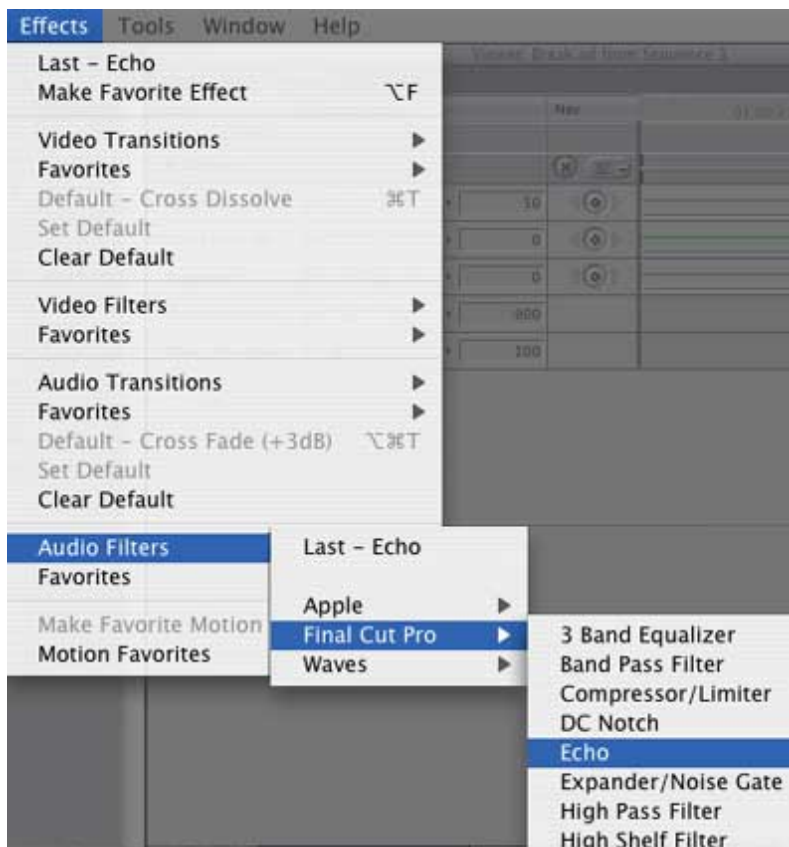
For instance, let's say you want to have your heroine walk into a large room and hear the echo expand as she gets further and further into the room.

Here's how to do it.

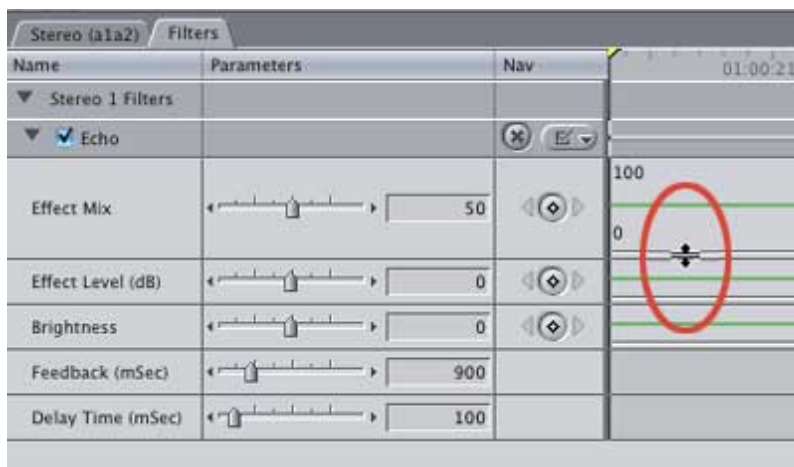
1) Select the audio clip to which you want to add echo, then double-click it to load it into the Viewer. Leave the clip selected.



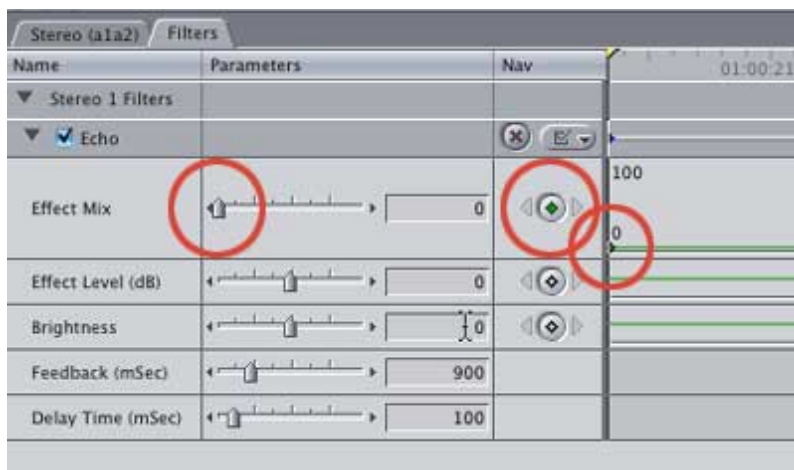
2) Open Final Cut Pro -> User settings and turn ON "Record Audio Keyframes." Then, close that dialog box.



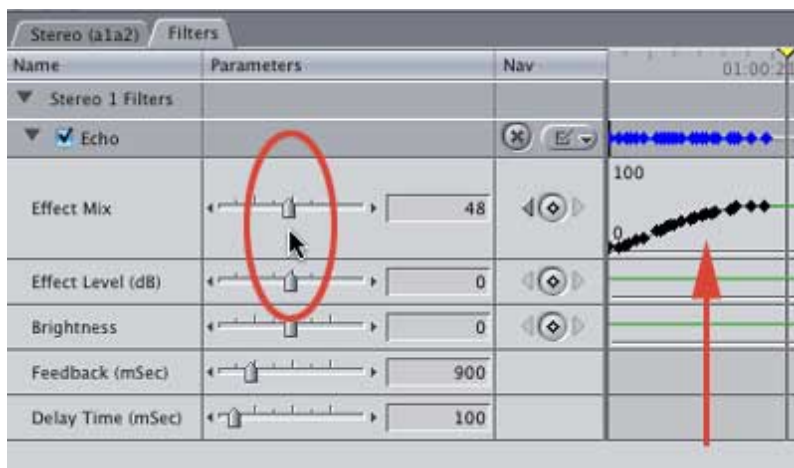
3) Select Effects -> Audio Filters -> Final Cut Pro -> Echo.



