CHAPTER 3

Teton Technique

TRY IT AT HOME: TetonTechnique.psd

SIT BACK AND WATCH: TetonTechnique.mov

Ladies and gentlemen, girls and boys of all ages, welcome to the Grand Teton National Park. But wait, something's wrong with the park.

The color differences between the left part of the image and the right part make it seem as if we're looking at two different parks—or, at least, the same park on two different days. This panorama presents a perplexing problem.

Unfortunately, it's also a common problem. The landscape is too wide to capture in just one picture, so you shoot multiple photos—but the lighting and color can change as you change your angle or as time passes. Our goal in this chapter is to fix this problem. We want the entire landscape to be a single image with consistent color. Open the TetonTechnique.psd file off the accompanying CD to work with me on your own computer. If you'd like to watch the movie instead, watch TetonTechnique.mov.

Let's take a closer look at what we're working with. There are two layers in this Photoshop file. Layer 0 is the layer on the left. Layer 1 is the layer on the right. Hide one to see the other one alone.

Layer 0 has the color we want to use for the entire panorama. Layer 1, on the right, is the incorrect color. So, how can we make them consistent? You probably guessed that we'll need to use levels. But levels can be pretty complicated on a color image like this one. What if you're not an expert at using levels? Aha! I'm going to show you an easier way to use levels than you've probably seen before.

Layer 0, on the left, is the correct color; Layer 1, on the right, should match it.

OR TRY THIS: Don't have any panoramic photos lying around? This technique works for more than just vacation shots. For example, you could use it to match images for prepress work: if you know one image prints well on your press, match other images to it so that you can be sure they'll print well, too.

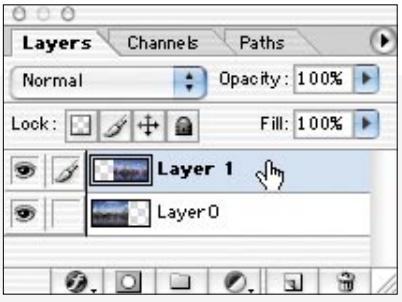
Channels Are the Key

Let's start by targeting Layer 1 in the Layers palette, because it's the layer we want to change ❶. Remember that we want the colors in Layer 1 to match those in Layer 0.

Now select the Channels tab to open the Channels palette. Channels are the secret to this whole operation. This is an RGB image, so we see the RGB channel, and a channel for each of the colors in it: red, green, and blue ❷.

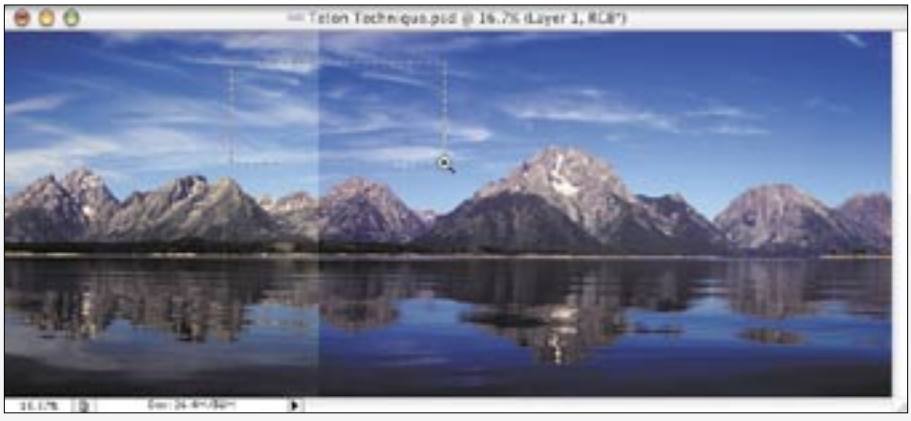
So that we can see what we're working with, let's zoom in on the image. Select the Zoom tool from the Toolbox. Then click and drag over the area you want to see. In this case, I think it will be easier to match colors in the sky, so let's magnify the sky and clouds ❸.

Okay, now remember, the color on the left is the color we want, so we're going to be changing the color on the right. Because we're looking at them side-by-side, we'll know when we achieve our match ❹.



❶

❷



❸

❹ *When we're finished, we want these colors to match.*

Let's get to work in our channels. Start by selecting the red channel ❺.

