

Job Management Guide

DOCUCOLOR 40 CP



THE DOCUMENT COMPANY

XEROX

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Contents

Preface

About this manual	xi
Terminology	xii
About the documentation	xii
DocuColor 40 CP job environments	xiii
Permissions	xiv
Safety warnings	xv
Cleaning the DocuColor 40 CP	xv

Chapter 1: Using the Control Panel

Introduction to the DocuColor 40 CP Control Panel	1-1
Activity light	1-1
Buttons	1-2
Display window	1-3
Functions menu	1-5
Starting and shutting down the DocuColor 40 CP	1-6
Starting the DocuColor 40 CP	1-6
Restarting the DocuColor 40 CP	1-7
Shutting down the DocuColor 40 CP	1-8

Chapter 2: Overview of DocuColor 40 CP WebTools

About WebTools	2-1
Access privileges	2-2
Checking DocuColor 40 CP status with the Status WebTool	2-4
Accessing information with the WebLink WebTool	2-5

Chapter 3: Tracking and Managing Print Jobs

WebTools for job tracking and management	3-1
WebSpooler	3-1
Job management features	3-2
Job List window	3-3
Job icons	3-9
Spool area	3-9
RIP area	3-10
Print area	3-11
Job commands	3-12
Overriding print settings	3-14
Thumbnails and full-screen previews (DocBuilder)	3-16
Using the Job Log	3-25

Chapter 4: Color Calibration

Introduction to color calibration	4-1
Understanding calibration	4-2
How calibration works	4-3
Scheduling calibration	4-4
Checking calibration status	4-5
Calibrating with AutoCal from the Control Panel	4-6
Connecting the scanner to the DocuColor 40 CP	4-6
Using AutoCal	4-7
Removing calibration	4-9
Calibrating with Print Calibrator	4-9
Using a scanner	4-10
Using a densitometer	4-10
The Calibration Mode window	4-14
Measurements	4-15
Measuring values with a DTP32 densitometer	4-16
Testing and applying calibration	4-20
Calibration checklist	4-22
Calibrating the densitometer	4-23

Chapter 5: Advanced Print Calibrator Topics

Using advanced calibration features	5-1
Choosing a measurements file	5-1
Working with targets	5-2
Customizing calibration targets	5-5
Backing up DocuColor 40 CP targets	5-9
Deleting custom targets	5-10
Removing calibration	5-10
Using advanced simulation features	5-11
Working with simulations	5-11
Using the Simulation Mode window	5-13
Checking the current simulation	5-14
Editing simulations	5-15
Managing simulations	5-18
Testing and setting a new default simulation	5-19

Appendix A: Troubleshooting

Error messages	A-1
Maintaining optimal system performance	A-5
Troubleshooting	A-6
Unexpected printing results	A-6
Clearing the server	A-7
Users are unable to connect to the printer	A-7
Setup error messages	A-8
AutoCal error messages	A-8

Index

Preface

This manual is intended for DocuColor 40 CP Color Server™ operators or administrators, or users with the necessary access privileges, who monitor and manage job flow, perform color calibration, and troubleshoot problems that may arise. It describes the functions and features of DocuColor 40 CP utilities and DocuColor 40 CP WebTools for the purposes of print job management and color quality control.

About this manual

This manual is organized as follows:

- Chapter 1 describes the DocuColor 40 CP Control Panel. It explains the various messages and icons that you might see on the Control Panel and describes how to print system information pages from the Control Panel. It also explains how to properly start up and shut down the DocuColor 40 CP.
- Chapters 2 introduces DocuColor 40 CP WebTools, explains how to access them, and directs you to sources of more information (in this manual or in other manuals in the documentation set).
- Chapter 3 describes WebSpooler, which can be used to view and manage DocuColor 40 CP job activity. In addition to providing a graphic display of the job flow, WebSpooler allows you to reprint or hold jobs, view and override print option settings, preview print jobs, and merge rasterized jobs.
- Chapter 4 tells you how to monitor and maintain color quality of your print output by calibrating the DocuColor 40 CP with Print Calibrator or AutoCal (with a desktop scanner).
- Chapter 5 describes advanced applications of Print Calibrator, such as creating custom calibration and simulation targets to customize the color responses of the DocuColor 40 CP.
- Appendix A lists error messages that you might see at the DocuColor 40 CP Control Panel, WebSpooler, or the DocuColor 40, and contains some troubleshooting information.

