ComColorExpress FS2100C

Color Printing

Contents

Introduction

This document explains how to manage color output on the ComColorExpress FS2100C and provides information about color conversion and other color operations.

This document is part of a set that includes documentation for users and system administrators. For more information about supported operating systems and system requirements, see *Configuration and Setup*.

Terminology, conventions, and documentation resources

This document uses the following terminology and conventions to refer to the ComColorExpress FS2100C, printer, and supported operating systems.

Term or convention	Refers to
Aero	FS2100C Server (in illustrations and examples)
Command WorkStation	Fiery Command WorkStation
Printer	ComColor GL
FS2100C Server	ComColorExpress FS2100C
macOS	All supported Mac operating systems. For a complete list, see System Requirements in *Configuration and Setup*.
Windows	All supported Windows operating systems. For a complete list, see System Requirements in *Configuration and Setup*.
⚠ DANGER	A danger concerning operations that may lead to death or injury to persons if not performed correctly. To use the equipment safely, always pay attention to these warnings.
⚠ WARNING	A warning concerning operations that may lead to injury to persons if not performed correctly. To use the equipment safely, always pay attention to these cautions.
⚠ CAUTION	Operational requirements and restrictions. Be sure to read these items carefully to operate the equipment correctly, and to avoid damage to the equipment or property.

The following documentation resources are available for the ComColorExpress FS2100C.

Resource	Description
User documentation	Documents in this set: *Color Printing, Configuration and Setup, Fiery Graphic Arts Pro Package, Printing, Utilities*

Resource	Description
Online help	• Help can be accessed directly from each Fiery application or by going to help.efi.com. • Each help system is available as a printable PDF, accessed from the PDF icon in the upper right corner of the Help window.
Additional reference material	• *Fiery Color Reference* - help.efi.com/ref/colorref/en-us/ • *Variable Data Printing* - help.efi.com/ref/vdp/en-us/ • *Workflow Examples* - help.efi.com/ref/workflows/en-us/ • *Configure Help* - help.efi.com/configure/3.2.85/en-us/ • *Fiery Ticker Help* - help.efi.com/fieryticker/2.0/en-us/

Key features of Color Management

Color Management is built into the FS2100C Server and designed to provide both casual and expert users with the best color output for a variety of purposes. The Color Management default settings provide high-quality, out-of-the-box color from many applications.

Color Management default settings allow casual users to achieve quality output without knowing about or changing any color settings on the FS2100C Server. Color Management also provides controls to allow expert users to obtain the best color output.

Depending on your particular needs, you can:

• Set the behavior of CMYK printing to emulate offset press standards.

• Match PANTONE and other spot colors for the best match when printing using four-color press conditions or presses with extra colorants.

• Select a rendering intent for RGB printing. Rendering intents allow for rich, saturated printing of presentation graphics, smooth, accurate printing of photographs, and relative or absolute colorimetric rendering for specialized needs.

• Define the source of incoming RGB color data for better color conversion of RGB data with no source information.

• Determine whether RGB data is converted into the full gamut of the printer or is first converted into the gamut of another device, such as a press standard. This feature is useful for making one device behave like another for RGB data. It also allows you to evaluate the appearance of an RGB file under different printing conditions without having to convert the RGB file to CMYK first.

Color Management offers an open color architecture, allowing users to customize the FS2100C Server to meet new printing needs as they arise. Color Management supports ICC profiles, which are industry-standard color profiles that describe the color behavior of a device. Note that ICC specification version 4 profiles are supported as well as version 2. Downloading ICC profiles to the FS2100C Server enables the FS2100C Server to simulate a custom press (or another printer), as well as accurately print colors from a particular monitor or scanner. In addition, you can create customized ICC profiles for the FS2100C Server.

Color features in Command WorkStation

Command WorkStation includes color management tools and color-related features.

- Color Management

  Command WorkStation allows you to set the default settings of the Color Managment print options for the FS2100C Server. These default settings are applied to all print jobs sent to the FS2100C Server, unless a user overrides them for an individual job.

- Profiles

  Command WorkStation allows you to manage all of the ICC profiles used in FS2100C Server workflows. You can also create custom profiles by editing existing CMYK output profiles and saving them as new profiles.

  Grayscale Source Profiles are listed in Device Center under Resources > Profiles. You can select one of these factory-installed grayscale profiles to use for source-to-output profile color conversion.

- Calibrator

  For consistent color, calibrate the FS2100C Server on a regular basis. Command WorkStation includes an easy-to-use calibrator, which allows you to calibrate using a measurement instrument.

  Command WorkStation also allows you to use any Status T densitometer by importing data in a standard file format. In this case, it is important to note that the quality of the instrument used determines the quality of the calibration.

- Spot-On (spot colors)

  Spot-On is a spot color (named color) manager. You can adjust and manage lists of spot colors and their CMYK equivalents. The matching lists of spot colors and CMYK values are known as spot color groups. Spot-On allows you to edit spot color definitions on the FS2100C Server and create custom spot color definitions and groups.

  Spot-On is also required for spot color overprinting, when a job contains overlapping spot-color objects.

- Fiery Spot Pro (spot colors)

  Fiery Spot Pro is a comprehensive program for creating, managing, and editing spot colors. Spot Pro allows you to edit spot color definitions on the FS2100C Server and create custom spot color definitions. Spot colors are a part of the Spot Pro feature. You can adjust and manage lists of spot colors and their CMYK equivalents.

  You can create a list of "substitute" colors. These are colors that, when called for in a document by their RGB or CMYK values, are substituted with a different color having the CMYK values from the Spot Pro color definition. This permits exact color control and overrides individual RGB and CMYK colors.

  Note: This feature is available with the Fiery Graphic Arts Pro Package.

- Image Enhance Visual Editor (IEVE)

  IEVE is an image-editing application that provides users with a visual workspace to adjust individual images in a job. With IEVE, you can see the effects of your adjustments and fine-tune the appearance of an image.

Fiery Graphic Arts Pro Package

Fiery Graphic Arts Pro Package contains features that are especially suited to the requirements of graphic arts applications.

The following features are included in Fiery Graphic Arts Pro Package:

Feature	Where to set values or access	Print option name
Control bar	Command WorkStation: Device Center: Color Setup: Control Bar	Control Bar
ImageViewer	Command WorkStation: Job Center: Actions > ImageViewer	none
Integrated Altona Visual Test	none	none
Postflight	Command WorkStation: Job Center: Actions > Properties: Job Info	Postflight
Preflight	Command WorkStation: Job Center: Actions > Preflight	none
Fiery Spot Pro	Command WorkStation: Device Center: Resources > Spot Pro	none
Ugra/Fogra Media Wedge	none	Control Bar

Color print options

The FS2100C Server provides print options that affect the output of color objects in various color spaces. By specifying the appropriate settings for each print option, you can obtain the expected results for your jobs.

Color management determines how color data in a job is converted to the color data that is sent to the printer. Some color print options affect the color management applied to a job. Other color print options are not related to color management.

Color management on the FS2100C Server

The color management system on the FS2100C Server determines how the color data in a document is converted from source to output.

Applications allow you to generate color data in different color spaces. The most common type of color data produced from office applications is RGB, while prepress applications generally produce CMYK data. Desktop applications also generate spot colors, such as PANTONE colors. A single page of a document may contain a mix of RGB, CMYK, grayscale, and spot colors.

Through print options that apply specifically to RGB, CMYK, grayscale, or spot color data, you specify the color management of a job.

Note: Before you set these color management options, you must set the Color mode option, which specifies the output color space (CMYK, for example). If you change the Color mode setting, color management options are reset to the server default settings.

Print options that affect CMYK data	Print options that affect RGB data	Print options that affect grayscale data	Print options that affect spot-color data
CMYK source	RGB source	Grayscale source	Spot color matching
Use CMYK embedded profiles	Use RGB embedded profiles	Use Gray embedded profiles	Use spot group
CMYK rendering intent	RGB rendering intent	Grayscale rendering intent	
Black point compensation	Separate RGB/Lab to CMYK source		
PDF/X output intent			

Print options that affect CMYK data	Print options that affect RGB data	Print options that affect grayscale data	Print options that affect spot-color data
Black text and graphics	Black text and graphics		
Black overprint (for pure black)	Black overprint (for pure black)		
Print CMYK gray using black only	Print RGB gray using black only	Print gray using black only	
Output profile	Output profile	Output profile	Output profile

RGB Source applies strictly to RGB color data. The other options that affect RGB color also affect Lab, XYZ, and other calibrated color spaces, which are more rarely used.

Where to specify color print options

You can set color print options for all jobs by setting the default values on the FS2100C Server. You can set the color print options for a specific job to different values if the default values are not what you want for the job.

In Command WorkStation, you can specify default values for color print options from Device Center > Workflows > Job Presets and then click Set Defaults in the toolbar. The defaults apply to all subsequent print jobs unless you override them.

Note: A job uses the FS2100C Server default settings at the time it is sent to the FS2100C Server Hold queue, not at the time the job is processed for printing.

How you set specific color print options for a particular job depends on how you submit the job to the FS2100C Server.

- When you print a job from an application through the printer driver, specify color print options using the settings that appear in the printer driver.

  The printer driver sends a PostScript file to the FS2100C Server that incorporates the settings for the color print options you selected.

- When you print a job through Hot Folders or a virtual printer, specify color print options in the Job Properties settings. These settings override the default settings on the FS2100C Server.

- When a job is in the Hold queue of the FS2100C Server, specify color print options through the Job Properties settings in Command WorkStation. These settings override the default settings on the FS2100C Server.

Raster curve presets is located only in the Color tab of Job Properties.

