

Welcome to Digital Stock, and thanks for choosing us.

Here are some Photoshop tips to help make your printed work live up to your expectations. We have compiled this information from excellent third-party sources and our own experience. Undoubtedly, new methods will be incorporated into future releases of page layout and image editing software. This will be especially true for color conversion using ICC profiles. As of this writing, ICC is becoming the color management standard on both Macintosh and PC platforms.

Please take a look at our most current Catalog Disc or our Web site at [www.digitalstock.com](http://www.digitalstock.com) for updates.

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## CMYK separations in Photoshop

Typically, Photoshop users convert their RGB files to CMYK using Photoshop's default settings for a "Mode Change." You can quickly adjust some of these settings to get better results taking into account the kind of paper stock and press you will print on. Below are some tips for getting set up.

*Note: In Photoshop 4.0 users can load ICC profile tables into the Separation Setup. We have included on this CD ROM some excellent ICC profiles for RGB to CMYK conversion. See the page titled "Using ICC Profiles to convert to CMYK." These tables will override the color settings described on the following pages.*

The CMYK color space is smaller than the RGB color space. Therefore, Photoshop is forced to make compromises in deciding how to compress the vibrant range of RGB into the somewhat duller range of CMYK. Compression is worse for some colors than for others. You will notice that brilliant blue skies

will not maintain their vibrancy when converted to CMYK. Bright yellows, on the other hand, will stay just as bright.

You can accurately preview how your CMYK separations will look if you have calibrated your monitor. Use the best hardware calibration you can afford (the kind with a suction cup device). Monitor calibration will save you time, money, and aggravation. At Digital Stock, we use X-Rite calibrators.

Make sure to discuss separation concerns with your printer. Presses, inks, atmospheric conditions, and other factors all play a part in printing. The guidelines on these pages are meant to help you use some of the tools that Photoshop has to offer. Further details are in the *Photoshop User Guide*.

If you understand the basic principles of conversion from RGB to CMYK, discussions with your printer will become more rewarding and your final pieces are more likely to meet your expectations.

# Color Settings – Monitor Setup and Printing Inks Setup

## Using color settings

There are three components in Photoshop that determine how RGB is converted to CMYK: Monitor Setup, Printing Inks Setup, and Separation Setup.

### Monitor Setup:

(File > Color Settings > Monitor Setup)

