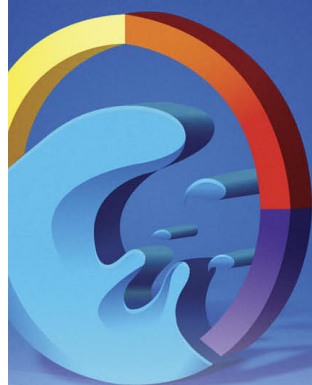




Splash RPX-iii Xerox 700 Digital Color Press

Color Guide



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INTRODUCTION

This document describes how to use the color management tools in the Splash RPX-iii Xerox 700 Digital Color Press. It also describes the color print options supported by the Splash RPX-iii Xerox 700 Digital Color Press.

Terminology and conventions

This document uses the following terminology and conventions.

Term or convention	Refers to
Digital press	Xerox 700 Digital Color Press
EFI Splash RPX-iii	Splash RPX-iii Xerox 700 Digital Color Press
Mac OS	Apple Mac OS X
Titles in <i>italics</i>	Other documents in this set
Windows	Microsoft Windows 2000, Windows XP, Windows Server 2003, Windows Vista

Splash color tools

The EFI Splash RPX-iii color tools consist of the following:

- **Profile management** allows you to import color profiles to the EFI Splash RPX-iii, providing easier and more customizable color management. You can also export color profiles from the EFI Splash RPX-iii. You can manage CMYK profile associations and associate output profiles with specific media types and screening methods.
- **ColorCal** allows you to create custom CMYK profiles to calibrate the EFI Splash RPX-iii to produce the most accurate CMYK and RGB color output possible.
- **ColorTuner** allows you to make color changes to any document (a single page or the entire document) at the EFI Splash RPX-iii without having to reopen and edit the original file in the original application. You can make color (RGB or CMYK) or grayscale changes globally by adjusting either the overall intensity of a specific color or the highlights, midtones, or shadows. Direct color substitution changes the selected color to a new color for a single page of a document or the entire document. Smoothed color substitution changes all occurrences of a single color to another color, allowing you to adjust the dominant color in an image.
- **Spot Color Editor** allows you to add and delete spot colors, as well as change the value output for any particular spot color.

Before using any of these tools, you must log on to the EFI Splash RPX-iii.

Splash color correction

The EFI Splash RPX-iii has built-in color correction capabilities that allow you to match the colors of the image on your computer monitor to process inks used on commercial printing presses.

CMYK color correction on the EFI Splash RPX-iii is optimized for matching mixed press ink colors. Splash CMYK color correction automatically compensates for differences between press ink colors to accurately simulate the selected press ink profile.

Splash color correction produces the same RGB color results for TIFF and EPS files.

Since color correction is applied by the EFI Splash RPX-iii, instead of the application, you can color-correct any print job, whether the job was created with a pre-press application, such as QuarkXPress, or an office application, such as Microsoft Word.

Documents that contain both RGB and CMYK graphics are a special problem for color proofing. Correcting color for one type of graphic affects the quality of the other. The EFI Splash RPX-iii provides RGB and CMYK color correction that produces accurate, consistent color for both.

PROFILE MANAGEMENT

This chapter describes how to manage color profiles and adjust color output on the EFI Splash RPX-iii.

Color profiles are descriptions of the color characteristics of a device. The EFI Splash RPX-iii uses several types of profiles to manage color.

- **Output profile** describes the color characteristics of a printing device, the Xerox 700 Digital Color Press in this case. The output profile is associated with a calibration target that defines the expected density response of the digital press.
- **Press profile**, or **simulation profile**, describes the color characteristics of another printing device, such as a printing press, that you want the EFI Splash RPX-iii to simulate. These color characteristics are specified in CMYK color space.
- **RGB profile** is used by the EFI Splash RPX-iii to determine the characteristics of the color values specified in a source digital image. These colors are specified in the RGB color space.

The EFI Splash RPX-iii comes with several ICC profiles installed. The ICC format is an industry standard color profile format developed by the International Color Consortium (ICC) that describes the color capabilities of a color device, including the gamut, based on the differences between an ideal and the current device. The ideal is often provided by the manufacturer as a color reference file.

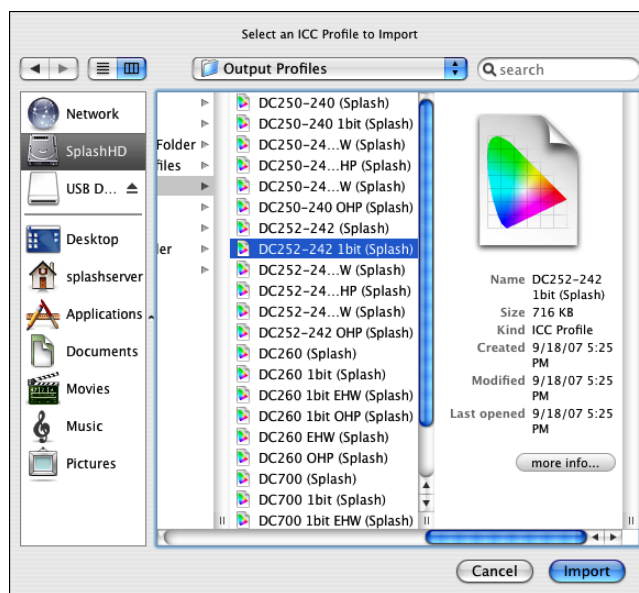
Importing profiles

You can import an ICC profile to the EFI Splash RPX-iii from a file on your system or from a client system using Splash Server Remote.

TO IMPORT A PROFILE

1 Choose Import Color Profile from the Profiles menu.

You can import RGB and CMYK profiles. A CMYK profile can be used as a press profile or an output profile.



2 Browse to the file location and select the file that you want to import.

NOTE: If you import a profile with the same file name as a profile that is already on the EFI Splash RPX-iii, it replaces the existing profile. If you do not want to replace the existing profile, change the file name before importing.

3 Click Import.

If you selected an RGB profile, the profile is imported.

If you selected a CMYK profile, a dialog box appears that allows you to set the profile type. The profile type determines whether the profile is added to the EFI Splash RPX-iii CMYK press profiles or to its output profiles.

For more information about CMYK press profiles, see [page 12](#). For more information about Output Profiles, see [page 15](#).

4 Select a profile type and click OK.

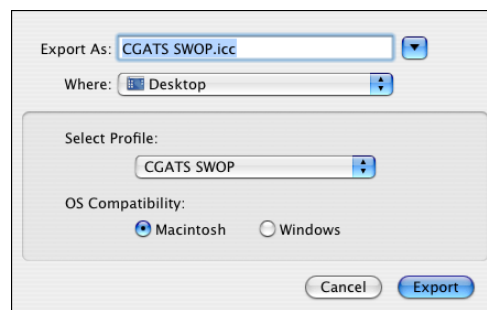
For a CMYK press profile, the Color Profiles dialog box allows you to specify the imported profile as a press profile or output profile.

For an output profile, the Output Profiles dialog box allows you to select whether you want the imported profile to be used by default when printing with a specific media type and printer mode.

5 If desired, choose the appropriate assignment for the new profile.**6 Click OK.**

Exporting profiles

You can export any RGB, CMYK, or output profile and save it as a file.

TO EXPORT A PROFILE**1 Choose Export Color Profile from the Profiles menu.****2 Select the profile that you want to export.****3 Enter the file name or leave the default name.****4 Browse to the location in which you want to save the file.****5 Select Macintosh or Windows compatibility.**

If you are going to import the profile to another EFI Splash RPX-iii, select Macintosh compatibility.

6 Click Export.

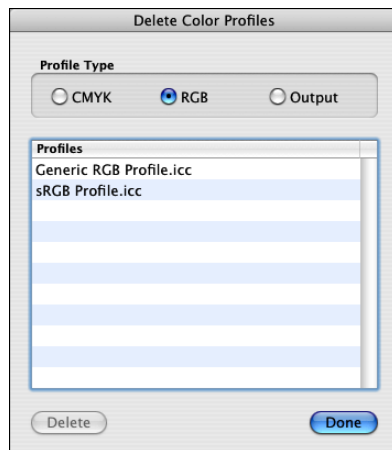
NOTE: If you export a custom profile that you created by editing a standard profile in the ColorCal Edit Profiles tool, the edits you made are recognized only if you import the profile to another EFI Splash RPX-iii. They are not recognized by other color management systems, such as ColorSync.

Deleting profiles

You can delete any custom RGB, CMYK, or output profile from the EFI Splash RPX-iii. You cannot delete the profiles that are included with the EFI Splash RPX-iii by default.

TO DELETE A PROFILE

- 1 Choose **Delete Color Profiles** from the **Profiles** menu.



- 2 Select the **type of profile: CMYK, RGB, or Output**.
All profiles of that type that can be deleted are displayed.
- 3 Select the **profile that you want to delete**, click **Delete**, and then click **Delete** again to confirm.
- 4 Click **Done** to close the window.

CMYK press profiles

The EFI Splash RPX-iii provides standard CMYK press profiles. The following are 4D (new style) profiles:

- CGATS SWOP
- Corel RGB
- Enterprise CMYK
- Euro-Simulation
- Euroscale Coated
- Euroscale Enhanced
- Fogramat
- ISO Coated
- ISO Coated v2 (ECI)
- ISO Coated v2 300 (ECI)

- ISO Uncoated
- ISO Uncoated Yellowish
- ISO Web Coated
- Japanese Press Enhanced
- Japanese Press Inks
- Newsprint Recycled Paper
- Newsprint White Paper
- SC Paper (ECI)
- SWOP Coated
- SWOP Enhanced
- Type D Enhanced
- Type D Inks

The following are 1D (old style) profiles:

- CMYK Enhanced
- CMYK Euroscale
- CMYK SWOP
- Uncalibrated
- Visual Standard
- Visual Standard EHW

You can use these profiles as the basis for creating custom profiles using the ColorCal Expert tool. For more information, see [“Calibration”](#) on page 20.

When you print a job to the EFI Splash RPX-iii from a client computer with Two-Way Communication enabled in the printer driver, you can set the CMYK Press Profile option to any of these profiles or any CMYK profile that you have imported (see [“CMYK Press Profile”](#) on page 56).

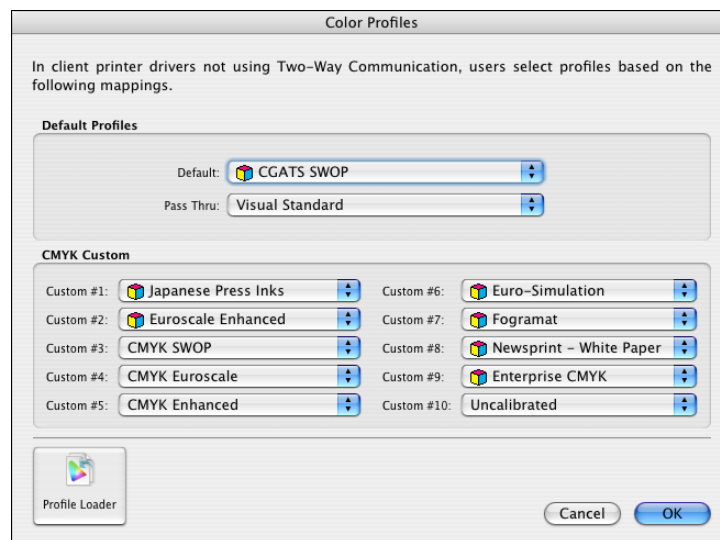
When you print a job to the EFI Splash RPX-iii from a client computer that does not have Two-Way Communication enabled in the printer driver, the selections shown for the CMYK Press Profile option are:

- Printer’s Default
- Default
- Custom 1 - Custom 10
- Color Management Off

These selections correspond to actual CMYK profiles residing on the EFI Splash RPX-iii. By default, the selections are defined as follows:

- Default: CGATS SWOP (US) or ISO Coated (Europe)
- Custom 1: Japanese Press Inks
- Custom 2: Euroscale Enhanced
- Custom 3: CMYK SWOP
- Custom 4: CMYK Euroscale
- Custom 5: CMYK Enhanced
- Custom 6: Euro-Simulation
- Custom 7: Fogramat
- Custom 8: Newsprint - White Paper
- Custom 9: Enterprise CMYK
- Custom 10: Uncalibrated
- Pass Thru (Color Management Off): Visual Standard

You can change the definition of any setting in the Color Profiles dialog box. To access this dialog box, choose Color Profiles from the Profiles menu.



To import a new CMYK profile, click Profile Loader and browse for the file (see [“Importing profiles”](#) on page 10). The new profile is added as a selection in the list of profiles available for each setting.

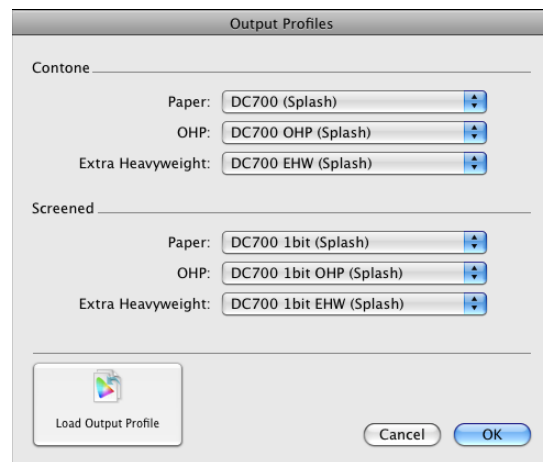
Output profiles

When you print a job to the EFI Splash RPX-iii with the Output Profile option (see [“Output Profile”](#) on page 59) set to Printer’s Default rather than a specific profile, the EFI Splash RPX-iii determines the output profile to use based on the Media Type and Printer Mode settings of the job. You can set which output profile to use for each combination of Media Type and Printer Mode.

Printer Mode is either Contone or Screened. Media Type is grouped into Paper, OHP (Transparency), and Extra Heavyweight groups, defined as follows:

Group	Media type
Paper	Uncoated, gsm less than or equal to 105
OHP	Transparency Transparency Interleave
Extra Heavyweight	All others

You can set the associations of output profiles with Media Type group and Printer Mode in the Output Profiles dialog box. To access this dialog box, choose Output Profiles from the Profiles menu.



To import a new output profile, click Load Output Profile and browse for the file (see [“Importing profiles”](#) on page 10). The new profile is added as a selection in the list of profiles available for each setting.

NOTE: The settings in the Output Profiles dialog box take effect when the Output Profile setting for a job is set to Printer’s Default. You can also select a specific output profile for a job, but make sure to select a profile that is appropriate for the job. For more information, see [“Output Profile”](#) on page 59.

Device link profiles

To use a device link profile on the EFI Splash RPX-iii, you must first import the profile. See the instructions in [“Importing profiles”](#) on page 10. For CMYK-to-CMYK device link profile, choose Simulation profile when you import the profile. An RGB-to-CMYK device link profile is handled by the EFI Splash RPX-iii automatically.

To use a device link profile when printing, select the CMYK-to-CMYK device link profile as the CMYK press profile for the job or the RGB-to-CMYK profile as the RGB profile for the job. The output profile setting is ignored. Calibration for the specified input tray and media is applied to the output.

CopyCal

CopyCal is a standalone application that creates profiles that allow the EFI Splash RPX-iii to emulate the output of any color printer. CopyCal is started from the EFI Splash RPX-iii server main window. CopyCal and the EFI Splash RPX-iii server can run at the same time. The digital press must be running during the entire profiling procedure.

CopyCal profiles are profiles that combine CMYK and RGB color correction into a single selection. Choosing a CopyCal profile in the CMYK profile list overrides any RGB color correction setting for that job.

The following procedure describes how to create a CopyCal profile for a color printer.

TO USE COPYCAL

- 1 Choose CopyCal icon from the Server menu in the EFI Splash RPX-iii main window.

The CopyCal main window appears.



- 2 Click Create Profile.

3 Select the input tray for printing the calibration target and click Next.**4 Type the number of copies to print.**

The number of copies is automatically set to the number specified in ColorCal preferences. For more information, see [“Setting ColorCal preferences”](#) on page 41. You can print multiple copies to warm up the digital press if it has been idle. If you specify more than one copy, all copies except the last one are printed as placeholders. The last copy is the calibration target that you will measure.

For Tray 5, you must also select the media type and paper size for printing the calibration target. For input trays other than Tray 5, the media type is automatically set to the type of paper in the tray.

5 Click Print.

CopyCal prints Page 1 of the reference target using the normal color correction settings of the digital press.

6 As instructed in the CopyCal window, return to the Finder and open one of the files in the Splash Extras/CopyCal Target folder in an application that can print PDF files.

- For Letter size output, open CopyCalTarget.pdf. (Click Open in the CopyCal window to open this file.)
- For A4 size output, open CopyCalTarget.A4.pdf.

