

CS Art File Guide

① Preferred File Types - *Vectors* (Best Quality)



There will always be exceptions, but these 5 types of files yield the best quality for print and allow the Art Department to better assess the means for production.

A **vector graphic** is the creation of digital images through a sequence of commands or mathematical statements that place lines and shapes in a given two-dimensional or three-dimensional space.

*.PSDs are not vectors, but normally contain a file optimal for print.

② Secondary File Types - *Raster Images* (Standard Quality)



Raster file types like the ones above can be also be perfect art files, but only if they have a **High Resolution** (Image Dimensions) and **DPI** (Dots Per Inch)

A **raster graphics** or **bitmap image** is a dot matrix data structure that represents a generally rectangular grid of pixels (points of color), viewable via a monitor, paper, or other display medium.

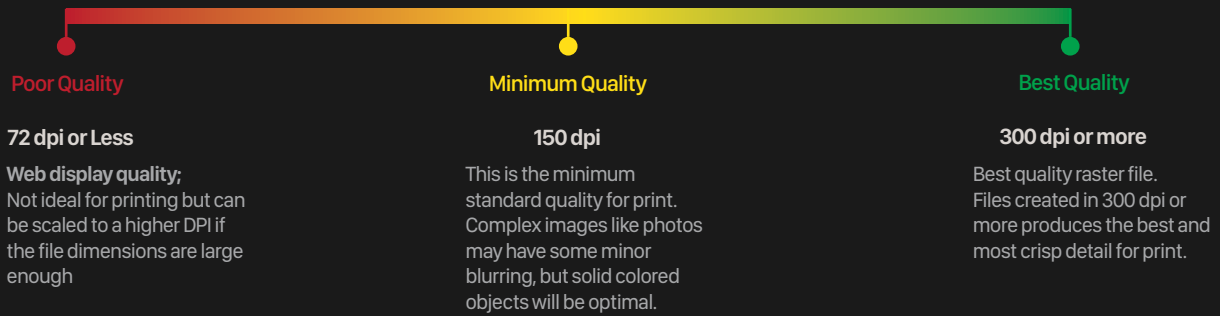
- **JPG** or **JPEG** - These are flattened where all pixels shown are merged together into a single layer. Photos are most commonly saved out as this type to retain quality and minimize file size.
- **PNG** - PNGs often contain **no** background which make them easy to manipulate and show on a variety of garments or subjects. In addition to no backgrounds, these are ideal files for preserving transparent or low-opacity elements.
- **TIF** - TIF files are used to save out full color files because of their capacity to store a wide range of colors. Because they are storing more data, they are often much larger in file size.

DPI - Dots Per Inch

In standard printing, such as an inkjet printer, the output is **300dpi**. (higher on more professional models) Printing in tiny dots, DPI tells the printer how many dots should print within one square inch. Therefore, the higher the DPI, the better the color range and quality of the overall print.

Visual Guide

DPI Meter



Raster Image Scaling

- Width (Inches) + Width (Inches)
← -/+ →



Raster image types **lose** DPI when being scaled up and **gain** DPI when scaled down. For example, a client may sometimes send a file at **150 dpi with a 7" width** but want to print it at 12" wide. However, when scaling the image to 12" wide, the DPI **decreases** to **87.5**.

This makes the file poor quality and could cause unwanted blurriness or low-quality prints.

← +/- →
+ DPI (Inches) - DPI (Inches)

Vector



Raster



Vector images are loss-less quality images which means the artist can scale the image indefinitely and the quality will remain the same.

Raster images, as seen on the right, lose quality and "pixelate" when scaled up higher than their present width or height. These rough edges shown can appear in the final print if the DPI is too low.