Terminology

Specific terms are explained as they are introduced. However, the following general terms are used throughout:

- **PostScript (PS)**—A computer language designed as a page description language. The DocuColor 40 CP uses this language for imaging the page and for communication with applications and with the print engine.
- **Job**—A file consisting of PostScript commands and comments that describe the graphics, sampled images, and text that should appear on each page of a document, and the printer options that should be used in printing, such as media or color rendering style.
- **Spool**—Write to a disk. Usually used here to refer to a PostScript print job being saved to the DocuColor 40 CP hard disk in preparation for processing and printing.
- **RIP**—Acronym for raster image processing, which changes text and graphics commands into descriptions of each mark on a page. In common use as a noun, a “raster image processor” (RIP) is the computer processor that performs this function.
- **Print**—The process of rendering, or imaging, a page or a job on a printer.

These concepts can explain how the DocuColor 40 CP Color Server and the DocuColor 40 work together as a powerful printing system. The DocuColor 40 CP PostScript RIP changes text and graphics commands in PostScript into color specifications for each dot of toner deposited on a page by the DocuColor 40.

About the documentation

This manual is part of the set of DocuColor 40 CP documentation, which includes the following manuals for users and system administrators:

- The *Configuration Guide* explains basic configuration and administration of the DocuColor 40 CP for the supported platforms and network environments. It also includes guidelines for setting up UNIX, Windows NT, and NetWare servers to provide PostScript printing services to clients.
- *Getting Started* describes how to install software to enable users to print to the DocuColor 40 CP. Specifically, it describes installation of PostScript printer drivers, printer description files, and other user software provided on the User Software CD. It also explains how to connect each user to the network.

- The *Printing Guide* describes the printing features of the DocuColor 40 CP for users who send jobs via remote workstations on the network or via a direct parallel port connection.
- The *Color Guide* provides an introduction to the basics of color theory and printing to a DocuColor 40 CP Color Server. It also includes practical color printing tips and application notes that explain how to print to the DocuColor 40 CP from popular Windows and Mac OS applications.
- The *Job Management Guide* explains the functions of the DocuColor 40 CP client utilities and WebTools, and how they can be used to manage jobs and maintain color quality. This book is intended for an operator or administrator, or a user with the necessary access privileges, who needs to monitor and manage job flow, perform color calibration, and troubleshoot problems that may arise.
- *Release Notes* provide last-minute product information and workarounds for some of the problems you may encounter.

DocuColor 40 CP job environments

The DocuColor 40 CP supports several levels of control of printing, job management, and setup, and offers you the flexibility to choose the configuration that corresponds to the requirements of your site. Your situation may correspond to one of the descriptions outlined below, or you may prefer an intermediate level of control.

At one extreme, an administrator or operator in a high-volume printing environment controls the entire job flow and all printing using WebSpooler. Print jobs arriving from remote users are spooled to the server disk and stored until the operator decides it is time to print them. Additional functions (calibration, job overrides, prioritizing, font management) are reserved for the administrator or operator.

At the other extreme, anyone on the local network can control all printing and server functions; operator intervention is not necessary. Users can print from their workstations to any of the published print connections. Anyone can use WebSpooler to control any print job.

The spectrum of control that an administrator can implement is described fully in the *Configuration Guide*.