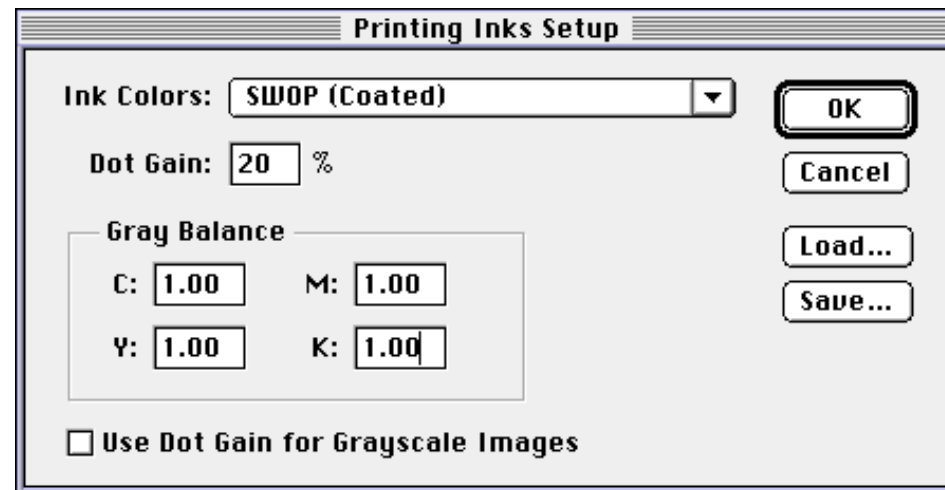
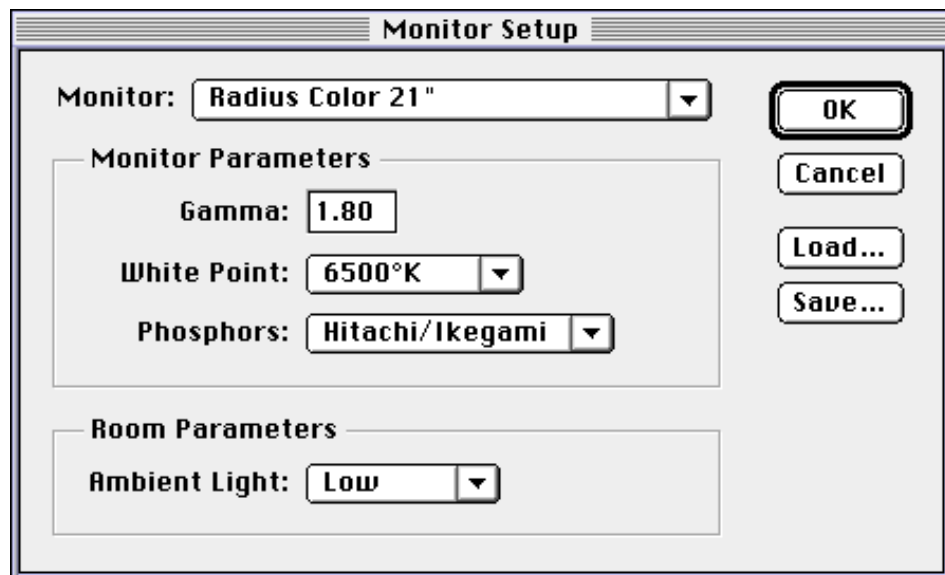
Choose your monitor from the list.

### Printing Inks Setup:

(File > Color Settings > Printing Inks Setup)

You should know what kind of paper stock you will be printing on. This can affect the CMYK mode change significantly. Generally, you will be printing on either newsprint, uncoated paper, or coated paper. You should also ask your printer what types of inks will be used. SWOP and Toyo are common inks.

Dot Gain will automatically change depending on your Ink Colors setting in the Printing Inks Setup. Photoshop's default works well. We would suggest *not* overriding the default unless your printer gives you specific advice for doing so.



# Color Settings – Separation Setup

## Separation Setup:

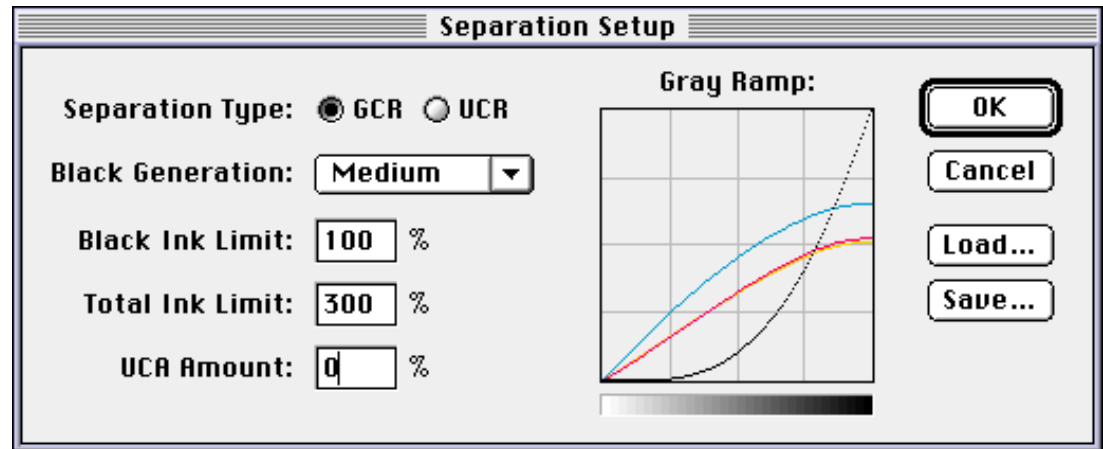
(File > Color Settings > Separation Setup)

This is where you can specify other factors that will determine the quality of your separations.