4) We are going to be adjusting the amount of echo in our effect. To give us some room to work, grab the gray bar separating the different filter settings with your mouse and drag it downwards.



5) Press Shift - i to move the Playhead to the start of the audio clip. Click the "Make keyframe" button (middle circle) to create a keyframe at the start of your clip (left circle). Drag the echo slider all the way to the left (right circle).



6) Place your mouse directly on the echo slider and press the space bar. As your clip plays, gradually drag the slider to the right until you hear the amount of echo you want.

Notice that keyframes were added automatically as you dragged the slider.

If you want to change the effect, simply select Undo and try again.

This is a very cool way to listen to your audio effects change in real time. Unfortunately, this only works with audio, not video. Still, this makes setting an effect a lot easier.

Larry's Up-coming Teaching Schedule

If you are interested in taking one of my Final Cut courses, I've got a flock of them coming up. Here are the training dates for late March and early April, along with the Apple-Certified Training Center that is presenting the class.

<i>Date</i>	<i>Subject</i>	<i>City</i>	<i>Training Center</i>
April 28-29	Advanced FCP	Westwood, CA	Digital Film Tree
May 3-4	DVD Studio Pro	Santa Monica, CA	DV Creators.net
May 5	FREE Final Cut Demo	Santa Monica, CA	DV Creators.net
May 7 - 11	Intro to Final Cut Pro	Burbank, CA	Video Symphony
May 13-14	Intro to Final Cut Pro	Santa Monica, CA	DV Creators.net
May 22-23	DVD Studio Pro	Phoenix, AZ	PowerThinking.com
May 25-27	Advanced FCP	Santa Monica, CA	DV Creators.net

I will also be teaching a summer course on Final Cut Pro at the UCLA extension -- Wednesday nights, starting in May.

For the latest information on classes, see the Home Page of my website: www.larryjordan.biz.

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Technique: Color-balancing using Match Hue

Have you noticed the Match Hue button in the Color Corrector 3-way window and wondered what it did?

Well, it's a surprisingly powerful tool that can help you color balance between two, or more, scenes. If you have only one scene to color, you would not use Match Hue. But, if you are trying to match the same color between multiple scenes, Match Hue can be a big help.

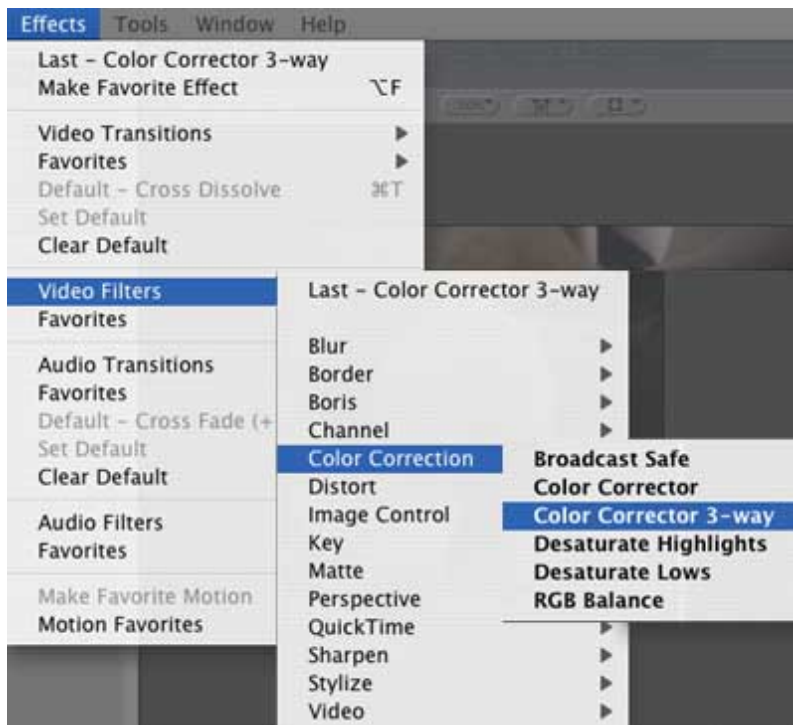
Recently, I shot a scene called, "New Puppy Comes Home." And, like all "great" photographers, I shot it without lights and without any good white or black references in the shot. In fact, the entire room is beige. And, since I didn't use any lights except daylight, all the colors looked a bit desaturated and rolling towards blue.



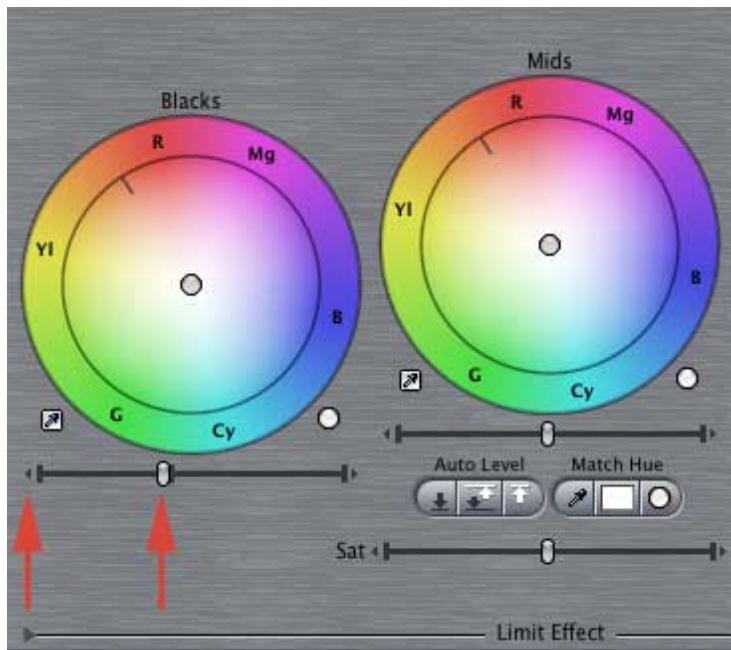
Since this is a "golden" retriever, I want to put some of the gold color back in her fur. So, now, I want to "fix it in post."

