

Topic 4 - Photoshop File Formats

Learning Outcomes

In this lesson, you will learn about the file formats in Adobe Photoshop. By familiarizing yourself with these file formats it will give you more flexibility when editing your work. By the end of this lesson, you will have revised the major differences between RAW, JPEG and Photoshop or PSD files.

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Photoshop File Formats

When working with photographs in Photoshop, there are a number of file formats to be aware of. They can be split up into three areas of our work flow, and if we think of them in this way, it makes our understanding of files in Photoshop much easier.

- We have our **original files** or photographs that we have captured with our digital camera.
- We have our **working files** or Photoshop files.
- Finally, we have our **output or final files** for specific devices.

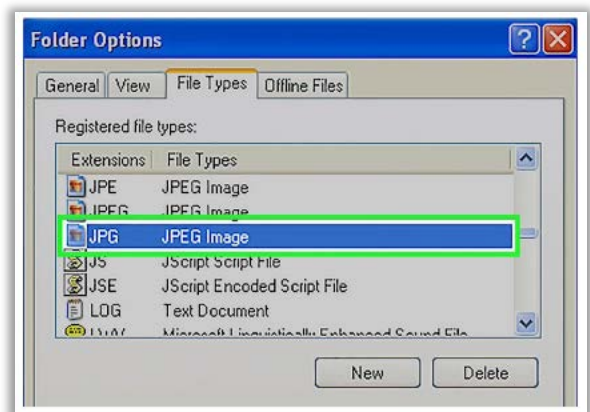
Original Files

Most of you will already know this, but when we begin to work on a photograph, it will more than likely be a JPEG or RAW file.

JPEG file is the most widely used file format in the world of photography because they have been the default file format that many devices

use for quite a while. Our phones, our cameras and computers can handle them quite easily. JPEG files are small, which enables you to store a large number of photos on a single device or a single card, and they can be written to those devices very quickly.

However, there is a trade off when using JPEG files. In order to decrease the size of a photograph, the JPEG file format throws away, or deletes information, through a process called lossy compression. Because of this the quality of a JPEG file can range greatly, depending on how much information is thrown away. On most smartphones or mobile phones this can be an issue as we usually don't have much control over how much compression we apply to our photographs.



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Although smartphone cameras are becoming more and more powerful all the time, many higher end DSLR cameras will provide us with more quality levels to choose from. The highest quality setting, which has the lowest level of compression, will probably be unnoticeable to most people, even some photographers. However, these files will have significantly less flexibility when making adjustments, such as brightening shadows, or decreasing vibrance, when you bring in a photograph for post processing. Because of this, when possible, always try to shoot in a RAW file format, rather than this lossy compression format like JPEG.

RAW is a generic term for a minimally processed file. The big difference between JPEG and RAW files is that the RAW file format contains all of the data that the sensor on our camera captured. RAW files use a different type of lossless compression so that the quality of the image is not compromised. This gives RAW files significantly more flexibility when making edits, and enhancements to our photographs, because we have more information to work with.

Camera manufacturers usually have their own branded RAW file formats. Because they're all written differently, the extension for these files will be different, so this is something to look out for. Nikon uses .NEF file extensions and Canon uses .CRW file extensions, and they both fall under the generic term of RAW files.

The DNG format, or the digital negative format, is another RAW file format, but there is a difference in that it is not exclusive. Adobe created the DNG format as they aimed for DNG becoming an archival format for all digital images. Any RAW file or photograph can be converted to the DNG file format using Adobe Lightroom, or Camera Raw another application in the Creative Cloud, or you can also use the free Adobe DNG converter.

