



# PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

## Epson Printers - Abbreviation Definitions

Printer Name **XXX XX XX XX XX XX.ICM**

**Ink**  
 Epson Ink . . .EP  
 HP Ink . . . .HP  
 Pigmented . .PI

**Rendering Intent**  
 Perceptual . . . . .PRC  
 Absolute . . . . .ABS  
 Relative . . . . .RLS  
 Relative Color Metric . . . . .RCM  
 Absolute Color Metric . . . . .ACM

**Color Gamut**  
 Max Gamut . . .NL

**Screening**  
 Stochastic . . . .ST

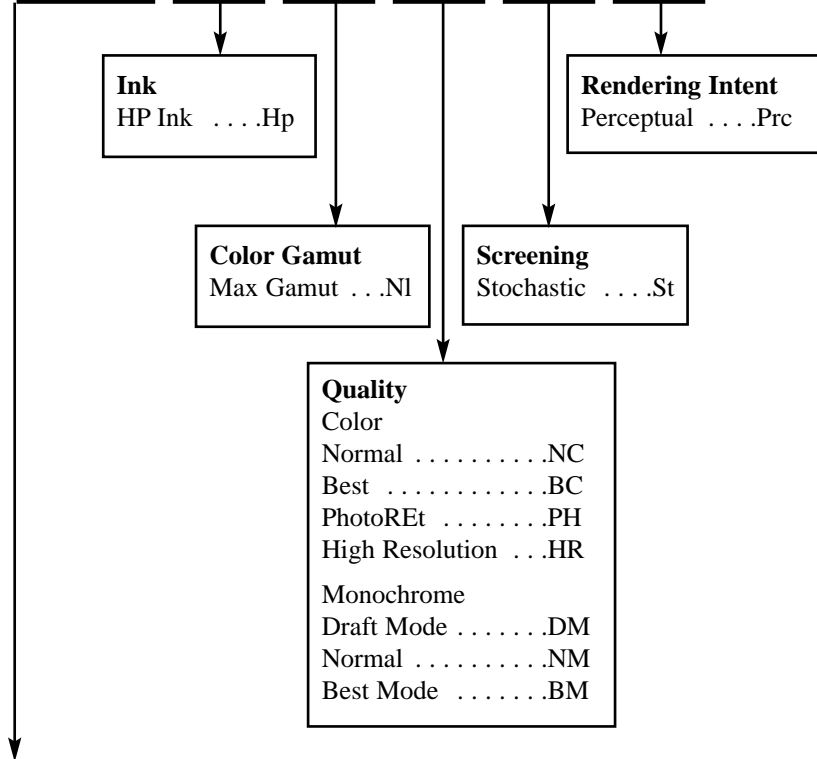
**Quality**  
 High Quality - 1440 dpi . . . . .HQ  
 Medium Quality - 720 dpi . . . . .MQ  
 Low Quality - 360 dpi . . . . .LQ  
 Draft Quality - 180 dpi . . . . .DQ  
 Super Quality - 2880 dpi . . . . .SQ

