

Working with Raw files

Q:

I'm still a little confused about the process of working with RAW. So, after you take a photo in RAW, you edit it (if needed), is that right? And then after you edit it, you have to convert it to JPEG in order to get it printed? If this JPEG conversion requirement is the case, then don't you end up losing the extra data that RAW provides? Thanks much! Laura Holley

A:

Raw files are proprietary data formats created by each camera manufacturer to support its own brand of cameras. For example, Canon started with .CRW and now uses .CR2 while Nikon has .NEF and .NRW. The Olympus format is .ORF and Pentax has .PTX and .PEF. Sony has three formats, namely .ARW, .SRF and .SR2. Many of these formats are actually based on the .TIFF data structure, often with proprietary header data.

While the list goes on, the important thing to realize is that the data structure for these files is not published. In response Adobe has created .DNG, their open-format wrapper structured on the .TIFF 6.0 format.

People tend to avoid working with Raw files because the benefits are misunderstood or they see Raw files as being an extra step in their digital photography workflow. For either reason they are losing out on the opportunity to create significantly better images.

When shooting in Raw mode, the full sized Raw settings is preferable for cameras that permit several sized Raw files. Capturing all the potential data will increase your ability to make adjustments and make tighter crops later on.

Once you have downloaded a Raw file, it needs to be opened in a Raw editor that supports the particular type of Raw format. Each camera manufacturer provides software that can perform this feat, as do many third-party software providers.

Adobe has Adobe Camera Raw (ACR), now in version 6 to support Photoshop CS5, with earlier versions supporting prior versions of PS CS. You can easily tell which ACR version supports a particular version of CS by adding "1" to the CS version. Do not upgrade your ACR software beyond its whole number range, for example ACR 6 does not work with PS CS4, only ACR 5.x does.

Other software programs edit Raw files, including Photo Mechanic, ACDSee, C1, Bibble, SilverFast DCPPro, SharpRaw, DxO, and FastStone Image Viewer. All these third-party products, including ACR, vary in their degree of support for handling different Raw formats. Some handle only those from the larger camera manufacturers, while others, such as Adobe, regularly update their software when new cameras that support tweaked Raw formats are released. Some products, such as Photo Mechanic have the ability to work with new Raw file versions without the need to wait for updates, as Photo Mechanic was able to read my Canon 5D Mark II and Canon 7D Raw files without need of an update. So I used PM while waiting for Adobe to publish their ACR 5DII and 7D file support downloads.

Now that we have covered the background to some degree, let's directly address the question at hand. Once downloaded to your computer, a Raw file has to be opened in compatible software and converted to .TIFF or .JPG formats for printing, most often .JPG.

Before the conversion you will probably find it beneficial to make some exposure, saturation, contrast or other editing adjustments. Here is where Raw files shine. Since they contain ALL the data that can possibly be captured by your camera's sensor, there is more data to work with when making adjustments. To prove a point, if I take a large .JPG file with my 21 Megapixel Canon 5D Mark II camera, it will probably be around 7MB. If I take a large Raw file with the same camera, the file could range all the way up to 25MB – over three times the size of the large .JPG file.

Increased tonal range and other benefits come with this extra data. Therefore you are able to make a greater range of exposure adjustments (over or under) than you can make with a .JPG file. Color temperature and color cast adjustments also have a broader scope, and are often more realistic when done in Raw as opposed to

.JPG files. At the end of your Raw editing process you will wind up with a superior image, as opposed to just editing the same image in .JPG.

You have to convert the image to .TIFF or .JPG, and yes, you do lose some of the quality when compressing the Raw file to a .JPG format. However, since you started with a superior image, the resulting .JPG is usually vastly superior to having just shot in .JPG format in the first place and edited that file. Plus, there is an important issue here, by shooting in Raw versus .JPG, you will be able to rescue more poorly exposed photographs.

The extra step of converting Raw files to .JPG to print them is offset by the superior final product, the greater ease of making adjustments and the ability to salvage files that would be unusable if they were shot in .JPG format to start. Even the costs for more memory cards and more hard drive storage space are offset by the aforementioned benefits.

Shooting in raw, coupled with the ability to properly edit file, will take your images to a whole new level.

Answer by Ted Salamone
20/20 Photo & Video
919 926-7500
ted@2020photo-video.com