

Art Preparation Guidelines

This guide will show you the necessary steps needed to create a file suitable for commercial printing. The guidelines are universal for all applications and should be applied to any artwork submitted to us (see exceptions at end).

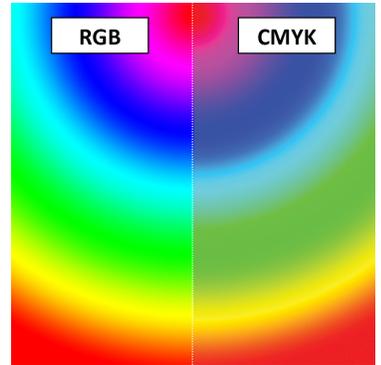
Color Mode

When setting up your document, it is imperative to choose the correct color mode for commercial printing. There are two color modes available: CMYK (cyan, magenta, yellow, black) and RGB (red, green, blue). There are also PMS (Pantone Matching System) colors, which are discussed on page 2.

One of the most common mistakes when setting up a document to print is creating the document in the wrong color mode. Commercial printing is done in four colors, CMYK. Through combining different levels of each of these four inks, most naturally occurring colors can be created. Each application has a different way to choose the CMYK color mode, but most applications used to create artwork for commercial printing WILL have an options available to change this setting.

RGB color mode is used for displaying colors on computer monitors and will not render the desired color when printed commercially. The reasons for this are: 1. RGB has no black! On a computer screen, black is created by the absence of the other colors, but in printing, the black must be printed on the white paper to create black color. Did that blow your mind?! 2. The range of colors that RGB can create is much broader than that of CMYK. So if a color is chosen in RGB that can't be created in CMYK, that color will print very poorly.

Occasionally people will say "but it printed out on my desktop printer just fine and that uses CMYK inks." While it may be true, the drivers to desktop printers are designed specifically to interpret RGB colors into CMYK, and the software used by commercial printers is not.



Preparation of Photos for Commercial Printing

Another common mistake is not preparing photos correctly for printing. The two areas necessary to talk about here are resolution and color mode.

Digital cameras and cell phones take and display pictures in RGB, not CMYK. Therefore, in a picture editing application (like Photoshop or similar), the picture must be opened and the color mode changed to CMYK. After the file has been resaved in CMYK color mode, it can be used for commercial printing purposes. If this is not done, the picture may appear washed out due to the absence of black.

The second step is ensuring the resolution is high enough to be printed. Commercial printing requires very high resolution to print correctly (for your final product to have a nice, crisp photo), whereas pictures used for display on computer screens/phone screens can be very low resolution and still look great. In fact, for many internet applications, lower resolution is preferred because the file will use less memory and download faster. The opposite is true for printing - higher resolution means sharper images.

A picture displayed on the internet may look fine at 72 ppi (pixels per inch), but a minimum of 300 ppi is absolutely necessary for commercial printing. Computer screens display pictures at a much lower resolution than commercial printing.

Unfortunately there is no way to increase the resolution of a photo or image, so the photo must be initially taken at a high resolution. This should explain why in most cases you cannot "save image as" from someone's website and use it for printing purposes....it is most likely 72 ppi. Same goes for most Google image searches. If you must download an image through a Google image search, be sure to adjust the search tool size setting to "large". That will increase your chances of finding a higher resolution image.

Bleed

Bleed is used to describe when photos, background, or images are designed to go to the edge of the document. If you are setting up a document that has bleeds, follow the following steps that will make the document suitable for printing.

When designing the file, make sure to extend any image that will bleed at least 1/8" (.125") beyond the document's finish size. In order to produce your final product, we must print this bleed area, and then trim the document down to its final size. So if your final document size is 8.5" x 11" (and you add .125" to all 4 sides), we will have to print an image that is 8.75" x 11.25", then trim it down to 8.5" x 11".

You can create bleeds in a few different ways. The first way is to set up bleeds upon initial document setup. Adobe applications have bleed options during document setup; you can just enter .125" for all four sides.

Upon document export make sure the bleed setting is set to at least .125". This option will be available in applications used to create files for commercial printing. It is very important bleeds be added to the files we receive. 99% of the time it's impossible for us to add the bleeds to your document.

Unfortunately, if you're using an application that's not meant to create documents for commercial printing (PowerPoint, Word, Excel, Publisher, etc.) you shouldn't design your document with bleeds. These applications will not support bleeds, so there should always be white space at the edge of your document.

If you are not using bleeds: Due to small variances in printing and cutting, no important images or text should be placed within 1/4" from the edge (trim) of your document. This 1/4" area is considered a 'safe zone' and ensures that nothing important is trimmed off in the finishing process.

Use of PMS Colors

The Pantone Matching System is a set of colors for which printers can look up the specific ink mixture and recreate that color with accuracy. Applications made to create files for commercial printing will support the use of PMS colors, and there should be a specific palette for you to choose which PMS colors you would like to incorporate into your design. There are two common mistakes made when a designer is using PMS colors.



