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- *Blogpost*: Photoshop vs Lightroom? Wrong Question! *(Link to Part 2 & 3 in this blogpost)*
  https://blog.main.wattsdigital.com/photoshop-vs-lightroom-wrong-question/
- *Blogpost:* The Philosophy of RAW: *(with link to new v 12.3 features video)*
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RAW Fundamentals for Photoshop

One of the most misunderstood (and mis-used!) concepts in digital post-processing is how to properly work with RAW files.

What to do with all that digital information? *How do you work with the format correctly & maximize your image's potential?*

When enhancing your image from RAW, what are the "Goals", and why? *What the heck are you even aiming for?*

You should be shooting in Camera RAW for your important work -- the results are worth it! The more digital information you're able to capture when you shoot, the more information you have to effectively create your image.

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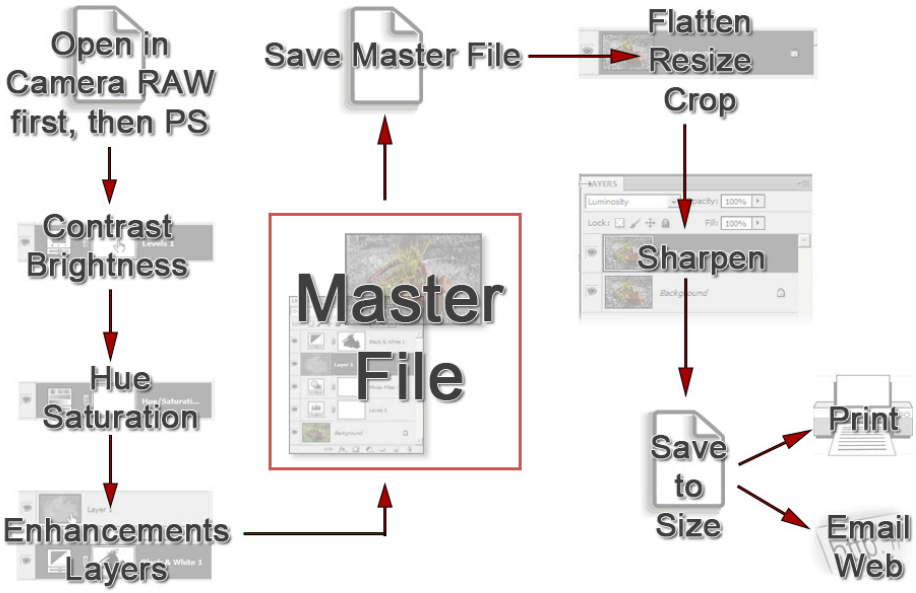
The Master File and Workflow

If a picture is truly worth a thousand words, then here's an overall visual representation of the **Workflow Chart** that I recommend you adopt (from my book) – notice that your Workflow centers on creating a **Master File**.



Creating a Master File is NOT for every image: it's for those images that you want to spend time with, doing all that's necessary to make your image "pretty". Here's where you pour your artistic "blood, sweat and tears" into your image.

What is a "Master File"? It's a 16-Bit, un-flattened, un-sharpened, un-cropped, un-resized file designated as such in its file name.

Why create a Master File?

- *It's Multi-purpose:* Use it to create separate files for a specific print size or printer, for the Web, for magazine output, etc. and you'll stay consistent between those files.
- *It's easily correctable:* for color, contrast, cropping, enhancements, etc. non-destructively (loss of digital information).
- *Sharpening is applied according to your print size*: Let's say that your Master File is created from a RAW file – It might be around 11"x16.5" at 300 ppi – If you sharpen for this size and reduce the file to prep for a 4x6 print, it will be over-sharpened.

What is RAW, and why do I need it?

- *A **Camera RAW file** contains unprocessed, uncompressed 16-bit data from your digital camera*. It's just information, but lots of it. It isn't really a file "format", like JPG or TIFF. It also doesn't have a Color Space (discussed in Class 1 & Class 5).

- You can't open a RAW file directly in Photoshop: *You must first work with it in The Adobe Camera RAW Plug-in (ACR) before "sending" it to Photoshop***.** By the way, ACR is a separate program, but included with (and "linked to") Photoshop.

- **You should be shooting in Camera RAW for your important work -- the results are worth it!** The more information you are able to capture when you shoot, the more information you have to effectively create your image.

- **Tonal Compression:** This was discussed in Class 1, but this is a great time to review, with a visual diagram - *This is the inevitable reduction /degradation of the original scene from your eyes to the print.* It's pure physics - the range of colors reproduced shrinks throughout the process.

  Let's say, for example, that our eyes see 100 shades of red. The camera, shot in RAW, may see 70 shades. Then Photoshop may see 60 shades of red, and the printer may only print 45 shades of the original 100 shades available.

