



Tutorial: Correcting White Balance

In this tutorial, we are going to use color correction filters inside our editing package to correct the bad white balance shown in Color Plate 30. Our goal will be to achieve an image with the color shown in Color Plate 31. Although the resulting color is not ideal (look at the strange magenta and green tones in the shadows of the adjusted image), it is certainly better than the original. In addition, since we can't afford a reshoot, saving the footage through color correction is our only hope of salvaging the scene!

The colors in an image can be divided into three categories: highlights, midtones, and shadows. When trying to decide how to color correct an image, start by identifying problems within these categories. As you adjust the first category, it will become more apparent what corrections need to be made to the other categories. For example, you might find that only highlight colors are out of balance. Adjust these, and then see if the midtones or shadows need adjustment.

For this tutorial, we will be correcting the footage using Apple's Final Cut Pro. Final Cut offers many different color correction filters and controls. For this tutorial, we will be using the Color Balance filter, partly because it's up to the task, but also because you'll find a similar control in just about any other editing program. Most Color Balance filters, including Final Cut's, let you specify which range of colors [md]highlights, midtones, or shadows [md]you want to adjust. Because most editing programs include a similar color correction filter, you should be able to follow along with this tutorial using just about any editing software.

Step 1: Create a Project

Create a new project, import the clip *adelle_1.mov* from the Chapter 16 folder on the web site, and place it on the timeline.





Step 2: Add the First Filter

Although at first glance it might look like this footage is completely blue, closer examination reveals that the woman's skin tones, and the wood frame behind her, are not that bad. It's the white wall and the white cushion that are particularly blue. Since these fall under the Highlight category of color, adjusting the highlights will be our first step.

Add a *Color Balance* filter to the clip.

In Final Cut, the Color Balance filter provides three radio buttons for targeting the color temperature you want to adjust. Click the Highlights button to target highlights. Because we want to remove the blue cast, begin by sliding the blue slider to the left until it reads approximately -70 . If your program doesn't allow you to target a particular range of colors, that's okay; you just might need to make additional adjustments later (see Figure 16.16).

Now look at your image[mnd]much less blue, but now the highlights are a little too green. No problem, drag the green slider to the left until it reads roughly -50 . Better, but still not quite right.

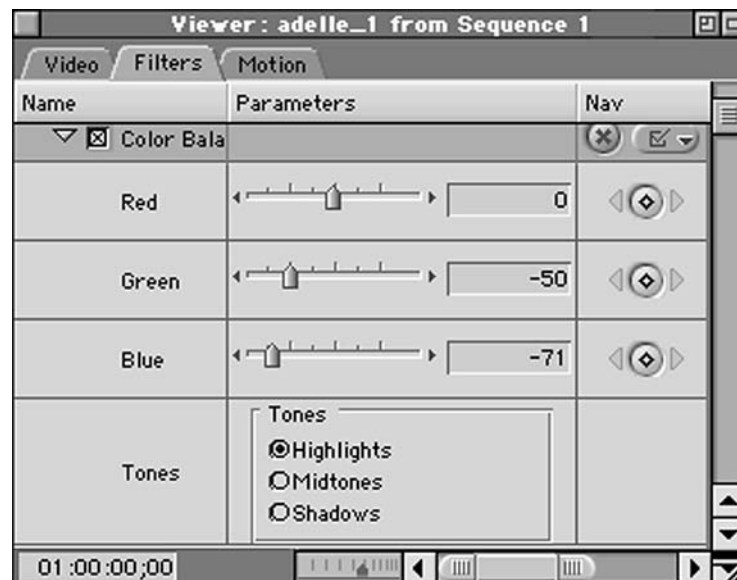


Figure 16.16

Adding the first Color Balance filter. Your goal is to address the biggest problem in your image. Don't expect to fix everything all at once.

Step 3: Add Another Filter

Although most of the blue cast was in the highlight areas, there's still a good amount of it in the midtones. Add another Color Balance filter to the clip, but set it to target the midtones.



Again, your first step is to reduce the blue. Drag the blue slider to around -60 . Look at your image and you'll see that, like before, you now have too much green. Drag the green slider to around -40 .

Much better, but now there's a very slight pink tinge. This can be removed by putting the red slider at -10 .

Step 4: Add Yet Another Filter

We're almost there, but look at the highlights in the corner of the couch. They're a little green. We could go back and lower the green slider in our first filter to further reduce the green highlights, but this will create other problems. Because the filters are calculated in a certain order, if we go back and change an earlier parameter, the filters and parameters that are calculated later will no longer serve the function we intended. So, add a third Color Balance filter.

Click the Highlights button in the new filter and drag the green slider down to about -30 . This should remove most of the green highlight.

Step 5: Now, Add a Filter

Although the color now looks much better, the image has ended up a tad darker because of our adjustments. Add a *Levels* filter to the clip. Drag the Gamma slider to the left to increase the brightness of the midtones (see Figure 16.17).

That's it! You've successfully removed the color cast and saved the footage. Now, however, it's important to scrub through the clip and make sure that your settings are accurate for all the sections of your video. In this clip, they work fine throughout, but if we had moved the camera or done some other activity that changed the lighting of the scene, then the clip might need different color correction settings for different parts. If your editing software allows you to animate filters using keyframes, then, with some patience, you can usually get smooth changes in adjustment from point to point within your clip. (More on keyframes in the next chapter.)

This stack of filters will all be calculated and applied when you render and compress your final video. Therefore, by applying all of these filters at once, you'll only have to compress your video at final render time.

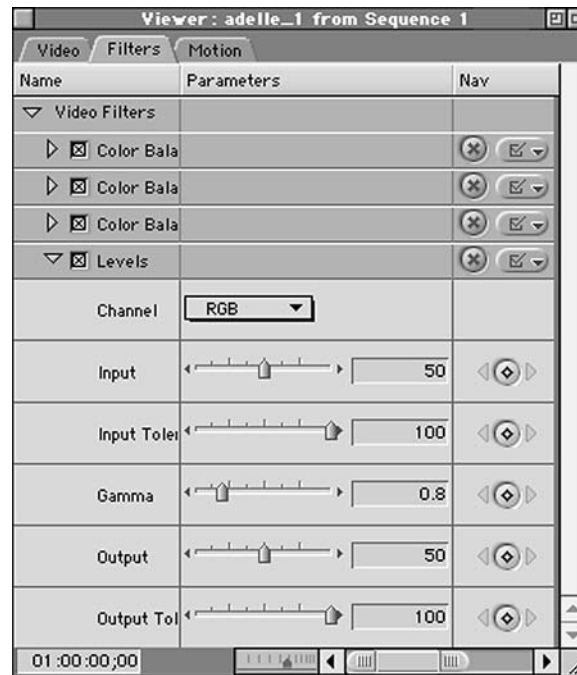


Figure 16.17

In this case, it took a good number of filters to deal with every color problem in our shot.

