
MANAGING FILE SIZE

Blue Label™

DIGITAL PRINTING

MANAGING IMAGES

Images often tend to be the biggest contributors to large file size for artwork. We've put together a few tips to help you manage overall file size as it relates to images.

1. Pixel-based artwork vs. Vector-based artwork

Pixel-based artwork, also known as raster images, are created with pixel-based programs. They commonly come in formats including jpg, gif, and png and are widely used in web applications. A pixel is the smallest single element on a display device. If you zoom in on a pixel-based image, it will be blurry (or pixelated).

Vector-based artwork, on the other hand, are created with vector software. Vector images are mathematical calculations from one point to another that form lines and shapes. If you zoom into a vector graphic it will always look the same.

The more pixel-based artwork in an Illustrator, the larger the file size will be. Be particularly careful with large or high-resolution pixel-based artwork. It is recommended whenever possible to use vector-based artwork to reduce file size.



2. Linked Images vs. Embedded Images

If you're planning on using pixel-based artwork or external images, you have two options for including the artwork in your file: linked images or embedded images.

Embedded images are actually contained within the Illustrator document at full resolution, thus being a primary contributor to larger file sizes. Linked images, on the other hand, remain independent of the Illustrator file, therefore keeping file sizes relatively small.

Tips for Linked Images

1. Most importantly, if you're using linked images, be sure to **include the original image files** when you send artwork to the printer
2. Ensure that if you move or delete a linked image or its folder, that you relink the file in Illustrator

Tips for Embedded Images

1. When using embedded images, be sure to **crop the image to only include the visible part** to keep file sizes to a minimum
2. If an update is made to an embedded image outside of Illustrator, be sure to reimport those images after editing them

RESOLUTION

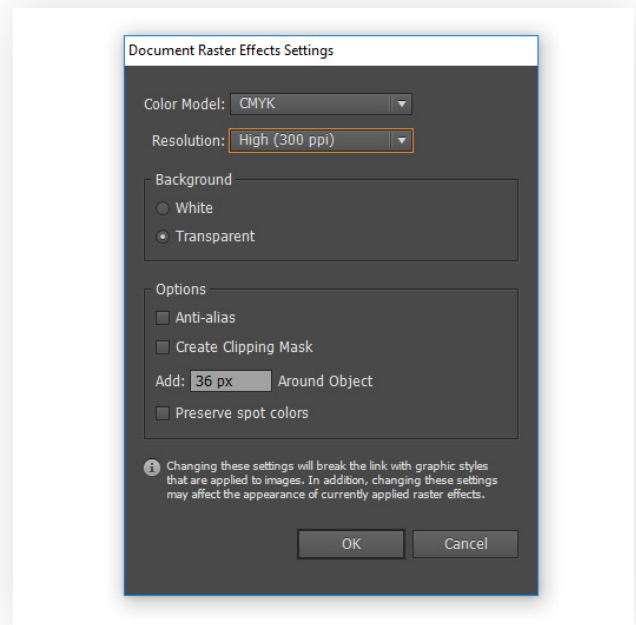
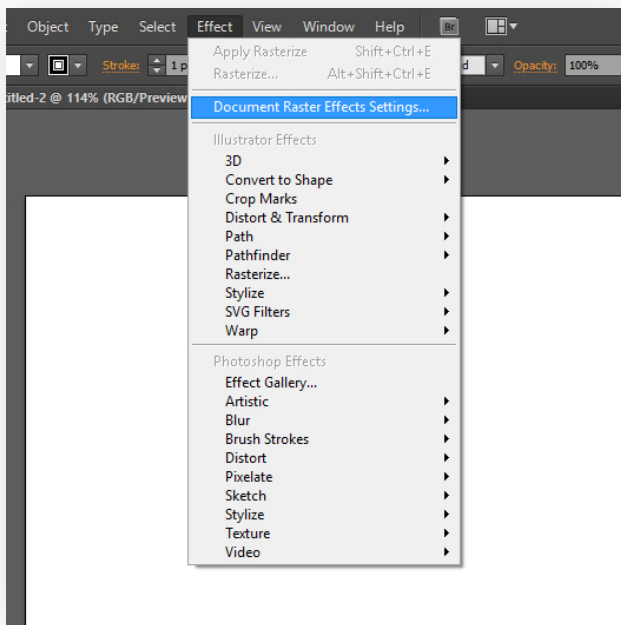
Resolution often comes into play when viewing or previewing artwork. It also becomes a factor when using pixel-based artwork.

1. Resolution of Raster Effects

When creating raster images, or in this case, raster effects in Illustrator, the program needs to know how large the pixels should be in the artwork. As you can imagine, the higher the resolution (measured in pixels per inch), the larger the file size.

When designing for print applications, it's important to ensure that a minimum resolution of 300 ppi is set. However, if you find that your Raster Effects Settings are currently set higher than this minimum, there is an opportunity to reduce the resolution to 300 ppi, therefore reducing the file size.

In Illustrator, this is achieved through this path: **Effects > Document Raster Effects Settings**



2. Designing to Specifications

One of the easiest way to increase file size in Illustrator is to set up a file to be larger than specifications, either in physical size or in resolution (DPI). Once again, it's important to ensure that **artwork is a minimum of 300 DPI**.