Auto trapping

Trapping is a technique where 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 between colors can be caused by factors such as misregistration, the physical properties of the ink, and the stiffness of the media.

Figure 1: Auto trapping off   **Figure 2:** Auto trapping on
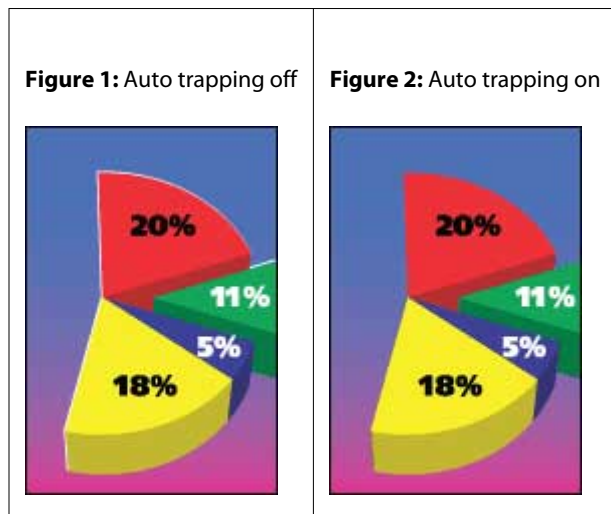
If you turn on the Auto trapping option, trapping is applied to text and graphic objects in a job.

The FS2100C Server has default trapping values that are optimized for a Fiery-driven print device using regular paper.

If the default trapping values do not provide the results necessary for the media that you use, you can modify the values to meet your requirements in Command WorkStation with the configurable auto trapping feature.

Print a job with Auto Trapping

1   In your application, select File > Print, select the FS2100C Server as your printer, and then go to the print options in the printer properties.

For information about how to set print options and print to the FS2100C Server from Windows and Mac applications, see *Printing*.

Alternatively, submit the job to the FS2100C Server Hold queue and then set print options in Job Properties in Command WorkStation.

2   On the Color tab, under Color settings, turn on the Auto trapping print option.

3   Click OK and print the job.

If you have not customized the trapping values with Command WorkStation, your job is printed with the default trapping values. If you edited the values, your job is printed with the custom trapping values.

Customize Auto trapping

In Command WorkStation, the Auto trapping customization feature is on the Trapping tab under Color Setup in Device Center. For more information about using Trapping, see *Fiery Command WorkStation Help*.

Black overprint (for pure black)

The Black overprint (for pure black) option specifies whether black text, or black text and vector graphics (where black is defined as RGB=0, 0, 0, or as CMYK=0%, 0%, 0%, 100%) print over colored backgrounds. If you turn off this option, black text, or black text and graphics knock out colored backgrounds. Knocking out can create a white edge around objects, or a white space, caused by the misalignment of color plates.

Note: You can set Black overprint (for pure black) only if Black text and graphics is set to Pure Black On.

The Black overprint (for pure black) option has the following settings:

- Text - Black text overprints colored backgrounds, eliminating white gaps and reducing the halo effect from misregistration of colors.

- Text/Graphics - Black text and graphics overprint colored backgrounds, eliminating white gaps and the halo effect from misregistration of colors.

- Off - Black text and graphics knock out colored backgrounds.

Note: PostScript applications may perform their own black overprint conversions before printing.

An example of how you might use this setting is a page that contains black text on a light blue background. The background blue is CMYK=40%, 30%, 0%, 0%. The black text is CMYK=0%, 0%, 0%, 100%.

- With Black overprint (for pure black) set to Text or Text/Graphics, the final text or graphic portions of the page are overprinted, or combined with the underlying color.

- With Black overprint (for pure black) set to Off, the border of the text or graphic is on an edge that has cyan and magenta on one side (outside the object) and black on the other side (inside the object). This transition may cause visible artifacts due to the practical limitations of the printer.

Note: The reproduction of CMYK components is affected by the CMYK source setting and calibration when CMYK is not 0%, 0%, 0%, 100%.

Black point compensation

The Black point compensation option lets you control the output quality of shadow areas for CMYK source colors.

Black point compensation works by scaling the source colors so that the darkest point in the source profile maps to the darkest point in the output profile. Use Black point compensation to enhance details in shadows when the CMYK source space is larger than the gamut of the printer. In proofing applications, when the CMYK source space is smaller than the gamut of the printer, do not use this option.

Note: For RGB source colors, black point compensation is always applied to Relative Colorimetric. Black point compensation does not apply to Absolute Colorimetric. Photographic already scales the saturated colors and shadow detail to the color capabilities of the output device, so black point compensation is not relevant.

Black text and graphics

The Black text and graphics option affects black text and vector graphics. When you set this option to Pure Black On, the black generated by applications (RGB=0, 0, 0 or CMYK=0%, 0%, 0%, 100%) is printed using black only.

With Black text and graphics set to Pure Black On, black text and line art are not misregistered, since only one colorant is used. This setting also eliminates blasting, which is an undesirable effect that occurs when excess amounts of ink or toner, combined with certain types of paper stock, cause objects to spread beyond their defined boundaries.

For some jobs, we recommend setting Black text and graphics to Normal. For example, if a job includes gradient fills that use black, the Normal setting gives the best result.

If you set Black overprint (for pure black) to Text or Text/Graphics, Black text and graphics must be set to Pure Black On.

Note: Use Black text and graphics only when printing composites, not separations.

The following table describes the behavior of Black text and graphics with black defined in different color spaces.

Color	Black text and graphics = Normal	Black text and graphics = Pure Black On or Rich Black On
RGB=0,0,0 (all other RGB values are unaffected by Black text and graphics)	Printed according to the definition for RGB=0,0,0 in the output profile. This may be a rich black (one that uses multiple colorants) if the output profile specifies a rich black, or K-only if the output profile specifies K-only for RGB=0,0,0. The output is affected by calibration.	Printed as 100% K (Pure Black On) or 100% K plus 50% Cyan (Rich Black On) using black and cyan.

Color	Black text and graphics = Normal	Black text and graphics = Pure Black On or Rich Black On
CMYK=0%,0%,0%,100% (all other CMYK values are unaffected by Black text and graphics)	Printed as K-only or as a rich black using all colorants, depending on the CMYK source and CMYK rendering intent settings. If CMYK rendering intent is set to Pure Primaries, CMYK=0%,0%,0%,100% prints as 100% K and the amount of black is limited by the CMYK source profile and calibration. If CMYK source is set to Bypass conversion, CMYK=0%,0%,0%,100% prints as 100% K and the amount of black is limited by the CMYK source profile and calibration. If CMYK rendering intent is set to Relative Colorimetric, CMYK=0%,0%,0%,100% is printed as a rich black using all colorants according to the output profile. The output is affected by calibration. **Note:** Setting CMYK source to ColorWise OFF disables the CMYK Source profile and calibration. In this case, the black is not limited by calibration.	Printed as 100% K (Pure Black On) or 100% K plus 50% Cyan (Rich Black On) using black and cyan, regardless of the CMYK source and CMYK rendering intent settings.
Spot colors (unaffected by Black text and graphics)	Standard spot color processing	Standard spot color processing

Note: PostScript applications may convert elements defined as RGB=0, 0, 0 to four-color CMYK black before sending the job to the FS2100C Server. These elements are not affected by the Black text and graphics option.

CMYK rendering intent

The CMYK rendering intent option specifies how CMYK input data is converted to the available color gamut of the output color space. This conversion can be optimized for the type of color image being printed.

The FS2100C Server also provides support for a fifth rendering intent, Pure Primaries.

Note: If you experience tone reproduction problems, use the Photographic setting.

Rendering intent	Best used for	Equivalent ICC rendering intent
Photographic - Typically results in less-saturated output than presentation rendering when printing out-of-gamut colors. This style preserves tonal relationships in images, and scales the grayscale tonal range in the source to the available tonal range in the output device.	Photographs, including scans and images from stock photography and digital camera images.	Image, Contrast, and Perceptual
Presentation - Creates saturated colors but does not match printed colors precisely to displayed colors. In-gamut colors, such as flesh tones, are rendered well. This style is similar to Photographic rendering intent, and can be used to increase contrast for grayscale content.	Artwork and graphs in presentations. This style can be used for mixed pages that contain presentation graphics and photographs.	Saturation, Graphics
Relative Colorimetric - Provides white point transformation between the source and destination white points. For example, the bluish-white color (gray) of a monitor is replaced by paper white. This style avoids visible borders between blank spaces and white objects. Relative Colorimetric is the default rendering intent for grayscale and is best suited for preserving the appearance of gray.	Advanced use when color matching is important, but you prefer white colors in the document to print as paper white. This style may also be used with PostScript color management to affect CMYK data for simulation purposes.	Relative Colorimetric

Rendering intent	Best used for	Equivalent ICC rendering intent
Absolute Colorimetric - Provides no white point transformation between the source and destination white points. For example, the bluish-white color (gray) is not replaced by paper white. This style can introduce gamut clipping in high light and shadow details.	Situations when exact colors are needed and visible borders are not distracting. This style may also be used with PostScript color management to affect CMYK data for simulation purposes. Setting CMYK rendering intent to Absolute Colorimetric simulates the white of the paper using CMYK values rather than leaving the paper white areas of the page unprinted. This has the same effect as the former Paper Simulation feature.	Absolute Colorimetric
Pure Primaries - Uses pure colorants, free from contaminating colorants that are introduced when color management tries to match the appearance of a color on image systems with different color capabilities.	When source content is made up of one or two process colorants, they remain as one or two process colorants in the final print. This rendering intent does not achieve colorimetric accuracy, and content is not expected to match that of other print systems.	Pure Primaries

Combine separations

The Combine separations option specifies how to print separated CMYK data.

