HOW TO PHOTOGRAPH HOLIDAY DECORATIONS



With mixed light sources and reflective, delicate materials, capturing the holidays can be difficult for a photographer – learn how to photograph holiday decorations with this in-depth guide. Holiday decorations often inspire photographers to record their beauty, but many photographers are disappointed by their results. This blog post provides some tips to capture these decorations in all their glory, so that you have beautiful images, using images which were created on assignment for a local non-profit organization.

The client needed images to document this year's set-up and arrangement of the trees to be used next year, and needed an image of each tree to print and send to the donors with a thank you note. Finally, they asked for close-up images to use on note cards and posters. You can see in the photo above that the scene has some challenges, chief among them the mix of very different colors of light in the scene from three different light sources.



In this article, we'll talk about how to manage mixed lighting.

THE 3 TOOLS FOR THE JOB

To master the challenges of photographing Christmas decorations, I use three tools and three techniques. Let's look at the tools first; they're quick to tick off the list:

- 1. Tripod
- 2. Clean Lenses
- 3. Remote Release

1. Adequate Support is Critical

First, use a tripod.

Yes, you could crank up the ISO and hand hold your camera, and you might get some sharp images, especially if you have image stabilization in your camera or lenses, but aside from the image noise you'd get, that's a bad idea for two other reasons, which I'll demonstrate as we continue through the article. If you'd like to review tripod choices, because you're in the market, <u>here's a link</u> to an article discussing how to select the best tripod for your needs.

In preparing to shoot this assignment, I discovered every possible electrical circuit was fully loaded already, so much so that when a coffee pot was plugged in, it blew the breakers! Adding in quartz lights or strobes to boost the amount of light in the room was not going to happen, so a tripod was my best friend for this shoot.

2. Cleanliness is Near-Perfection

It's important to use VERY clean lenses. When photographing any



scene which will have strong light sources in the frame, any dust, dirt, smears or haze, when struck by strong light, will degrade your image. You can always add a hazy effect later, if you want to; adding sharpness will be less successful (always). You can also use a special effect filters, for some of your images.

Newer lens designs tend to control flare better, while older lenses will have more of an issue with flair and image softening. You can make some really interesting effects happen with really old lenses, if you have any lying around. In some of the photos used in this article, such as the image at the top right



of this page with the snowman, an older lens stopped slightly down yielded hexagonal out-of-focus highlights; a newer lens will usually give perfectly round circles.

The quality of the out of focus highlights is referred to bokeh. Much as been written about bokeh, but in essence you want to have a lens that records out of focus areas in a way that's pleasing to the eye and not a distraction. Some people will find the hexagons a distraction; you can change the aperture to something wider to see if you like the change in effect. The wider the aperture, the more shallow the depth of field, and the more round the out of focus highlights.

3. Ah, Sweet Release

Always use a cable or wireless remote release. You don't want to introduce shake and vibration into your image by using a camera on a tripod without a remote release. This is particularly important when planning to combine more than one image using High Dynamic Range, part of our toolkit for best techniques.

With these building blocks in place, it's time to analyze the original scene, and explore the best camera settings are essential for shooting this kind of image.

The image below shows a pretty good view of the lighting in the original scene.



It really was as dark as you see in the image, lighting provided by 4 sodium vapor lamps overhead, 2 at each end of the room, one floodlight spotlighting trees in the rear left corner, and all the rest of the light in the room provided by the lights on each tree.

You can see the shoot will be challenging. The project was made even more challenging by the visitors to the room; it was not possible to shoot the trees without people in the room. All shooting had to be done by waiting until people had moved out of the frame before capturing the next image.

Setup, and wait; setup, and wait – this was the pattern for the long hours it took to shoot the scene.

THE 3 CAMERA SETTINGS TO MASTER

To master the challenges of photographing Christmas decorations, I use three tools and three techniques. Let's look at the tools first; they're quick to tick off the list:

- 1. White Balance
- 2. Metering/Exposure
- 3. Dynamic Range

Exposure, color temperature and dynamic range; these three are key. Exposure concepts you already know. Color temperature refers to the way your camera records color values, based on the color of white light in the scene. Tips for managing holiday images' color temperatures are below. The dynamic range is the amount of light from white to black that can be captured in one image, often less than you'd like to capture due to the limits of a particular camera's sensor range. This blog post also discusses how to expand dynamic range when needed.

