All About Images

Search

Focuses on many common image questions in regards to image resolutions, resizing images, file types, vector and raster images, scanning, saving and more.

RGB and CMYK

RGB

RGB or Red, Green and Blue, are additive colors and are what we see when we look at our computer monitors and televisions screens. The tiny dots that make up our displays are composed of RGB information. The RGB color space is very large and is ideal for images that would be used for web and presentation purposes.

CMYK

CMYK or Cyan, Magenta, Yellow and Black, are subtractive colors are the standard ink colors for printing. This means that whenever we print an image, we are using CMYK inks to produce the print. Many professional printers or publishers require that images for print must be converted to CMYK before being printed. This is because the RGB color spectrum (displays) is much more wide then the CMYK spectrum (ink) and during conversion from RGB to CMYK, the appearance of certain colors may look different.

To change the color mode using Photoshop, go to Image > Mode and select a desired color mode.

Image Transparency

What does it mean to save an image with transparency?

Notice the two images below:

- The image on the left was saved using a file format that did not support transparency and displays with an unwanted white background.
- The image on the right was saved using a transparency supported format and looks very crisp and clean on this colored background.

File types that support transparency: TIFF, PNG, GIF

Native File Fomats

Native File Formats

Not only are there image formats, but many applications have their own native file format. It is important to understand that there is a difference between a native file types and an image file types.

An example of a native file type is a .PSD which stands for Photoshop Document. This file is created only by Adobe Photoshop and can retain information such as layers, adjustments, masks, and other Photoshop adjustments.

It is always good to save a version of an image in the native format if you plan to make future edits to the image, because the native file format will keep all editing information.

Image Editors

Adobe Photoshop - (.PSD)

GIMP - (.XCF)

Illustration/Vector Art

Adobe Illustrator - (.AI)

CorelDRAW - (.CDR)

Common Image File Formats

Common Image File Formats

There are numerous image file types out there so it can be hard to know which file type best suits your image needs. Some image types such as TIFF are great for printing while others, like JPG or PNG, are best for web graphics.

The list below outlines some of the more common file types and provides a brief description, how the file is best used, and any special attributes the file may have.

TIFF (.tif, .tiff)

TIFF or Tagged Image File Format are lossless images files meaning that they will not lose any image quality or information (although there are options for compression), allowing for very high-quality images but also larger file sizes.

Compression: Lossless - no compression. Very high-quality images.
Best For: High quality prints, professional publications, archival copies
Special Attributes: Can save transparencies
Learn more about TIFF file types

Bitmap (.bmp)

BMP or Bitmap Image File is a format developed by Microsoft for Windows. There is no compression or information loss with BMP files which allow images to have very high quality, but also very large file sizes. Due to BMP being a proprietary format, it is generally deprecated in favor of TIFF files.

Compression: None
Best For: High quality scans, archival copies
Learn more about BMP file types

JPEG (.jpg, .jpeg)

JPEG, which stands for Joint Photographic Experts Groups is a “lossy” format, meaning that the image is compressed to make a smaller file. The compression does create a loss in quality but this loss is generally not noticeable. JPEG files are very common on the Internet and JPEG is a popular format for digital cameras - making it ideal for web use and non-professional prints.

Compression: Lossy - some file information is compressed or lost
Best For: Web Images, Non-Professional Printing, E-Mail, Powerpoint
Special Attributes: Can choose amount of compression when saving in image editing programs like Adobe Photoshop or

GIMP.

Learn more about JPEG file types

GIF (.gif)

GIF or Graphics Interchange Format files are widely used for web graphics, because they are limited to only 256 colors, can allow for transparency, and can be animated. GIF files are typically small in size and are very portable.

Compression: Lossless - compression without loss of quality
Best For: Web Images
Special Attributes: Can be Animated, Can Save Transparency
Learn more about GIF file types

PNG (.png)

PNG or Portable Network Graphics files are a lossless image format originally designed to improve upon and replace the gif format. PNG files are able to handle up to 16 million colors, unlike the 256 colors supported by GIF.

Compression: Lossless - compression without loss of quality
Best For: Web Images
Special Attributes: Save Transparency
Learn more about PNG file types

EPS (.eps)

An EPS or Encapsulated PostScript file is a common vector file type. EPS files can be opened in many illustration applications such as Adobe Illustrator or CorelDRAW.

Compression: None - uses vector information
Best For: Vector artwork, illustrations
Special Attributes: Saves vector information
Learn more about EPS file types

RAW Image Files (.raw, .cr2, .nef, .orf, .sr2, and more)

RAW images are images that are unprocessed that have been created by a camera or scanner. Many digital SLR cameras can shoot in RAW, whether it be a .raw, .cr2, or .nef. These RAW images are the equivalent of a digital negative, meaning that they hold a lot of image information, but still need to be processed in an editor such as Adobe Photoshop or Lightroom.

Compression: None
Best For: Photography

Special Attributes: Saves metadata, unprocessed, lots of information

Learn more about RAW file types

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