In most cases, you'll want to leave GCR (Gray Component Replacement) selected as Separation Type. This allows some of the CMY, where the three color inks are used together, to be replaced by K (black).

UCR is for special circumstances such as images with dark neutral tones that will be printed on uncoated stocks. Discuss this type of printing with your printer or service bureau for advice on this separation option.

(continued)

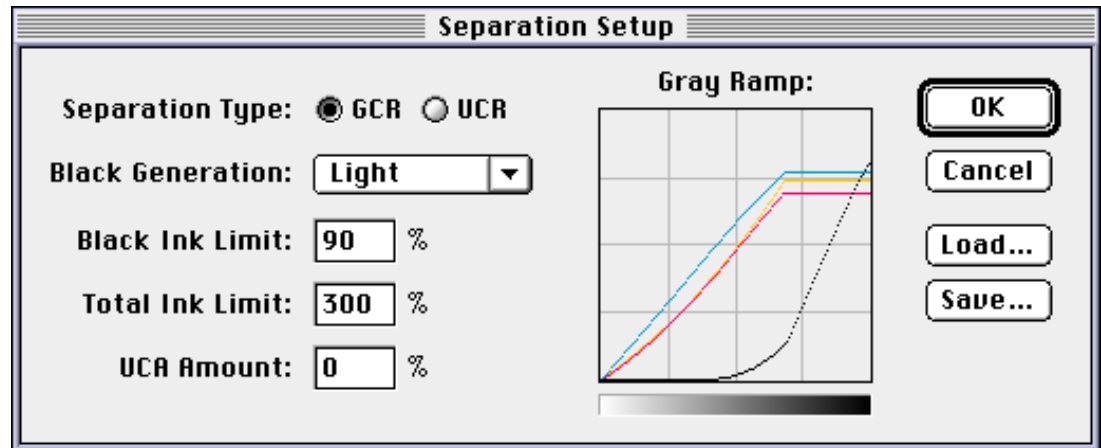


*This is Photoshop's default setting for Separation Setup. We have created four Separation Setups that you can load by using the "Load" command in this palette. The setups are located in the "Color" folder inside the "Freestuf" folder.*

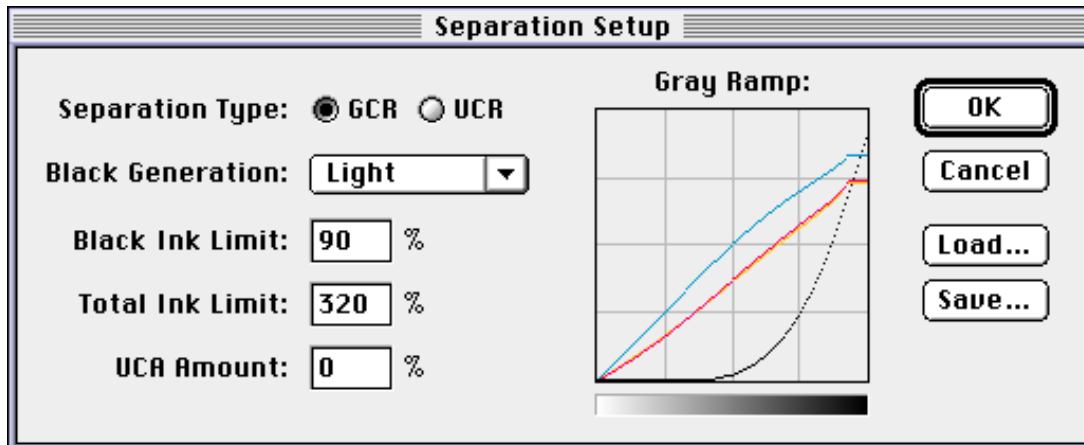
## Separation Setup (continued)

We have found that because Digital Stock images are generally quite colorful, they print better if Black Generation is set to Light. Using a Light setting can also give the printer more leeway to adjust the ink color on the press if needed. Printers sometimes call this a *skeleton black*.