	What our eyes see	*What your Camera sees*	*What Photoshop sees*	*What is actually printed*
JPG →	100	40	30	15
RAW →	100	70	60	45

So, how can you minimize some of the effects of tonal compression? Three things:

1) - Shoot in RAW (or scan in 16 bit)

2) - Use a proper Color Working Space in Photoshop (discussed in Class 1 & Class 5)

3) - Have your Color Management "house" in order
(discussed in Class 5)

- ## A RAW file is different from a JPEG in 2 major respects:

1) There's much more information in RAW (16 bit vs. JPG's 8 bit)

2) There's automatic "file compression & processing" built into the creation of a JPG, whether you want it or not.

- ## 16 bit vs. 8 bit:

More information is a very good thing in photographic capture. Bit Depth is like the Earthquake Richter Scale: it's logarithmic - - a 6.0 earthquake is twice as powerful as a 5.0 earthquake, not just 20% more powerful, as the numbers on the scale would seem to indicate. Likewise, a 16-bit file is NOT twice as much information as an 8-bit file: it's hundreds of times more information.

(JPG) 8 Bit: 256 values of each color x 3 (RGB) = ***17.7 Million*** combinations of RGB

(RAW) 16 Bit: 65,000+ values of each color x 3 (RGB) = ***281 Trillion*** combinations of RGB

- ## What is an .xmp file?

It's a separate ("sidecar"), tiny, glorified "text" file that contains "metadata" – *you never need to directly open it*.

Think of it as the "instructions" for all of that RAW information (which is never directly "changed"). *It's generated as soon as you make any "modifications" to your RAW file, and saves those "instructions" in the same folder as your RAW file.*

A few things to remember:

1) - If you back up your RAW file, back up your .xmp file, too; it's in the same folder/location as your RAW file.

2) - If you're working in **"Bridge"** and can't see the .xmp file, simply go to *"View"* Menu -> *"Show Hidden Files".*

3) - If you want to start over with your original "as shot" RAW capture, simply "trash" the .xmp file (very rare!).

- ## If your Camera shoots, RAW + JPG, then you should do so ...

It takes up little in memory, and gives you a quick "look-see" image that's been "processed" for contrast, color, etc. (albeit by a computer chip!). *Oh, and I frequently hear folks say "My JPG looks better in Bridge or Lightroom!" - - read on, and you'll never believe that again!*

Adobe Camera RAW Plug-in (ACR) to Photoshop Workflow

Adobe Camera RAW plug-in (ACR) to Photoshop - what should be done in each program?

- Generally, I'd suggest that you make as many global Hue, Saturation and Brightness corrections as you can in the *Adobe Camera RAW plug-in* (ACR), **following the "Goals" shown below.**
- Further, I'd also suggest doing **ALL** contrast adjustments, localized corrections of any kind, "fine-tuning", cropping and sharpening in Photoshop - you can then take advantage of the power of adjustment layers and layer masks, "fine-tuning", cloning, cropping, sharpening, and much more.
- While it's true that you'll spend a bit more time in your overall Photoshop Workflow by shooting in RAW, it's really not that much more - *you'll probably spend a lot less time in Photoshop by spending a few more minutes in ACR first* **– and the results are truly worth it**!

…so, the four ***"Goals"*** are to bring your final RAW image into Photoshop:

- Slightly **Dark or Under-Exposed - -** *It's easier to lighten in Photoshop …*
- Slightly **Low or "Flat" in Contrast - -** *It's easier to increase your contrast in Photoshop …*
- Slightly **Over-Saturated - -** *It's easier to de-saturate in Photoshop …*
- Best Overall **Color Balance** - - *You can "fine-tune" individual areas in Photoshop …*

- **Why these four "Goals", you ask?** Following these 4 "Goals" will bring LOTS of information from your digital capture into the "visible spectrum" (and hence your Master File in Photoshop).
- Further, it provides "headroom", or a "margin of error" – *it's always better to have more information than not enough, and information is king in post-processing.*

*Keep in mind that by using these four **"Goals**" your objective is NOT to make a perfect image in ACR - which is what most people try to do, including Lightroom users in the "Develop" Module - and you simply can't (see blogpost on "Lightroom vs Photoshop? Wrong Question!") ...*

*By using these four **"Goals**", you'll take advantage of the strengths of both ACR and Photoshop in your overall workflow to end up with your final desired "killer" image (via your Master File).*

- **What are those strengths?** *ACR* is designed to get as much digital information as you can out of your digital capture, and *Photoshop* is the industry standard in using that information for the best possible (and most flexible) results.