You can combine Cyan, Magenta, Yellow, and Black separations.

You can also combine one or more spot colors.

- Off - Prints each separation individually.

- On - Combines separations as a single, composite-color document, and automatically sets the following print options: Color mode (CMYK) and Black overprint (for pure black) (Off).

The results of combining the multiple plates are predictable and accurate, regardless of the original application used. This feature also fully supports DCS 2.0 file formats when included in a PostScript print job from a page-layout application.

The following applications have been tested with Mac and Windows for compatibility with the Combine separations option:

- Adobe Illustrator

- Adobe InDesign

- Adobe PageMaker

- QuarkXPress

Note: You cannot use Combine separations at the same time that you use the following features: Substitute colors, Composite overprint, or Black overprint (for pure black).

Note: You cannot use Combine separations at the same time that you use Postflight.

Composite overprint

The Composite overprint print option allows you to print overprinted objects as specified in the source file.

When overlapping objects are printed, the foreground object can either overprint or knock out the background object. With overprinting, the color of the background object shows through the foreground object where they overlap, and the resulting color is a combination of the colors of the two objects. With a knockout, the foreground object hides the background object where they overlap.

- Off - An overprinted object knocks out a background object.

- On - The area of overlap between two overprinted objects is a blend of the two colors.

Note: The Composite overprint option does not overprint the foreground object if it is an RGB object.

The Composite overprint print option is supported for PostScript and PDF jobs produced by the following applications:

- Adobe Acrobat

- Adobe Illustrator

- Adobe InDesign

- QuarkXPress

- CorelDRAW

The 2-color print mapping option is ignored when Composite overprint is turned on.

You cannot use Composite overprint at the same time that you use Combine separations.

Device link profiles

To be selected for a print job, a device link profile must reside on the FS2100C Server and be associated with a specific source profile and output profile.

When you select the source profile and output profile settings associated with a device link profile, the FS2100C Server bypasses its normal color management and applies the device link conversion to the color data in the job. The source profile and the output profile are not used.

Profiles that do not reside on the FS2100C Server do not appear as settings. A device link profile that is not associated with a source profile setting and an output profile setting cannot be selected for a job. Therefore, even though the source profile and output profile that are associated with a device link profile are not used to calculate color conversions, they must reside on the FS2100C Server.

Device link profiles are disabled when any of the Color input settings shown in the following table have been enabled or specified:

RGB-CMYK device link	CMYK-CMYK device link
Use RGB embedded profiles	Use CMYK embedded profiles
RGB rendering intent	CMYK rendering intent

RGB-CMYK device link	CMYK-CMYK device link
Print RGB gray using black only	Print CMYK gray using black only
	Black point compensation

Grayscale rendering intent

The Grayscale rendering intent option specifies how grayscale input data is converted to the available color gamut of the output color space. This conversion can be optimized for the type of gray objects being printed.

To control the appearance of text, graphics, and images in grayscale, select the appropriate rendering intent. The FS2100C Server allows you to select from the four rendering intents currently found in industry-standard ICC profiles.

Note: If you experience tone reproduction problems, use the Photographic setting.

Rendering intent	Best used for	Equivalent ICC rendering intent
Photographic - Preserves relationships between various colors in an image when performing gamut compression.	High-gamut photographic images, especially when converting to a small gamut printer space. Typically not required for grayscale images.	Perceptual
Presentation - Increases color saturation when performing gamut compression.	Vector artwork and graphics for presentations. Generally not used for grayscale source rendering.	Saturation
Relative Colorimetric - Preserves in-gamut colors and remaps out-of-color gamut colors only when performing out-of-gamut compression. Maps source white point to destination white point (no "paper simulation").	Precise color matching of vector artwork and logos. Best choice for grayscale source rendering.	Relative Colorimetric
Absolute Colorimetric - Preserves in-gamut colors and remaps out-of-color gamut colors only when performing out-of-gamut compression. It does not map the source white point to destination white point ("paper simulation").	Proofing jobs. Generally not used for grayscale source rendering.	Absolute Colorimetric

ImageViewer Edits

The ImageViewer Edits print option lets you apply color curve edits that have been saved on the server as a preset.

ImageViewer in Command WorkStation can be used to edit the CMYK curves of a processed job on the FS2100C Server. These curve edits can be saved as presets in the Preset area of the Color Adjust pane in ImageViewer. These presets can be applied to spooled jobs with the ImageViewer Edits print option on the Color tab in the Job Properties window.

Use the ImageViewer Edits option to select a preset for your job.

Factory-supplied curve edits apply some typical color corrections:

- No correction

- Lighter highlights

- Midtone boost

- Shadow detail

- Reduce C (cyan) cast

- Reduce M (magenta) cast

- Reduce Y (yellow) cast

The preset list shows the factory-supplied curve edits followed by the custom curve edits.

After the job is processed, the edits become part of the job and are no longer visible as edits when you view the job in ImageViewer.

For more information about ImageViewer see *Fiery Command WorkStation Help*.

Optimize RGB transparency

The Optimize RGB transparency option sets the source RGB, CMYK, and Grayscale color profiles used to render transparency.

You can specify Optimize RGB transparency for a job in the Job Properties window in Command WorkStation, Fiery Hot Folders, or a virtual printer.

Optimize RGB transparency affects jobs with the following characteristics:

- The job is in PDF format (submitted to the FS2100C Server as a PDF file).

- The PDF file contains transparent effects applied to objects in RGB, L*a*b*, CMYK, and Grayscale color spaces. Transparency effects are created in design applications and included with PDF version 1.4 and later. Drop shadows applied to text are a common transparency effect, or designs where background objects are visible through foreground objects.

- The transparent objects overlap, creating an area of mixed source colors. For example, you might use a desktop publishing application to apply a drop shadow effect to text with CMYK colors, and this text overlaps an RGB image in the background.

  When you print with the Adobe PDF Print Engine Preferred (APPE) print option disabled and the Optimize RGB transparency print option turned on, source profiles selected in the Job Properties window are used to manage the color conversion when rendering transparency instead of a predefined set of general purpose color profiles. This ensures your selections for managing transparency are processed to achieve consistent color for objects

overlapping areas with and without transparency. If you turn off the Optimize RGB transparency print option, objects traversing transparent regions might print with color artifacts such as a visible seam in an object that is intended to have continuous separation values in all ink channels.

When you print with the Adobe PDF Print Engine Preferred (APPE) print option and the Optimize RGB transparency print option turned on, the transparency blending color space of the PDF file is used for color management in conjunction with the source profiles set in the Color tab of the Job Properties window. This is similar to turning off Adobe PDF Print Engine and the final rendering should achieve equivalent color appearances whether Adobe PDF Print Engine is turned on or not. Adobe PDF Print Engine does not convert transparency effects to an intermediate state and this may benefit some complex designs with fine detail and transparency effects. Designs with mixed color spaces will also benefit with the Optimize RGB transparency print option turned on because multiple color spaces are accurately processed into a single transparency blending color space.

Optimize RGB transparency can result in a longer processing time, especially for variable data printing (VDP) jobs that contain multiple individual PDF pages.

When you print from the printer driver, the Optimize RGB transparency option does not appear because jobs printed from the printer driver are always submitted to the FS2100C Server as PostScript jobs, which are not affected by Optimize RGB transparency.

Keep in mind the following and best practices for turning on Optimize RGB transparency:

- Documents containing mixed color spaces should have the Optimize RGB transparency print option turned on.

- Both Optimize RGB transparency and Separate RGB/Lab to CMYK source print options should be selected when the PDF file has transparency effects and you are printing with the CMYK+ color mode.

- Optimize RGB transparency and Separate RGB/Lab to CMYK source print options together will prevent color rendering artifacts.

- The PDF file is created with an RGB transparency blending color space, which is commonly used for web and mobile documents.

Output profile

The Output profile print option specifies the output profile used to process a job. Color data in a print job is converted to the color space of the printer, which is described by the output profile.

In addition, the calibration that is associated with the output profile is applied to the job before printing.

The FS2100C Server includes one or more default output profiles, each created for a specific media type. You can also import your own output profiles to the FS2100C Server.

Use job defined settings

Rather than select a specific output profile for your job, you can let the FS2100C Server determine the output profile automatically. The color mode and media type used in the print job determine the profile, or if the job uses media from Paper Catalog, the output profile specified in Paper Catalog is used.

For more information on default output profiles, see Setting a default color output profile on page 21 and How does the FS2100C Server decide which output profile to use? on page 21.

Device link profiles

If a CMYK-to-CMYK or RGB-to-CMYK device link profile is available for the specified output profile and source profile, Device link profile selected is displayed below the Output profile list. When a device link profile has been selected, the specific device link profile name is displayed below the Source profile list. The other source settings in the area are disabled as they are not applicable in the device link profile workflow.

In this case, the selected output profile is not used for color management, since the device link profile is used.

For more information on device link profiles, see Device link profiles on page 17.

Setting a default color output profile

If you do not want to manually select an output profile for every job, you can specify an output profile as the default. You can also override the default setting for a specific job.

Your preferred output profile must be specified according to the Use job defined settings rules.

For jobs using Paper Catalog:

- Do not modify the front and back color profile settings for your media/substrate.

  The specified profile will be used, unless the setting is Server's default.

For jobs not using Paper Catalog, or when Paper Catalog specifies Server's default:

- Go to Device Center > Resources > Profiles. Under Output Profiles, select your preferred output profile and associate it with all the available media types.

  Note: Association of output profiles with media is only possible if the FS2100C Server workflow supports it.

You can override the default for a specific job by going to Job Properties > Color > Output profile. Instead of Use job defined settings, select a profile from the list. You can also set a specific output profile as the default by accessing Set defaults from the Server menu in Command WorkStation.

