

AUTOFOCUS TIPS

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INTRODUCTION

I have been suffering some time with difficulty timing shots to capture that decisive moment. I put the problem down to my disability becoming worse with age. Then after reading around I discovered I can set up autofocus to make things easier. The problem really is that autofocus usually won't let you take the shot if it has not locked on to a subject. Here's what to do to make autofocus work better.

The information here is based around my Canon EOS 5D Mark IV, but it can be applied to other cameras. This camera is easy to focus in Live View mode using its touch screen: both autofocus and manual focus. But it is when used in eyelevel mode that I have been experiencing issues.

Always remember auto focusing is designed to make the best image when there is a narrow depth of focus, such as when you are using a long focus lens, or a large aperture, or both. Being able to make a beautiful, soft, out-of-focus background in this way can emphasise your subject, but focus is made more critical. But focusing does not have to be perfect with a wide-angle lens used with a small aperture and a large depth of focus.

STARTING AUTOFOCUS

Normally autofocus is started when you half-press the shutter button with your right index finger. This action also starts the exposure meter. Some cameras allow you to use your right thumb with a button on the back of the camera to start autofocus – this is called *back button focussing*. Many find this very useful. Half holding the shutter button is a little tricky, which is where back button focusing has an advantage.

You will need to consult your manual to determine how to turn back button autofocus on. If you do this, then half-pressing the shutter button won't initiate focussing any more.

AUTOFOCUS DRIVE MODE

When the camera is focusing automatically, electric motors are moving (driving) lens elements until the image is sharp. Autofocus can be made to work in one of two ways. Canon calls these One-Shot AF and AI Servo AF. I will use the terms One-shot and Servo. Other terms used are Single Focus (One shot) and Continuous focus (Servo).

The most common mode is One-Shot autofocus. In this mode when you start autofocus, it focuses on the subject and then autofocus stops, with a beep and a message in the viewfinder. While holding the shutter button (or back focus button) you can reframe the image to place the subject where you want without the focus changing.

The other mode is Servo autofocus. On this setting, half-pressing the shutter initiates focusing and locks onto the subject, but focusing continues while you hold the shutter half pressed. If you keep the focus spot on the

subject and it moves towards or away from you, focus is changed to keep the subject sharp. This is the setting to use for active children or the dog on the beach, birds in flight, sports, or any similar moving subject. Because focusing is going on while you half hold the shutter button, you will flatten the camera battery more quickly. Some photographers have this setting as their preferred mode.

Some cameras have a hybrid mode, which Canon calls AI Focus. In this mode focus starts in One shot mode, stopping focus when it has fixed on the subject, but switches to Servo mode if the subject moves towards or away from the camera.

WHICH AND HOW MANY FOCUS POINTS?

All cameras these days have a wide selection of the number of focus points and which focus points you can use.

For most situations, the use of one focus point is best. For a portrait, you place this point on an eye. For landscapes, you place it between the foreground and the background. However, the use of the smallest point called Single-point Spot AF by Canon will find difficulty locking onto focus if you are a little unsteady, or if the subject moves. Choose the larger Single-point AF. This works much better for me, particularly with long focus lenses, which magnify the image and any movement.

You can select which focus point is best for your subject. One in the bottom half of the frame is best for landscapes, but it would be best in the top half of the frame for facial shots, where you want to focus on an eye.

Using multiple points is best if the subject is moving, such as a bird in flight. Focus can lock on as the subject as it moves around the frame. In this situation having all focus points selected is probably the most useful setting, but you can select smaller groups of points if you prefer. The downside of this is that focusing will be on the closest subject in the group of focus spots, and this might not be what you want. So, for static subjects one point is best.

One tip for bird photographers. Set up two of the buttons on the back of the camera to single point and all points. You can rapidly shift between the two settings, if for example the bird takes flight.

There are several ways of selecting autofocus points on my camera. Read your instruction manual and determine which is best for you. On my camera, I can register one particular point and instantly return to it, which is a great feature. Some modern interchangeable lens mirrorless cameras with touch screens allow you to select a focus position with your thumb. My 5D Mk IV allows this in live view, but not of course in eyelevel viewfinder mode.

FINE TUNING SERVO FOCUS CHARACTERISTICS

Some high-end cameras enable you to fine tune how focus works when in the servo focus mode. Basically, you can adjust how sensitive the focus is if the subject moves smoothly or erratically, or when another subject moves into the focus area. Behaviour also depends on whether one or multiple focus points have been selected. See your camera manual for details. The three basic adjustments are tracking sensitivity, acceleration / deceleration sensitivity, and where multiple points are used the sensitivity of switching between points.

Some users find these adjustments do not have much effect, so don't get too worried about them. They have no relevance in One-shot mode.

FACE AND COLOUR RECOGNITION.

My Canon 5D Mark IV has a face and colour recognition setting for use when a group of focus points have been activated, and the focus is in Servo mode. There are two settings with very nerdy names, including the term iTR is an abbreviation for intelligent tracking and recognition.

The EOS iTR AF (face priority) setting will keep focus on a human face it recognises in the field of view. If the face moves over the focus points, it will track and keep the face in focus.

The second setting EOS iTR AF will track faces and also track a contrasting coloured subject that move across the selected focus points.

CAPTURING THE MOMENT!

If you really don't want to wait while the camera is focusing, you can override this on some cameras.

In One-shot mode, setting to release priority allows you to take the photo before focus is achieved. You get the shot, but it probably won't be sharp where you want if you are using a large aperture or a long focus lens with a narrow depth of focus. Use a small aperture to increase depth of focus.

The same can be made to happen in Servo mode, but it is set separately. Canon has three options: focus priority, release priority and equal priority. For continuous shooting (motor wind) and servo focusing, you can also set whether focusing is given priority over shooting speed or vice versa, or if they have equal priority. If shooting speed has priority, you get lots of shots, but they may not be in focus (small aperture and large depth of focus will reduce this effect). If focus has priority, the shooting speed will slow down, particularly in low light or with a low contrast subject.

MACRO AND CLOSE-UP

Hand-held close-up photography when using a typical macro lens of 60mm focal length or longer, is one typical case where autofocusing can be difficult. Always use the Continuous Focus (servo) mode. Even if the subject is not moving – the flower blowing in the wind or the bee in flight, you are moving. The depth of focus is very narrow, even with the aperture stopped right down to f/16 or smaller. All movement is magnified as well as the subject.

Keeping a single focus spot on just the right point on the subject is very difficult, especially as you age. Stooping is the worst pose. If you can, sit and brace as much of your body as you can. Get down to it, with your elbows on the ground if it helps.

The use of multiple focus spots can help. Once you have locked onto a flower stamen, it will stay focused on it if your unsteadiness or the breeze moves it around the frame.

MANUAL FOCUS

I prefer autofocus most of the time. It has developed and improved so much that you can get a large proportion of in-focus shots in extreme conditions, such as sports or wildlife. However, I do sometimes prefer manual focusing for landscapes or architectural images taken on a tripod. Usually I am using wide angle lenses at small apertures, and focus is not critical. I can use a DoF calculator to determine the hyperfocal distance to maximise my depth of focus from the nearest subject to infinity. Touch screen live view makes focusing easy. You can magnify the image and see when it is sharp.

Remember we have not always had it so good. Focusing my first 35mm camera involved measuring or estimating how many feet or metres the subject was from the camera, and setting the focus ring to the required distance. Now that's manual focus!