

Troubleshooting Raster Artwork

Hints & Tips for Creating Perfect Raster Artwork in Illustrator

File Formats

- o If you know that your service provider's print workflow supports native Photoshop documents and transparency, it is **OK to use .psd files** in an InDesign layout.
 - InDesign supports layers and transparency from Photoshop files as well as other features.
 - Note that many effects and blending modes in Photoshop **do not work well** in InDesign—flatten these layers before placing in InDesign.
 - Vector objects also do not translate correctly. To preserve them, save your Photoshop file as a **Photoshop PDF** and place that file into InDesign.
- o JPEGs can be used if your print service provides uses a PDF-based workflow and if images are NOT required to be converted to CMYK.
 - JPEG support for CMYK is very poor.
 - Always save your JPEGs at the maximum quality allowed (12 in Photoshop).
 - If you perform substantial editing of an image, save it as a Photoshop file instead. Multiple-saves to a JPEG file can result in lower image quality.
- o If the print workflow is unknown, use **TIFF files** for raster artwork
 - TIFF files used to be the standard file format for raster images in print.
 - Always include the .tif file extension
- o Please, oh please, don't use **GIF, PNG, or BMP** files in a print production workflow.

Transparency

- o If you need transparency, save your images as **native Photoshop files**.
 - Do not use transparent TIFF images—they have worked in the past and might be OK, but I have seen more consistent results with native .psd files.
- o When using Bitmapped TIFF images, the **white is transparent** when placed in InDesign.
- o In InDesign, **use any path as a clipping path** (even from TIFF images) by selecting an embedded path using Object > Clipping Paths > Options...
- o Use Window > Output > Flattener Preview to diagnose transparency issues in InDesign

Tips for Preparing Logos for Print Production

Image Scaling

o Use care when scaling or rotating images in InDesign or Illustrator.

- Adjust your image's PPI in Photoshop prior to placing them in InDesign.

- As a good starting point, set the **PPI to 300** with Resampling unchecked.

- Always maintain the image's original proportions.

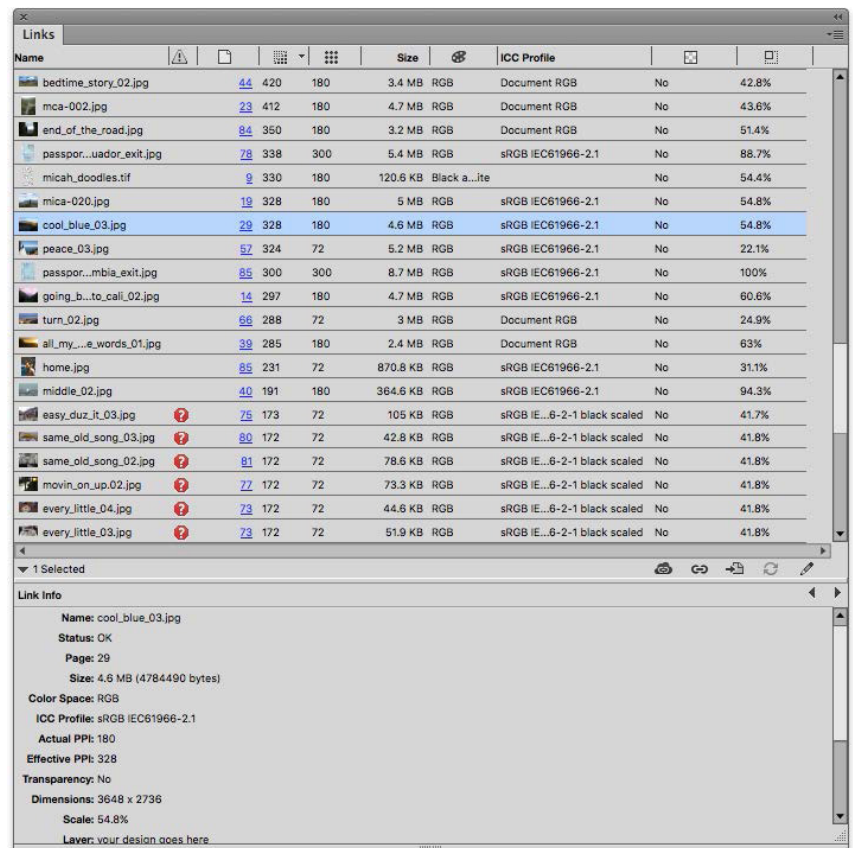
o If you do scale, double-check your image's effective resolution, ensuring that it is always approximately 2X the printer's line screen ruling.

- Effective resolution is the resolution of your image after scaling in preparation for printing.

- You can use Window > Links to view an image's **effective resolution**. To view it, select Panel Options... under the panel submenu, then check Effective Resolution in the Show Column column. (see below screenshot)

- This works best if you set the PPI of your images to 300, even without re-sampling them.

Links Panel Example:



o Avoid upsampling raster images.

- Care when **upsampling** is required. The general rule is that you can upsample by about 125% without significant loss of quality.

- Some high-quality images can support a 200% upsampling in Photoshop only.

- Remember that any change to an image's pixel dimensions—up or down—can cause image quality to degrade.

Tips for Preparing Logos for Print Production

Colors & Inks

- o You can colorize Bitmapped and Grayscale TIFF & PSD images in InDesign with Spot or process colors.
- o Match rich black CMYK builds in InDesign with the builds from a CMYK raster image.
- o Obey the total ink limits of your printer.
- o If your print provider's workflow is color managed, make sure all images have an ICC color profile. (most shops use color management)
 - In some cases, make sure they all use the same ICC color profile. sRGB is widely accepted and, in some cases, required to ensure color accuracy.
 - Some print providers provide their own ICC profile.
 - To convert to a profile in Photoshop, select Edit > Convert to Profile...

Miscellaneous

- o Clean-up your image before exporting by deleting unused layers, alpha channels, and paths. Essentially, flatten the image except for basic transparency (if needed).
- o When printing from InDesign, change this setting the Print dialog box: Images > Graphics Send Data, change to All.
 - Optimized Subsampling sometimes reduces the quality of the image.

Understanding Dot Gain

Defined

- o Dot Gain is an increase in halftone dot size when wet ink spreads as the paper absorbs it.
- o It can also occur when the plate cylinder transfers its image to the blanket cylinder, or increase/decrease based on the paper type and coating, lpi, temperature and humidity.

Results

- o Dot gain causes an image to look darker than intended.
- o Photoshop and color management systems take dot gain into account when preparing and displaying an image.
- o Increasing the lpi also increases dot gain.

Measurement

- o Average press Dot Gain is 20%
- o Measured at a 50% dot using a densitometer: A device used for measuring the density of ink printed on paper.

o Equation: $\text{Actual dot \%} - \text{Intended dot \%} = \text{dot gain}$

- If a 50% dot actually appears like a 60% dot, dot gain is said to be 10%.

Paper

Dot gain causes an image to look darker than intended.

Type	Description	Dot Gain	Average lpi
Newsprint	Coarse paper that is very porous	30%	85 – 100 lpi
Uncoated	A variety of papers that are <i>not</i> coated with a gloss surface treatment	25%	133 lpi (Web press) 150 lpi (Sheet fed press)
Coated	Paper on which a shiny coating has been applied during manufacturing	20%	150 lpi
Calendered	Paper to which a finishing step of heat and pressure has been applied to create a smoother surface	20 – 25%	133 – 150 lpi