

# THE CAMERA CLUB OF CENTRAL MINNESOTA



## The Newsletter of the Camera Club of Central Minnesota

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### Club Meetings and Other Bits of Information

The Camera Club of Central Minnesota will be meeting on the first Monday of each month with the second Monday of the month as back up starting in January 2017. We will meet at the Public Library in St. Cloud from 6:45 to 8:45 pm.

The club has monthly photo topics, image sharing and critique, hands on demonstrations of photographic gear and software, member online gallery links, discussions about photography, and is open to all.

#### Assignments

**Monday, August 7, 2017**, Bremer Community Room 104. The assignment is *Animals*.

**Monday, September 11, 2017**, Bremer Community Room 104. The assignment is *"Action"*.

**Monday, October 2, 2017**, Bremer Community Room 104. The assignment is *"Monochrome: Digital and/or Print"*.

Remember, all your photo assignments and meeting dates are online at

<http://cameraclubmn.com>

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### Ten Tips For Better Autofocus In Nature Photography

It's easy to take autofocus for granted. I know, I do. This technology is amazing — your camera has to figure out what should be sharp in a scene, focus the lens and take the picture, all in a fraction of a second. We expect our cameras to do this frame after frame without fail. Of course, autofocus does fail us at times. As much as the camera manufacturers would like us to believe that their autofocus (AF) technologies are beyond compare, it sometimes has problems and we get images that aren't focused properly. Sometimes we believe manufacturers' hype and expect cameras to be perfect in an imper-

fect world.

You can make autofocus work better for you. There are steps you can take with any camera you own that will get you consistently sharper pictures with autofocus. You could spend a lot of time studying how autofocus works and then compare cameras, but in my experience, this won't help you get better pictures. Frankly, having used all sorts of camera models, I can tell you that no matter what the manufacturers tell you about their systems, each one seems to have its strengths and weaknesses. It's true that certain pro cameras are designed for speed, including AF speed. If you're photographing subjects like especially active wildlife, that could be a critical need, but if you're photographing landscapes, it won't matter.

The key is not to find the absolute "best" autofocus, but to get the best autofocus from your system. Here are some tips to follow.

#### Lock Focus For Manual Focus

There are situations when the camera wants to keep changing its point of focus in continuous focus or it wants to shift focus points every time you press the shutter when you're on single-shot autofocus. There are also times where you may find it hard to focus the camera manually, perhaps because you're using a wide-angle lens and you need to be sure it focuses on a specific part of the scene. In any of these instances, you can use your autofocus to get you close by locking focus on a key part of the scene and then turning off the autofocus so you just have manual focus. You'll be focused on a specific spot and, in essence, you're using autofocus to help you with manual focus.

#### Lock Focus

It's important to be sure that focus is in the right place in any scene, whether that's a landscape or a flock of birds. When focus is off, it's all too obvious and can ruin a per-



### Inside this issue:

|                                                  |   |
|--------------------------------------------------|---|
| CLUB MEETING AND OTHER BITS OF INFORMATION       | 1 |
| TEN TIPS FOR BETTER AUTO-FOCUS IN NATURE PHOTOG. | 1 |
| TAKE YOUR PHOTOGRAPHY TO THE NEXT LEVEL          | 4 |



# The Camera Club of Central Minnesota

## Ten Tips for Better Autofocus... (continued)



ONE OF THE GREAT THINGS ABOUT DIGITAL PHOTOGRAPHY IS THAT YOU CAN SHOOT LOTS OF PICTURES IN ORDER TO SEE WHAT YOUR CAMERA CAN DO; YET THERE'S NO COST...



factly good picture. Nature photographers often shoot in low-light conditions that can some-times make it hard to see to focus. We become dependent on autofocus in such situations. Watch the AF lights in your viewfinder as your camera finds focus. This will tell you where the camera is focusing. If the camera isn't focusing in the right place, move your camera slightly as you press the shutter release halfway until the right place is highlighted. Keep the shutter release pressed to lock focus (or hold the AF button down if your camera has one) as you move the camera back to the composition and then press the shutter release all the way to take the picture.

### Change Your AF Point

Most cameras allow you to select a specific AF point. The standard way that autofocus works in cameras is for the camera to choose what it thinks is the best focus point from an array of AF points across the scene. This works in a lot of situations. But if you have a subject that must be sharp in a specific part of the composition, you're best off changing this default setting to a specific AF point where you need sharpness. One example is an animal that continually comes to a specific area in the composition. You need to be sure the animal is absolutely sharp, yet the subject may be at slightly different distances from the camera so that manual focus can't be used. Simply select an AF point where the animal is likely to be.