Here's how to use Match Hue to get this done.

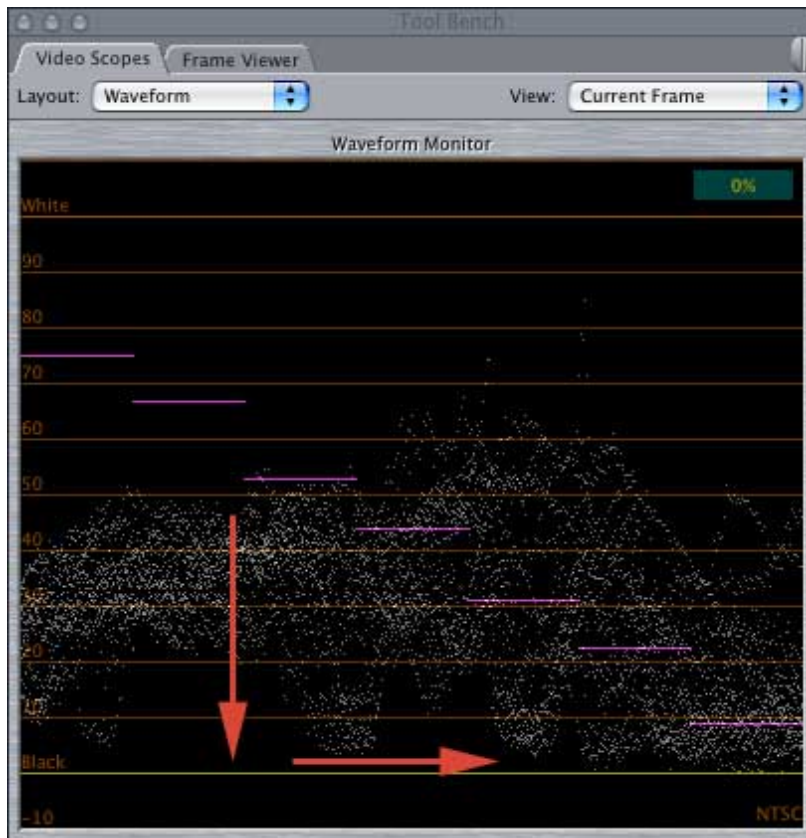
1) Select your shot



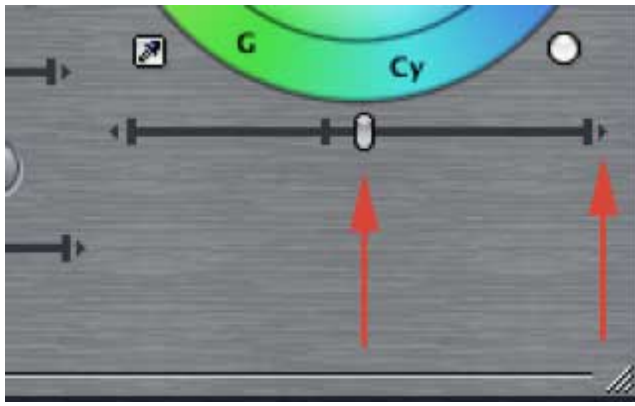
2) Apply the "Color Corrector 3-way" filter



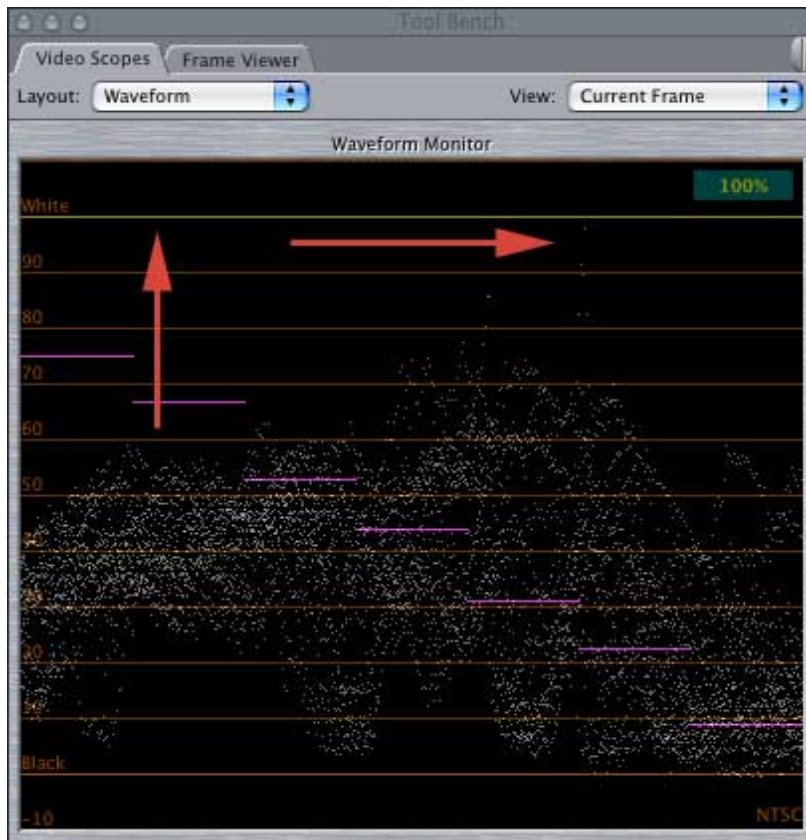
3) Set your black levels by clicking the small arrows at the end of the black level slider of the color corrector window...