Note: The default output profile displayed in the Color tab of the Default Settings window is that set by the FS2100C Server. The note displayed there ("Use job defined settings" is always the default profile selection.) refers to the Output profile menu in the Job Properties window.

If a job is using Paper Catalog, the default output profile will be that specified in the Paper Catalog entry for the front color profile and the back color profile. Server's default is the profile determined by the FS2100C Server. For more information, see How does the FS2100C Server decide which output profile to use? on page 21.

How does the FS2100C Server decide which output profile to use?

The FS2100C Server takes a number of factors into account when deciding which output profile to use for a job.

These factors are dependent on the implementation of Paper Catalog on the FS2100C Server, which determines how the user will select the media for a job.

Paper Catalog can be implemented in one of three ways:

- Paper Catalog must be used for media selection.
- Paper Catalog is optional for media selection.
- Paper Catalog is not available for media selection.

Note: Implementation of Paper Catalog is dependent on how it is supported on the FS2100C Server.

The FS2100C Server runs the following tests to determine which output profile to use.

1 Is the Output profile in Job Properties set to the automatic output profile selection?

2 Is Paper Catalog used?

3 Which output profile is set most closely to the settings for your job?

Is the Output profile in Job Properties set to the automatic output profile selection?

For automatic profile selection, the Output profile print option in the Color tab of the Job Properties window must be set to Use job defined settings. The option is displayed as Use job defined settings because more settings than the media alone are considered. For example, if Color mode is set for CMYK+, the Color mode might be used in addition to the media itself to determine the profile.

If a specific output profile is selected, it will be used. Make a specific selection when you are not satisfied with the automatic selection or when you want to experiment with other profiles.

Is Paper Catalog used?

When a Paper Catalog media is specified in Job Properties, check the Paper Catalog output profile association. To see the front and back color profiles association, right-click the chosen media in Paper Catalog and select Edit. If a specific output profile is associated with the media/substrate, that profile will be used.

If the output profile association is set to Server's default, the third test will be used.

Which output profile is set most closely to the settings for your job?

Check the association between the available output profiles and the job settings. Go to Device Center > Resources > Profiles and expand the Output Profiles section.

Print options are dependent on the connected server. For example, the Media type print option is often available but not always.

Options in the Description column in Profile Manager (Device Center > Resources > Profiles) typically do not match one-for-one the large number of equivalent job settings.

For instance, Job Properties may offer multiple coated options, while there might be only one output profile setting associated with coated media type. In this case, the output profile associated with coated will be used for all coated media.

To change which output profile will be used by default with a media type, double-click the output profile of your choice, then check the media type this profile is compatible with. A single output profile can be specified for many, or all of the available media settings.

PDF/X output intent

The PDF/X output intent option, when turned on for a PDF/X job, specifies the use of the PDF/X output intent embedded in the PDF/X document. Typically, whether you use this option depends on whether you are printing a proof or the final output (production printing).

PDF/X is a subset of the PDF specification. PDF files can contain a variety of elements (text, graphics, even animations) and it is not always obvious how these elements should be displayed or printed. PDF/X was designed with a focus on high-quality printing. It excludes the use of PDF features that are not appropriate for graphic arts and adds features that prevent ambiguities related to printing. A PDF/X-compliant document contains embedded information about the intended printing conditions for the document.

Prints for proofing are expected to look exactly like the output of the final production device, regardless of the capabilities of the printer. For instance, when proofing Newsprint, you want the color gamut of the printer to be very limited compared to its capabilities. In production, you usually want to maximize the use of the printer gamut by applying specific color features. Even in production, however, you might choose to limit the color gamut in order to achieve consistency in the color produced by different devices.

The PDF/X output intent option only affects PDF/X files (conforming to the PDF/X3, PDF/X-1a, PDF/X4, or PDF/X-6 standard). It has no effect on non-PDF files or PDF files that are not PDF/X compliant. Profiles specified by PDF/X files must be embedded in the files, not referenced from an external location.

Note: You can use a Hot Folders filter to determine if a PDF file is PDF/X compliant. For information about this Hot Folders filter, see *Fiery Hot Folders Help*.

When PDF/X output intent is turned on and no other setting conflicts, the FS2100C Server processes a PDF/X-compliant file in a way that produces results defined by the intents and source color spaces embedded in the file, such as the output intent per page will be used as the CMYK source on that page. The FS2100C Server ignores the CMYK rendering intent and CMYK source options. The rendering intents in the PDF/X file are used and the printed output is limited to the color gamut specified by the output profile embedded in the file.

When PDF/X output intent is turned off, the PDF/X output intent is ignored.

You can specify the PDF/X output intent print option for a job in the Job Properties window of Command WorkStation, Hot Folders, or a virtual printer.

When you print from the printer driver, the PDF/X output intent option does not appear because jobs printed from the printer driver are always submitted as PostScript jobs.

Black point compensation in PDF 2.0 files

The PDF output intent of the document becomes the CMYK source profile when you turn on PDF/X output intent and Adobe PDF Print Engine Preferred options in the Job Properties windows.

Depending on the version of PDF, processing is handled differently:

- <u>PDF 1.7 and earlier</u>: The PDF output intent is used for all pages in the job.

- <u>PDF 2.0</u>: Each page of the PDF file can have its own output intent, which is used as the CMYK source on that page. Select the Use embedded black point compensation option to use the instructions embedded in the file for applying black point compensation.

Black point compensation is used in desktop publishing applications to convert images from one color space to another (for example, converting a digital camera image from RGB to CMYK for printing). You can use black point compensation when you print your job with a CMYK profile.

The FS2100C Server can handle multiple types of objects on the same page. For example, text objects and graphic objects are handled according to their respective instructions in the PDF file when you select the Use embedded black point compensation option. Make sure that the CMYK rendering intent option is set to Relative Colorimetric.

Print RGB/CMYK gray using black only

When the Print RGB gray using black only option is turned on, any RGB color that has equal R, G, and B values is printed as K and gray-only black instead of CMYK black. Similarly, when Print CMYK gray using black only is turned on, any CMYK color, where C, M, and Y are 0 (zero), and K is any value, is printed as K and gray-only black instead of CMYK black.

You can turn on Print RGB gray using black only or Print CMYK gray using black only for either Text/Graphics or Text/Graphics/Images. "Graphics" refers to vector graphics. "Images" refers to bitmap images.

Note: You can also turn on Print gray using black only for the Grayscale source profile, with the same options of Text/Graphics and Text/Graphics/Images.

The following limitations apply:

- The Print RGB gray using black only and Print CMYK gray using black only options have no effect on a job that is sent as separations.

- If CMYK rendering intent is set to Pure Primaries, Print CMYK gray using black only does not affect the output.

- If Separate RGB/Lab to CMYK source is turned on, Print RGB gray using black only is turned off. Likewise, if Print RGB gray using black only is turned on, you cannot turn on Separate RGB/Lab to CMYK source.

- If Black Text and Graphics is set to Pure Black On or Rich Black On, it takes precedence over Print RGB gray using black only and Print CMYK gray using black only for 100% black text and graphics.

- If a gray is specified as a spot color, Print RGB gray using black only and Print CMYK gray using black only do not affect that gray.

RGB rendering intent

The RGB rendering intent option specifies how RGB input data is converted to the available color gamut of the output color space. This conversion can be optimized for the type of color image being printed.

To control the appearance of images in artwork, or RGB photographs from Adobe Photoshop, select the appropriate rendering intent. The FS2100C Server allows you to select from the four rendering intents currently found in industry-standard ICC profiles.

Note: If you experience tone reproduction problems, use the Photographic setting.

Rendering intent	Best used for	Equivalent ICC rendering intent
Photographic - Typically results in less-saturated output than presentation rendering when printing out-of-gamut colors. This style preserves tonal relationships in images.	Photographs, including scans and images from stock photography and digital camera images.	Image, Contrast, and Perceptual
Presentation - Creates saturated colors but does not match printed colors precisely to displayed colors. In-gamut colors, such as flesh tones, are rendered well. This style is similar to the Photographic rendering intent.	Artwork and graphs in presentations. This style can be used for mixed pages that contain presentation graphics and photographs.	Saturation, Graphics

Rendering intent	Best used for	Equivalent ICC rendering intent
Relative Colorimetric - Provides white point transformation between the source and destination white points. For example, the bluish-white color (gray) of a monitor is replaced by paper white. This style avoids visible borders between blank spaces and white objects.	When color matching is important, but you prefer white colors in the document to print as paper white. This style may also be used with PostScript color management to affect CMYK or RGB data for simulation purposes.	Relative Colorimetric
Absolute Colorimetric - Provides no white point transformation between the source and destination white points. For example, the bluish-white color (gray) is not replaced by paper white.	Situations when exact colors are needed and visible borders are not distracting. This style may also be used with PostScript color management to affect CMYK or RGB data for simulation purposes.	Absolute Colorimetric

RGB source, CMYK source, and Grayscale source

The RGB source, CMYK source, and Grayscale source print options allow you to define the color spaces of the RGB, CMYK, and grayscale data, respectively, in your document so that the appropriate color conversion occurs on the FS2100C Server.

Commonly used color spaces are available on the FS2100C Server. For others, you can import CMYK and RGB custom profiles to the FS2100C Server. Custom grayscale profiles cannot be imported.

RGB source

When you specify a profile for RGB source, the FS2100C Server overrides source color space definitions or profiles that other color management systems may have specified. For example, if your document contains an embedded RGB profile, the RGB source setting overrides it.

When you specify an RGB source profile, the output from the FS2100C Server is consistent across platforms. The RGB source options are as follows:

- EFIRGB - Specifies an EFI-defined color space recommended for users who have no detailed information about their RGB data.

