

# ARTWORK 101: FILES AND COLOR MODELS

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In this article we're getting back to basics. We're talking about the common artwork terms and color models referenced in design and customization of promotional products.

#### The Artwork

The two terms commonly associated with artwork include raster and vector.

*What's raster art and why isn't it preferred in promo?* Raster art is composed of millions of tiny square pixels that each contain information about one color. Together, these millions of pixels create a single image. Photographs and scanned images are examples of raster art. Unlike vector art that maintains the integrity (quality) of the image at all times, the small square pixels that form raster art become visible as you zoom in on the image (think "pixelated"). And while raster art files can be reduced in size, they cannot be enlarged without the image becoming blurry. Typical forms of raster art include JPG, PNG, and TIFF files.



Difference between painting with pixels (left) and drawing with vectors (right).

#### What is vector art and why is it ideal for promo?

Vector art is created using an illustration software program like Adobe Illustrator, which uses mathematical equations to create intricate, pathbased shapes that together create an image such as a logo. Every detail in the image—lines, curves, strokes of color—relates back to a vector path (or mathematically based instruction) that allows an image to be scaled larger or smaller without

sacrificing the quality of the image. This is ideal when printing a variety of media and sizes—from pens with a small imprint area to outdoor banners with a large imprint area. Typical forms of vector art include EPS, PDF and AI files.

Not sure if a file is vector or raster? Zoom in close and if the image and text starts to become blurry, you're working with a raster artwork file.

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**RGB** color model is used for digital images like logos formatted for websites, and is based on three colors: red, green and blue. The RGB color model adds and mixes layers of light to create a desired image to be displayed on electronic devices like computer and television screens. When printing material (tangible) items, we always work in CMYK, never RGB.

*CMYK* color model is based on four colors: cyan, magenta, yellow and key (black). Often referred to as 4-color or full-color process, CMYK allows for detailed color matching and gradients of color. The CMYK model subtracts and/or layers various intensities of cyan, magenta and yellow to achieve a desired result, making it possible to translate a given color or palette of colors, including PMS colors, into CMYK. It is used for printing materials like branded full-color drinkware and pens.

## The Color Models

Pantone, CMYK and RGB are the common color models referenced in design.

Pantone Matching System (PMS) is a color system that contains premixed inks that create a single solid color, also referred to as a spot color. While there are roughly 1,800 PMS spot colors, each color can be tinted (lightened) by adding white, toned by adding gray, or shaded (darkened) by adding black, bringing the potential number of PMS color variances into the millions.



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