

# 6 Tips for Controlling Depth of Field

By Brian Auer

Depth of field refers to the distance (depth) from the focus point that a photo will be sharp, while the rest becomes blurry. A large, or wide, depth of field will result in much of the photo in focus. A small, or narrow, depth of field will result in much more of the photo out of focus. Neither approach is better or right, and which depth of field to use is up to you, the photographer. You may have different reasons for choosing a certain depth of field including artistic effects, bringing attention to a subject, or crisp representation of a scene.

There are four main factors that control depth of field: 1) lens aperture, 2) lens focal length, 3) subject distance, and 4) film or sensor size. Your film or sensor is pretty well set, so you won't have much luck changing that. Your focal length and distance to the subject are usually determined by your choice of composition. So the lens aperture is your primary control over depth of field.

Before I get to the tips, let's get a few things straight:

- **BIG APERTURE = SMALL F/NUMBER = SMALL DEPTH OF FIELD** (small amount in focus)
- **SMALL APERTURE = BIG F/NUMBER = BIG DEPTH OF FIELD** (large amount in focus)

1. **Aperture Control** - Large apertures (small f/numbers) cause a narrow DOF, while small apertures (large f/numbers) cause a wide DOF. To bring attention to a subject by blurring a background, shoot with f/numbers like f/2.8, f/4, or f/5.6 – this is called “selective focus”. To bring the whole scene into focus, shoot with f/numbers like f/16 or f/22.

**2.Avoid Excess DOF - If you want to bring an entire scene into focus and keep it sharp, you'll use a small aperture. But be careful not to go too small. Lens sharpness will start to deteriorate at the smallest apertures. Use enough to get what you want, and no more. You may have to experiment a bit to get a feel for how your camera and lenses work at different apertures.**

**3.Focus Point - The DOF extends behind and in front of the point of focus. It usually extends further behind than in front, though. So keep this in mind when choosing your focus point; you'll want to focus about 1/3 of the way into the scene rather than 1/2 way.**

**4.Use a Tripod - As you stop down the lens for greater depth of field, you're also letting less light into the camera. To compensate for this and maintain correct exposure, you'll need to either use longer shutter speeds or a higher ISO. The ISO can only be increased so much before noise artifacts will become an issue, so you'll most likely want to lengthen your shutter speed. If your shutter speed is too long, you'll need a tripod (or some type of stabilization) to deal with this.**

**5.DOF Preview - When looking through the viewfinder of an SLR camera, you're seeing the world through the lens. You can easily see your resulting composition and point of focus, but the depth of field you're witnessing is a little false. You're seeing the resulting depth of field for the largest aperture of the lens, no matter what f/number you've chosen. Most newer dSLR cameras have a feature called DOF preview that allows you to stop the lens down to the chosen aperture so you can see the true depth of field. What you're seeing usually gets darker because you're letting less light through, but you should still be able to see the scene (unless the aperture is very small and it's dim out).**

**6.Focal Length - As I mentioned, your focal length is usually determined by your choice of composition, but you should know how it affects your depth of field. Longer focal lengths (200mm) have less depth of field than shorter focal lengths (35mm). Just keep this in mind when you're trying to achieve a certain depth of field — you may need to alter your focal length in addition to your aperture.**

**So there are your basic tips for controlling your depth of field when taking photographs. The best way to learn how to control DOF is to set your camera to aperture priority mode (if it has it) and go take some pictures. Photograph the same subject many different times while altering the aperture, point of focus, and focal length (if you have multiple lenses or a zoom lens). Either write down your settings you used for each picture or use software to view your camera's settings while you look through the pictures on your computer. You'll begin to see how these different things affect your photos.**