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Xerox® 490/980™ Color Continuous Feed Printing System
Color Management Guide

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Color Management Overview

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The CMS (Color Management System) Option Tool is an add-on software for the Xerox 490/980 Color Continuous Feed Printing System, and it can be installed on a remote PC. The CMS Option Tool is the primary tool used when adjusting color on the Xerox 490/980 Color Continuous Feed Printing System. Color selections and calibrations are performed using the CMS Tool. This section explains what the CMS Option tool is and how to make color selections for a specified job on the PC-GUI.

The Xerox 490/980 Color Continuous Feed Printing System produces what is commonly known in the industry as "Business" or "Transactional Color". This is one way to describe this caliber of color and where it fits in the market; between that of ink jet products and offset quality. The machine is also the fastest toner-based production color system available today. Utilizing four color housings, the machine outputs CMYK at 600dpi, and line screens from 85 to 300 lpi. Color output of this machine is richer in tone and hue than comparable ink jet systems. The color gamut is targeted at newsprint-type image quality.

Because the machine uses dry toner, it can print on a wide variety of substrates ranging from 64 gsm to 160 gsm. Paper weights lighter than 64 gsm may also be used subject to satisfactory testing for suitability. Light weight stocks are typically a problem for ink jet printers because the ink often causes water saturation, curling, and other issues. Through the use of dry toner and flash fusing technology, the machine provides a competitive advantage to the customer. Because of its unique use of strobing xenon lamps, only the toner is heated and no pressure, heat or contact is made with the substrate itself. Therefore, the customer gains the ability to use light weight stocks and other special media, such as cards and adhesive labels, without any of the problems associated with the use of ink jet systems.

CMS Option Tool Overview

The CMS (Color Management System) optional tool is installed using GUI software added to the remote PC.

The CMS Option tool has the following features:

- Creating a color conversion table
- Creating a calibration table

You can use the CMS Option Tool to add paper color characteristics and CMYK ink characteristics. When adding characteristics, the printer will generate a color conversion table. This table will be used and allow you to specify paper color characteristics or CMYK ink characteristics. You can add these selections when making job queue settings.

Over the course of time, the printer's color characteristics are often altered during printing. The process to correct those color inconsistencies is called calibration. You can create a color correction table using the CMS Option Tool for calibration. If you have a duplex configuration, you can perform calibration on both printers.

Major Functions of the CMS Option Tool

The two major functions of the CMS Option tool is to generate calibration and color conversion tables.

Generating the calibration adjustment tables

- Printing Colorimetry patterns
- Creating calibration data

Generating the color conversion table

- Creating user definition paper data
- Creating user-specified ink characteristics data
- Viewing paper information

CMS Option Tool Setup

This section describes the setup of the CMS Option Tool. The CMS Option Tool should be installed on a remote PC where the GUI is also present.

Prerequisites to setting up CMS Option Tool

The following are required before setting up the CMS Option Tool:

- You must be logged in as an Administrator or a user with Administrator privileges.
- Ensure the remote PC being used is connected to the network.
- Resolution of the screen must be set to 1280 x 1024 or greater.
- The remote PC must have at least 300 MB or more of free disk space.
- The GUI software must be able to connect to the Controller.

Color Options

Color options can be selected for an individual job. To view color options for a job, perform the following:

1. Open Job Management.
2. Select the desired job.
3. Select [**Properties**].
4. Select the [**Color**] tab.

Any selections made on this color tab are characteristics of the printed output for the desired job. If an option is greyed out, it is not selectable.

Color Resource Set

A color resource set is created at the PC-GUI and is used to transmit color characteristics to the printer for the given job. Options are available in the pull-down menu. Select the System Default if there is no desired set.

Convert CMYK/RGB Black to K

This option is available for PS/PDF. You can choose whether or not to map the black in an input color space directly to the black in an output color space.To convert CMYK/RGB Black to K, select the Color tab of the Properties window. Select the pull-down menu on the Convert CMYK/RGB Black to K option. The black of the input color space is mapped directly to the black of the output color space. It is only effective for K 100 % or RGB data.

Black Overprint

This option is available for PS/PDF. You can choose whether or not to overprint on the black portion of an input color space, without printing the under-color. The Black Overprint option is available on the Color tab of the Properties window. When this option is selected, the black of the input color space is overprinted.

This is only effective for PS/PDF data and applies only to characters and graphics, not images.
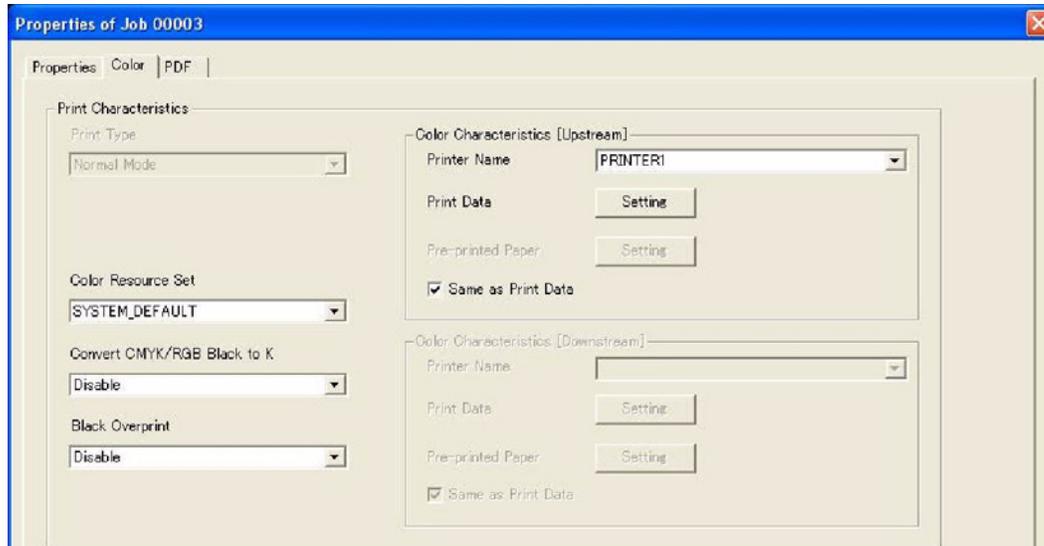
Color Characteristics

Color characteristics are displayed on the Color tab of the Job Properties window. The window is divided for Upstream and Downstream printers. The Upstream refers to the first printer, Downstream is the second printer. If you are using a simplex printer, you will make selections for only the Upstream printer. If selections are made for a duplex configuration printer, selections will need to be made for both the Upstream and the Downstream printer. The following information is pertinent for both Upstream and Downstream printers.

Black & White printing is available in the Color Mode option.

In a Duplex printing mode, both printers must be in the "Not Ready" status before changing to the Color Mode.

Printer Name

Select the desired printer from the Printer Name pull-down menu.

Print Data

Select the output screen characteristics of the print data. Select the [**Setting**] button to open the Color Characteristics Upstream Print Data dialog box.

Print Mode

Select Color or B/W. (Color is the Default.)

Resource Group Name

The file name of the color resource group can be specified (None is Default.)

User TRC

Setting of the User Toner Reduction Curve (TRC). This is only effective in the Color mode. Select [**Browse**] to adjust the TRC.

Simulation

Specify RGB/CMYK color simulation to be performed on the input data. The following options are available:

- Device
- Ink Simulation

Intent

In the Intent option, specify the way to map the ink simulation from the pull-down menu and select one of the following:

- Perceptual
- Relative
- Saturation
- Absolute

Color Space

In the Color Space option, specify the color space for ink simulation.

Image Quality

In the Image Quality option, specify the image quality to be used for ink simulation from the pull-down menu. The following options are available.

- Business Document
- Photo

You cannot specify this for RGB data in PS/PDF.

Perceptual (Default of RGB)

The rendering technique is specified so that compression or expansion will be performed according to color spaces of the device. This will reproduce all color spaces of the images.

In general, the saturation and lightness will be lowered.

Relative (Default of CMYK)

After dynamic range compression is done, colors that can not be reproduced will be converted, lightness will be sustained as much as possible, and saturation will be decreased. This is not intended for conversion of wide dynamic-ranged images, or high key and low key images.

Saturation

The saturation option is specific for pixels in images. When saturation is changed, it changes the hue and lightness of an image.

It is not recommended to change this option for photos, but is useful for conversion of graphics and charts for presentations.

Absolute

The Absolute option allows colors of reproducible areas to be converted correctly. When colors are converted, lightness is similar to original and saturation will be decreased. For colors in areas that are not reproduced, halftones will decrease significantly. It is not recommended to choose this option for conversion of wide dynamic-ranged images, or high key and low key images.

Output Screen Characteristics

The following options can be selected on the Output screen:

- Screen Job: Selects Halftone Dot [Not Selectable]
- Halftone Dot Shape: Circle [Not Selectable]
- Select Frequency: Choose from 80/100/120/150/200/300

    Note

    PS/PDF must be the same setting in upstream/downstream. It is only selectable on the upstream system.

Screen Angle: Select C:15 ^{o} M:75° Y:0° K:45° [Not Selectable]

User TRC

When the Browse button of User TRC is selected, the Edit TRC window is displayed. Make any desired changes on the Edit TRC window.

Pre-Printed Paper

Select the output screen characteristics of the pre-printed paper. Select the [**Setting**] button to open the [**Color Characteristics [Upstream] (Print Data)**] dialog box.

Custom ink settings

If an ink is to be used that is different than either of the two standard types, it must be registered as a custom ink.

Calibration data

Calibration data is used to adjust the colors of the printer. After extended use, colors may shift from desired calibration. When this happens, use calibration data to make adjustments. Chapter 2 details the CMS Option Tool.

CMS Option Tool

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This chapter details the CMS Option Tool. Operations performed with the CMS Option Tool are discussed here. For detailed information on Calibration, please see the remaining chapters of the Color Management Guide.

Introduction to the CMS Option Tool

Listed below are the common uses of the CMS Option Tool:

- Print a Colorithmic pattern: Use this option to print a colorithmic pattern to be used for color conversion.
- Create calibration data: Use this option to create data to be used for calibration.
- Create custom paper settings: Use this option when using a paper type other than the standard types listed.
- Create custom ink settings: Use this option to create CMYK ink settings to be used other than the two standard types listed.
- Download Paper Information: Use this option to download paper settings that are registered in the CMS Option Tool.
- Backup and restore paper information: Use this option to backup and restore paper settings that are saved in the CMS Option tool.

Measuring devices

The following measuring devices are supported by the Xerox 490/980 Color Continuous Feed Printing System:

- iCColor
- DTP70
- Eye-One iSis

Although the above measuring devices are supported, it is recommended that you use the X-Rite Eye-One iSis measuring device with the Xerox 490/980 Color Continuous Feed Printing System. For instructions in this guide, the X-Rite Eye-One iSis is the measuring device preferred.

Install the CMS Option Tool

1. Insert the CMS Option Tool CD into the CD-ROM of the remote PC.
2. Double click [**setup.exe**]. The setup wizard will open.
3. Select [**Next**].
4. Allow the CMS Option Tool to install in the default location [**C:\Program Files\Xerox\CMS Option Tool**], select [**Next**].
5. Specify a folder name or select the Program Folder where the program icon will be added and select [**Next**].
6. Select [**Next**] again. The installation will begin. When installation is complete, a dialog box will appear.
7. Select [**Finish**].To begin using the CMS Option Tool, select the icon on the GUI to open the CMS Option tool dialog box.The tool will display similar to the following:
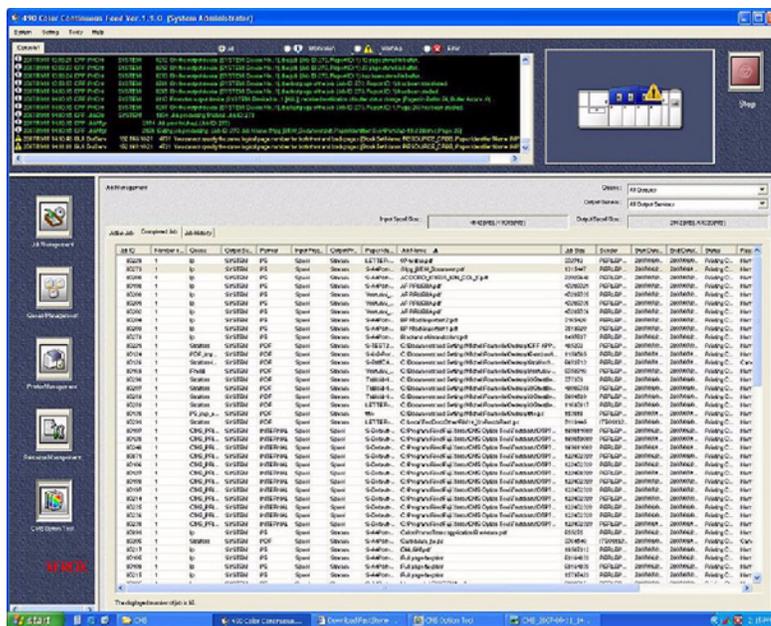
CMS Option tool tab menus

The following tabs are located on the CMS Option Tool window.

- Print Colorimetric Pattern
- Create Calibration Data
- Custom Paper
- Custom Ink Characteristic
- Paper Information
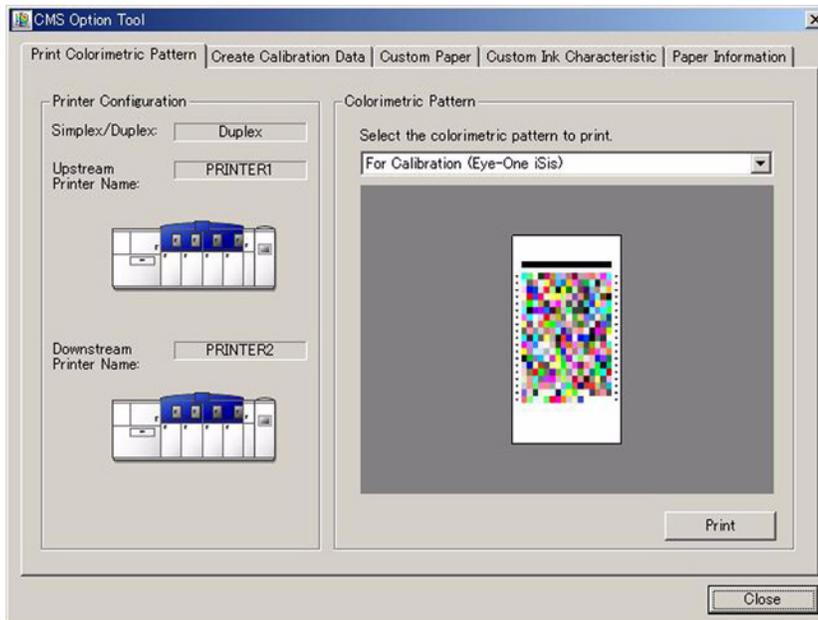
After the installation

When the installation is complete, start the PC-GUI to ensure that the CMS Option Tool installed properly. The CMS Option Tool button will be displayed on the GUI.

Cancelling the installation

If you wish to cancel the installation process, select [**Cancel**]. Select [**Yes**] to cancel installation. Then select [**Finish**]. The following dialog box will appear.
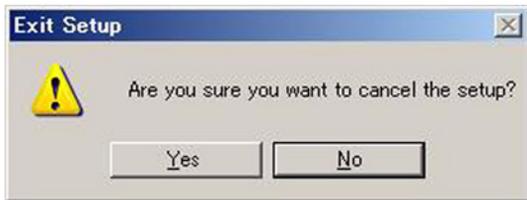
Uninstall the CMS Option Tool

To uninstall the CMS Option tool, select [**Start: Settings: Control Panel**] Then select [**Add/ Remove Programs**] and select the CMS Option Tool. If this is unsuccessful, use the following instructions to uninstall the CMS Option Tool.

1. Insert the CMS Option Tool CD into the CD-ROM of the remote PC being used.
2. Double-click [**setup.exe**]. The setup wizard will display.
3. Select [**Remove**] and select [**Next**].
4. Select [**OK**]. The uninstallation will begin.
5. Select [**Finish**].

Using the CMS Option Tool

The CMS tool can be used for a variety of tasks. The most common task is printing a colorimetric pattern to be used for calibration. The following sections explain how to use the options on the CMS Option tool. Detailed instructions on how to perform calibration can be found in the later chapters of this guide.

Print Colorimetric Pattern

Use the Print Colorimetric Pattern tab to print a desired colorimetric pattern for use when performing calibration. Before you print a colorimetric pattern, you may have to login. Double-click the [**Xerox 980 Color Continuous**] and enter your username and password.
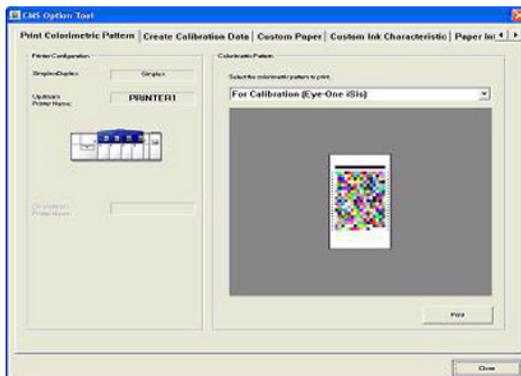
The colorimetric pattern print is used to calibrate the printing system. If you have a simplex configuration, a total of six copies will print of the colorimetric pattern will be printed. Three copies each of the Error Diffusion and three copies of the Halftone Dot will be printed. The name of each print will be printed along with the pattern print. If it is a simplex machine, the word "Upstream" will also be printed.

If you have a duplex configuration, a total of 12 prints will be printed. There will be three prints for each of the Error Diffusion and the Halftone dot for the Upstream printer and three each of the downstream printer. The name of the print (Error Diffusion or Halftone Dot) will be printed at the bottom of each pattern along with the words "Upstream" or "Downstream" to identify the printer.

Once the patterns are printed, select the best copy of each of the prints. You will need to cut out one print of each to be used for calibration. It is important when you cut the print that the lead edge is neatly and evenly trimmed.

How to print a colorimetric pattern

1. Select the CMS Option Tool icon from the PC-GUI.
2. Select the [**Print Colorimetric Pattern**] tab.
3. Using the options on the window, make the desired selections. It is recommended that you use the X-Rite Eye-One iSis as your measuring device. For more information on these selections, refer to the following information in this section for a detailed description of options.
4. Select [**Print**].
5. The colorimetric pattern will be printed. A window will appear asking if you wish to continue. Select [**Yes**]. In the following window, select [**OK**].

The following explains options available under the [Print Colorimetric Pattern] tab:	
Printer Configuration	
Simplex/Duplex	Make a selection depending on what printer configuration you have. Select [**Simplex**] for simplex machines, [**Duplex**] for duplex configured machines.
Upstream Printer Name	The name of the first printing system is displayed here.
Downstream Printer Name	The name of the second printer, if you have a duplex configuration.
Colorimetric Pattern	
Note The following three options are for conversion use with a new paper setting:	
[**DTP70**]	Use this option for color conversion on the DTP70. Select this option when you are using the DTP70 color measuring device and wish to create a colorimetric pattern for the color conversion table.
[**iCCColor**]	Use this option for color conversion when using ICCOLOR. Select this option when you are using the iCCColor color measuring device and wish to create a colorimetric pattern for the color conversion table.
[**Eye-One iSis**]	Use this option for color conversion on the Eye-One iSis. Select this option when you are using the Eye-One iSis color measuring device and wish to create a colorimetric pattern for the color conversion table. This is the recommended measuring device.
Note The following four options are for calibration use for daily ads:	
[**DTP70**]	Select this when using the DTP70 color measuring device and need a colorimetric pattern for calibration.
[**ICCOLOR**]	Select this when using the iCCColor color measuring device and need a colorimetric pattern for calibration.
[**Eye-One iSis**]	Select this when using the Eye-One iSis color measuring device and need a colorimetric pattern for calibration. This is the recommended measuring device.
[**Print**]	Select this to print the chosen colorimetric pattern.