| Paper Type                           |                                      |                                     |
|--------------------------------------|--------------------------------------|-------------------------------------|
| <b>iProof Papers</b>                 | Transparency . . . . .ETP            | Glossy Paper Photo Weight . . .GPW  |
| PressProof 1 . . . . .BP1            | Watercolor Paper . . . . .EWC        | Double Weight Matte (Roll) . . .DWM |
| PressProof 2 . . . . .BP2            | Premium Glossy Photo (Roll) .EPG     | Matte Paper (Roll) . . . . .MPR     |
| PressProof 3 . . . . .BP3            | Synthetic Paper . . . . .ESP         | Matte Paper Heavyweight . . . .Mph  |
| PressProof 4 . . . . .BP4            | Photo Quality Paper . . . . .EPQ     | Semigloss Photo Paper (Roll) . .SGP |
| PressProof Offset Semigloss . .POS   | Archival Matte Paper . . . . .AMP    | Semigloss Proofing Paper A          |
| PressProof Offset Gloss . . . . .POG | Premium Semigloss Photo . . .PSP     | Dupont/Epson . . . . .SPA           |
| PressProof2 Heavyweight              | Premium Plain Paper . . . . .PPP     | Semigloss Paper (Roll) . . . . .SGR |
| Double Sided . . . . .P2D            | Premium Luster Photo Paper . .PLP    | Semigloss Photo Paper . . . . .SPP  |
| <b>Epson:</b>                        | Publication Proofing Paper           | Commercial Proofing                 |
| 360 Coated Paper . . . . .ECP        | Dupont/Epson . . . . .PUP            | Dupont/Epson . . . . .CPP           |
| Glossy Film . . . . .EGF             | Professional Media Photo . . . .PMP  | Commercial Matte Proofing           |
| Glossy Paper (Roll) . . . . .EGP     | Professional Glossy Paper . . . .PGP | Dupont/Epson . . . . .CMP           |
| High Quality Paper . . . . .EHQ      | Photo Quality Glossy Film            |                                     |
| Photo Paper . . . . .EPP             | (USA) . . . . .PGF                   |                                     |
| Plain Paper . . . . .EPL             | Glossy Paper Heavyweight . . . .GPH  |                                     |

# PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

## HP Printers - Abbreviation Definitions

Printer Name **XXX XX XX XX XX XX.ICM**



| Paper Type                                    |   |   |
|---|---|---|
| Plain Paper . . . . .PLP                      | Premium Photo Paper Glossy . .HG2                       | Restickable Large Round Inkjet Stickers . . . . .HSS  |
| Banner Paper . . . . .HBN                     | Premium Plus Photo Paper Glossy . . . . .HPG            | Restickable Large Square Inkjet Stickers . . . . .HRS |
| Bright White Inkjet Paper . . . .HBW          | Premium Plus Photo Paper Matte . . . . .HPM             | Other Inkjet Papers . . . . .HOI                      |
| Felt-textured Greeting Card . . .HFG          | Premium Inkjet Transparency Film . . . . .HPT           | Other Photo papers . . . . .HOP                       |
| Glossy Greeting Card . . . . .HGG             | Professional Brochure & Flyer Paper Glossy . . . . .HBG | Other Transparency Films . . . .HOT                   |
| Iron-On-T-Shirt . . . . .HIT                  | Professional Brochure & Flyer Paper Matte . . . . .HBM  | Other Specialty Papers . . . . .HOS                   |
| Matte Greeting Card . . . . .HMG              |   |   |
| Photo Paper . . . . .HPP                      |   |   |
| Premium Inkjet Paper . . . . .HPI             |   |   |
| Premium Inkjet Heavyweight Paper . . . . .HHP |   |   |

## PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

Before we discuss printing to PowerRIP 2000 using ColorSync and ICC profiles there are a number of terms that need to be defined for a clear understanding of what we will be doing.

### *Glossary of Terms:*

**ICC Profiles** are color space descriptions. The ICC profile format is defined by the International Color Consortium as a cross platform standard. Ability to cross platforms allows you to print from Mac to PC, PC to Mac, etc. Color management is built into Windows 98, 2000 and Me as well as the Macintosh operating system. ICC compliant applications, such as Photoshop 5.x, Illustrator 8.x, Quark 4.x, have the capacity to output using ColorSync. PowerRIP 2000 can print using ColorSync from any ICC compliant application.

**ColorSync** is the industry standard for managing color across a broad spectrum of devices such as monitors, scanners and various output devices. PowerRIP 2000 can print from any ICC compliant application.

**Gamut** or Color gamut are all the colors that a device can produce. It is the range of colors that a color system can output. Many more colors can be displayed on the screen than can be printed. When colors on the screen can not be printed they are out of gamut. The RGB gamut is much larger than the CMYK gamut. The RGB gamut consists of any combination of red, green and blue. The CMYK gamut consists of only the colors that can be produced with cyan, magenta, yellow and black. So gamut is the range of colors that can print using a particular set of inks and paper.

**Perceptual Matching** maintains the relative color values among the original pixels as they are mapped to the printer gamut. The color relationship is preserved even though the color values may be changed when the image moves from the display to the color output.

