

PACIFIC STUDIO

Scanning Guidelines

This is such a critical component of file preparation that it's worth emphasizing.

Calculating Resolution:

Resolution = output size x output resolution / input size

(For example, a 4" x 5" transparency that is being scanned for a phenolic print at 48" x 60" would need to be scanned at 1800 ppi.)

$$48" \times 150 \text{ ppi} = 7200 \text{ pixels} / 4" = 1800 \text{ ppi}$$

$$60" \times 150 \text{ ppi} = 9000 \text{ pixels} / 5" = 1800 \text{ ppi}$$

ppi = (pixels per inch) the number of pixels displayed per unit of length in an image

Or another way to think of it:

Always scan to desired resolution at final size.

For an output resolution of 150 dpi:

If you have 4" x 5" original image and it will be used at final size of 48" x 60", that final size is 12 times larger than the original. So the original needs to be scanned at 12 times larger than 150 dpi, or 1800 dpi.

$$**(final size \div original size) \times final output resolution = scanning resolution**$$

$$(48" \div 4") \times 150 \text{ dpi} = 1800 \text{ dpi}$$

or

$$(60" \div 5") \times 150 \text{ dpi} = 1800 \text{ dpi}$$

If dimensions of original image do not correlate with final output dimensions, scan to yield the correct dpi for the largest side of final output (using same enlargement factor for both width and height).

Make sense?

It's not possible to increase the resolution of an image after it's been scanned (unless one plans to reduce it's output size). Converting an image from 72 dpi to 300 dpi in Photoshop does not add information to the file or increase it's resolution. The only method of increasing image quality is to rescan image at a higher resolution.