Layout files for the colorimetric patterns

The layout files for the colorimetric patterns are stored in the same folder where the CMS Option Tool is located. The default location is:

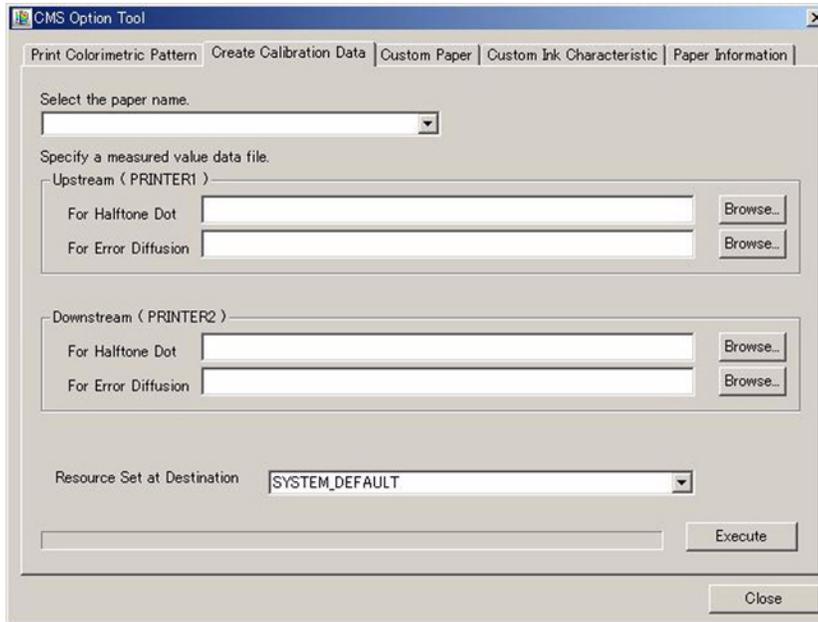C:\Program Files\Xerox\CMS Option Tool\ReferenceFiles

Selecting a layout file

Each layout file is dependent upon the desired measuring purpose. The layout file chosen will appear on the printed colorimetric pattern. The following table displays the measuring purpose and the name of the layout file that should be chosen:

Color Conversion Layout Files	
ICCOLOR: iCCColor.rnd.xml	
Calibration	iCCColor_up_Calib.rnd_1.xml
	iCCColor_up_Calib.rnd_2.xml
	iCCColor_up_Calib.rnd_3.xml
	iCCColor_dn_Calib.rnd_1.xml
	iCCColor_dn_Calib.rnd_2.xml
	iCCColor_dn_Calib.rnd_3.xml
DTP70: DTP70.rnd.xml (all three prints are in one file)	
Calibration	DTP70_up_Calib.rnd_1.xml
	DTP70_up_Calib.rnd_2.xml
	DTP70_up_Calib.rnd_3.xml
	DTP70_dn_Calib.rnd_1.xml
	DTP70_dn_Calib.rnd_2.xml
	DTP70_dn_Calib.rnd_3.xml
Eye-One iSis: EyeOneiSis.rnd.xml	
Calibration	EyeOneiSis_up_Calib.rnd_1.xml
	EyeOneiSis_up_Calib.rnd_2.xml
	EyeOneiSis_up_Calib.rnd_3.xml
	EyeOneiSis_dn_Calib.rnd_1.xml
	EyeOneiSis_dn_Calib.rnd_2.xml
	EyeOneiSis_dn_Calib.rnd_3.xml

Create Calibration Data

Use the Create Calibration Data tab to create a table to be used for calibration. This table is generated based on measured colorimetric data. Select [**Resource Set at Destination**] to send color resources to the printer.

How to Create Calibration Data

1. Select the CMS Option Tool icon from the PC-GUI.

2. Select the [**Create Calibration Data**] tab.

3. Select the Paper Name from the pull-down menu.

4. Select the desired data file for the printer(s). When selecting the data file for Halftone Dot, the file will be *.ht. When selecting the data file for Error Diffusion, the file will be *.ed. Select the first file for each.

5. Select the Resource and set at destination or leave as System Default.

6. Select [**Execute**].

For a detailed description of options on these selections, refer to the information in the following section.

Select the paper type

All standard and registered types of paper will be listed. Select a paper type from this option. Plain paper and Special paper are considered standard. All other paper types must be registered through the Custom Paper option.

Specify data file

Use this option to select a data file to be applied to the desired printer. If you are using a duplex configuration, the first printer is referred to as [**Upstream**], the second printer is referred to as [**Downstream**].

Use the following information to select the correct data file.

Upstream printer
- For Halftone Dot: Select [**Browse**] to specify the halftone dot data for the printer. The file will be named *.ht
- For Error Diffusion: Select [**Browse**] to specify the error diffusion data for the printer. The file will be named *.ed

Downstream Printer
- For Halftone Dot: Select [**Browse**] to specify the halftone dot data for the printer. The file will be named *.ht
- For Error Diffusion: Select [**Browse**] to specify the error diffusion data for the printer. The file will be named *.ed

Resource set at destination

Select the desired resource to be used as a color resource when downloaded for printing.

Execute

Select this option to generate calibration data.

Custom Paper

Use the Custom Paper tab to create a color conversion table to be used for custom paper. This table is based on measured colorimetric values from the data file. A color conversion table can also be created for halftone dot and error diffusion. When [**Resource Set at Destination**] is selected, color resources for a custom paper are sent to the printer. When you create a custom paper, you must make the following selections:
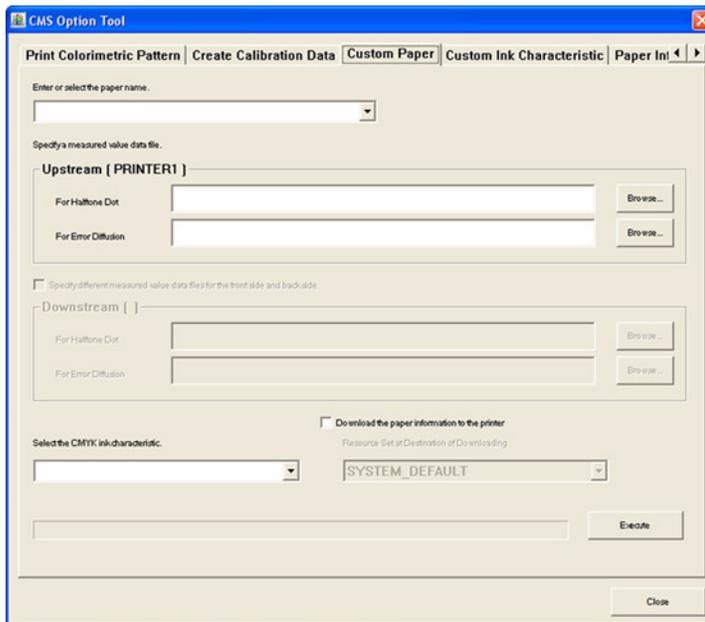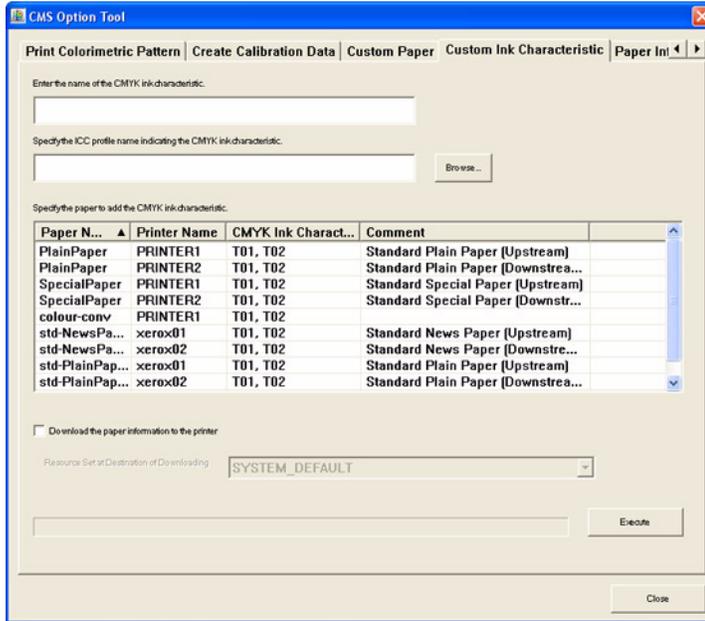
Paper Name

Select a paper name from the pull-down list or enter a new name for the custom paper to be used.

Specify data file

Use this option to select a data file to be applied to the desired printer. If you are using a duplex configuration, the first printer is referred to as [**Upstream**], the second printer is referred to as [**Downstream**].

Use the following information to select the correct data file.

Upstream printer
- For Halftone Dot: Select [**Browse**] to specify the halftone dot data for the printer.
- For Error Diffusion: Select [**Browse**] to specify the error diffusion data for the printer.

Downstream Printer
- For Halftone Dot: Select [**Browse**] to specify the halftone dot data for the printer.
- For Error Diffusion: Select [**Browse**] to specify the error diffusion data for the printer.

Colorimetric value data for sides

Use this option to choose if the same data file will be used for Upstream and Downstream. If different data files should be applied, select the check box.
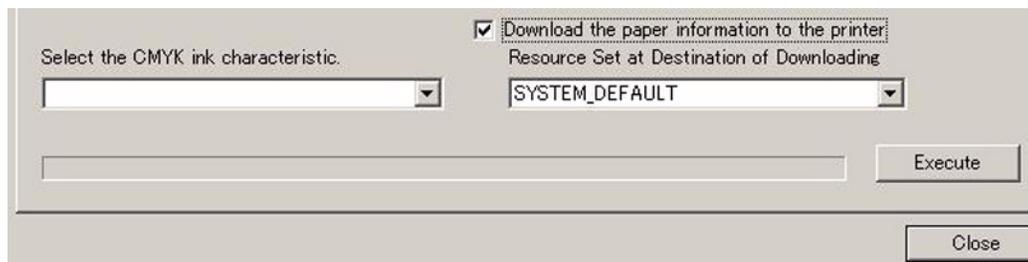
Select CMYK

The selected CMYK ink attributes are registered and used to create a color conversion table for the selected custom paper.
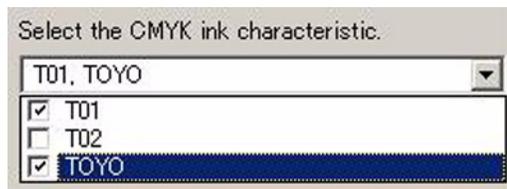
Download paper information

Use this option to download the paper information to the printer.

Resource Set at Destination of Downloading

Select this option if you choose to allow the resources to be set at the download destination.

Execute

Select this option to generate a color conversion table for the custom paper.

Registering Custom Paper

To register custom paper:

1. Enter the Paper Setting. Set Paper Length to 18 inches.
2. Select a colorimetric pattern for color conversion. For color conversion, use Eye-One iSis.
3. The colorimetric pattern will be printed for color conversion. Select [**Print**] and then select [**OK**].
4. Select [**OK**] in the CMS Option Tool window.
5. Cut out the pattern along the dotted line. Halftone Dot, Error Diffusion, and Upstream/ Downstream. Lead edge black bar and left edge are critical.
6. Measure the patterns using the Eye-One iSis.
    a. Connect to the Eye-One iSis and switch on the power.
    b. Select [**Start/Programs/X-Rite/ColorPort/ColorPort1.5.3/ColorPort 1.5.3**].
    c. Select [**Measure Target**] tab.
    d. Select [**EyeOneiSis.rnd**] under Target.
    e. Select [**X-Rite Eye-One iSis**] under Measurement Device.
    f. Select [**Connect**].
    g. Select [**No Filter**].
    h. Insert the Halftone Dot pattern, and select [**Close**].
    i. Select [**OK**] when measurement is successful.
    j. Select [**Save Data...**].
    k. Select [**CGATS**] then select [**Save**].
    l. Save the file as **eyeoneisis_up_ht.txt** in the My Documents directory.
    m. Select [**Clear Data...**].
    n. Repeat the previous steps for Error Diffusion pattern.
    o. Save file as **eyeoneisis_up_ed.txt**.
7. In the CMS Option Tool window, select the [**Custom Paper**] tab.
8. Enter the Media name in the "Enter or select the paper name" field.
9. Browse to the data files that you have created, under "Specify a measured value data file." There is a data file for Upstream and a data file for Downstream.
10. Select [**T01**] in the "Select the CMYK ink characteristic" drop down menu. **T01** is General printing and **T02** is for Newspapers.
11. Select [**Download the paper information to the printer**].
12. Select [**OK**] in the CMS Option Tool window.

Custom Ink Characteristic

Use the Custom Ink Characteristic tab to specify information for a new custom ink.

If you specify the International Color Consortium (ICC) profile and paper to be used, you can create a color conversion table for converting CMYK specifics in the profile to the printer.

How to Create Custom Ink Characteristic

1. Select the CMS Option Tool icon from the PC-GUI.
2. Select the [**Custom Ink Characteristic**] tab.
3. Enter the name of the CMYK ink characteristic.
4. Select [**Browse**] to specify the ICC profile name that indicated the CMYK ink characteristic.
5. Select one or more paper types to add to the CMYK ink characteristic registration in the Specify Paper section.
6. Select the check box to allow you to select the resources when downloaded in the Download paper information section.
7. Select [**Execute**]. Selecting the execute button will generate a color conversion table.   If resources are to be set at destination, then color resources are downloaded to the printer.

Paper Information

Use the Paper Information window to view and make changes to saved paper settings.

How to view Paper Information

1. Select the CMS Option Tool icon from the PC-GUI.
2. Select the [**Paper Information**] tab.
3. A majority of this window is read-only. The following information explains in detail the options available on this window.

Paper name

The paper names specified in Custom Paper are displayed. There are two generally supported papers also listed, plain and special. All paper types are listed here.

Printer name

The printer names that are registered in the GUI are displayed here. You can change the name in the Properties dialog box.

CMYK ink characteristics

The registered ink characteristics are listed here.

Measurement time

All data from each color measurement is generated and these dates are listed here.

Comment

Any registered comments are listed in the properties of paper information.

Download Paper Information

Paper information can be downloaded to the printer. Select the paper information from the list and select [**Download**]. A confirmation window will appear, select [**Yes**] to proceed. The color resource of the selected paper information will download and be sent to the printer.

You can download paper information with calibration data to the printer. This data is generated using previously generated calibration files and color measurement data. This data is specific to the paper that is selected in the paper information list.

Select the check box and select a resource to be used when downloaded. Select any paper information and then select [**Download**].

Change Paper Properties

To display the properties of a paper registered in the CMS Option tool, select [**Properties**]. The window that displays is available to edit. The following options are available to change.

Paper name

The paper name displays.

Printer name

The printer name that has been registered on the GUI is displayed. The printer name can be changed.

Standard/Custom paper

The paper name of either the standard or custom paper is displayed here.

Measurement time

All data from each color measurement is generated and these dates are listed here.

Resource creation time

The date and time when a color resource file has been created will be displayed.

Calibration On/Off

If calibration data is enabled or disabled, it will be displayed here.

Calibration mode

The calibration mode will be displayed here depending on if the configuration is for simplex or duplex.

CMYK ink characteristics

The registered ink characteristics are listed here. If you wish to rename or delete a characteristic, right-click on the specific characteristic. Printer defaults cannot be renamed or deleted.

Ink name

The ink names are listed here.

ICC Profile

The ICC profile names that are specified in the Custom Ink Characteristics are listed here.

Comment

Any additional paper information, or other information that is necessary can be added in the Comment field. Any information in the comment field will be displayed in the Custom Ink Characteristics list.

Save

All paper information that has been changed will be saved when this option is selected. All previously saved information will be lost.

Save As

Paper information will be saved as a name that you specify.

Close

This option will close the Paper Properties window.

Delete Paper information

Paper information can be deleted from the paper information list. To delete paper information, select the desired item and select [**Delete**]. A confirmation window will appear. Select [**Yes**] to delete the color resource of the paper information. Select [**No**] to cancel this operation.

Backup paper information

Paper information can be backed up to a disk. Information such as the user-defined paper information and CMYK ink characteristics and ICC Profile can be saved.

When you select to backup this information, a directory is automatically generated with the following name:

CMSProfilesYYYYMMDDhhmm

Select [**Backup**] and a confirmation window will appear. Select [**Save to**] and enter a directory where the information will be saved. Select [**OK**] and a confirmation window will appear.

Select [**Yes**] to backup the paper information into the desired directory. Select [**No**] to cancel this option.

Restore of paper information

Paper information can be restored if it was backed up. If this option is selected, it will overwrite the current information.

Select [**Restore**] and a confirmation window will appear. Select [**Save to**] and enter a directory where the information will be saved. Select [**OK**] and a confirmation window will appear.

Color Resource Management

The Color Resource Management provides functions to create, edit, take out and delete color resource files, as well as functions to copy between resources. It is also possible to create, copy, rename, and delete resource sets.

1. Open Resource Management.
2. Select [**Color Resource**].
3. Select the Media Directory, select [**Local PC**].
4. On the left side, open the following path: [**C:\Program Files\CF_CMS Tool\Printer Profiles**]
5. On the right side:
   a. Highlight [**HPA_PRINTER1.cntl**].
   b. Right click and select [**Import**].
   c. Select [**HPA_980**] and select [**OK**].
   d. A popup window will appear asking if you wish to overwrite the file, select [**Yes**].
6. On the left side:
   a. Highlight [**HPA_Printer2.cntl**].
   b. Right click and select [**Import**].
   c. Select [**HPA_980**] and select [**OK**].
   d. A pop-up window will appear asking if you wish to overwrite the file, select [**Yes**].
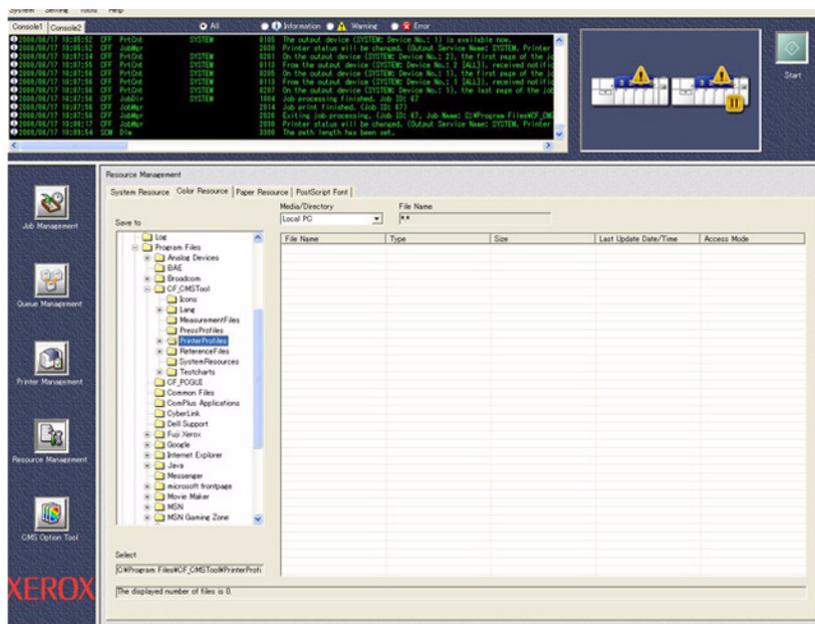
Prepare for Color Calibration

3

This chapter discusses what needs to be done before the procedures in the remaining chapters of the Color Management Guide are performed. A method of determining if you are able to skip the Set Up Imposition Files and Create a New Queue sections of Chapter 4 is also provided.

It is important to follow the sections of this chapter in order.

Recommended Calibration Conditions

This section describes the recommended conditions for performing the pre-calibration and color calibration procedures in the following chapters.

