



# INTRODUCTION TO GRAPHICS

## Color Temperature & Color Cast Correction

Information Sheet No. PS715

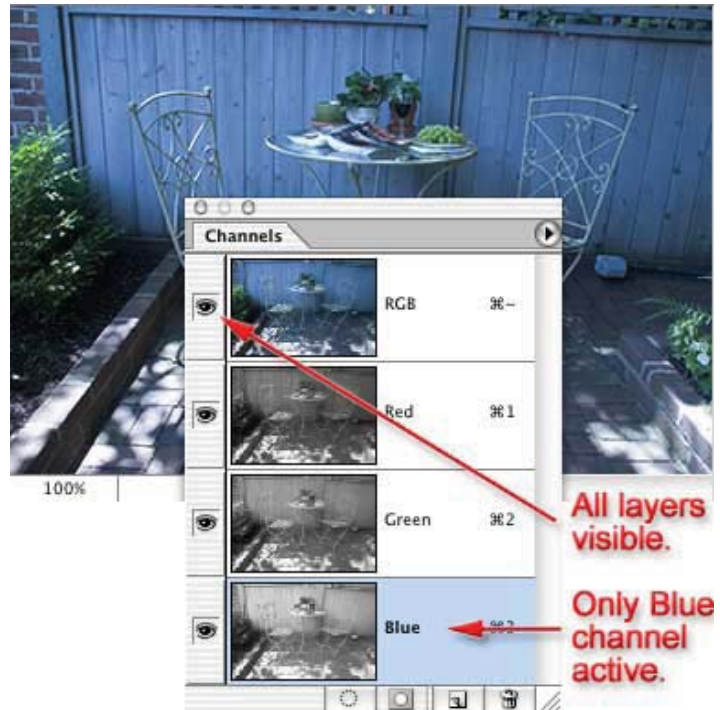
Here's a different way to correct a color cast or change the temperature of an image. We'll invert one of the color channels, then use the Edit > Fade command to reduce the effect. You'll be surprised at how effective (and easy) this technique can be.

Start by looking at "temperature." When you talk about the temperature of light, you're moving from digital imaging and photography into physics. In a nutshell, when you heat an object, it glows. The higher the temperature, the more bluish the light it emits. Consider temperature to be part of whitebalancing the image.

When working with Photoshop's Camera RAW plug-in, you have a simple slider that controls the temperature of the image. You adjust the image to compensate for the lighting under which the image was captured. (Of course, if the image was shot with camera settings appropriate for the lighting, no adjustment need be made.)

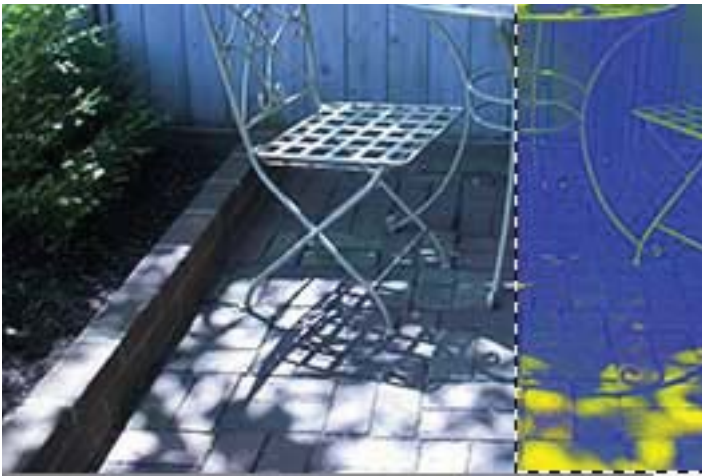
### STEP 1

Look first at an image that's too cool -- the image has a blue cast. Open the image in Photoshop and open the Channels palette. Click on the Blue channel to make it the only active channel, then click in the visibility column (the "eyeball" column) to the left of the RGB column to make all channels visible.



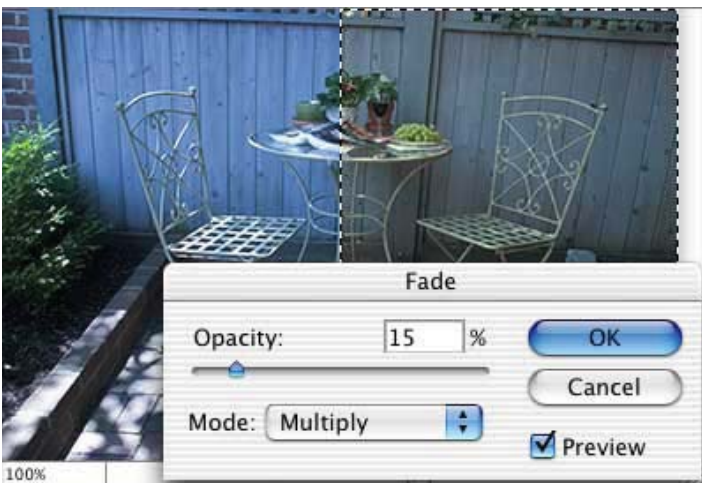
### STEP 2

Use the menu command Image > Adjustments > Invert or the keyboard shortcut for the command, Control-I. In this and the following examples, the right half of the images have been selected so that you can compare the "before" (left) and "after" (right).



### STEP 3

Immediately after applying the adjustment go to the Edit menu and select Fade Invert. The Fade command must be selected immediately after an adjustment, filter or tool application. Should you execute any other step in Photoshop, the fade command will not be available. In the Fade dialog box, change the blending mode from Normal to Multiply and drag the Opacity slider to the left. Slowly drag the slider back toward the right until the image's temperature is adjusted to your liking. (Typically the Opacity slider will be moved to 10-25%.)



### STEP 4

If an image is too warm (too yellow), use the Overlay blending mode rather than Multiply. The Opacity slider may need to be adjusted to 40-50%.



### STEP 5

This same technique can be used to reduce a color cast in an image. For example, if there's a red color cast, you can invert the Red channel, then use the Fade command with the Multiply blending mode to neutralize the color cast.



### STEP 6

To neutralize a magenta color cast, invert the Green channel, then Fade using the Overlay blending mode.



**STEP 7**

Here's a handy guide to neutralizing color casts with the Invert Channel/Fade technique.

<b>Color Cast</b>	<b>Invert Channel</b>	<b>Blending Mode</b>
Red	Red	Multiply
Yellow	Blue	Overlay
Green	Green	Multiply
Cyan	Red	Overlay
Blue	Blue	Multiply
Magenta	Green	Overlay

NOTE: The opacity adjustment is dependent upon the strength of the color cast. Generally when using the Multiply blending mode, the Opacity will be 10-25%. When using Overlay, the Opacity could be 40-50%.