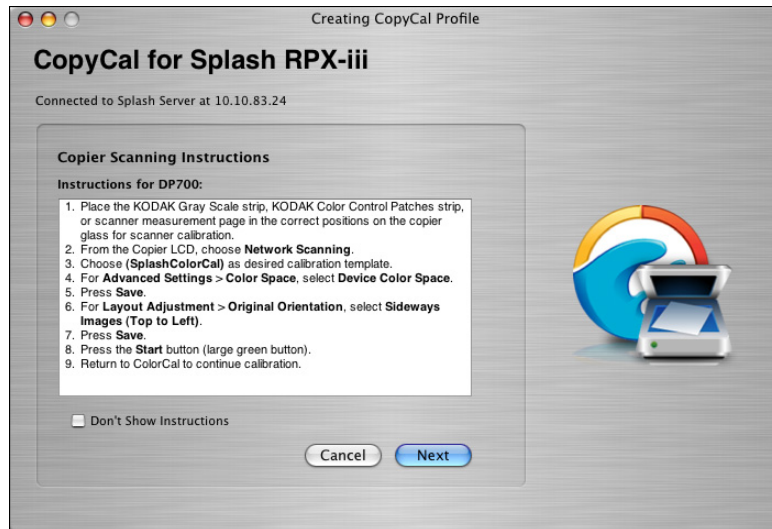
NOTE: These files are included on the EFI Splash RPX-iii User Software and Documentation DVD.

7 Print the file on the printer that you want to emulate, using the color correction settings that give you the desired output.

Pages 2, 3, and 4 of the reference target are printed.

8 In CopyCal, click Next.

9 Follow the on-screen instructions and click Next.



CopyCal scans the target and determines current color performance based on the acquired image.

NOTE: If you edit the other settings in the Splash template before the scan, you may get an error message. In this case, repeat the scan sequence.

10 Repeat [step 9](#) for pages 2, 3, and 4.

NOTE: If the pages are placed on the glass quickly, it may possible to scan without reselecting the scan options.

NOTE: If the wrong target is placed on the glass, a CopyCal error message appears, stating that it could not find registration marks. Restart the CopyCal procedure.

11 When prompted, name the profile and save it.

You can now select the CopyCal profile created as a custom CMYK profile. If the profile already exists, CopyCal prompts you to replace the profile. If you do not want to overwrite the existing profile, click Cancel.

Other color management systems

You can disable Splash color correction and use a third-party color management system to correct screen-to-print or process ink-to-print jobs.

NOTE: Using a third-party color management system increases processing time.

The EFI Splash RPX-iii provides color profiles for Apple's ColorSync color management software. The Splash ColorSync color profiles are located in the Splash: Splash Extras: ColorSync folder. These profiles enable ColorSync to print to the EFI Splash RPX-iii.

NOTE: Disable Splash Color Correction in the print driver before printing with ColorSync color management software.

For best results with ColorSync, set the Splash Pass Through profile to Visual Standard, which is the default setting. For more information, see [“CMYK press profiles”](#) on page 12.

For more information about using ColorSync, see the documentation that accompanies the application.

Profiling the digital press

To create a color profile of the digital press that the EFI Splash RPX-iii prints to, you can print the measurement page from the EFI Splash RPX-iii. Make sure the following print options are disabled when you print:

- RGB Color Management
- CMYK Color Management
- Match Spot Colors
- Use Black Ink Only
- Overprint Black

CALIBRATION

The color output on any color digital press changes over time, producing inconsistent color from day to day, or even hour to hour. ColorCal adjusts the EFI Splash RPX-iii for these changes, keeping output consistent. Calibration takes only a few minutes, so the color output can be tested and recalibrated as often as necessary.

You can calibrate using three methods:

- Using the digital press's scanner.
- Using an EFI ES-1000 spectrophotometer connected to the EFI Splash RPX-iii.
- Using an X-Rite (GretagMacbeth) iO automated chart reader coupled with an ES-1000 connected to the EFI Splash RPX-iii.

For optimal color printing results, calibrate the EFI Splash RPX-iii at least once daily. Calibrate several times a day during heavy use.

You can save multiple calibrations for use with specific printing conditions and print media.

ColorCal also offers AutoGray calibration to improve the gray balance of the calibrated digital press. You can also print a Test Page to verify visually the consistency of color output across a page.

In the Edit Profiles interface, you can create and save custom color profiles.

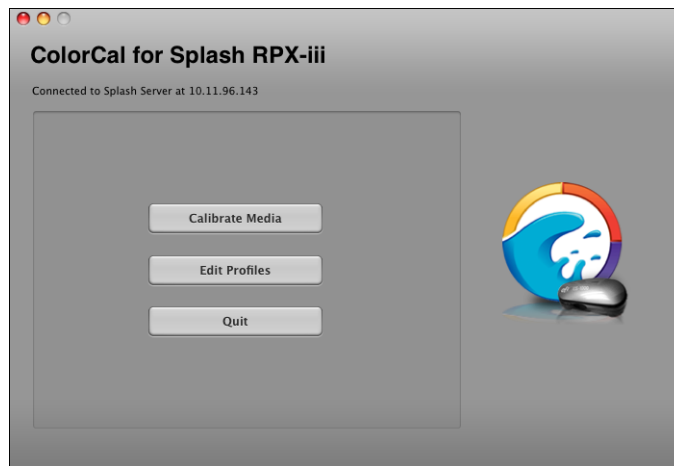
Calibrating with the ES-1000 (with or without iO)

This section describes how to calibrate the EFI Splash RPX-iii with ColorCal using an ES-1000 spectrophotometer connected to the EFI Splash RPX-iii. If you also connect the ES-1000 to an iO, the iO manipulates the ES-1000 for you. Without an iO, you operate the ES-1000 manually.

TO CALIBRATE THE EFI SPLASH RPX-iii USING THE ES-1000 WITH OR WITHOUT AN IO

- 1 Make sure that the ES-1000 is properly installed and connected to the EFI Splash RPX-iii. If you are using an iO, set it up with the ES-1000.
- 2 With the digital press running, click the ColorCal icon in the toolbar of the EFI Splash RPX-iii main window.

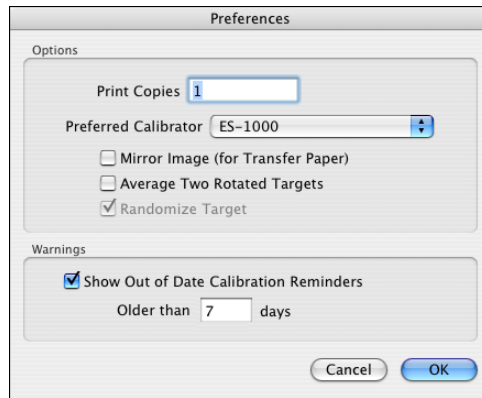
The ColorCal main window appears.



NOTE: You can run the EFI Splash RPX-iii during calibration, but do not process any jobs until calibration is complete.

3 To confirm the calibration method, choose Preferences from the ColorCal menu.

By default, Preferred Calibrator is set to Copier Scanner.



4 If you do not have an i0, select ES-1000. If you have an i0, select Eye-One.

The selected device is used for calibration and AutoGray.

5 Click OK.

6 In the ColorCal main window, click Calibrate Media.

7 Select the input tray for printing the calibration target and click Next.

8 Type the number of copies to print.

The number of copies is automatically set to the number specified in ColorCal preferences. For more information, see [“Setting ColorCal preferences”](#) on page 41. You can print multiple copies to warm up the digital press if it has been idle. If you specify more than one copy, all copies except the last one are printed as placeholders. The last copy is the calibration target that you will measure.

For Tray 5, you must also select the media type and paper size for printing the calibration target. For input trays other than Tray 5, the media type is automatically set to the type of paper in the tray.

9 Click Print.

The calibration target is printed.

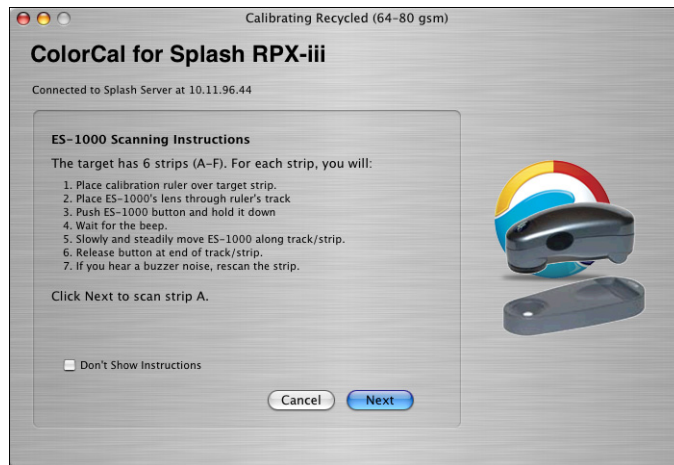
NOTE: If the Average Two Rotated Targets option is selected in ColorCal preferences, two targets are printed. If you specified printing more than one copy, use the last two copies. For more information, see [“Setting ColorCal preferences”](#) on page 41.

10 Retrieve the calibration target(s) from the digital press.

- 11 Calibrate the ES-1000 by placing it in its cradle and pressing the button on the side of the instrument.**

When you place the ES-1000 in the cradle, white point calibration calibrates the spectrophotometer and compensates for gradual drifts in its measurement. Make sure that the sample aperture is in full contact with the white tile on the cradle. If you do not place it correctly in the cradle, the spectrophotometer does not return accurate measurements.

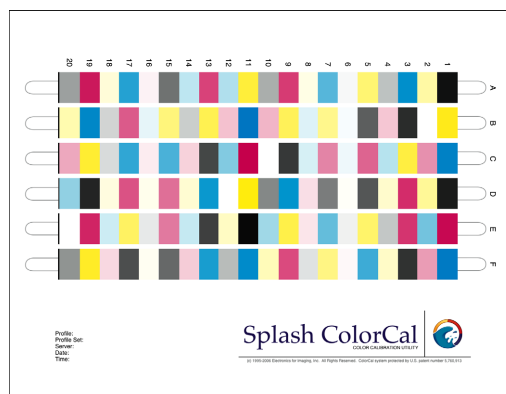
Instructions for measuring the color patches on the calibration target appear.



- 12 For a more accurate measurement, place several sheets of plain white paper beneath the calibration target.**

The extra sheets block underlying colors from being read by the instrument.

- 13 If you are using an i0, follow the on-screen instructions for placing the calibration target, click Next, and go to [step 23](#).**
- 14 Orient the calibration target so that strips are horizontal.**



- 15 Click Next.**

- 16 Position the ruler along the strip.
- 17 Hold the ES-1000 with its length perpendicular to the scan direction, and place the sample aperture through the ruler's track in the white space at the start of the strip.
- 18 Press and hold the button, and wait for a beep and for arrows showing the scan direction to appear in the strip on the screen.
- 19 After you hear a beep and see the arrows, slide the ES-1000 at a slow but consistent pace across the strip.

Take about five seconds to slide the length of the strip.

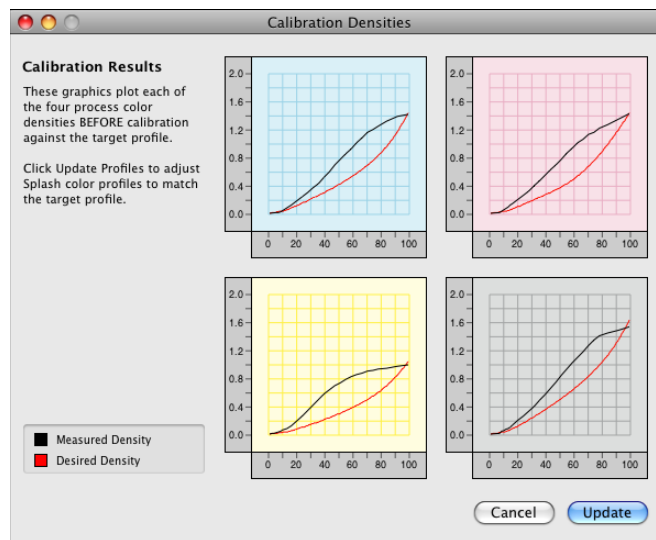
- 20 Release the button when all of the patches in the strip have been measured and you reach the white space at the end of the strip.

When a strip is measured successfully, instructions for measuring the next strip appear. If the strip is not measured successfully, a message directs you to try again.

- 21 Repeat steps 16 through 20 for each strip (A-F).
- 22 If the Average Two Rotated Targets option is selected in ColorCal preferences, repeat steps 12 through 21 for the second target.

For more information, see [“Setting ColorCal preferences”](#) on page 41.

When the calibration target has been measured, ColorCal displays a graphic representation of color performance for the digital press.



- 23 Evaluate the measurement results.

The Desired Density lines represent accurate CMYK printing for the calibration target on the media being calibrated. The Measured Density lines show actual uncalibrated digital press performance as measured from the scanned target.

NOTE: The vertical axis for each color curve is in units of Status-T less the paper density. The horizontal axis is represented as dot percentage from 0% to 100%.

If the Measured Density lines are jagged and do not increase linearly, a measurement error has occurred. In this case, do not accept the measurements. Click Cancel (rather than Update), press and hold the Option key, and then click Run Calibration. Follow the instructions to measure the target again.

- 24 **Click Update to have ColorCal adjust color output to match the Desired Density levels for your color profiles.**

ColorCal updates all profiles at the same time, even custom profiles, so you can use any color profile immediately without repeating color calibration.

A message appears stating that profile updating is complete.

- 25 **Click Verify to check calibration results for the digital press, or click Finish to return to the ColorCal main window.**

For more information, see [“Verifying digital press color accuracy”](#) on page 29.

- 26 **To exit ColorCal, choose Quit ColorCal from the ColorCal menu.**

Calibrating with the digital press scanner

This section describes how to calibrate the EFI Splash RPX-iii with ColorCal using the scanner on the digital press.

TO CALIBRATE THE EFI SPLASH RPX-iii USING THE DIGITAL PRESS SCANNER

- 1 **With the digital press running, click the ColorCal icon in the toolbar of the EFI Splash RPX-iii main window.**

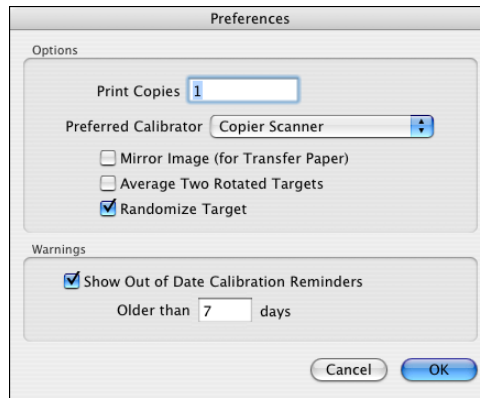
The ColorCal main window appears.



NOTE: You can run the EFI Splash RPX-iii during calibration, but do not process any jobs until calibration is complete.

2 To confirm the calibration method, choose Preferences from the ColorCal menu.

By default, Preferred Calibrator is set to Copier Scanner.



The selected device is used for calibration and AutoGray.

3 Click OK.

4 Click Calibrate Media in the ColorCal main window.

5 To calibrate the digital press scanner, click Calibrate. Otherwise, click Skip and go to [step 11](#).

If you are using ColorCal for the first time, or the digital press has recently been serviced, we recommend that you calibrate the scanner. ColorCal prompts you to calibrate the scanner every time you calibrate the EFI Splash RPX-iii with the digital press scanner.

Calibrating the scanner adjusts the digital press to compensate for scanning differences that could affect calibration quality. This command affects ColorCal operation only. It does not affect the scanning capability of the digital press for other scanning operations.

NOTE: To calibrate the scanner without calibrating the EFI Splash RPX-iii, choose Calibrate Scanner from the Calibration menu. This selection is available only if the Preferred Calibrator is set to Copier Scanner in the ColorCal preferences.

6 Select the input tray for printing the scanner measurement page and click Next.

7 Type the number of copies to print.

For Tray 5, you must also select the media type and paper size for printing the calibration target. For input trays other than Tray 5, the media type is automatically set to the type of paper in the tray.

8 Click Print.

The scanner measurement page is printed.

9 Retrieve the measurement page from the digital press.

ColorCal prompts you to place the measurement page on the digital press glass.

10 Follow the on-screen instructions and click Next.

For step 1 of the instructions, place the Kodak Gray Scale target and Color Control Patches target (provided with the EFI Splash RPX-iii) and the scanner measurement page face-down on the digital press glass.

NOTE: Handle the Gray Scale target and Color Control Patches target by the edges to avoid smudging the patches. Keep the targets in the protective sleeve when not in use. Replace a target if the patches become damaged.

ColorCal scans the measurement page. A message appears when the scanner calibration is complete.

11 Select the input tray for printing the calibration target and click Next.**12 Type the number of copies to print.**

The number of copies is automatically set to the number specified in ColorCal preferences. For more information, see [“Setting ColorCal preferences”](#) on page 41. You can print multiple copies to warm up the digital press if it has been idle. If you specify more than one copy, all copies except the last one are printed as placeholders. The last copy is the calibration target you will measure.

For Tray 5, you must also select the media type and paper size for printing the calibration target. For input trays other than Tray 5, the media type is automatically set to the type of paper in the tray.

13 Click Print.

The calibration target is printed.

NOTE: If the Average Two Rotated Targets option is selected in ColorCal preferences, two targets are printed. If you specified printing more than one copy, use the last two copies. For more information, see [“Setting ColorCal preferences”](#) on page 41.