1. The printer should be properly maintained in accordance with supplied Xerox documentation.
2. The paper stock used to perform the pre-calibration and color calibration should be the same paper stock used for jobs that will be submitted after the pre-calibration and color calibration have been successfully performed.

    Note

    The lamp specification given in the following condition is only a recommendation, not a requirement.

   D50 Ra=99, Color rendering AAA, 5000K Extra neutral white fluorescent bulb.

3. The printer is located in an environment comparable to the **B-Zone** of the table below:

Environmental Zone	Temp. Range	Rel. Humidity Range	Comments
B-Zone	**59° F to 86° F 15° C to 30° C**	**30% to 65% RH**	**The 490/980 CCF Printing System will deliver optimal performance in this zone.**
C-Zone	50° F to 82° F 15° C to 27° C	65 % - 85 % RH	The 490/980 CCF Printing System will deliver degraded performance in this zone.
A-Zone	59° F to 90° F 15° C to 32°	15 % to 30 %	The 490/980 CCF Printing System will deliver degraded performance in this zone.

Verify Color Calibration Resources

The purpose of this procedure is to verify that you have all of the files necessary to perform the pre-calibration and color calibration procedures in the later chapters of the Color Management Guide.

1. Insert the Xerox 490/980 Color Continuous Feed Printing System Customer Documentation CD into the CD-ROM drive of the computer that contains the PC-UI.

2. Select the indented link under the link to this Color Management Guide called [**Color Calibration Resources**]. This will open Windows Explorer and show you the root folder of the Xerox 490/980 Color Continuous Feed Printing System Customer Documentation CD.
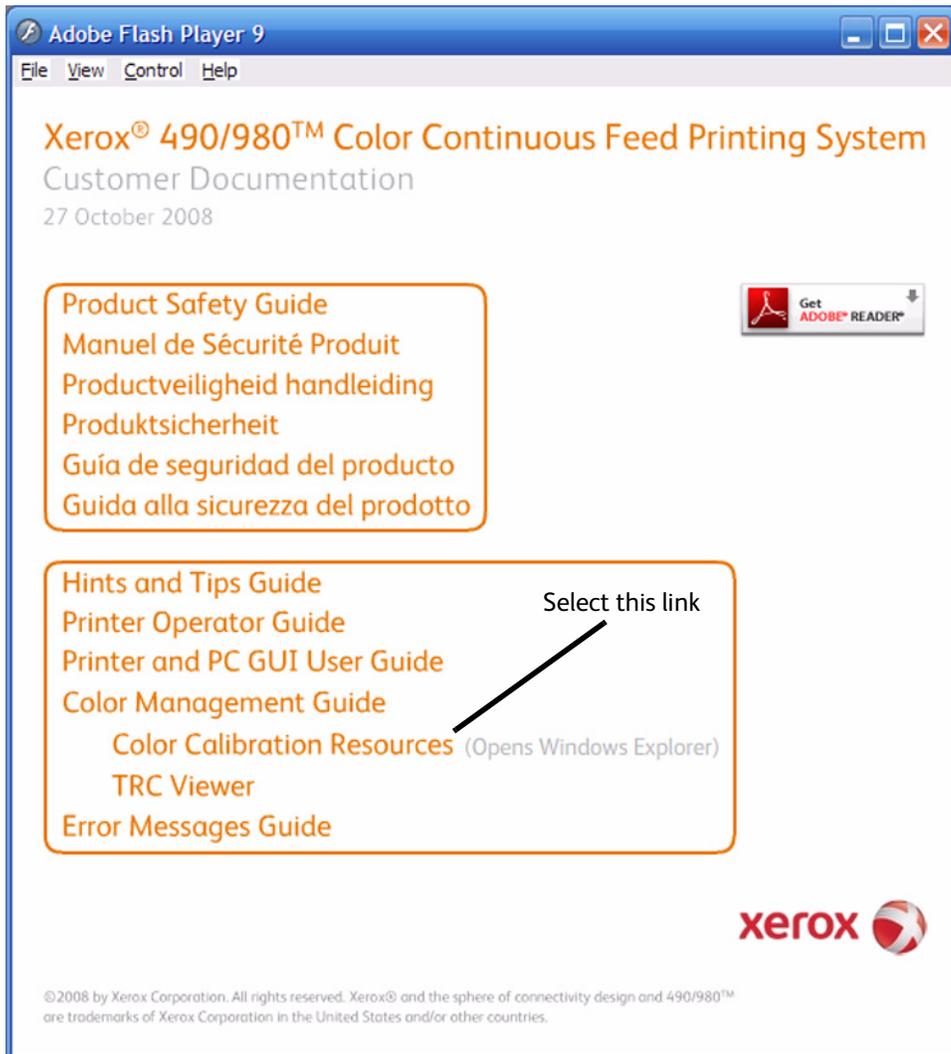
Note

The directory tree referenced in the following step is on pages 3-4 to 3-7.

3. Open the [**Color Calibration Resources**] directory and verify that the folders and files shown in the following directory tree exist:

****

- \ColorPort Targets
- \Imposition Files
- \Resource Group Names
- \TOF Mark
- \TRC Viewer
- \ColorPort_DTP70.pdf
- \ColorPort_iCColor.pdf
- \ColorPort_iSis.pdf
- \Duplex Xerox 490980 Color Test Pattern.pdf
- \Simplex Xerox 490980 Color Test Pattern.pdf

Name ▲	Size	Type
ColorPort Targets		File Folder
Imposition Files		File Folder
Resource Group Names		File Folder
TOF Mark		File Folder
TRC Viewer		File Folder
ColorPort_DTP70.pdf	358 KB	Adobe Acrobat 7.0
ColorPort_iCColor.pdf	294 KB	Adobe Acrobat 7.0
ColorPort_iSis.pdf	433 KB	Adobe Acrobat 7.0
Duplex Xerox 490980 Color Test Pattern.pdf	115 KB	Adobe Acrobat 7.0
Simplex Xerox 490980 Color Test Pattern.pdf	170 KB	Adobe Acrobat 7.0

\ColorPort Targets

- \ATCN_DTP70.xml
- \ATCN_iCColor.xml
- \ATCN_iSis.xml

\Imposition Files

- \Confirm_105.forms
- \Confirm_105.imp
- \Confirm_195.forms
- \Confirm_195.imp
- \Duplex_PreCal.forms
- \Duplex_PreCal.imp
- \Duplex_iSis2_195.forms
- \Duplex_iSis2_195.imp
- \iSis2_105.forms
- \iSis2_105.imp
- \iSis2_180.forms
- \iSis2_180.imp
- \Simplex_PreCal.forms
- \Simplex_PreCal.imp
- \Simplex_iSis2_195.forms
- \Simplex_iSis2_195.imp
- \TRC_18.forms
- \TRC_18.imp

\TOF Mark

- \TOFMark3.tif

\TRC Viewer

- \mfc71.dll
- \msvcr71.dll
- \TRCViewer.exe

Note

The contents of the following directory [**Resource Group Names**] continues onto the next page.

\Resource Group Names

- \TRC_PRINTER1.cntl
- \TRC_PRINTER1_absolute.crd
- \TRC_PRINTER1_perceptual.crd
- \TRC_PRINTER1_relative.crd
- \TRC_PRINTER1_saturation.crd
- \TRC_PRINTER1_sRGB.csa
- \TRC_PRINTER1_sRGB_absolute.br3c
- \TRC_PRINTER1_sRGB_absolute.by3c
- \TRC_PRINTER1_sRGB_absolute.pr3c
- \TRC_PRINTER1_sRGB_absolute.py3c
- \TRC_PRINTER1_sRGB_perceptual.br3c
- \TRC_PRINTER1_sRGB_perceptual.by3c
- \TRC_PRINTER1_sRGB_perceptual.pr3c
- \TRC_PRINTER1_sRGB_perceptual.py3c
- \TRC_PRINTER1_sRGB_relative.br3c
- \TRC_PRINTER1_sRGB_relative.by3c
- \TRC_PRINTER1_sRGB_relative.pr3c
- \TRC_PRINTER1_sRGB_relative.py3c
- \TRC_PRINTER1_sRGB_saturation.br3c
- \TRC_PRINTER1_sRGB_saturation.by3c
- \TRC_PRINTER1_sRGB_saturation.pr3c
- \TRC_PRINTER1_sRGB_saturation.py3c
- \TRC_PRINTER1_T01_absolute.py3c
- \TRC_PRINTER1_T01_absolute.c3ch
- \TRC_PRINTER1_T01_absolute.c4c
- \TRC_PRINTER1_T01_perceptual.c3ce
- \TRC_PRINTER1_T01_perceptual.c3ch
- \TRC_PRINTER1_T01_perceptual.c4c
- \TRC_PRINTER1_T01_relative.c3ce
- \TRC_PRINTER1_T01_relative.c3ch
- \TRC_PRINTER1_T01_relative.c4c
- \TRC_PRINTER1_T01_saturation.c3ce
- \TRC_PRINTER1_T01_saturation.c3ch
- \TRC_PRINTER1_T01_saturation.c4c
- \TRC_PRINTER1_T02_absolute.c3ce
- \TRC_PRINTER1_T02_absolute.c3ch
- \TRC_PRINTER1_T02_absolute.c4c
- \TRC_PRINTER1_T02_perceptual.c3ce
- \TRC_PRINTER1_T02_perceptual.c3ch
- \TRC_PRINTER1_T02_perceptual.c4c
- \TRC_PRINTER1_T02_relative.c3ce
- \TRC_PRINTER1_T02_relative.c3ch
- \TRC_PRINTER1_T02_relative.c4c
- \TRC_PRINTER1_T02_saturation.c3ce
- \TRC_PRINTER1_T02_saturation.c3ch
- \TRC_PRINTER1_T02_saturation.c4c

Note

The contents of the following directory [**Resource Group Names**] is continued from the previous page.

\Resource Group Names

- \TRC_PRINTER2.cntl
- \TRC_PRINTER2_absolute.crd
- \TRC_PRINTER2_perceptual.crd
- \TRC_PRINTER2_relative.crd
- \TRC_PRINTER2_saturation.crd
- \TRC_PRINTER2_sRGB.csa
- \TRC_PRINTER2_sRGB_absolute.br3c
- \TRC_PRINTER2_sRGB_absolute.by3c
- \TRC_PRINTER2_sRGB_absolute.pr3c
- \TRC_PRINTER2_sRGB_absolute.py3c
- \TRC_PRINTER2_sRGB_perceptual.br3c
- \TRC_PRINTER2_sRGB_perceptual.by3c
- \TRC_PRINTER2_sRGB_perceptual.pr3c
- \TRC_PRINTER2_sRGB_perceptual.py3c
- \TRC_PRINTER2_sRGB_relative.br3c
- \TRC_PRINTER2_sRGB_relative.by3c
- \TRC_PRINTER2_sRGB_relative.pr3c
- \TRC_PRINTER2_sRGB_relative.py3c
- \TRC_PRINTER2_sRGB_saturation.br3c
- \TRC_PRINTER2_sRGB_saturation.by3c
- \TRC_PRINTER2_sRGB_saturation.pr3c
- \TRC_PRINTER2_sRGB_saturation.py3c
- \TRC_PRINTER2_T01_absolute.py3c
- \TRC_PRINTER2_T01_absolute.c3ch
- \TRC_PRINTER2_T01_absolute.c4c
- \TRC_PRINTER2_T01_perceptual.c3ce
- \TRC_PRINTER2_T01_perceptual.c3ch
- \TRC_PRINTER2_T01_perceptual.c4c
- \TRC_PRINTER2_T01_relative.c3ce
- \TRC_PRINTER2_T01_relative.c3ch
- \TRC_PRINTER2_T01_relative.c4c
- \TRC_PRINTER2_T01_saturation.c3ce
- \TRC_PRINTER2_T01_saturation.c3ch
- \TRC_PRINTER2_T01_saturation.c4c
- \TRC_PRINTER2_T02_absolute.c3ce
- \TRC_PRINTER2_T02_absolute.c3ch
- \TRC_PRINTER2_T02_absolute.c4c
- \TRC_PRINTER2_T02_perceptual.c3ce
- \TRC_PRINTER2_T02_perceptual.c3ch
- \TRC_PRINTER2_T02_perceptual.c4c
- \TRC_PRINTER2_T02_relative.c3ce
- \TRC_PRINTER2_T02_relative.c3ch
- \TRC_PRINTER2_T02_relative.c4c
- \TRC_PRINTER2_T02_saturation.c3ce
- \TRC_PRINTER2_T02_saturation.c3ch
- \TRC_PRINTER2_T02_saturation.c4c

Copy Color Calibration Resources

This procedure describes how to copy the contents of the [**Color Calibration Resources**] directory on the Xerox 490/980 Color Continuous Feed Printing System Customer Documentation CD to the computer containing the PC-UI.

1. Insert the Xerox 490/980 Color Continuous Feed Printing System Customer Documentation CD into the CD-ROM drive of the computer that contains the PC-UI.

2. Select the indented link called [**Color Calibration Resources**]. This will open Windows Explorer and show you the root folder of the Xerox 490/980 Color Continuous Feed Printing System Customer Documentation CD.
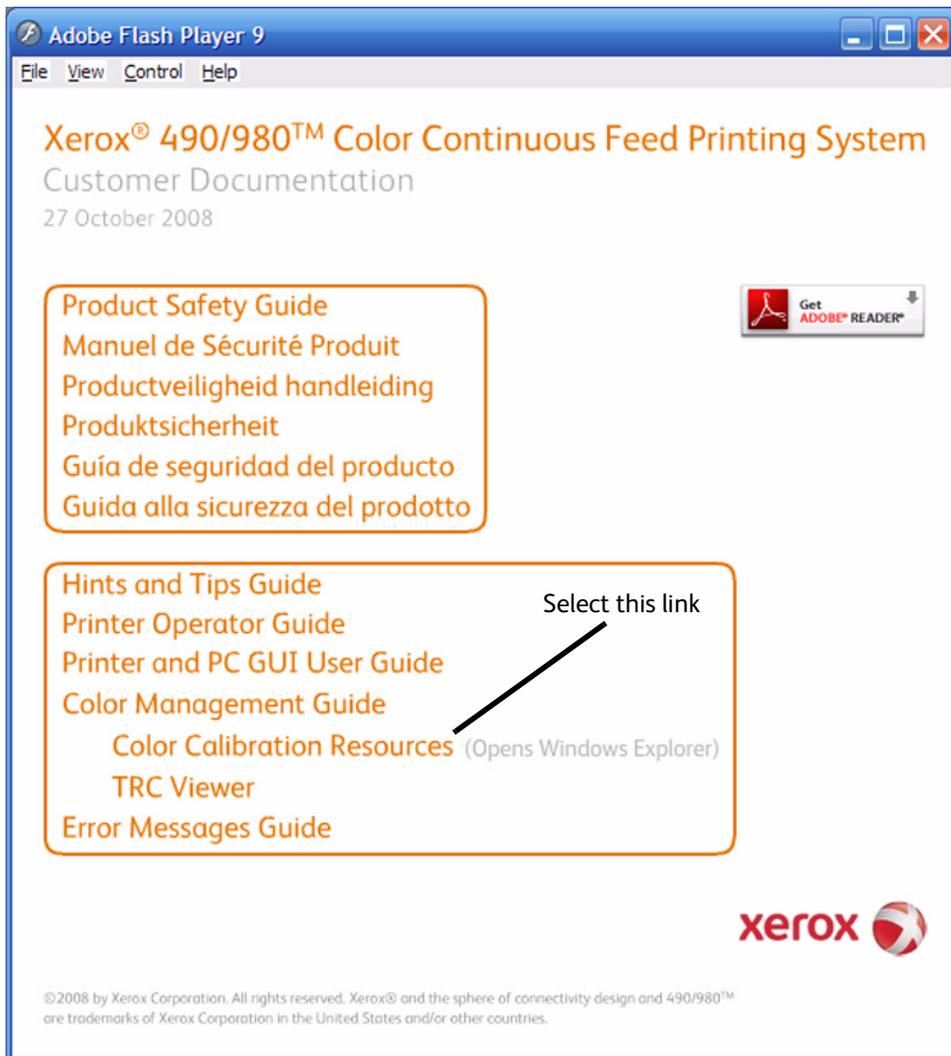
3. Right-click the folder [**Color Calibration Resources**]. A pop-up menu will appear.

4. Select [**Copy**].

5. Right-click on the clock shown on the Windows taskbar. A pop-up menu will appear.

6. Select [**Show the Desktop**].
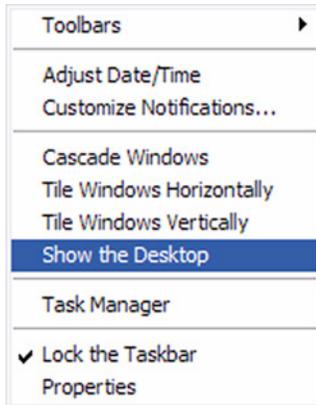
7. Place the mouse cursor over a vacant area of the Windows Desktop and right-click. A pop-up menu will appear.

8. Select [**Paste**]. The [**Color Calibration Resources**] directory will be copied to the Windows Desktop.

9. Close the Adobe Flash Player window.

10. Close the Windows Explorer Window.

11. Remove the Xerox 490/980 Color Continuous Feed Printing System Customer Documentation CD from the CD-ROM drive of the PC-UI computer.

Download ColorPort Utility Software

The purpose of this section is to download the latest documentation-supported version of the ColorPort Utility Software (version 1.5.4). This software is required for performing color calibration in Chapter 5 Color Calibration Process for v1.1.6 Software and in Chapter 6 Color Calibration Using ColorPort Utility Software.

> Note
>
> If you are viewing this document using a .pdf reader, the following URL is a hyperlink.

1. Go to the following URL:

[**http://www.xrite.com/product_overview.aspx?ID=719&Action=Support&SoftwareID=681**].

2. Select the [**PC Version**] hyperlink from the web page.
3. Choose to save the .zip file (56.4 MB) to the hard drive.
4. When the download is complete, extract the contents of the .zip file.
5. Select [**install.exe**] to begin the installation.
6. Follow the on-screen instructions to install the ColorPort Utility Software.
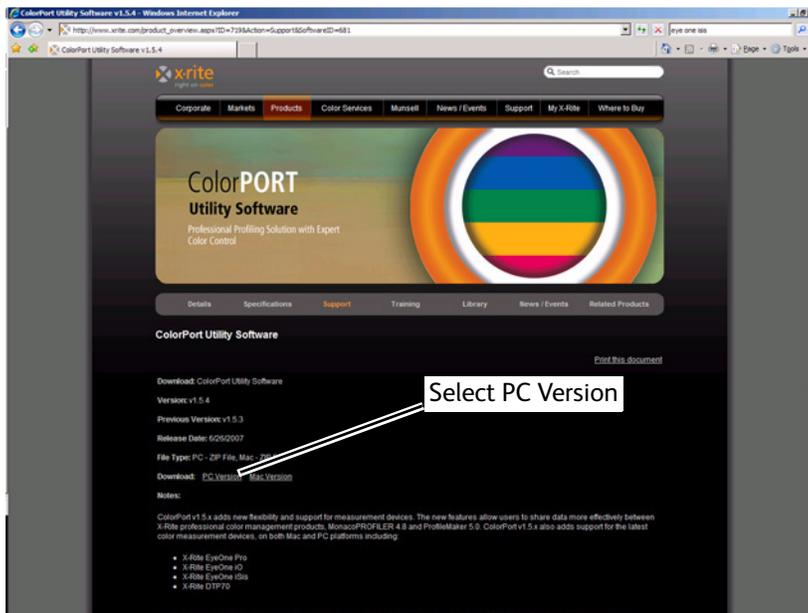
Check for Queue and Imposition Files

The purpose of this section is to determine if any of the imposition files or queues used in chapter 4 have already been created.

The following procedures explain how to check for pre-existing imposition files and queues.

Check for Existing Imposition Files

A new imposition file is required only if the paper stock is being changed. An imposition file may have already been created to accommodate the new paper stock width. The following procedure explains how to check for existing imposition files.