**Relative Colorimetric** leaves colors that fall inside the gamut unchanged. It takes colors outside the gamut and converts them to colors inside the gamut. The colors will have the same lightness or darkness but can now be printed because they fall inside the gamut.

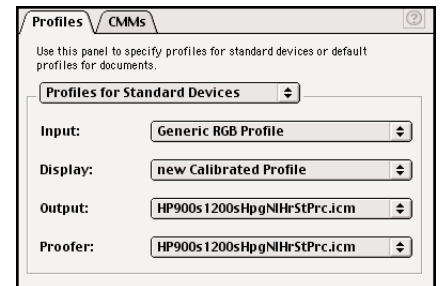
**Saturation Matching** maintains the relative saturation values. Out of gamut colors are converted to colors that fall in the gamut with the same saturation.

**Absolute Colorimetric** disables white point matching when converting the colors. (This is not recommended.)

# PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

## Activating ColorSync

Before using ColorSync with your applications you should make ColorSync active in your Operating System. Go to **Apple>Control Panel>ColorSync**. The **Profiles** dialog will display. Select the ICC profile you wish to use in the **Output** pull-down. **Quit** the ColorSync dialog. A **Save Changes** dialog will display. Click **Save**.



## Printing from Applications

### Printing from QuarkXPress 4.x using LaserWriter 8.7 and ICC Profiles

These directions assume that you have already selected LaserWriter 8.7 and your printer in the Chooser.

Before you can print using ICC profile you must enable Quark CMS (Color Management System). The following is an overview of the CMS functionality. For an in-depth discussion of CMS, QuarkXPress Tech Note Color Profiles should be read. If you did not install CMS when you installed Quark, using the Quark CD, Install Quark Color Management Software.

#### Step 1:

##### Enable CMS

In QuarkXPress 4.x go to **Utilities>XTension Manager**.

Select **Quark CMS**.

Quit out of Quark.

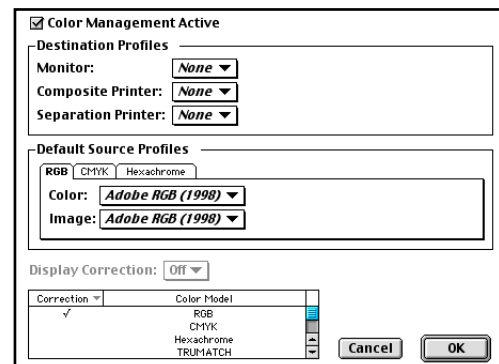
Launch Quark.

#### Step 2:

##### Activate CMS

In QuarkXPress 4.x go to **Edit>Preferences>Color Management**.

Select **Color Management Active** to activate CMS.



**Note:** If you create a default profile with no Quark document open, that profile will be applied globally to all documents. If you create a default profile with a Quark document open then the default profile will affect that file only.

To see what ICC profiles you have installed on your system go to **Utilities>Profile Manager**. If the profile you want to use has a check next to it, CMS will use it.

You can specify a default profile in the Color Management Preferences dialog box. (**Edit>Preferences>Color Management**)

# PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

## Step 3:

### Destination Profiles

**Monitor** will affect your monitor display only.

**Composite Printers** will affect your printer output.

### Default Source Profiles

#### RGB tab

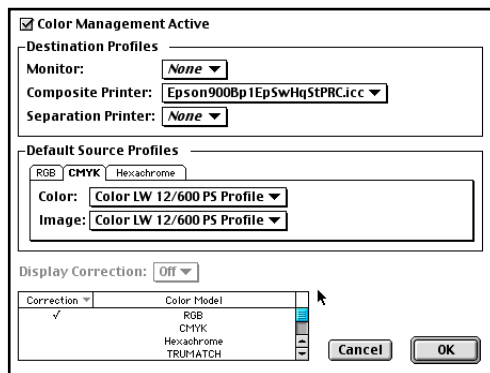
**Color** corresponds to the monitor you used when you created the RGB document.

**Image** corresponds to the input device.

#### CMYK tab

**Color** corresponds to the CMYK source (monitor or scanner). If you don't have a CMYK monitor or scanner select the profile for your CMYK output device

Click **OK**.