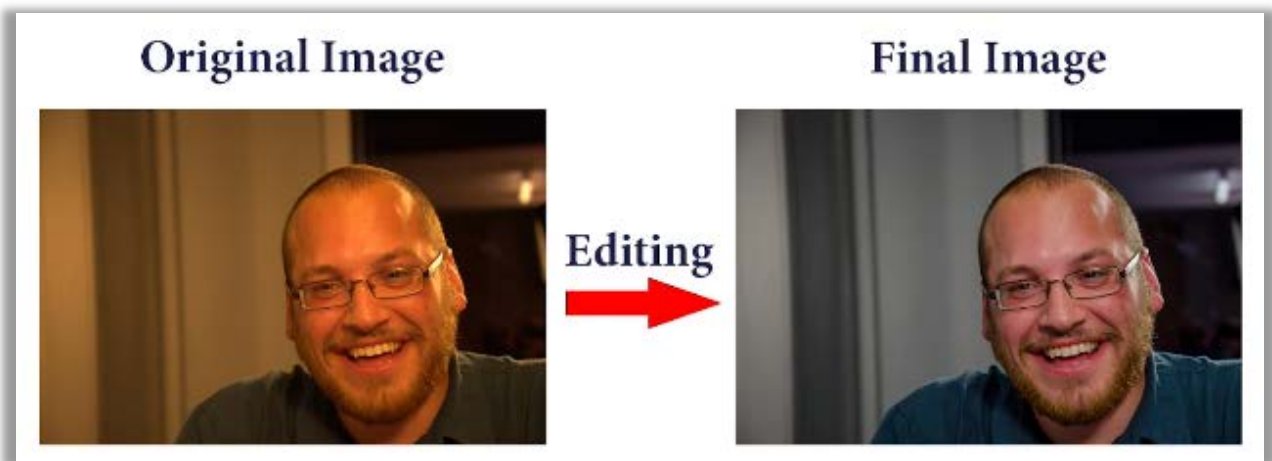


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Working Files

Working files or Photoshop files, will most likely be your multi-layered, retouched and composited images or designs that you create in Photoshop. They are used when you're saving your multi-layered documents from Photoshop as either PSD or TIFF. Saving in either of these file formats means that you can save all of the elements that you create in Photoshop including layers and masks, types, shape layers, smart objects, and more. Some photographers will save as TIFF but most photographers save their work as PSD.

Output/ Final Files



We think of output/ final files when we have our editing done and we want to export or share our work. To reduce file size, these file formats will usually flatten and compress photographs, making it much easier to upload or transfer files at a faster rate. Exporting or saving a copy of our file, ensures that we can return to our working file if we need to make changes to an individual layer or maybe we need to increase the brightness at a later time. JPEG is very common when saving files that will be viewed on a screen, such as a mobile phone or a computer, especially when posting online to social media platforms such as Facebook, Twitter or Instagram. This comes down to JPEG's ability to create small files that download quickly.



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The PNG file format is another very popular file format and it can be used to save graphics for the web that require a single layered file but still need to display transparent zones. For example, PNG files are perfect for logos because the PNG format will render smooth edges around the transparency. PNG is ideal for graphic design or any other flat artwork rather than an actual photograph.

The GIF file format is also a single layer or a flattened file format. It has lossy compression applied, but in a different way than JPEG. To save as a GIF file, you have to convert your image to a different color mode called index color. Index color only allows a total of 256 colors in the image. This file format is also commonly used for graphics like logos. Although the GIF file format supports transparency, it only supports one level. This simply means that if you have a circular logo, the edges are going to look jagged if you save it as a GIF. On the other hand, GIFs have the unique ability to contain animations within them, so they are often used for creating ad banners and other short animations to view on screen.

Photoshop PDF File Format

The Photoshop PDF file format is a really convenient format when you need to distribute a secure document. Think of it like a locked briefcase. For example, if you need to send your client some images of the work as it is in progress. Sometimes, these photographs include unreleased products, and so no one in the public domain should have access to them. You can set a password to protect the file from being opened or from being printed by someone who shouldn't have access to it. However, the recipient will be able to view the PDF in the free Adobe Acrobat Reader.



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What have we learned in this lesson? A Summary

In this lesson, we have reviewed the most important file formats that you'll encounter when using Photoshop – JPEG, RAW, PSD, PNG. We've also looked at why you might want to choose one file format over another.