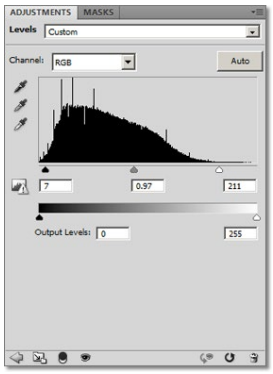
Points to Remember:

- There are actually quite a few advanced tools in the ACR Plug-in. *However, both in Workflow and the spirit of K.I.S.S. (Keep It Super Simple), you should NOT be using the more advanced functions* – it's quite possible that you, like me, will never use them!
- *Other than the "Edit" Tool (discussed later), I never use any of the various tools and brushes in ACR* (I call them "gee-whiz" functions) – 3 reasons:
  1) There's not a true ***"History"*** **Panel** to fall back on (like in Photoshop) if I don't like what I see.
  2) There are no **"Layers"** in ACR.
  3) Photoshop does a *much* better job of doing what most of these "gee-whiz" functions in ACR do.
- You should strike a balance of time spent with your file in both ACR and Photoshop, using the strengths of each program. *Typically, I'll spend 20% to 25% of my "file" time in ACR, with the balance in Photoshop.*

Key Point: *The **Histogram** shows those pixels brought into the **"visible spectrum" of light** from your original "bucket" of RAW Capture.*

• By bringing your file from ACR into Photoshop following the four "Goals", **your histogram in Photoshop should reflect it** (depending on the subject matter, of course), with a bias of extra pixels to the left-hand side, similar to the Levels dialog box shown - *slightly underexposed, with plenty of "headroom" (room for adjustment), particularly in the highlights.*

• This will bring pixels from your RAW capture into the "visible spectrum" of light, and avoid digital "clipping". By the way, this concept is called *"Expose to the Left"* (feel free to run an internet search on it for more).

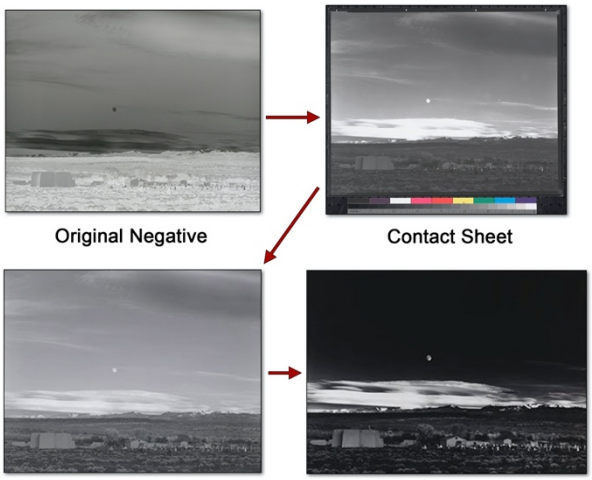


If it was good enough for Ansel Adams, it's good enough for me …

Ansel Adams was not only a ground-breaking photographer, but he re-defined what to do with your image AFTER you've shot it ("post-processing"). By doing so, he was a pioneer in turning printed photographs into an art form.

Using the **Zone System**, Adams & his contemporary **Fred Archer** were famous for exposing & chemically processing their negatives so that they were slightly ***low in contrast*** & slightly ***under-exposed***, which resulted in more detail in the highlights as well as the shadows – **just like 2 of the "Goals" stated above** *(the other 2 goals are exclusive to color images).*

Think of adjusting your RAW file in the same way – but instead of using a *negative & chemistry* like Ansel Adams & Fred Archer did, we're processing our RAW File (*the "negative"*) using Adobe Camera RAW (*the "chemistry"*).



"Moonrise, Hernandez, New Mexico"
from anseladams.com

More on the "Moonrise" Sequence from the previous page ...

- *Original Negative:* Using the Zone System, the initial capture is slightly underexposed, and retains detail in the highlights & shadows (low in contrast) - **think original RAW Capture.**

- *Contact Sheet:* The contact sheet reveals the low-contrast nature of the original capture & chemical processing technique - **think "first look" in Camera RAW.**

- *Initial Print:* Although low in contrast, the initial print shows all sorts of detail in the highlights as well as the foreground - **think "after adjusting" in Camera RAW.**

- *Final Print:* This famous print shows how much can be done with the original capture, truly giving it that majestic "pop" - **think "after adjusting" in Photoshop.**

To see an enlargeable version of the Ansel Adams composite on the previous page, visit this blogpost (near the bottom), or use the QR code at the right:

"The Philosophy of RAW"

https://blog.main.wattsdigital.com/?p=2215

ACR Plug-in to Photoshop Evolution:

- Once you've made all of the necessary adjustments to your RAW file following the 4 "Goals", press the *"Open"* button on the bottom right of the ACR Workspace. You'll notice 3 things will happen:

  1) - ACR Plug-in Closes

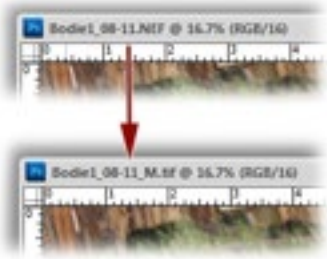
  2) - Your file opens in Photoshop

  3) - A *.xmp* file is generated, and saved in the same folder as your RAW file

- Notice the **Filename** and **File Extension's** evolution in Photoshop:

  1) When you bring the file into Photoshop from ACR, the file extension **(.NEF & .CR2** or similar) leads you to believe it's still a RAW file *(for the propeller-heads amongst us, it's not really – it's a 16-bit hybrid TIFF)*.