1. White Balance



Most photographers don't carry color temperature meters, so we start with our eyes and our brains to see how to manage the color. Your camera defaults to a setting for automatic white balance, which attempts to make the color of white light match to a neutral value. You can test how this works. To do so, capture a test image using the Auto White Balance setting on your camera.

The auto white balance often works very well, but be aware that your camera may have trouble making the right decision in scenes with small points of bright light, such as small lights on green branches, or candles on a wedding reception table. In addition, holiday images often look better when the white is NOT neutral, but a bit warm. The warm tones evoke the spirit of the holiday.

Which White is the Right White?

Mixed colors of lighting are a challenge. Color temperature is an area where human eyes adapt much more easily than than your camera will adapt, but human eyes can see a difference in the warmth of various segments of an image lit with differing colors of light. If your image shows the holiday lights as a neutral white color, but the rest of the scene is an unacceptable color, don't be surprised.

In your test image, see what the scene's overall color is. In the comparison test of the bow images above, the tree in the back at right is very blue, caused in large part by the cool overhead light falling on the background tree but not illuminating the tree at right in the foreground. The warmer tone of the foreground tree comes from the tungsten bulbs of the tree's lights. How do we cope with these variations in color temperature? Here are four techniques, some for capturing the original image, some for adjusting the image after the fact.

Option A: Analyze the scene and shoot a test image (RAW mode is best)

First, decide whether you're going to shoot in Camera RAW mode or JPEG, or both, if your camera allows both. Camera RAW mode allows you to change the white balance of an image after it has been shot. You can also change the white balance on a JPEG, but not as well, and quality is often visibly degraded if you make an extreme white balance change.

Various digital artifacts can show up quickly when making extreme corrections, so this is a perfect time to shoot it right so that you don't have to make it right. These digital artifacts can also show up when shooting in camera raw mode, to a lesser degree. In both modes, shooting the original image correctly will minimize in – computer adjustment.

How to optimize color balance while shooting?

Decide what is most important in the scene. In the case of the two images of the bow shown, the bow is a focal point for the image, offset by the out-of-focus multi-colored lights above. Make sure this focal point is correctly exposed. Shoot your first test image with the white balance set on Auto; your camera may surprise you and do a great job of balancing the color.

Now, look at the color of the focal point of the image. Is it too orange,or



too blue? You'll need to adjust the white point, discussed next. Now, look at the exposure of the rest of your test image, not just the white balance. How much brighter or darker than the primary focal point is the rest of the scene? What other light sources are striking the other parts of the scene? In the image above, the tree in the background at left is very warmly lit, while the tree in the center is very neutral. This was caused by the overhead sodium vapor light.

If you look closely, you can see warm-toned lights on the center tree. Making the center tree any warmer will make the warm tree too warm. If I want the center tree any warmer, I'll end up doing a careful mask in Photoshop to make the image balance out.

Option B: Change your camera's white balance to a custom setting

No matter what setting you start with, you should make a couple of test images and evaluate them right after you make them. If your images look very, very orange, you'll need to change the white balance setting from auto to tungsten, or set a numerical value that is even lower (2500°) to offset some of the excess orange (assuming your camera allows numerical settings).

The tungsten setting boosts the blue light the camera records, offsetting the overly generous amount of orange light to capture an image that more closely appears similar to what your eyes see. On the other hand, if the lights appear very cool, almost blue to your eyes, your test image may show a strong blue cast to the whole image. (This is guaranteed if your first image is made with a tungsten setting on your camera while shooting many LED lights, so an Auto or Daylight white balance setting is recommended for your first test shot with this type of light.)

If the image is too blue, assuming your camera offers numerical values setting for white balance, set a much higher number, such as 6500°, and keep going



up as needed. The higher the number, the cooler the light you're attempting to match to get a neutral or slightly warm white. There is no manufacturing standard for LED holiday lighting color, and experience has shown these lights can range widely in color temperature, so experimentation will be necessary. If your camera doesn't allow numerical adjustment, you can try the other white balance settings on your camera. If none of them deliver a really great image, find the one that will require the least correction, and use that setting.

