

Image Production Tipsheet (1)

The Collaboratory Project • Northwestern University

After capturing an image with a flatbed or a slide scanner, you will typically apply the following techniques to it:

- Crop
- Scale
- Adjust brightness and contrast
- Adjust color
- Sharpen
- Save in the appropriate file format

This tipsheet document presents a quick review of the most basic techniques for accomplishing these tasks in Adobe Photoshop 4.0. You can learn step by step instructions for these techniques and for more advanced alternative techniques from the Collaboratory Project's Image Production Step by Step Reference.

Getting Started

1. From the File menu Preferences submenu choose Units and Rulers.... Set the Rulers Units popup menu in the Units and Rulers dialog box to pixels. Click OK. Photoshop will now show image measurements in pixels.
2. Open your image. If it does not use 24-bit color (millions of colors), from the Image menu Mode submenu choose RGB Color. The image is set to 24-bit RGB color mode, required for many image processing operations.

Cropping and Adjusting the Resolution of an Image

1. Use the Selection Tool (dotted rectangle in the upper left corner of the Tools palette) to drag a selection box around the area of the image you are interested in.



Figure 1: The Selection Tool

2. From the Image menu choose Crop. Everything outside the selection is deleted.
3. From the Image menu choose Image Size.... Uncheck the Resample Image checkbox. Set the Resolution popup menu to pixels/inch and type in "72" as the resolution. Click OK. The image will not appear to change at all, but in fact you have given it a new resolution. The resolution will be stored with the file when you save it.

Scaling an Image

1. From the Image menu choose Image Size.... The Image Size dialog box appears.
2. In the Image Size dialog box check the Constrain Proportions and Resample Image checkboxes. Set the Resample Image popup menu to Bicubic.
3. Enter the width and height values for your output image. For WWW pages you should use the pixel measurement of your image as a guide for resizing. Your image is resized by the values you entered for width and height.

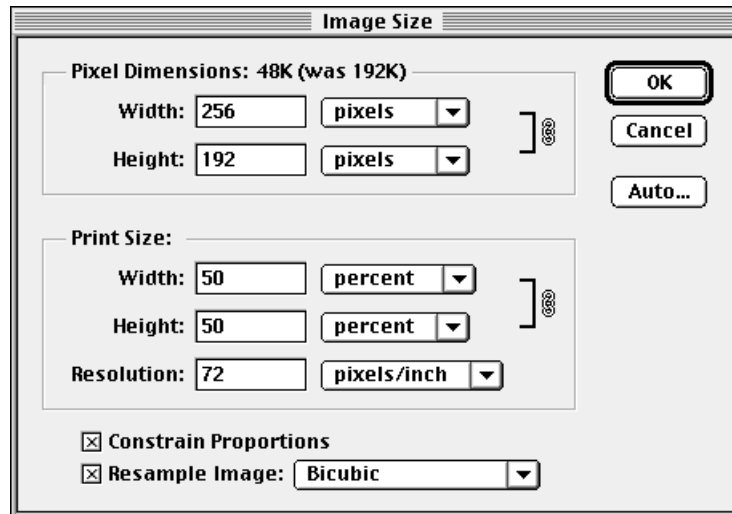


Figure 2: The Image Size dialog box set to scale an image by 50% horizontally and vertically

Changing the Brightness and Contrast of an Image

Note: If you are working on a Macintosh computer, you may want to adjust the brightness of an image slightly high to improve its quality when it is displayed on PC-compatible computers, which have a darker display.

1. From the Image menu Adjust submenu choose Brightness and Contrast. Click the Preview checkbox. Drag the triangular sliders for Brightness and Contrast to adjust your image. Click OK when the image has been adjusted to your liking.

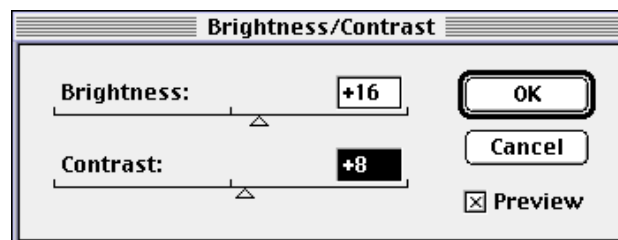


Figure 4: The Brightness/Contrast Dialog box

Adjusting the Color of an Image to Remove a Color Cast

Frequently a color image from a photographic source will have a noticeable tint affecting the entire image. This undesirable effect is called a color cast. For the following instructions, we'll assume your image is too warm (a red or yellow cast), as often happens with digital cameras under incandescent lighting.