### Know Your Camera's Idiosyncrasies

It's great fun for photographers to get together and debate the relative merits of different cameras. And there's no question that there are differences in the way that cameras handle autofocus. While the debate may be fun, it doesn't help you get better pictures with your camera. You need to learn the idiosyncrasies of autofocus with your camera. What does it do best? Where does it seem to have problems? This comes from using your camera in all sorts of situations. One of the great things about digital photography is that you can shoot lots of pictures in order to see what your camera can do, yet there's no cost to shooting those pictures.

Sure, we'd all like the latest and greatest of the newest cameras, but until we can afford that new purchase, we need to understand how to get the best from the equipment that we do have. Every time that I purchase or test a new camera, I always take it out and play with it before I have to use it seriously. I want to know the camera's idiosyncrasies regarding autofocus and other controls. It's important to work with the camera in your hand and get the most out of it rather than worry that it can't do something it wasn't designed for.

### SAF vs CAF vs Hybrid

Your camera offers at least two options for autofocus: single shot (SAF) and continuous (CAF). Single-shot AF locks down the focus and won't allow the camera to

shoot until focus is confirmed. This is an important type of focus for most standard nature scenes where focus doesn't change (and shouldn't change). Continuous autofocus allows the camera to focus continually as you take pictures, updating the progress of a moving subject, for example.

A third option on many cameras is a hybrid. This type of autofocus allows the camera to decide when to use single-shot autofocus and continuous autofocus. This has never been a choice that I've liked. It seems like the camera is always choosing the wrong type of autofocus and screwing up my focus as I shoot. I'd rather choose a specific type of autofocus based on the subject and movement of the subject.

### Watch For Bright Light

Bright light in your composition, especially the sun, can confuse your AF system. A dramatic way of photographing a landscape with trees is to shoot it against the sun so the sun creates a starburst pattern through the trees. But that dramatic effect also can cause problems with autofocus. Try moving the camera to autofocus without the sun and then re-framing the composition. You also might have to change the camera to manual focus for scenes like this.

### Beware Of AF Up Close

Autofocus often has trouble when you're dealing with close subjects. Depth of field is so shallow that even a slight change in focus can make the difference be-

tween a good picture and one for the trash. Very often the camera will choose the wrong point for focus up close. For this reason, many of the best macro shooters use manual focus for close-up work. There's also a trick to using autofocus up close. Move your camera around and lock focus on an important part of your subject. Keep that focus locked and gently move your camera toward and away from the subject until you have exactly the right spot in focus. Take the picture. Another thing that drives you crazy up close is when the camera starts focusing to infinity. Many lenses have focus limiters for just this reason. If yours has such a switch, set it so that it only focuses at a close distance when you're doing close-up photography.

### Faster Lenses Help AF

A fast lens is a lens with a wide maximum aperture, such as  $f/2.8$ . If you need fast autofocusing, you need a fast lens. Most zooms are slower lenses with maximum apertures of  $f/4$  or so, especially the compact zooms. If you have an extended range zoom that's also compact, you can find that the lens speed gets very slow. For subjects such as landscapes or flowers, that's not a big deal. For fast-moving wildlife, a slow lens can have a big effect on how quickly you can get the animal in focus.

### Working With Teleconverters And AF

Modern teleconverters that are designed for specific focal lengths are very good. They might not match a single-focal-length lens in absolute sharpness, but on a cost-benefit basis, a teleconvert-

er's value can be huge. The problem is that they significantly reduce light to the focal plane of the camera and that results in less light to AF sensors. Sometimes this means that the autofocus doesn't work at all with a teleconverter and a lens. In this case, especially, you may be required to use a fast lens with a teleconverter to coax your AF system to work.

### Help Out Your AF System

It sometimes can take a fraction of a second to find an object and lock focus. Give your camera and lens a head start by starting the autofocusing early. If you wait until the last minute, you may find that you can't get the photograph you want because focusing will be trailing the action. This is especially important for moving subjects, such as flying birds. Start by pressing the shutter button lightly, which engages your autofocus. If your camera has a specific AF button on the back of the camera, use it to start your autofocus (the camera is only focusing and not setting exposure or setting off the shutter).