  2) Next, you save your image as a **Master File** *(with the "_M" at the end of the filename)* – your image shows up with the ".TIFF" or "PSD" extension, depending on what you select.



- Here's where you save your image to begin building your **Master File** – *see the Workflow Chart for more.* Now you can task your **Master file** (discussed earlier) for many uses – You can crop, sharpen and convert to 8-bit for printing on your inkjet printer or through a custom lab; you can reduce the size and PPI to save as a JPG for the web, and so on.

Using Camera RAW Filter for "Non-RAW" Files in Photoshop

Using Camera RAW Filter for "Non-RAW" files in Photoshop

You'll notice from the **Workflow Chart on page F** that I run everything (RAW and non-RAW files) through Adobe Camera RAW for maximum results – but opening a non-RAW file in the ACR plug-in can be problematic.

• Not to be confused with the Adobe Camera RAW (ACR) "plug-in" (which is technically a separate program), there is a "filter" in Photoshop CC that gives you access to some of the better features of ACR – *It's called the **Camera RAW Filter**, and works on your "non-RAW" files such as JPG, TIF, and so on.*

• I incorporate this Filter into my regular "non-RAW file" workflow (particularly for "problem" files), and I've drastically improved overall quality – *plus, I've frequently reduced the total amount of time I spend working on an image in Photoshop.*

Here's how to do it:

1) Use this Filter after you've opened your "non-RAW" file in Photoshop (JPG, TIFF, PSD, etc)

2) Create a **Background Copy** first – to do this, with your Background Layer active, go to "*Layer" -> "Duplicate Layer …"*

3) Make your **Background Copy** active by clicking on it once, then go to the *"Filter"* menu, then choose *-> "Camera RAW Filter …"* - *now follow the steps in the **Workflow Chart.***

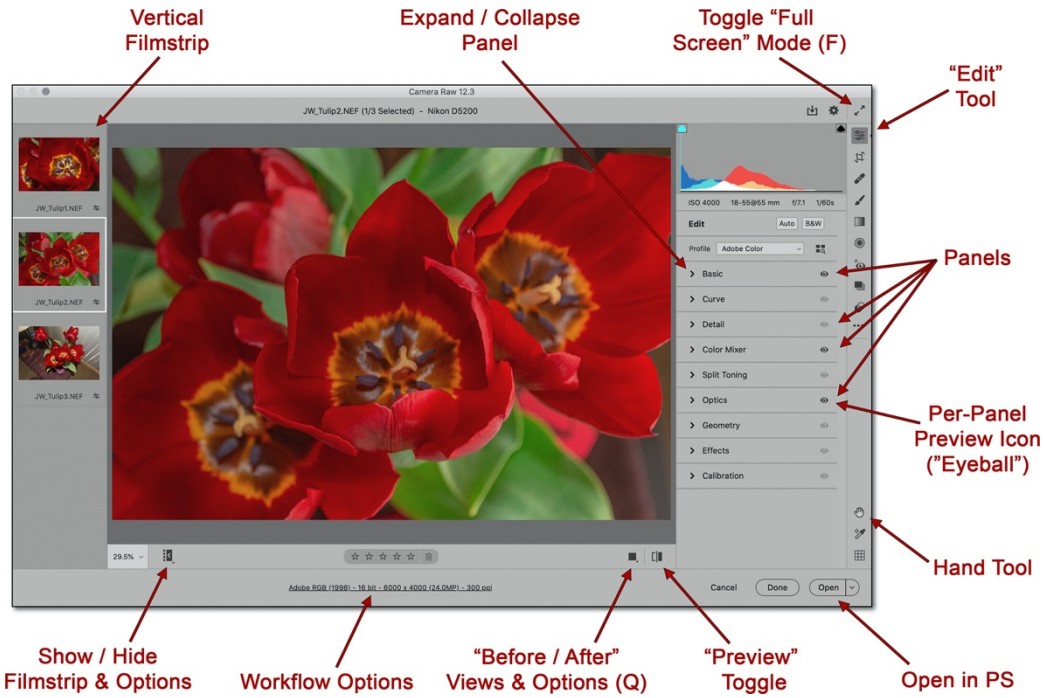
Minor Disadvantages

- It's limited to the bit depth of the original non-RAW file – If you open a JPG (8-bit), it will stay 8-bit.
- Lens corrections is unavailable – there are no lens profiles like in the ACR plug-in.
- Unlike the ACR plug-in (which generates an .xmp file), the adjustments you make in **Camera RAW Filter** are not saved - that's why you use it with a background copy so it's saved separately within your Master File.
- If you start with a JPG, you'll need to save your final version as a TIFF or PSD, as JPG's cannot be saved with Layers.