1. From the Image menu Adjust submenu choose Hue/Saturation.... The Hue/Saturation dialog box appears.

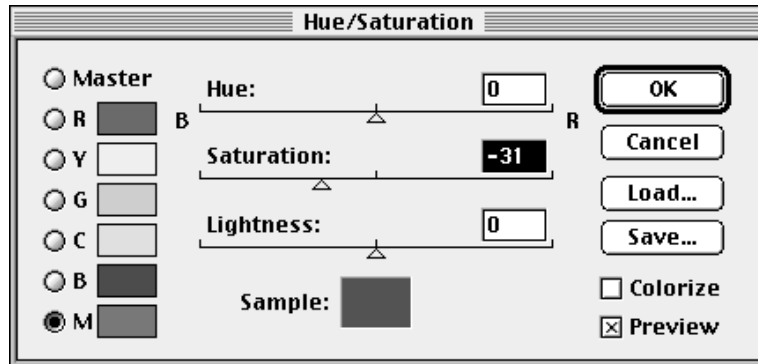


Figure 6: The Hue/Saturation Dialog Box

2. Click on the “M” for magenta radio button. Drag the Saturation slider to the left. The magenta tones in the image become less vivid.
3. If other colors in the image need adjustment, select the appropriate radio button and adjust their saturation or lightness. Click OK to save your changes.

Hint: In general, you won't need to adjust the Hue. In particular, adjusting hue with the Master radio button selected radically changes all the colors in your image—but maybe you want green people on a purple lawn!

Sharpening an Image

Scanning and processing tend to blur the details in an image. When you are through working on an image you will usually want to sharpen it.

1. From the Filter menu, Sharpen submenu, choose Sharpen or Sharpen More. The image becomes sharper, minimally in the case of the Sharpen command and quite noticeably in the case of the Sharpen More command.

Saving an Image for the World Wide Web

Once you have adjusted an image to your liking, you will need to save it in a format appropriate for the World Wide Web. There are two image formats universally supported by graphical web browsers like Netscape Communicator and Microsoft Explorer, GIF and JPEG.

Saving an Image in JPEG format

An image must be in 24-bit color (millions of colors) to be saved in JPEG format. JPEG is the best format for photographic images.

1. From the File menu choose Save As.... The Save As dialog box appears.
2. Enter as a name for your file a single short word followed by a period and the three letter extension “jpg,” i.e. “halloween.jpg” or “skeleton.jpg.” This extension is essential for JPEG files on the World Wide Web.
3. From the Format popup menu choose JPEG. Click OK. In the JPEG Options dialog box that appears, from the Quality popup menu choose Medium. Set Format Options to Baseline Standard and Click OK. Your image is saved as a JPEG file.

Saving an Image in GIF Format

An image must be in indexed color format (256 or fewer colors in a palette) to be saved in GIF format. GIF is the best format for diagrams, graphical text, buttons, ornaments, graphs and flat art in general.

1. From the Image menu Mode submenu choose Indexed Color.... The Indexed Color dialog box appears.

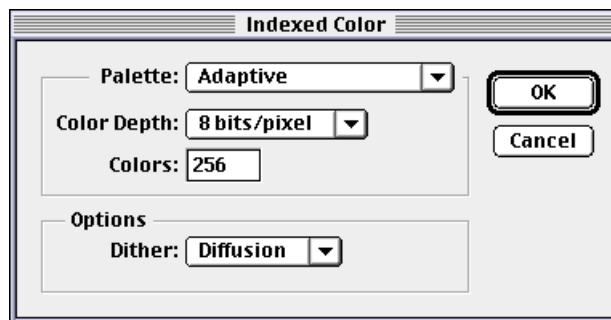


Figure 7: The Indexed Color dialog box

2. From the Palette popup menu choose Adaptive. Select the desired Color Depth or enter the desired number of colors for the image. Click OK. The image is converted to indexed color with the number of colors you have indicated. In general, you should use as few colors as necessary to create a good quality image. Fewer colors results in smaller GIF files, which are desirable for World Wide Web pages.
3. From the File menu choose Save As.... The Save As dialog box appears.
4. Enter as a name for your file a single short word followed by a period and the three letter extension “gif,” i.e. “halloween.gif” or “skeleton.gif.” This extension is essential for GIF files on the World Wide Web.
5. From the Format popup menu choose CompuServe GIF. Click OK. In the GIF Options dialog box that appears, click on Normal or Interlaced row order. Click OK. The file is saved in GIF format. Interlaced row order will make your GIF file appear in several animated bands when the file is accessed over a network by a Web browser.