## Step 4:

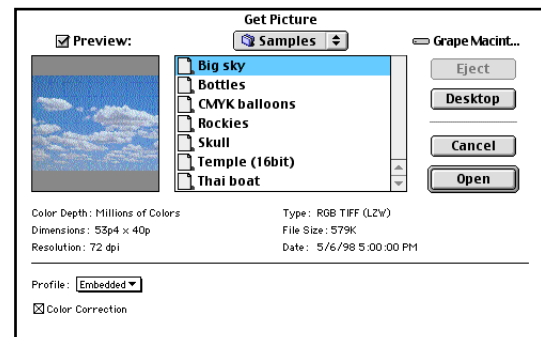
### Using ICC Profiles

#### Get Picture - (File>Get Picture)

When CMS is active a Profile pull-down is added to the Get Picture dialog box. This allows you to define the images source profile to be compared with the destination profile.

*Note: Profiles specified in Get Picture>Profile will override the default source profile in Color Management Preferences.*

If the Profile pull-down list and Color Correction check box are unavailable, the picture you are importing may have been saved by an application not supported by Quark CMS. Quark CMS will only define the color space of a color raster images, such as TIFF, JPEG, BMP and Photo CD.



## Print - (File>Print)

When color management is active an additional Profile tab will display in the Print menu. Composite Profile will override the Composite Printer specified in the Color Management Preferences. Go to **File>Print** and follow the steps 5-14 to print.

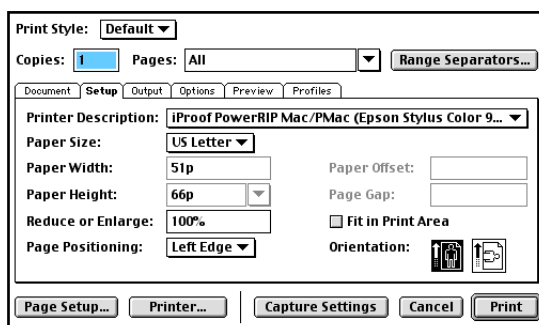
## Step 5:

The LaserWriter 8.7 Print dialog will display.

### Setup tab

Select your **printer** in Printer Description.

Select the correct **Paper Size**.

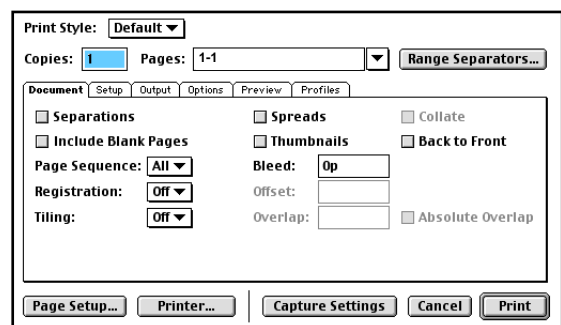


## Step 6:

### Document tab

Deselect **Include Blank Pages**.

Type the page numbers you want to print in **Pages**.

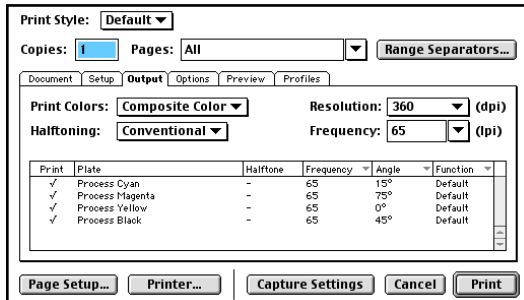


# PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

## Step 7:

### Output tab

Select **Composite Color** in Print Colors.



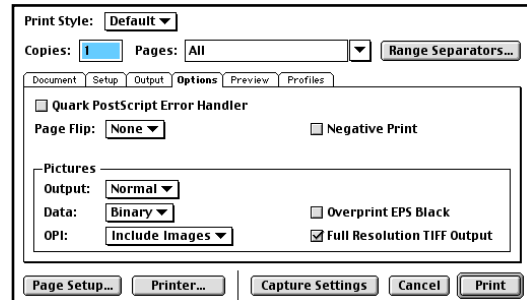
## Step 8:

### Options tab

Select **Normal** in Output.

