

Handling Image Noise in Lightroom and Topaz Denosie AI

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With Contributions from
Frank Richards and Others

What's the Problem?

- Under low light situations when there are multiple constraints, photographers may have to raise the ISO in order to achieve proper exposure. (For instance, indoor rodeo and roller derby where lighting is bad and a high shutter speed is required.)
- Higher ISO settings introduce noise which robs detail and can be distracting on its own.
 - There is **color noise** that shows up as red and green dots in deep shadows.
 - And **luminance noise** that shows up as a uniform but random pattern of dots on all parts of the image.

ISO 25600



How Much Noise is Too Much?

- Some will say any noise is too much.
- I think we obsess over noise when it is rarely a problem.
- I have submitted both projected and print images shot at ISO 25600 several times, and no one has ever found it a problem. It is visible, but not a problem.
- Particularly with today's large sensors, the image is down sampled so much for club sized images that the noise gets masked.

Examples

Handling Noise – During Capture

- Get the exposure right.
- For things like landscapes,
 - Use a tripod
Set aperture as needed for desired depth of field
 - Set ISO at base level or very low
 - Let shutter speed to go where needed for the proper exposure.
- For action
 - Set shutter speed to value needed to freeze the motion. Rodeo 1/1250 to 1/1600.
 - Set aperture to lowest setting – ideally f/2.8 or even wider.
 - Let ISO float to the value needed to get proper exposure – if possible. (I use Auto ISO.)
- Note: At the recent DCC trip to the rodeo I used 1/1250 or 1/1600 and a 100-400 lens with f/4.5 – 5.6. My ISO pegged at the maximum 25600 much of the time. This resulted in under exposure. I should have used a faster lens and also should have used a monopod to prevent camera shake which further degraded sharpness.

Handling Noise in Post Processing – Lightroom Classic

- Use default sharpening. May want to use the mask to avoid sharpening the noise.
- Set luminance noise reduction to balance noise reduction and the plastic look.
- Set color noise reduction to eliminate the colored dots in shadows. I set mine to 25 default.

Examples

Handling Noise in Topaz De Noise AI – Method 1 – Round Trip from LR

- If you decide you need more than LR Detail can do, consider Topaz DeNoise AI.
- Do this step early.
- Turn Detail OFF or set Luminance and Color Noise to 0.
- Right click the image and choose edit in DeNoise AI. Set the transfer parameters.
- The file opens in DeNoise. Try the different models and decide which model and settings works the best on your image.
- Click Apply and the image is returned to LR.
- Process the image in LR to taste.

Example

Handling Noise in Topaz De Noise AI – Method 2 – Single RAW File

- One DeNoise model is RAW. It works most effectively on the RAW file, not the TIFF or PDF from LR. This makes the workflow a little awkward.
- In LR, right click the image and choose Show in Explorer. This opens an explorer window and with the image highlighted.
- Open DeNoise.
- Drag the file from explorer into Denoise.
- Choose the RAW Model and adjust to taste but automatic works very well. You can use other models.
- Choose Save Image use Frank's suggested settings. Now wait.
- Return to LR in the library module. LR does not know about this image.
- Right click on the folder name and choose "Synchronize Folder". The image will appear next to the original if sort order is Capture Time.
- Process to taste.

Handling Noise in Topaz De Noise AI – Method 3 – Multiple RAW File

- You can choose multiple images via Explorer. Select them all and drag the files from explorer into Denoise.
- Once you have chosen the model and settings, click save.
- Frank and I are both seeing about a minutes an image for large sensors.
- The DNG's will appear in the source folder. Do the Synchronize Folder deal again.

Handling Noise in Topaz De Noise AI – Method 3 – Multiple RAW File - variant

- Finding multiple files with explorer can be tedious. As an alternative,
- Choose the files to be DeNoised in LR and flag say with a color.
- After you have flagged all the ones you want to process, filter so you have just those images.
- Choose them all.
- Right click the source folder and choose Create Folder Inside of “Source Folder” and choose Include Selected Photos. This creates a new folder under the source folder and moves the images to be processed there.
- Go to explorer and find the new folder. Since they all need DeNoise, just choose them all and drag to DeNoise.
- Process the batch. The new DNG’s will appear in this new folder.
- In LR, synchronize the new folder.
- Now with LR select all the images in the new folder and drag back to the original source folder.
- Then process as normal.

Cautions

- LR noise reduction and Topaz DeNoise AI are both very good. Topaz seems to be on an aggressive path to continuously improve the AI products.
- But any noise program can cause artifacts.
 - Plastic look
 - Further noise in out of focus areas.
- The DNG returned by Topaz is not as good as I think it will be in the future.
 - Color cast
 - Adobe, camera, and custom profiles not available.
- Don't over do it. I think an obviously denoised image is worse than one that is natural looking with some noise.

Questions