If the scene only uses traditional bulb lights, these produce a very warm color, and you want to set your camera to its tungsten setting for a first test, esp. when capturing JPEGs. The tungsten setting was originally designed to

photograph using standard light bulbs, the traditional ones that we all had until fairly recently, its name coming from the element used to make the filament in each bulb, which, when heated, emitted a very bright light with a color temperature of around 2800°.

Your camera's white balance setting choice may spell out Tungsten, or it may simply have an icon of a traditional light bulb. Try that setting. If the lights in your



scene are not a warm color, but appear to be a cooler, almost blue white, the

color temperature will be very different and your white balance setting will need to reflect that difference. With any type of lighting, you might leave the camera on auto white balance, to make a first shot, and see what you get. These cool-colored bulbs, mixed in with traditional tungsten lighting, can cause challenges, as shown in the photo of the tree with the number 8 in front of it. The left side, under the sodium vapor light, is very cool compared to the right side.

You may be wondering why I didn't just turn off the sodium vapor lamps? It was not an option, and would have lowered the lighting level in the room to unsafe levels. No one wants a broken leg at a Festival of Trees!

Option C: Edit the scene in Lightroom or Photoshop, for exposure & for color temperature

Start by making a test shot, which you'll analyze in the computer before you make all your images, whenever possible. Make your best guess at the optimal exposure setting for your camera and capture an image.

Then:

1. Check the exposure you just created, using the histogram built into your camera. If the histogram is jammed all the way to the right or left, your exposure needs to be adjusted. You can either use exposure compensation to overor underexpose your images automatically, or set your camera manually to optimize exposures.

2. Note that your histogram will usually show a spike at the extreme right of the image, showing the pure white of the lights in the scene. It's important to know that the histogram your



camera displays is based on a JPEG preview, and does not perfectly reflect what you will capture with RAW images.

3. You may find that the histogram looks great, but the color temperature is significantly different than what you see in front of you, so that the image is too orange, or too blue. This is a particular hazard when shooting under mixed lighting; those high efficiency lamps are not designed for critical color!. If your camera has manual controls for white balance, pick the built-in white balance that closest matches your scene. You may find that this is difficult to do in mixed light, such as the light shown in the first photo of this blog post.

4. Once you have a histogram that indicates a good solid exposure, make the rest of your exposures, and then open the files.

5. If you are working in Adobe Camera Raw, or Adobe Lightroom, experiment with pushing the Highlight slider significantly to the left, and the Shadow slider significantly to the right. You may want to add some Clarity as well. Going all the way to the left or right is often too much, so adjust each image for optimal visual quality, holding details as much as possible in both shadows and highlights.



6. Fine-tune the white balance in Camera RAW or Lightroom so that the image is warm enough, but not too warm. It shouldn't look icy, nor should it appear

flames-of-Hades warm. Often, after changing the white balance, you'll need to readjust the Highlights and Shadows sliders for a final just-right appearance. Of course, you're doing this on a <u>properly calibrated and profiled screen</u>, now aren't you? Photoshop and Lightroom assume you are...

7. Evaluate the detail; can you see details in the area you want to see? If not, you may need to continue to boost or decrease the exposure slider to hold/show details. Using the Clarity slider can reveal details also, but be sure not to overdo it. The Clarity slider is a prime candidate for *Just Because You Can Doesn't Mean You Should* status.

Speaking of details, in the shot of the red shiny ornament to the right, the photographer, his camera, AND his tripod are all too visible. Matte finish ornaments and decorations do a much better job of hiding unwanted reflections!



If, with all the adjustments you make, you can't see detail in all the areas where you want it, you will need to add or remove light in the areas needing detail when you reshoot, using one of two methods. You can add in light, using either continuous or strobe light; alternately, you can bracket the images, and combine multiple exposures in the computer later. See details later in this post.

