



Victor Graphics, Inc.

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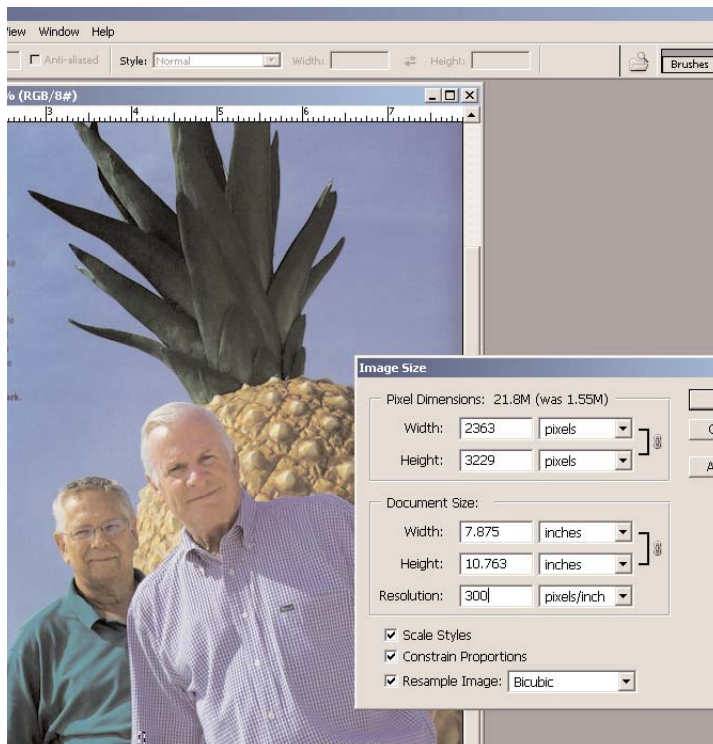
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Scanning Halftones and Line Art

When considering graphics for a project a scanner is a critical piece of equipment in publishing. Scanning provides the ability to capture and input photographs and art. With today's evolving technology desktop scanners have become an integral part of a designer's project. Not all scanners on the market are designed for high resolution output. (Please consider this when scanning.)



Scanning is the process of capturing a *continuous tone* photographic image or line art in a *bitmapped format*.

Scanning is measured in dots per inch or **DPI** where as the output (i.e. to a printer) is measured in lines per inch or **LPI**. The scanning resolution is independent from the output resolution. This should be considered when scanning to ensure that scans are set for high resolution.

Halftones - Covers, inserts, and dust jackets

Scan at **300 DPI** (2 x line screen that will be printed at 150 LPI).

Halftones - Text

Scan at **266 DPI** (2 x line screen that will be printed at 133 LPI).

As a general rule the formula for scanning is 2 x's line screen. If you have any questions on this please contact your customer service representative.

Line Art should be scanned at **600 DPI**.

When scanning images it is important to consider how the image is cropped for the final output. If the scanned image is large and requires cropping or reducing the size this should be done prior to importing the image into the page layout. If a graphic is reduced or resized inside the page-layout the document still contains the data from the original scan. This information generates additional unnecessary data when sent to the RIP for output which causes the output devices to become overworked and may produce PostScript errors that may cause delays.

Please scan images directly into an image editing program (i.e. Adobe Photoshop). The images can be properly sized, cropped and saved in an economical file size. When saving scans in their reduced size there is less chance that the images will require touchup, or contain spots or other flaws.

Dot-gain is a phenomenon in printing and graphic arts whereby printed dots are perceived and actually printed bigger than intended. This causes a darkening of the screened images or textures, especially in the mid tones and shadows. This happens because of the viscosity of ink and its ability to spread through the paper as it is soaked in. Dot gain varies with paper type. Uncoated paper stock like newsprint paper shows the most dot gain.

Dot-gain can cause photographs / grayscale images to look darker than expected. Midtone dot-gain must be managed either during or after scanning. Additionally, end dots (the highlights and shadows) should have standard set points. When scanning files for Victor Graphics please use the following:

3% highlight dot

A final consideration when scanning is the printer's dot-gain.

90% shadow dot

For Mid-tone dot gain adjust contrast for mids accordingly