The channel appears in grayscale. We can clearly see that the grayscale values are different in the image on the right half of the image. We'll make them the same.

With the red channel targeted, choose Image > Adjustments > Levels ❻.

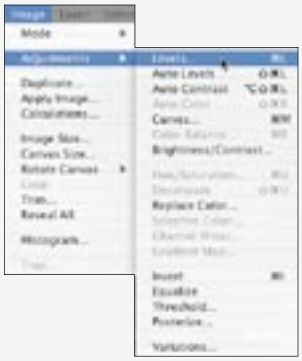
That's right, we're going to run levels on the grayscale image. Remember, all you have to know for this project is how to make two shades of gray look the same. We ought to be able to do that easily enough. Let's try it.

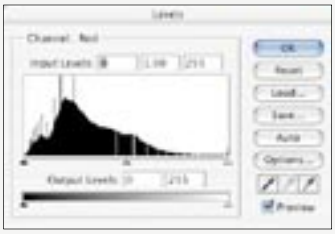
Click on the midpoint, and move it to the left. The right half of the image changes, while the image on the left stays the same ❼.

Continue to move the midpoint until the grayscale values for the images look about the same, and then click OK. Don't worry about the ugly line that separates the images. We'll fix that in a few minutes.

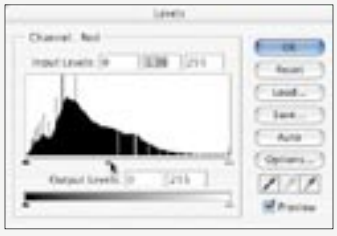
ANOTHER WAY:
Here, we're judging our progress visually. If you want greater accuracy, you can use the Eyedropper tool to set an exact numerical value for each gray value.

❺ *Each channel appears in grayscale. We'll adjust the colors in the red channel first.*





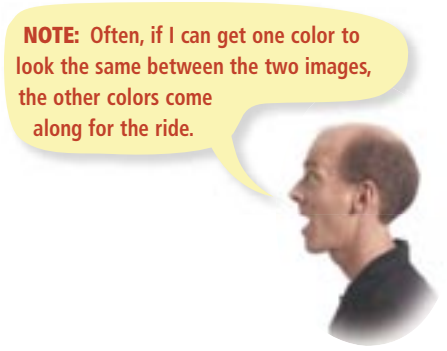
❻ *The changes we're making in the Levels dialog box affect only the layer on the right.*



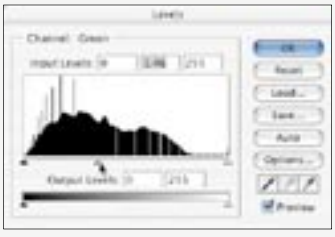
❼

Now, the red channel is in good shape. Let's move on to the green channel. Select it in the Channels palette ❽ to see whether we need to make any changes to it.

It looks like we do need to make some adjustments. The grayscale values for the image on the left side are very different from those in the image on the right side. We know how to fix that, though, don't we? Choose Image > Adjustments > Levels again. Adjust the midpoint until the two shades of gray are approximately the same, and click OK ❾.



❽ *The green channel needs to be adjusted, too.*



❾

All that remains is the blue channel. Select it. We can see there's a problem there, too ❿.

Choose Image > Adjustments > Levels. Slide the midpoint until it looks about right, and click OK.

This has become routine by now. And it's easy enough with a grayscale image to see when the values match ⓫.

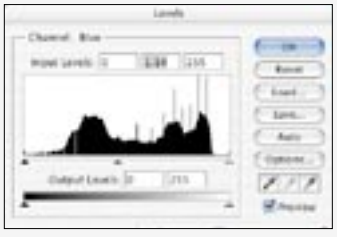
We're out of channels, so let's see what we've done. While we're still targeting the blue channel, let's zoom out to see the full image ⓬. (Double-click the Hand tool to zoom to the full image quickly.)

Well, the blue channel looks pretty good. It's time to put all the pieces together again and see how we fared.

Drum roll, please. Select the RGB composite image at the top of the Channels palette. And this is what we have ⓭:

We've matched the colors pretty well. That ugly line down the center is the only remaining hint that these are two images merged together.

