Color Correction in Final Cut Pro

**-Richard Harrington, PMP**

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Fix it in Post

Have you ever had to reject a shot due to improper color temperature? Or, even worse, because the camera operator forgot to white balance? Bring life back to your footage with Final Cut Pro's powerful color correction filters. With just a few educated clicks, you can quickly enhance your video images and create stylized looks with Final Cut Pro's primary and secondary color correction techniques. This session will teach you how to properly use the Video Scopes, Frame Viewer, Range Check, and Color Corrector 3-way. These tips are excerpted from a new book called Final Cut Pro on the Spot (published by CMP Books). Special thanks to Abba Shapiro who tackled this challenging, yet fun, task with me.
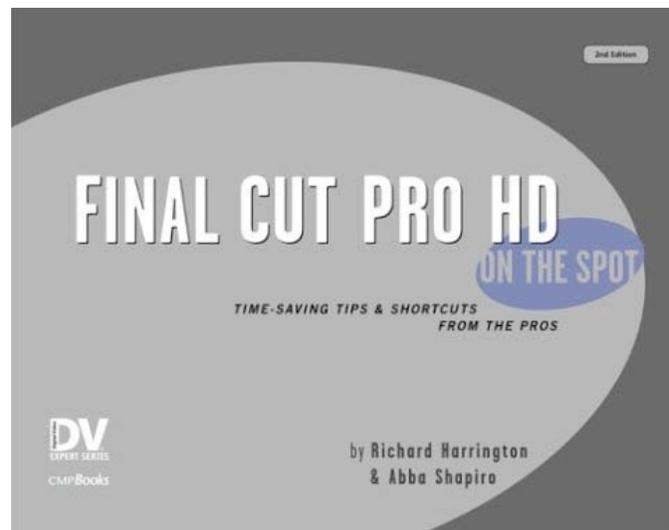
Why is there an Exclamation Point on my Monitor
(Or do zebra bars really grow in my NLE system?)

But for those of you in hurry, and we suspect most of you are… here's a 'quick' way to spot problems. The range check command (View > Range Check). An exclamation point means you have a problem, as do red stripes. Green stripes just mean areas that are close to the legal limit.

Excess Luma (Ctrl + Z)

If your image is too bright, you'll have problems in a broadcasting environment. Be sure your whites don't exceed their limit. Simply apply a Color Corrector 3-way and pull the White slider to the left until the Exclamation point goes away.


Excess Chroma

If your image is too saturated, you'll often have colors that bleed (or spread) across the screen. Reds and Yellows often have this problem. You can use a Color Corrector 3-way or the Broadcast Safe filters to fix this problem. Simply Desaturate or Clamp the illegal colors.

Both

This is how we usually work. Warn us if there's a problem by popping up the exclamation point. A little work with color correction usually solves the issue. If we have a hard time spotting the trouble area (luminance vs. saturation) we'll just switch to one of the specialized views.
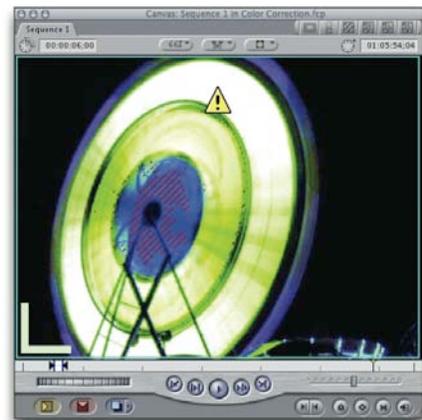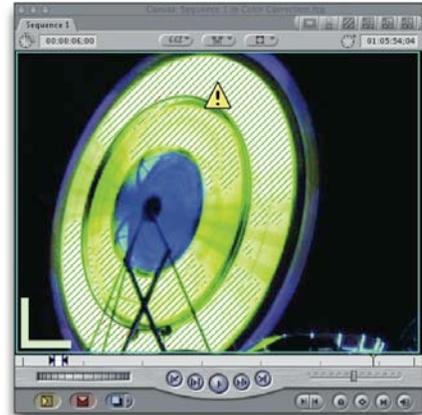
Yeah, It's that Easy
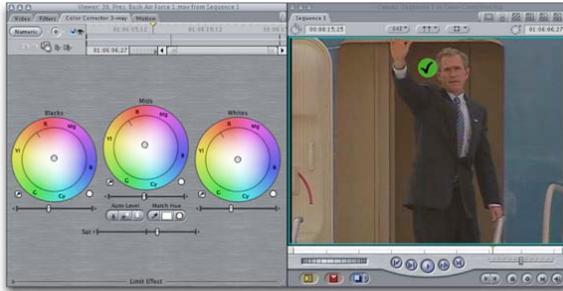
The Color Corrector 3-Way can solve many problems (and it's fast!) Most people get overwhelmed by the interface. The key is to use one slider at a time. We usually work in this order to fix a 'typical' shot that's not broadcast safe. Make sure your range check is on for both luminance and saturation and view things on a broadcast monitor if possible.