FILE CLEANUP

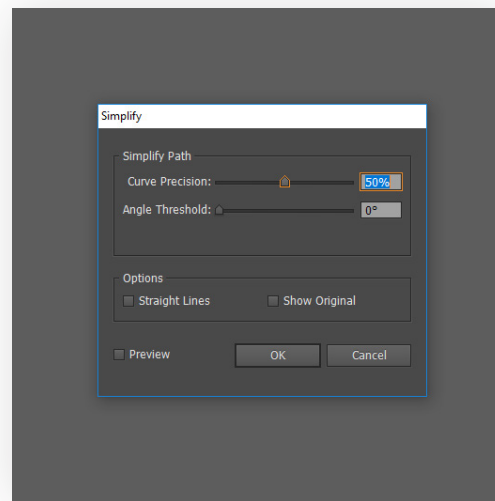
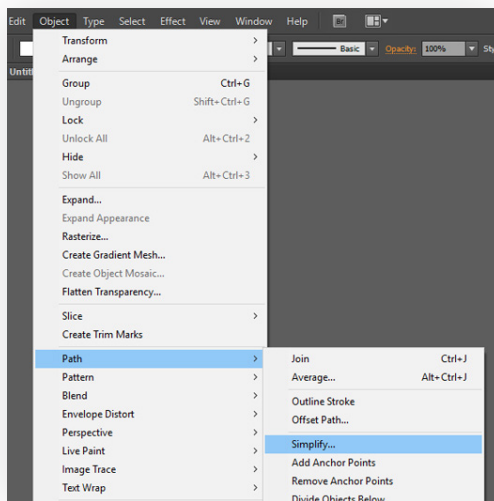
In the process of designing and building artwork, there is often an accumulation of unused resources, including images, swatches, styles, etc. During the design process or before delivering to a printer, it can be a good idea to clean up these unused resources.

1. Remove excess points in vector artwork

Believe it or not, the more points in a vector, the larger the file size. That means it can be beneficial to consolidate these points or remove excess points throughout the design process. A simple way to do this is to simplify the path:

Object > Path > Simplify

This can often be good enough for rough processing, but may not be ideal for final artwork. There are also programs that exist that can assist with the reduction of excess points in vector artwork.

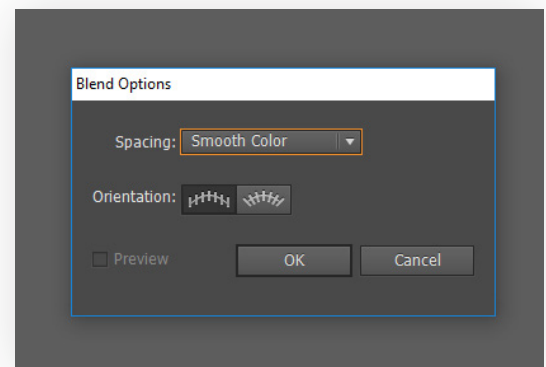


2. Reduce the number of steps of Blend objects

Blending objects in Illustrator can create and distribute shapes evenly between two objects. By default, Illustrator calculates the optimum number of steps to create a smooth transition. However, you can also control the number of steps or distance between steps by setting blending options:

Object > Blend > Blend Options

Be sure to choose a number of steps that doesn't lead to a significant decline in the quality of the object blend.



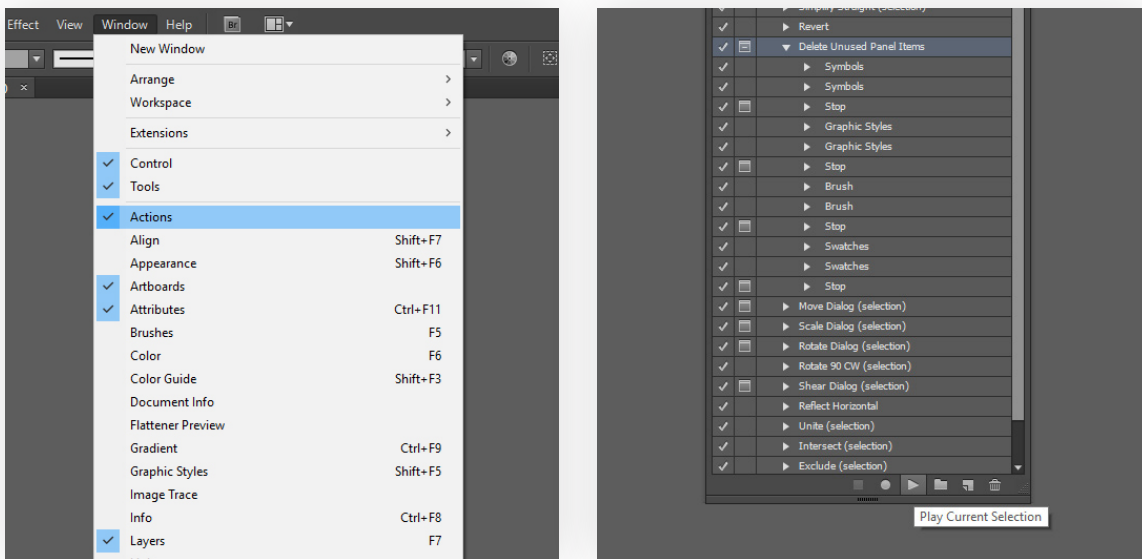
FILE CLEANUP

3. Remove unused swatches, graphic styles and symbols

Throughout the design process, there are likely design elements that are added or created, but in the end are unused. This can include color swatches, graphic styles, symbols and more. Illustrator makes it easy to save extra file size by deleting these unused elements through an **Action**.

The **Delete Unused Panel Items Action** will run through all unused Symbols, Graphic Styles, Brushes and Swatches.

Simply navigated to **Window > Actions** and identify the **Delete Unused Panel Items** action.



4. Reduce/remove unnecessary layers

One final element that you can clean up to further reduce file size is unnecessary layers. If you're able to combine layers or remove unused layers, this can help reduce file size.

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