

Autofocus

- Why spend time on this, doesn't everyone understand autofocus?



Rate this photo:

Properly exposed, check

Rule of thirds composition check

In Focus TRASH!

For quality photos you should consider.

1. Focus
2. Composition
3. Exposure

Could your images be sharper more consistently?
Without proper focus you images are basically
trash.



Change in thinking.

- Focus for me was always something I did manually without much thinking. I thought about composition, exposure settings.
- With autofocus you have to think but not about actual focusing. What you have to think about is where and what you want **the camera** to focus on.
- You have to tell the camera either what to focus on or where to look when focusing on the subject you chose.

How auto focus works

The camera will activate the focusing servo until it detects sharp contrast. When something is blurry, it lacks sharp contrasts so the camera hunts for focus by turning the lens back and forth.

- Sensors can detect contrast as light enters the camera called phase detection.
- It may also use contrast detection reading directly from the camera sensor.
- Because of these methods, certain situations are difficult for autofocus to work and understanding them will lead to less frustration. Why won't autofocus work on a blank wall, plain sky, or a dark room?

Learning your cameras autofocus settings and practicing using them is something you should start doing TODAY before another great shot has to be trashed.

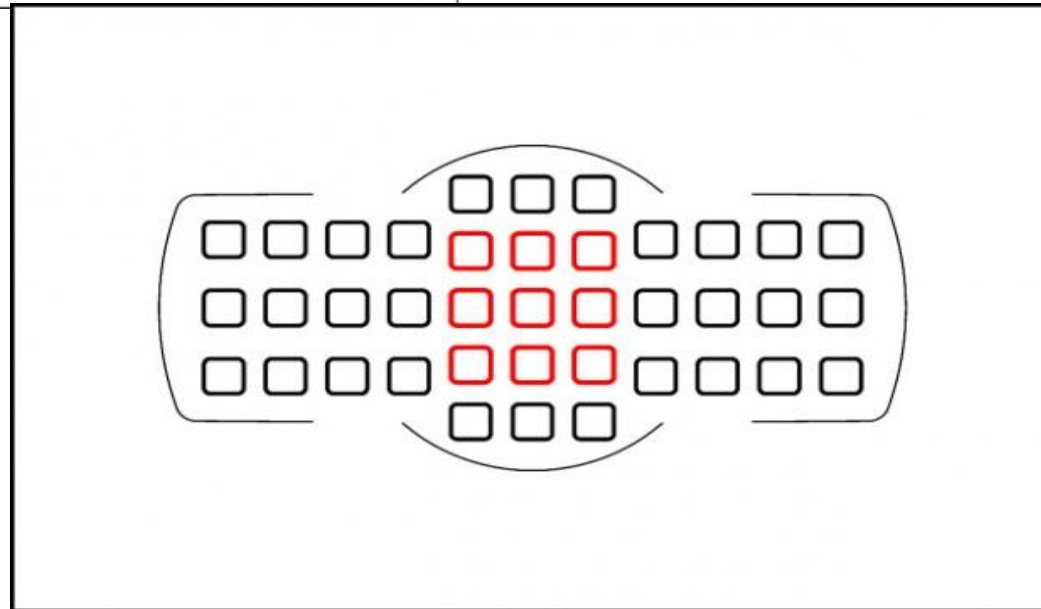
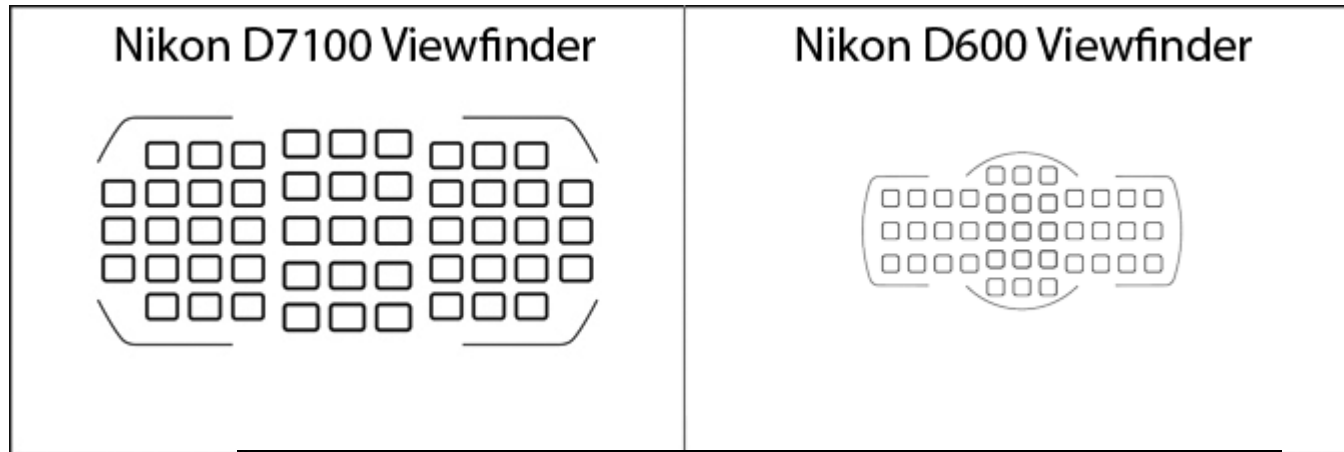


