

Freeze Frame

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Understanding Color Balance & Temperature

How many times have you made an image and only realized after the fact that your color was way off?

Hey, it happens! But, if you follow the steps outlined here, you can improve your color balance before or, if necessary, in post-production.

First of all, if you're shooting in RAW, this will help tremendously. But even if you're shooting in JPG, all is not lost.

Before we get into color correcting, let's look at color temperatures and how they relate to your photojournalism.

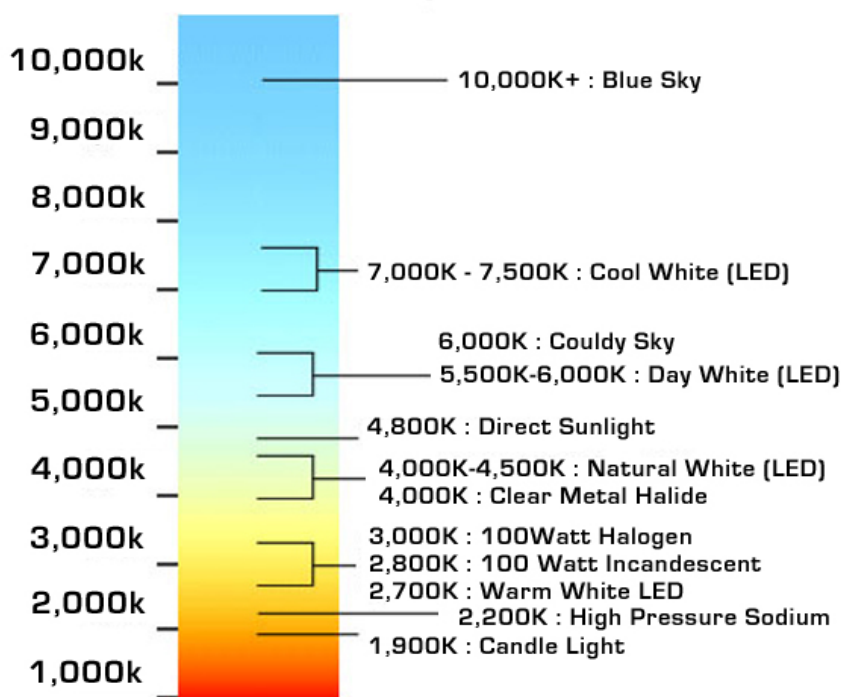
Color Temperature

Color temperature is measured in degrees of Kelvin, or K. The chart below outlines the differences in color temperature and its associated light source.

Color temperature is based on absolute temperature (in degrees Kelvin) at which the black object emits radiation in visible spectrum. The black object emits visible spectrum radiation when heated at temperatures ranging from 1,000 Kelvin to 10,000 Kelvin.

Color temperature for a light source is based on this visible spectrum radiation temperature range. Light source is red-ish in color at 1,000 Kelvin, white at 5,500 Kelvin, bluish-white at 6,000.

Kelvin Color Temperature Scale



SOURCE: luminaenergydesign.com

As you can see, the color temperature scale ranges from 1,000K (candlelight) to 10,000K (full blue sky).

Knowing how to read the light temperature on this scale will greatly increase your image-making *in-camera* rather than having to fix it later in post-production.

When I'm shooting inside, the first thing I do is look at the lighting in the room. If it is mixed lighting, I know that I have to read the light correctly where the main subject is located.

I shoot *most* of my images using the Kelvin scale on the camera. The alternative to using the scale is the pre-program settings for Incandescent, Fluorescent, Tungsten, Shade, Bright Sun, Flash, etc. While these settings are good and will get you in the ballpark, they are not always full-proof. Then there is Auto. While I don't recommend it all the time, you may have to use it if you just can't seem to get it right.

On the flip side of color temperature is using different Kelvin settings to influence the mood of a photograph. The more blue the settings, the cooler the mood can be. Conversely, the more orange or red the setting, the more dramatic the scene can be.

Correcting the Color

In the attached examples on the right, that I pulled from the Internet, you can see the before and after images. Now, while I don't know what the photographer was using for their color settings, it is quite obvious that it is not correct based on the final product. I'm pretty sure the people in the photographs are not orange ... unless they all stood in a spray tan booth too long!

In the first image of the Soldiers singing on the stage I'm pretty confident there were mixed light sources just based on the fact that most performers on a stage are bathed in lights with different color gels on them.

Even though the image is a JPG, I was still able to correct it to probably what the truer colors should be using the Photoshop Layers Adjustment panel. (I will write an article next month on the Layers Adjustment panel).

The bottom line with this image was utilizing Levels and Curves to bring out the proper colors.

In the second image of Lt. Gen. Freakley, I had to really torque the adjustments using Color Balance, Photo Filter and Hue/Saturation panels. My guess was, based on the high overhead ceiling in a conference hall, the lights were probably a Sodium-Vapor based light with a color temperature in the 2,200K-2,500K rating.

In both images, I was able to eliminate the horrible orange color-cast across the board and bring out the colors as close to what they probably were, given the lighting situation.

So experiment with shooting in different lighting conditions with different Kelvin color temperature settings and see how your images turn out. The better you read the light beforehand, the less adjustments you'll have to make in post-production which will save you time!

-30-

BEFORE



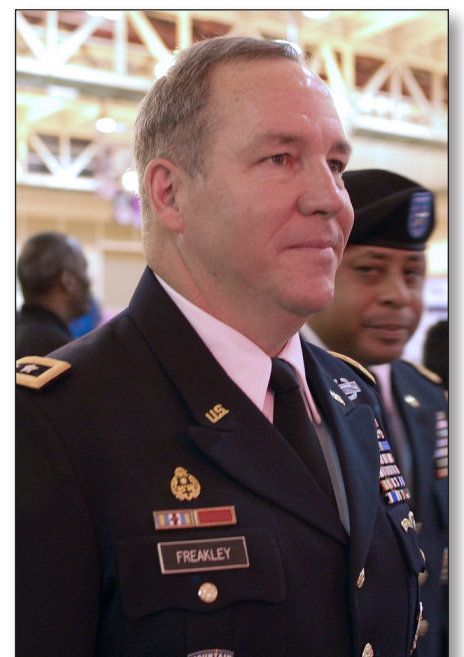
AFTER



BEFORE



AFTER



SOURCE: flickr.com/myarmyreserve

Timothy L. Hale is an award-winning photojournalist for the Warrior-Citizen magazine at the U.S. Army Reserve Command Public Affairs Office at Fort Bragg, N.C. He is a member of Nikon Professional Services, National Press Photographers Association and National Association of Photoshop Professionals. When he isn't on assignment for the Army Reserve, he owns a photojournalism and graphic design service and he also freelances for an international photo wire service. He has been shooting professionally since 1981.