We have found that the only time we need a Medium Black Generation is when there is an abundance of neutral tones in the scene, for example, for a photo of a white bridal gown. Using a Medium setting maximizes the chances that neutrals will stay neutral on the press.



*For coated stock on a web press*



*For coated stock on a sheet-fed press*

The Black Ink Limit should usually stay at around 90%. This will let the printer use more of the CMY inks and so will allow more leeway to adjust color.

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## Separation Setup (continued)

Total Ink Limit is the last important value in Separation Setup. This number represents the maximum coverage of all four inks added together. Coated stocks can handle more ink than uncoated stocks and newsprint, because coated stocks are less absorbent. The ink sits up on the paper and does not spread into it.

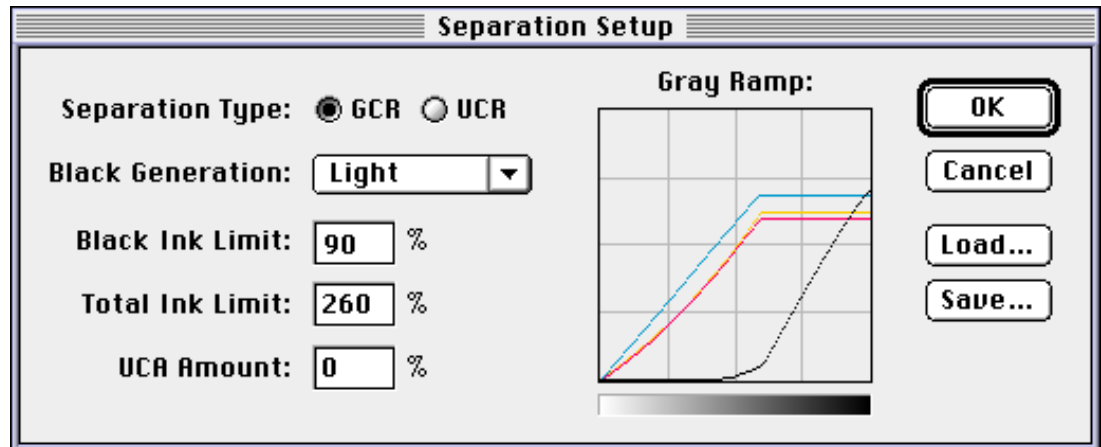
Coated papers on sheet-fed presses can take 320% to 330% Total Ink coverage.

Coated papers on web presses can take about 300%.

Uncoated papers can take about 260% to 280%.

Newsprint can handle around 240%.

If you make yourself familiar with the concepts involved in Separation Setup, you'll have a better chance of success on press. And once again, talk with your printer about his or her particular requirements and recommendations.



*For uncoated stock on a web press*

# Using ICC profiles to convert to CMYK

## Using ICC profiles

With Photoshop 4.0 you can build separation tables using Apple Color Sync for the Macintosh or Kodak ICC Color Management for Windows 95.

(File > Color Settings > Separation Tables)

