

AdobeSM Customer Services

Questions to Ask Your Printer

To get the best results from four-color separations in Adobe Photoshop, it is important to maintain a dialog with the different agencies involved in getting the job printed. This may involve talking with the professionals at a color house for scans, at a service bureau for producing film, and finally, at a print shop for printing the job on-press.

Of all these relationships, the dialog with your printer is the most crucial. To begin the search for a good print shop, you should consult with several printers and tour their facilities. When you take a tour, ask to see printed samples of their work and spec sheets for their equipment. Many good printers provide information geared to working with desktop files. Be sure to find out what the printer's presses are capable of printing.

When you pick a printer and are ready to start working on a project, do not hesitate to ask any question you might have. Asking the right questions will help you establish a good rapport with the printer, avoid surprises later, and build confidence about producing good separations.

The following sections detail the most important information you need from your printer to produce color separations in Photoshop, including

- the screen frequency the press can handle
- press conditions and expected dot gain
- the method the printer uses to generate the black separation plate
- the ink limits of the press and the ink density of the black plate
- what role the printer will play in producing film

Your printer may also be able to guide you in selecting and modifying images that will print well, and perhaps recommend a color house for high-end scans.

SCREEN FREQUENCY AND IMAGE RESOLUTION

At the beginning of discussions with your printer, determine the screen frequency the press is capable of printing. The screen frequency directly affects the resolution of the scanned image in Photoshop. In general, the image resolution needs to be 1.5 to 2 times the screen frequency at which the file will be printed. For example, if the press can support a 150-line screen, you won't need an image resolution greater than 300 pixels per inch (ppi). A higher image resolution won't yield significantly better results, but it will generate a much larger file size. On the other hand, having too low a resolution for your image may result in a file that will look coarse, or *pixelated*, when printed.

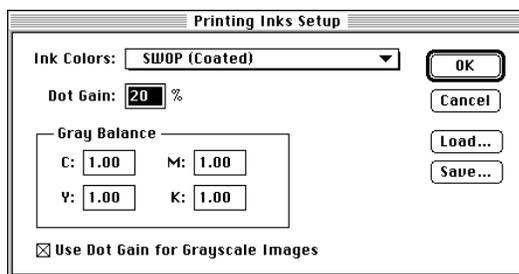
For more information about issues related to scanning, see the technical note "Scanning Basics."



DOT GAIN ON PRESS

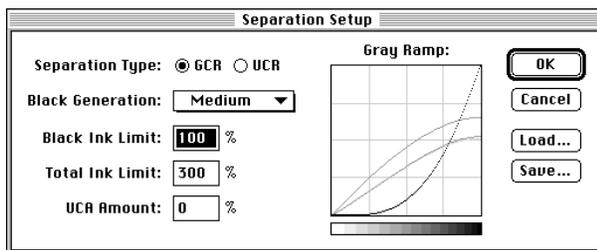
Be sure to ask how much dot gain the printer experiences on-press for a given paper stock. Ask how much dot gain is expected on-press from the film stage to press sheet in the midtones. Many printers will tell you the amount of dot gain expected from the proof stage to the press sheet, but this is an incorrect value to use in Photoshop.

In general, coated stock registers a dot gain of 18 percent to 25 percent in the midtones. Dot gain for uncoated stock and newsprint varies from 30 percent to 40 percent. Because midtones register the greatest amount of gain on-press, Photoshop uses the gain in the midtones as a good indication of the gain that occurs over the rest of the image. If your printer is unsure of the dot gain value, use the default values provided for each type of paper stock in the Printing Inks Setup dialog box.



GENERATING THE BLACK SEPARATION PLATE

Photoshop offers two ways to generate the black separation plate, Undercolor Removal (UCR) and Gray Component Replacement (GCR). The options appear in the Separation Setup dialog box.



The difference between the two methods affects mainly the black plate. GCR generates black throughout the image, beginning in the highlights. UCR generates black mainly in the 3/4-tones and in the black of the image and thus holds shadow detail better. See how the two methods distribute black ink by observing the black in the Gray Ramp when you choose either GCR or UCR.

For best results, choose GCR or UCR, depending on which method the print shop has more experience and is more comfortable. Many printers are more comfortable with UCR. For more information about UCR and GCR, refer to the *Adobe Photoshop User Guide*.

INK LIMITS

Also ask your printer about the total ink limit the press can support and the total ink density used for the black plate. Enter this information in the Separation Setup dialog box. Many small to medium-sized print shops may not be able to provide this information, because they never had to configure it for any useful purpose. If you are unsure, use the default values.

THE PRINTER'S ROLE IN PRODUCING FILM

A close working relationship with your printer in producing film will save many headaches as well as wasted time and money. Ask your printer what role the print shop will play in producing film. Pick a printer who assumes this function in-house or who is willing to work closely with your imaging house or service bureau.