- sRGB (PC) - A Microsoft and Hewlett-Packard recommended color space designed for typical home and office applications.

- Apple Standard - Specifies the color space of an older Mac computer monitor.

- Adobe RGB (1998) - An Adobe-defined color space, used in some prepress workflows as the default working space for Adobe Photoshop.

- eciRGB v2 - The European Color Initiative (ECI) recommended color space for use as an RGB working color space and color data exchange format for ad agencies, publishers, reproduction, and printing houses.

- Fiery RGB v5 - An EFI-defined color space recommended for users of office applications. This color space is similar to EFIRGB but is larger and can provide a more desirable blue output.

In cases where you do not want RGB source to override another specified source color space, select the Use RGB embedded profiles option.

If the Use RGB embedded profiles option is enabled, the FS2100C Server honors objects in the document with RGB profiles, and objects without profiles are color managed with the RGB source profile from Job Properties.

CMYK source

The CMYK source option can be set to any CMYK source profile that is present on the FS2100C Server.

To properly manage color in a printed image that was separated using an ICC profile, the same profile must be specified for printing the image.

The CMYK source profile setting you specify depends on the CMYK profile or press standard for which the CMYK data was separated. This option affects CMYK data only.

- For images that were separated using a custom separation (such as a separation produced with an ICC profile), select the profile used for RGB to CMYK conversions in the prepress workflow on the FS2100C Server with the CMYK source setting.

- For images that were separated for a press standard, select the press standard as the CMYK source setting.

If the job contains an embedded CMYK profile, select the Use CMYK embedded profiles option. The embedded profile is applied to CMYK data.

The CMYK source option can be set to any CMYK source profile that is present on the FS2100C Server.

If you do not want CMYK data in a job to be converted to the output color space, you can select one of the following settings:

- Bypass conversion - This setting sends the original CMYK data in the job to the printer without conversion, but with calibration applied.

- ColorWise OFF - This setting sends the original CMYK data in the job to the printer without calibration applied and without converting the CMYK data. The CMYK data is still subject to the total ink or toner limit, however.

  The ColorWise OFF setting is available for a specific job but it cannot be the default setting on the FS2100C Server. You select this setting for a specific job.

  Note: When you print with the ColorWise OFF setting, make sure that the options you choose in your application do not cause the application to modify CMYK data. You must specify no color management in the application when you print with the ColorWise OFF setting.

Grayscale source

The FS2100C Server supports separate processing of jobs with Device Gray and ICC Based Grayscale through their own color conversion.

For FS200/FS200 Pro and earlier, the grayscale color spaces were processed through the CMYK color path.

The Grayscale source profile setting provides factory-installed grayscale profiles to use for source-to-output profile color conversion. Users cannot import their own grayscale ICC profiles.

If the job contains an embedded profile associated with grayscale objects in the document, select the Use Gray embedded profiles option.

The Grayscale source option can be set to any of the factory-installed grayscale source profiles that are present on the FS2100C Server.

Separate RGB/Lab to CMYK source

The Separate RGB/Lab to CMYK source option manages RGB colors (as well as device independent color spaces, such as L*a*b*) to source CMYK.

- When Separate RGB/Lab to CMYK source is turned on, the original RGB colors in the document are converted to the source CMYK profile selected in Job Properties before being converted to the output profile of the printer (as defined by the Output profile print option). The color reproduction from converting RGB colors to the CMYK source and then the output color space is similar to converting the RGB content to that CMYK source profile.

  For example, the color reproduction from converting RGB colors to the CMYK source in the FS2100C Server is similar to converting an RGB image to a CMYK profile in Photoshop. Another useful technique with Separate RGB/Lab to CMYK source is to take a high-quality ICC profile for another printer, define that as the source CMYK profile in the FS2100C Server and simulate the color appearance of RGB colors by the other printer.

  This feature is also used with PDF/X workflows in which all color spaces are converted to CMYK source before they are converted to the output color space. These workflows require device dependent colors (RGB, Grayscale) and device independent colors (ICC colors, L*a*b*) to achieve a color match to the CMYK content in the document. With the introduction of PDF/X-4 allowing transparency in a PDF/X document, the feature also supports CMYK overprinting included in designs that have transparency effects. A best practice for rendering transparency is to turn on the Separate RGB/Lab to CMYK source print option because rendering transparency requires complex processing policies to achieve the desired appearance.

- Turning off the Separate RGB/Lab to CMYK source print option manages all RGB colors with the output color profile. This workflow renders the RGB colors with the full gamut of the output device and is recommended when you need the most vibrant color achievable with the print system.

Spot color matching

The Spot color matching option provides automatic matching of spot colors with their best CMYK equivalents.

- On - The FS2100C Server uses a built-in table to generate the closest CMYK matches of spot colors your printer can produce. (New tables are generated when you add new output profiles.)

  With Spot-On, the FS2100C Server uses the CMYK matches determined through Spot-On.

  With Spot Pro, the FS2100C Server matches spot colors with their best CMYK equivalents.

  Spot Pro is available with the *Fiery Graphic Arts Pro Package*.

- The Use spot group menu allows you to select a spot color group that FS2100C Server searches first for spot color definitions during file processing. When new spot color groups have been created in Device Center > Resources > Spot Colors, or in Device Center > Resources > Spot Pro for servers with the *Fiery Graphic Arts Pro Package*, the new groups are listed in the Use spot group menu. If a spot color is not found in the selected list, the FS2100C Server searches all other spot color groups for a matching spot color name. If the name is not found, the spot color is rendered with the alternate color in the document.

- Off - The FS2100C Server processes spot colors as CMYK data and uses the alternate color space in the document. By default, most applications use the CMYK equivalents defined by the spot color manufacturer, such as PANTONE. These are the same CMYK equivalents used by applications that include spot color libraries.

Note: Spot colors that are not included in the built-in table are processed with the alternate color space in the document.

For jobs that include spot colors, turn Spot color matching on unless you are printing press simulations. In that case, turn Spot color matching off and select the appropriate CMYK source.

For PDF and PostScript jobs that include spot colors that are not in the built-in table, turning Spot color matching on causes the alternate color space to be used. The FS2100C Server references the built-in table to generate the closest CMYK matches of the original spot color.

Note: Use Spot color matching only when printing composites, not when printing separations.

Substitute colors

Substitute colors are colors that, when called for in a document by their RGB or CMYK values, are substituted with a different color that is defined in the spot color dictionary. This permits exact color control and overrides individual RGB and CMYK colors.

Spot-On or Spot Pro allows you to create a list of substitute colors. To enable substitute colors for a job, turn on the Substitute colors option.

Spot Pro is available with the *Fiery Graphic Arts Pro Package*.

Note: You cannot use Substitute colors at the same time that you use Postflight.

When you use Substitute colors at the same time that you use Spot color matching, be sure that the CMYK color that you want to replace with a substitute color is not a CMYK color that is also defined as a spot color. Otherwise, the spot color may be replaced with the substitute color, which may not be the result that you expect.

For more information about creating and using substitute colors, see *Fiery Command WorkStation Help*.

Use embedded black point compensation

The Use embedded black point compensation print option, when selected, uses the embedded output intent for black point compensation.

For more information, see PDF/X output intent on page 22.

Use RGB/CMYK/Gray embedded profiles

You can specify whether the FS2100C Server uses the source profile (either RGB or CMYK or grayscale) that is embedded in the print job rather than the source profile specified in the print settings.

RGB

If you turn on Use RGB embedded profiles, the FS2100C Server honors the embedded RGB profile information for objects tagged with an RGB profile and uses the RGB source profile for RGB objects without an RGB profile. If you turn off this option, the FS2100C Server uses the profile specified in the RGB source option.

CMYK

If you turn on Use CMYK embedded profiles, the FS2100C Server honors the embedded CMYK profile information for objects tagged with a CMYK profile and uses the CMYK source profile for CMYK objects without a CMYK profile. If you turn off this option, the FS2100C Server uses the profile specified in the CMYK source option.

Gray

If you turn on Use Gray embedded profiles, the FS2100C Server honors the embedded gray profile information for objects tagged with a gray profile and uses the source gray profile for gray objects without a gray profile.

Use spot group

Use spot group allows you to define the spot color library to search first for the spot colors in the job before searching all other libraries in the FS2100C Server.

For more information about using spot color groups, see Spot color matching on page 27.

Transparency best practices

Present-day artwork frequently uses transparency for visual emphasis as well as masking artwork for the final design.

Using transparency can render unexpected results in a color managed workflow and require additional settings to achieve the intended final print. There are best practices for processing transparency with the FS2100C Server workflow.

The first best practice is selecting the Adobe PDF Print Engine which natively processes transparency effects. Processing the same file through the PostScript interpreter converts the native PDF to PostScript and removes transparency effects. The conversion can produce acceptable results, but the conversion can change native objects that a following workflow might not accept (for example, live type may get converted to graphic objects).

The second best practice is enabling these color settings in Job Properties.

- Separate RGB/Lab to CMYK source = On. This feature preserves CMYK and pure black ink overprinting when color managing transparency.

- Optimize RGB transparency = On. This feature renders transparency with the blending color space defined in the document and often required for the closest reproduction seen with the document opened in Adobe Acrobat.

Specific content in each document may require changes to the properties of the job in addition to these best practices. Examples include content with embedded color profiles should process with Use embedded color profiles for that color type. If you are working in a PDF/X workflow, you must enable the Color setting PDF/X output intent for the expected color conversion to occur.

Documents with objects in gray and black tints can make use of special color processing features on the FS2100C Server to print those elements only in black ink. When you work with transparency, the default settings for these features may need to be changed for a consistent color appearance.