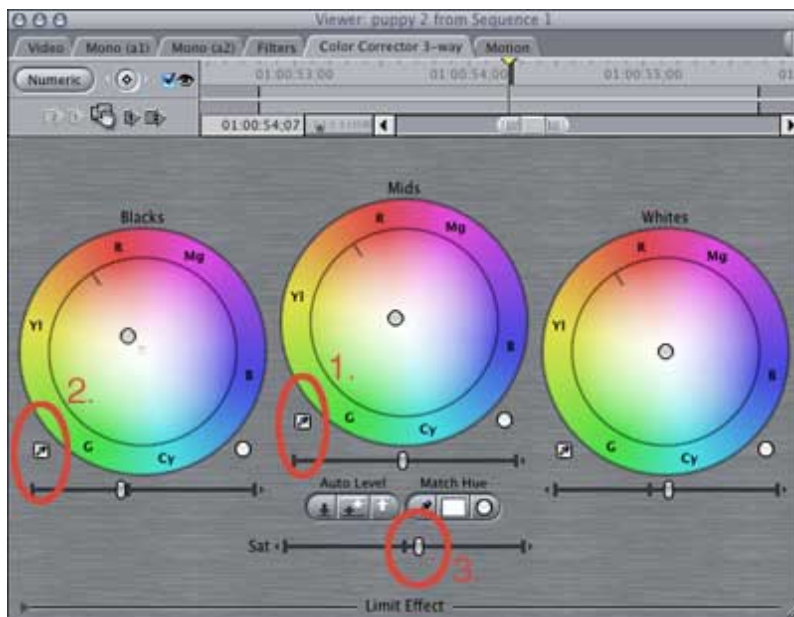
... so that your adjusted black levels sit right on the black line of the Waveform scope



4) Now, set your white levels by clicking the small arrows at the end of the white level slider of the color corrector window.



There aren't any real whites in this shot, so I raised the levels a bit to give the picture more "snap," but didn't take them all the way to the limit.

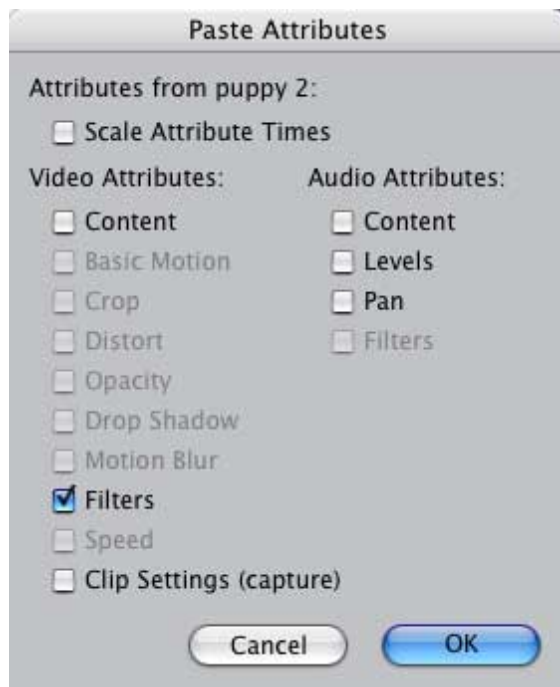


With this first shot, as there wasn't a white reference, so, instead, I did a color balance on the mid-gray toy using the eye dropper tool (#1), then color balanced on the black tube top of the girl at the center top of the picture using the black eye dropper tool (#2).

Then, looking at my NTSC monitor, I increased the saturation (#3) until the puppy's fur started glowing.



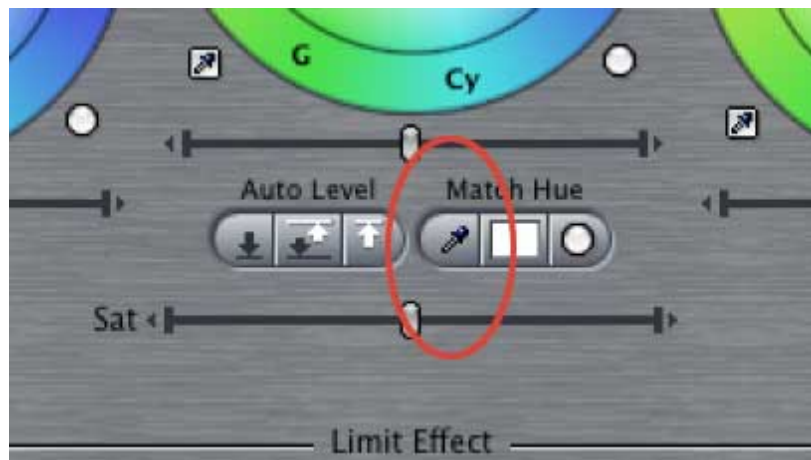
This is the shot I ended with.



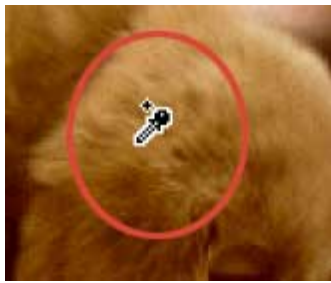
Now, one option to color balance the next shot is to simply copy the settings from this filter into my next shot, using Edit->Paste Attributes. And, I tested it and it works. You end up with a perfectly fine result.

However, to illustrate how Match Hue works, let's do something different.