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Focusing Modes

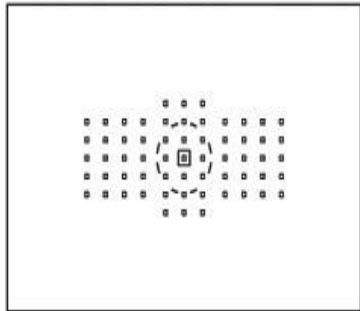
- AFS Nikon, One Shot Canon: single point focusing. When shutter is $\frac{1}{2}$ released it focuses on where you tell it to focus.
- AFC Nikon, AI Servo Canon: Continues to focus as the subject moves.
- AFA Nikon, AI Focus Canon: camera chooses all, often chooses closest object or most contrasty.

Focusing Points you can choose between one, groups or all focusing points depending on what mode your in.



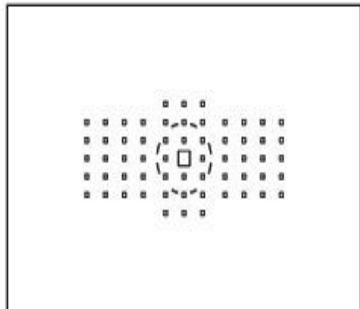
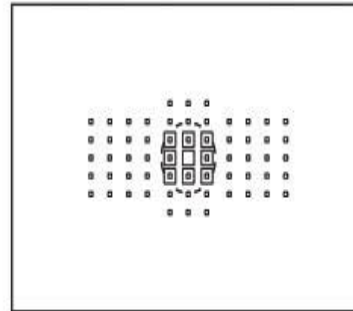
Some autofocus settings for Canon.

Canon EOS 5D Mark III AF Area Selection Modes



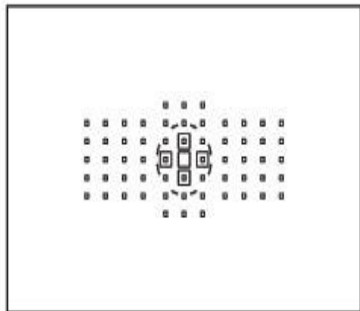
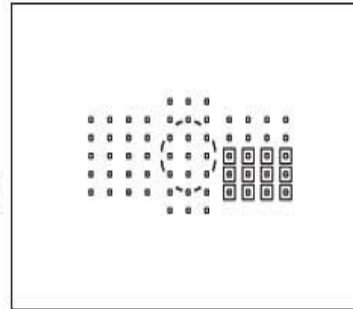
Single-point Spot AF
(Manual Selection)

AF Point Expansion
(Manual Selection,
Surrounding Points)



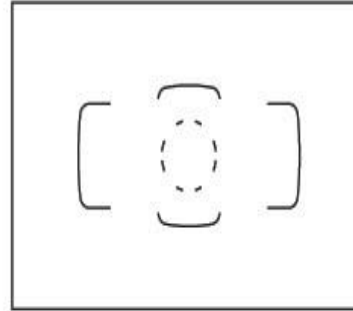
Single-Point AF
(Manual Selection)

Zone AF
(Manual Selection of Zone)



AF Point Expansion
(Manual Selection)

61-Point Automatic
Selection AF



Using one shot or AFS settings a point can be placed where YOU want the focus to be.