14 Retrieve the calibration target(s) from the digital press.**15 Follow the on-screen instructions.**

For step 1 of the instructions, place the Kodak Gray Scale target (provided with the EFI Splash RPX-iii) and the calibration target face-down on the digital press glass.

NOTE: Handle the Gray Scale target by the edges to avoid smudging the patches. Keep the targets in the protective sleeve when not in use. Replace a target if the patches become damaged.

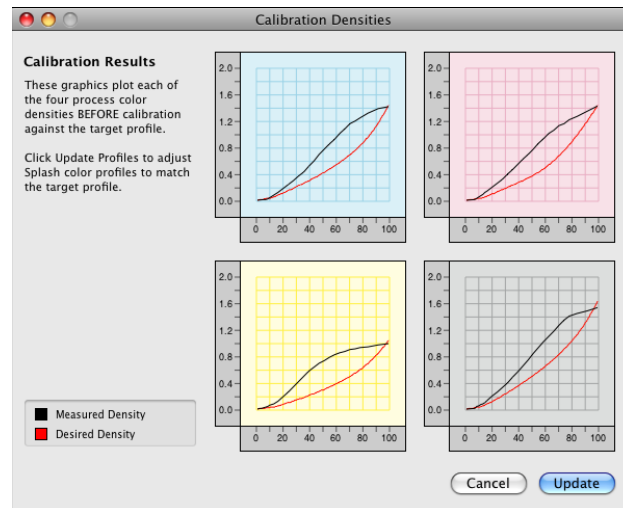
16 Click Next.

ColorCal scans the calibration target.

- 17 If the Average Two Rotated Targets option is selected in ColorCal preferences, repeat steps 15 and 16 for the second target.**

For more information, see “Setting ColorCal preferences” on page 41.

When the calibration target has been measured, ColorCal displays a graphic representation of color performance for the digital press.



- 18 Evaluate the measurement results.**

The Desired Density lines represent accurate CMYK printing for the calibration target on the media being calibrated. The Measured Density lines show actual uncalibrated digital press performance as measured from the scanned target.

NOTE: The vertical axis for each color curve is in units of Status-T less the paper density. The horizontal axis is represented as dot percentage from 0% to 100%.

If the Measured Density lines are jagged and do not increase linearly, a measurement error has occurred. In this case, do not accept the measurements. Click Cancel (rather than Update), press and hold the Option key, and then click Run Calibration. Follow the instructions to measure the target again.

- 19 Click Update to have ColorCal adjust color output to match the Desired Density levels for your color profiles.**

ColorCal updates all profiles at the same time, even custom profiles, so you can use any color profile immediately without repeating color calibration.

A message appears stating that profile updating is complete.

- 20 Click Verify to check calibration results for the digital press, or click Finish to return to the ColorCal main window.**

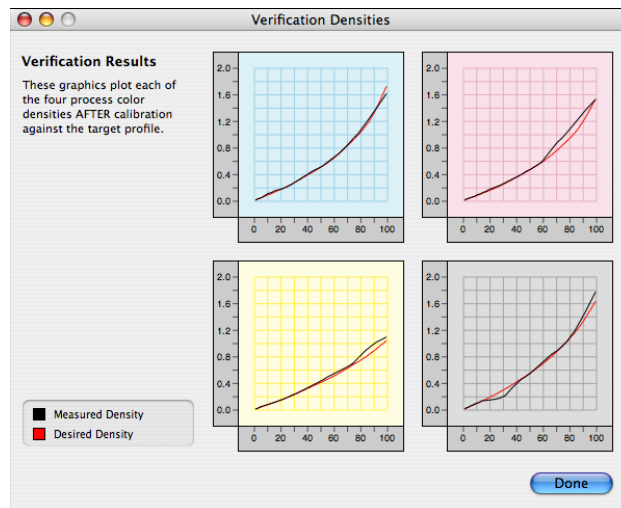
For more information, see the following section.

- 21 To exit ColorCal, choose Quit ColorCal from the ColorCal menu.**

Verifying digital press color accuracy

To verify the accuracy of a calibration, click Verify in the dialog box that appears when calibration is complete. Follow the steps used to initially calibrate the EFI Splash RPX-iii.

When the verification process finishes, ColorCal displays the color performance results. Compare the Desired Density lines with Measured Density lines to determine color printing accuracy. The following example shows that measured output closely matches desired color performance. Recalibration is not necessary.



If the Measured Density levels do not match Desired Density levels, calibrate the EFI Splash RPX-iii again.

If the measured curve does not closely correspond to the target curve during the verify process immediately after calibrating, the digital press may require servicing. If the digital press is printing unevenly, ColorCal cannot operate properly. To verify color consistency visually, see [“Color Consistency Test Page”](#) on page 40.

AutoGray

AutoGray is an additional calibration performed to improve the gray balance of the calibrated digital press. The AutoGray calibration procedure is similar to color calibration in that it prints and measures a target and then uses the measurements to automatically adjust the calibrated profile to improve gray balance.

NOTE: If a digital press has not been calibrated, AutoGray is disabled. For optimal accuracy, calibrate AutoGray following every color calibration.

To remove the current AutoGray calibration and reset AutoGray to the default, choose Clear AutoGray from the Calibration menu and select the calibration from which to remove AutoGray calibration.

After calibrating the EFI Splash RPX-iii, use the following procedure to perform AutoGray calibration.

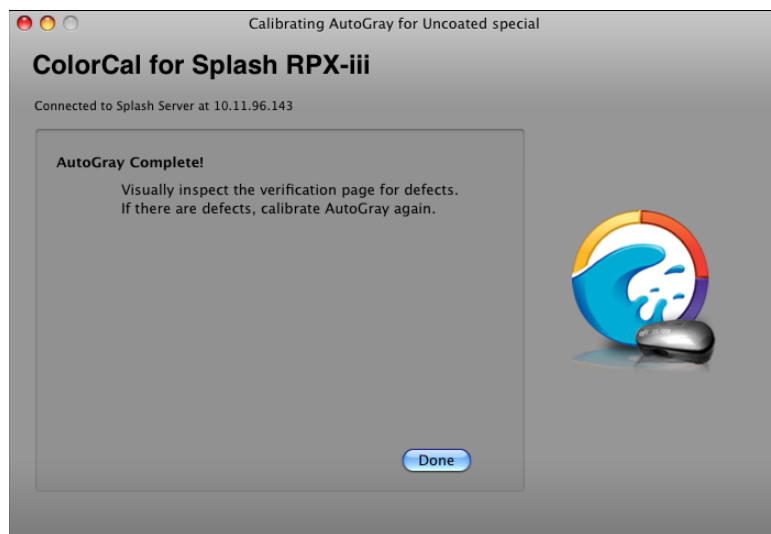
TO PERFORM AUTOGRAY CALIBRATION

- 1 In the ColorCal main window, choose **Calibrate AutoGray** from the Calibration menu.
- 2 If you are using the ES-1000, with or without an i0, go to [step 7](#) of the ES-1000 procedure on [page 22](#).

If you are using the digital press scanner, go to [step 11](#) of the digital press scanner procedure on [page 27](#).

The steps are the same as for color calibration, except that:

- If you are using the ES-1000, the target is two sheets (12 strips, A-L) instead of one.
- If you choose Verify at the end of the calibration, you verify the results by visual inspection, not by measuring with the ES-1000 or digital press scanner.



Custom calibrations

A calibration can be associated with one or more paper trays and the media type and weight installed in those trays. The EFI Splash RPX-iii comes with two pre-existing calibrations: one for Plain paper (Factory Plain) and one for all other media types (Factory EHW). By default, the EFI Splash RPX-iii selects which of these calibrations to use based on the media loaded in the tray.

For the Xerox 700 Digital Color Press, Plain paper includes uncoated media weighing 105 gsm or less.

When you calibrate the EFI Splash RPX-iii using the Calibrate Media selection in ColorCal, you update the calibration associated with the tray and media you select.

To use different calibrations for two types of media that would otherwise use the same calibration, you can create custom calibrations for each media. For example, you might have two Plain media of the same weight but with different background colors.

Creating a custom calibration

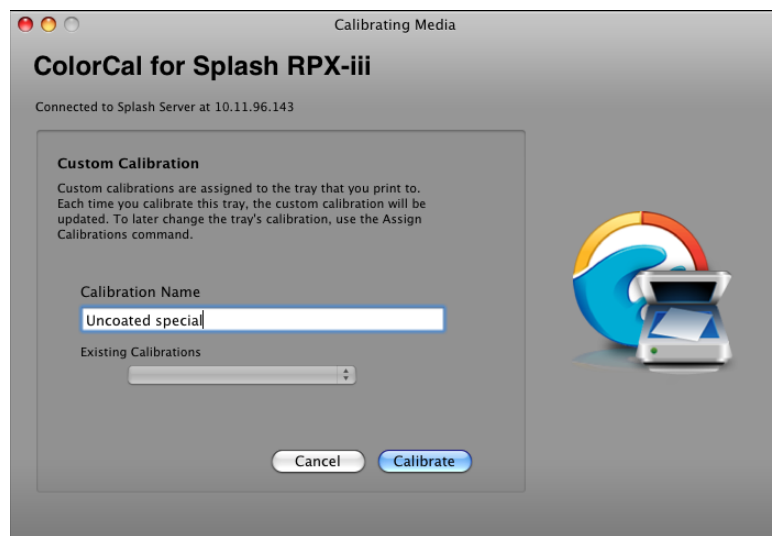
You create a custom calibration in ColorCal.

TO CREATE A CUSTOM CALIBRATION

- 1 In the ColorCal main window, choose **Calibrate Custom** from the **Calibration** menu.

The calibration procedure will proceed as described in “[Calibrating with the ES-1000 \(with or without iO\)](#)” on page 21 or “[Calibrating with the digital press scanner](#)” on page 25, depending on the Preferred Calibrator setting in ColorCal preferences.

- 2 When prompted for the calibration name, type a name that describes the media and click **Calibrate**.



When calibration is complete, the new calibration is assigned to the tray that you selected for printing the calibration target.

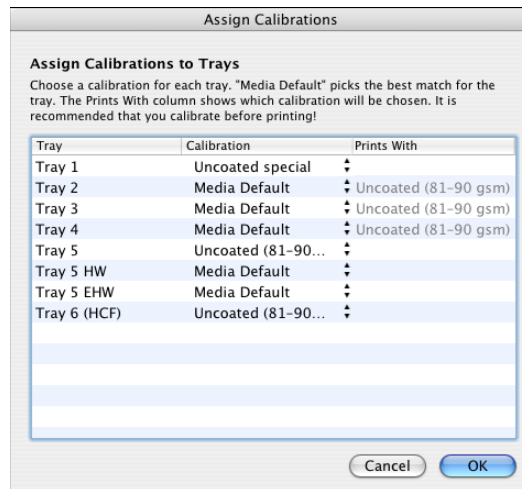
Assigning a calibration to a tray

By default, each tray is assigned to the Media Default setting for calibration, which means that the EFI Splash RPX-iii selects either Factory Plain or Factory EHW based on the media loaded in the tray. When you create a custom calibration, the tray you select when you print the calibration target is automatically reassigned to the custom calibration.

In general, you do not need to manually change the calibration assigned to a tray. However, if necessary you can view and change the calibration assigned to each tray in ColorCal.

TO VIEW AND CHANGE CALIBRATION ASSIGNMENTS

- 1 In the ColorCal main window, choose Assign Calibrations from the Calibration menu.



- 2 To change the calibration assigned to a tray, click the current setting and select the new calibration from the list.

NOTE: If you select the Media Default setting, the Prints With column indicates the calibration actually used.

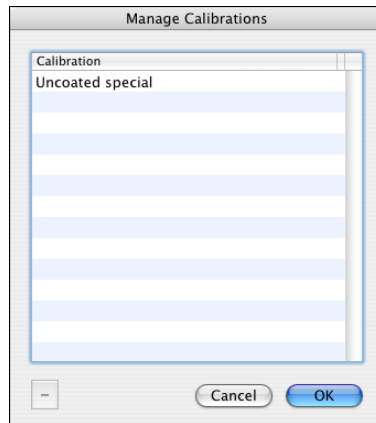
- 3 Click OK to close the window.

Managing custom calibrations

You can delete and rename custom calibrations.

TO MANAGE CUSTOM CALIBRATIONS

- 1 In the ColorCal main window, choose **Manage Calibrations** from the **Calibration** menu.

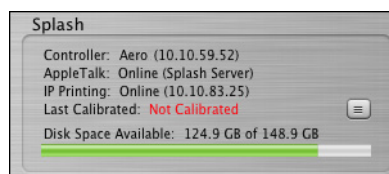


- 2 To delete a calibration, select the calibration and click the minus sign (-).
- 3 To rename a calibration, double-click the calibration and type a new name.
- 4 Click **OK** to close the window.

Calibration status and history

You can view the calibration status of all calibrations from the EFI Splash RPX-iii main window. You can also view the calibration history of a particular calibration in ColorCal.

In the lower-right corner of the EFI Splash RPX-iii main window, the **Last Calibrated** value is displayed in red as a warning if any of the calibrations you have specified are out of date (according to the time interval set in ColorCal preferences). For more information about ColorCal preferences, see [“Setting ColorCal preferences”](#) on page 41.

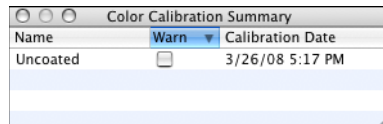


By default, the calibration status of all calibrations is checked. You can selectively disable the warning for specific calibrations. For example, you can disable the warning for heavyweight media if you only print on plain paper.

TO VIEW THE CALIBRATION STATUS AND SET THE WARNING STATUS OF ALL CALIBRATIONS

- Click the list icon next to the Last Calibrated field in the lower-right corner of the EFI Splash RPX-iii main window.

The Color Calibration Summary window appears. The calibration date for each calibration is displayed.



To disable the warning for a particular calibration, clear the Warn option for that calibration.

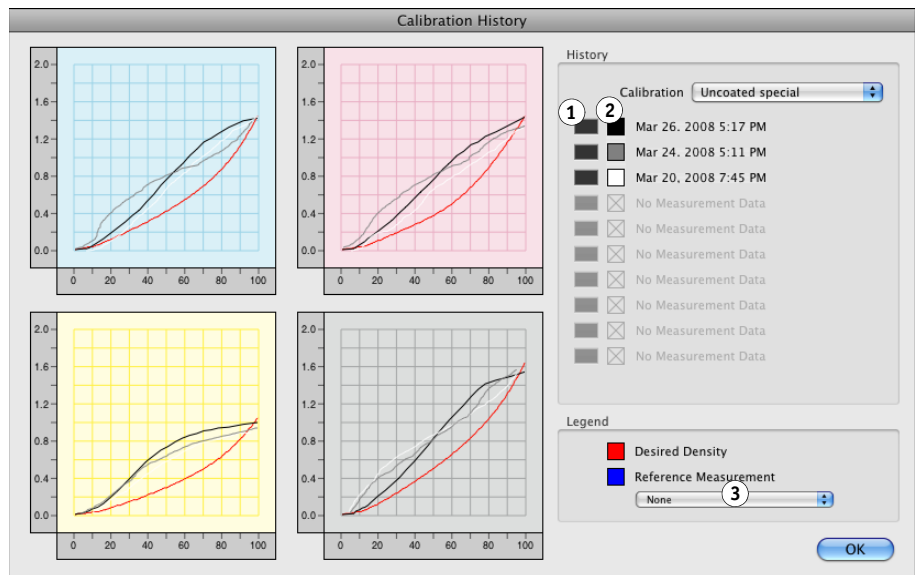
TO VIEW THE HISTORY OF A CALIBRATION

- In the ColorCal main window, choose Show Calibration History from the Calibration menu.
- Choose a calibration from the list.

The last 10 sets of measurements associated with the calibration are available for display on the graphs.

- Select the calibrations that you want to display.

- Click to select calibration. Selected calibrations are displayed on graphs.
- Color square indicates color of line on graphs.
- Click to select reference measurement.



- To set the calibration designated as the Reference Measurement, choose the calibration from the list under Reference Measurement.

The Reference Measurement is a calibration that always appears in the list of 10, even if other calibrations are newer. Typically, you select the calibration performed immediately after the digital press was last serviced as the Reference Measurement. This allows you to observe how the digital press changes from the time that it is serviced.

TO CLEAR THE CALIBRATION HISTORY FOR ALL CALIBRATIONS

- 1 In the ColorCal main window, choose **Clear Calibration History** from the **Calibration** menu.

A confirmation dialog box appears. If **Keep Reference Measurement** is selected, the Reference Measurement for each calibration is not deleted.



- 2 Click **Delete**.