If you have a series of images requiring the same adjustments, making a preset to apply all these settings in one click saves time. I often apply a preset as a starting point, then make final adjustments on each image as needed.

This is best done to images where you've already gotten fairly close to the correct white balance, and are now simply fine-tuning. Find the eyedropper tool in the toolbar at the top of the window in Adobe Camera RAW, or in Lightroom. Next, find something that's supposed to be pure white. Click on it with the eyedropper tool. The area where you clicked will be adjusted to neutral white, changing the color of the whole image.

In the image far above, with the single gold ornament, clicking with the white balance eyedropper simulating snow was enough to cause those snow puffs to turn pure white. This caused the overall scene to get a little too blue, and so I made a minor (400°) correction to add a little warmth back in. Warmth is almost always preferable to coolness in this kind of shooting.

Option D: Edit part of the scene to match the rest of the scene

When dealing with mixed lighting, it's often not possible to find a compromise color temperature/white balance adjustment that makes the entire scene visually pleasing. When this happens, you have a couple of options.

You can decide that the amount of time to edit the image is not worth the investment, and live with the image. This will depend on your personal taste, and in this particular assignment, on the preferences of the client. What happens if



you have to change part of the image? There are several options, depending

on the needs of the particular image. Sometimes, you can use a brush in Lightroom or Camera RAW to add a color change.

You can also use a gradient to pull across one side of the screen, when appropriate. When possible, these adjustments are easier done in Lightroom or Camera RAW than they will be in Photoshop. However, using layers and various adjustments in Photoshop can save an image that requires too much work in other tools.

Make Baby Bear (Just Right) Exposures

Exposures for scenes with strong lights in them can be problematic. Here's how to get exposures that are just right.

Surprisingly, starting with getting the white balance correct is the best way to perfecting your exposures, which is why that discussion happened first in this blog post.

2. Metering

The best of all approaches, when possible, is to use a hand-held, incident light meter. While it seems like a hassle, it's actually the lazy photographer's best friend, as getting a correct exposure first time, every time cuts post-processing production time immensely.

This measures the light striking the center of attention, and helps me make the most accurate exposures possible. When that isn't possible, many



photographers rely on a combination of the auto-metering capabilities of their cameras, and analysis of the histogram on the back of the camera.

This can lead to disappointment when shooting challenging scenes, due to the fact that your camera is showing previews of the JPEG images, with already processed files, usually higher contrast than what you'll get with a RAW file, and a histogram that is also based on the JPEG files.

These two preview tools can be used as rough guidelines, but you'll need to get intimately familiar with your camera's capabilities by shooting, then testing in your editing program of choice, and doing this often enough that you develop an instinctive command to compensate for the characteristics of your particular lens and camera combination. This can only be done through practice!

If your camera or handheld meter has metering choices between spot, center-weighted, and full scene, you'll want to experiment with the best choice for your style of shooting. I frame most shots in such a way that center-weighted seems to work best, and my shoot/test/reshoot practice has made me confident that I know how to bias the exposure when necessary.



3. Dynamic Range — When You Just Can't Get Enough (Light)

While you're changing your camera's white balance setting, look to see if your camera has highlight or dynamic range compensation. My camera has an option to set "Active D-lighting", a tool which adjusts exposures as they're captured to preserve as much detail as possible in the scene.

This takes full advantage of the dynamic range in my camera's sensor. All the images I shot of the Festival of Trees used that setting at maximum, since past tests have shown this is an effective way to optimize exposures of scenes with strong light sources and dark shadows.

Your camera may not have this option, or it may be called by another name. Be sure and distinguish between settings that optimize exposure before capture, and those that are post-processing tools built into your camera, if present.



In the Festival of Trees shoot for my client, the light in the room was very low, as shown above, and many of the branches on the Christmas trees only received light from their decorative lights. In lighting situations like this, the dynamic range of many cameras won't be able to record all the detail in both highlights and shadows.

Two things to note about this: the lower the ISO you use to shoot, the better the dynamic range; and, even with the lowest ISO your camera delivers, you may not be able to hold detail in both shadows and highlights. Here's what to do, presented in order from easiest to most work.

Option A: Make the most of your raw file.