Permissions

Support for these job environments is achieved by a combination of DocuColor 40 CP Setup options. By default, anyone can access Setup (both from the Control Panel and WebSetup), but the administrator can limit access to Setup by specifying an Administrator password for the DocuColor 40 CP (see the *Configuration Guide*).

Also by default, anyone can log in to WebSpooler and control job flow, but an administrator can restrict access to these functions by specifying an Operator password.

The three security levels from greatest to least control are:

- **Administrator**—confers control of Setup and is the highest level of control. The person who has access to Setup can control the printing and job management environment by choosing which queues are enabled, and by electing to set passwords. The Administrator can also set a common web link for all users who log in to the DocuColor 40 CP using their web browser.
- **Operator**—includes control of print jobs that arrive at the server and the ability to perform calibration.
- **Guest**—allows users to view the status of active jobs and the list of stored jobs. They cannot make changes to jobs or change their printing instructions. A password is not needed to log in as Guest and view jobs from WebSpooler.

This manual describes the features of the DocuColor 40 CP client utilities and WebTools, and all operator privileges, whether those privileges are available to everyone or are exclusive to only certain people. It also includes descriptions of administrator functions, sometimes referring you to other manuals for more information.

Safety warnings

The DocuColor 40 CP display window is a liquid crystal display (LCD) that is made of glass and can break. Do not subject it to strong shocks.

If the display window breaks and the liquid crystal material leaks out, do not inhale, ingest, or touch it. If the material gets on your skin or clothing, wash it off with soap and water immediately.

Do not touch or put pressure on the panel. This will change the color of the panel.

Cleaning the DocuColor 40 CP

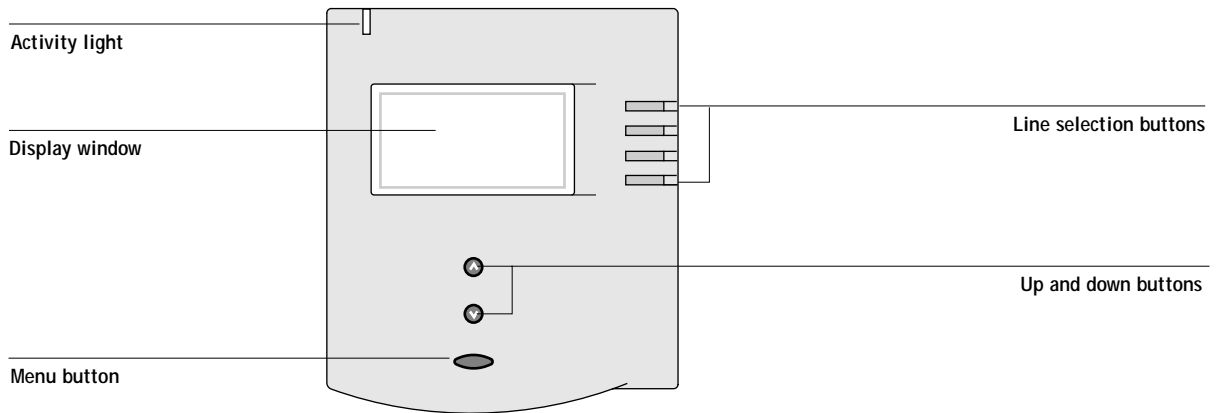
Clean the DocuColor 40 CP with a soft cloth moistened with isopropyl alcohol or ethyl alcohol. *Never* use water or ketone as these may permanently alter the display.

Chapter 1: Using the Control Panel

You can use the DocuColor 40 CP Control Panel to view status information, print special pages, and set up printing.

Introduction to the DocuColor 40 CP Control Panel

The Control Panel, shown below on the front of the DocuColor 40 CP, comprises the following parts:



Activity light

The activity light indicates the current DocuColor 40 CP activity. If the light is:

Solid red	An error has occurred causing the DocuColor 40 CP to be disabled.
Flashing red	There is an error causing printing to be disabled, but the DocuColor 40 CP is capable of processing.
Solid green	The DocuColor 40 CP is idle.
Flashing green	The DocuColor 40 CP is processing or printing a job, or communicating with a remote computer.
No light	The DocuColor 40 CP is off or starting up.