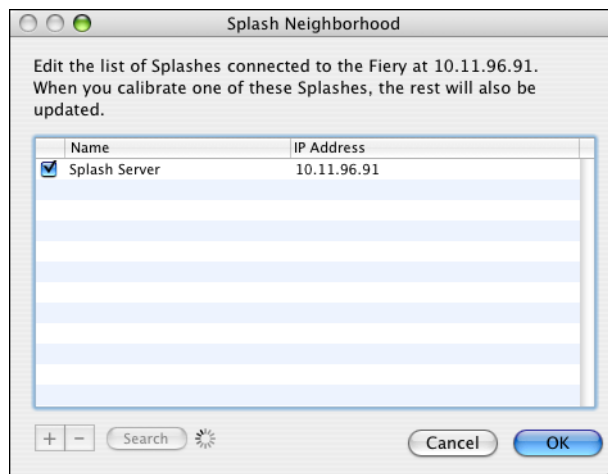
Updating multiple EFI Splash RPX-iii servers from one server

A Splash Neighborhood consists of one or more EFI Splash RPX-iii servers connected to the same Fiery. You can perform a calibration on one server and automatically update the calibrations on the other servers.

TO CREATE OR MODIFY A SPLASH NEIGHBORHOOD

- 1 In the ColorCal main window, choose **Splash Neighborhood** from the **Remote** menu.

ColorCal automatically searches for EFI Splash RPX-iii servers connected to the same Fiery.



- 2 To add a server that is not displayed in the list, click the plus sign (+), type the IP address, and then click OK.**

The IP address must be valid for a EFI Splash RPX-iii connected to the same Fiery and be enabled for remote calibration in the Server preferences.

- 3 To remove a server from the neighborhood, clear its check box. To delete a server from the list completely, select it and click the minus sign (-).**

To add back a server you deleted, click Search.

- 4 To activate the updating of calibrations on all the servers in the neighborhood, select Update Neighborhood from the Remote menu if it is not already selected.**

If Update Neighborhood is not selected, only the EFI Splash RPX-iii that is connected (under Remote > Splash Connection) is updated.

- 5 Click OK to close the window.**

Calibrating one or more servers from a remote computer

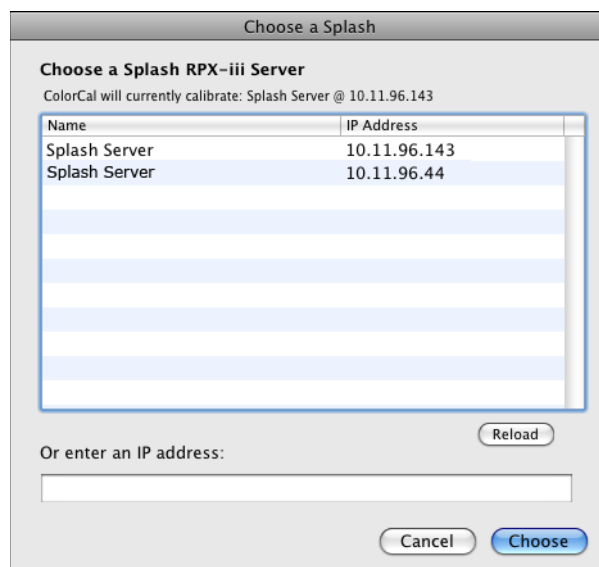
You can run ColorCal on a remote computer and update the calibration on the EFI Splash RPX-iii from the remote computer. This feature is useful when the EFI Splash RPX-iii is physically difficult to access to connect the ES-1000, if that is your calibration device. The remote computer must have Calibration Station installed in order to run ColorCal, and the EFI Splash RPX-iii must be running in order to be calibrated remotely.

You can also configure ColorCal to perform multiple calibrations at the same time, in batch mode. You specify a list of servers and calibrations for each server, and ColorCal prints all of the calibration targets to all of the servers. You retrieve all the targets, measure them in any order, and ColorCal saves the measurements to the appropriate server. This feature is useful if you are using an ES-1000 and do not want to move it from server to server.

For information about installing Calibration Station, see [Getting Started](#).

TO CALIBRATE A EFI SPLASH RPX-iii SERVER FROM A REMOTE COMPUTER RUNNING COLORCAL

- 1 In the ColorCal main window, choose **Splash Connection** from the **Remote** menu.



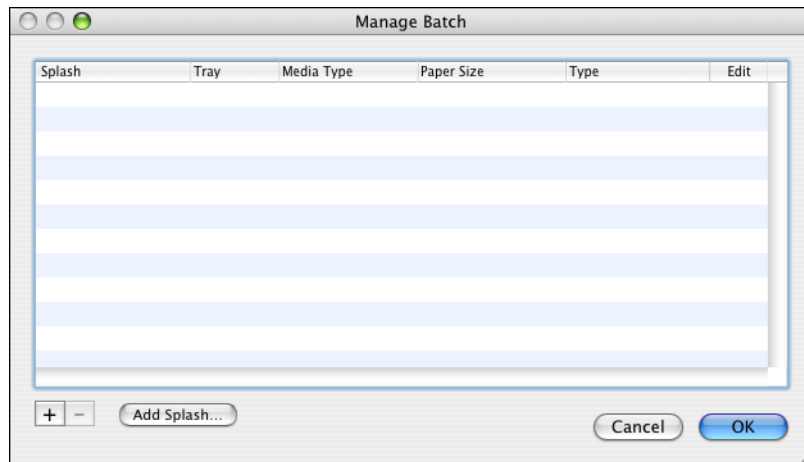
NOTE: If the EFI Splash RPX-iii that you want to calibrate does not appear in the list, make sure that the EFI Splash RPX-iii is enabled for remote connection. Check the Allow Remote Calibration option in the Splash Server preferences.

- 2 To connect to a server, select the server from the list or type the IP address, and then click **Choose**.

When you calibrate, the calibration is saved to the selected server.

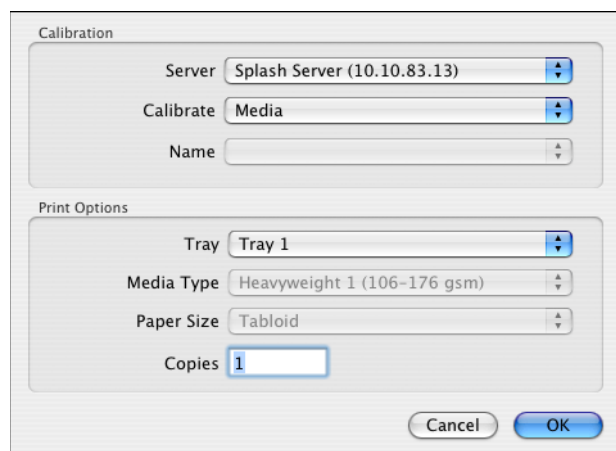
TO CALIBRATE MULTIPLE EFI SPLASH RPX-iii SERVERS FROM A REMOTE COMPUTER RUNNING COLORCAL

- 1 In the ColorCal main window, choose Manage Batch from the Remote menu.



- 2 Click the plus sign (+).

A dialog box appears that allows you to choose a server and specify the calibration.



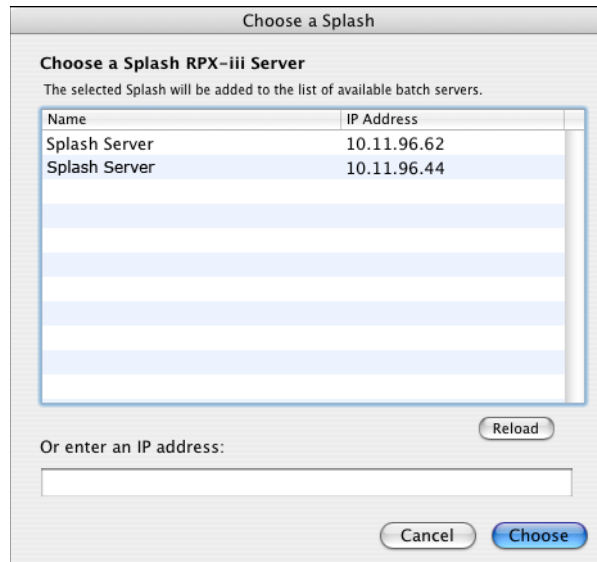
- 3 Choose the server from the list, select the calibration type and print options for printing the calibration target, and then click OK.

The calibration is added to the batch list.

The calibration type is Media, Custom, AutoGray, or Scanner. For a custom calibration, select the name also.

- 4 To add other EFI Splash RPX-iii servers to the list of available servers, click Add Splash.**

The Choose a Splash window appears.



- 5 Select the server or type its IP address if it is not displayed in the list, and then click Choose.**

The server is added to the list of available servers. You can add its calibrations to the batch by clicking the plus sign (+).

- 6 To remove a calibration from the batch, select it and click the minus sign (-).**

- 7 Click OK to close the window.**

- 8 In the ColorCal main window, choose Print Batch Targets from the Remote menu.**

All of the calibration targets for the specified calibrations are printed.

- 9 Retrieve all of the calibration targets.**

- 10 In the ColorCal main window, choose Measure Batch Targets from the Remote menu.**

- 11 Click Measure.**

- 12 Measure the calibration targets as described previously in this chapter for the different calibration types.**

You can measure the targets in any order. You do not have to scan all of the pages at once. You can cancel the calibration and resume later by choosing Measure Batch Targets again. Completed measurements are saved to the appropriate EFI Splash RPX-iii as they are completed.

Color Consistency Test Page

The Color Consistency Test Page allows you to verify color consistency across a page by visually inspecting a Test Page filled with a mid-tone CMY gray.

TO PRINT THE COLOR CONSISTENCY TARGET

- 1 In the ColorCal main window, choose **Check Color Consistency** from the **Calibration** menu.
- 2 Type the desired gray level and click **Next**.
- 3 Select the input tray for printing the Test Page and click **Next**.
- 4 Type the number of copies to print.

The number of copies is automatically set to the number specified in ColorCal preferences. For more information, see [“Setting ColorCal preferences”](#) on page 41. You can print multiple copies to warm up the digital press if it has been idle. If you specify more than one copy, all copies except the last one are printed as placeholders. The last copy is the one that you will use.

For Tray 5, you must also select the media type and paper size for printing the calibration target. For input trays other than Tray 5, the media type is automatically set to the type of paper in the tray.

- 5 Click **Print**.

The Test Page is printed.

- 6 Examine the Test Page.

The page should be free of visible variations in coverage and color reproduction or any other defects that might affect normal output.

- 7 In the final screen, click **Done**.

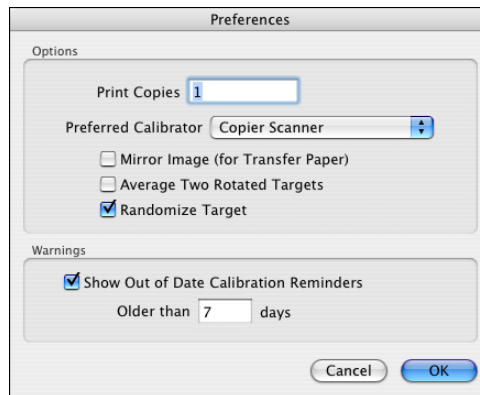
Setting ColorCal preferences

ColorCal preferences are options that control the operation of the ColorCal functions.

TO SET COLORCAL PREFERENCES

- 1 In the ColorCal main window, choose Preferences from the ColorCal menu.

The Preferences window appears.



- 2 Select the desired preferences and click OK.

Print Copies: Specifies the number of copies of the calibration target printed. Printing multiple copies can prevent problems if the first print from the digital press is not representative of the normal output.

Preferred Calibrator: Sets the method you use to make calibration measurements: Copier Scanner, ES-1000, or Eye-One iO.

Mirror Image: Inverts the calibration target image. Use this option to calibrate the EFI Splash RPX-iii for heat-transfer paper (for example, T-shirt transfers). Select this option, print the calibration target on the heat-transfer paper, transfer the calibration target image to the final medium (for example, a T-shirt), and perform calibration measurements on the final medium.

Average Two Rotated Targets: Specifies that two calibration targets are printed, one rotated 180 degrees with respect to the other. You are prompted to measure both targets, and then the averages of the measurements are used.

Randomize Target: Randomizes placement of the patches on the calibration target to minimize the effects of print density variations on a page.

Show Out of Date Calibration Reminders: Allows you to select a specific number of days from the last calibration date to remind you to recalibrate the media in each tray. When the specified time interval expires for any of the input trays, a warning icon appears next to the tray selection in the ColorCal procedure.

Editing custom color profiles

ColorCal provides expert-level tools for creating custom (user-defined) CMYK profiles and output profiles or modifying the calibrated CMYK profiles and output profiles provided with ColorCal.

You can edit the calibration curve and the white point for a profile. For best results, calibrate a profile before editing it.

To create a new profile, save an existing profile under a new name and then modify the new profile.

Editing the calibration curve

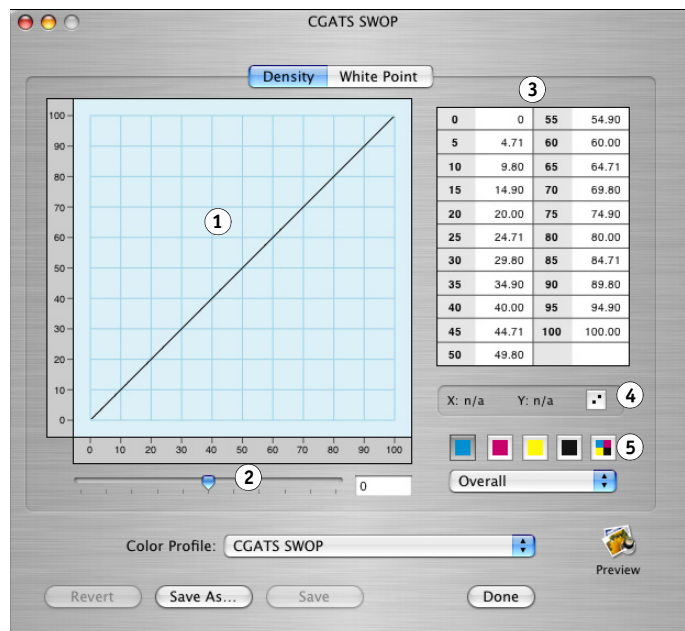
ColorCal provides the following methods for editing a calibration curve:

- Adjusting gain in shadows, midtones, and highlights
- Editing control points on the calibration curve
- Entering percentages (for new-style profiles) or densities (for old-style profiles)

TO EDIT A CALIBRATION CURVE

1 In the ColorCal main window, select Edit Profiles.

- 1 Color curve
- 2 Color slider
- 3 Table of color values
- 4 Click to activate control points
- 5 Color palette



2 Select a profile to edit from the Color Profile list.

NOTE: Factory installed profiles cannot be edited. If you select a factory installed profile, the Save button is disabled. You must choose Save As and enter a new profile name.

3 Select a color curve to edit from the color palette.

The four color curves and the master curve are selectable.

4 To edit the curve by adjusting gain, select Highlights, Midtones, or Shadows to choose a portion of the curve, or Overall to adjust the entire curve, and move the slider to adjust the gain.**5 To edit the curve using control points, choose Profiles > Edit Control Points (or click the button next to the X and Y coordinates) to turn control point editing on, and then click and drag the curve points with the mouse pointer.**

NOTE: Control point editing is not available for the master curve.

Output Percentage (0% to 100%) and Input Percentage (0% to 100%) update in the table of X and Y values as a curve point is moved.

- To add a curve point, click anywhere along the curve. ColorCal allows a maximum of 32 control points for an individual color curve.
- To remove a curve point, drag it over another point on the color curve.
- To undo all changes to the curve, click Revert.
- To change the curve to a straight diagonal line ($X=Y$), choose Profiles > Set Channel to Line.

NOTE: The color curves are similar to those used in Adobe Photoshop, but cannot be directly exchanged with curves created in Photoshop.

6 To edit the curve using percentages, click a value in the table of X and Y values and type a new value.

NOTE: The table of X and Y values is not available for the master curve.

If an out-of-range value is entered, it is corrected immediately to the nearest in range value. For new-style, the range is 0.0 to 100.0. For old-style, the range is 0.0 to 2.0. The table does not accept negative numbers.

NOTE: To undo all changes, click Revert.

7 Repeat steps 3 and 6 until all adjustments to all curves are complete.

Each color's cumulative changes show in its own channel and in the master channel display.

8 Click Save to overwrite the existing profile or Save As to create a new profile.**9 Click Done.**

NOTE: If you click Done before saving a profile, ColorCal prompts you to save changes or cancel. The new profile is automatically calibrated to the last time calibration was run.

NOTE: Revert restores the previously saved profile.

Editing the white point

Use caution when changing the white point, because even a small change can cause a significant change in color output. In general, change the white point only after taking measurements on actual media and arriving at a specific number.