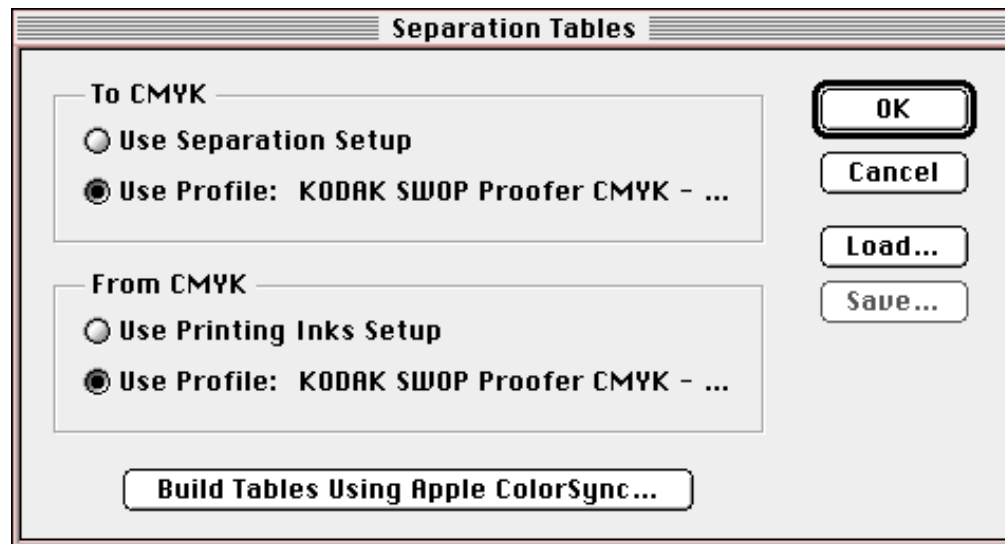
When you build tables this way, Photoshop uses them *instead of* the Separation Setup or Printing Inks Setup information under Color Settings.

First copy the ICC profiles included on this CD ROM to your system by navigating to "ICC\_Prof" or "ICC Mac" folder (CD ROM\Freestuf\Color).

On a Mac, profiles go into the "ColorSync" folder (System\Preferences\ColorSync).

On a PC running Windows 95 they go into the "Color" folder ( C:\Windows\System\Color).

In Photoshop, click on "Build Tables Using..." and select a profile.



Leave the "Render Intent" set to "CMS default."

Next make a "Mode Change" from RGB to CMYK. Now, when you make a mode change, Photoshop will use the ICC printer profile to make the conversion.

In comparison to Photoshop's standard "mode change," ICC profiles generally create a lighter, more open, separation with better shadow detail.

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## Using ICC profiles to convert to CMYK (continued)

We have tested over a dozen printer profiles as of this writing. For the insert booklet accompanying this CD ROM we currently are using the *Radius SWOP Sheetfed C* to convert images of people and *Kodak SWOP Proofer CMYK - Coated Stock* to convert images of nature and images containing blue skies.

The following ICC profiles, among others, are included on this disc in the Color folder:

*Kodak SWOP Proofer CMYK - Coated Stock* – slight yellow cast, a good choice for images with blue skies (approx. 320 total ink).

*Radius SWOP Sheetfed C* – slight magenta cast, good skin tones (approx. 275 total ink).

*SWOP\_ShortK.pf/Linotype-Hell* – slight yellow cast, very deep blacks (approx. 350 total ink).

*Digital Stock RGB Tango* – the ICC Profile for the Digital Stock scanner. You can use this with programs that allow you to specify both “Source” and “Destination” devices – for example, the ColorSync plug-ins for Photoshop which are available free at [www.colorsync.com](http://www.colorsync.com).

Be sure to talk to your printer or run your own tests to determine the suitability of a profile for your particular workflow.

Check out our Catalog Disc or [www.digitalstock.com](http://www.digitalstock.com) for CMYK info updates and new ICC profiles.

*Note: Photoshop 5.0 will use ICC profiles differently.*

*Note: Windows 98 will have a new CMM (Color Management Module) and will support ICC profiles differently from Windows 95.*



## CMYK and Printing Information

*Preparing Digital Images for Print*

by Sybil and Emil Ihrig

Osborne Mcgraw Hill

ISBN 0-07-882146-0

510-549-6600

800-822-8158

*Professional Photoshop*

Dan Margulis

John Wiley & Sons Publisher

ISBN 0-471-01873-2

*Real World Photoshop 4*

David Blatner and Bruce Fraser

Peachpit Press

ISBN 0-201-68888-3

510-548-4393

800-283-9444

## Photoshop Info, Tips, and Tricks

*The Photoshop 4 WOW Book*

by Jack Davis and Linnea Dayton

Peachpit Press

ISBN 0-201-88370-8

510-548-4393

800-283-9444

*The Photoshop Bible*

by Deke McClelland

IDG Books

ISBN 1-7645-4005-X

650-655-3000