Select **Binary** in Data.

Select **Full Resolution TIFF Output**.

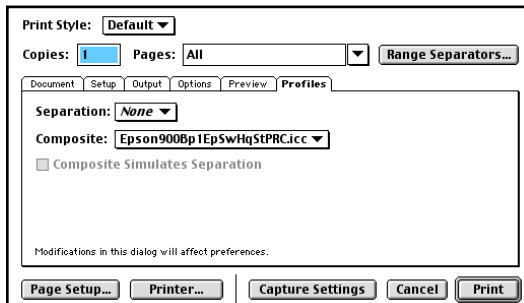


## Step 9:

### Profiles tab

Select your **ICC Profile** in Composite.

Click **Printer** in the bottom left corner.



## Step 10:

The LaserWriter Print dialog box will display.

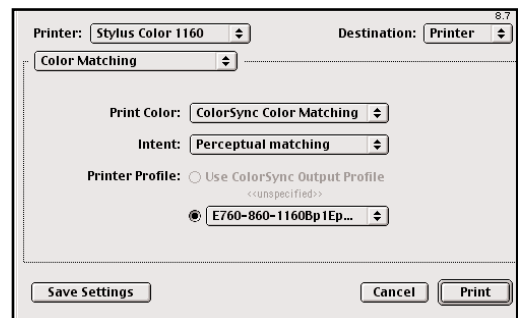
### Color Matching

Select **ColorSync Color Matching** in Print Color.

Select **Perceptual Matching** in Intent.

Select **Use ColorSync Output Profile** in the Printer Profile.

The ICC profile that you defined in the Apple ColorSync Profiles dialog will display.

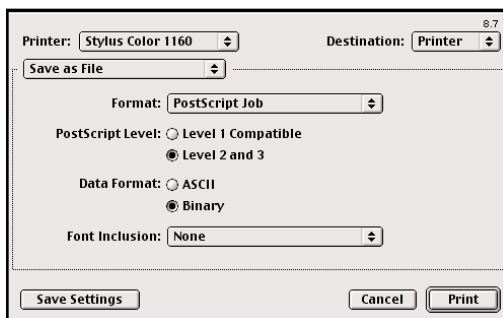


## Step 11:

### Save as File

Select **Binary** in Data Format.

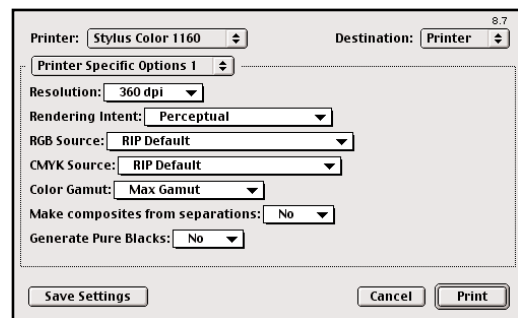
Select **All** in Font Inclusion.



## Step 12:

### Printer Specific Options 1

For an in-depth discussion of the Printer Specific Options for your printer see Appendix 4 Properties/Features of the PowerRIP 2000 manual.

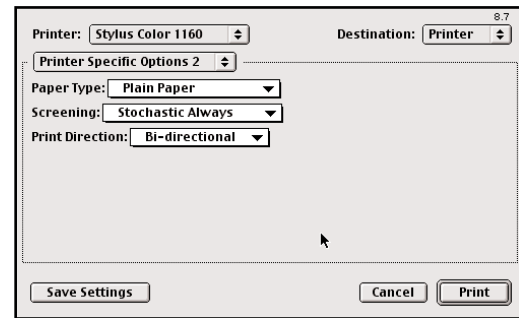


# PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

## Step 13:

### Printer Specific Options 2

- Select the appropriate **Paper Type**.
- Select **Stochastic Always** in Screening.
- Select **Bi-Directional** in Print Direction.