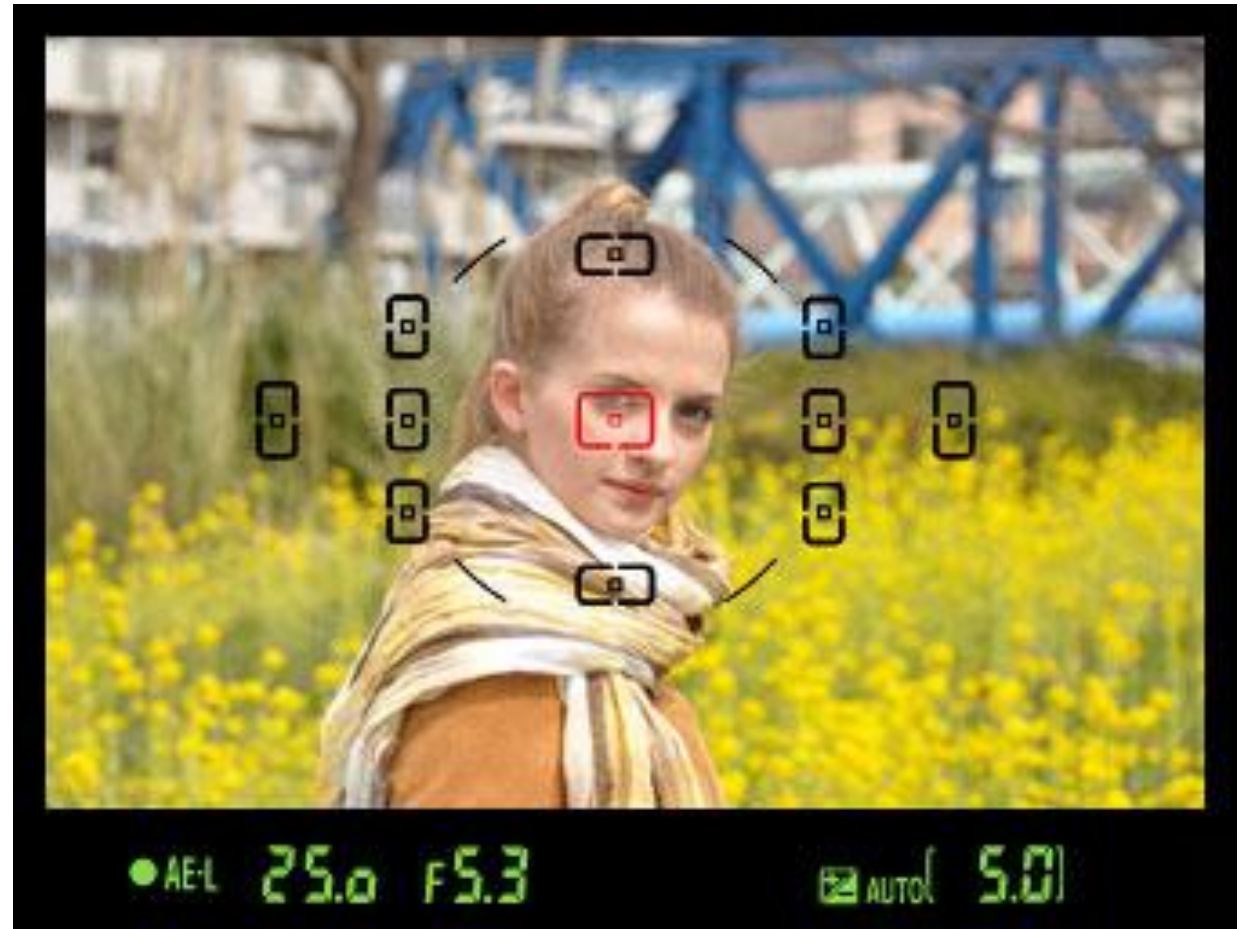
Servo or AFC mode. Focus will adjust while shutter is ½ pressed. Starting focus point should be placed on subject.