1. If needed, rebalance the image by sampling with the eyedropper.
2. Adjust the White slider. Slide it slowly to the right until your red zebra stripes disappear.
3. Slide to the Mids slider to adjust the exposure.
4. Roll the Black slider in to the Right to restore contrast.
5. Re-adjust the White, then Mids if needed.
6. Roll a little Saturation in (or out) to taste.

A simple clean up for DV footage captured in Low Light

Most people will shoot their video cameras in any type of light, but unfortunately that does not always give the best type of image. Single chip video cameras were just not made to handle low light recording, but that does not mean that you cannot use the imagery. So try a trick digital still photographers use – run a 1 or 2 pixel Gaussian Blur on JUST the Blue Video Channel. Don't too much more or the footage will start to "bloom" or soften in color. By Gary Adcock, Chicago FCPUG
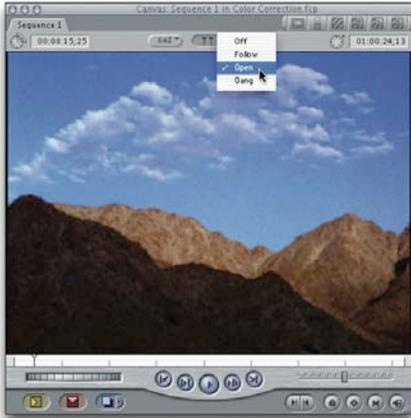
Playhead Sync

You've applied color-correction to a clip in your timeline and want to access the controls. You double-click on the clip, make some adjustments and go to the next clip. Somewhere along the way you forget to load the clip you want to work on. Only after several clicks do you discover that you've messed up a shot by color correcting the wrong item.

The viewer can now keep up with what you are doing in the timeline automatically. In the viewer there is a new drop-down menu for playhead sync. Setting the viewer to Open will automatically open the shot that you are looking at. This is VERY useful for color correction or other effects work.

You'll Poke Your Eye Out

Inside the Color Corrector 3-Way, you'll see three eyedroppers in the upper area. These are useful for fixing color balance. Think of this as white balancing in post, we've even fixed video shot on the wrong filter.

1. Use the White eyedropper to click on something that should be white. Don't go for the white's of someone's eyes, rather a large area like a wall or
2. Use the Blacks eyedropper to click on something that should be black.
3. The Mids eyedropper really only works when using a chip chart or something with 50% gray.
4. If the color balancing is over-compensated, you may need to drag back towards center in the color wheel.
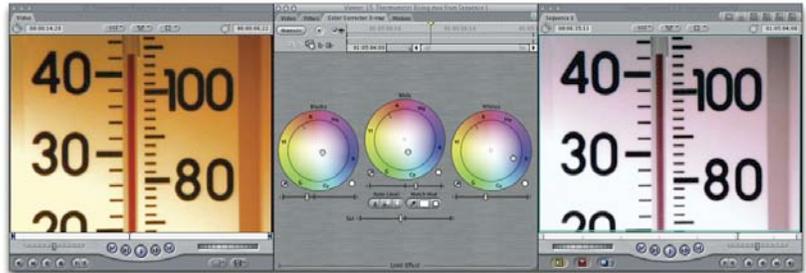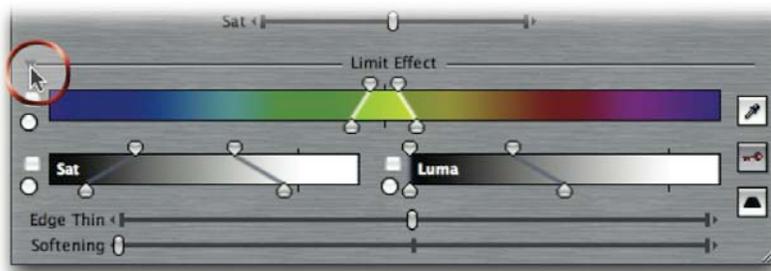
Pandora's Box

When the Color Corrector 3-way was introduced, there was a lot of confusion. Everyone seemed to be drawn to the controls at the bottom of the screen. They wanted to tweak and fiddle, and pretty soon people started complaining that they couldn't get consistent results.

Those controls are for limiting the effect. This is called secondary color correction and is for isolating your touch-up to specific areas. Unless that's what you want, don't touch! Fortunately, these are now in a hidden area of the interface of Final Cut Pro 4.

Safe (and Lazy...)

Quick, the show you're working on needs to be made broadcst legal. You can afford the render time, but not the time necessary to figure out what's legal and what's not. Or maybe you don't know how to read scopes? Whatever.

1. Create a new sequence with settings that match the sequence, which needs fixing. Name it "Safety sequence" to help you know the difference between the two.

2. Double click the Safety sequence (so it's open) in the browser.

3. Select your finished sequence in the **Browser**. You're going to nest (put the master sequence, your main sequence you've been working days/weeks/months on) into the new sequence. Drag the "master" sequence into the saftey sequence. This is called nesting and will permit you to put a *single* effect on the entire show.

