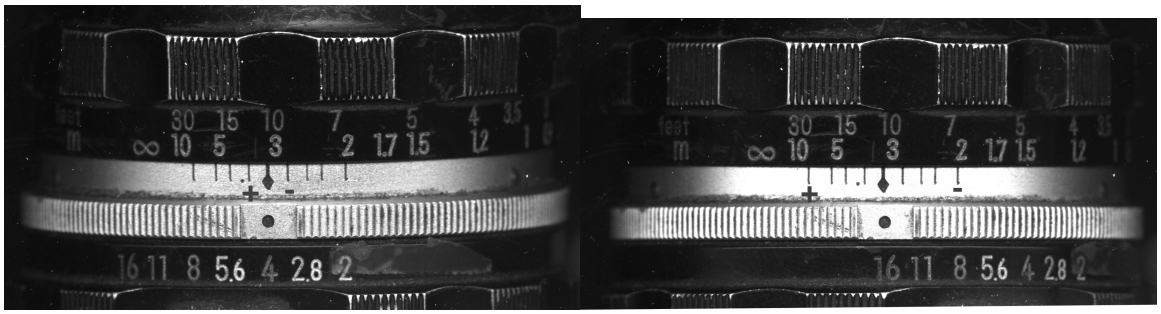
DEPTH of FIELD ROUNDUP

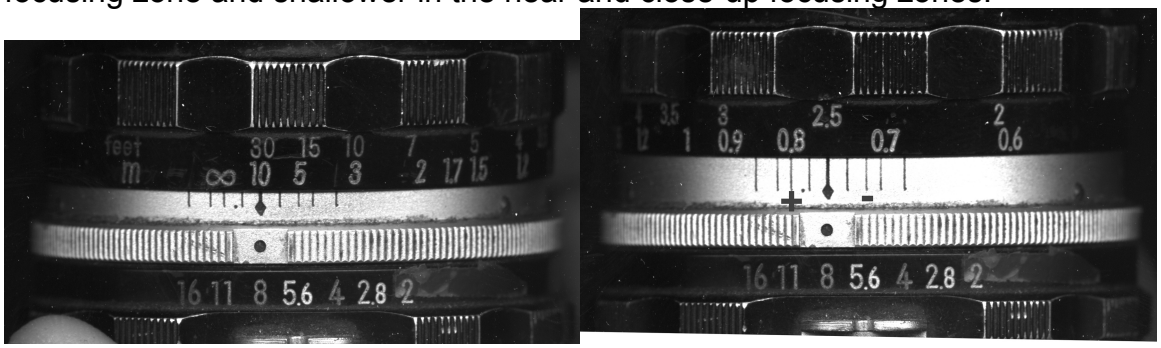
There are 3 parameters to manipulate when making decisions to place the near and far extents of the sharp depth of field zone. They are the f/stop, the focal length of the lens, (or the category of the lens, wide angle, normal, or telephoto) and the zone of focus (very far, portrait, close up). All three of them influence each other.

f/stop Considerations:
For a given lens and object position, the higher f/#'s will give greater depth of field.



A 50 mm lens is focused on an object 10 feet away. The depth of field extends from about 11' to 9' at f/4, from about 30' to 7' at f/16.

Object Distance Considerations:
For a certain lens set a certain f/stop, the depth of field is deeper in the far focusing zone and shallower in the near and close-up focusing zones.



A 50 mm lens is set to f/8. When it is focused at 30', its depth of field extends from infinity on down to about 10' (When the infinity focus is set at the far reach of the depth of field, the lens is said to be set at its *hyperfocal distance*. The lens doesn't need to be focused as long as the subjects are further away than the near focus, handy for moving subjects!) With the same f/8 setting, but focused at 2.5' away, the depth of field extends only a couple of inches on either side of the prime focus.

Type of Lens Considerations:
For a certain object distance and f/stop, the wider angle (shorter focal lengths) lenses will have more depth of field than a normal lens which has more depth of field than a telephoto lens. (The shorter the focal length, the greater depth of field; longer focal lengths yield shallower depth of field.)

A 21 mm wide angle lens, a 50 mm normal lens, and a 200 mm telephoto lens are all focused on a subject 10' away, and all are set to f/11. The normal lens has depth of field from 15' to 7'; the wide angle has depth from infinity down to 3' (its hyperfocal distance); and the telephoto lens has scant inches on either side of 10' for its depth of field.