ColorCal provides the following methods of editing the white point:

- Visually selecting a white point from a color graph
- Entering numerical values for each component of the white point

TO EDIT THE WHITE POINT OF A PROFILE

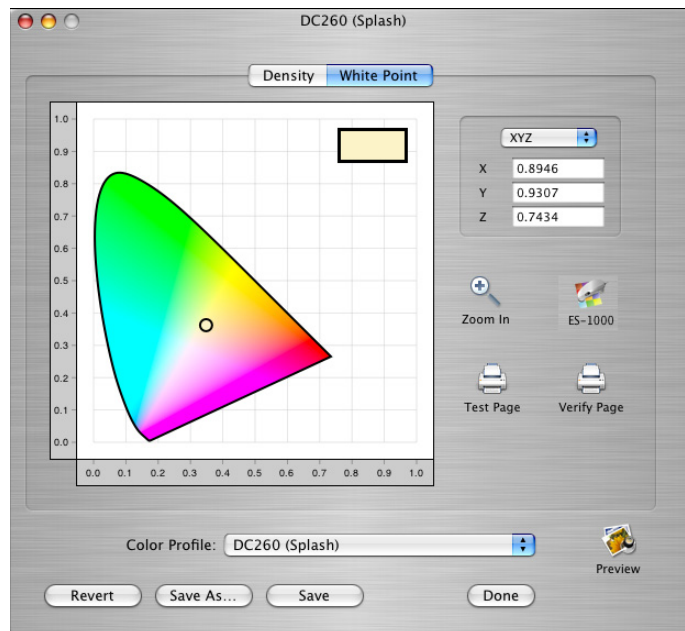
1 In the ColorCal main window, select Edit Profiles.

2 Select a profile to edit from the Color Profile menu.

NOTE: Factory installed profiles cannot be edited. If you select a factory installed profile, the Save button is unavailable. You must choose Save As and type a new profile name.

3 Click White Point.

The White Point graphical display appears.



4 To set the white point using numerical values, choose L*a*b*, HSV, RGB, or XYZ for the type of values, and then enter new values in the fields.

- 5 **To set the white point visually from the screen, click and drag the circle to a new location in the color chart.**

The color swatch in the upper-right corner updates to show the current white point. Generally, however, this method is less accurate than specifying a numerical value.

- 6 **To set the white point visually from a printed sample page, click the Test Page icon to print the page and select the square on the page that is the best match for the white that you want.**

You can then enter the L, a, and b values of that square as described in [step 4](#).

- 7 **To set the white point using the ES-1000 spectrometer, click the ES-1000 icon and follow the on-screen instructions.**

This option is available only if the ES-1000 is installed and connected to the EFI Splash RPX-iii.

- 8 **To further verify the white point setting, click Verify Page.**

A full page of the current paper white is printed from the currently selected tray for you to inspect.

- 9 **Click Save to overwrite the existing profile or Save As to create a new profile.**

NOTE: When factory installed profiles are selected, Save is the same as Save As.

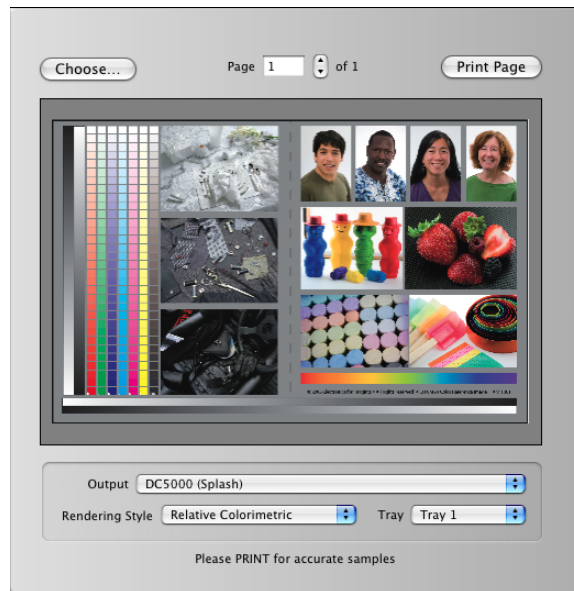
- 10 **Click Done.**

NOTE: If you click Done before saving a profile, ColorCal prompts you to save changes or cancel. The new profile is automatically calibrated to the last time calibration was run.

NOTE: Revert restores the previously saved profile.

Previewing a profile

At any point while editing a profile, you can preview a document (in PDF, PostScript, EPS, or TIFF format) with the edited profile applied by clicking the Preview icon in the lower-right corner of the window. A preview pane appears that allows you to choose a file to view. You can also drag and drop a file from the desktop directly into the preview pane.



This preview is intended to show relative change and is not intended as a proof of the final color. The only proof is the printed page. Editing a profile is an iterative process. Make a change, print a proof, and then check the proof to see if further changes are needed.

Use Print Page to print a proof. When you print, you can select the Rendering Style and Paper Source to see the effects of those settings used with the profile you have edited.

COLOR PRINT OPTIONS

This chapter describes the EFI Splash RPX-iii color print options and other print options that affect color output. You can control the settings for color print options as follows:

- Set the options for a specific print job when you print to the EFI Splash RPX-iii using the EFI Splash RPX-iii printer description file.
- Set default values for color print options on the EFI Splash RPX-iii. If you set an option to “Printer’s Default” when you print a job, the default value on the EFI Splash RPX-iii is used.
- If you send a job to the Hold queue, you can override the job’s settings from the EFI Splash RPX-iii before printing the job.
- If you send a job to a Virtual Printer or Hot Folder, the print option settings of the Virtual Printer or Hot Folder are applied to the job.

For more information about print options and Virtual Printers, see the [Printing Guide](#). For more information about default job settings, overriding a job’s settings, and Hot Folders, see the [Job Management Guide](#).

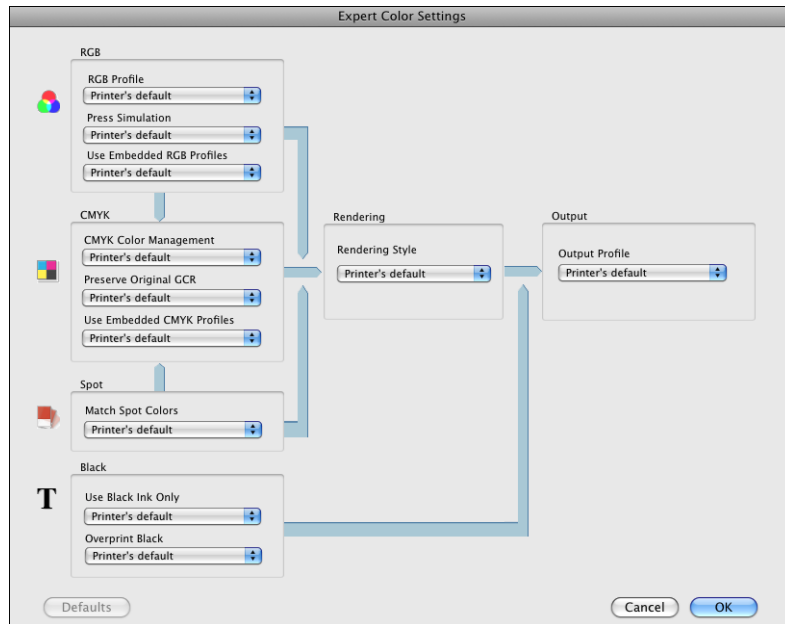
Splash Color options in the printer drivers

The location of the color print options varies with each printer driver.

TO SELECT SPLASH COLOR OPTIONS IN THE MAC OS X PRINTER DRIVER

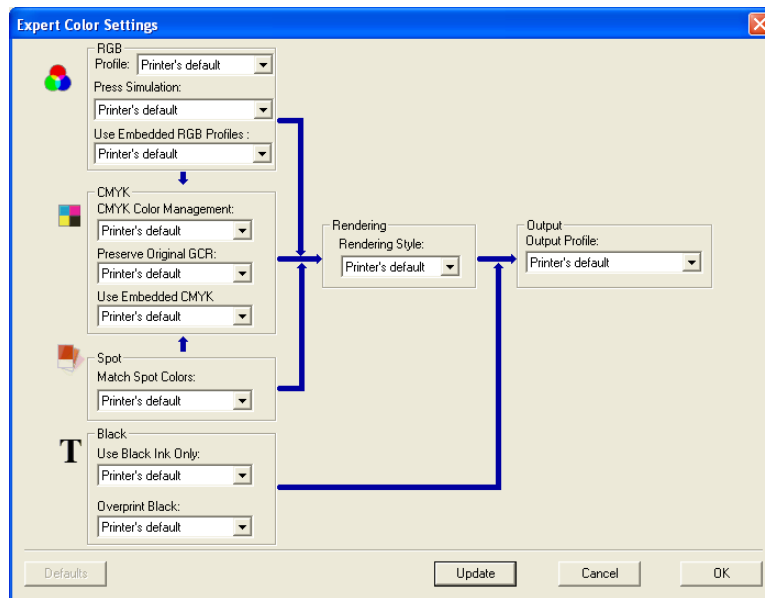
- 1 From an application, choose **Print**.
- 2 **Mac OS X v10.5 only:** Expand the dialog box, if necessary, by clicking the arrow next to the Printer name.
- 3 **Mac OS X v10.4:** Choose **Splash Color** from the **Copies & Pages** list.
Mac OS X v10.5: Choose **Splash Color** from the **Preview** list.

4 Click Expert Settings to view and edit color print options.



TO SELECT SPLASH COLOR OPTIONS IN THE WINDOWS PRINTER DRIVER

- 1 From an application, choose Print.
- 2 Select the EFI Splash RPX-iii as the printer.
- 3 Click Properties, and then click the Color tab.
- 4 Click Expert Settings to view and edit color print options.



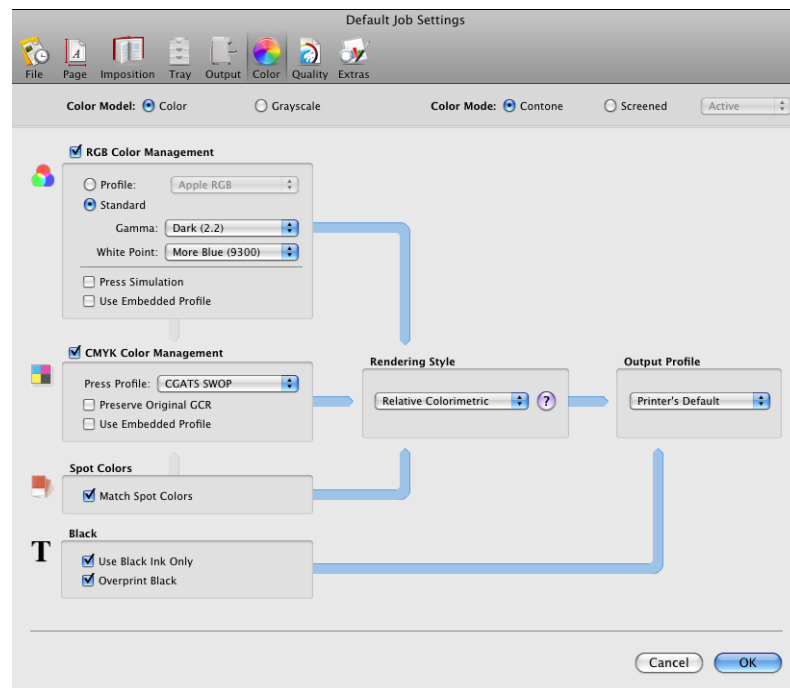
Splash Color default settings on the EFI Splash RPX-iii

The options on the Color tab in the Default Job Settings dialog box allow you to set the default values for color print options.

TO SET DEFAULT SPLASH COLOR OPTIONS

- 1 In the EFI Splash RPX-iii main window, choose **Edit Defaults** from the **Jobs** menu.

The Default Job Settings dialog box appears.



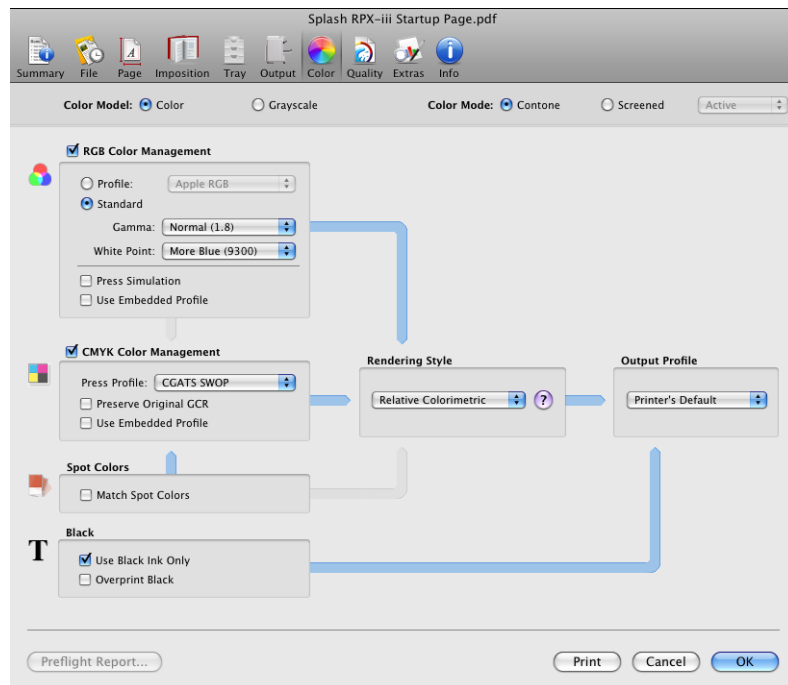
- 2 Click the **Color** tab, select the settings that you want to be the defaults, and then click **OK**.

Splash Color job settings on the EFI Splash RPX-iii

When you edit a job on the EFI Splash RPX-iii, you can select new values for color print options.

To SET SPLASH COLOR OPTIONS FOR A SPECIFIC JOB

- 1 In the EFI Splash RPX-iii main window, select the job.
- 2 Choose Edit Job from the Jobs menu.



- 3 Click the Color tab, select the settings that you want for this job, and then click OK.

Two-Way Communication

Two-Way Communication retrieves the color print option default settings currently selected on the EFI Splash RPX-iii and the color profiles currently residing on the EFI Splash RPX-iii, and displays them in the printer driver when you start the printer driver (Mac OS X) or click Update in the Expert Color Settings window (Windows). Two-Way Communication is available on Mac OS X and Windows if you connect to the EFI Splash RPX-iii through a TCP/IP network.

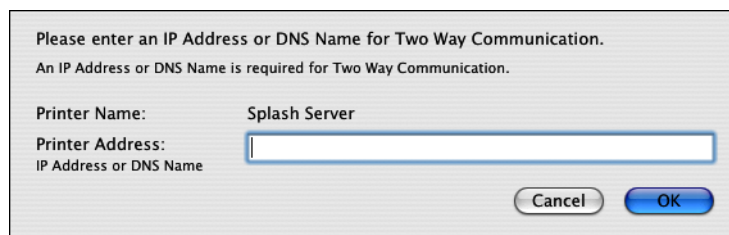
NOTE: If Two-Way Communication is not enabled, the Printer's Default setting appears for many print options. The Printer's Default setting means that the setting on the EFI Splash RPX-iii is used.

NOTE: On Mac OS X, you must enable Two-Way Communication manually.

TO ENABLE TWO-WAY COMMUNICATION ON MAC OS X

- 1 In the Splash Color window of the printer driver, select the Two-Way Communication option.

A dialog box prompts you for an IP address or DNS name.



Please enter an IP Address or DNS Name for Two Way Communication.
An IP Address or DNS Name is required for Two Way Communication.

Printer Name: Splash Server

Printer Address:
IP Address or DNS Name

Cancel OK

NOTE: If the dialog box does not appear automatically, click Configure.

- 2 Type the EFI Splash RPX-iii IP address or DNS name in the dialog box.

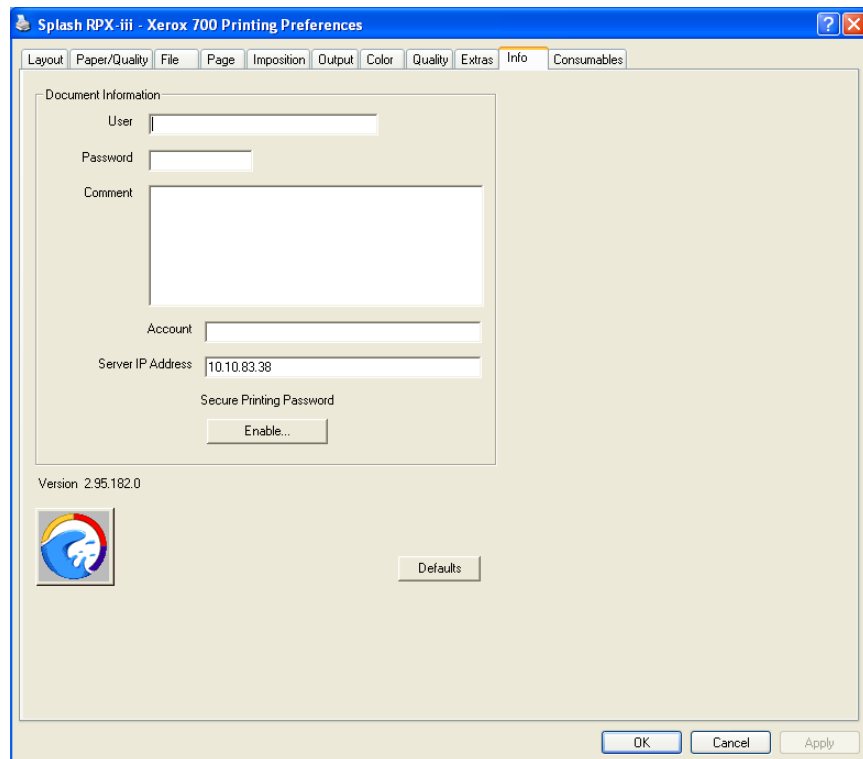
If you type a DNS name, the network must support DNS.

