



February 2019 Lightroom Update

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On February 12, 2019, Adobe released a new revision to Adobe Lightroom. They did this for both Lightroom Classic, which stores photos locally (on your hard drive), and for Lightroom CC, which stores images on the Cloud. This lesson is going to cover the changes made to the program.

Lightroom Classic Update

When Lightroom is updated, they always add support for new equipment. In this version, the following cameras and lenses are now supported:

New Camera Support

- Nikon Z6
- Nikon Z7

New Lens Support

- Nikon AF-S NIKKOR 500mm f/5.6E PF ED VR
- Nikon AF-S NIKKOR 500mm f/5.6E PF ED VR + 1.4x
- Nikon AF-S NIKKOR 500mm f/5.6E PF ED VR + 1.7x
- Nikon AF-S NIKKOR 500mm f/5.6E PF ED VR + 2.0x

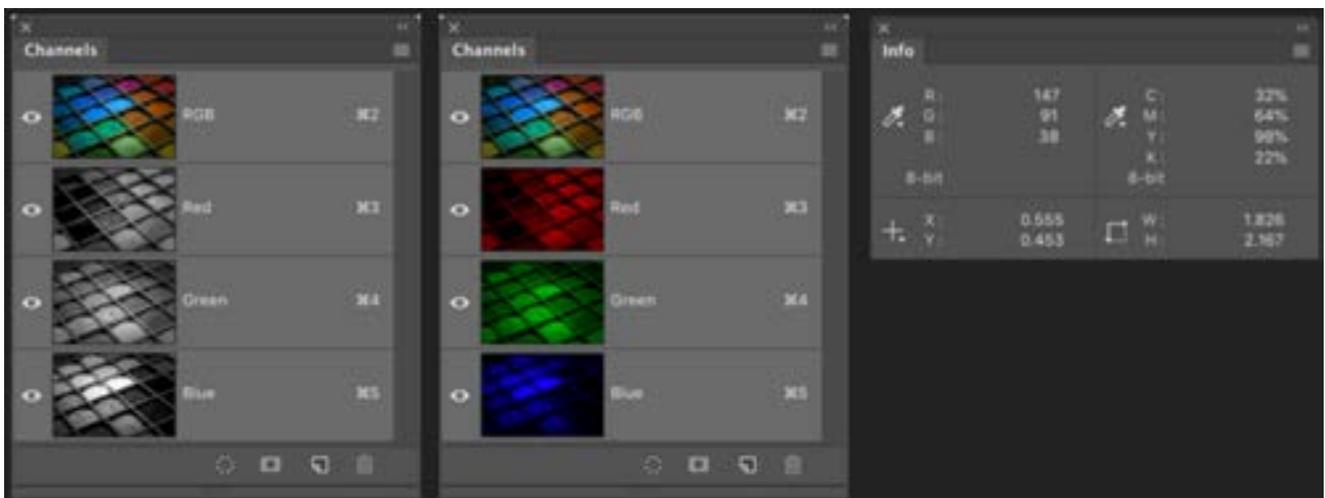
New Features

- Tethering performance improved (Loupe view is the largest improvement.)
- Simplified tether menu
- Copy to Camera for Canon option removed (became default if card is in camera)
- New Disable Auto-Advance Checkbox

- Map: Altitude will not auto-populate when you enter GPS coordinates but update icon allows you to force LR to calculate altitude when desire (so drone shots will not have inaccurate altitude data)
- Enhance Details (new demosaicing algorithm also available in ACR and LR CC)