File content can also be revised with a Fiery JobFlow preflight workflow to automate job submission to the FS2100C Server and prepare the file to make the best use of FS2100C Server color features.

Note: Fiery JobFlow preflight workflows are available with the Fiery Graphic Arts Pro Package.

Print from an application

To print from an application, you use the printer driver for your operating system (Windows or Mac).

- For information about how to install the printer driver, set up the FS2100C Server for printing, and set print options with the printer driver, see *Printing*.

- When you print a job from a Mac application using the printer driver, you must also set color management print options appropriately.

Print with color settings in macOS

Printing a job from a Mac application varies from application to application, because many Mac applications have their own print dialog that is different from the macOS system print dialog. To set color management print options when you are using the macOS system print dialog and the printer driver, follow the steps below. For more information about how to set print options with the printer driver for macOS, see *Printing*.

1 Select Print in your application.

2 Click Show Details to expand the dialog box, if necessary.

3 Click Preview, select Color Matching from the list, and then click In Printer.

4 Set other print options as needed, and then click Print to send your job.

Color profiles

The FS2100C Server includes by default a number of RGB and CMYK profiles that you can use for printing through the RGB Source, CMYK/Grayscale Source, and Output Profile settings for a job.

You can manage the profiles on the FS2100C Server with Profile Manager in Command WorkStation, which allows you to import ICC profiles to the FS2100C Server, export profiles, delete profiles (except for default and factory profiles), and set the properties of profiles. Profile management is accessed from Command WorkStation Device Center > Resources > Profiles. You can also create custom CMYK source or output profiles by editing an existing profile and saving it as a new profile.

You can install (copy) additional ICC color source profiles (new, former, and legacy) from https://www.efi.com/ marketing/fiery-servers-and-software/downloads/pantone-library/ to your computer. Use the ICC color source profiles with applications that support ICC standards, such as Adobe Photoshop.

You can also install ICC profiles from the FS2100C Server to your computer over the network.

ICC profiles available for download

ICC source color profiles (new, former, and legacy) can be downloaded from www.efi.com and then you can install (copy) them to your computer.

You can download the source color profiles from https://www.efi.com/marketing/fiery-servers-and-software/ downloads/pantone-library/.

EFI Former CMYK Source Profiles

- GRACoL2006 Coated1 (EFI).icc
- ISO Coated FOGRA39L (EFI).icc
- ISO Uncoated FOGRA29L (EFI).icc
- SWOP2006 Coated3 (EFI).icc
- SWOP2006 Coated5 (EFI).icc

Legacy Source Profiles

The Legacy Source Profiles include Adobe ICC Profiles, ECI ICC Profiles, and EFI Support ICC Profiles.

Adobe ICC Profiles folder

The Adobe ICC Profiles folder contains the profiles that were created by Adobe Systems, Inc. For more information, see the documents included in the folder.

CMYK Profiles:

- CoatedFOGRA27.icc
- CoatedFOGRA39.icc
- CoatedGRACoL2006.icc
- JapanColor2001Coated.icc
- JapanColor2001Uncoated.icc
- JapanColor2002Newspaper.icc
- JapanColor2003WebCoated.icc
- JapanWebCoated.icc
- UncoatedFOGRA29.icc
- USWebCoatedSWOP.icc
- USWebUncoated.icc
- WebCoatedFOGRA28.icc
- WebCoatedSWOP2006Grade3.icc
- WebCoatedSWOP2006Grade5.icc

RGB Profiles:

- AdobeRGB1998.icc
- AppleRGB.icc
- ColorMatchRGB.icc
- PAL_SECAM.icc
- SMPTE-C.icc
- VideoHD.icc
- VideoNTSC.icc
- VideoPAL.icc

ECI ICC Profiles folder

The ECI ICC Profiles folder includes profiles that were created by the European Color Initiative (ECI). For more information, see the documents included in the folder, as well as the ECI web site at www.eci.org.

CMYK Profiles:

- ISOcoated_v2_300_eci.icc
- ISOcoated_v2_eci.icc
- ISOuncoatedyellowish.icc
- PSO_Coated_300_NPscreen_ISO12647_eci.icc
- PSO_Coated_NPscreen_ISO12647_eci.icc
- PSO_LWC_Improved_eci.icc

- PSO_LWC_Standard_eci.icc

- PSO_MFC_Paper_eci.icc

- PSO_SNP_Paper_eci.icc

- PSO_Uncoated_ISO12647_eci.icc

- PSO_Uncoated_NPscreen_ISO12647_eci.icc

- SC_paper_eci.icc

EFI Support ICC Profiles folder

The EFI Support ICC Profiles folder includes profiles that were created by EFI. For more information, see the General Requirements for Applications in Commercial Offset Lithography (GRACoL) website at www.gracol.org, the Fogra website at www.fogra.org, and the Specifications Web Offset Publications (SWOP) website at www.swop.org.

CMYK Profiles:

- EFIEURO.icc

- EFISWOP.icc

- Enterprise CMYK.icc

- GRACoL2006_Coated1_EFI.icc

- ISOCoated.icc

- ISOCoated_FOGRA39L_EFI.icc

- ISOUncoated_FOGRA29L_EFI.icc

- SWOP2006_Coated3_EFI.icc

- SWOP2006_Coated5_EFI.icc

RGB Profiles:

- EFI Fiery RGB Chroma.icc

- EFI Fiery RGB Chroma+.icc

- EFI Fiery RGB Chroma++.icc

Note: The EFI Fiery RGB Chroma profiles are designed to provide saturated colors, especially in nighttime images, while maintaining photographic detail. Of the three profiles, EFI Fiery RGB Chroma.icc has the least effect and EFI Fiery RGB Chroma++.icc has the greatest effect.

- EFIRGB.ICC

- Fiery RGB v2.icc

- Fiery RGB v4.icc

- Fiery RGB v5.icc

- RGB D65 (Splash).icc

Japan Profiles:

- EFIDIC.ICC

- EFIJMPA2.icc

- EFIJMPA3.icc
- JapanColor2011Coated.icc
- JC2001_type1_EFI.icc
- JC2001_type2_EFI.icc
- JC2001_type3_EFI.icc
- JC2001_type4_EFI.icc
- TOYO Offset Coated 2.0.icc

Calibration

In this documentation, "density" (all lower case) means the perceived darkness of a colorant caused by the absorption or reflection of light on media, irrelevant of its measurement unit. The actual density of an ink can be reported with various measurement units like Density (D), Lightness (L*), even percentage.

Calibrating the FS2100C Server ensures consistent and reliable color output. Calibration adjusts the ink densities to compensate for the difference between the expected response (target) densities of the printer and the actual measured densities that the printer outputs.

Periodic calibration is necessary to monitor the actual output of the printer. To calibrate the FS2100C Server, you use the Calibrator module included with Fiery Color Profiler Suite and measure printed color patches on media.

Calibration is applied to all jobs, but you can disable it for a specific job. The ColorWise OFF setting for the CMYK source option disables calibration (and color management) for CMYK data in a job. You might want to disable calibration for testing purposes, for example.

Changing calibration has the potential to affect *all* jobs for *all* users, so consider limiting the number of people authorized to perform calibration. Set an Administrator password to control access to calibration (see *Configuration and Setup*).

Understanding calibration

Calibration generates adjustments to ink densities that account for the difference between the actual measurements and the expected response (target).

- Measurements represent the actual color behavior of the printer.

- Calibration settings contain sets of measurements that represent the output for specific printing conditions, such as media and print options.

- Each calibration setting is associated with a calibration target that describes the expected behavior of the printer.

After you calibrate the FS2100C Server for a specific print setting, the measurements are stored. These measurements are used to adjust output densities when you print with the output profile associated with the calibration setting.

Although the needs of most users are met by the default calibration setting, the FS2100C Server allows you to select a calibration setting to customize calibration for specialized jobs.

Every output profile has an associated calibration setting. If you have not specified one, the calibration setting associated with the default output profile is used.

How calibration works

Success in obtaining satisfactory print quality from the FS2100C Server depends on many factors. Among the most important are establishing and maintaining optimal ink or toner densities.

Calibration allows you to:

- Maximize the color reproduction capabilities of the FS2100C Server.

- Ensure consistent color quality from print run to print run.

- Produce consistent output across more than one FS2100C Server.

- Achieve better color matches when reproducing spot colors, such as PANTONE colors or other named color systems.

- Optimize the FS2100C Server for using color managed rendering intents, CMYK simulations, and ICC profiles.

Even with a calibrated system, ink or toner density is affected by the settings of the printer, humidity, and temperature. Color density also tends to drift over time. Uneven color density on media affects calibration results. Regular measurement detects day-to-day variations in density, gradation, and color reproduction, and calibration corrects them.

Calibration works by calculating adjustments that compensate for the difference between actual (measured) and target values. These calibration adjustments are often depicted as mathematical curves for each of the colorants.

When to calibrate

Calibrate the FS2100C Server at least once a day, depending on the volume of print jobs. If it is very important to maintain consistent color, or your printer is subject to wide fluctuations in temperature or humidity, calibrate every few hours. For optimal performance, calibrate whenever there is a noticeable change in print quality or printing results are not as expected.

If you must split a print job into two or more batches to print at different times, it is important to calibrate before you print each batch. You should also calibrate the FS2100C Server after printer maintenance or printer calibration. However, because the printer may be less stable immediately after maintenance, wait until you have printed approximately 50 images before you calibrate.

Note: Because output from the printer is very sensitive to changes in temperature and humidity, do not install the printer near a window, in direct sunlight, or near a heater or air conditioner. Media is also sensitive to climate changes. Store it in a cool, dry, stable environment, and keep media sealed until it is used.