1. Ensure that the Xerox 490/980 Color Continuous Feed Printing System is powered on and is connected to the PC-UI.
2. Select [**Resource Management**] on the left-side navigation pane of the PC-UI.
3. Look for any imposition files that are named with the following convention:

   • **Simplex_PreCal_***[Paper Stock Width]*

   Note

   As an example, if you were changing to 18 in (457 mm) width paper stock, you would look for an imposition file called [**Simplex_PreCal_18in**].

4. If you find an imposition file that has the width of paper stock you are using, you can skip the Set Up Imposition Files section of Chapter 4.
5. If you do not find an imposition file that has the width of paper stock that you are using, you must perform the Set Up Imposition Files section of Chapter 4.

Check for Existing Queues

A new queue is required only if the paper stock width is being changed. A queue may have already been created to accommodate the new paper stock width. The following procedure explains how to check for existing queues.
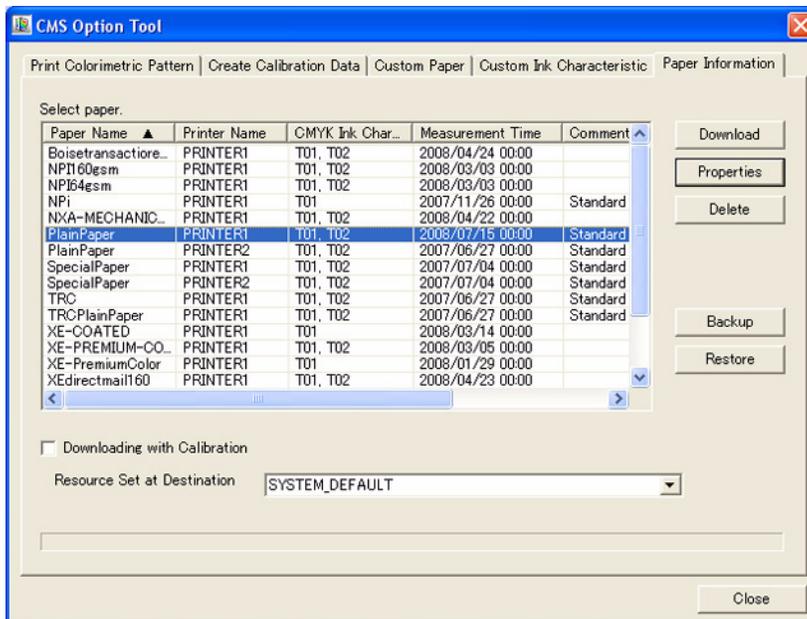
1. Ensure that the Xerox 490/980 Color Continuous Feed Printing System is powered on and is connected to the PC-UI.
2. Select [**Queue Management**] on the left-side navigation pane of the PC-UI.
3. Look for any imposition files that are named with the following convention:

   • **TRC_***[Paper Stock Width]*

   Note

   As an example, if you were changing to 19.5 in (495 mm) width paper stock, you would look for a queue called [**TRC_19-5in**].

4. If you find a queue that has the width of paper stock you are using, you can skip the Create a New Queue section of Chapter 4.
5. If you do not find a queue that has the width of paper stock that you are using, you must perform the Create a New Queue section of Chapter 4.

Pre-Calibration Engine Density Adjustment

4

This chapter discusses how to set the color densities of Yellow, Magenta, Cyan and Black (Y/M/C/K) to within optimal parameters for color calibration.

This procedure should be performed as desired, but especially:

- After changing the Developer of a color
- After using approximately one roll of paper since the Developer of a color was changed
- When the highest level of image quality is required

Create an Empty Color Resource

In order to perform the pre-calibration engine density adjustment, a Color Resource must be created with no calibration data associated with it. This is because we want to simulate native engine performance. Follow these steps to create an Empty Color Resource. There is a separate procedure for Simplex Systems and for Duplex Systems.

For Simplex Systems

1. Ensure that the Xerox 490/980 Color Continuous Feed Printing System is powered on and is connected to the PC-UI.

2. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**CMS Option Tool**].

3. Select the [**Paper Information**] tab.

    Note

   Ensure that [**Downloading with Calibration**] is **not** selected.

4. Under the Paper Name field, select [**Plain Paper**] for PRINTER1.

5. Select [**Properties**].

6.   For the Paper Name field, type [**TRC**].

7.   Select [**Save As**].

8.   After the pop-up window appears, select [**Yes**].
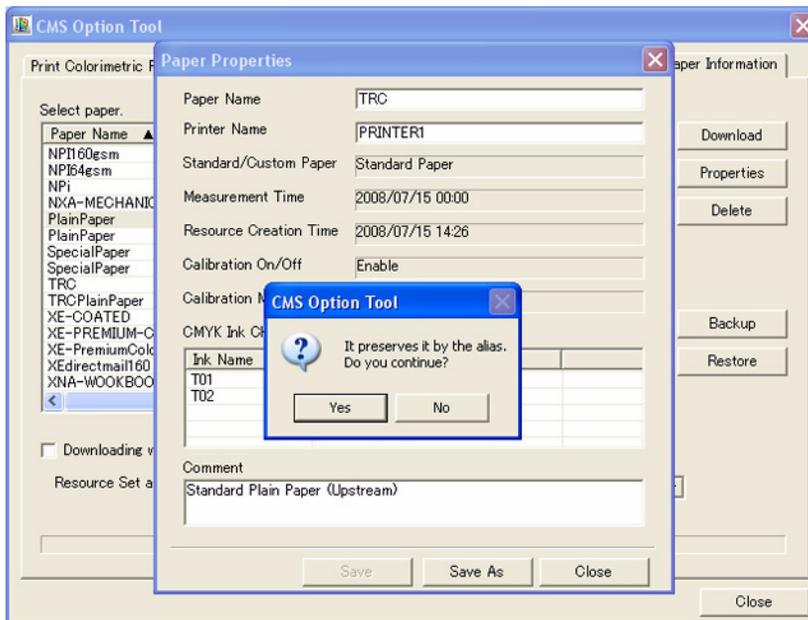
9.   Select the Paper Name [**TRC**] for PRINTER1.

10. Select [**Download**].

11. After the pop-up window appears, select [**Yes**].
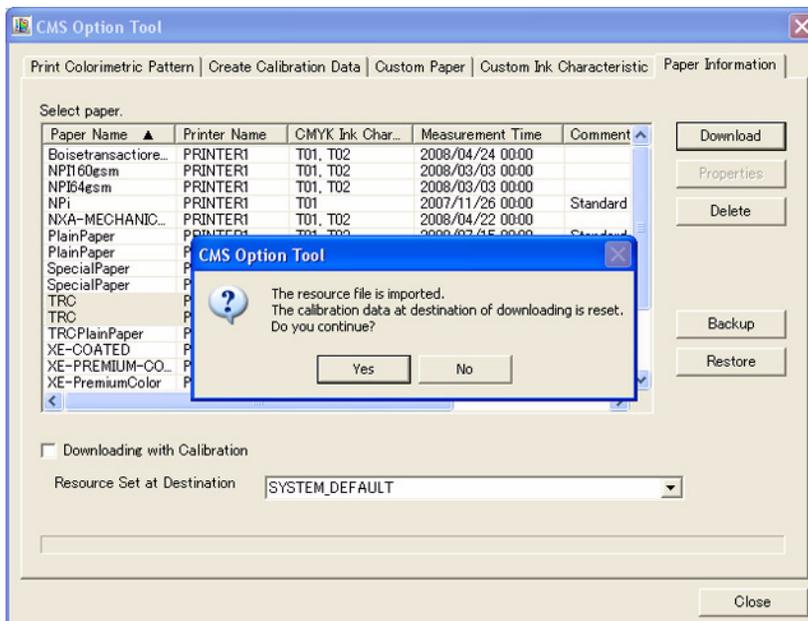
12. The message "Resource file Download process (Ended)." will appear at the lower part of the window above the status bar.

13. Exit the CMS Option Tool by selecting [**Close**] located at the bottom right of the window.

For Duplex Systems

1. Ensure that the Xerox 490/980 Color Continuous Feed Printing System is powered on and is connected to the PC-UI.

2. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**CMS Option Tool**].

3. Select the [**Paper Information**] tab.

   Note

   Ensure that [**Downloading with Calibration**] is **not** selected.

4. Under the Paper Name field, select [**Plain Paper**] for PRINTER1.

5. Select [**Properties**].

6. For the Paper Name field, type [**TRC**].

7. Select [**Save As**].

8. After the pop-up window appears, select [**Yes**].
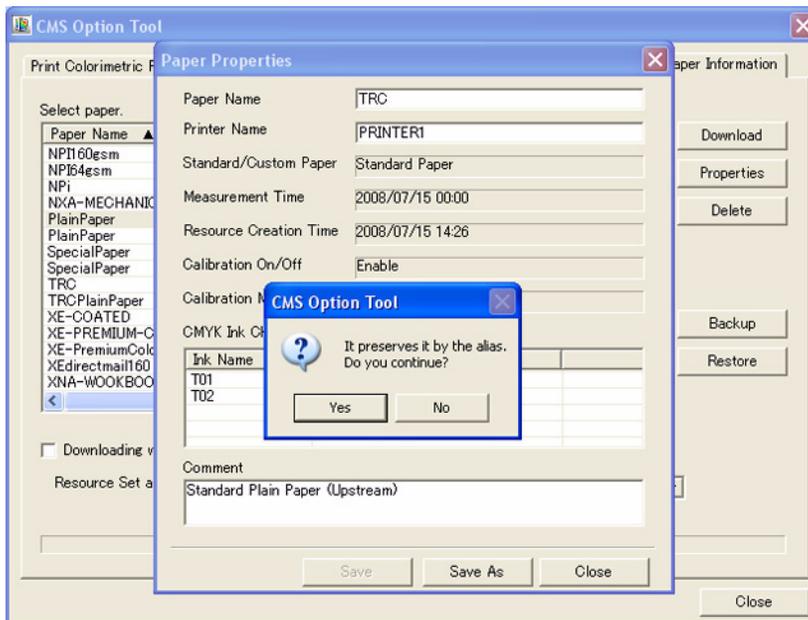
9. Under the Paper Name field, select [**Plain Paper**] for PRINTER2 and repeat steps 4-8 of this procedure.

10. Holding **<CRTL>** on the keyboard, select the Paper Name [**TRC**] for both PRINTER1 and PRINTER2.

11. Select [**Download**].

12. After the pop-up window appears, select [**Yes**].
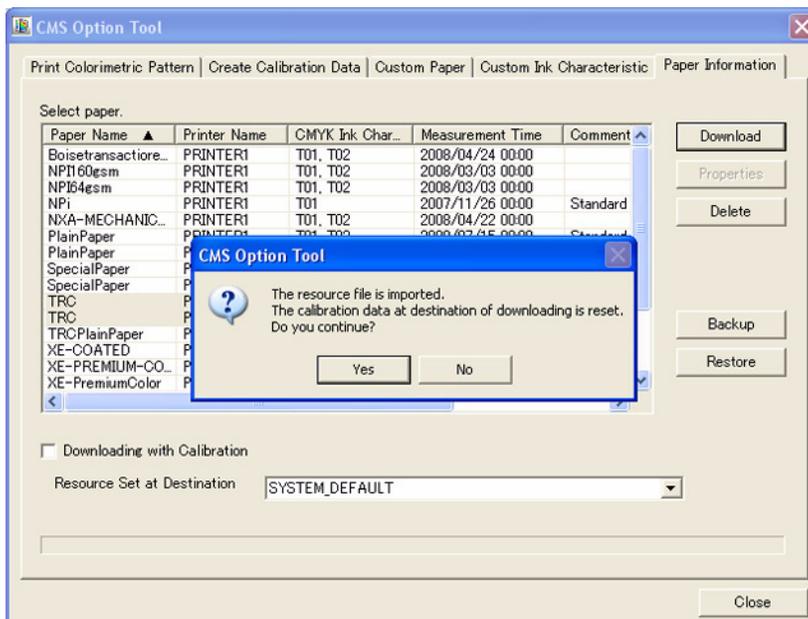
13. The message "Resource file Download process (Ended)." will appear at the lower part of the window above the status bar.

14. Exit the CMS Option Tool by selecting [**Close**] located at the bottom right of the window.

Set Up Imposition Files

This section explains how to import either a simplex or duplex imposition file from the [**Color Calibration Resources**] directory copied to the Windows Desktop in Chapter 3, and how to manipulate the imported simplex or duplex imposition file to accommodate whatever paper size you are using. There are different procedures for manipulating the imposition file depending on if it is for a simplex or duplex system.

Import Simplex/Duplex Imposition Files

The purpose of this procedure is to ensure proper placement of the density test pattern on the paper. This imposition file has already been created for you. The following procedure will describe how to import it onto the PC-UI.

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Resource Management**].

2. Select the [**System Resource**] tab.

3. In the Media/Directory drop-down menu, select [**Local PC**].

   Note

   In the following step, if the [**Color Calibration Resources**] does not appear, the directory structure must be refreshed. Refresh the directory structure by selecting [**System Directory**] and then [**Local PC**] in the Media/Directory drop-down menu.

4. Browse to [**Local Disk (C:)\Documents and Settings**[*Current Logged in Windows XP Profile*]**\Desktop\Color Calibration Resources\Imposition Files**].

5. Right-click on the appropriate file:

   a. For a simplex configuration: [**Simplex_PreCal.forms**].

   b. For a duplex configuration: [**Duplex_PreCal.forms**].

6. Select [**Import**].

7. Select the stock set (folder) [**SYSTEM_DEFAULT**] and select [**OK**].

8. If you are using a cutter/stacker as a post-processor, follow steps 9-11. If you are not using a cutter/stacker as a post-processor, go to step 12.

9. Browse to [**Local Disk (C:)\Documents and Settings**[*Current Logged in Windows XP Profile*]**\Desktop\Color Calibration Resources\TOF Mark**].

10. Right click on [**TOFMark3.tif**] and select [**Import**].

11. Select the stock set (folder) [SYSTEM_DEFAULT] and select [**OK**].

12. Do not navigate away from the [**System Resource**] tab. The following section describe how to manipulate the imposition file just imported using this tab.

Manipulate the Imported Simplex Imposition File

Now that you have imported the simplex imposition file into the PC-UI, you must ensure that the Logical Paper Settings of the imposition file match whatever paper stock width you are currently using.

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Resource Management**].

2. Select the [**System Resource**] tab.

3. In the Media/Directory drop-down menu, select [**System Directory**].

4. Double-click [**Simplex_PreCal.forms**] to open the imposition file.

    Note

    For the next step, the Paper Identifier Name should follow the convention of [**Simplex_PreCal_**] and the number in inches or millimeters of the paper stock width (i.e., [**Simplex_PreCal_19-5in**], [**Simplex_PreCal_495mm**]). Decimal points are not allowed in a Paper Identifier Name, so substitute in a dash [**-**] if the paper stock width is not a whole number.

5. Rename the imposition file. Add an [_] to the end of the Paper Identifier Name and type the paper stock width in inches or millimeters (i.e. [**Simplex_PreCal_** *[Paper Stock Width]*]).

6. Select [**Properties**] located on the bottom of the window.

7. Ensure that the numerical values entered for the Offset Specification and Logical Page Size are correct for your current paper stock width. To do this, reference Appendix A which explains how to find these values. When you are finished, return to this procedure.

8. Select [**OK**] to save the Logical Page Setting changes (if any were made).

9. Select [**OK**] again to save the imposition file.

Manipulate the Imported Duplex Imposition File

Now that you have imported the duplex imposition file into the PC-UI, you must ensure that the Logical Paper Settings of the imposition file match whatever paper stock width you are currently using.

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Resource Management**].

2. Select the [**System Resource**] tab.

3. In the Media/Directory drop-down menu, select [**System Directory**].

4. Double-click [**Duplex_PreCal.forms**] to open the imposition file.

    Note

    For the next step, the Paper Identifier Name should follow the convention of [**Duplex_PreCal_**] and the number in inches or millimeters of the paper stock width (i.e., [**Duplex_PreCal_19-5in**], [**Duplex_PreCal_495mm**]). Decimal points are not allowed in a Paper Identifier Name, so substitute in a dash [**-**] if the paper stock width is not a whole number.

5. Rename the imposition file. Add an [_] to the end of the Paper Identifier Name and type the paper stock width in inches or millimeters (i.e. [**Duplex_PreCal_** *[Paper Stock Width]*]).

6. Select [**Properties**] located on the bottom of the window.

7. Ensure that the numerical values entered for the Offset Specification and Logical Page Size are correct for your current paper stock width. To do this, reference Appendix A which explains how to find these values. When you are finished, return to this procedure.

8. Select [**OK**] to save the Logical Page Setting changes (if any were made).

9. Select the [**2**] tab at the upper left part of the preview pane.

10. Repeat steps 5-8.

11. Select [**OK**] again to save the imposition file.

Create a New Queue

The purpose of this section is to submit the density test pattern using the proper imposition, queue and color settings. We do this by creating a new queue. Please follow the appropriate procedure based on whether you have a simplex or duplex system.

Create a new Simplex Queue

Use this procedure to create a new queue for a simplex system.

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Queue Management**].
2. Select [**New**] located at the lower right of the window.

Note

For the next step, the Queue Name should follow the convention of [**TRC_**] and the number in inches or millimeters of the paper stock width (i.e., [**TRC_19-5in**], [**TRC_495mm**]). Decimal points are not allowed in a Queue Name, so substitute in a dash [**-**] if the paper stock width is not a whole number.

3. In the Queue Name field, type [**TRC_** *[Paper Stock Width]*].
4. Under the Data Format drop-down menu, select [**PDF**].
5. In the Delete Job After Printing box, select the [**Manual**] radio button.
6. For Input Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.
7. For Output Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.
8. For Extended Spool, select the [**Enable**] radio button.

9. Select the [**Paper Setting**] tab.
10. Ensure that [**SYSTEM_DEFAULT**] is the selected stock set name.
11. In the Paper Identifier drop-down menu, select the imposition file [**Simplex_PreCal_***[Paper Stock Width]*].