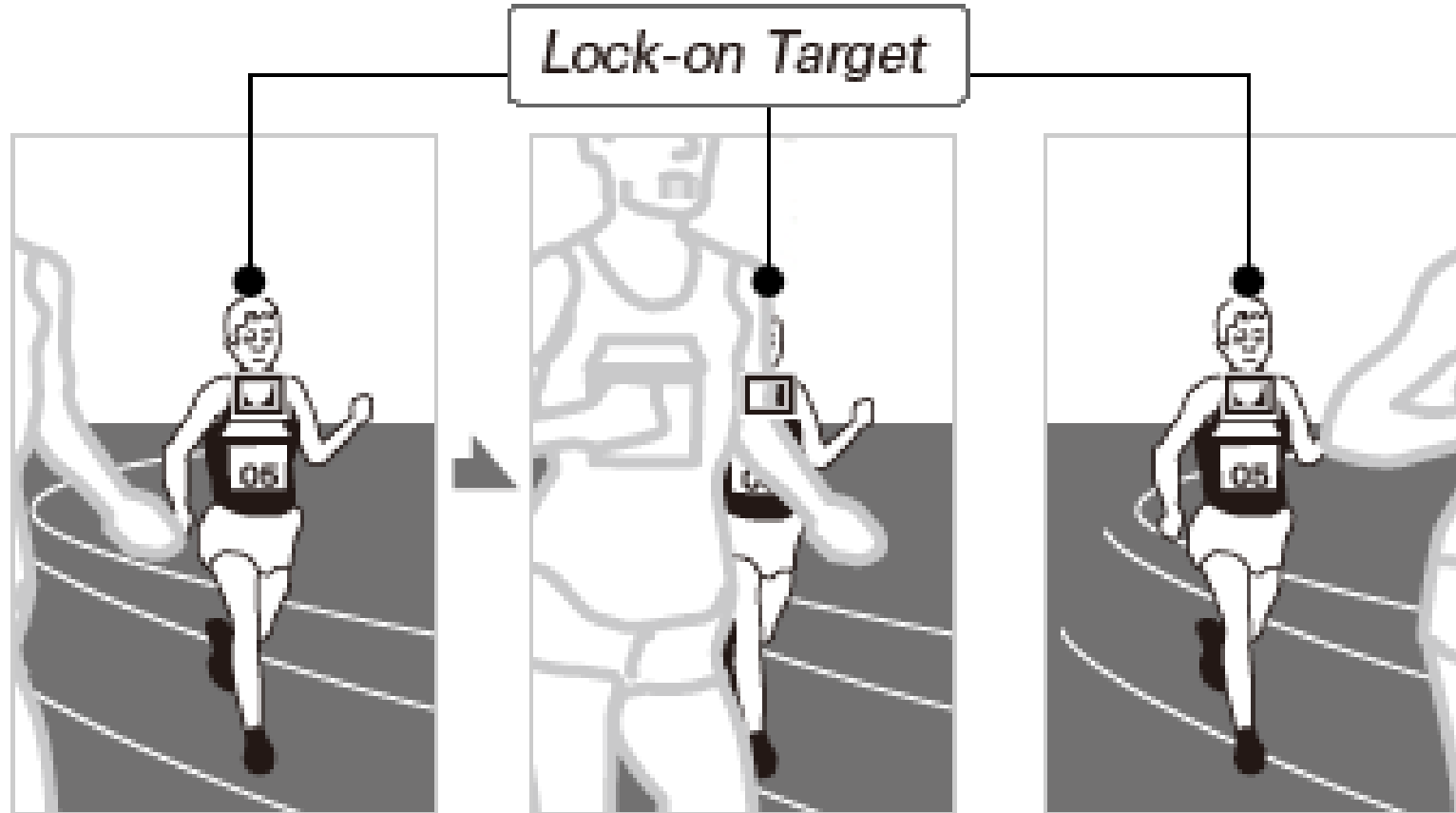
Other features like 3d tracking are great for moving objects.



Making sure a focus dot is on the closest eye is a great start to a better portrait. The center dot is said to be the most accurate. Some people focus, lock it and recompose.



More challenging situations call for the right settings and practice. Check your manual for more information.



Tips to improve autofocus performance in low light

- **Use the center focus point.** Whether your camera is equipped with 9 or 51 focus points, you do not want to use the focus points in the corners of the frame when shooting in low-light conditions, simply because they are not going to be very functional/accurate. The center focus point is often your best bet, because it is a cross-type sensor that works better than any other focus point in your camera.
- But what about framing and composition if you have to focus in the center? For those situations, the solution is to move the autofocus function from your shutter release to a dedicated button on the back of the camera, then focus on your subject and recompose. This technique is called “[focus and recompose](#)”. But you have to be careful when recomposing your shots after focusing, especially when shooting at shallow depths of field with a large-aperture lens. If you focus and then recompose, your focus plane will most likely change, resulting in bad focus, so keep this in mind.

- **Look for contrast and edges.** Instead of trying to focus on plain, one-colored objects, look for “contrasty” objects or edges that stand out from the background.
- **Add some light/Turn on more lights.** Sounds pretty basic, but if you are having problems focusing, what is simpler than adding a few more lights or turning more lights in the room? I always try to bring a flashlight.
- **Use the “AF-Assist” feature on your camera or speedlight.** It is there for a reason – use it every time you have problems focusing in low-light. To activate it, make sure that “AF-Assist” is turned on in your camera menu and the AF-S mode is selected.
- **Watch your shutter speed.** It might look like bad focus, but it might actually be camera shake that causes your images to look soft. Using a lens with Vibration Reduction technology certainly helps, but still make sure to keep your shutter speed relatively high. If you have to work with slow shutter speeds, work on your hand-holding technique.

- **Use Live View Contrast Detect.** If you are using a tripod, try focusing in Live View mode using Contrast Detect. Even manually focusing is much easier in Live View mode, since you see a lot more on the larger LCD than inside the camera viewfinder.
- **Use a bright flashlight.** If your camera does not have a built-in AF-Assist lamp, use a bright flashlight and ask someone to point it at your subject while you try to focus. Switch to manual focus mode once focus is acquired, then ask your helper to turn off the flashlight and take a picture without you or your subject moving. For photographing landscapes at night, a laser pointer works quite well (don't use a laser pointer for photographing people or animals!).
- **Use manual focus.** Sometimes manually focusing your lens is quicker than trying to use any of the autofocus methods. Many landscape, macro and architecture photographers shoot with manual focus lenses.

- Extra goodies:
- Fine tuning your autofocus. My Nikon d7100 has the ability to fine tune the focus for every lens I have.

