

week::four

Troubleshooting Raster Artwork

Hints & Tips for Creating Perfect Raster Artwork

File Formats

- 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 always translate correctly. To preserve them, save your Photoshop file as a **Photoshop PDF** and place that file into InDesign.
- **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.
- 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.
 - TIFF uses loss-less compression, so image quality is always maintained.
- Please, oh please, **don't use GIF, PNG, BMP, or low-quality JPEGs** files in print production.

Hi, THIS IS .TIFF



Transparency

- If you need transparency, save your images as **native Photoshop files**.
 - Try not to 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.
- When using *Bitmapped* TIFF images, the **white is transparent** when placed in InDesign.
- In InDesign, **use any path as a clipping path** (even from TIFF images) by selecting an embedded path using Object > Clipping Paths > Options...
- Use **Window > Output > Flattener Preview** to diagnose transparency issues in InDesign

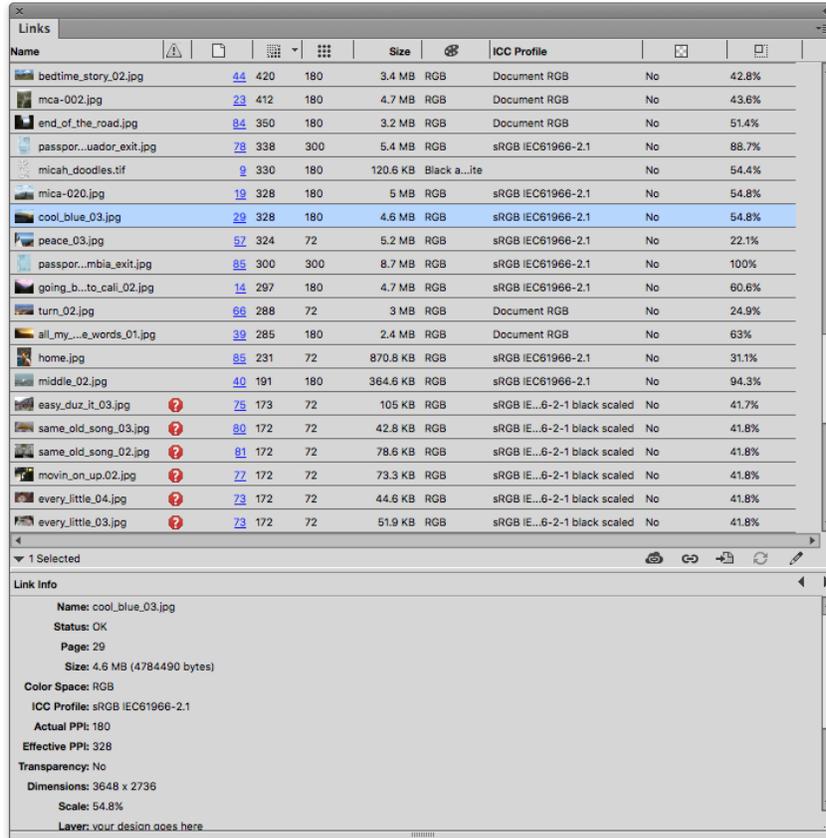
Image Scaling

- **Use care when scaling or rotating your 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.
- 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 screenshot next page)
 - This works best if you set the PPI of your images to 300, even without re-sampling them.

- 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 a loss of image quality.

Be Informed About Your Links in InDesign

- Links Panel Example:



How Much Spatial Resolution is Required in Raster Images?

LPI – Lines Per Inch

- A measurement of the *screen ruling* created by an output device.
- Your print service provider determines this based on your press needs and paper choices.

In Grayscale or Color Raster Images

- Common wisdom is to set the ppi to **1.5–2.0 times the lpi**
 - If lpi = 150, then dpi should be between 225 and 300ppi.
 - 2X is the most common equation to use, just to be on the safe side.

$$\text{Printed_lpi} \times 2 = \text{ppi}$$

Sample LPI Equations

Newsprint: 85 lpi X 2 = 170 ppi	Laser printer: 106 lpi X 2 = 212 ppi	Imagesetter: 150 lpi X 2 = 300 ppi
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For Line Art Raster Images

- Try to match printer **dpi** resolution up to 1,200 dpi.
 - If printer dpi = 600, then line art resolution should be 600ppi.

Recommended Resolutions:

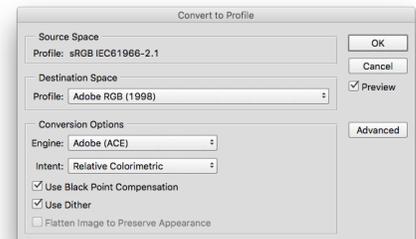
- Recommended ppi based on the final print/display size of an image.

Image Type	Resolution
Line art (black & white bitmaps)	600ppi
Photographs for professional printing	300ppi
Photographs for consumer printers	150 – 200ppi

Color, Inks, & Other Hints

Colors & Inks

- You can **colorize Bitmapped and Grayscale TIFF & PSD** images in InDesign with Spot or process colors.
- Match **rich black CMYK builds** in InDesign with the builds from a CMYK raster image.
- **Obey the total ink limits** of your printer.
- 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...



Other Hints

- **Clean-up your image** before exporting by deleting unused layers, alpha channels, and paths. Essentially, flatten the image except for basic transparency (if needed).
- **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.