- 1) Select the second clip in the sequence and apply the Color Corrector 3-way filter
- 2) Double click the clip to load it into the Viewer
- 3) Click on the Color Corrector 3-way tab in the Viewer
- 4) Important - position your Timeline playhead in the earlier, color balanced clip



- 5) Click the Match Hue eyedropper to select it



6) Click on a section of the puppy's fur in the color corrected shot that is in both shots. In this case, I clicked at the top of the ear.



Notice that the color chip in the Match Hue selector has turned brown. Notice, also, that the mid-gray color selector has turned green.

This means that, instead of looking for a mid-gray, the color selector will CONVERT the color you click it on INTO the color in the Match Hue color selector.

7) Move the Playhead in the Timeline to your second shot to display your second shot in the Canvas.



8) Select the green mid-gray color selector and click in the Canvas at the top of the puppy's ear. Notice that the color has instantly changed so that the color of the fur in the new shot matches the color of the fur in the first shot.

This technique is especially useful when matching colors in product shots or where reference colors are missing.



Just for comparison, here are the before and after versions of the two puppy shots.

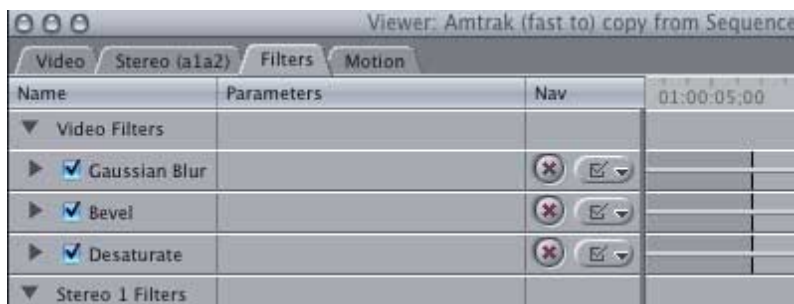
Ta-DAH! We got the "golden" back.

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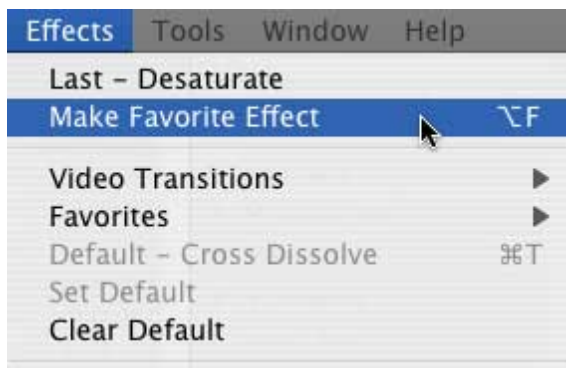
Tip: A faster way to create Favorite Filters

Remember my student, Pete, who provided the earlier tip on how to automatically create keyframes? Well, he obviously had way too much time on his hands in class, because he found another shortcut that I want to share with you.

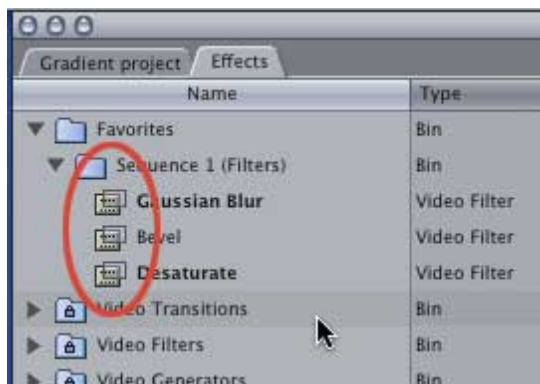
Here's a faster way to create a Favorite Filter.



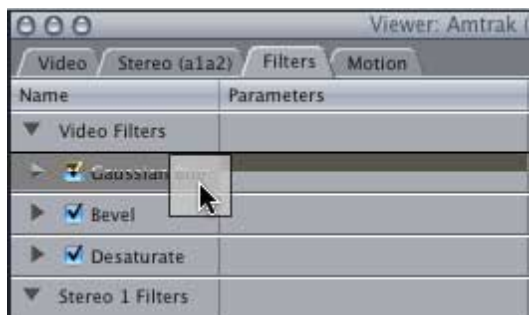
1) Let's say you have several filters assigned to the same clip. (This works with only one filter assigned, but it's even cooler when you have several.)



2) If we use Effects -> Make Favorite Effect...



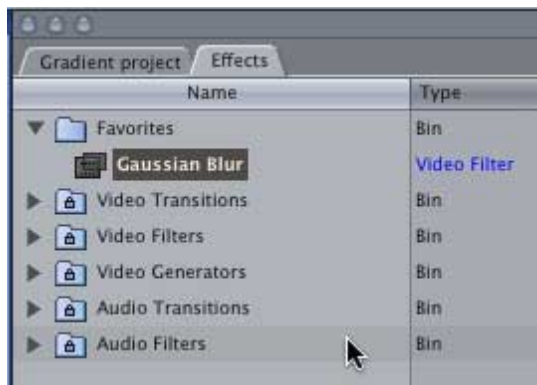
...all three of our filters are placed into the Favorites folder of the Effects tab. Now, sometimes, this is just ducky. But, in our case, we just want one.



3) So, in this case, simply drag the filter you want by grabbing it's name from the Filter tab in the Viewer and ...



...dropping it on top of the Favorites folder in the Effects tab.



Ta-DA! Instant Favorite effect with all your settings intact.

Hardware Update: Firewire 800 on the G-5.

A quick note. Due to the construction of the PCI bus in a G-5, FireWire 800 drives only perform about 20% faster than FireWire 400 drives. This is due to constraints in the G-5 PCI bus and motherboard, not the operating system. Until new G-5's ship with re-engineered motherboards, this problem will not be resolved.

This is NOT an issue using G-4's. Provided you add a FireWire 800 PCI card in your G-4, you will see a significant performance improvement in disk transfers using a FireWire 800 drive.

For more info, check out the Firewire discussion at: www.barefeats.com.