- 3 Click OK.

On Windows, Two-Way Communication is automatically enabled when you print through a TCP/IP port. You can modify the server name or IP address, if necessary.

TO MODIFY TWO-WAY COMMUNICATION ON WINDOWS

- 1 **Windows 2000:** Click Start, choose Settings, and then choose Printers.
Windows XP: Click Start and choose Printers and Faxes.
Windows Server 2003: Click Start, choose Control Panel, and then choose Printers and Faxes.
Windows Vista: Click Start, choose Control Panel, choose Hardware and Sound, and then choose Printers.
- 2 In the Printers window, right-click the EFI Splash RPX-iii printer driver icon and choose Printing Preferences.
- 3 Click the Info tab.
- 4 Modify the EFI Splash RPX-iii IP address or DNS name.



- 5 Click OK.

Splash Color options

The Splash Color options in the printer driver allow four-pass color or grayscale printing with contone or halftone screening and Splash color correction.

Color Model (Print Mode)

The Color Model (in the Windows printer driver and on the EFI Splash RPX-iii) or Print Mode (in the Mac OS X printer driver) option selects either color or grayscale output. Grayscale images produce similar results with either model; however, grayscale images print faster in Grayscale mode than in Color mode.

Printer Mode (Color Mode)

The Printer Mode (in the printer drivers) or Color Mode (on the EFI Splash RPX-iii) option switches digital press output between Contone (full color) output and Screened output. When Screened is selected, the EFI Splash RPX-iii applies halftone screening to the color image.

The screening method is set in the EFI Splash RPX-iii preferences. For more information, see [“Color print options in Server preferences”](#) on page 63.

When Screened is selected, the active screening preferences are used by default. You can select a different set of screening preferences from the drop-down list next to the Printer Mode or Color Mode option, in the job color settings or the EFI Splash RPX-iii default color settings. To enable printing from a client computer using different screening preferences, configure Virtual Printers or Hot Folders with the different settings.

For more information about screening preferences, see the [Job Management Guide](#).

RGB Profile

RGB Profile simulates colors on a monitor or scanner. It can accurately color match mixed RGB file formats independent of the application, platform, or print driver.

Default RGB profiles

You can always select the following profiles at the EFI Splash RPX-iii or a client computer. If other RGB profiles are imported, you can select them at the EFI Splash RPX-iii or at a client computer in the printer driver with Two-Way Communication enabled.

- Apple RGB (default)
- Adobe RGB
- ECI-RGB V1.0.icc
- eciRGB_v2.icc
- Fiery RGB

- RGB 9300
- RGB D50
- RGB D65
- sRGB

NOTE: Two “identical” but uncalibrated monitors may display an image differently enough to exceed the ability of a color correction application to closely match them. In addition, the colors on a printed page are affected by the light reflecting off the ink and by the particular shade of white in the paper. To produce the closest possible color correction, use a monitor calibrator to compensate for the variations of your individual monitor, the lighting conditions in your office, and the white point of your paper.

RGB Custom Setup

If you set RGB Profile to Custom Setup in the printer driver, or Standard on the Color tab of the Default Job Settings on the EFI Splash RPX-iii, you can set Gamma and white point values manually. The Gamma and white point adjust Splash color correction to simulate the monitor used to view and work with the document. The default settings satisfy most configuration requirements.

- Gamma describes how a device reproduces tonal gradations. This setting applies to the input and output device. This option lightens or darkens the RGB content of a particular document to provide a more accurate match with the monitor.

Choose Lightest (1.0), Light (1.4), Normal (1.8), Dark (2.2), or Darkest (2.6). The default is Dark (2.2).

- The white point simulates various lighting conditions for proofing color documents. Use this option to adjust the RGB content in a particular document relative to the white point of the monitor.

Choose More Yellow (D50 Proofing), Normal (D65), More Blue (9300). The default is More Blue (9300). If flesh tones or red tones are too magenta, skies and other blues too cyan, and grass and greens too dark (almost bluish), choose More Blue. If flesh tones and reds are too yellow, blues too purple, and greens too yellow, choose More Yellow.

RGB Color Management Off

By default, the RGB Profile setting overrides any RGB profile embedded in a print job. To use the RGB profile information in a print job, enable the Use Embedded Profile (RGB) option (see “[Use Embedded Profile \(RGB or CMYK\)](#)” on page 57).

If you do not want Splash RGB color management for a job (for example, if you are using a third-party color management system), set RGB Profile to Color Management Off. To make Color Management Off the default setting for jobs, clear the RGB Color Management option on the Color tab of the Default Job Settings on the EFI Splash RPX-iii.

Press Simulation

Press Simulation constrains input RGB colors to the gamut of the selected CMYK press profile to provide closer matching of RGB input to press output. Press output is usually less saturated and vivid than RGB input colors. This option works with either 1D or 4D CMYK press profiles. If CMYK color correction is not enabled, this option has no effect.

If a document contains no CMYK data, disable Press Simulation (the default setting in the printer driver). If CMYK color correction is applied to these files, the RGB colors are restricted to the CMYK profile color gamut and saturated colors may desaturate and hues may shift.

NOTE: Most business application documents contain only RGB data. Disable Press Simulation when you print these documents.

CMYK Press Profile

The EFI Splash RPX-iii provides CMYK color correction profiles that simulate commercial press inks in your output when you print CMYK documents to the EFI Splash RPX-iii. The profiles work with CMYK press color correction to automatically compensate for differences in press ink colors.

To apply CMYK press color correction to a print job, select the appropriate CMYK press profile from the list.

You can import your own CMYK profile to the EFI Splash RPX-iii (see [“CMYK press profiles”](#) on page 12).

If you enable Two-Way Communication in your printer driver, the names of the CMYK profiles on the EFI Splash RPX-iii appear as selections in the CMYK Profile menu. If Two-Way Communication is not enabled, the actual profile names cannot be retrieved from the EFI Splash RPX-iii. In this case, the selections are listed as Default and Custom 1 - Custom 10, which are placeholders for actual CMYK profiles. You can set each of these selections to a specific CMYK profile at the EFI Splash RPX-iii (see [page 12](#)).

For more information about Two-Way Communication, see [page 52](#).

By default, the CMYK Profile setting overrides any CMYK profile embedded in a print job. To use the CMYK profile information in a print job, enable the Use Embedded Profile (CMYK) option (see [“Use Embedded Profile \(RGB or CMYK\)”](#) on page 57).

If you do not want Splash CMYK color management for a job (for example, if you are using a third-party color management system), set CMYK Press Profile to Color Management Off in the printer driver when printing the job or clear the CMYK Color Management option on the Color tab of the job's settings on the EFI Splash RPX-iii. To make Color Management Off the default setting for jobs, clear the CMYK Color Management option on the Color tab of the Default Job Settings on the EFI Splash RPX-iii.

Preserve Original GCR

Preserve Original GCR causes the CMYK press profile to be applied so the original GCR (gray component replacement) settings of the CMYK data are preserved. Gray component replacement is a method in which CMY gray components of an image are replaced by K-only gray. The Preserve Original GCR option only affects color matching with new style 4D profiles. Old style profiles are automatically GCR preserving.

Preserve Original GCR only affects the profiles supplied with the EFI Splash RPX-iii. Profiles created by profiling tools have a built-in GCR that cannot be altered.

Use Embedded Profile (RGB or CMYK)

The Use Embedded Profile options cause the EFI Splash RPX-iii to honor the color profile information embedded in a file, rather than apply the color settings for the job. There are two separate options, one for RGB color and one for CMYK color.

NOTE: Use Embedded Profile does not appear in the printer driver (neither RGB nor CMYK).

Elements in the file not tagged with profile information use the job color settings regardless of the Use Embedded Profile settings.

A limited number of applications are known to output jobs with tagged RGB or CMYK data.

Match Spot Colors

The EFI Splash RPX-iii can simulate PANTONE, Toyo, HKS, or DIC spot colors and tints in documents. To enable this feature, set Match Spot Colors to On.

For more information about spot colors, see [“Spot Color Editor”](#) on page 78.

Use Black Ink Only

Use Black Ink Only substitutes a pure (CMY=0, K=100) black for any RGB black in the document. This option prevents ink buildup on the page and alleviates shadows created by misregistered mixed black. It also allows pages that contain only RGB black to count as black-and-white pages rather than color.

Overprint Black

Overprint Black prevents the “halo” effect that occurs when a black object is printed on top of an object of another color. Selecting this option tells the EFI Splash RPX-iii to print black-only input colors (including those that are black-only because of the Use Black Ink Only option) with no knockout of underlying colors.

Rendering Style

Rendering Style affects how colors outside the digital press gamut are mapped into the digital press gamut. Choose a Rendering Style that describes how the document was created:

- **Relative Colorimetric:** Matches the colors of scanned photographic images. Use this option for proofing photographic material.
- **Saturation:** For documents that were primarily created with a computer graphics application. This option optimizes print jobs with highly saturated color and provides a close screen-to-print match.
- **Pure Primaries:** For documents that were created entirely with a computer graphics application. This option creates bright, close to pure versions of the primary colors, but provides a less accurate match to the screen and is less accurate for photographic images than Saturation. This style does not have an ICC equivalent.
- **Absolute Colorimetric:** Matches the RGB input to press output, to accommodate off-white white point settings or paper.
- **Perceptual:** For documents containing spot colors, or to lighten the RGB color output.

NOTE: The default Rendering Style is Relative Colorimetric.

NOTE: The Rendering Style names have changed from the previous version to avoid confusion with ICC standard rendering style names. To see how the new names correspond to the old names, see the following table.

New style name	Old style name	ICC equivalent	Matches
Relative Colorimetric	Photographic	Relative Colorimetric	Balanced Saturation/ Lightness
Saturation	Graphics	Presentation Saturation	Saturation
Pure Primaries	Presentation	Not Applicable	Outputs Pure Primary Colors
Absolute Colorimetric	Paper Simulation	Absolute Colorimetric	Off-White White point
Perceptual	Spot	Photographic Perceptual	Lightness

Output Profile

The output profile for your digital press describes its color characteristics and includes a calibration target that describes the expected behavior of the digital press. Because the output profile is applied to all data in the print job, make sure that the profile you select is the right one for your job.

You can import your own output profiles to the EFI Splash RPX-iii (see [“Output profiles”](#) on page 15).

If you enable Two-Way Communication in your printer driver, the names of the output profiles on the EFI Splash RPX-iii appear as selections in the Output Profile menu. If Two-Way Communication is not enabled, only the names of the default profiles installed on the EFI Splash RPX-iii appear.

In the printer driver, the Printer's Default setting means that the setting on the EFI Splash RPX-iii is used. However, the Output Profile option also has a Printer's Default setting in the EFI Splash RPX-iii's Default Job Settings. This setting means that the output profile is determined by the Media Type and Printer Mode selections. You configure the association between output profiles, media types, and printer modes at the EFI Splash RPX-iii (see [“Output profiles”](#) on page 15).

Splash Quality options

The Splash Quality options improve the quality of images, text, and graphics.

Image Smoothing

Image Smoothing enhances low-resolution images (through interpolation) to create a smoother appearance. It has the greatest effect on images with a resolution below 150 dpi.

NOTE: If this option is enabled, printing is slower.

Text/Graphics Edge Enhancement

Text/Graphics Edge Enhancement uses a digital press feature to sharpen the edges of text and vector graphics. This option does not affect rendering or printing speed.

Show Composite Overprints

Show Composite Overprints prints composite documents that specify overprints for all colors, including spot colors, with proper color correction applied. RGB colors and spot colors are converted to CMYK values. To see trapping as well as overprinting, you must print the document as separations from the application.

Overprints from the following applications and file types are supported: QuarkXpress, Macromedia Freehand, Adobe InDesign, PDF (printed or dropped from Adobe Acrobat), and Adobe Illustrator.

Auto Trapping

Trapping is a technique in which the size of objects is modified so that colors printed next to each other overlap slightly, to prevent white spaces between two colors. These white spaces, or “halos,” can be caused by factors such as misregistration, the physical properties of the toners, and the stiffness of the media.

The Auto Trapping option automatically traps text and graphics independently of their application. This option affects both composite and separations files.

NOTE: The Auto Trapping option improves the quality of output from the digital press. It does not serve as a proof of trapping for a printing press.

Gradient Smoothing

Gradient Smoothing improves the smoothness of color gradients but reduces color accuracy. It also ensures that pure input colors (Y, M, C, or K only) are output as pure colors, regardless of the CMYK press profile selected. The output produced with this option might be more visually pleasing but less color-accurate than the output produced without this option.

PDF/X-3 Compliant

The PDF/X-3 Compliant option provides a single step for selecting a combination of print options required for printing PDF/X-3 compliant documents, such as the Altona test suite.

Text/Graphics Quality

Text/Graphics Quality enhances text and graphics that contain fine lines, small text, and inverted (white on black) text and graphics. The Best setting provides more improvement than Text/Graphics Edge Enhancement, but requires more processing time.

NOTE: This option affects 100% values of C, M, Y, and K in text and graphics.

Apply ColorTuner

The Apply ColorTuner option is available only for jobs that have color tuning (see [page 66](#)). Use this option to turn color tuning on and off. You can also use this option to compare output to see the effects of color tuning.

NOTE: Apply ColorTuner does not appear in the printer driver.

Splash Extras options

The Prepress Features of the Extras print options provide better proofing for some press environments.

Separations

Page layout applications, such as Adobe PageMaker and QuarkXPress, can print pages with a single color isolated from the whole image. These pages, called separations, are then copied on film image setters so that each page is converted to one or more (usually four) output grayscale pages. Separations printed on a print device that does not have a special Separation feature produce one grayscale page per color on the original page.

The EFI Splash RPX-iii can re-composite these individual pages back into multi-color pages to produce a proof equivalent to the proof produced from films by conventional means. The primary benefit of separation is to show overprinted objects with proper colors and to make trapping visible.

The Separations print option prints a composite page from applications that support separation printing.

- **Automatic** detects separation print jobs, composites the separations, and applies color correction. This default option supports CMYK plates plus plates in PANTONE, Toyo, HKS, or DIC if these press colors are supported by your separation application. This option supports separation generated by any application. With Automatic selected, the EFI Splash RPX-iii supports the full range of PANTONE, Toyo, HKS, or DIC colors and tints.

NOTE: RGB graphics are converted to CMYK by both QuarkXPress prior to version 4.0 and PageMaker. RGB images in versions of Quark and PageMaker and RGB colors in Quark 4.0 or later are converted to grayscale and appear as gray in the output. This is a limitation of these applications.

- **Automatic Single Page** processes any separation job as a single page job. All color plates are combined together, including spot color. This allows printing single-page spot color separations from Macromedia Freehand, Deneba Canvas, and Adobe Illustrator.

If a multi-page separation job is sent with this option selected, the pages overlay, resulting in undesirable output.

NOTE: The Automatic and Automatic Single Page settings are compatible with in-RIP separations for applications that generate in-RIP separations.

- **Disabled** disables Separations and prints plates as grayscale pages.

Print In Own Color

If Print In Own Color is selected, the EFI Splash RPX-iii prints each plate of a separations file by itself in its own color. This option only affects jobs printed as separations. It has no effect on composite jobs.

NOTE: This option is not compatible with Print Progressives. If Print In Own Color is selected, Print Progressives is ignored.

Print Progressives

If Print Progressives is selected, the EFI Splash RPX-iii prints up to four separate sheets for a print job. You can configure this print option to specify which color passes print on each sheet (see “[Color print options in Server preferences](#)” on page 63). This allows you to examine the result of each color pass for a four-color document.

NOTE: For optimal results when creating press proofs using Print Progressives, select one of the 1D CMYK press profiles for the print job. For information about the current CMYK profile settings, contact your EFI Splash RPX-iii administrator.

Print Info Strip

Print Info Strip allows you to print a customizable info strip along the edge of the output. The default information on the info strip includes user, job, color, and media type. The customizable options are available when you choose Print Info from the Server menu in the EFI Splash RPX-iii main window.

For more information about customizing the info strip, see the [Job Management Guide](#).

The info strip is helpful for printing and tracking multiple variants of the same document. You can specify its contents to include color settings, job comment, and other options that identify the job’s characteristics.

NOTE: The Print Info Strip image may overwrite the job image if it occupies the same part of the page in the output.

Invert Image

Select Invert Image to invert the CMYK data. When using RGB colors, the Invert Image option inverts each color to the opposite of its CMYK equivalent. For many of the colors, this results in the color black.

Mirror Image

Select Mirror Image to flip the printed image horizontally. Use Mirror Image when printing to heat-transfer paper from which the image is then transferred to the final medium. This technique is used to print to non-standard media, such as rice paper, rag paper, or T-shirts.