Buttons

Line selection buttons	There are four line selection buttons on the right side of the Control Panel. Use these buttons to select the command displayed on the corresponding line of the display window. When a button is active, a special character (>) appears in the display window next to the button.
Up and down buttons	Use these buttons to scroll to different screens in multi-screen lists, to select Setup options from a list of available options, and to scroll alphanumeric characters.
Menu button	Press this button to view other screens. Under normal operation, the Control Panel displays the Info, RIP, or Print Status screen with information about the status of the DocuColor 40 CP. If you press the Menu button, the Functions menu is displayed and you can perform additional operations (see page 1-5). If a job is processing or printing, press the Menu button to cycle among the active screens.

Display window

The display window provides information about the status of the DocuColor 40 CP, displays menu information, and enables you to view and edit information in the Setup menus.

The last line of the display window displays text that tells you what screen you are looking at and highlights one of the icons to indicate what the DocuColor 40 CP is doing. Only the icons for the screens that are currently available appear. The menu button cycles among the active screens.

The screens are:



Alert Status

If there is a problem with processing a job or printing functions, an error message appears on the Control Panel. For information on error messages, see Appendix A, “Troubleshooting.”



Print Status

When the DocuColor 40 CP is printing a job, the Print Status screen appears. This screen displays the following:

Cancel Job—Press the top line selection button to cancel the job currently printing.

User name—The name of the user who sent the job currently processing.

Pages/Total—The number of copies of the current job printed and the total number of copies of the job requested.



RIP Status

When the DocuColor 40 CP is processing a job, the RIP Status screen appears. This screen displays the following:

Cancel Job—Press the top line selection button to cancel the job currently processing. The DocuColor 40 CP cancels the job before printing begins.

Document name—The name of the document currently processing.

User name—The name of the user who sent the job currently processing.

Kilobytes—The size (in kilobytes) of the job processed so far.

NOTE: This number is always displayed in kilobytes, even if the amount goes over 1000KB; for example, 10MB is displayed as 10000KB.



Info Status

When the DocuColor 40 CP is not processing or printing a job, it displays information about the current server and software. It displays the following information:

Server Name—The DocuColor 40 CP name.

Status—The current status of the DocuColor 40 CP. The DocuColor 40 CP status can be: Idle, Initializing, Busy, Processing, or Printing.

Megabytes—The space (in megabytes) available on the DocuColor 40 CP hard disk, for example, 756MB.

Version—The system software version running on the DocuColor 40 CP.



Functions

You can press the Menu button to display the Functions menu. Use the up and down buttons to scroll through the list. Press the line selection button to the right of a command to select that command. See page 1-5 for more information.



Network

The network icon appears at the bottom left of any of the other screens when a job is being sent to the DocuColor 40 CP, either over the network or through the parallel port. The network icon also appears, together with a flashing green activity light, when a remote utility is running.

Functions menu

You can choose the following commands from this menu:

Print Pages

Print special pages from the DocuColor 40 CP. You can print the following pages from the submenu that appears:

Test Page—A Test Page enables you to confirm that the DocuColor 40 CP is properly connected to the copier, and provides color and grayscale samples to troubleshoot problems with the copier or the DocuColor 40 CP. The following settings are among those listed on the Test Page: Server Name, Printer Model, color settings, calibration information, date and time the Test Page was printed.

Configuration—Prints the Configuration page, which gives the current server and device configuration. This page lists general information about the hardware and software configuration of the DocuColor 40 CP, the current options for all Setup settings, information about the current calibration, and the Ethernet and Token Ring addresses of the DocuColor 40 CP.