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Technique: Improve Exterior Video by Using Gradients and Composite Mode

OK. I confess. I love taking pictures of trains. In my spare time, I wander around the California coast taking train pictures. However, when I looked at my MiniDV video of trains, I realized that, well, they didn't look as good as I thought they should.

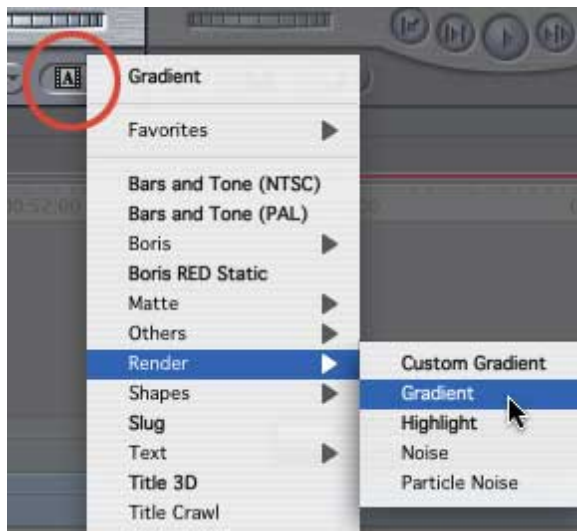
So, here's a technique that you can use to improve the look of your exterior shots. (As an added bonus, this works as well in PhotoShop on stills as it does in video.) However, it requires using a feature of Final Cut that few people understand -- composite modes.

There isn't enough time to explain composite modes fully. Suffice it to say that composite modes use the underlying numbers that describe each image, rather than the image itself, to modify images using certain rules.

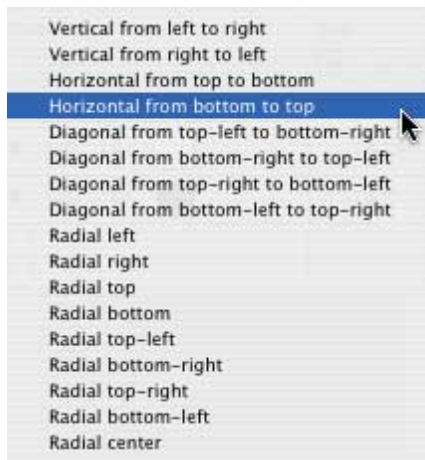
Here are two ways composite modes can improve your exterior shots.



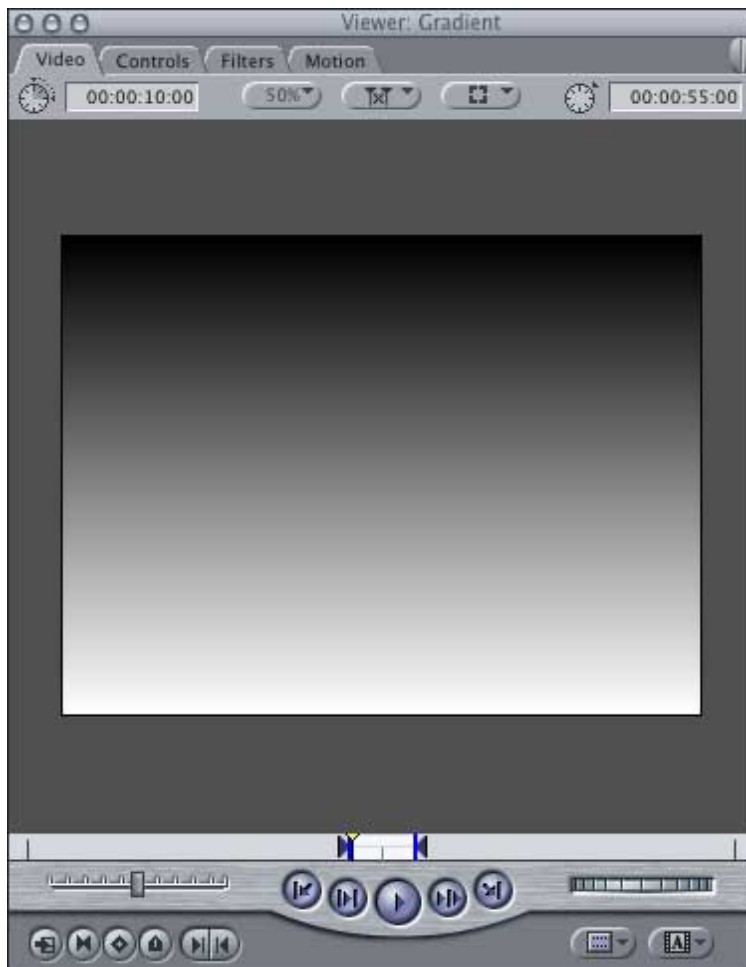
Here's a shot of an Amtrak train passing through a fog-shrouded valley at about 6:00 AM. It isn't bad, but the sky is too bright and distracts from the train.



So, I placed the train into my timeline, then went to the Generators menu (red circle) and selected Render -> Gradient.

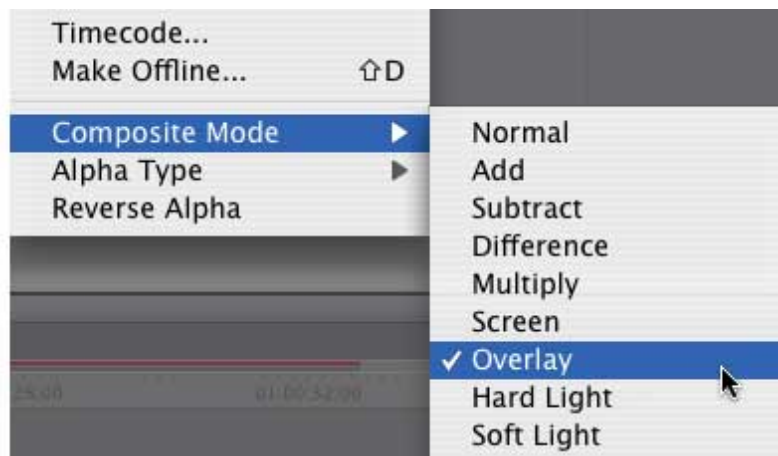


Clicking the Control tab at the top of the Viewer, I changed the orientation of the Gradient to be from Bottom to Top.