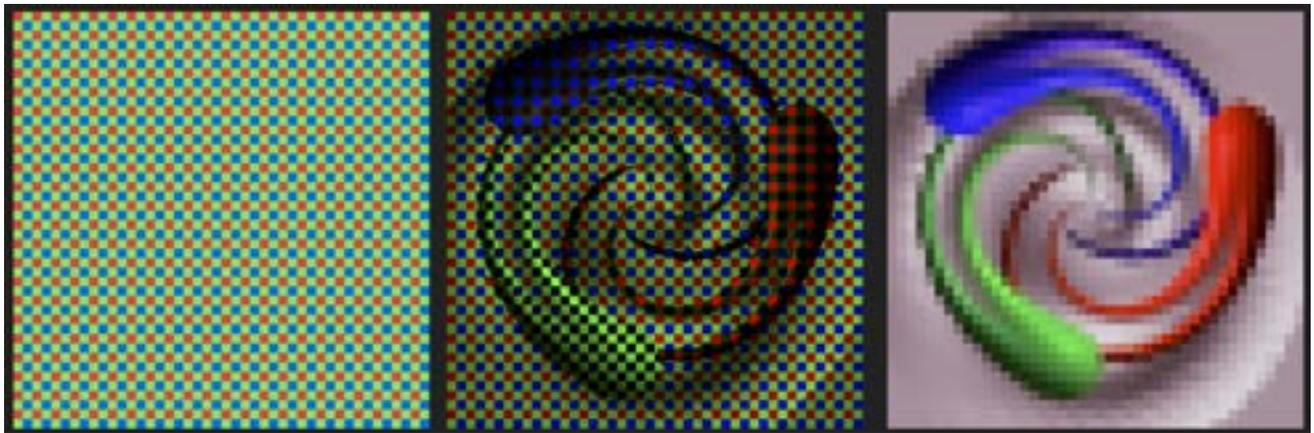
Demosaicing Explained

- Every color you've ever seen in Photoshop can be described a mix of Red, Green and Blue light (RGB).
- We only need three colors because those are the only three colors your eyes are sensitive to.



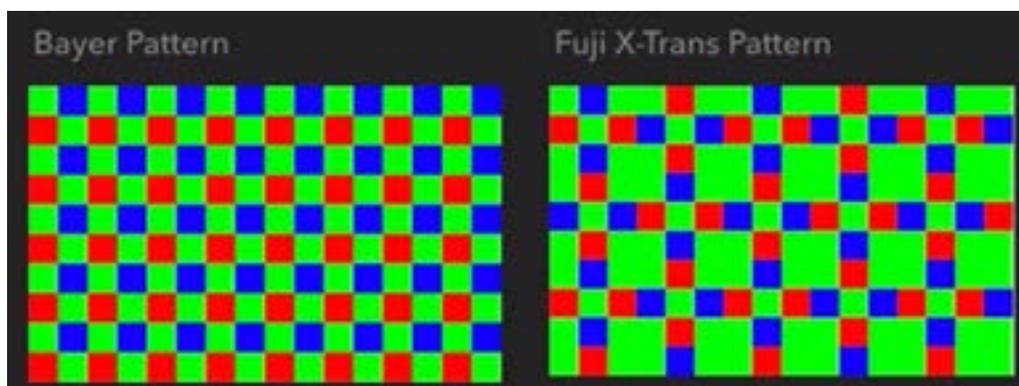
In Photoshop, images are made up of red, green and blue light. Above, you can see the Channels panel displaying the three colors of light and the Info panel displaying the values for each color.

- Camera sensors are essentially black & white because they cannot determine which color of the light is being measured.
- To capture color information, tiny filters are added above each sensor site to filter out all but the Red, Green OR Blue light.



Cameras use tiny filters above each sensor site in order to capture color information. Demosaicing occurs when that color information is converted into red, green and blue values.

- The process of converting from individual Red, Green OR Blue numbers into Red, Green AND Blue numbers is known as demosaicing.
- Lightroom & Adobe Camera Raw (ACR) offer demosaicing, which is why raw files auto-open in ACR before Photoshop. (They have one brightness measurement for each pixel and Photoshop needs three per pixel.)
- Enhance Details is an alternative Demosaicing algorithm that can be used with any camera-generated raw file.
- ACR was optimized for Bayer pattern (Canon, Nikon, Sony) which caused images captured with other patterns to suffer complaints. Fuji X-Trans users prompted the creation of Enhance Details.



What's Unique About Fuji X-Trans?