The first common mistake is when a designer would like to print in those specific PMS colors in which they designed, but the application will not export the file correctly to support PMS colors. Unless an application was designed to specifically support PMS colors, it **SHOULD NOT BE USED** to design artwork for commercial printing in PMS colors. For instance, although Microsoft Publisher will allow a person to choose a PMS color for design purposes, when that file is exported, the PMS color information disappears, and that PMS color is translated into either RGB or CMYK color mode. Microsoft

applications **DO NOT** support PMS color information – they cannot be used to print in PMS colors.

The second common mistake is when a designer wants to print in CMYK, but designs in PMS colors. If this is the case, the PMS colors **MUST BE** changed to CMYK before submitting artwork. If they are not changed, you may end up missing colors on your final product for the following reason: When a printer prepares for printing, they are only going to print in cyan, magenta, yellow and black. If you have sent over a file in CMYK plus PMS 185, the PMS 185 will most likely not print. To avoid this situation, make sure you use your application to change all colors to CMYK.

File Export

Most printers prefer to receive complete files, which they cannot alter. Although submitting files should be a simple process, unfortunately it can get quite confusing. A few simple guidelines can simplify the process.

We prefer to receive a print ready Adobe PDF file. The PDF file, if prepared correctly, will contain everything a printer needs to correctly process a file. To change your file to a PDF, in some applications you will be able to 'Export' to a PDF, and in others you will have to 'Save As' and choose PDF as the file type. To export a file to create a PDF file, please review the PDF settings when you export:

The quality of the PDF should be set to 'Press Quality.' This ensures the file carries high enough resolution to print successfully. Make sure any other resolution settings are at their highest settings. This

creates a large file, but it ensures enough information is included for commercial printing.

Make sure under 'bleed' settings at least 1/8" (.125") is included. No printer's marks are necessary (do not include color bars, registration marks, etc.)

There are other file formats that are suitable for printing, but the PDF is most helpful. If you are sending us a file in its native application, make sure the file is packaged with all fonts and links. Even though we may have the font you used, there can be many different versions of a single font. Please outline (or change to curves) all text. This prevents any font issues including font versions and text reflow. If you're sending a .jpg file, it must be exported at 300 dpi or greater and the color mode needs to be set to CMYK. When using .jpg files, PMS colors cannot be used.

If you are going to change text to outlines or curves, be sure to save your document with a different name first, so you can always return to your original document if changes are needed.

The only files we can accept in their native form are Adobe InDesign, Adobe Illustrator, and Adobe Photoshop. All other file types need to be changed to a PDF using Adobe Acrobat.

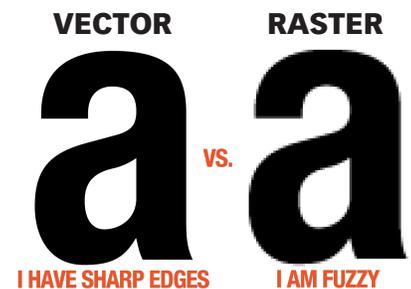
What's the Difference Between Vector and Raster?

This question is asked all the time and the answers can be as confusing as the names raster and vector themselves.

A *raster* image is made of up pixels, each a different color, arranged to display an image.

A *vector* image is made up of paths, each with a mathematical formula (vector) that tells the path how it is shaped and what color it is bordered with or filled by.

The major difference is raster image pixels don't retain their appearance as size increases – when you blow a photograph up, it becomes blurry for this reason. Vector images do retain appearance regardless of size, since the mathematical formulas dictate how the image is rendered.



Pros and Cons of Raster and Vector Images

Raster images are capable of displaying a myriad of colors in a single image and allow for color editing beyond that of a vector image. They can display finer nuances in light and shading at the right resolution. Vector images are scalable, so that the same image can be designed once and resized infinitely for any size application – from business card to billboard. Vector images are able to retain PMS color information.

Raster images cannot be made larger without sacrificing quality. Vector images cannot display the natural qualities of photographs. Raster images cannot retain PMS color information. Raster images are often large files, while vector images are relatively small. Raster images are used in web and print, vector images cannot and must be converted to a raster for web use. Vectors display at the highest resolution allowed by the output device, while rasters blur when blown up.

When Should I Use a Raster or a Vector?

Raster images are primarily used with photos, which is why Photoshop is a raster editing program. Adobe Illustrator, on the other hand, is a vector drawing program that automatically creates your vector formulas as you draw. Logos and other graphic elements are typically best created as vectors; while photographs are best left for rasters.

If you're not sure whether you should create a raster or vector file, follow this simple rule of thumb: If you're drawing something from scratch with only a few colors, go with vector. If you're editing a photo with multiple colors, go with raster. Many projects use vector drawings and raster images together – a brochure, for example, might include a corporate logo (vector) plus an image of happy customers (raster).

MOST IMPORTANTLY!

If you have any questions regarding any aspect of your artwork setup, don't hesitate to contact us. We are here to help guide you and make the process easier for you. 717-731-9456. kyle@konhaus.com