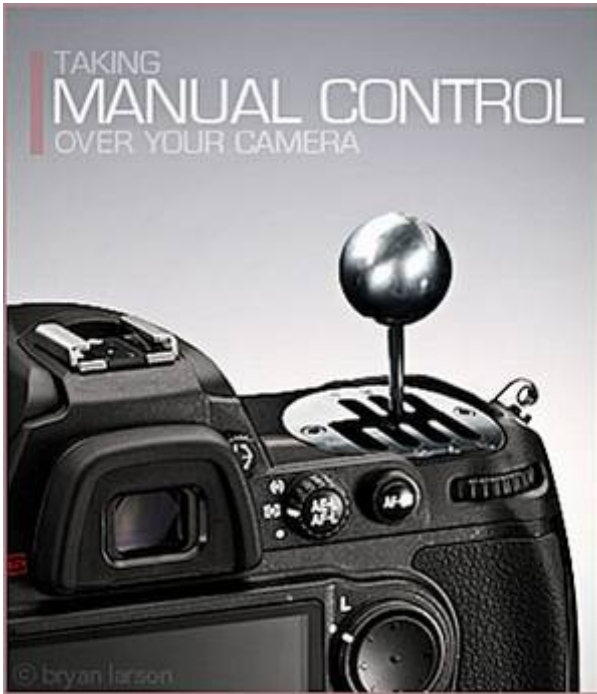


Taking Manual Control Over Your Digital Camera



I was typing away the other day, putting the finishing touches on a short article, and not being the most careful typist, I accidentally wrote “dital” instead of “digital.” Of course, I was immediately notified of my mistake via a little red underline. A simple right-click of my error provided me with a number of spelling alternatives: detail, dial, tidal, vital, and so forth.

Essentially, my computer software was using the information available to it to make an educated guess as to what the right word should be. In some odd way, I was a bit disappointed that even with all the state-of-the-art technology and software innovations available, computers can still do little more than make an educated guess when performing tasks that have a variety of possible outcomes.

So I got thinking, how do these same limitations affect photography. Now that photography has become completely digital, every camera is installed with a small computer and processor. The computer is in charge of a number of key operations, but for today, we’ll just talk about one; how it controls your camera when in automatic mode.

When a camera is fully automated the computer is asked to control a number of extremely important tasks. It uses a combination of pre-installed data and real-time tests to generate an educated guess as how your photograph ought to be shot. For people who

don't care about learning how to use their camera, they accept these educated guesses as the best the camera can do, and if they want a better quality picture, they have to buy a better quality camera. This belief is, for the most part, untrue. While I do believe that a higher quality camera can produce higher quality results, I believe that any camera is capable of shooting a good picture as long as you can take control over how the photo is taken.

So, I'm going to make a statement that sounds simple, but really is something you need to believe if you want to improve your photographic skills:

You are smarter than your camera.

That's it. That's all you need to believe. Unfortunately, you're going to need to prove it.

So what decisions should you make that your camera's computer never should? The answer is actually quite simple. You need to control the most fundamental features that are the same now as they were fifty years ago: ISO, white balance (WB), aperture (Av), shutter speed (Tv), and focus. So I'm going to talk a bit about my thought process when setting these features manually. I don't intend to teach you how to make the adjustments or what they are as there exists countless guides that do that already.

ISO & White Balance

These features derive from the properties of film emulsion. Every roll available has both an inherent white balance and ISO. Just be aware of how lucky you are that you can change these settings on the fly with a digital camera, and not have to buy a variety of film to accommodate every shooting scenario that may arise.



ISO : I love pure, bold color so I always aim for the lowest ISO possible. ISO is the first thing I set when entering into a shoot. I base my ISO on the shadows and dark areas of the scene, rather than the ones that are heavily lit. All ISOs can expose well-lit subjects, but only high ISOs can expose dark areas. The second thing I look at is the speed of my lens. If I have a fast lens (i.e. f2.8) then I know I can push my ISO down a touch. I will also consider my subject. If my subject is static and I can shoot long exposures without risking motion blur then I'll push my ISO lower, whereas fast-moving subjects require fast shutter speeds and often high ISOs.



WB : I ask myself: how many types of light are present? Which color of light is best to balance to? For instance, if I'm shooting outside then I'll set my white balance to daylight (6000 degrees kelvin). If I'm shooting a home interior lit with daylight through open windows, and tungsten light from the interior fixtures, then I opt daylight and often use my flash to counteract the tungsten light. Sometimes I try to adjust all lighting so it's the same color by using gels, swapping bulbs, etc. Other times it works nicely just to let all the different colors of light be seen - like at crazy rock shows.

Aperture and Shutter Speed

Like a fine balance, each must compliment the other. You cannot change one without affecting the other. These are the yin and the yang of photography. The symbols Av and Tv are often used which stand for Aperture Value and Time Value.



Av : I start by looking at my available light and get an idea of what aperture range I'm looking at. Lots of light means a broader range of choice. Second, I'll think about the shot itself and what depth of field I want. If I want lots of detail at all depths, then I'll drop it down as low as f22. If I want a soft background, with a refined range of focus, then I'll open it up to f2.8 or larger. Sometimes you don't have a lot of choice, so the wider (lower number) the better. That's why lenses with apertures like a fixed f2.8 are so expensive - because they'll benefit you in low light. It's also important to consider your subject - fast moving subjects will require lower apertures, so you can achieve faster shutter speeds.



Tv : The length of the exposure has huge bearing on the outcome of a shot. I start by looking at my subject and whether or not I want them sharp or blurred. Some subjects like city traffic benefit from long exposures, while others suffer. I try to stay at 1/60 of a second or faster when I'm shooting handheld, and use a tripod for slower exposures. Stillness varies from person to person, and image stabilizers will help. Fast subjects require fast shutter speeds.

Manual Focus

Auto focus is very fast and often quite reliable. That being said, sometimes you just have to take matters into your own hands. Be prepared to make adjustments at a moment notice.



MF : If my lens is struggling to find contrast in a shot, or focuses on the wrong thing, then it goes straight to manual. Most digital SLRs will even give you a audible or visual cue when you're manually focused correctly. I try to avoid focusing on my subject center frame, and often try to manually keep my focus while reframing in accordance with the rule of thirds. Trusting my auto focus has ruined more shots than I can count. If your eyesight is a tad out, then make sure to set your diopter accordingly. Learn to trust your eyes.

Photography is a subjective medium. Your personal tastes should influence your shots, and there's no better way to achieve this than by taking control of your camera. Learn how to use your camera quickly and effectively, but also learn how to study the world around you using a photographer's eye. Soon, you'll be able to walk into a room and say "if I were shooting in here, I'd be shooting at 400 ISO, tungsten white balance, f4, at 1/60 of a second." When that day comes, you might also notice that people start finding you strange. Don't worry, there will always be another photography-loving soul nearby who will understand.