Job Log—Prints a log of the last 55 jobs. For information on the fields in the Job Log and on printing it in other forms, see “Using the Job Log” on page 3-25.

Control Panel Map—Prints the Control Panel Map, which is an overview of the screens you can access from the Control Panel. For information about using these screens to set up the DocuColor 40 CP, see the *Configuration Guide*.

Color Charts—Prints samples of the RGB, CMY, and PANTONE colors available from the DocuColor 40 CP.

Font List—Prints a list of all fonts currently on the DocuColor 40 CP hard disk.

Suspend Printing

Suspend communication between the DocuColor 40 CP and the copier. You *must* suspend printing if you want to interrupt the current DocuColor 40 CP job so that you can use the copier to make copies. Jobs continue to process on the DocuColor 40 CP. After you make the copies, select Resume Printing to continue printing jobs from the DocuColor 40 CP.

Resume Printing

Resume communication between the copier and the DocuColor 40 CP after you have finished making copies.

Reboot Server

Shut down all DocuColor 40 CP activity in the correct manner and then restart. You should use this option instead of the power switch on the back of the DocuColor 40 CP.

Starting and shutting down the DocuColor 40 CP

Generally, you can leave the DocuColor 40 CP running all the time. This section describes how to shut down and restart the DocuColor 40 CP when necessary.

Starting the DocuColor 40 CP

To start the DocuColor 40 CP, move the power switch on the back of the DocuColor 40 CP to the On position. If the copier is also powered off, power it on before powering on the DocuColor 40 CP.



Diagnostic messages appear on the DocuColor 40 CP Control Panel. If any diagnostics fail, more information and instructions appear. Contact your service representative if the DocuColor 40 CP encounters problems while running the diagnostics.

When the diagnostics are finished, the following message is displayed:

For software update or setup, press any key.

If you want to change Setup option settings, press any button; if you do not press a button, the DocuColor 40 CP continues starting up and displays the message Idle when it is ready to receive data.

NOTE: If an Administrator password has been set, you are required to enter it to access Setup.

If you press a button, the following options appear.

For information about the Setup menus and options, see the *Configuration Guide*.

Choose:	To do this:
Exit Setup	Exit the Setup menus; the DocuColor 40 CP reboots.
Server Setup	Enter the Server Setup menus.
Network Setup	Enter the Network Setup menus.
Printer Setup	Enter the Printer Setup menus.
PS Setup	Enter the PostScript Setup menu.
Color Setup	Enter the Color Setup menu.
Job Log Setup	Enter the Job Log Setup menu.
Calibration	Calibrate the DocuColor 40 CP using AutoCal. For more information, see “Calibrating with AutoCal from the Control Panel” on page 4-6 and the <i>Configuration Guide</i> .
Change Password	Change the Administrator password.
Clear Server	Clear all jobs in all server queues and the Job Log. Check with your administrator or operator before choosing Clear Server.

Restarting the DocuColor 40 CP

You should use the procedure described below to restart the DocuColor 40 CP rather than using the power switch on the back of the DocuColor 40 CP.

TO RESTART THE DOCUCOLOR 40 CP:

1. Make sure that the DocuColor 40 CP is not receiving, processing, or printing a job.

Make sure that the status message on the Control Panel is Idle.

NOTE: If a job from the Print queue is processing, it will continue processing and print after the DocuColor 40 CP is restarted; if a job sent to the Direct connection is processing, it will not finish processing or printing.

2. Press the Menu button to display the Functions menu.
3. Use the down button to scroll to the last screen and choose Reboot Server.

Shutting down the DocuColor 40 CP

You may need to shut down the DocuColor 40 CP for service. When you do so, fonts that have been downloaded to the hard disk drive are not deleted. Print jobs in the Hold and Printed queues and jobs that have been processed but not printed are not deleted and are available for printing when you restart the DocuColor 40 CP.