Use PDF XObjects

Use PDF XObjects is a feature that recognizes objects (text, images, vectors) within a PostScript or PDF file and caches the image, reducing need to reRIP (re-process) image data.

Save as TIFF

Save as TIFF saves a rasterized image file as a TIFF file, up to 600 dpi. The TIFF file is placed in the TIFF Folder within the Splash folder on the EFI Splash RPX-iii.

To activate this feature, choose a resolution of 72, 300, or 600 in the DPI list in the printer driver. Or, if you edit a job's options on the EFI Splash RPX-iii, enter a resolution value between 3 and 600 dpi.

Color print options in Server preferences

The options on the Color tab in the Splash Server Preferences dialog box allow you to set some color print options for all jobs. You cannot modify these options for an individual job in the printer driver or at the EFI Splash RPX-iii.



Copier Screening sets the screening applied to text, graphics, and images.

Setting	Text	Graphic	Image
200 Cluster Dot	200 dot	200 dot	200 dot
200 Rotated Line	200 line	200 line	200 line
Enhanced Text & Graphics	300 dot	300 dot	200 dot
Enhanced Text	300 dot	200 dot	200 dot

NOTE: We highly recommend that you recalibrate all calibrations after changing the Copier Screening setting. If the Printer Mode option is set to Screened, the Copier Screening option is ignored. Screened jobs are always printed using Enhanced Text & Graphics.

Grayscale As K in CMYK color corrects any grayscale input data as CMYK black. If this option is off, grayscale input data is treated as RGB black. In general, use this option for documents created in prepress applications. For documents created in office applications, such as Microsoft Word, grayscale data is designed to be treated as an RGB monitor color. Do not use this option for such documents.

Warn After N Days: Allows you to select a specific number of days from the last calibration date to remind you to recalibrate the EFI Splash RPX-iii. When the specified time interval expires for any of the calibrations you have specified, the date and time listed in the Last Calibrated area of the EFI Splash RPX-iii main window are displayed in red. You can disable the calibration warning for specific calibrations. For more information, see [“Calibration status and history”](#) on page 33.

Automatically Launch ColorCal: If this option is enabled, ColorCal launches automatically whenever a calibration is out of date (as determined by Warn After N Days).

Allow Remote Calibration: If this option is enabled, you can calibrate the EFI Splash RPX-iii from another EFI Splash RPX-iii or computer running ColorCal. For more information about remote calibration, see [“Updating multiple EFI Splash RPX-iii servers from one server”](#) on page 35 and [“Calibrating one or more servers from a remote computer”](#) on page 37.

Progressives sets the output for the Progressives features. When you select the Print Progressives option for a job, you can print up to four separate color passes per page. Select the number of sheets to print (Sheets 1-4), and then select the number of colors to print on each sheet (C, M, Y, or K).

Example color print option combinations

The print option settings you use will vary depending on the type of document you print and the factors that are important to you. The following sections describe some of the issues to consider.

Quality and printing time

The factory default settings for EFI Splash RPX-iii color print options are intended to provide a balance between output quality and processing time. If you want higher quality or faster processing speed than the defaults provide, try different settings.

For faster processing:

- Use a 1D CMYK press profile (CMYK SWOP, CMYK Euroscale, or CMYK Enhanced)
- Disable Overprint Black

For higher quality:

- Set Text/Graphics Quality to Best
- Enable Show Composite Overprints
- Enable Auto Trapping

Black-and-white pages

A page that contains only gray images and text prints as a black-and-white page if the default print option settings are applied. “Gray” includes Grayscale, RGB where R=G=B, and CMYK where C=M=Y=0.

Most office applications print black text and graphics as Grayscale or R=G=B.

If the Use Black Ink Only option (see [“Use Black Ink Only”](#) on page 57) is disabled, or the Override RGB Profiles or Override CMYK Profiles Server Preferences (see [“Color print options in Server preferences”](#) on page 63) are disabled, most pages with Grayscale or RGB colors that are less than 100% black will print as color. Even if all these options are set to their default values (enabled), these pages might print as color if the job is printed using an output profile with significantly non-white white point.

COLOR TUNER AND COLOR TWEAK

This chapter describes how to adjust the color output of an individual job using ColorTuner and Color Tweak.

- ColorTuner allows you to adjust the output color of RIPped pages before printing all the copies of a job. You can use ColorTuner to make minimal corrections not remedied by color profiles and calibration, or significant changes to the color content of a page. You can correct problems caused by incorrect source content, such as printing CMYK colors instead of spot colors.
- Color Tweak allows you to adjust the CMYK curves of one or more jobs, preview the results, and reprint without reRIPping. The job must have already been processed and have saved raster images.

ColorTuner edits are applied to a job after all simulation profiles and an output profile have been applied. If you want to change the profile settings of a job that has been color-tuned, you must first delete the color tuning (see [page 75](#)), make the profile changes, and then color-tune the job again (see “[Editing colors with ColorTuner](#)” on [page 66](#)).

After you save changes in ColorTuner, the job prints with these color-tuning settings. You can also save ColorTuner changes as a set to apply to other jobs.

Editing colors with ColorTuner

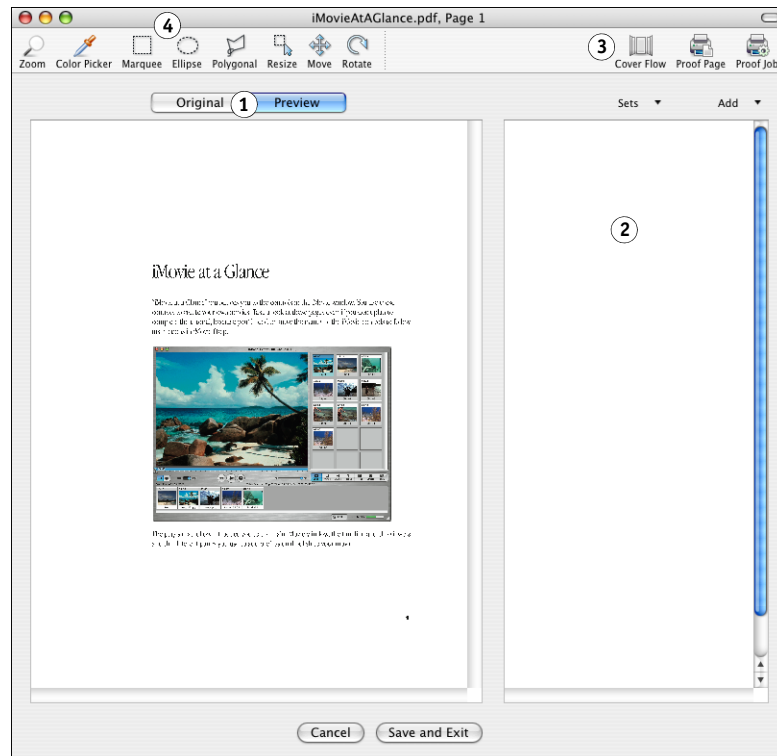
To edit colors in a print job with ColorTuner, use the following procedure.

TO EDIT COLORS IN A JOB USING COLORTUNER

- 1 In the EFI Splash RPX-iii main window, select the job in the Hold queue that you want to edit.
- 2 Start ColorTuner in one of the following ways:
 - Choose ColorTuner from the Jobs menu.
 - Click the ColorTuner icon in the toolbar.
 - Press Command+T.
 - Click the arrow in the column header and choose ColorTuner from the menu.

The job is processed and the first page is displayed in the ColorTuner main window.

- 1 Page view selectors
- 2 Change list
- 3 Page selector (Cover Flow)
- 4 Page tools

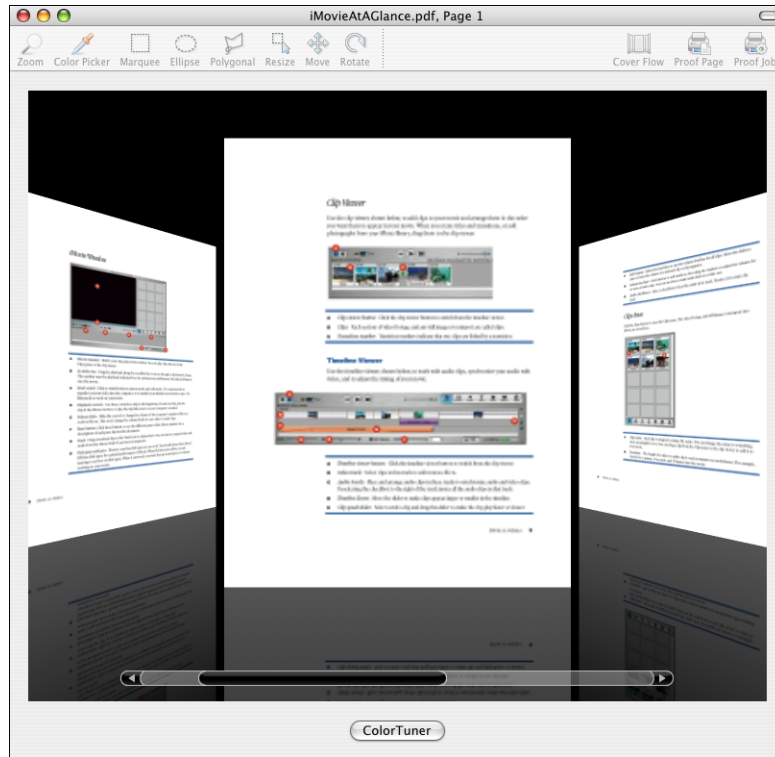


NOTE: When preparing the job for tuning, ColorTuner processes the job using the following job settings, regardless of the actual job settings. The actual settings are applied when the job is printed.

- 1 copy
- Uncollated
- No staple
- No punch
- No duplex
- Forward page order
- No cover page
- Save as TIFF Off
- Progressives Off
- Text/Graphics Quality Normal

3 To edit a page other than the first page, click the Cover Flow icon to select a page to edit.

The job pages appear in a viewer.



- To sequence through the pages, click and drag the slider.
- To step forward or backward a page, click the next page or the previous page, or click the arrows on the slider.

4 Click ColorTuner.

The selected page appears in the ColorTuner main window.

5 Apply edits to the page as described in this chapter.

6 Repeat steps 3 through 5 for the pages that you want to color tune.

When you select a new page, you can choose whether to apply the edits from the current page to subsequent pages.

7 To save the job with your changes, click Save and Exit.

If you click Cancel before saving, the job reverts to the last saved color tuning or to an untuned state if no tuning has been saved.

ColorTuner main window

From the ColorTuner main window, you can:

- Add color edits and filters to the change list.

For more information, see [“ColorTuner edits”](#) on page 70.

- Apply a ColorTuner set. This option is available when no color edits have been applied or all color edits have been deleted or reverted. The changes that you want to make must have already been saved as a ColorTuner set that is available on the EFI Splash RPX-iii,

The ColorTuner set is applied to the entire job, not just the selected page. For more information, see [“ColorTuner sets”](#) on page 74.

- Compare the tuned page to the untuned page on the screen.

The Preview page view shows the page rendered with the changes in the change list. The Original page view shows the page rendered without any changes.

The on-screen preview is intended to show the relative color change being applied and is not intended as a proof of the final color. Always print a proof to check any changes you make in ColorTuner.

To see the effects of filters in the preview, you must zoom in. As with color changes, print a proof to see the actual effects.

- Print proofs.

Click Proof Page to print the selected page with ColorTuner edits applied. Click Proof Job to print all pages of the job as edited and exit ColorTuner.

NOTE: If another job is printing, the proof prints after that job finishes.

- Save and exit.

Click Save and Exit to save the job with the ColorTuner edits and exit ColorTuner.

Page tools

Access page tools through the icons in the ColorTuner main window.

Tool	Description
Zoom	Click the page view to zoom in. Option-click to zoom out. Allows 10 levels of zoom.
Color Picker	Click a point in the page view to select the color at that point. This tool is available only for Direct Substitution and Smoothed Substitution. NOTE: Use the Zoom tool, if necessary, to help you pick a color at a precise location.

The Marquee, Ellipse, and Polygonal tools let you define the area of a page that a color edit affects. Select the area first, and then select the color edit.

Tool	Description
Marquee	Click and drag to define the rectangular area.
Ellipse	Click and drag to define an elliptical area.
Polygonal	Click at each vertex to define a polygonal area, and then double-click or press Return to close the shape.
Resize	Affects the area defined by the Marquee, Ellipse, or Polygonal tool. Click the Resize icon to activate handles on the selected area, and then click and drag a handle to resize the area.
Move	Affects the area defined by the Marquee, Ellipse, or Polygonal tool. Click the Move icon, and then click and drag the selected area to another location.
Rotate	Click to rotate the page view 180 degrees.

ColorTuner edits

ColorTuner offers the following types of color edits:

- **Direct Substitution** changes all occurrences of a single color to any other color or spot color, without constraints. This edit is designed for significant color changes to solid color areas. Artifacts (color discontinuities) can and will appear if the color change is significant (for instance, from red to blue or from 100% red to 50% red) and if the color occurs in areas other than the solid color area.
- **Smoothed Substitution** changes all occurrences of a single color to any other color. All colors within a range in CMYK space around the selected color are changed as well. This edit allows you to adjust a dominant color in the image, such as one endpoint of a background gradient, while limiting the range of color changes, to prevent discontinuities.
- **Global RGB** allows you to manipulate the individual RGB curves to affect all color output on the page. All colors are affected, regardless of the type of source data (RGB or CMYK). The curve manipulation controls perform the same functions as the ColorCal Expert tool (see [“Editing custom color profiles”](#) on page 42).
- **Global CMYK** allows you to manipulate the individual CMYK curves to affect all color output on the page. All colors are affected, regardless of the type of source data (RGB or CMYK). The curve manipulation controls perform the same functions as the ColorCal Expert tool (see [“Editing custom color profiles”](#) on page 42).
- **Global Gray** allows you to manipulate the grayscale curve to affect a grayscale job.

ColorTuner provides a number of predefined filters that you can apply to create special effects or correct problems in print jobs. The following filters are provided:

- **Noise** produces a rotogravure effect or enhances digital press output over large constant areas.
- **Blur** smooths “noisy” or low-resolution print jobs by applying a flat filter.

- **Gaussian Blur** smooths “noisy” or low-resolution print jobs by applying a Gaussian filter.
- **Sharpen, Sharpen Edges, Unsharp Mask** all enhance detail. Each one affects different areas of a print job.
- **Image Enhancement** corrects color casts and problems with highlights and shadows

TO ADD A GLOBAL RGB, GLOBAL CMYK, OR GLOBAL GRAY EDIT

- 1 To restrict the change to a specific region on the page, select an area using the Marquee, Ellipse, or Polygonal tool.

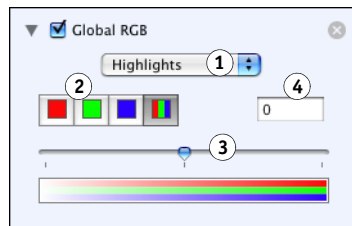
For details, see “Page tools” on page 69.

- 2 Click Add and select Global RGB, Global CMYK, or Global Gray.

Global RGB and Global CMYK are available only for jobs printed in color mode. You can make equivalent changes with either type of edit. Global Gray is available only for jobs printed in grayscale.

The Global Substitution dialog box appears. (A Global RGB edit is shown below. A Global CMYK and Global Gray edit are similar.)

- 1 Tonal range
- 2 Color channel
- 3 Slider
- 4 Numeric value



- 3 Select a tonal range (Highlight, Midtone, or Shadow) or Overall.
- 4 Select an individual color channel or the composite of all colors, and then move the slider or type a value directly in the field.
- 5 Repeat steps 3 and 4 for all tones and colors that you want to change.

TO ADD A DIRECT SUBSTITUTION OR SMOOTHED SUBSTITUTION

- 1 To restrict the change to a specific region on the page, select an area using the Marquee, Ellipse, or Polygonal tool.

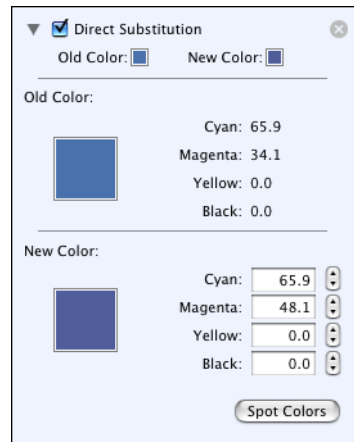
For details, see “Page tools” on page 69.

- 2 Click Add and select Direct Substitution or Smoothed Substitution.

The Color Picker is selected automatically.

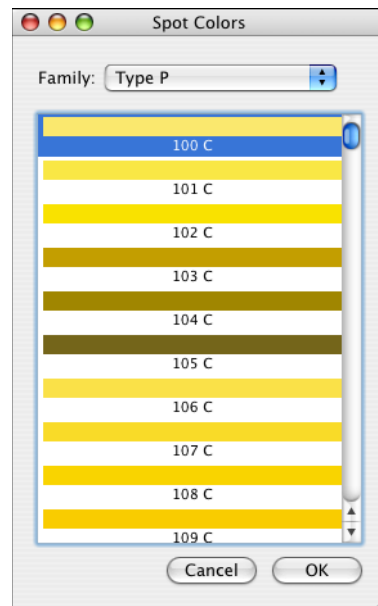
3 Click the end of the dropper on the color that you want to change.