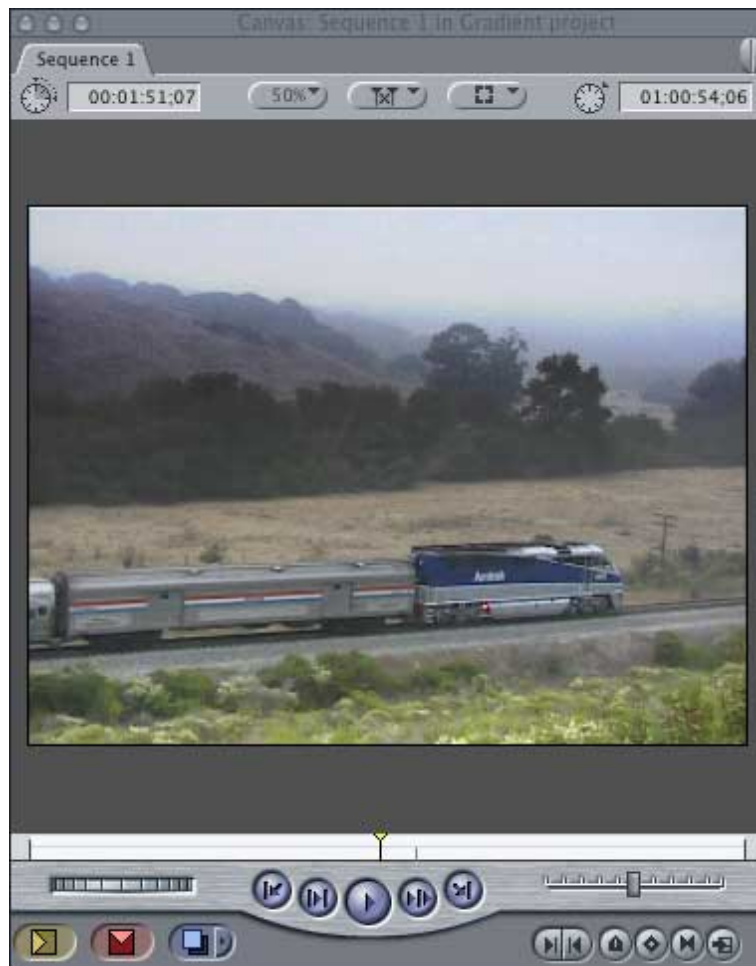


My gradient now looked like this.

Place the Playhead in the middle of the clip. Then, drag the gradient over to the Canvas window and select "Superimpose" from the pop-up overlay.



Select the gradient on the Timeline and go to Modify -> Composite Mode -> Overlay.



Notice how the sky got a bit darker and less dominant. The foreground lightened and the train took its rightful place as the principal object in the picture.

Using a gradient with an Overlay composite mode will darken the top half of a picture, while making the colors richer, and lighten the bottom of the shot.

All very cool.



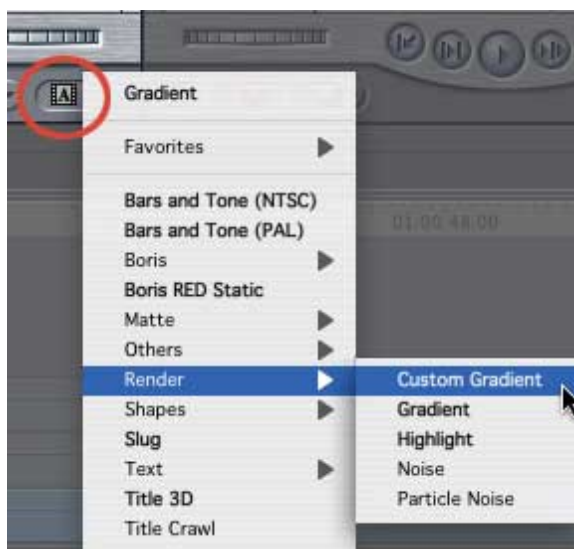
So, feeling very confident, I selected another seriously back-lit shot. (One of the problems with shooting trains at sunset along the California coast is that, unless I want to go swimming, everything is back-lit. Now, I could shoot in the morning, but that is just plain too early to get up.)

Let's see if our new technique can improve this picture.

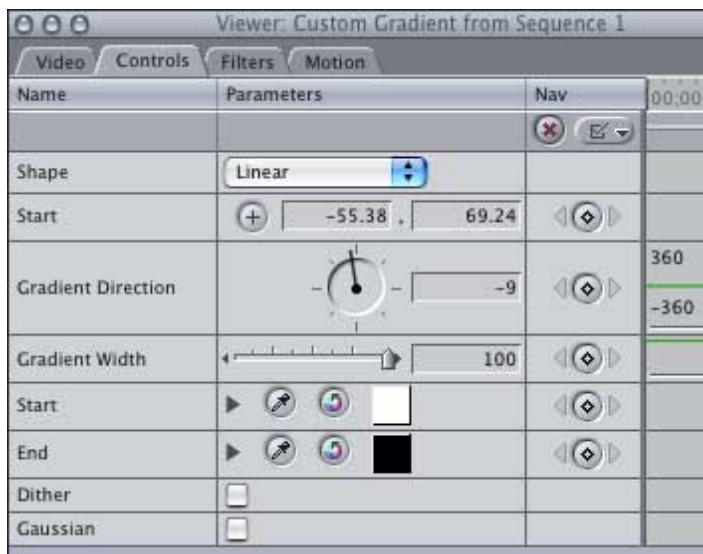


Sigh... Disaster. Whacked-out colors in the sky. The foreground is too light and the train is still too dark to see.