- Uses proprietary filter pattern In an attempt to minimize common problems with Bayer pattern sensors
- Does not repeat as frequently
- Less repeat has potential to reduce moiré in fabrics
- Anti-aliasing filters are traditional method for reducing moiré (filters produce less sharp images making alternative desirable)
- Sony, Nikon, Canon & others also offer cameras without anti-aliasing filters (but they use a Bayer pattern sensor, which is more susceptible to moiré)
- Drawback of Fuji X-Trans has been limited software support (until Enhance Details)



Undesirable moiré patterns can pop up in fabrics

Benefits of Enhance Details in Lightroom

- More accurate demosaicing
- Produces higher resolution results
- More accurate rendition of fine details
- Better preservation of small color details (Just make sure that Color Noise Reduction isn't blurring that detail.)
- Reduced moiré patterns and false colors

Areas Likely to Benefit from Enhance Details

- Fine details that feature 45° angles and curves (blades of grass, trees, fur, eye-lashes that are FAR from camera)
- High contrast edges that feature 45° angles and curves (edge of mountain where it touches sky)
- Edges that transition from yellow/orange to blue (fall color leaves against blue sky)
- Fuji X-trans Images that look painterly and shouldn't

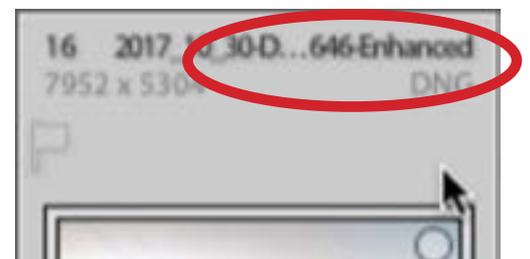
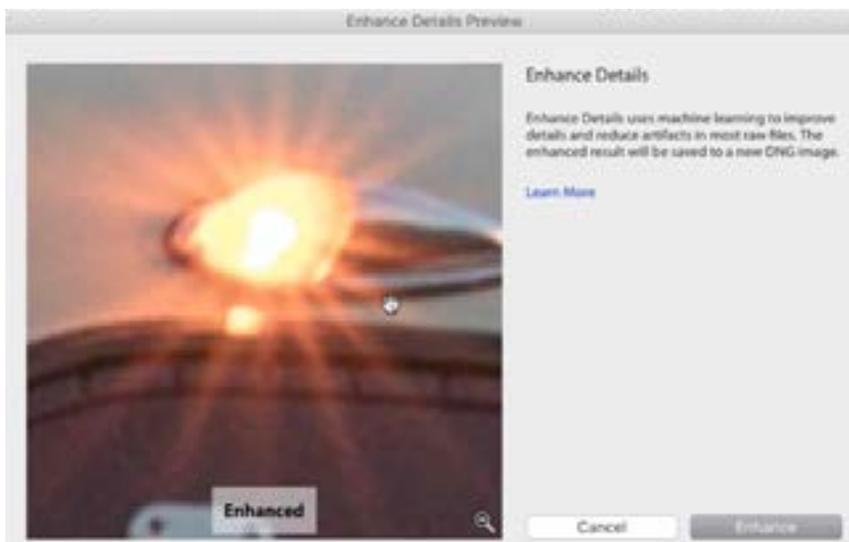
Enhance Details trade-offs

- Slower than default demosaicing algorithm (TIME)
- Produces a derivative DNG file with “-enhanced” added to file name (HD SPACE; often twice the file size of original raw file)
- More accurately reproducing what your camera captured also allows you to see more of the problems your lenses cause (EASIER TO SEE ARTIFACTS)
- Not available as a default setting
- Little benefit for cameras that feature anti-aliasing filters and Bayer sensors (might not notice any difference at all)

Accessing Enhance Details

- Photo>Enhance Details (in Library and Develop modules)
- Right-click image and choose Enhance Details
- Keyboard shortcut: Mac: Control-Option-I; PC: Ctrl-Alt-I
- System requirements: Mac OS High Sierra (10.13) or Windows 10 (version 1809) or later
- Wish it was available as preset and during export