Click **Print**.  
Click **Print**.  
The file will process and print

## Printing from Photoshop 5.0 using LaserWriter 8.7 and ICC Profiles

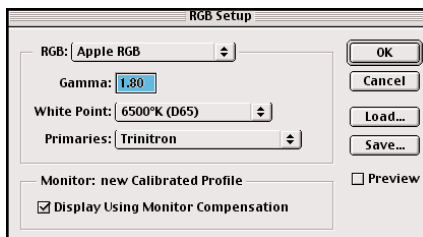
Photoshop uses CMM (Color Management Module) to interpret ICC profiles. Before using ICC profiles you should calibrate your monitor using ColorSync. Go to **Apple>Control Panels>Monitors & Sounds**. The **Monitors & Sounds** window will display. Click **Color** and then calibrate. Follow the screen directions to calibrate your monitor.

**Note:** For an in-depth discussion of Photoshop and ColorSync, the Photoshop Users Guide should be read.

## Selecting Photoshop Color Settings

### RGB Setup

**File>Color Settings>RGB Setup**



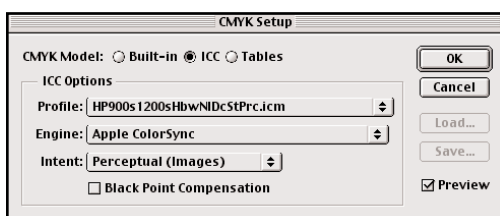
**RGB:** Select what best fits the range of color reproducible in print and displayable on the monitor.

**Gamma:** White point and primaries automatically change depending on what you select in the RGB pull-down.

Select **Display Using Monitor Compression** for real time conversion between Photoshop and the monitor.

### CMYK Setup

**File>Color Settings> CMYK Setup**



In the **Profiles** pull-down select the ICC profile you wish to use when printing.

In the **Engine** pull-down select Apple ColorSync.

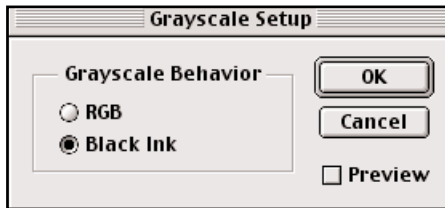
In the **intent** pull-down select Perceptual (image).

Do not select **Black Point Compression** because it might clip your gamut.

# PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

## CMYK Setup

File>Color Settings> Grayscale Setup



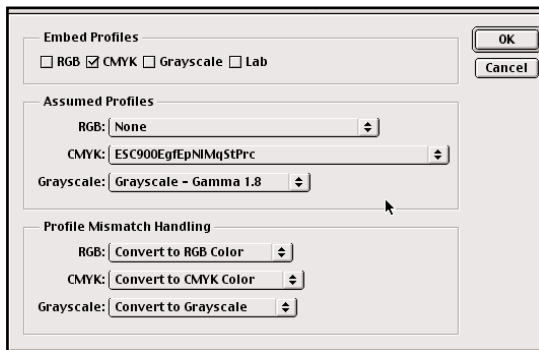
*Note: Use this setup when image will appear on the Web.*

**RGB:** Provides composite gray made of equal amounts of red, green, and blue.

**Black Ink:** Preferred setting when images will be printed.

## CMYK Setup

File>Color Settings> Profile Setup



Photoshop has to be told that you want to embed profiles or if you do not want to embed profiles. It is accomplished with profile Setup.

If you want to embed a profile in all the color spaces select RGB, CMYK, Grayscale, and LAB.

*Note: If the image is going to be used for the Web only select Grayscale.*

### Assumed Profiles

Select the profile you want to use in RGB, CMYK, and/or Grayscale.

## Profile Mismatch Handling

This feature allows you to tell Photoshop how to handle a tagged image if a different color space has been previously used with it.

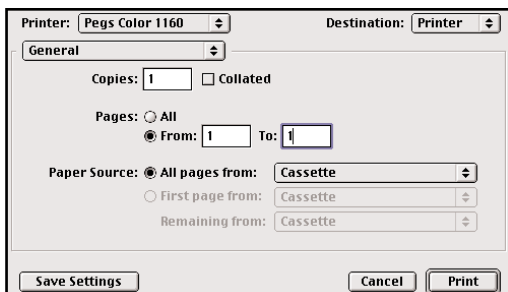
### Step 1:

Go to **File>Print**.