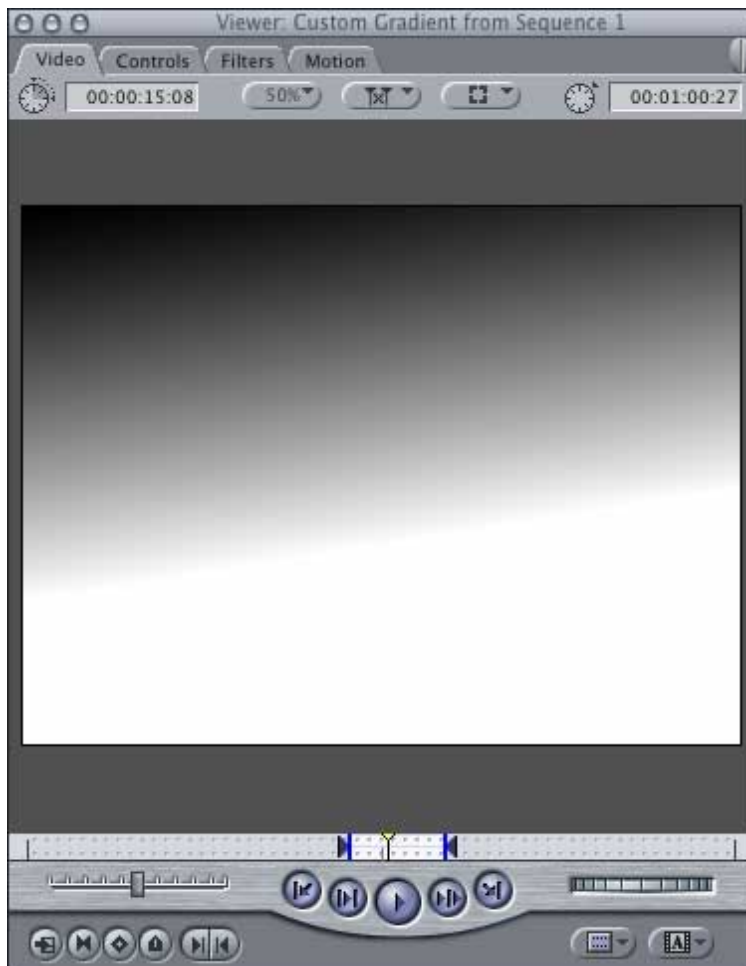
But, all is not lost. Let's try the same concept, but take it to the next level.



This time, we'll create a Custom Gradient.



The differences are, among others, that we can adjust the angle of the gradient, the width of its edge and where the transition occurs.



Here's what our gradient looks like after I finished tweaking.

Again, superimpose it over the train shot in the timeline. But this time, instead of selecting "Overlay" as the composite mode, let's select "Soft light."



Sha-zam! We can see the train, while still darkening the sky and not blowing out the foreground.

What's the moral here? Several things:

1. Don't be afraid to experiment with gradients and composite modes.
2. No composite mode works perfectly for all shots.
3. You don't need to be stuck with a bad exposure, Final Cut gives you the tools you need to improve your shots.

All very cool.

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Reader Mail

I encourage you to write and share your thoughts or comments on this newsletter; that way, we all learn.

Phil Hodgetts writes regarding the tip on setting video black levels:

If you are outputting to analog, your capture card will automatically elevate your black levels the appropriate amount so that NTSC black outputs at 7.5 IRE. For those of you on PAL systems, the numbers are different, but the effect is the same.

Just some additional clarification... 7.5 IRE is, as you say, correct for NTSC, but *only* within North America. Japan and Asian NTSC analog is at zero IRE. No setup.

PAL has never had setup and there is no difference in black level between digital black and analog black.

Just another of those NTSC North America anomalies that are the pain of having the first system.

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Jim Perry writes regarding video compression:

I do have a question about how DVD SP compresses. You can customize the compression settings by control-clicking on a video in the assets tab. Is DVD SP using the same compression engine as Compressor? I prefer this method as DVD SP does the compression in the background whereas when I launch Compressor from FCP it ties up FCP until the compression is done.

Larry responds:

The compression engine in Compressor is essentially the same as the compressor in DVD Studio Pro. However, in addition to the two options you mention (compressing by Exporting from Final Cut and compressing in the background of DVD SP), there's a better third option:

1. Export your video from Final Cut using Export -> QuickTime movie.
2. Set your export settings to match your sequence.
3. Make the sequence Self-Contained ONLY if you are moving the resulting QuickTime movie to another computer system, other than your own.
4. Take that exported QuickTime movie and bring it into Compressor for compressing.

Exporting from Final Cut takes forever, as each individual frame is exported and compressed.

Compressing inside DVD SP will either slow your system down significantly, if done as a background process, or really slow down your initial build, if done as part of the final build.

Creating a master movie file and importing it into Compressor allows you to create batches that can run while you're away from the computer, as well as multiple compressed versions of the same movie master.

Here's the commercial that supports this newsletter.

I provide system design, consulting, editing, training and support for Final Cut Pro and DVD Studio Pro.

If you need help, I'd appreciate it if you would give me a call, (818) 879-5105, or send me an email -- larry@larryjordan.biz.

Thanks.

Wrap-up

Well, that's it for this edition of the newsletter. Let me know what you think, and tell your friends to subscribe. Also, please send me your comments, along with suggestions for future stories.

Planned for next month (and, yes, this changes until the last minute):

- A first look at Final Cut Pro HD
- Compressor: Other settings to get the most out of your video (this got delayed from April)
- Using the Pen tool to quickly create smoother moves and effects (this, too, got delayed from April)
- Striping blank tapes. Is this still a good idea?
- Another "Client Report"
- Reader feedback
- And more.

Thanks -- and have fun editing!

Larry

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