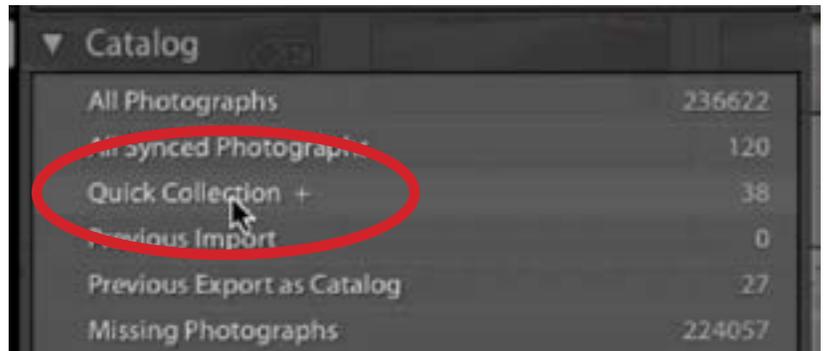
When you choose Enhance Details, a dialog will appear and there will be a preview window that shows an extremely zoomed-in area of the image. Click on the magnifying glass icon in the bottom right corner to see the entire picture. Then click within a specific area of the picture to zoom back in to that area. Click and hold within the image to see a “before” view and release the mouse button to see the enhanced, “after” view. If you like the result, click the Enhance button on the right side of the dialog. If not, hit the Cancel button to close the Enhance Details Preview dialog. If you choose to Enhance Details, a new DNG file will then appear in the image folder and the file name will end with the word “enhanced.”



LEFT: The Enhance Details Preview dialog shows a zoomed area of the image so you can see what the result will look like.

ABOVE: After using Enhance Details, you'll have a new DNG file, ending in “-Enhanced.”

How to work Enhance Details into your workflow Many images will not benefit from the Enhance Details command at all, so how do we work this new feature into our workflow? Here's one suggestion. Pick out the images that could potentially benefit from Enhance Details and place them in a Quick Collection. You can add a selected image to the Quick Collection by tapping the B key. View the Quick Collection by expanding the Catalog Panel on the left side of the interface and choosing Quick Collection. Once viewing all the images in the Quick Collection, you can select them all at once (Command+A on Mac; Ctrl+A on Win), click on the Photo menu and choose Enhance Details. It may take a little while to process, depending on how many images were selected.



The Quick Collection can be found within the Catalog panel on the left side of Lightroom's interface.

After running the Enhance Details feature, there will be two versions of the image: one that is enhanced and one that is not. You may want to compare these side-by-side to see if there was any improvement. To do this, select both images and click on the enhanced image to make sure that it is the most selected. Then, click on the X|Y icon below the main image window in order to see the two versions side by side. (If the toolbar containing the X|Y icon is not visible, click on the View menu and choose Show Toolbar.) The two selected images will appear in Compare View and the one that was most selected (the enhanced one) will be labeled as the Select. The other will be labeled as the Candidate.

In order to truly compare the results, you'll need to zoom in on the image. Click within the image window to see the zoom view. If it is not zoomed in enough, use the settings at the top of the Navigator panel to change the zoom view. In the video example, we clicked on the top right menu and chose a zoom view of 4:1. Looking at the image with an extremely zoomed view will help to see the fine details and determine whether the Enhance Details feature made any improvement.



Lightroom's Compare View is being used to inspect the results of the Enhance Details feature next to the version of the image that did not have it applied. Access Compare View by clicking the X|Y icon (circled).

Enhance Details Support

- YES: Raw files from Fuji X-Trans sensor (main reason for feature since Lightroom was subpar in this area)
- YES: Raw files from Bayer pattern camera sensor (Nikon, Canon, Sony, Olympus, etc.)
- YES: Raw files converted to standard DNG
- NO: Demosaiced Images (JPEG, TIFF, PNG, PSD, etc files)
- NO: HDR DNG files

- NO: Panorama DNG files
- NO: Lossy DNG files
- NO: Reduced dimension raw files (small raw setting in camera)
- NO: Pixelshifted Raw files (from cameras that capture multiple images and merge them into a single raw file)

Tips & Tricks

- Update ACR to 11.2 to Match Lightroom version
- New DNG version for Enhance Details compatibility

Lightroom CC Update

- HDR merge support (via Photos>Photo Merge>HDR)
- Panorama merge support (via Photos>Photo Merge>Panorama)
- HDR Panoramas (via Photos>Photo Merge>HDR Panorama)
- Targeted Adjustment Tool for Tone Curve & Color Mixer
- Histogram clipping indicators (via triangle icons in corners of histogram)