TO SHUT DOWN THE DOCUCOLOR 40 CP:

1. Make sure that the DocuColor 40 CP is not receiving, processing, or printing a job.

Make sure that the status message on the Control Panel is Idle. If a job has just finished processing or printing, wait at least five seconds after the Control Panel status message switches to Idle before proceeding to step 2.

NOTE: If a job from the Print queue is processing, it will continue processing and print after the DocuColor 40 CP is restarted; if a job to the Direct connection is processing, it will not finish processing or printing.

2. Power off the DocuColor 40 CP by moving the power switch on the back to the Off position.

NOTE: After powering off the DocuColor 40 CP, make sure to also power off the copier. Leaving the copier powered on while the DocuColor 40 CP is powered off can lead to excessive drain on the DocuColor 40 CP motherboard battery.

Chapter 2: Overview of DocuColor 40 CP WebTools

This chapter introduces the DocuColor 40 CP WebTools: Status, WebSpooler, WebLink, Installer, and WebSetup. It explains how to access these tools and describes their functions. For more information on WebSetup and Installer WebTools, you are referred to other manuals in the documentation set.

About WebTools

WebTools reside on the DocuColor 40 CP but can be accessed over the network from Windows 95, Windows NT 4.0, and Mac OS client computers. The DocuColor 40 CP has a home page that lets remote users view server functions and manipulate jobs. For specific information on the browsers supported with WebTools, see *Getting Started*.

The following DocuColor 40 CP WebTools can be accessed from the DocuColor 40 CP WebTools home page.

WebTool:	Summary:	For more information:
Status	Shows you the jobs currently processing and printing.	See page 2-4
WebSpooler	Allows you to view, manipulate, reorder, reprint, and delete jobs currently spooling, processing, or printing on the DocuColor 40 CP. Also allows you to view, print, export, and delete the Job Log. Most of these functions require an Administrator or Operator password, if one has been set.	See "WebSpooler" on page 3-1
WebLink	Provides a link to another web page, provided you have a valid Internet connection. The WebLink destination can be changed; this function requires the Administrator password, if one has been set.	See page 2-5 and the <i>Configuration Guide</i>

WebTool:	Summary:	For more information:
Installer	Allows you to download DocuColor 40 CP printer file installers directly from the server.	See <i>Getting Started</i>
WebSetup	Allows you to modify the DocuColor 40 CP configuration (Setup) remotely. This function requires the Administrator password, if one has been set.	See the <i>Configuration Guide</i>

Access privileges

The DocuColor 40 CP system allows the site administrator to choose and implement a level of access and control appropriate for your particular site. The levels of access allowed to remote users depend on whether the administrator has enabled use of the WebTools, and whether a password is required to use certain features of the WebTools.

The three possible levels of access to WebTools are Administrator, Operator, and Guest. To enable maximum password protection, Administrator and Operator passwords must be specified in Setup (see the *Configuration Guide*).

NOTE: An Operator password can be set only by using WebSetup.

When both an Administrator password and an Operator password have been specified, the access levels are as follows:

Access level:	Privileges and password requirements:
Administrator	Has full access to all WebTools and DocuColor 40 CP Control Panel functions; Administrator password required.
Operator	Has access to all functions of WebTools <i>except</i> WebSetup and clearing the Job Log from WebSpooler; Operator password required.
Guest	Can view job status, but cannot make changes to jobs or Setup, and cannot view the Job Log; no password required.

If you have been given the Operator password, you can manage job flow and override print settings of your jobs with WebSpooler. If not, you can still log in as Guest and use these tools, and the Status WebTool, to track the status of your jobs. Check with your site administrator for information on your access privileges.

TO ACCESS WEBTOOLS:

1. Start up your Internet browser application.
See *Getting Started* for information about supported platforms and browsers.
2. Enter the IP address or the DNS name of the DocuColor 40 CP.
Check with the operator or administrator for this information.
3. If the Log In dialog box appears, select a login level, enter the password, and click OK.
The Log In dialog box appears only if the administrator has set an Administrator or Operator password (or both).
4. When the DocuColor 40 CP WebTools home page appears, click to select one of the WebTools.