12. Select the [**Color**] tab.

13. In the Color Characteristics [Upstream] box, in the Printer Name drop-down menu, select [**PRINTER1**].

14. In the Color Characteristics [Upstream] box, select [**Setting**].

15. In the Resource Group Name drop-down menu, select [**TRC_PRINTER1.cntl**].

16. Select [**OK**].
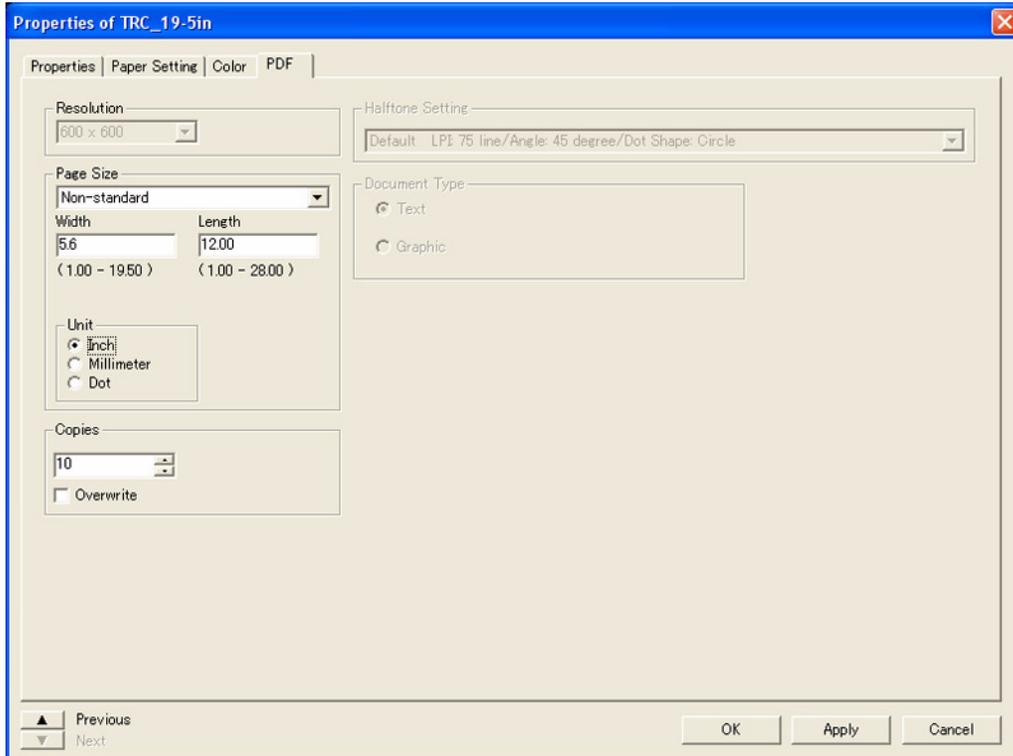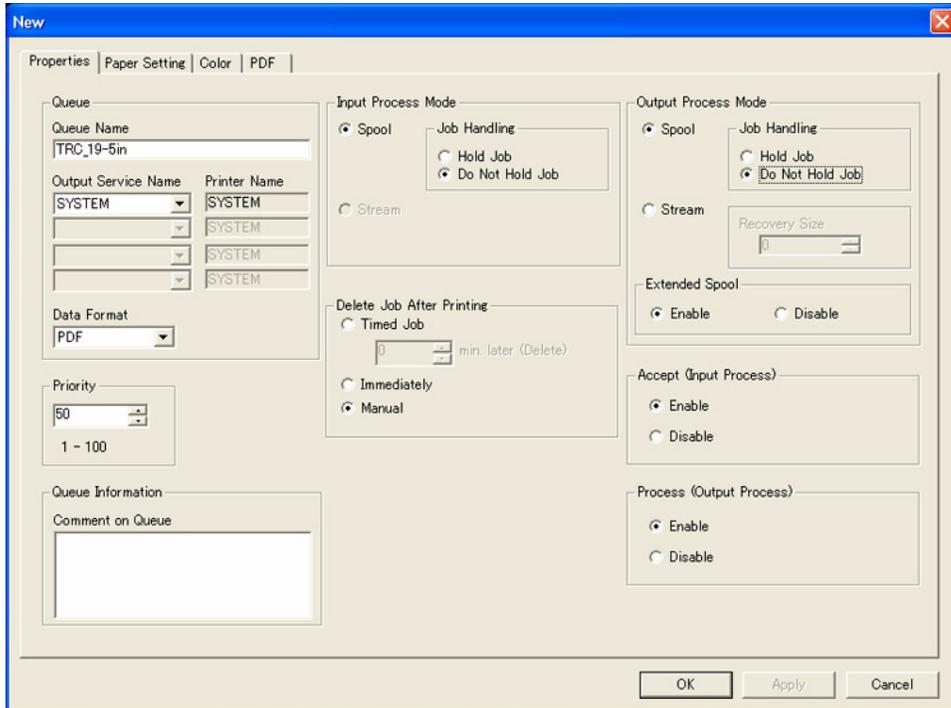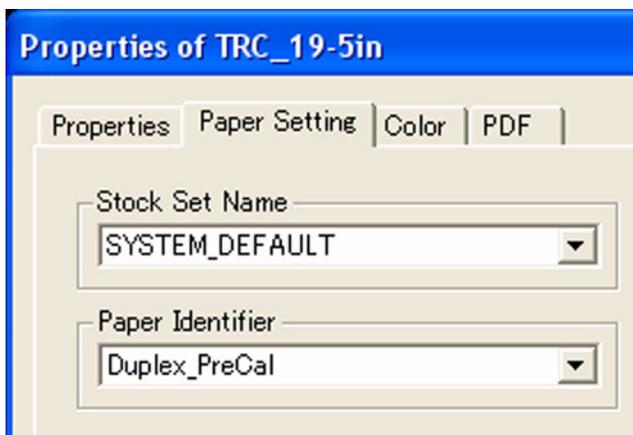
17. Select the [**PDF**] tab.
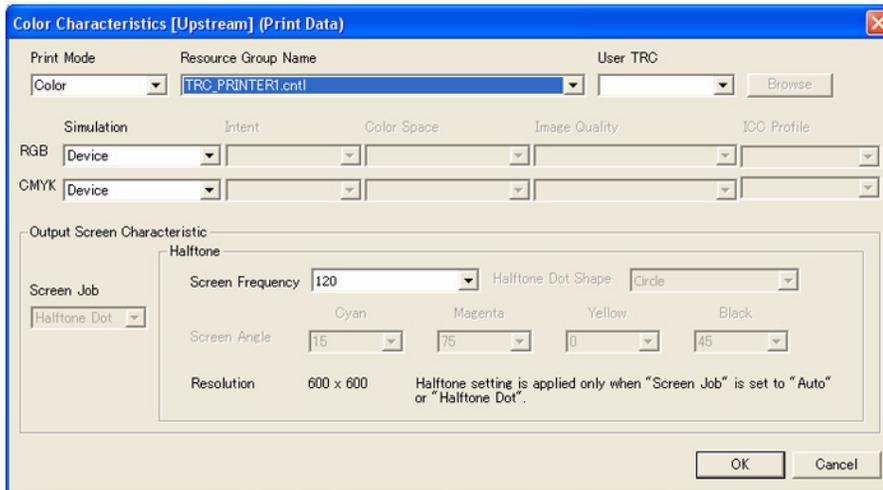
18. In the Page Size drop-down menu, select [**Non-standard**].

Note

In the following step, while using Inches is recommended, it is not required. Millimeters are also supported by this documentation.

19. For Unit, select [**Inch**].

20. In the Width field type [**5.6**] (142 mm). In the Length field type [**12.00**] (305 mm).

21. In the Copies field, type [**10**].

22. Select [**OK**].

Create a new Duplex Queue

On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [Queue Management].

1. Select [**Queue Management**] on the left-side navigation pane of the PC-UI.
2. Select [**New**] located at the lower right of the window.

Note

For the next step, the Queue Name should follow the convention of [**TRC_**] and the number in inches or millimeters of the paper stock width (i.e., [**TRC_19-5in**], [**TRC_495mm**]).

Decimal points are not allowed in a Queue Name, so substitute in a dash [**-**] if the paper stock width is in a half-inch increment.

3. In the Queue Name field, type [**TRC_** *[Paper Stock Width]*].
4. Under the Data Format drop-down menu, select [**PDF**].
5. In the Delete Job After Printing box, select the [**Manual**] radio button.
6. For Input Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.
7. For Output Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.
8. For Extended Spool, select the [**Enable**] radio button.

9. Select the [**Paper Setting**] tab.
10. Ensure that [**SYSTEM_DEFAULT**] is the selected stock set name.
11. In the Paper Identifier drop-down menu, select the imposition file [**Duplex_PreCal_**_[Paper Stock Width]_].

12. Select the [**Color**] tab.

13. In the Color Characteristics [Upstream] box, in the Printer Name drop-down menu, select [**PRINTER1**].

14. In the Color Characteristics [Upstream] box, select [**Setting**].

15. In the Resource Group Name drop-down menu, select [**TRC_PRINTER1.cntl**].

16. Select [**OK**].

17. In the Color Characteristics [Downstream] box, in the Printer Name drop-down menu, select [**PRINTER2**].

18. In the Color Characteristics [Downstream] box, select [**Setting**].

19. In the Resource Group Name drop-down menu, select [**TRC_PRINTER2.cntl**].

20. Select [**OK**].
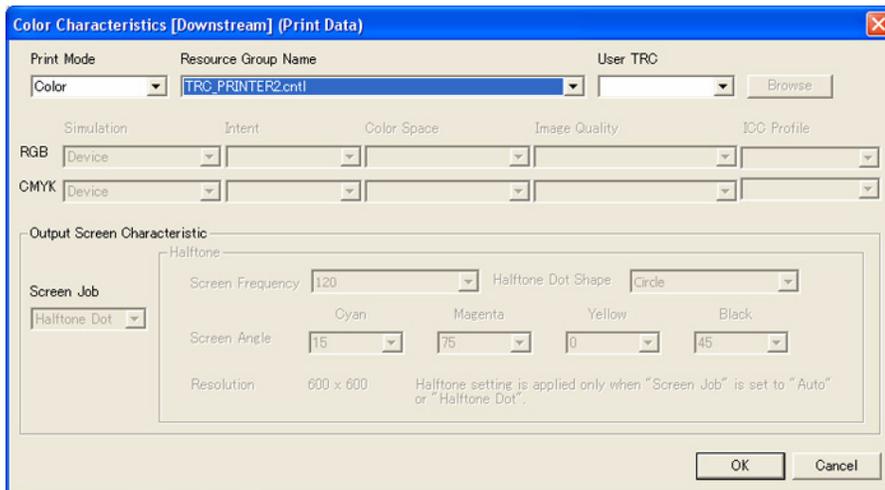
21. Select the [**PDF**] tab.

22. In the Page Size drop-down menu, select [**Non-standard**].

Note

In the following step, while using Inches is recommended, it is not required. Millimeters are also supported by this documentation.

23. For Unit, select [**Inch**].

24. In the Width field type [**5.6**] (142 mm). In the Length field type [**12.00**] (305 mm).

25. In the Copies field, type [**10**].

26. Select [**OK**].
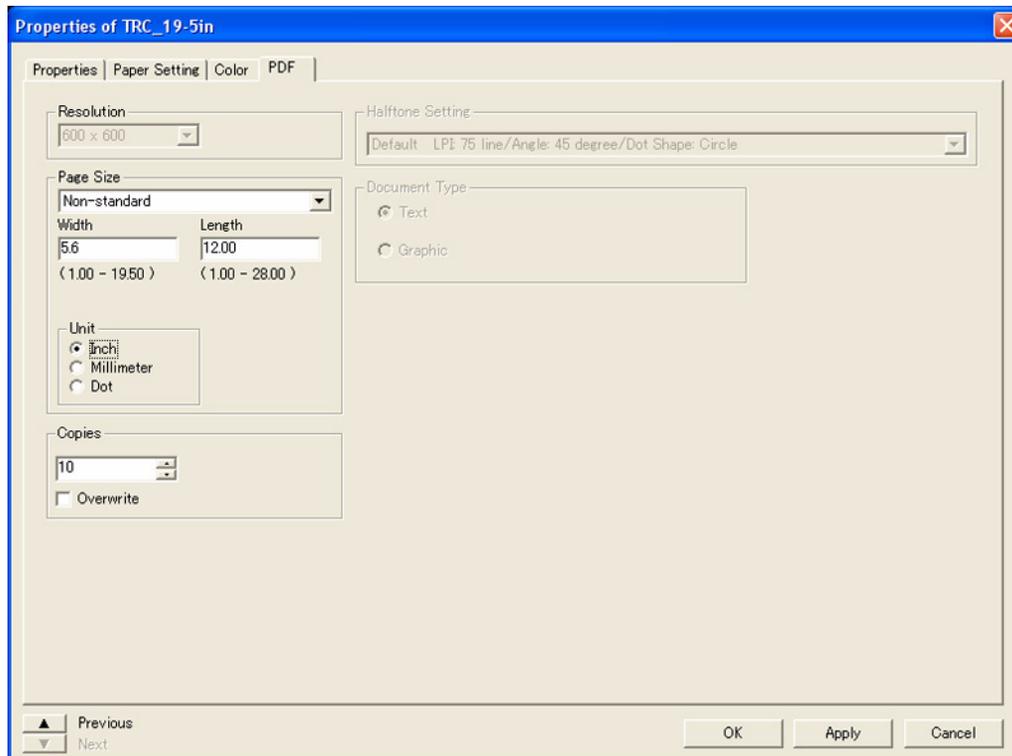
Color Density Adjustment

The purpose of the following procedure is to achieve the proper color density levels for optimum color calibration.

Note

The following procedure must be performed:

- For a Simplex System: One time.
- For a Duplex System: One time for each printer.

1. Open the [**Color Calibration Resources**] folder that was copied to the Windows Desktop.
2. Select either the duplex or simplex test patterns. The test patterns are named as follows:
    a. For Simplex: [**Simplex Xerox 490980 Color Test Pattern.pdf**].
    b. For Duplex: [**Duplex Xerox 490980 Color Test Pattern.pdf**].
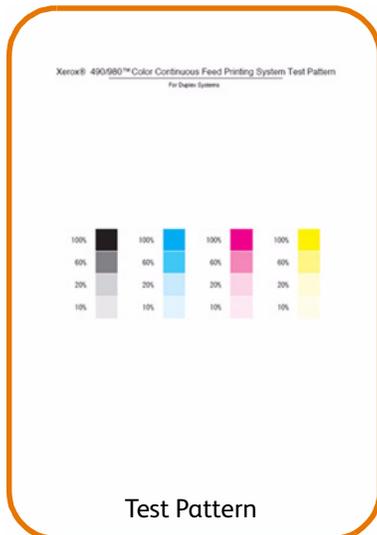
Test Pattern

Note

As a reminder, the queue name used to submit the job in the next step is [**TRC_** *[Paper Stock Width]]*.

3. Reference Appendix B and submit the appropriate test pattern to the printer using Line Printer Remote (LPR). Return to this procedure when you are finished.

4. The command prompt window should look similar to the following when you are finished typing:
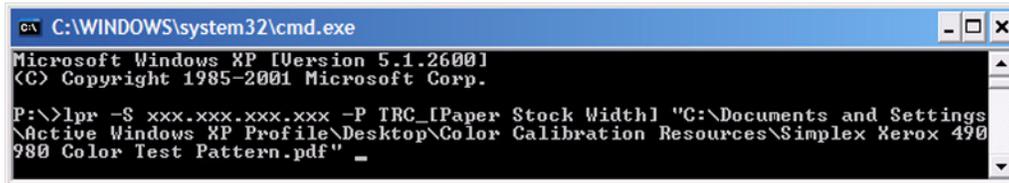
```
C:\WINDOWS\system32\cmd.exe                                          _ □ ✕

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

P:\>lpr -S xxx.xxx.xxx.xxx -P TRC_[Paper Stock Width] "C:\Documents and Settings
\Active Windows XP Profile\Desktop\Color Calibration Resources\Simplex Xerox 490
980 Color Test Pattern.pdf" _
```

5. After you have confirmed that you have the appropriate text in the command prompt window, press **<Enter>** to submit the job to the printer.

6. Close the command prompt and Windows Explorer windows.

7. Save the last three print-outs of the test pattern.

Note

In the following step, the white paper is used as a backdrop under the test pattern print to prevent the viewing surface from interfering with the color squares.

8. Place a piece of white paper on a table, then place the test pattern on top of the white piece of paper.

9. Place the SIR on top of the test pattern. Ensure that the square cut outs are in line with the 100 % color squares of the test pattern.

10. Using the provided Xerox 490/980 Color Continuous Feed Printing System SIR, evaluate by eye if the 100 % square of colors on the test pattern are lighter or darker in density than the Light shade or the Dark shade of the SIR. Repeat this procedure for each of the four colors (Y/M/C/K). Write down the results of each observation for recording purposes.

100 % SIR

11. Repeat steps 9 and 10 for each of the three test pattern print-outs.

12. Average the results from step 10 together.

Note

In order to change color density values, the system must be paused (in NOT READY mode) and the user must be logged in as a System Administrator. Once both of these requirements have been met, the color density values can be changed from the PC-UI by selecting [**Printer Management**] on the left-side navigation pane.

13. If the 100 % color square on the test pattern (on average) is darker in density than the Dark color square on the SIR, lighten (decrease) the print density of that color by 1 using the PC-UI.

14. If the 100 % color square on the test pattern (on average) is lighter in density than the Light color square on the SIR, darken (increase) the print density of that color by 1 using the PC-UI.

15. Select [**Setting**] after making the appropriate color density changes.

16. If another print-out of the test pattern is required, it may be released from the hold queue of the IOT-UI without resubmitting the job from the client station.

Note

In the following step, if any color density settings are at their maximum or minimum values, and the color settings are still not within the specified parameters of the SIR, notify your local Xerox service representive.

17. Repeat steps 8-16 as many times as is required until all four colors are within the specified parameters of the SIR.

18. When you are finished with this procedure, delete the job from the hold queue of the IOT-UI.

Color Calibration Process for v1.1.6 Software
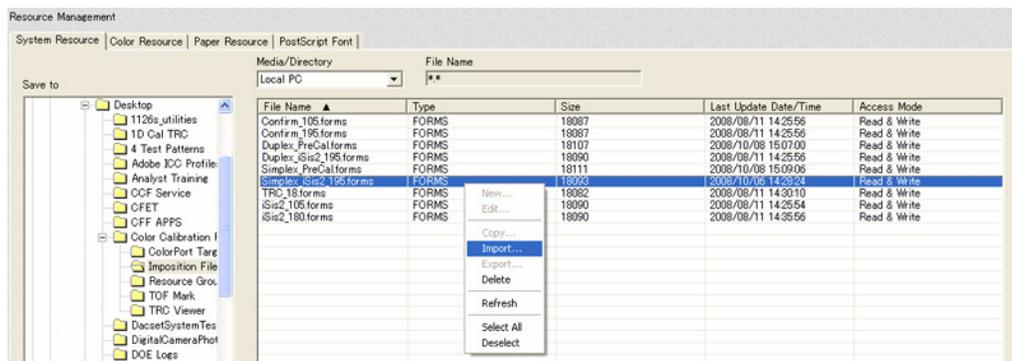
<div style="text-align: right">5</div>

This chapter discusses how to properly calibrate the color output of the printer.

Create a TRC File

The purpose of this procedure is to set up a queue for printing the color calibration grids. There is a separate procedure for simplex and duplex systems.

For Simplex Systems

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Resource Management**].
2. In the Media/Directory drop-down menu, select [**System Directory**].
3. In the [Save to] list of directories on the left side of the screen, right click the mouse. A pop up menu will appear.
4. Select [**New**].
5. Type [**ColorCal**] and select [**OK**].
6. In the Media/Directory drop-down menu, select [**Local PC**].
7. Browse for the folder [**C:\Documents and Settings***[Current Active Windows XP Profile]***\Desktop\Color Calibration Resources\Imposition Files**].
8. Select the imposition file [**Simplex_iSis2_195.forms**].
9. Right-click and select [**Import**].

10. Ensure that the [**ColorCal**] folder is selected and select [**OK**] to import the imposition file.

11. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Queue Management**].

12. Select [**New**] at the bottom right of the window.

13. In the Queue Name field, type [**Calibration**].

14. In the Data Format drop-down menu, select [**PDF**].

15. In the Delete Job After Printing box, select the [**Manual**] radio button.

16. For Input Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.

17. For Output Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.

18. In the Extended Spool box, select the [**Enable**] radio button.

19. Select the [**Paper Setting**] tab.

20. For Stock Set Name, select [**ColorCal**].

21. A popup window will appear asking for you to specify the paper identifier. Select [**OK**].

22. In the Paper Identifier drop-down menu, select [**Simplex_iSis2_195**].

23. Select the [**Color**] tab.

24. In the Color Characteristics (Upstream) box, in the Printer Name drop-down menu select [**PRINTER1**], then select [**Setting**].