The ACR Workspace

Accessing the ACR Plug-In:

The easiest way to access the **Adobe Camera RAW (ACR) Plug-in** is to go to the *"File"* menu → *"Open…"* in Photoshop – *Choose a **RAW file**, and the **ACR Plug-in Workspace** will automatically open.*



Set your Preferences:

1. **Settings:** – If necessary, click on the "gear" icon in the upper right to access. *But I'd recommend leaving everything at the default settings.* When you need to change your *"Workflow Options"* (also available in the "*Settings"* menu), simply click on the area shown instead in the graphic above.

2. **In the *"Workflow Options"* Menu**, choose:

   - *"Adobe RGB (1998)"* for *"Space"*
   - *"16-Bits/Channel"* for *"Depth"*
   - For *"Image Sizing"*, uncheck *"Resize to Fit"* -- This will give you a file equal to the native size of your camera sensor: It's better to use Photoshop, not the RAW plug-in, to enlarge your image to the desired size, as the sharpening algorithm in Photoshop is so much better.
   - *"300 pixels/inch"* for *"Resolution"*.

   Unless you have RAW files from more than one camera, you'll only have to set this once.

ACR Workspace features *(shown clock-wise in diagram on previous page):*

- Click on the **"Expand / Collapse Panel"** icon to open & close *"Panels"* – – If necessary, you can edit the *"Panel"* behavior in *"Settings -> General"*: I use the default "Single Panel" mode, as only one *"Panel"* is open at a time, and the others close – WAY less clutter!

- **Toggle Full Screen Mode:** to avoid distractions in the background of your screen, click on the double-sided arrow icon in the upper right to expand – or use the Speed Key **"F"**.

- If you follow the Goals of RAW file enhancement, you'll need only **one *"Tool"*** (**the *"Edit"* tool**), and **four essential *"Panels"*** (shown with arrows in the diagram on the previous page).

  You can pretty much ignore the other "*Tools"* & *"Panels"- - it's "gee-whiz" stuff, and* more than likely you'll never need them. Besides, you can perform these functions in Photoshop (using your Master File) with *dramatically* better results - Remember, K.I.S.S. (Keep It Super-Simple).

- The **Per-Panel Preview Icon** *(hereinafter referred to as the* **"Eyeball"***)***:** if a *"Panel"* is edited, then the **Eyeball** is highlighted - if it's grayed out, there are no edits in that *"Panel". For example:* in the diagram on the previous page, only 3 *"Panels"* have been edited.

- The **Eyeball** shows / hides the edits of the chosen *"Panel"* - just click & hold to see *"before",* and release to see *"after"*.

- **Toggle to Default Settings ("Preview" Toggle):** this shows before / after views of ALL corrections made to your RAW file – not just for an individual *"Panel".*

- **"Before / After" Views:** press & hold for options / preferences, click for your preferred view – side-by-side, top / bottom, etc. FYI, the Speed Key is ***"Q"***. *By the way, I rarely use this function - but if you do, you can make adjustments to your file while in this view.*

- **Filmstrip:** simply click the icon shown to hide / reveal the Filmstrip – OR, click & hold for options. This is a handy feature if you're processing multiple RAW files. I definitely don't use it all of the time, preferring instead to see my image a bit larger in the Workspace.

(Not shown in diagram):

- **Zoom Tool:** The Zoom Tool is the default cursor that shows up in your image. If you click on your image, it enlarges to *100%* – – click again, and it returns to *"Fit to View"*

- All of the most popular **Speed Keys** and **Navigation Tools** that are available in Photoshop are also available in ACR

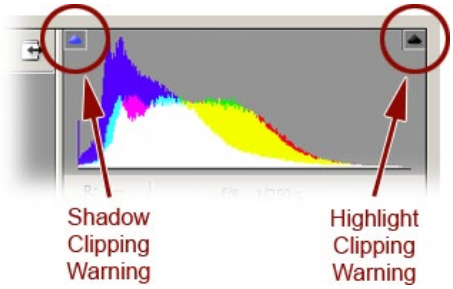
- **When all of your adjustments are completed in ACR**, click on the *"Open"* button. As mentioned earlier, *3 things happen when you do:*

  1) ACR closes,
  2) your image opens in Photoshop,
  3) an .xmp file is generated (and saved in the same folder as your RAW file

ACR in Action

Important: *as you work through this chapter, keep in mind the critical **"Goals"** discussed in Chapter 19.*

How to Check for Clipping:



Clipping is *the unwanted elimination and usage of digital information (pixels)*. Because a RAW file has an incredible amount of digital information, it needs to be optimized, and critical pixels need to be brought back into the "Visible Spectrum" (See Chapter 19). As you do so, you'll be using the **Clipping Warnings** in ACR, similar to the ones in **Levels** (Class 2).