Move the cursor over the buttons to display information about the selections.



NOTE: The Configure button appears only if you logged in as Administrator. With Administrator privileges, you can click this button and specify which of the WebTools are available to other users.

Checking DocuColor 40 CP status with the Status WebTool

You can use the Status WebTool to see what jobs are currently processing and printing. The Status WebTool does not require any special access privileges. If the administrator has enabled Web Services in Setup and has provided you with the IP address of the DocuColor 40 CP, you can use the Status WebTool to monitor the status of print jobs as they are rasterized and printed.

To access the Status WebTool, point your browser to the DocuColor 40 CP WebTools home page and click Status. The current RIP Status and Printer Status appear in the window.

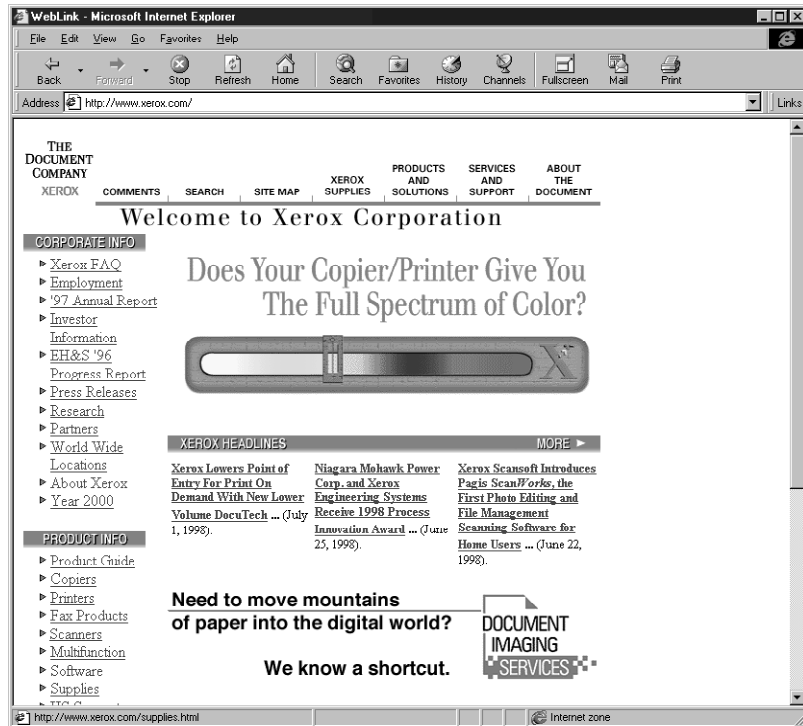


To open a new browser window for the Status display, click Float. You can then close other browser windows and leave the Status window open to continue checking the status of the DocuColor 40 CP. As long as you keep the Status window open, it is dynamically updated.

To obtain more information about the status of jobs, use WebSpooler.

Accessing information with the WebLink WebTool

The WebLink button on the DocuColor 40 CP WebTools home page provides a link to another web page or to multiple web pages, provided you have a valid Internet connection. The WebLink destination is initially set to www.xerox.com. The administrator at your site can set the WebLink destination. Check the WebLink sites for any information available there.



Chapter 3: Tracking and Managing Print Jobs

This chapter describes the functions of the DocuColor 40 CP WebTools that let you track and manage jobs sent to the DocuColor 40 CP.

WebTools for job tracking and management

If your site administrator has enabled Web Services on the DocuColor 40 CP, you can access WebTools from Windows 95, Windows NT 4.0, and Mac OS computers with an Internet browser. The WebTools that provide *job tracking* capabilities are WebSpooler and the Status WebTool. WebSpooler also provides *job management* capabilities, provided you have the necessary access privileges (see page 2-2). For specific information on the browsers supported with WebTools, see *Getting Started*.