To monitor print quality, print a color reference image. A good reference image includes fully saturated color patches and pale tints of cyan, magenta, yellow, and black. Images with skin tones offer a good basis for comparison. Save and periodically compare the images you print. If a noticeable change in appearance occurs, calibrate the FS2100C Server.

When you examine the reference image, all color patches should be visible, even though they may be very faint in the five to two percent range. Each patch set should show uniform gradation from patch to patch as the color lightens from 100% to zero.

If the solid patches (100% cyan, magenta, yellow, or black) look less saturated over time, show the images to your service technician to determine whether adjusting the printer can improve output.

Check calibration status

You can check when the FS2100C Server was last calibrated in Command WorkStation.

Check the calibration status for a job

- In Command WorkStation, in Job Center, select the job.

  The time of the most recent calibration is displayed in the lower-right corner.

Check the status of a specific calibration

1 In Command WorkStation, start Calibrator using one of the following methods:

   - In Device Center, click the General tab, click Tools, and then click Calibrator.

   - Click Server > Calibrate.

   - In Job Center, click the Calibrate icon in the toolbar.

   - Click the More icon (three dots) next to the FS2100C Server in the Servers list and select Calibrate.

2 Click Calibration Manager (☷).

   The list of calibration settings on the FS2100C Server appears in Calibrator.

3 Find the calibration in the list and check the Last calibrated value.

   Default measurements indicates the factory settings, which means that the FS2100C Server has not been calibrated.

Calibrator in Command WorkStation

You can calibrate the FS2100C Server with Calibrator in Command WorkStation.

Calibrator provides a choice of measurement methods depending on the methods available for your FS2100C Server:

- ES-3000 hand-held spectrophotometer

  For more information about this method, see the online help.

- ES-2000 hand-held spectrophotometer

  For more information about this method, see the online help.

- ES-6000 - EFI ES-6000 XRGA-compliant instrument

  The EX-6000 can measure the reflected spectra of printed color on pages automatically. It can connect to your computer through a local area network connection or a USB connection. For more information about this method, see the online help.

Multiple users can connect to one FS2100C Server with Command WorkStation, but only one user at a time can use Calibrator. If you try to calibrate when another user is using Command WorkStation to calibrate, an error message is displayed.

Before you save calibration measurements, you can check the calibration by printing a test page to see if it prints as you expect. It may also be helpful to print your own test page with the colors and job settings that are important to you.

Calibrator allows you to view the calibration measurements as a graph of input versus output curves for C, M, Y, and K.

- If the maximum measured density of a colorant is less than the target value, print a test page to check the output, especially areas with a lot of that particular colorant.

- If the maximum measured density is greater than or equal to the target value, this is usually not a problem.

If the curves are not smooth, it may be because the printer does not print uniformly across the page. The calibrated output may still be acceptable.

One way to check uniformity is to print a test job that covers the page with a single colorant (C, M, Y, or K) at the percentage that you want to check. Lack of uniformity is usually visible with values between 15% and 30%. This page must be printed without color management (CMYK Source set to Bypass conversion). If lack of uniformity is visible, we recommend that you calibrate using one of the sorted patch layouts, which helps to minimize banding in gradients. However, calibration cannot fix the lack of uniformity of the printer.

Calibrate the FS2100C Server with Command WorkStation

1   Start Calibrator by doing one of the following:

- In Command WorkStation, click Server > Calibrate.

- In Command WorkStation, click the Calibrate icon.

- In Command WorkStation, in Device Center, click General, click Tools, and then click Calibrator.

- In Command WorkStation, right-click a spooled/processed job and select Calibrate job.

   In this case, Calibrator automatically selects the calibration settings used by the job.

2   Follow the procedure for your measurement instrument.

   For more information, see the online help.

Managing calibration settings

Every output profile on the FS2100C Server must be associated with a calibration setting. The calibration setting provides the FS2100C Server with measurements of each of the printed colorants, for specific printing conditions (for example, media type). This data, along with the expected density response of the printer, allows the FS2100C Server to apply corrections to color values that are sent to the printer, to achieve the calibrated output.

An output profile can be associated with only one calibration setting, but the same calibration setting can be used by more than one output profile.

A calibration setting must be associated with at least one output profile, otherwise the calibration setting will never be used for printing.

Output profiles and calibration settings

The FS2100C Server has one or more factory-supplied output profiles.

Output profiles and their associated calibration settings may produce acceptable color quality. However, you may need to create custom calibration settings and output profiles, depending on your situation.

	Your media	Action	Notes
1	Recommended media for a factory-supplied output profile (the media that the profile is based on)	Printing with the output profile produces acceptable color. You do not need to create a calibration setting or custom profile.	Check with the printer manufacturer for media recommendation.
2	Media similar to a factory-supplied profile's recommended media	You might be able to use a factory-supplied output profile. The print settings required for your media (for example, media type and media weight) must match the print settings required by the recommended media. If the color quality is acceptable, you do not need to create a calibration setting or custom profile.	The output profile name usually indicates the general type of media (for example, plain, coated, or heavy). You can find the print settings required for the recommended media in Calibrator.
3	Media that is similar to a factory-supplied profile's recommended media, but uses different print settings	You must create a custom calibration setting and custom profile.	Use profile-generating software to create a custom profile.
4	Media that does not yield acceptable color with any factory-supplied profile	You must create a custom calibration setting and custom profile.	Use profile-generating software to create a custom profile.

Note: Recommended media is chosen for color quality, as well as other factors, such as feeding reliability and quality of transfer.

Select calibration setting for output profile

1 In Command WorkStation, in Device Center, click the Color Setup tab and click Color Management.

2 Click Set Defaults, and in the window that appears, click Color. Select the output profile and note the name of the calibration setting displayed to the right.

3 In Command WorkStation, in Device Center, click the General tab, click Tools, and then click Calibrator.

4 Click Calibration Manager (⬚).

The list of calibration settings on the FS2100C Server appears in Calibrator.

5 Select the calibration setting from the list.

6 Click OK to close the window.

Custom calibration settings

If you are printing on a media that is similar to the recommended media, but uses different print settings, you might still be able to use the output profile, but you must create a custom calibration setting. If the color quality is acceptable, you do not need to create a custom profile.

You can add a new calibration setting that you can then select when performing calibration. You can delete a custom calibration setting. You cannot delete a factory-supplied calibration setting.

For information about adding a custom calibration setting, see the online help.

Custom calibration settings and output profiles

If you determine that none of the factory-supplied output profiles produces acceptable color with your media, you must create a custom calibration setting in Calibrator and a custom profile using profile-generating software.

To create a custom calibration setting, you print images of color patches on the FS2100C Server using your media and measure the media with Calibrator.

Note: If you are creating only a custom output profile, make sure that the printer is well calibrated before creating the profile (if calibration is supported on the printer). For information about performing printer calibration, see the documentation that accompanies the printer.

When color quality is important, make sure that the FS2100C Server is calibrated for the particular halftone screen that you use. Changing a halftone screen usually modifies the color response of the printer.

Spot colors

The Spot Colors feature is part of Spot-On and Spot Pro. Spot-On and Spot Pro are comprehensive programs for creating, managing, and editing spot colors. You can edit spot color definitions on the FS2100C Server and create custom spot color definitions.

The Spot color matching print option automatically matches spot colors with their best CMYK equivalents plus additional colorants, if available, so that spot colors can be simulated using the CMYK colors. However, you may want to adjust the default CMYK equivalents to achieve a better match for your specific printing conditions. You can modify spot colors with the spot color editors, Spot Colors or Spot Pro, in Command WorkStation).

Note: Spot colors are also called "named" colors because a color name is used to represent a specific CMYK value.

Spot-On is a standard feature on the FS2100C Server. If you choose to activate the Fiery Graphic Arts Pro Package, you will use Spot Pro instead of Spot-On.

Note: Spot Pro is available with the Fiery Graphic Arts Pro Package

Spot Colors and Spot Pro come pre-loaded with libraries of named colors such as those from PANTONE, HKS, TOYO, and DIC. The spot color libraries store the original colors with their device-independent definitions (L*a*b* values). For each output profile on the FS2100C Server, Spot-On or Spot Pro computes the best available CMYK reproduction of each spot color. Each time a new profile is generated or updated, Spot-On or Spot Pro automatically recalculates the best CMYK equivalents and converted L*a*b* values.

Spot-On and Spot Pro supports other features related to spot colors:

- You can create a list of "substitute" colors. These are colors that, when called for in a document by their RGB or CMYK values, are substituted with a different color having the CMYK values from the Spot Colors or Spot Pro color definition. This permits exact color control and overrides individual RGB and CMYK colors.

  For more information, see Substitute colors on page 28.

- You can map any spot color to an alias that will create a fixed link to an existing spot color to ensure that two spot colors use the same color values, even if they have different names. You can create an alias between one Pantone spot color and another Pantone spot color, or an HKS spot color to Pantone spot color.

  For more information, see *Fiery Spot Pro Help*.

- When a job that specifies overprinting for spot-color objects is printed with the Composite overprint print option, Spot-On or Spot Pro enables the correct color processing.

  For more information, see Composite overprint on page 17.

Spot colors in Command WorkStation

The Spot Colors feature is a spot color (named color) manager in Command WorkStation that allows you to edit spot color definitions on the FS2100C Server and create custom spot color definitions.

The Spot Colors feature is part of Spot-On and Spot Pro. If Spot-On or Spot Pro is available for your FS2100C Server and is activated on the FS2100C Server, you can adjust and manage lists of spot colors and their CMYK equivalents plus additional colorants, if available, and converted L*a*b spot color matches.