By making the proper adjustments in ACR with the **Clipping Warnings turned on**, *you'll take advantage of the full range of tonal values available to you in your image - without "clipping" pixels.*

- **Toggle the Clipping Warnings on and off a few ways:**

  - Turn the **"Clipping" Toggles** on by clicking on the square boxes with the triangles in it in the upper corners of the histogram.

  - The square box on the **left** will activate the *Shadow Clipping Warning*, and the square box on the **right** will activate the *Highlight Clipping Warning*.

  - You'll know that the **clipping toggles are active** when the small box has a **black pinstripe** around it.

  - You can also hold down the *"Option"* key in Mac *(" Alt"* key in Windows) while adjusting the appropriate sliders in the **"Exposure / Contrast"** group (discussed shortly)

- **To Correct for Clipping**: With the Clipping Warnings activated, move the appropriate sliders in the **"Exposure / Contrast"** group (discussed shortly) until the clipping masks disappear (or as close as you can, if it's not possible to completely eliminate clipping).

- **Highlight Clipping** is typically shown in red, and **Shadow Clipping** is typically shown in blue.

About the Panels:

There are only 4 *"Panels"* that I use on a regular basis, each described in detail below. You can pretty much ignore the other *"Panels"- - it's "gee-whiz" stuff, and* more than likely you'll never need them. Besides, you can perform these functions in Photoshop (using your Master File) with *dramatically* better results - Remember, K.I.S.S. (Keep It Super-Simple)!

1) The "Basic" Panel:

The **"Basic" Panel** is where you'll do the vast majority of your work in **ACR** by moving the **Adjustment Sliders.**

- It's important to get in the habit of making **small adjustments at first**, then using the *"Preview"* toggle to see your results as you go along.

- You'll notice that the horizontal line that forms each slider is a **visual representation** of what that slider can accomplish, color and density-wise. For example, the *"Exposure"* sliders' horizontal line goes from dark to light, the *"Tint"* sliders' horizontal line goes from green to magenta, and so on.

- Photoshop has grouped the adjustment sliders in the *"Basic"* Panel into **4 groups**, by function:

1) Exposure / Contrast Group
2) Color Balance Group
3) Edge Sharpness Group
4) Color Intensity Group

- **Start by adjusting the "Exposure / Contrast Group" FIRST in the *"Basic"* Panel** - - As discussed previously*, it's imperative to work on each group in the order shown above*: Exposure /Contrast should be adjusted first, followed by the Color Balance – not the other way around! **See the Workflow Chart.**

- There are 3 controls at the top of the *"Basic"* Panel: "**Auto", B&W"** and **"Profile"** - *in the spirit of K.I.S.S., I strongly recommend you IGNORE all 3 controls, and leave at their defaults.*

The "Exposure / Contrast" Group:

- **Exposure:** This affects mostly *the mid-tones* of your image. Move to the left to darken your image, and to the right to lighten.

- **Contrast:** I rarely use this slider - You'll get better results by adjusting your final contrast in Photoshop. I generally leave it at the default settings - *or, more than likely, even **reduce** the values*.

- **Highlights:** This slider will recover highlights that are washed out. Move the slider to the left to increase the highlight detail.

- **Shadows:** Move the slider to the right to open up shadow detail.

- **Whites:** This slider will recover extremely bright details. I use it after using the Highlights slider to "fine-tune" - but don't let your whites get too "muddy" or gray!

- **Blacks:** Move the slider to the left to increase the amount of black in your image. *Be careful with this one* --It's easy to block out shadow detail if you use too much of it.

The "Color Balance" Group:

- **White Balance:** *It's been my experience that you get better results with manual adjustments – but you can use these "presets" as a guide*. These are presets for the *"Temperature"* and *"Tint"* sliders, discussed below. From the drop-down menu, you can choose from a number of presets. This will also give you an idea of how the "*Temperature"* and *"Tint"* sliders work and interact. Once you move any slider manually, this box changes from "*As Shot*" to *"Custom".*

- **Temperature:** Move this slider to the right to warm up the color of your image (adds a yellow cast), and move it to the left to cool your image down (adds a blue cast).