Lenses and systems that allow manual focusing at the same time that your autofocus is on can help, too. Do a little pre-focusing manually before you need your autofocus to work. That way, the AF system doesn't have to search for something to focus on as you have already given it that information.

### Cross-Type Sensors

A number of DSLR (and 35mm SLR) manufacturers

point out that some (and with a few models, all) of the AF sensors in their cameras are cross-types. Early phase-detection AF cameras used line-type sensors, which could only read focus with subject lines perpendicular to them: A horizontal sensor could read vertical lines but not horizontal ones; a vertical sensor could read horizontal lines but not vertical ones. A cross-type sensor, as you might suspect, can read both horizontal and vertical lines and thus is able to focus on a much greater number of subjects than a horizontal or vertical line sensor. Some cameras even employ diagonally oriented cross-sensors, so that they can autofocus on diagonal lines in a scene or subject.

### Phase-Detect AF Vs Contrast-Detect AF

With phase-detection AF, a portion of the light entering the lens is diverted to the AF module, where it's split into two parts, which are directed onto a pair of CCD line sensors. The points where the two beams strike the sensor tell the camera's AF computer whether the image is in focus or not, and if not, in which direction it's out of focus and by how much. A phase-detection system can thus establish focus with a single reading and adjustment, making it quicker than contrast-based systems and much better for moving subjects (and in dim light).

All of today's DSLRs use phase-detection AF systems for normal shooting. Contrast-detection AF measures contrast at the image sensor, the idea being contrast is at its maximum when the image is sharply focused. A contrast-based AF system must take multiple readings to determine and set



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focus: After the first reading, focus is adjusted and another reading is taken. If the contrast is greater, another adjustment is made in the same direction and another reading is taken, and so on, until contrast starts to decrease. If the second reading shows less contrast than the first, an adjustment in focus is made in the opposite direction, then another reading is taken, etc. The result is that contrast-detection AF requires multiple readings and adjustments, taking longer than phase-detection AF to establish focus. But it can be more precise, and there's no disruption of the live image during focusing as there is with phase-detection, so it's excellent for tripod-mounted live-view work, where speed is not of the essence. Some DSLRs offer both types of AF in live-view operation.

### AF In SLRs: A Timeline

**1981** Pentax introduced the ME-F, the first interchangeable-lens SLR with TTL autofo-

ocusing capability. It took all Pentax SLR lenses, but auto-focusing was possible only with one special AF lens: a 35-70mm zoom, which contained both the AF motor and the four AA batteries it needed to operate.

**1985** Minolta introduced the Maxxum 7000, which really started the AF SLR revolution. The body contained not only the AF sensor, but a focusing motor as well, so AF worked with all lenses. Caveat: Only the new Maxxum lenses could be used with the camera; the Maxxum cameras couldn't use previous Minolta system lenses.

**1987** Canon introduced the EOS system, with the EOS 620 and EOS 650 models. EOS AF SLRs don't contain focusing motors; rather, each lens contains its own motor optimized for its requirements. The drawback was that longtime Canon users couldn't use their earlier lenses with EOS cameras; only EF (and today, EF-S) lenses can be used on EOS bodies. Other manufacturers

put the AF motor in the AF SLR body to retain compatibility with previous as well as new AF lenses (only the AF lenses would autofocus, but users could use their existing lenses with manual focusing). Today, most DSLR manufacturers offer higher-end lenses that contain their own focusing motors. (Nikon has even introduced entry-level D40 and D60 bodies that don't have focusing motors and thus must be used with the AF-S lenses that do contain AF motors if one wants autofocus capability.)

**2006** Olympus introduced the first D-SLR with a Live-View monitor. The EVOLT E-330 had two Live-View modes, one that used the same phase-detection AF as was employed for normal shooting and a full-time Live-View mode with manual focusing.

**2007** Nikon introduced the D3 and D300 with Live-View modes, featuring both types of autofocus. In Handheld mode, phase-detection AF is used; in Tripod mode, contrast-detect AF is **used**.

THERE ARE MANY PATHS YOU CAN TAKE TO GET TO A BETTER PHOTO— AND THAT'S PART OF THE CONFUSION, JUST KNOWING WHERE TO START.

## Take Your Photography to the Next Level



All of us want to take better photos. That's a given, even for people that to the rest of us are at the pinnacle of creating incredible images.

But when you're a beginner, getting to that place where you say, "Wow, I just created a great shot!" can be a bit on the daunting side.

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to - and that's part of the confusion, just knowing where to start.