The Spot-On feature is in Command WorkStation, in Device Center > Resources > Spot Colors.

The Spot Pro feature is in Command WorkStation, in Device Center > Resources > Spot Pro.

Spot colors also allows you to assign spot colors and process colors to the generic colors that are used in a job. The 2-Color print mapping feature is designed for print shop operators to simulate a two-color press. You can print a two-color job to a two-color device by mapping the colors in a job to the colors that are already created on the device.

For more information about 2-Color print mapping, see .

For more information about Spot colors and Substitute colors, see *Fiery Command WorkStation Help*.

How spot color matching works

Spot-On and Spot Pro allow you to adjust and manage lists of spot colors and their CMYK equivalents plus additional colorants, if available. The matching lists of spot colors and CMYK values are known as spot color dictionaries. Spot-On and Spot Pro allow you to maintain multiple spot color dictionaries for each output profile on the FS2100C Server.

You can specify the job properties that you use to print a job. Based on the settings, Spot-On or Spot Pro determines the output profile and its associated spot color dictionary.

If you select output profile X and redefine PANTONE 123 from 30%M to 50%M using Spot Pro, the output will reflect 50%M when you print a job with output profile X. If you print a job with output profile Y, you will get the original value.

If you select output profile X and create a custom color named "My Purple" and define it as 80%C 40%M, the FS2100C Server automatically calculates the L*a*b values using output profile X and creates new CMYK values for use with output profile Y.

To use the Spot-On or Spot Pro feature with named colors, you must enable the Spot color matching print option.

Note: Spot colors that are identified by name are printed with their defined CMYK values. Edits to an output profile made in Command WorkStation do not affect how spot colors are printed.

Any edits made to a job with the color adjustment features in Fiery ImageViewer affect all of the colors in the job, including spot colors.

Monitor settings

This feature requires that a job be displayed with correct colors on your monitor. To display the colors correctly on your monitor, you must set up the monitor according to the manufacturer's recommendations, and specify the correct monitor profile for your monitor.

Specify the following settings for the monitor:

• On the monitor: Brightness, Contrast, and Color Temperature

• In the operating system: Resolution, Refresh rate, and Number of colors

For more information about setting up the monitor and the monitor profile, see the documentation that accompanies the monitor.

2-color print mapping

The 2-color print mapping feature allows you to assign spot colors and process colors to the generic colors that are used in a job. This feature is designed for print shop operators to do proofing for a two-color printer. You can print a two-color job to a two-color printer by mapping the colors in a job to the colors that are already created on the two-color printer.

The following limitations apply when you use 2-color print mapping:

*   The settings for 2-color print mapping are ignored when the Composite overprint and Combine separations options are turned on.

*   Postflight does not report on 2-color print mapping, because Postflight reports the source state of a document.

*   You cannot select the 2-color print mapping and Substitute colors options at the same time. Also, you cannot select a substitute color to be used in 2-color print mapping.

2-color print mapping configuration

In 2-color print mapping, the colors that are used in a job are mapped with the colors to print.

From Fiery Spot-On or Spot Pro, you can open the Define 2-Color Print Mapping window, and then reassign the document colors to the named or custom colors to print.

Spot-On is a standard feature on the FS2100C Server.

If you choose to activate the Fiery Graphic Arts Pro Package, you will use Spot Pro instead of Spot-On.

You can access Spot-On from Command WorkStation Device Center > Resources > Spot Colors.

Note: Spot Pro is available with the Fiery Graphic Arts Pro Package.

You can access Spot Pro from Command WorkStation Device Center > Resources > Spot Pro.

When the 2-color print mapping print option is turned on for a job, the FS2100C Server replaces the document colors with the colors you defined in the Define 2-Color Print Mapping window.

Print a job with 2-color print mapping

After you map the colors, you can print a two-color job with 2-color print mapping.

1 In your application, select File > Print, select the FS2100C Server as your printer, and then go to the print options in the printer properties.

For information about how to set print options and print to the FS2100C Server from Windows and Mac applications, see *Printing*.

Alternatively, submit the job to the FS2100C Server Hold queue and then set print options in Job Properties in Command WorkStation.

2 In the Color tab, select 2-color print mapping.

3 Click OK and print the job.

Image Enhance Visual Editor

Image Enhance Visual Editor (IEVE) is an image editing application that provides users with a visual workspace to adjust individual images in a job. With IEVE, you can see the effects of your adjustments and fine-tune the appearance of an image.

With IEVE, you can adjust tone, color, and sharpness, and perform red-eye correction. You can apply the same adjustments to all images on a page or a range of pages. When you save a set of adjustments as a preset, you can easily apply the same adjustments in the future.

Adjustments made in IEVE affect the job on the server and cannot be applied to the original source document.

IEVE is accessible from Command WorkStation. For more information about IEVE, see *Fiery Command WorkStation Help*.

Access IEVE in Command WorkStation

1 In Job Center in Command WorkStation, select the job containing the images that you want to adjust.

   Note: IEVE supports PDF, PostScript, and imposed (.dbp) jobs only.

2 To start IEVE, do one of the following:

   - Select Actions > Image Enhance Visual Editor.

   - Right-click the selected job and select Image Enhance Visual Editor from the menu that appears.

IEVE and Apply image enhancement print option

IEVE adjustments are independent of the configurable Apply image enhancement print option. If the Apply image enhancement print option is turned on for a job that is also modified with IEVE, the effects of both are applied to the images in the job. We recommend that you use one or the other, not both, for a job.

- The Apply image enhancement print option is a faster way to apply simple adjustments that do not require visual confirmation before printing.

- IEVE is faster for making selective adjustments that require fine-tuning and visual inspection.

Paper Simulation white point editing

The Paper Simulation feature renders paper white as a printed color in the output, rather than leaving white areas of the page unprinted. White point editing allows you to perceptually adjust the hue, brightness, and saturation of the simulated paper white defined is defined in a CMYK source profile as the white point.

Although an ICC profile contains a definition of "white," the white may not always visually match the human eye, requiring a perceptual adjustment. You can customize the white point if necessary to achieve the result that you want.

Note: If you print a job with Paper Simulation, and you have defined a substitute color as C=0, M=0, Y=0, K=0, the values defined in Substitute Colors override those for Paper Simulation.

The Paper Simulation white point editing feature lets you customize an existing CMYK source profile and adjust its white point. You must also link the custom profile with a specific output profile. When you print a job, you must select the customized CMYK source profile and its linked output profile to see the effect of the Paper Simulation White Point editing.

You can customize the paper simulation by editing the white point values with Command WorkStation before printing your job. For more information, see *Fiery Command WorkStation Help*.

For Paper Simulation to be successful, the media white from the simulated CMYK color space will be simulated (as much as possible) by adding ink or toner to the output sheet. For this simulation to work, the output profile media must be brighter and whiter than the simulation profile media.

Edit the Paper Simulation White Point

You can edit the Paper Simulation White Point values with Command WorkStation.

To access the Paper Simulation White Point dialog box, see the instructions in *Fiery Command WorkStation Help*.

When you edit the Paper Simulation White Point values, you save them in a custom profile, which you create by editing an existing CMYK source profile in Color Editor. You must also link the CMYK source profile to an output profile.

Note: If you have defined a substitute color as C=0, M=0, Y=0, K=0, the values defined in Substitute Colors override those for Paper Simulation. For information about Substitute Colors, see *Fiery Command WorkStation Help*.

Print a job with Paper Simulation

1 In your application, select File > Print, select the FS2100C Server as your printer, and then go to the print options in the printer properties.

For information about how to set print options and print to the FS2100C Server from Windows and Mac applications, see *Printing*.

Alternatively, submit the job to the FS2100C Server Hold queue and then set print options in Job Properties in Command WorkStation.

2 If you edited the Paper Simulation White Point values, select the following settings as well.

- On the Color tab under Color input, for the CMYK source print option, select the custom profile that you saved after editing the Paper Simulation White Point values.

- On the Color tab, for the Output profile print option, select the profile that you linked to the custom CMYK source profile when you edited the Paper Simulation White Point values.

- On the Color tab, for the CMYK rendering intent option, select Absolute Colorimetric.

3 Click OK to save the settings.

4 After you specify the print settings, click OK, and then click Print to send your print job.

Your job is printed with the Paper Simulation values.

Note: If you have defined a substitute color as C=0, M=0, Y=0, K=0, the values defined in Substitute Colors override those for Paper Simulation. For information about Substitute Colors, see *Fiery Command WorkStation Help*.

Monitor settings

This feature requires that a job be displayed with correct colors on your monitor. To display the colors correctly on your monitor, you must set up the monitor according to the manufacturer's recommendations, and specify the correct monitor profile for your monitor.

Specify the following settings for the monitor:

- On the monitor: Brightness, Contrast, and Color Temperature

- In the operating system: Resolution, Refresh rate, and Number of colors

For more information about setting up the monitor and the monitor profile, see the documentation that accompanies the monitor.

Hot Folders filters

Hot Folders filters either convert some types of files to PostScript or PDF (Portable Document Format), or preflight other types of files. Some of these filters are standard and some are optional.

Note: For information about configuring Hot Folders to preflight files, see *Fiery Hot Folders Help*.

File conversion and preflighting take place on your computer in the Hot Folders application, which saves FS2100C Server resources.

You can print files directly from Hot Folders filters without starting the application from which they were created.

For information about using the filters in the Hot Folders application, see *Fiery Hot Folders Help*. For information about operating systems that support Hot Folders, see *Configuration and Setup*. For information about installing the Hot Folders application, see *Utilities.*

These filters are standard:

- General

  - EPS

  - JPEG

  - PDF

  - PS

  - TIFF

  - FFP

  - VDP

- JDF

- Microsoft