❿ *The layers don't match in the blue channel, either.*



⓫ *Slide the midpoint until the values match.*

⓬ *The blue channel looks good.*

⓭ *Select the RGB composite image. Nice!*

Use a Layer Mask to Remove the Line

To remove that line, we're going to use a layer mask.

Select the Layers tab to return to the Layers palette. Then, make sure that the topmost layer, Layer 1, is still targeted, because we want to blend Layer 1 into the background. Now we're ready to create a layer mask. Click the Add Layer Mask icon at the bottom of the Layers palette ❶. A layer mask appears next to the thumbnail of the layer in the Layers palette.

Select the layer mask to target it, and then select a brush to use to paint over the seam between the images. For this purpose, I recommend a soft-edge brush, with the Normal blending mode, and an opacity of 100% ❷.

We also want to make sure that the foreground color is black ❸. Black *hides* the image, and white *reveals* the image.

ANOTHER WAY: To see the mask in the image area, press the Alt or Option key while you click the layer mask in the Layers palette. Shift-click to turn the mask off or on.

ADD LAYER MASK

❶ *Click the Add Layer Mask icon in the Layers palette to create a layer mask.*

❸

❷

Masking Portions of a Layer

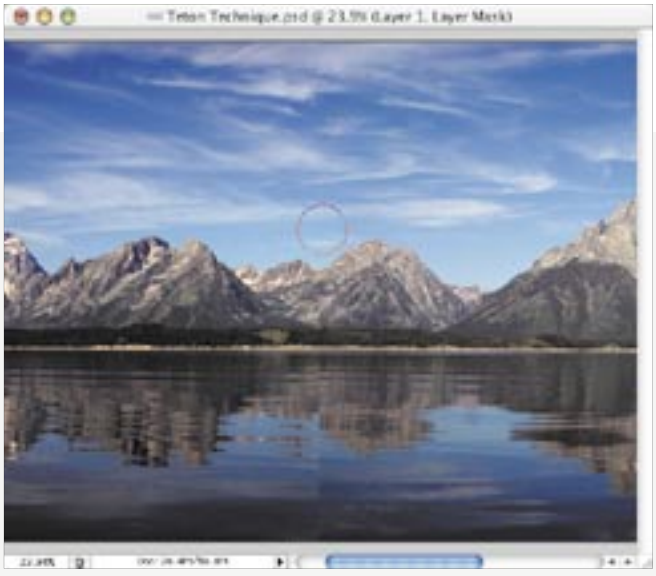
Layer masks protect parts of your image so that you can be selective about where you apply filters, change colors, or add effects. You can use a mask to blend one layer with another, or to modify part of a layer with another. For example, you could use a layer mask to fade the edges of a photograph into a white background. Or, you can blend two image edges together, as we did in this chapter. While you're working with the mask, the special effects you apply don't affect the actual pixels in the layer. Only when you apply the mask do the changes become permanent.

A layer mask is grayscale. What you paint in black is opaque, so the layer itself is hidden; what you paint in white is transparent, revealing the layer; and what you paint in shades of gray appears with corresponding degrees of transparency.

Ready? Click at the top of the image, on the line. Then drag the brush down to paint through the image until the two are blended together ❹.

Look at the layer mask thumbnail in the Layers palette ❺. The layer mask has a strip of black paint through it. That layer mask is what's blending these images together.

OR TRY THIS: Did you go too far with the brush? Use a white brush instead of a black brush to recover the image. To switch to a white brush, click the double-arrow icon to toggle the foreground and background colors in the Toolbox.



❹ *As you drag the brush over the line, the two sides of the image are blended together.*

❺ *The black strip is the layer mask.*

SUPER USER TIP: Here's a great time-saving technique for painting a straight line between two points in Photoshop: Click once where you want the brush stroke to start, hold down the Shift key, and then click again at the end point for your line. Photoshop draws a line with the current paintbrush between the two points.

There's our final panorama. Breath-taking, isn't it? Ah, but you can breathe just fine, now that you know how easy it is to blend your images together. Of course, not all images are created equal. Here, we used the midpoint slider to adjust the grayscale values. With other images, you may need to adjust the white point, black point, or even the Input sliders in the Levels dialog box to match the gray values. The midpoint slider is a good place to start, but don't be shy about experimenting with the other sliders as well.