With that in mind, I thought long and hard about all the things I know now that I didn't know when I started and narrowed it down to three crucial ways you can improve your photography.

### #1: It's Not All About the Gear

If I had to say what the most common problem is for newbie photographers, I'd say that it's too much of a focus on the gear.

By that, I mean that instead of actually learning how to use the camera they have already, they put all their energy into lusting over what

camera they should have.

The problem with that is that the camera they feel they should have isn't going to make them a better photographer...

Practicing and learning photography concepts with the camera they already have will make a big difference, though.

Even if all you have is a smartphone, you can learn a ton about photography, especially compositional principles.

For example, you don't need to spend thousands of dollars on a Canon 5DS to practice things like framing, using leading lines, the rule of thirds, and other basic photography composition rules.

In fact, I'd argue that it's easier to learn about composition with a smartphone because it's a much less overwhelming camera than a high-end DSLR.

Besides, you already have a phone, so if you're just beginning, why drop a bunch more money on another camera before you know what you're doing?

Just use the camera you've got, work on developing your creative eye and understanding basic photography rules, and when your camera becomes a liability, and you can no longer take the sort of photos you want to take with it, then upgrade to something new.

### #2: Zero In on Specific Skills

As I noted above, it's necessary to learn how to use the gear you've got and focus on developing basic photography skills before you think about getting new gear.

But to take that point a step

further, I'd highly recommend focusing on one type of photography in the beginning, that way you can develop a keen eye for the type of detail, style choices, and the technical aspects of photography as they apply to one genre.

I know it's exciting to start photography and you want to try everything from portraits to street photography to macro to landscapes.

But the problem with that is that each type of photography requires a bit of a different approach and mindset.

So, by trying to be a jack of all trades, you're likely to end up becoming a master of none.

Instead, start your photography journey by working on one type of photo. I chose landscapes, but you can choose whatever you want.

And once you begin, learn everything you can about that type of photography.

Another benefit of working on a specific set of skills is that you become intimately familiar with the gear you've got. And once that happens, learning other types of photography will become vastly easier!

For example, when I started shooting landscapes, I learned the basics of aperture, shutter speed, and ISO. That, in turn, led to a discovery of concepts like white balance, understanding metering modes, and exposure compensation. From there, I learned to shoot in aperture priority mode, shutter priority mode, and eventually even manual mode.

But you'll never guess what happened when I took a few portraits of my family - they were much-improved pictures.

Why? Because the concepts of exposure, metering, white balance, and so forth are the same for one type of photography as any other. In other words, the skills I'd learned for landscapes were applicable to portraits, so my portraiture improved as a result.

So, focus on one genre at first, and when you try expanding your horizons, you'll be better equipped to conquer other types of photography.

### #3: Learn How to Process Your Images

When I first started out in photography, I had no idea how much work was involved in processing images.

Even just organizing them into folders on my computer seemed to be an enormous task, let alone actually getting the images into a program to manipulate things like brightness, sharpness, saturation, and so forth.

Programs like Photoshop and Lightroom are incredibly powerful, but for beginners, they can also be incredibly intimidating.

But it doesn't have to be that way...

Just like you have to start somewhere with learning how to use your camera, you have to start somewhere with processing your images.

I started out with very simple tasks - cropping, straightening if necessary, and adjusting brightness, contrast, saturation, and vibrancy.

Once I felt comfortable doing those things, I worked on



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Membership is \$25 per year. Members should provide: Email Address, Mailing Address, and Phone Number.

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The Camera Club of Central Minnesota publishes a monthly newsletter which is distributed via e-mail. The newsletter will contain information about up-coming meetings, summaries of previous meeting, recommendations for photographers, announcements of photographic workshops, and other material that seems appropriate.

If you would like to send suggestions, comments, or other communications concerning the club or newsletter, please send your e-mail to [rheath@tds.net](mailto:rheath@tds.net).

### Take Your Photography... (continued)

mastering more advanced skills like making selections, dodging and burning, exposure blending, and so forth.

The moral of the story here is that you have to approach learning how to process your images like eating an elephant - just one bite at a time.

Yes, it will take some time, dedication, and patience to become a post-processing guru,

but in the end, your images will be much better if you actually know what you're doing in Photoshop or Lightroom.

I suppose that's also the lesson for this entire article - it will take time.

But if you commit yourself to learning and practicing, with time, you'll find that you have the ability to take much better photos.