- **Tint:** Move the slider to the right to increase the overall magenta bias, and to the left to increase the overall green bias.

The "Edge Sharpness" Group:

- **Texture:** This can make up for the inevitable failure of digital capture challenges with sharpness - it also increases Contrast, so be careful! 10 to 15 units are usually more than enough to get the job done.

- **Clarity & Dehaze:** I ***NEVER*** use these sliders - both of these are also "edge sharpening" tools, like **Texture**. Consider **Texture** to be a f*ine* adjustment, **Clarity** to be a *medium* adjustment, and **Dehaze** to be a c*oarse* adjustment. Both of these controls radically increase the contrast, which defeats one of the "goals" discussed in Chapter 19 - bringing your RAW file into Photoshop *low in contrast.*

The "Color Intensity" Group:

- **Vibrance:** This is "Saturation on Steroids", preferred to Saturation below. It's not unusual for me to add 30+ units.

- **Saturation:** I rarely use this, preferring the *Vibrance* slider above instead.

---

2) The "Color Mixer" Panel:

This functions similarly to the *"Hue / Saturation"* Adjustment Layer, discussed in Class 2.

Options: you'll notice that there's a drop-down menu called *"Adjust"*, which gives you the choice of either an *"HSL"* or *"Color"* mode. *You'll get the same results, regardless of which mode you choose.* AND – if you make changes in one mode, those changes show up in the other mode.

- **If you choose "HSL"** – – this has separate tabs for *Hue, Saturation, & Luminance* – with the eight colors in each tab. Think of it this way – *choose which tab you need first (H, S or L), then adjust your particular color(s) within that tab.*

- **If you choose *"Color"*** – – the HSL controls are conveniently grouped together in whatever Color you've chosen. This is really handy if you only need to adjust the HSL of a particular color. Think of it this way – *choose the Color first, then adjust the HSL for that Color only, all in one convenient place.*

3) The "Optics" Panel:

Under the *"Profile"* sub-tab, choose *"Remove Chromatic Aberration"* and *"Enable Profile Corrections"*. On newer cameras, the profile for your lens should automatically be chosen - you can, if you wish, check the profile details by clicking on the triangle to the right, but it's usually not necessary.

I'll generally apply the profile, mainly because of parallax correction & how it opens up and evens out the corner density / fall-off. There are a few instances where I wouldn't apply it: images from a specialty lens (such as a fisheye, etc.), or perhaps I just like the image "as-is".

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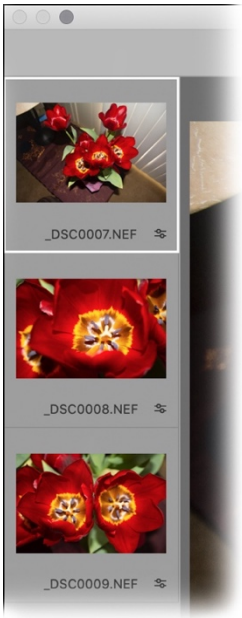
4) The "Detail" Panel:

Adjust Noise Reduction as necessary – rare for low ISO images, necessary for high ISO images (over 1600+, depending on the camera). Start with low values (10 to 25) using the" Luminance" Slider, and adjust at 100% magnification / enlargement.

Personally, I've found **Topaz DeNoise** (https://topazlabs.com/denoise-ai-2/) to be a much better product, and rarely use the Noise Reduction built into Photoshop.

Processing Multiple RAW files



If you open multiple RAW files at the same time, the *"Filmstrip"* opens on the left side of your workspace (or bottom, depending on your *"Filmstrip"* options). *You'll see thumbnails of your RAW files.*

- Clicking on a thumbnail highlights it, making it the **"active" image.**
- Once all your adjustments are completed, and BEFORE pressing the *"Open"* button at the bottom-right, right-mouse click on any thumbnail and choose *"Select All"*. All of your images should be highlighted.
- If you only select only one image and press the *"Open"* button, that image opens in Photoshop and closes ACR. Don't worry about all of your work in the other images – *an .xmp file is generated for each of them.*

Link to free Online Meetups

Join us for FREE live & online Meetups, including one specifically for "RAW Fundamentals" - - in these Meetups, *you'll see methods taught in this book "come to life"!*

https://www.meetup.com/San-Diego-Photoshop-for-Photography/

The ACR-to-Photoshop Evolution Shown Visually

If a picture is worth a thousand words, then this series of screengrabs of two different images will visually show you the evolution from the Original RAW Capture, to the Optimized Master File in Photoshop:

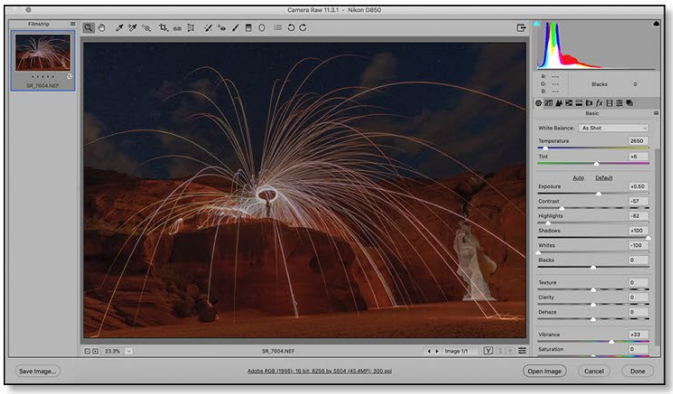
This image is the original RAW capture opened and un-edited in ACR. *See the Workflow Chart, "Open File in ACR", in my book.*

1

Original RAW File in ACR

This image is the RAW capture optimized in ACR following the "Goals", ready to open in Photoshop *See the Workflow Chart, "Optimize File in ACR", in my book.*

2



Optimized RAW File in ACR

This image is the optimized Master File in Photoshop, ready to be purposed for print, web, etc. *See the Workflow Chart, "Optimize Master File in Photoshop", in my book.*

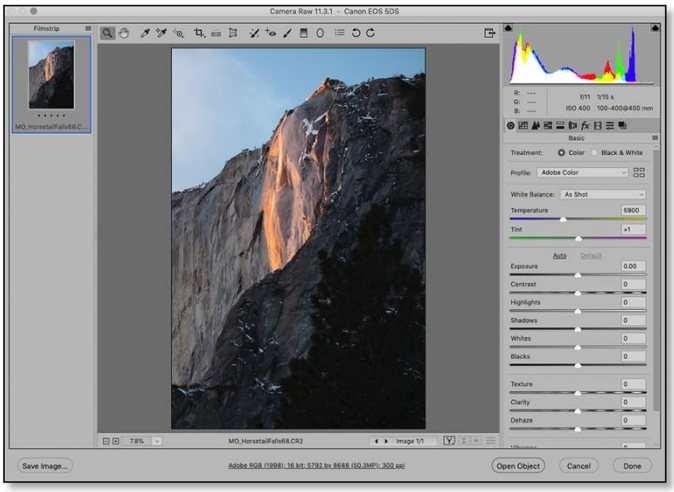
3

Optimized Master File in Photoshop

© 2019 Images Courtesy of Stephanie Rudd

This image is the original RAW capture opened and un-edited in ACR. *See the Workflow Chart, "Open File in ACR", in my book.*

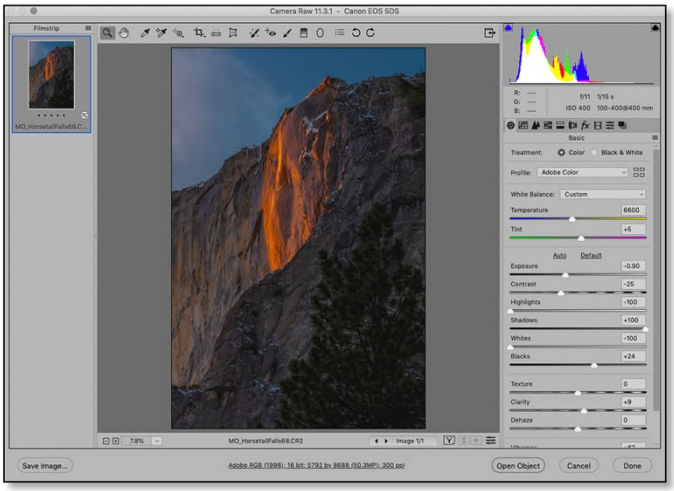
1



Original RAW File in ACR

This image is the RAW capture optimized in ACR following the "Goals",, ready to open in Photoshop *See the Workflow Chart, "Optimize File in ACR", in my book.*

2



Optimized RAW File in ACR

This image is the optimized Master File in Photoshop, ready to be purposed for print, web, etc. *See the Workflow Chart, "Optimize Master File in Photoshop", in my book.*

3

Optimized Master File in Photoshop

© 2019 Images Courtesy of Mark Oshenduszko

Optimize RAW File in ACR *(Section 2 of primary "Workflow Chart")*:

A) Open your RAW file in ACR (or your "non-RAW" file in Camera RAW Filter in PS)

B) Adjust the *"Optics"* Panel (Except Camera RAW filter) - *Pg 14*

C) Adjust the *"Basic"* Panel – Exposure and Contrast first, then Color - *Pg 12-13*

D) Adjust the *"Color Mixer"* Panel - *Pg 13*

E) If necessary, adjust the *"Detail"* Panel for Noise Reduction - *Pg 14*

F) Open in Photoshop (except in Camera RAW Filter in PS)