25. In the Resource Group Name drop-down menu, select [**TRC_PRINTER1.cntl**].

26. For both RGB and CMYK under the Simulation drop-down menus, ensure [**Device**] is selected.
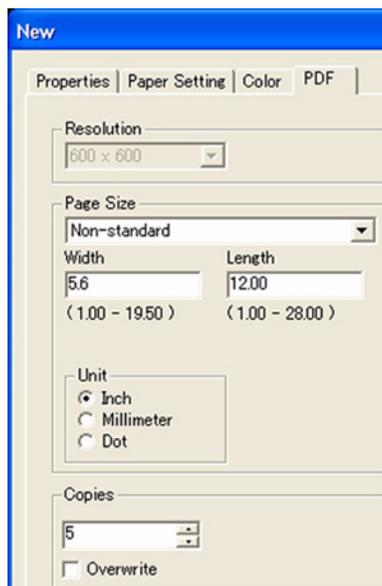
27. Select [**OK**].
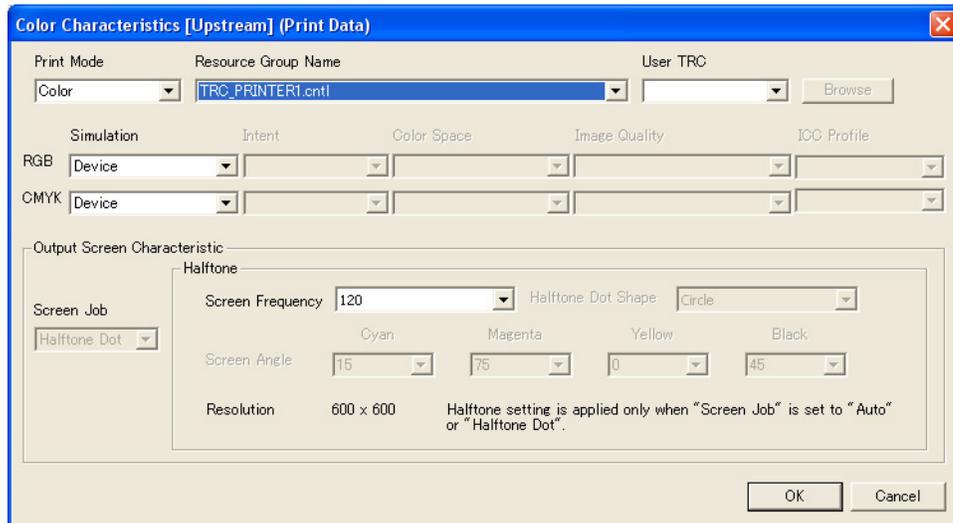
28. Select the [**PDF**] tab.

29. In the Page Size drop-down menu, select [**Non-standard**].

   Note

   In the following step, while using Inches is recommended, it is not required. Millimeters are also supported by this documentation.

30. For Unit, select [**Inch**].

31. In the Width field type [**5.6**] (142 mm). In the Length field type [**12.00**] (305 mm).

32. In the Copies field, type [**5**] and select [**OK**].

Note

As a reminder, the queue name used to submit the job in the next step is [**Calibration**].

33. Reference Appendix B and submit the ColorPort test pattern [**ColorPort_iSis**] located in the folder [**C:\Documents and Settings***[Current Active Windows XP Profile]***\Desktop\Color Calibration Resources**] to the printer using Line Printer Remote (LPR). Return to this procedure when you are finished.

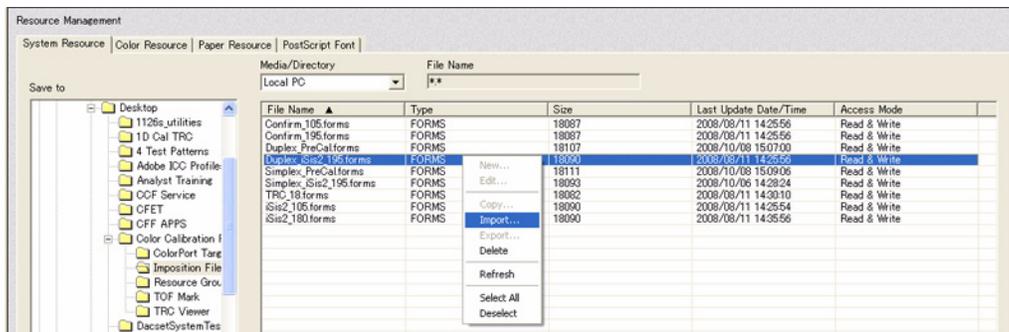34. The command prompt window should look similar to the following when you are finished typing:
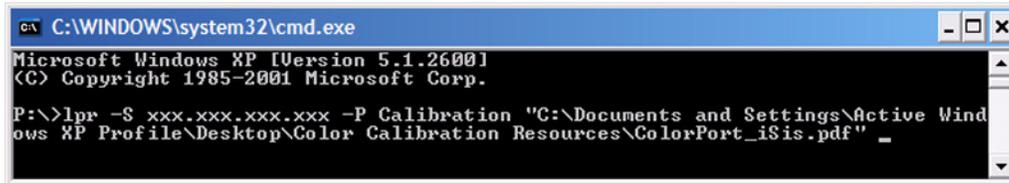
35. After you have confirmed that you have the appropriate text in the command prompt window, press **<Enter>** to submit the job to the printer.

36. Close the command prompt and Windows Explorer windows.

37. Depending on whether you have a simplex system or a duplex system, do one of the following:

   a.   Select the third set of targets from the printer.
   b.   Select the third set of targets from the prints done by each printer.

38. Identify and mark the test patterns based on their positions as inboard, middle or outboard.

39. Cut around the dotted line edge of the test patterns.

For Duplex Systems

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Resource Management**].

2. In the Media/Directory drop-down menu, select [**System Directory**].

3. In the [Save to] list of directories on the left side of the screen, right click the mouse. A pop up menu will appear.

4. Select [**New**].

5. Type [**ColorCal**] and select [**OK**].

6. In the Media/Directory drop-down menu, select [**Local PC**].

7. Browse for the folder [**C:\Documents and Settings**[*Current Active Windows XP Profile*]**\Desktop\Color Calibration Resources\Imposition Files**].

8. Select the imposition file [**Duplex_iSis2_195.forms**].

9. Right-click and select [**Import**].

10. Ensure that the [**ColorCal**] folder is selected and select [**OK**] to import the imposition file.

11. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Queue Management**].

12. Select [**New**] at the bottom right of the window.

13. In the Queue Name field, type [**Calibration**].

14. In the Data Format drop-down menu, select [**PDF**].

15. In the Delete Job After Printing box, select the [**Manual**] radio button.

16. For Input Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.

17. For Output Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.

18. In the Extended Spool box, select the [**Enable**] radio button.

19. Select the [**Paper Setting**] tab.

20. For Stock Set Name, select [**ColorCal**].

21. A popup window will appear asking for you to specify the paper identifier. Select [**OK**].

22. In the Paper Identifier drop-down menu, select [**Duplex_iSis2_195**].

23. Select the [**Color**] tab.

24. In the Color Characteristics (Upstream) box, in the Printer Name drop-down menu select [**PRINTER1**], then select [**Setting**].

25. In the Resource Group Name drop-down menu, select [**TRC_PRINTER1.cntl**].

26. For both RGB and CMYK under the Simulation drop-down menus, ensure [**Device**] is selected.

27. Select [**OK**].
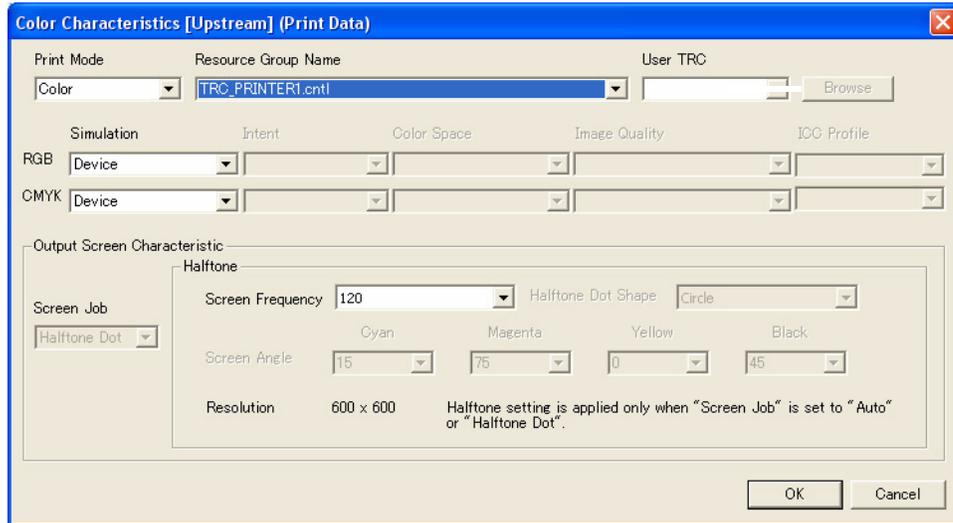
28. In the Color Characteristics (Upstream) box, in the Printer Name drop-down menu select [**PRINTER2**], then select [**Setting**].

29. In the Resource Group Name drop-down menu, select [**TRC_PRINTER2.cntl**].

30. For both RGB and CMYK under the Simulation drop-down menus, ensure [**Device**] is selected.

31. Select [**OK**]

32. Select the [**PDF**] tab.

33. In the Page Size drop-down menu, select [**Non-standard**].

    Note

    In the following step, while using Inches is recommended, it is not required. Millimeters are
    also supported by this documentation.

34. For Unit, select [**Inch**].

35. In the Width field type [**5.6**] (142 mm). In the Length field type [**12.00**] (305 mm).

36. In the Copies field, type [**5**] and select [**OK**].

Note

As a reminder, the queue name used to submit the job in the next step is [**Calibration**].

37. Reference Appendix B and submit the ColorPort test pattern [**ColorPort_iSis**] located in the folder [**C:\Documents and Settings**[*Current Active Windows XP Profile*]**\Desktop\Color Calibration Resources**] to the printer using Line Printer Remote (LPR). Return to this procedure when you are finished.

38. The command prompt window should look similar to the following when you are finished typing:
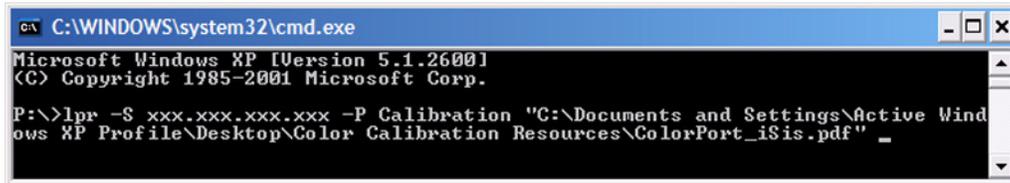
```
C:\WINDOWS\system32\cmd.exe                                    _ □ ×
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

P:\>lpr -S xxx.xxx.xxx.xxx -P Calibration "C:\Documents and Settings\Active Wind
ows XP Profile\Desktop\Color Calibration Resources\ColorPort_iSis.pdf" _
```

39. After you have confirmed that you have the appropriate text in the command prompt window, press **<Enter>** to submit the job to the printer.

40. Close the command prompt and Windows Explorer windows.

41. Depending on whether you have a simplex system or a duplex system, do one of the following:

   a. Select the third set of targets from the printer.
   b. Select the third set of targets from the prints done by each printer.

42. Identify and mark the test patterns based on their positions as inboard, middle or outboard.

43. Cut around the dotted line edge of the test patterns.

Regional Settings

This is to ensure that the ColorPort Utility Software can function properly when measuring targets in the next section.

1. Select [**Start**] and [**Control Panel**].

2. Select [**Regional and Language Options**].

3. Select [**Customize**].
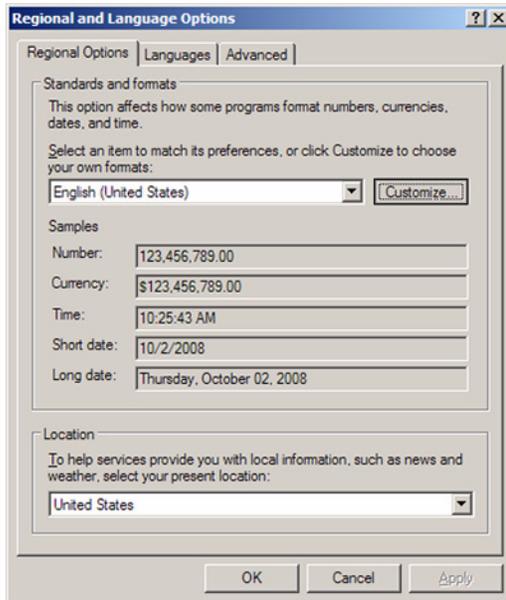
4. For the decimal symbol field, ensure that the decimal point [**.**] is selected, and not the comma [**,**].
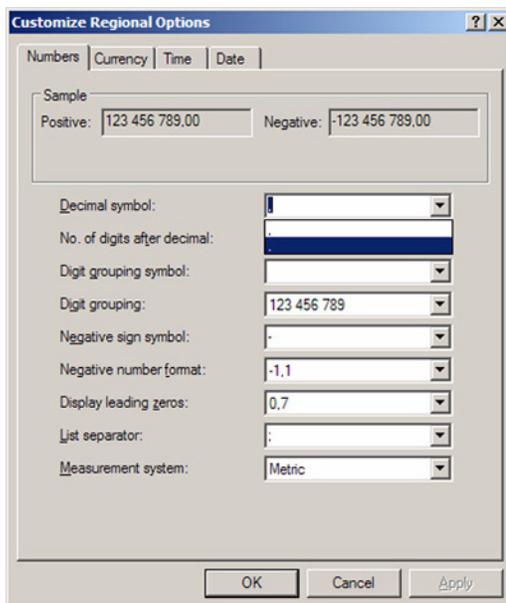
5. Select [**OK**], select [**OK**] again, and close the Control Panel window.

Use ColorPort to Measure Targets

This is to measure the printed test grids using the ColorPort Utility Software.

1. Open the ColorPort Utility Software (v1.5.4).
2. Select the [**Measure Target tab**].
3. Under the Target drop-down menu, select [**ATCN_iSis**].
4. Under the Measurement Device drop-down menu, select [**X-Rite Eye-One iSis**].
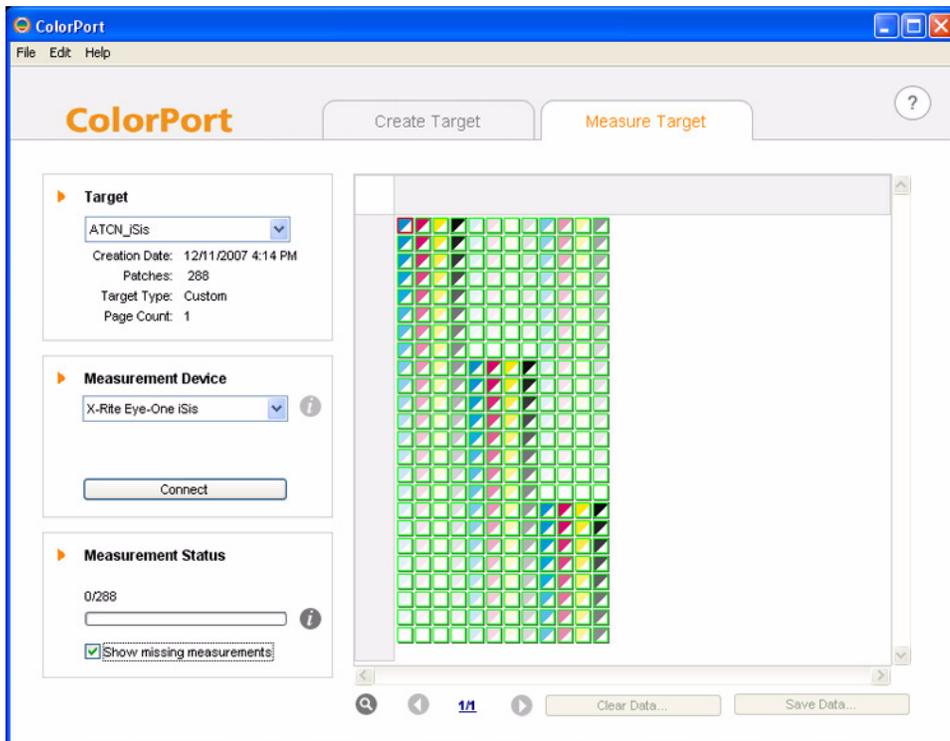
5. Select [**Connect**] and wait for the Eye-One iSis to be ready.

Note

Each test pattern takes about two minutes for the Eye-One iSis to process.

6. Insert a test pattern into the Eye-One iSis with the solid black bar facing upwards.

7. After the color data has been successfully processed, remove the test pattern from the Eye-One iSis and press [**OK**] at the pop-up window.

8. Select [**Save Data**].

9. Under the Format drop-down menu, select [**CGATS**].

10. Select [**Save**].

Note

If a duplex system exists, the first file scanned from each engine should be denoted with an _1.txt at the end of the filename. The second file with a _2.txt, etc.

11. For the filename, type in an appropriate name (i.e. Upstream_1.txt).

12. Select [**Save**] and choose the [**My Documents**] folder.

13. Select [**Clear Data**] and select [**OK**] at the pop-up window.

14. Do one of the following based on whether a simplex or duplex configuration exists:

    a. For a simplex configuration: Repeat steps 6-13 for the remaining two test patterns and proceed to step 15.

    b. Repeat steps 6-13 for the remaining two test patterns of the upstream printer, and three test patterns of the downstream printer, then proceed to step 15.

15. At the pop-up window, select [**Close**].

16. Exit the ColorPort Utility Software.

Create TRC File with TRC Viewer

Depending on whether you have a simplex system or a duplex system, use the appropriate procedure.

For Simplex Systems

1. Ensure that the 490/980 Color Continuous Feed Printing System Customer Documentation CD is inserted into the CD-ROM Drive of the PC-UI computer.

2. Open the TRC Viewer software from the main menu of the Xerox 490/980 Color Continuous Feed Printing System Customer Documentation CD.

3. When prompted by the Security Warnings, select [**Run**] twice to open the TRC Viewer Software.

4. Select the third option down on the right hand side of the window called [**??..**].

Browse for input file
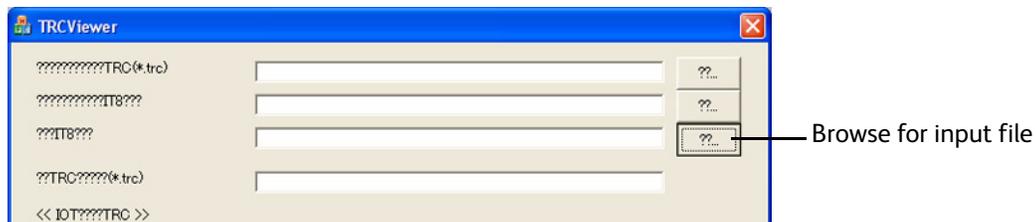
5. Browse for the Upstream_1.txt (or similar named) file created by ColorPort located in [**My Documents**].

6. Select [**Open**].
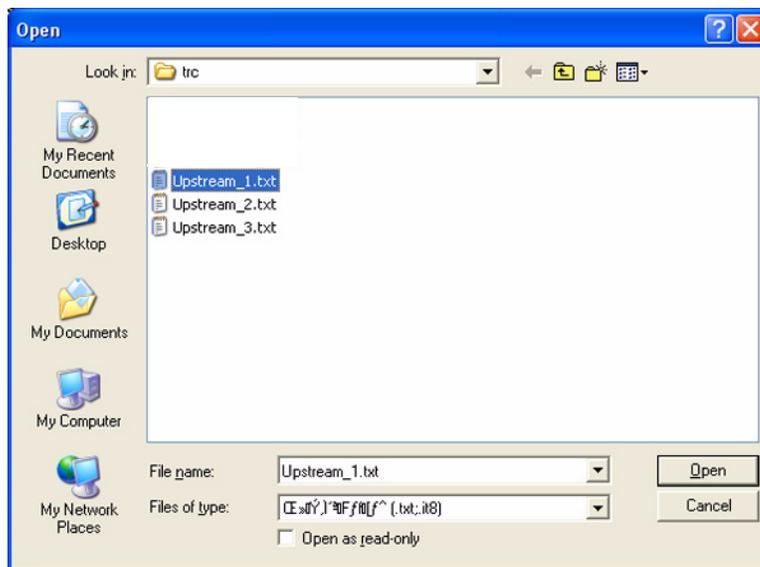
7. Click into the fourth field down from the top of the window. Delete the _1 from the end of the filename (ends with .trc).