The corresponding CMYK values appear in the Color Substitution dialog box.



You can substitute a CMYK color or, for Direct Substitution only, a spot color.

- 4 To substitute a CMYK color, enter the desired values in the CMYK fields by clicking the up or down arrows or typing the numbers.**
- 5 To substitute a spot color, click Spot Colors, select the spot color in the Spot Colors dialog, and click OK.**



The CMYK values of the spot color appear in the CMYK fields.

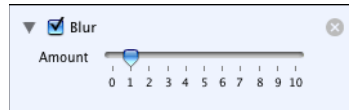
NOTE: If you modify the CMYK values of a spot color, it changes to a CMYK color.

TO ADD A FILTER

- 1 To restrict the change to a specific region on the page, select an area using the Marquee, Ellipse, or Polygonal tool.

For details, see [“Page tools”](#) on page 69.

- 2 Click Add and select a filter from the list.



- 3 Move the Filter Adjustment slider to the right to increase the effect of the filter, or to the left to decrease the effect of the filter.
- 4 For the Image Enhancement filter, select settings for Shadow, Highlight, and Color Cast Correction.

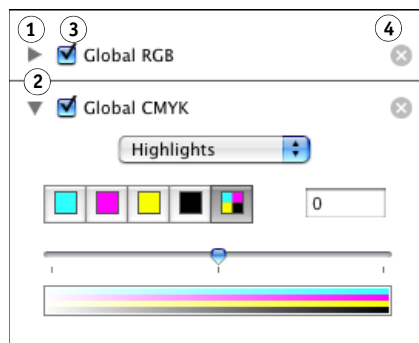
TO MODIFY AN EDIT OR FILTER IN THE CHANGE LIST

- 1 Click the triangle to the left of the edit name to select the edit and to expand or close it.

To modify the edit, you must expand it.

- 2 Select new settings.
- 3 To stop applying the edit without deleting it, clear the check box to the left of the edit name.
- 4 To delete the edit, click the X to the right of the edit name.

- 1 Triangle (closed)
- 2 Triangle (expanded)
- 3 Check box (edit applied when selected)
- 4 Delete



ColorTuner sets

To apply the color changes from one job to another, save the current color changes in a job as a set and then apply the set to the other job. The set is saved independently from the job, whether or not you save the color tuning for the job.

The following selections from the ColorTuner main window allow you to save and apply ColorTuner sets.

- **Sets > Save Set** saves color tuning changes as a ColorTuner set with the name you specify. This option is not available if no color changes have been made in a job.
- **Sets > Apply Set** selects a ColorTuner set and applies it to the job. You can apply further edits to the job in addition to the ColorTuner set. This option is available when no color edits have been applied or all color edits have been deleted or reverted. For a grayscale job, only ColorTuner sets that contain only grays are available. For a color job, only ColorTuner sets that contain colors are available.

NOTE: If a ColorTuner set contains color changes that apply to selected areas rather than the entire page, undesirable results may occur if you apply the set to a job that has a different page size or orientation from the original job.

You can copy ColorTuner sets from one EFI Splash RPX-iii to another using the File > ColorTuner Sets > Import Set and File > ColorTuner Sets > Export Set commands in the main Splash Server window. You can also delete ColorTuner sets from the EFI Splash RPX-iii using the File > ColorTuner Sets > Delete Set command in the main Splash Server window.

NOTE: You must be logged on as with Administrator privileges to import, export, or delete ColorTuner sets.

TO EXPORT A COLORTUNER SET

- 1 Choose ColorTuner Sets > Export Set from the File menu.
- 2 Select the set to export and click Export.
- 3 Enter the file name, browse to the location for the file, and then click Export.
- 4 Click Done to close the window.

TO IMPORT A COLORTUNER SET

- 1 Choose ColorTuner Sets > Import Set from the File menu.
- 2 Browse to the file, select it, and then click Import.

The ColorTuner set is imported. If it has the same name as an existing set, “copy” is appended to its name.

TO DELETE A COLORTUNER SET

- 1 Choose ColorTuner Sets > Delete Set from the File menu.
- 2 Select the set to delete and click Delete.
- 3 Click Delete again to confirm the deletion.
- 4 Click Done to close the window.

ColorTuner job options

You can control the color tuning for a job from the Jobs menu in the Splash Server main window, without starting ColorTuner.

- To delete any color tuning applied to a job, select the job and choose Clear ColorTuner from the Jobs menu.
- To apply a ColorTuner set to a job, select the job and choose Apply ColorTuner Set from the Jobs menu.
- To turn the color tuning of a job on or off, select the job, choose Edit Job from the Jobs menu, and then select or clear the Apply ColorTuner option on the Quality tab. This option does not delete the color-tuning.

Adjusting colors with Color Tweak

Color Tweak allows you to adjust the CMYK curves of one or more jobs, preview the results, and reprint without reRIPping. The job must have already been processed and must contain saved raster images.

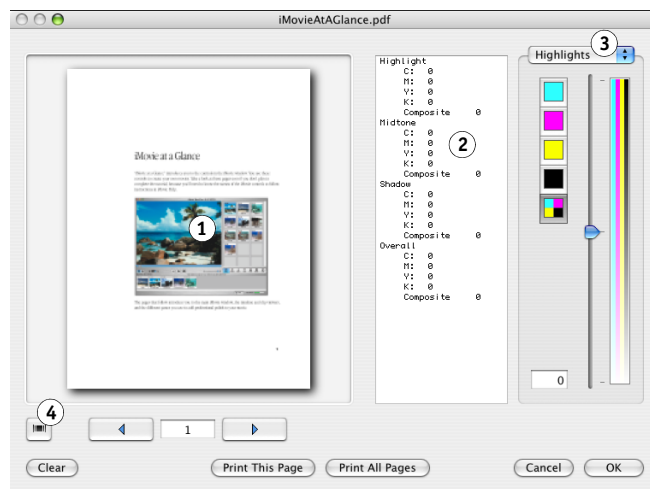
You can adjust CMYK curves in ColorTuner as well, but Color Tweak is generally faster if your changes can be made using Color Tweak's more limited features.

TO ADJUST COLORS IN A JOB USING COLOR TWEAK

- 1 In the EFI Splash RPX-iii main window, select the job(s) in the Hold queue that you want to adjust.
- 2 Start Color Tweak in one of the following ways:
 - Choose Color Tweak from the Jobs menu.
 - Click the arrow in the column header and choose Color Tweak from the menu.

The first page appears in the Color Tweak main window.

- 1 Preview
- 2 CMYK numeric values
- 3 Editing tools
- 4 Page selector

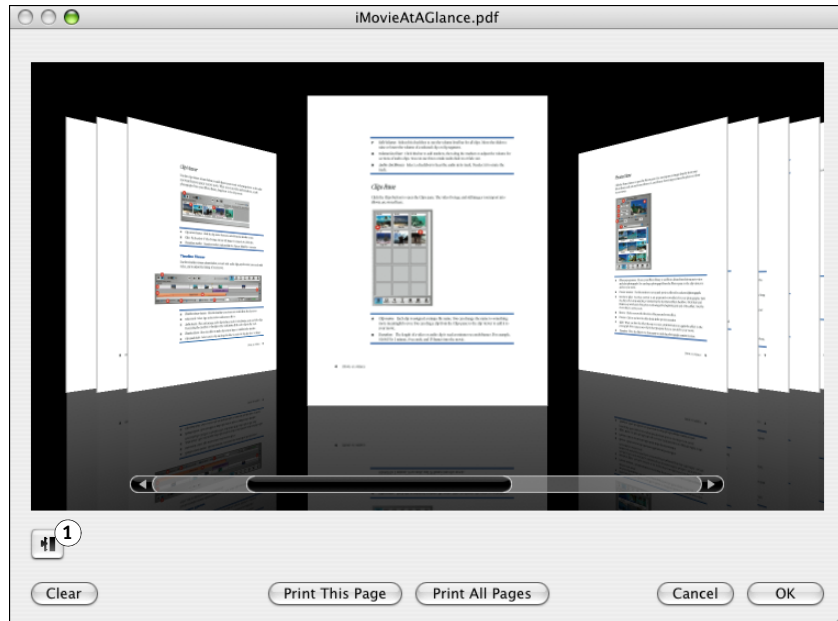


- 3 Use the arrows below the preview to go to the page that you want to adjust.

4 To view all the pages in the job, click the page selector.

The job pages appear in a viewer.

1 Return to Color Tweak



- To sequence through the pages, click and drag the slider.
- To step forward or backward a page, click the next page or the previous page, or click the arrows on the slider.

5 Click the icon in the lower-left corner to return to Color Tweak.

The selected page appears in the Color Tweak main window.

6 Choose a tonal range (Highlight, Midtone, or Shadow) or Overall from the popup menu.

7 Select an individual color channel or the composite of all colors, and move the slider or type a value directly in the field.

Once you make a modification, the resulting values for all tonal ranges and color channels are listed in the area to the left of the color editing tools.

8 Repeat steps 6 and 7 for all tones and colors that you want to change.

9 To view the effects on the pages of the job(s), click the right arrow to show the next page, or the left arrow to show the previous page.

10 To revert all changes and reset all tonal ranges and color channels to 0, click Clear.

11 Click OK to save your changes, click Print This Page to print the current page with your changes, or click Print All Pages to print all pages of the job with your changes.

The Color Tweak window closes.

SPOT COLOR EDITOR

This chapter describes how to edit spot colors on the EFI Splash RPX-iii. The Spot Color Editor allows you to edit the output of existing spot colors and add new spot colors, ensuring that the spot colors produced by the EFI Splash RPX-iii match those of particular printing devices. The Spot Color Editor can also substitute patterns for spot colors, allowing you to use special effects, such as metallic textures, for selected colors.

Editing spot colors

The EFI Splash RPX-iii includes the following spot color families:

Family type	Family name
P	PANTONE Coated
U	PANTONE Uncoated
Goe	PANTONE Goe
Textile	PANTONE Textile
D	DIC
T	Toyo
HK, HN, HE, HZ	HKS

The EFI Splash RPX-iii also includes a family for custom spot colors, called Custom. The Custom family is empty initially. You can add custom spot colors to it.

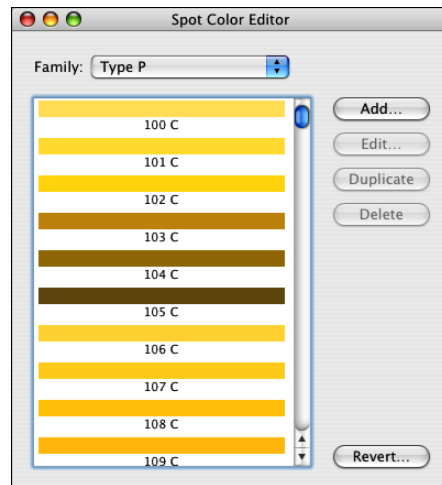
For optimal results, make sure that the digital press is calibrated before adding or editing spot colors.

Use caution when editing spot colors. No constraints are imposed on the changes that you make, so editing the original values of a color or substituting an EPS that looks very different from the original color can result in significant changes to the output of your file.

TO EDIT A SPOT COLOR

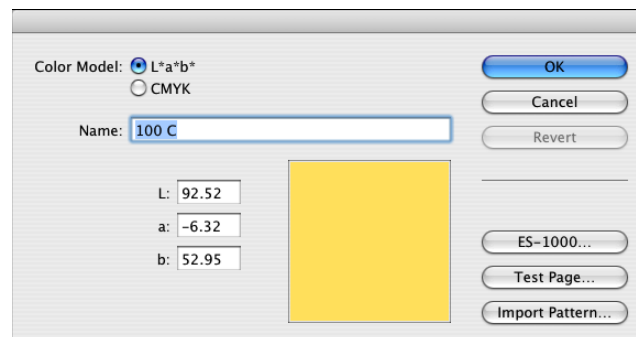
- 1 In the EFI Splash RPX-iii main window, choose Spot Color Editor from the Server menu.

The Spot Color Editor main window appears.



- 2 Choose a spot color family from the Family menu.
- 3 Double-click a spot color within the family or select the color and click Edit.

The Edit dialog box appears.



- 4 To enter numerical values for the color, choose a color model and edit the values in the CMYK or L*a*b* fields.

Editing the CMYK values can provide a more intuitive means of editing colors than directly editing L*a*b* values. It can also help to identify out-of-gamut spot colors (those with a C, M, Y, or K value of 0 or 100). These colors do not output accurately.

NOTE: If you switch from L*a*b* to CMYK and back, there might be slight changes to the original L*a*b* values, especially if the color is outside of the digital press gamut.

5 To substitute an EPS pattern for a spot color, click Import Pattern and browse for the file.

Substituting a pattern is useful in creating special effects, such as metallic textures. The size of the EPS is limited to 2" x 2". The pattern is mirrored and repeated across areas larger than the EPS.

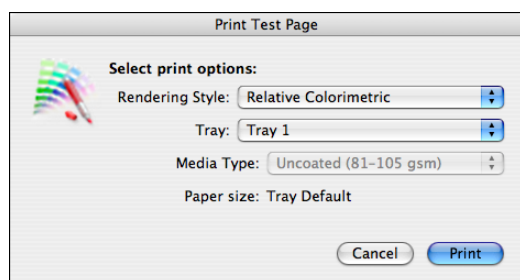
NOTE: Spot color patterns only appear in composite files, not in separations.

To change to a different pattern, or to change back from a pattern to a spot color, remove the current pattern first.

6 To sample a color with the ES-1000 spectrometer, click ES-1000 and follow the on-screen instructions.

You can use the ES-1000 to sample a color from a physical object, such as a printed color document. This option is available only if the ES-1000 is installed and connected to the EFI Splash RPX-iii. The measurement is taken in L*a*b* values.

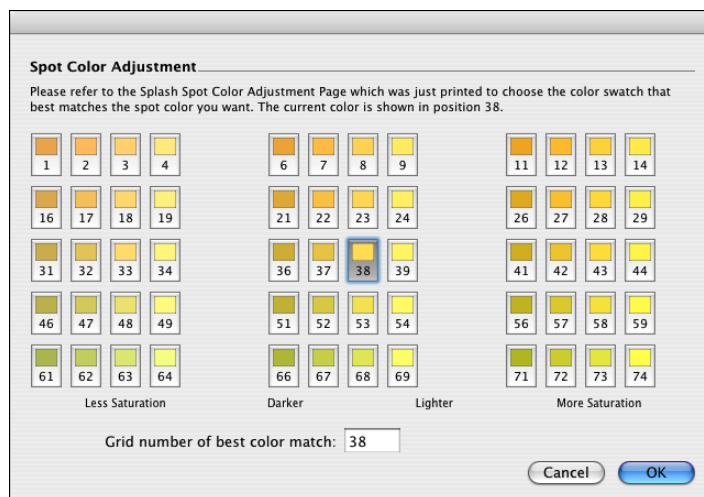
7 To verify your edit, click Test Page, select the appropriate print options, and click Print.



The Test Page allows you to verify that your edited spot color will print as you expect and also allows you to change to a similar color if it does not. The Test Page also indicates whether your edited color is in gamut.

- 8 Examine the printed page to find the patch that is closest to the color you want, enter the patch number, and then click OK.

The Test Page contains a number of color patches that vary the L*a*b* or CMYK values from your edited color. The middle patch, #38, is your edited color.



TO ADD A SPOT COLOR

- 1 In the EFI Splash RPX-iii main window, choose Spot Color Editor from the Server menu.
- 2 Choose a spot color family from the Family list and click Add.
- 3 Type a name for the color.
- 4 Enter L*a*b* or CMYK values in the fields, import an EPS pattern, or use an ES-1000 to sample a color.

For more information, see [“To edit a spot color”](#) on page 79.

- 5 Click OK.

TO DELETE A SPOT COLOR

- 1 In the EFI Splash RPX-iii main window, choose Spot Color Editor from the Server menu.
- 2 Choose a spot color family from the Family list.
- 3 Select the spot color and click Delete.
- 4 Click OK to confirm the deletion.

TO DUPLICATE A SPOT COLOR

- 1 In the EFI Splash RPX-iii main window, choose **Spot Color Editor** from the **Server** menu.
- 2 Choose a spot color family from the **Family** list.
- 3 Select the spot color and click **Duplicate**.

The Spot Color Editor creates a copy of the color, adding “copy” to the name. You can then edit the name and values of the new spot color.

Renaming a spot color

To change the name of a spot color, select the color, click **Edit**, and then type a new name. The new name must match the name used in the application that defines the spot color. Use caution when changing the name of a factory spot color because the standard name might be referred to by many documents.

Reverting spot color changes

The Spot Color Editor allows you to revert changed colors back to the original factory settings by clicking **Revert**. To revert only a selected color, select the **Selected Color** option in the **Revert** dialog box. To revert the entire family, select the **Selected Family** option. Reverting the entire spot color family changes any edited spot colors back to their original values and deletes any new colors added to the family. Use caution when reverting the entire family.

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