

SpyderLENSCAL™

Users Guide



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Problem. Solution. Feature. Benefit.

Problem:

Photographers have enjoyed the benefit of autofocus for 25 years now, but many still struggle with its accuracy and repeatability. Auto-focus is a great convenience, especially in fast shooting situations. But typically the first step in reviewing files from a shoot is tossing all the images where the focus isn't quite right. This can be motion blur or other issues, but one of the most frequent causes is auto-focus error. We tend to blame this on the camera choosing the wrong object, or the wrong point on the object as the focal point, but there is another possibility, one we hate to consider, given the price of the hi-end lenses we use: the auto-focus of our lens may simply be off. When you take a simple shot of a flat object perpendicular to the camera, and it still isn't quite as sharp as it should be, you have to accept that this may be the cause.

Solution:

Many newer DSLR cameras now offer a method to correct this issue: they allow you to store auto-focus correction data for several of your most important lenses. This feature is likely to become more common, and appear in other camera types.

SpyderLensCal was designed to aid in correcting the auto-focus on your camera and lens combinations and storing them in your camera's custom settings.

Feature:

SpyderLensCal provides photographers with a fast, reliable method of measuring the focus performance on camera and lens combinations. It allows photographers to obtain razor-sharp focusing, using modern DSLR autofocus micro-adjustment. The LensCal device is affordably priced, compact, lightweight and durable, with integrated level and tri-pod mount.

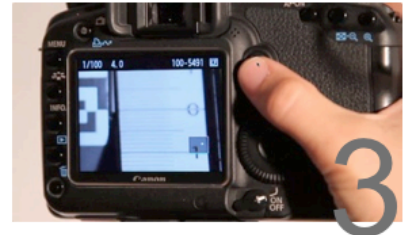
Benefit:

SpyderLensCal allows photographers to easily calibrate their interchangeable lenses and recent DSLR bodies. There is no need to ship lenses and bodies back to the manufacturer any longer if you have the tools to do it yourself.

Performing a Lens Calibration on each of your key auto-focus lenses can improve the number of usable shots from a day's shooting. And with a rugged, portable device such as LensCal, photographers can carry it on site or even on safari, so that lens calibration can be checked and adjusted if hard use or extreme weather may have caused changes.

How does it work?

1. Setup your camera and SpyderLensCal at a fixed distance during the calibration (using a table or tripod)
2. Using Autofocus, take a picture of the SpyderLensCal
3. Evaluate the picture on the back of your camera; is the focus in the back or front of the zero mark?
4. Adjust the micro-focus adjustment in your camera menu accordingly.
5. Take a second photo to evaluate if further adjustment is necessary.



A Tour of the SpyderLensCal Workflow

Lights



Choose a location with appropriate lighting for your auto-focus calibration. Not too dark, not too much uncontrolled light directly behind the camera. Light from any other angle in front of the target location, or more than one, should be fine. Setting it up as a studio shoot is excellent, but not really necessary.

Action



This is as easy as unfolding a lawn chair. Just open it up from its flat locking position, and place the ruler in the correct orientation with the main target. The tripod mount on the bottom of LensCal allows for mounting on most any tripod, including portable tripods. There is a bubble level on LensCal's base to allow users to level the tripod for most effective alignment with the camera. Simply placing LensCal on a desk, table, or shelf works fine as well.

Camera

Now is the time to decide which camera and lenses you want to calibrate. Setting the camera up on a tripod is very convenient, but not critical. Using tripods does make the process simpler and easier. As an alternative you can place the LensCal and Camera flat on a table.



Settings

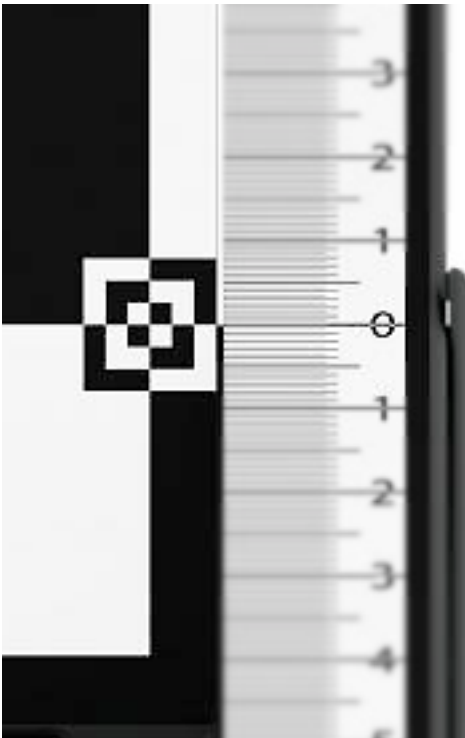
Be sure the camera and lens are set to auto-focus, as these are the functions LensCal is measuring. Also, be sure to use the most open Aperture setting possible (often 4.0 or 2.8) to produce the clearest example of the focal plane. In order to control the camera's aperture it's necessary to be in Aperture Priority mode, or in Manual mode.

Shoot



Take one or more shots of the target, aiming the camera at the center of the large target area. Or, for improved accuracy of calibration, aim the camera at the small bullseye at the right edge of the vertical target. This will minimize any error caused by not having the target exactly perpendicular to the axis of the lens. If your camera highlights the focus point it has chosen, that will confirm that the target plane has been selected as the intended focal plane.

Review



Select your target shot on the Camera's LCD screen. Zoom in on the section of the ruler adjacent to the target. At the camera's maximum zoom examine the markings and numbers on the ruler to see which one is sharpest. That mark represents the center of focus, as defined by your camera and lens using their auto-focus system.

Adjust



If that mark is not at zero, then your auto-focus is either front focusing, or back focusing. Determine which, and by how many marks. Go to the Auto-focus adjustment option in your camera's menu and move the auto-focus adjustment the appropriate number of points forward or back. Retest to determine if your adjustment was the ideal amount. If not, increase or reduce your adjustment until the sharpest zone is centered on the zero mark on the LensCal ruler.

Recalibrate As Needed

Repeat for other lenses, and then recheck annually, or whenever your lenses have seen hard use or extreme temperatures. Or as you acquire new ones!

For more product info, videos on using SpyderLensCal and FAQs, please go to:

<http://www.datacolor.com/goto/SpyderLensCal>