    Note

    The TRC Viewer will automatically process the Upstream_1.txt, Upstream_2.txt and Upstream_3.txt files and average the results.

8. Select [**TRC??**].

Browse for input file
Edit name of TRC
Exit
Create TRC   Refresh

9. Select [**OK**] after the pop-up window appears.

10. Select the bottom right [**???**] to close the TRC Viewer Software.

For Duplex Systems

1. Ensure that the 490/980 Color Continuous Feed Printing System Customer Documentation CD is inserted into the CD-ROM Drive of the PC-UI computer.

2. Open the TRC Viewer software from the main menu of the Xerox 490/980 Color Continuous Feed Printing System Customer Documentation CD.

3. Select the third option down on the right hand side of the window called [**??..**].

Browse for input file

4. Browse for the Upstream_1.txt (or similar named) file created by ColorPort located in [**My Documents**].
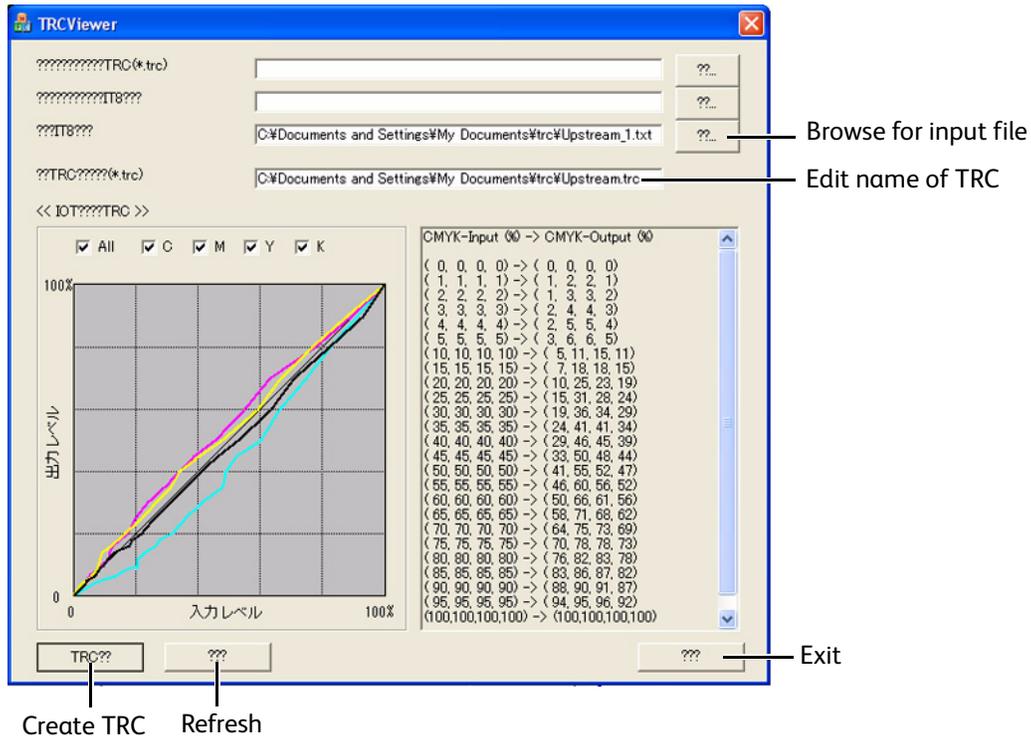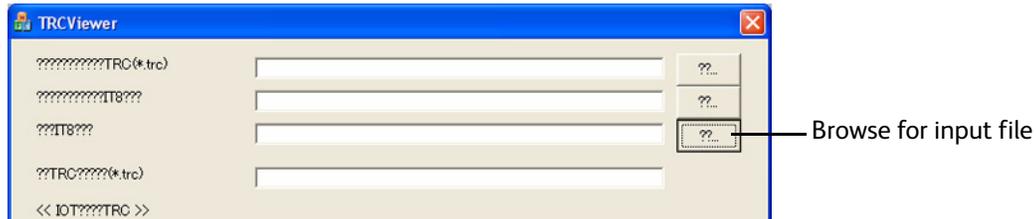
5. Select [**Open**].
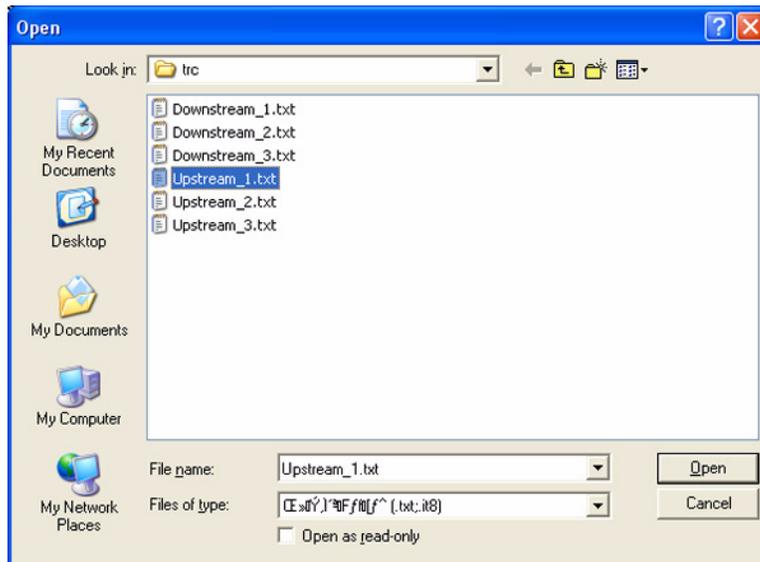
6. Click into the fourth field down from the top of the window. Delete the _1 from the end of the filename (ends with .trc).

    Note

    The TRC Viewer will automatically process the Upstream_1.txt, Upstream_2.txt, Upstream_3.txt files and average the results. The same process applies to the Downstream_1.txt, Downstream_2.txt and Downstream_3.txt files.

7. Select [**TRC??**].

Browse for input file

Edit name of TRC

Exit

Create TRC   Refresh
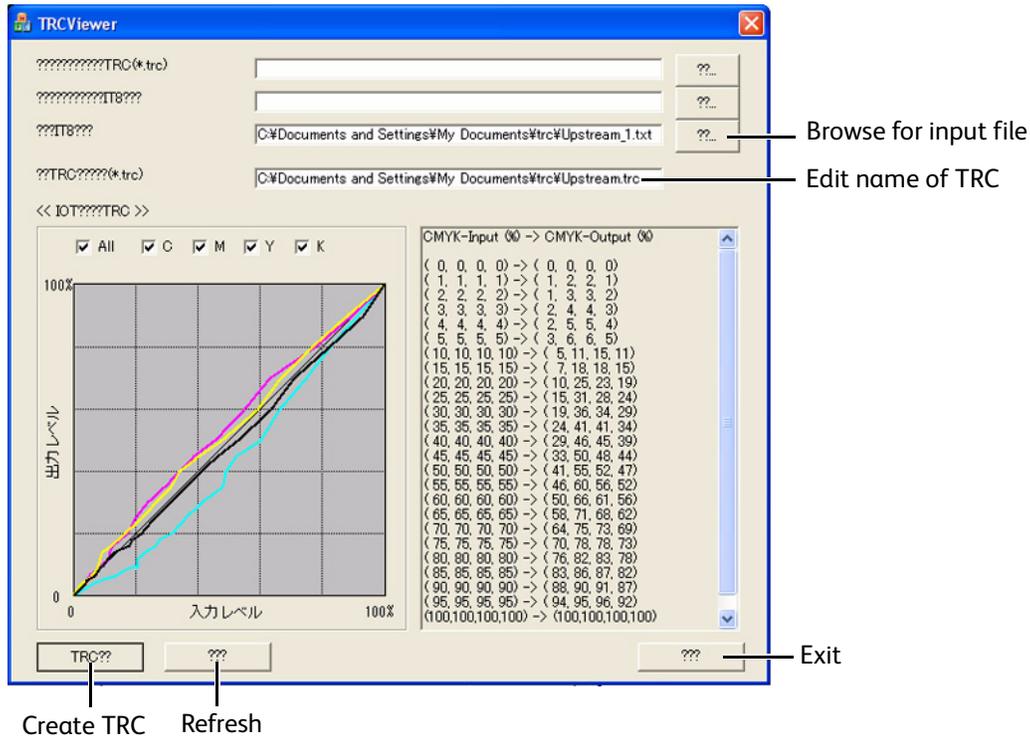
8. Select [**OK**] after the pop-up window appears.

9. Repeat steps 3-8 for the downstream engine using file Downstream_1.txt.

10. Select the bottom right [**???**] to close the TRC Viewer Software.

Import TRC File into PC-UI

For Simplex Systems

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Resource Management**].
2. Select the [**Color Resource**] tab.
3. Select [**Local PC**] under the Media/Directory drop-down menu and browse for the [**Local Disk (C:)\Documents and Settings**[*Current Windows XP Profile*]**\My Documents**] folder where the TRC file is stored.
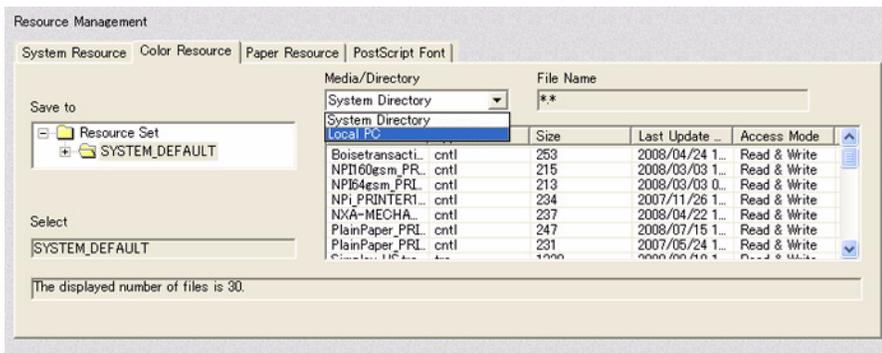
4. Locate and select the [**Upstream.trc**] file created with the TRC viewer.
5. Right-click and select [**Import**].

6.   Select the appropriate directory (i.e. SYSTEM_DEFAULT) and select [**OK**].

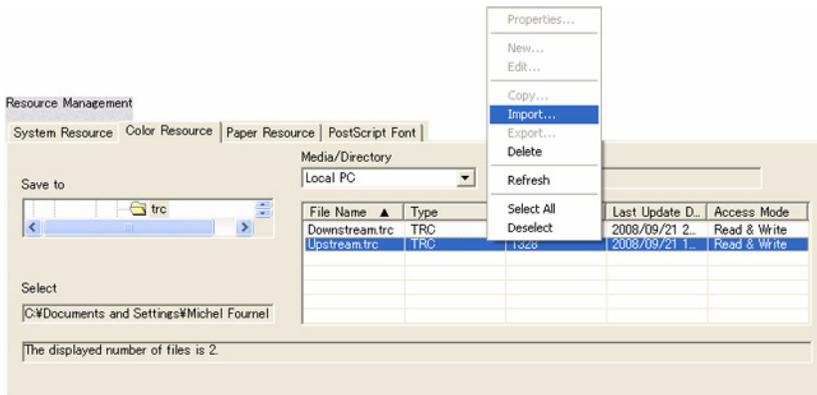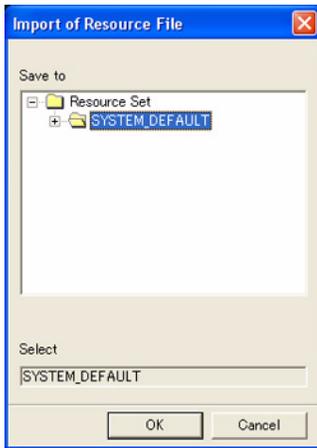## For Duplex Systems

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Resource Management**].

2. Select the [**Color Resource**] tab.

3. Select [**Local PC**] under the Media/Directory drop-down menu and browse for the [**Local Disk (C:)\Documents and Settings***[Current Windows XP Profile]***\My Documents**] folder where the TRC files are stored.
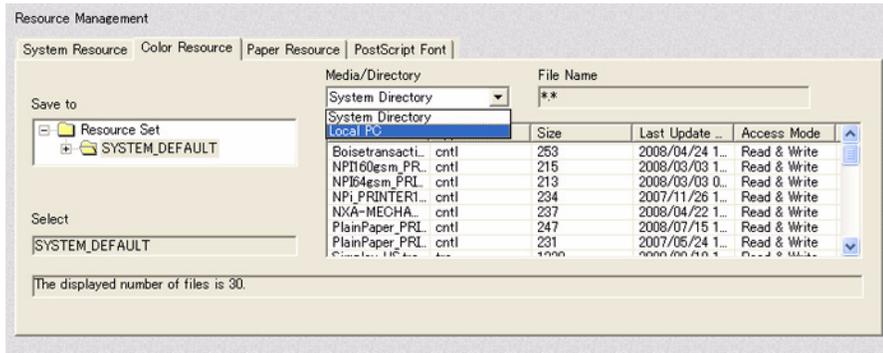
4. Locate and select the [**Upstream.trc**] file created with the TRC viewer.

5. Right-click and select [**Import**].

6. Select the appropriate directory (i.e. SYSTEM_DEFAULT) and select [**OK**].
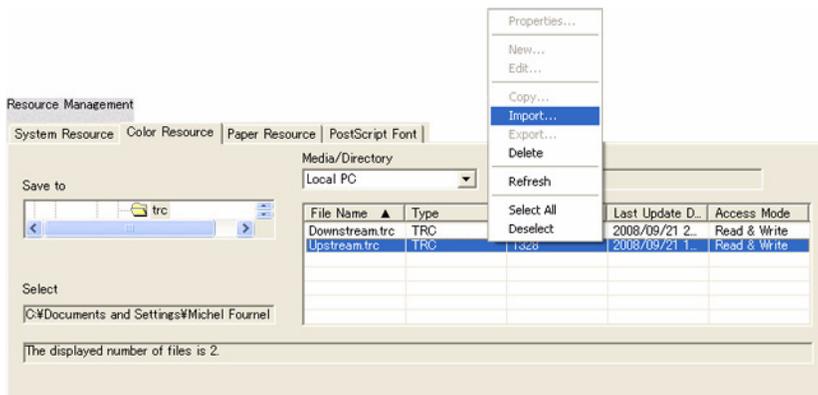

7. Repeat steps 4-6 for the [**Downstream.trc**] file.

Create a New Queue for Calibration Confirmation

Depending on whether a simplex or duplex system exists, use the appropriate procedure on the following pages.

For Simplex Systems

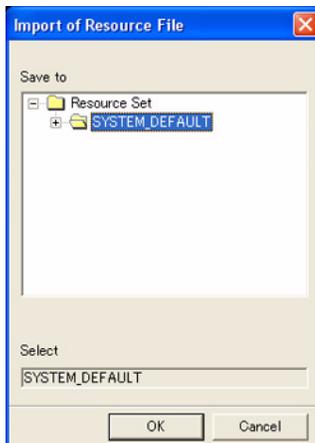Create a queue that uses the TRC created for the upstream User TRC.

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Queue Management**].
2. Select [**New**].
3. In the Queue Name field, type [**CalibrationConfirmation**].
4. Under the Data Format drop-down menu, select [**PDF**].
5. In the Delete Job After Printing box, select the [**Manual**] radio button.
6. For Input Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.
7. For Output Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.
8. In the Extended Spool box, select the [**Enable**] radio button.

9. Select the [**Paper Setting**] tab.
10. Ensure that the Stock Set Name is [**SYSTEM_DEFAULT**].
11. In the Paper Identifier drop-down menu, select the imposition file [**Simplex_PreCal**].

12. Select the [**Color**] tab.

13. In the Color Characteristics [Upstream] box, in the Printer Name drop-down menu, select [**PRINTER1**].

14. In the Color Characteristics [Upstream] box, select [**Setting**].

15. In the User TRC drop-down menu, select [**Upstream.trc**].

16. In the Resource Group Name drop-down menu, select [**TRC_PRINTER1.cntl**].

17. Select [**OK**].

18. Select the [**PDF**] tab.

19. In the Page Size drop-down menu, select [**Non-standard**].

Note

In the following step, while using Inches is recommended, it is not required. Millimeters are also supported by this documentation.

20. For Unit, select [**Inch**].

21. In the Width field type [**8.50**] (216 mm). In the Length field type [**12.00**] (305 mm).

22. In the Copies drop-down menu, type [**10**].

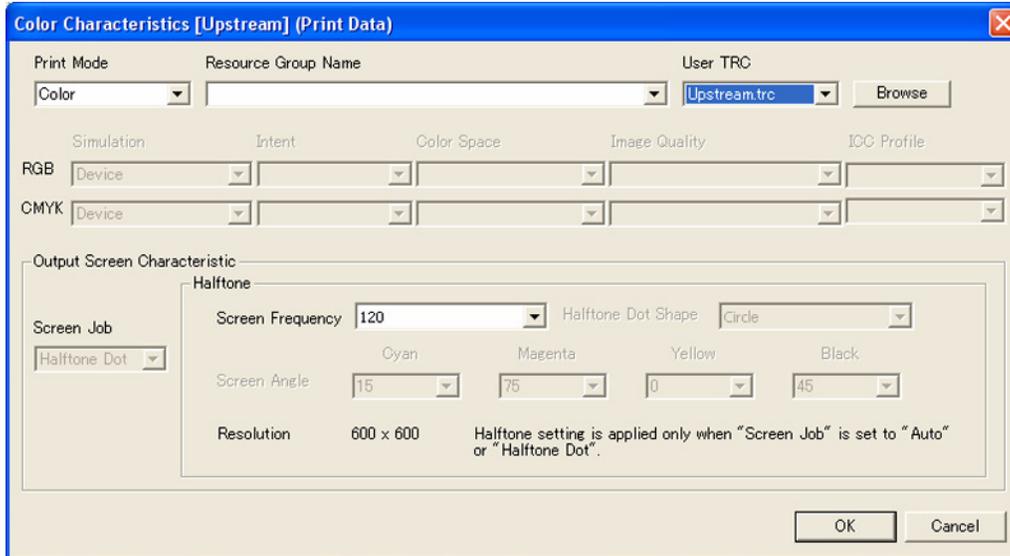
23. Select [**OK**].

For Duplex Systems

Create a queue that uses the TRC's created for the upstream and downstream as User TRC's.

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Queue Management**].

2. Select [**New**].

3. In the Queue Name field, type [**CalibrationConfirmation**].

4. Under the Data Format drop-down menu, select [**PDF**].

5. In the Delete Job After Printing box, select the [**Manual**] radio button.

6. For Input Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.

7. For Output Process Mode, select the [**Spool**] and [**Do Not Hold Job**] radio buttons.

8. In the Extended Spool box, select the [**Enable**] radio button.

9. Select the [**Paper Setting**] tab.

10. In the Paper Identifier drop-down menu, select the imposition file [**Duplex_PreCal**].

11. Select the [**Color**] tab.

12. In the Color Characteristics [Upstream] box, in the Printer Name drop-down menu, select [**PRINTER1**].

13. In the Color Characteristics [Upstream] box, select [**Setting**].

14. In the User TRC drop-down menu, select [**Upstream.trc**].
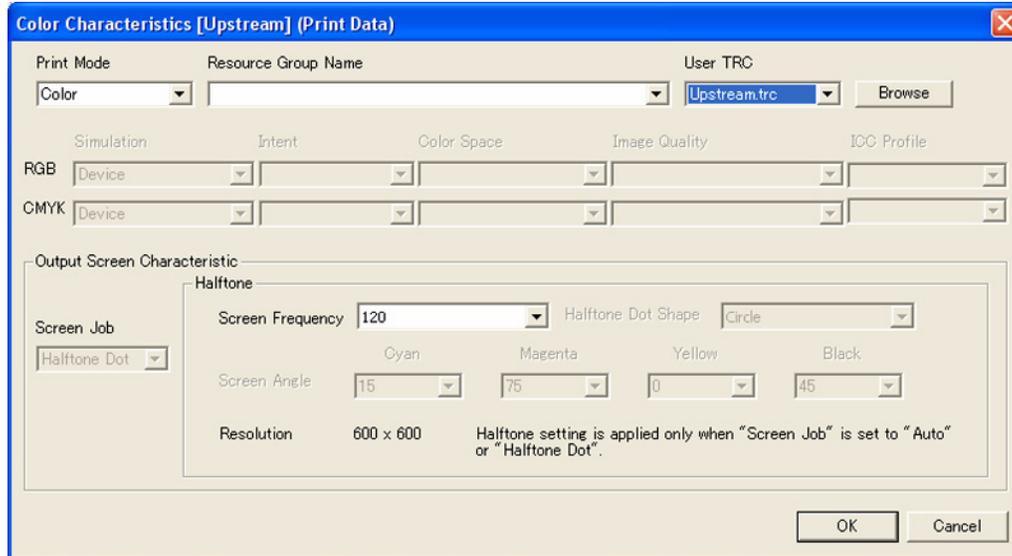
15. In the Resource Group Name drop-down menu, select [**TRC_PRINTER1.cntl**].