4. In this case the effect will be **Broadcast Safe** (Effects>Video Filters> Color Correction> Broadcast Safe. Add this single effect and it will make the entire show legal.

5. Render. Yes, it's a *red* render bar when played back under Safe RT (in most circumstances). But its presets are pretty conservative and keep most work passing legal requirements.

By Jeff Greenberg, Future Media Concepts

Add It Up

Dark video? That never happens to us of course, but we hear that this is a good fix. If you have a shot that's really dark, you can use screen modes to lift the details out.

1. Place a cloned copy of the dark shot above (option + drag, then hold down the shift key).
2. Contextual + Click and change the Composite Mode. Add works very well to combine the lightest elements.
3. If it is too light, reduce the opacity of the top clip. If it is too dark, clone an additional copy on a third track.

This works great on surveillance/security video as well.

One Hot Spot

Have a problem in just part of your image? There's two approached worth taking.

Broadcast Safe – This filter will clamp the illegal levels and knock them into place. It can sometimes lead to banding, but its fast and easy to apply.

Color Corrector 3-Way – A better method is to select the hot spot with the limit effect command. Base your selection solely on the luminance (ignoring Saturation and Hue). Be sure to Feather your selection significantly. Now your adjustments to the Mids and Whites will be much gentler.

Help! My scopes are hard to see…

By default… the scopes in FCP use light lines to signify their results. That's fine and all… but that doesn't mean you have to like it. Simply contextual + click on a scope and you can access SEVERAL different display options that may help you see your results more clearly.


Final Cut Pro On the Spot, copyright CMP Books
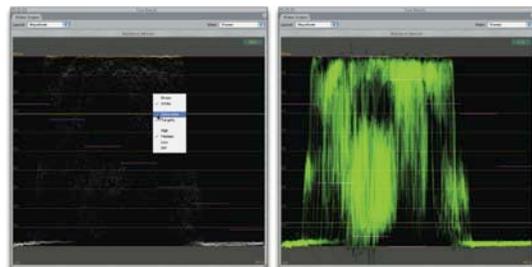
A Spot of Color

This specialty effect can be used to add dramatic emphasis to a shot by leaving only one color and stripping the rest. To pull this effect off, you will need to use the Color Corrector 3-way filter. This effect works best on clip with a dominant color region.

1. Apply the Color Corrector 3-way filter and access the filters visual controls.
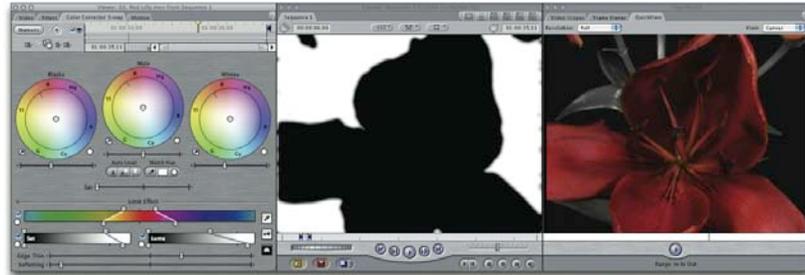
2. Using the Select Color eyedropper in the Limit Effect controls, select the desired color you'd like to keep.

3. Click on the key icon to view the matte. Use the Select Color eyedropper while holding down the shift key to add to the matte.

4. Finesse the matte by adjusting the Width and Softness sliders for the Chroma, Saturation, and Luma values in the Limit Effect controls. When the desired color is clearly selected, there will be no holes in your matte.

5. Click the key icon twice to toggle back to View Final.

6. Slide the Saturation slider to the left to desaturate the clip.
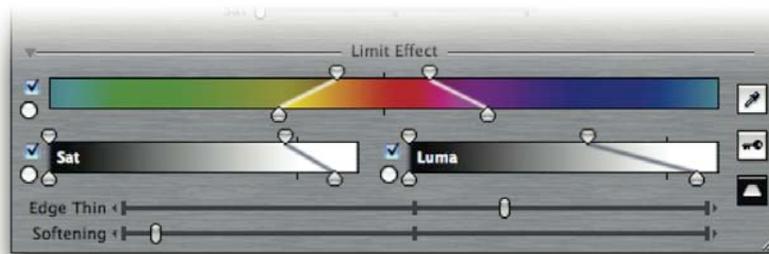
7. At the very bottom are controls to tweak the effect. Check the invert box at the bottom of the parameters list. Adjust the Thin/Spread and Softening sliders to enhance the effect.

Instructor: Richard Harrington

Richard Harrington is a certified Project Management Professional, Adobe Certified Expert in Photoshop and After Effects, and Apple-certified instructor in Final Cut Pro. Additionally, he has completed Avid's Master Editor Workshop and the Avid Certified Instructor Program. His visual communications consultancy, RHED Pixel, creates motion graphics and produces video and multimedia projects. He is a faculty member at The Art Institute of Washington, a popular speaker at conferences, and an instructor for Future Media Concepts. He is the author of Photoshop for Nonlinear Editors and as well as a moderator Creative Cow's Photoshop Forum.

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