Shooting in Camera RAW mode, if available to you, will help you to make the most of your images. Adjust the color balance before capture for best results.

Option B: Add some more light to the scene

In cases where you can add in more light, you can boost the amount of light hitting the trees and decorations, closing the gap between the low light and the bright strings of lights. As previously mentioned, that wasn't an option in the scene I shot.

When adding extra light, I've found I prefer continuous lighting, such as quartz lights designed for photography, or even shop lights such as you'd find at Home Depot, or other stores. Using strobe lights can surprise you with unwanted reflections.

It's easier to preview the effect of continuous lighting, and its effect when mixed with ambient light, either overhead or from the decorative lights.

Note that color temperatures on these lights vary widely. Stores such as Costco have started selling LED versions that are often cooler, and dramatically change the color temperature of the scene. Test before a big assignment! A tripod, and a cable release are essential tools when blending long exposures with auxiliary light, especially strobes.

Option C: Bracket your images and combine them using HDR software



Dedicated software exists to combine multiple, bracketed shots of the same image. While some of these softwares can be used without a tripod, using a tripod and remote release will guarantee best results.

If you don't have dedicated <u>HDR (high dynamic range) software</u>, you can use a little-known feature in Photoshop to combine images, such as the image

shown above, created from 9 images, each bracketed one stop apart. A similar feature has recently been introduced in Lightroom.



To create this image in Photoshop, follow these steps:

- 1. Open Adobe Bridge, and navigate to the images you want to merge.
- 2. Select each frame in your bracketed range of images.
- 3. With these images highlighted, select the Tools menu, then Photoshop, then Load Files into Photoshop Layers. Photoshop will open each file and stack them in layers in one document. At this point, it would be good to save before continuing; sometimes, this taxes the system and Photoshop closes unexpectedly.
- Select all the layers in your stacked image; you can click on the top layer, hold down the Shift key and click on the bottom layer, and all layers will be selected.
- 5. Under the Edit Menu, select Auto-Align Layers. Photoshop will make sure each image is in registration, so that you don't have ghosts. If you do see a ghost image, you can check each layer to find the layer or layers that was shot out of alignment with the rest of the images, and turn off that layer. Then, repeat the auto-alignment.

 Save, and then select Auto-Blend Layers under the Edit Menu.
When the dialog window appears, select Stack Images, and Seamless Tones and Colors.



A recent addition to this dialog, the Content Aware Fill Transparent Areas checkbox fills in any blank areas automatically. You may find you like this feature, which is used more when shooting panoramas and focus stacking shots. For this type of work, it will attempt to fill in any pure white areas with any detail it can find, so watch carefully for undesired elements in the center of bright lights, for example. On the other hand, auto-blending without checking the box can cause a blank spot in the image where the pure white areas are, which can be undesirable. As always, your sharp eyes will be needed to complement your sharp lenses when creating your best work.

In the image of the striped ornament below, after I created the Photoshop blend, I selected all the blended layers, and typed Command + Shift + Option + E. (Control + Shift + Alt + E in Windows). This created a composite layer of all the

layers underneath it, preserving the original layers in case I wanted to go back to edit any of them.

With the new composite layer, I duplicated it, then changed the blending mode to Multiply,



and changed the layer's opacity to 30%, toning down the highlights.

CONCLUSIONS

Photographing holiday decoration scenes can be challenging, but very rewarding. For best results, you'll first want to master color balance and exposure tools in your camera, and if you have one, an incident light meter. If your camera has built-in tools for taming high dynamic range images, that's a great help to improve this type of image creating.

Alternately, you can use the built-in HDR tools in Photoshop and Lightroom to composite a series of bracketed exposures. Of course, if you have one of the specialized tools such as Google Nik plug-ins, with a dedicated HDR module, this can also deliver good results, either from a single exposure or a bracketed set.

Happy shooting, and happy holidays.



Kevin O'Connor helps design and test software, is a graphic designer and photographer for multiple clients and companies, and fixes people's (and companies') color. He has consulted to multiple companies, including Apple, Sony, Fujifilm USA, and X-Rite. He loves teaching good color practices to enthusiastic learners.