

A Key to Sharp Photos

# Focus Stacking

Presented by John Klingel

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# Depth of Field

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- The closer a subject is to you, the shorter the depth of field.
- The higher the magnification, the shorter the depth of field.

# Landscape Photography

- Focus Stacking is very useful in landscape photography when trying to get near and far objects in focus.
- I don't use it with landscape photography very often but it is helpful at times.

# Focus Stacking

- To extend the Depth of Field, you shoot a series of photos and focus on different spots.
- Then you process and blend the photos to combine the in-focus points into one photo where everything is in focus.
- The blending and stacking can be done in Photoshop or stand-alone software like Helicon Focus and others.
- You can't use Lightroom or PS Elements

# Two Ways to Shoot

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- Manual, where you refocus each shot.
- Automatic, where something like Helicon Remote takes control of your camera and refocuses each shot and automatically fires the shutter.

# Shooting

- Shoot in RAW
- Use a tripod.
- Set focus to manual.
- Aperture has to remain constant for every shot.
- So use Manual or Aperture Mode.
- Best to use a shutter release.
- Mark the first and last shot.

# Manual Shooting

- Study subject carefully to note each surface or point that should be sharp.
- Start at front of object and take a shot.
- Then move the focus ring slightly toward back of object and shoot again.
- Then move the focus ring slightly toward back of object and shoot again.
- Keep moving focus ring slightly until back of object is in sharp focus.
- Don't be afraid to take a lot of shots.

# Optimum Sharpness

- Use a low ISO.
- Use the best aperture on your lens.
- The sweet spots for most lenses are usually two and three stops higher than the most open aperture on your lens.
- For my 70 to 200mm f2.8 lens, the sweet spots are f5.6 and f8.
- For my macro lens, they are 4.0 and 5.6.



# Software

- Photoshop
- Helicon Focus \$115
- Helicon Focus with Helicon Remote \$200
- Zerene Stacker \$89 (No Remote)
- CombineZP Freeware (Windows Only and No Remote)
- Google to find more

# Photoshop Stacking

- Open photos as layers in Photoshop (Lightroom or Bridge)
- Select layers
- Edit>Auto-Align Layers>Auto
- Edit>Auto-Blend Layers>Stack Images
- Flatten Layers
- Post Process Photo

Note: After aligning there is often a white border that requires cropping. After blending, white lines may appear that will disappear when layers are flattened.

# Photoshop or Helicon Remote

- For stacking of manual focused shots, Photoshop is great and better at aligning photos that contain movement.
- For very fine macro work, Helicon Remote is almost essential.
- Shooting in windy conditions can produce ghosting that even Photoshop can't deal with.
- White flowers are error prone.

# Contact Info

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- [JKLINGEL@SBCGLOBAL.NET](mailto:JKLINGEL@SBCGLOBAL.NET)
- Workshops – HDR, Nature Photography, Creative Post Processing and Focus Stacking.