16. Select [**OK**].

17. In the Color Characteristics [Downstream] box, in the Printer Name drop-down menu, select [**PRINTER2**].

18. In the Color Characteristics [Downstream] box, select [**Setting**].

19. In the User TRC drop-down menu, select [**Downstream.trc**].

20. In the Resource Group Name drop-down menu, select [**TRC_PRINTER2.cntl**].

21. Select [**OK**].

22. Select the [**PDF**] tab.

23. In the Page Size drop-down menu, select [**Non-standard**].

Note

In the following step, while using Inches is recommended, it is not required. Millimeters are also supported by this documentation.

24. For Unit, select [**Inch**].

25. In the Width field type [**5.6**] (142 mm). In the Length field type [**12.00**] (305 mm).

26. In the Copies drop-down menu, type [**10**].

27. Select [**OK**].

Post-Calibration Density Check

The purpose of the following procedure is to confirm that the proper color density levels have been achieved for optimum color calibration.

> Note
>
> This procedure must be performed:
>
> - For a Simplex System: One time.
> - For a Duplex System: One time for each printer.

1. Open the [**Color Calibration Resources**] folder that was copied to the Windows Desktop.
2. Select either the duplex or simplex test patterns. The test patterns are named as follows:
   a. For Simplex: [**Simplex Xerox 490980 Color Test Pattern.pdf**].
   b. For Duplex: [**Duplex Xerox 490980 Color Test Pattern.pdf**].

Test Pattern

Note

As a reminder, the queue name used to submit the job in the next step is [CalibrationConfirmation].

3. Reference Appendix B and submit the appropriate test pattern to the printer using Line Printer Remote (LPR). Return to this procedure when you are finished.

4. The command prompt window should look similar to the following when you are finished typing:
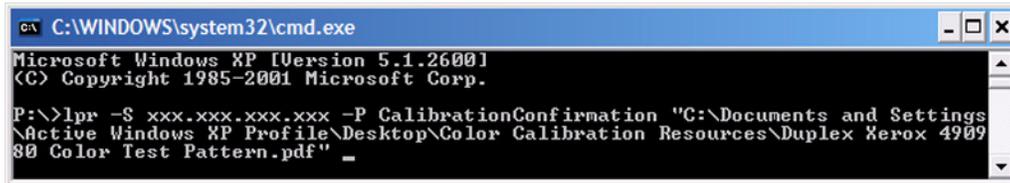
```
C:\WINDOWS\system32\cmd.exe                                              _ □ ×
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

P:\>lpr -S xxx.xxx.xxx.xxx -P CalibrationConfirmation "C:\Documents and Settings
\Active Windows XP Profile\Desktop\Color Calibration Resources\Duplex Xerox 4909
80 Color Test Pattern.pdf" _
```
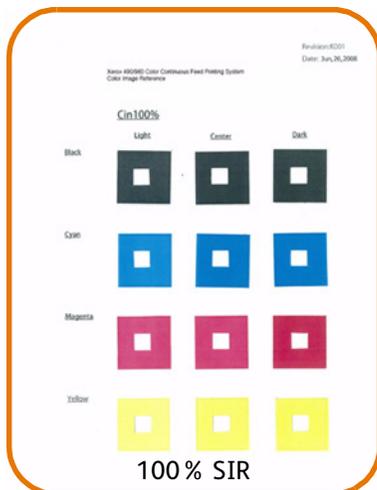
5. After you have confirmed that you have the appropriate text in the command prompt window, press **<Enter>** to submit the job to the printer.

6. Close the command prompt and Windows Explorer windows.

7. Save the last three print-outs of the test pattern.

Note

In the following step, the white paper is used as a backdrop under the test pattern print to prevent the viewing surface from interfering with the color squares.

8. Place a piece of white paper on a table, then place the test pattern on top of the white piece of paper.

9. Place the SIR on top of the test pattern. Ensure that the square cut outs are in line with the 100 % color squares of the test pattern.

10. Using the provided Xerox 490/980 Color Continuous Feed Printing System SIR, evaluate by eye if the 100 % square of colors on the test pattern are lighter or darker in density than the Light shade or the Dark shade of the SIR. Repeat this procedure for each of the four colors (Y/M/C/K). Write down the results of each observation for recording purposes.

100 % SIR

11. If the color densities of each color square are within the specified parameters of the Xerox 490/980 Color Continuous Feed Printing System SIR, color calibration has been successfully completed. If the color densities of each square are not within the specified parameters of the Xerox 490/980 Color Continuous Feed Printing System SIR, color calibration must be repeated. Please go back to the Color Density Adjustment on page 18 of Chapter 4 and repeat all procedures up to this point again.

Apply a Calibration TRC to existing Queues using the User TRC option

For the queues that you would like calibrated, follow this procedure.

For Simplex Systems

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Queue Management**].
2. Double-click on an existing print queue from the list.
3. Select the [**Color**] tab.
4. In the Color Characteristics (Upstream) box, select [**Setting**].
5. Under the User TRC drop-down menu, select the [**Upstream.trc**] file that was created previously.
6. Select [**OK**].
7. Select [**OK**] again.

For Duplex Systems

1. On the left-side navigation pane of the Xerox 490/980 Color Continuous Feed Printing System PC-UI, select [**Queue Management**].
2. Double-click on an existing print queue from the list.
3. Select the [**Color**] tab.
4. In the Color Characteristics (Upstream) box, select [**Setting**].
5. Under the User TRC drop-down menu, select the [**Upstream.trc**] file that was created previously.
6. Select [**OK**].
7. In the Color Characteristics (Downstream) box, select [**Setting**].
8. Under the User TRC drop-down menu, select the [**Downstream.trc**] that was created previously.
9. Select [**OK**] again.

Color Calibration Using ColorPort Utility Software

6

This chapter discusses how to perform Calibration. All processes that need to be performed before calibration are discussed in earlier chapters.

Calibration is when you check and adjust (by comparison with a standard print) the accuracy of the printed output. The Xerox 490/980 Color Continuous Feed Printing System uses the calibration process to ensure the best possible printed output.

To perform calibrations, you must have the CMS Option Tool loaded. Information on how to install the CMS Option tool is located in Chapter 2.

For calibration on the Xerox 490/980 Color Continuous Feed Printing System, it is recommended that you use the X-Rite Eye-One iSis spectrophotometer measuring device and the ColorPort Utility Software. See Chapter 3 Download ColorPort Utility Software for information on how to obtain the latest version of the ColorPort Utility Software.

Color Calibration

Before performing color calibration, set the cutter to A3 and ensure that all color settings for both printers are set at 4 (C,M,Y,K).

1. Select the CMS Option Tool icon from the PC-GUI.
2. Select the [**Print Colorimetric Pattern**] tab.
3. Select the colorimetric pattern to print from the pull-down menu. For Calibration, select (Eye-One iSis).
4. Select [**Print**].
5. Select [**Yes**] to continue. After printing is complete, select one sample of the following test patterns and cut around the dotted lines neatly:

Test Pattern Names
For Upstream Halftone Dot
EyeOneiSis_up_Calib.rnd_1 (299)
EyeOneiSis_up_Calib.rnd_2 (299)
EyeOneiSis_up_Calib.rnd_3 (299)
For Downstream Halftone Dot
EyeOneiSis_dn_Calib.rnd_1 (299)
EyeOneiSis_dn_Calib.rnd_2 (299)
EyeOneiSis_dn_Calib.rnd_3 (299)
For Upstream Error Diffusion
EyeOneiSis_up_Calib.rnd_1 (299)
EyeOneiSis_up_Calib.rnd_2 (299)
EyeOneiSis_up_Calib.rnd_3 (299)
For Downstream Error Diffusion
EyeOneiSis_dn_Calib.rnd_1 (299)
EyeOneiSis_dn_Calib.rnd_2 (299)
EyeOneiSis_dn_Calib.rnd_3 (299)

Using ColorPort for Color Calibration

Open the Colorport software. Select [**Start: Programs: Colorport**] on your PC or select [**Colorport.exe**] on the desktop.

1. Select the [**Measure Target**] tab.

2. Select the Target pull down menu. Select the name of the first test pattern, (ex: EyeOneiSis_up_Calib.rnd_1). The "EyeOneiSis" refers to the measuring device.

3. Select the measuring device [**X-Rite Eye-One iSis**].

4. Select [**Connect**].

5. After the pop-up window appears, place the test pattern into the reader, image facing up. You may need to hold the test pattern as the reader begins.

6. When the EyeOneiSis has completed the reading of the printed pattern, select [**Save Data**].

7. Select the Format pull down menu and select [**CGATS**]. Spectral Range is 400nm - 700nm and Value Scale is 0-100.

8. Select [**Save**].

9. A save screen will open. Select the name that matches the name of the test pattern (upstream, downstream, error diffusion, halftone dot). Older files can be used as naming templates to create a name. An example of how a file should be named is: **Date_Printer_Filetype_Scan #.txt**.

10. Select [**Save**]. A pop-up window will appear asking if you wish to replace it, select [**Yes**].

11. Repeat the above steps (except steps 2 and 3) for each test pattern. When completed, close Colorport.exe.

12. On the CMS Option tool, select the [**Create Calibration Data**] tab.

13. Select paper name.

14. Specify a measured data file for Upstream (Printer1):

    a. Halftone Dot: select [**Browse**] and select file [**EyeOneiSis_Cal_299_up_(HD)**] with today's date.

    b. Error Diffusion: select [**Browse**] and select file [**EyeOneiSis_Cal_299_up_(ERRD)**] with today's date.

15. Specify a measured data file for Downstream (Printer2):

    a. Halftone Dot: select [**Browse**] and select file [**EyeOneiSis_Cal_299_dn_(HD)**] with today's date.

    b. Error Diffusion: select [**Browse**] and select file [**EyeOneiSis_Cal_299_dn_(ERRD)**] with today's date.

16. Select [**Execute**] and then [**Yes**]. When completed, select [**OK**] and close the previous window.

Appendix

A

Logical Page Setting

The purpose of this appendix is to help you create imposition files in the pre-calibration and color calibration chapters of the Color Management Guide. The Logical Page Setting is one of the necessary properties that needs to be configured when creating an imposition file.

Note

This section is referenced as appropriate throughout the pre-calibration and color calibration chapters of this manual.

The Logical Page Setting is comprised of two sets of numerical values:

Offset Specification

The Offset Specification determines the positioning of the printed page on the paper. Accordingly, the PC-UI requires the following two numerical values:

1. X-direction, which determines how far away the printed page is from the outboard paper edge (on the imposition preview screen).
2. Y-direction.

Logical Page Size

The Logical Page Size (or image area) tells the software what the printable area of the paper is. Accordingly, the PC-UI requires the following two numerical values:

1. Width.
2. Height.

Offset Specification and Logical Page Size Explained

The two sets of numerical values that make up the Offset Specification and the Logical Page Size are dependent on two variables:

1. The DPI (dots per inch) selected in the imposition file, which can be either:
   - 300x300 DPI or;
   - 600x600 DPI
2. The width of the logical page (image area) being printed.

   Note

   In the following paragraph, it mentions that a logical page size of 5.6 in (142 mm) by 12 in (305 mm) is used. This is because 5.6 in (142 mm) by 12 in (305 mm) is the size of the test pattern printed to perform color calibration using the Xerox 490/980 Color Continuous Feed Printing System SIR.

Later in this chapter, there is a Table of Offset Specification and Logical Page Size Values. This table shows the numerical values for the Offset Specification and Logical Page Size for widths of paper stock from 8.3 (211 mm) in to 19.5 in (495 mm) and a logical page size of 5.6 in (142 mm) by 12 in (305 mm).

If the width of the paper stock you are using is not covered in the Table of Offset Specification and Logical Page Size Values, use the sample procedure in the section Calculate Offset Specification and Logical Page Size Values to determine the appropriate numerical values.

Calculate Offset Specification and Logical Page Size Values

The following sample procedure uses the following hypothetical paper stock width, logical page size (image area) and DPI settings:

- Paper Stock Width: 8.3 in (457 mm)
- Logical Page Size (image area): 5.6 in (142 mm) x 12 in (305 mm)
- DPI: 300x300

To Calculate Logical Page Size Width

Multiply the width of the logical page size in inches by the DPI:

> 5.6 x 300 + 500 = 1680 = Logical Page Size Width

To Calculate Logical Page Size Height

Multiply the height of the logical page size in inches by the DPI:

> 12 x 300 = 3600 = Logical Page Size Height

To Calculate Offset Specification X-direction

1. Multiply the width of the paper stock in inches by the DPI:
   8.3 x 300 = 2490

2. Divide the number calculated in the previous step by 2:
   2490 / 2 = 1245

3. Divide the Logical Page Size Width already calculated by 2:
   1680 / 2 = 840

4. Subtract the number calculated in step 2 by the number calculated in step 3:
   1245 - 840 = 405 = Offset Specification X-direction

To Calculate Offset Specification Y-direction

This value is always equal to 0.

When finished with all calculations...

Add 500 dpi to the Logical Page Width:

> 1680 + 500 = 2180 = New Logical Page Width

Subtract 200 dpi from the Offset Specification X-direction:

> 405 - 200 = New Offset Specification X - direction

The Logical Page Settings should match the graphic below:

Table of Offset Specification and Logical Page Size Values

The following table shows the numerical values for the Offset Specification and Logical Page Size for:

- Widths of paper stock from 8.3 in (267 mm) to 19.5 in (495 mm) at 0.5 in or 12-13 mm intervals
- A logical page size of 5.6 in (142 mm) by 12 in (305 mm)
- A DPI setting of 300x300

|	Offset Specification (DPI)		Logical Page Size (DPI)	
Paper Stock Width	X-direction	Y-direction	Width	Height
8.3 in (211 mm)	205	0	2180	3600
8.5 in (216 mm)	235	0	2180	3600
9 in (229 mm)	310	0	2180	3600
9.5 in (241 mm)	385	0	2180	3600
10 in (254 mm)	460	0	2180	3600
10.5 in (267 mm)	535	0	2180	3600
11 in (279 mm)	610	0	2180	3600
11.5 in (292 mm)	685	0	2180	3600
12 in (305 mm)	760	0	2180	3600
12.5 in (317 mm)	835	0	2180	3600
13 in (330 mm)	910	0	2180	3600
13.5 in (343 mm)	985	0	2180	3600
14 in (356 mm)	1060	0	2180	3600
14.5 in (368 mm)	1135	0	2180	3600
15 in (381 mm)	1210	0	2180	3600
15.5 in (394 mm)	1285	0	2180	3600
16 in (406 mm)	1360	0	2180	3600
16.5 in (419 mm)	1435	0	2180	3600
17 in (432 mm)	1510	0	2180	3600
17.5 in (444 mm)	1585	0	2180	3600
18 in (457 mm)	1660	0	2180	3600
18.5 in (470 mm)	1735	0	2180	3600
19 in (483 mm)	1810	0	2180	3600
19.5 in (495 mm)	1885	0	2180	3600

Appendix

B

Print Using LPR

The purpose of this appendix is to help you submit the various test patterns necessary to perform the pre-calibration and color calibration procedures found in this guide to the printer.

The following procedure uses LPR (Line Printer Remote) to submit a job to the printer.

1. Select [**Start**] and [**Run**].
2. Type [**cmd**] and select [**OK**].
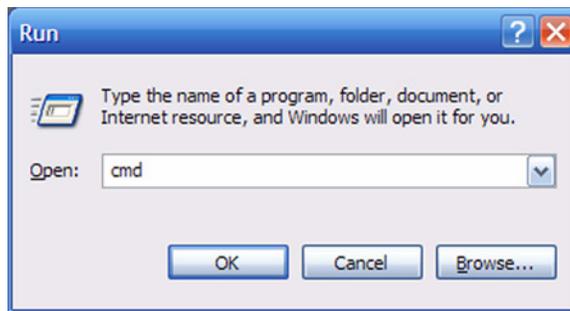
3. A command-prompt window will appear. Type the following exactly as shown, substituting the IP Address of the printer for *[printer IP address]*, the and any underscores for spaces; do not type the underscores unless it is actually part of the queue name: [**lpr_-S_***[printer IP address]***_-P_***[queue name]_*].
4. Ensure that the command-prompt window is small enough so that you can see the Windows Explorer window behind it that has the [**Color Calibration Resources**] directory open.
5. Select the appropriate test pattern to be printed and hold down the left mouse button.

6. Drag and drop the .pdf into the command-prompt window. The location of the .pdf will automatically be entered into the command-prompt window in double-quotes.

Drag and drop the
test pattern
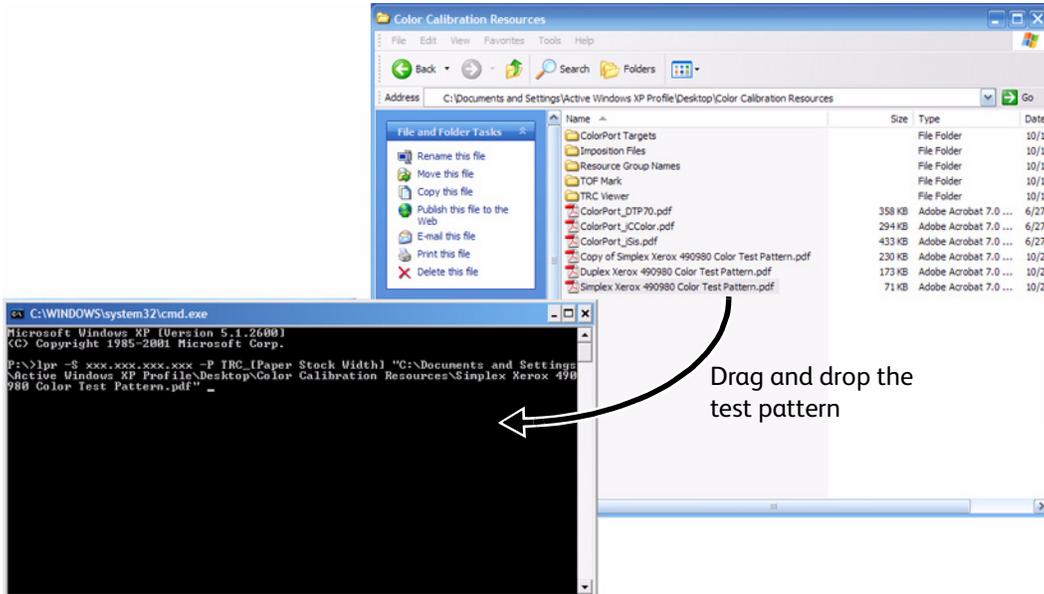
7. Ensure that the command prompt window is selected. Enter one space after the last double-quotes of the filename.

8. Go back to the original procedure that referenced this appendix. Compare what you have typed into the command prompt window to the text in the graphic before submitting the job to the printer.