The LaserWriter 8.7 Print dialog will display.

### General

Define the pages you want to print in To and From.

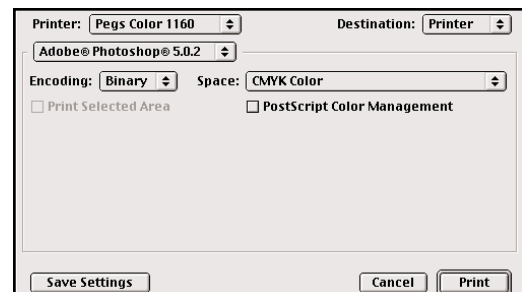


### Step 2:

### Adobe Photoshop

Select **Binary** in Encoding.

Select the appropriate color space in Space.



# PowerRIP 2000 ColorSync™ 2.6.1 or later and ICC Profiles (Cont)

## Step 3:

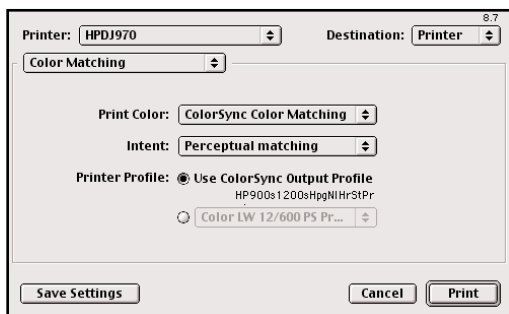
### Color Matching

Select **ColorSync Color Matching** in Print Color.

Select **Perceptual Matching** in Intent.

Select **Use ColorSync Output Profile** in the Printer Profile.

The ICC profile that you defined in the Apple ColorSync Profiles dialog will display



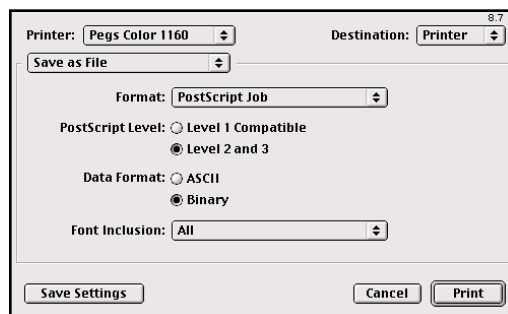
## Step 4:

### Save As File

Select **Level 2 and 3** in PostScript Level.

Select **Binary** in Data Format.

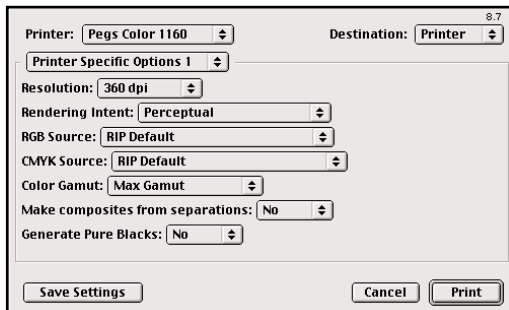
Select **All** in Font Inclusion.



## Step 5:

### Printer Specific Options 1

For an in-depth discussion of the Printer Specific Options for your printer see Appendix 4 Properties/Features of the PowerRIP 2000 manual.



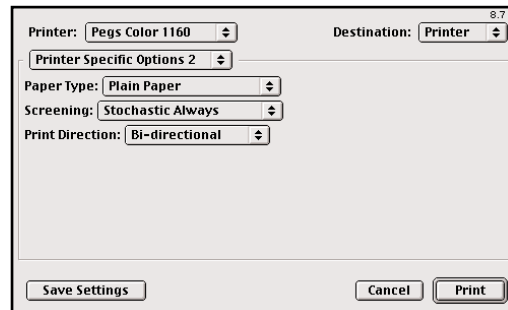
## Step 6:

### Printer Specific Options 2

Select the appropriate **Paper Type**.

Select **Stochastic Always** in Screening.

Select **Bi-Directional** in Print Direction



Click **Save Settings**.

Click **Print**. The file will process and print.