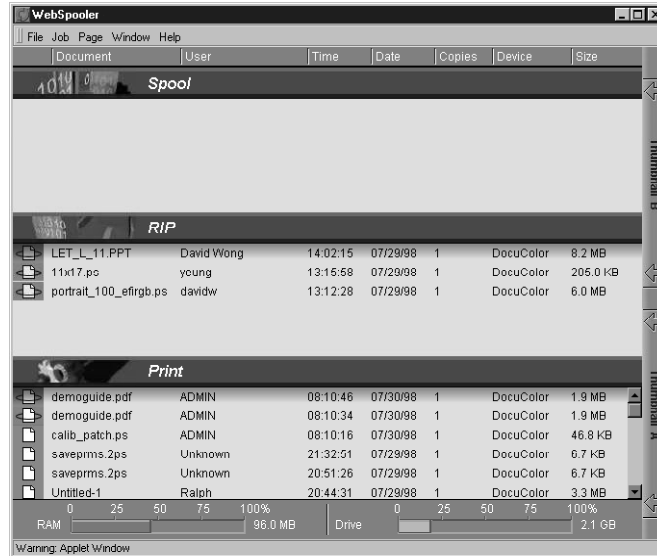
WebSpooler

WebSpooler provides a window on DocuColor 40 CP and copier functions, and an interface from which you can control those functions.

TO LAUNCH WEBSPoolER:

1. Launch your internet browser and enter the IP address or DNS name of the server you want to connect to.
2. If a password has been set, the Log In window appears.
To log in as Administrator, enter the Administrator password and click OK.
To log in as Operator, enter the Operator password and click OK.
To log in as Guest, click OK, without entering any password.
3. From the DocuColor 40 CP WebTools home page window, click WebSpooler.
For instructions on how to access the DocuColor 40 CP WebTools home page window, see page 2-3.

The WebSpooler window appears in a new browser window.



Job management features

Unless passwords have been defined in DocuColor 40 CP Setup, you can log in to the WebTools home page without entering a password, and you are given full privileges to WebSpooler which include:

- A view of current printing jobs and jobs stored on the DocuColor 40 CP
- Control of printing jobs and a view of the Job Log
- Ability to clear the Job Log

After the Administrator has performed Setup and specified passwords, user options depend on your login level. If you log in to the WebTools home page as Guest, you have the first option only. If you log in as Operator, you have the first two options. If you log in as Administrator, you have all three options. For information about Setup and specifying passwords, see the *Configuration Guide*.

You can use WebSpooler to perform the following functions from your workstation:

- Override current job option settings
- Delete jobs
- Duplicate or rename jobs
- RIP a job and hold the raster data
- Hold jobs in the spooled area or the RIPped area
- Remove raster data from RIPped files
- Change the priority of jobs
- Edit and merge raster data jobs (DocBuilder)
- Display, print, export, or delete the Job Log

Most of these functions require Administrator or Operator privileges. However, even without a password, you can log in to the WebTools home page as Guest with view-only privileges in WebSpooler.

Job List window

Your first view of WebSpooler is the Job List window, which is divided into three areas by Spool, RIP, and Print status bars. The Job List window is surrounded by a frame that includes slider buttons and menus. System information indicators at the bottom of the window show the current availability of hard disk space and RAM on the currently selected DocuColor 40 CP server.

When the DocuColor 40 CP is receiving and processing print jobs, the Job List window is a dynamic display, filled with the names of jobs and their characteristics. Status bars animate in real time as new jobs are processed and printed, and jobs move to different display areas.

	Document	User	Time	Date	Copies	Device	Size
Menu bar	WebSpooler File Job Page Window Help						
Spool status bar	10:14 AM Spool						
Spooled jobs							
RIP status bar	RIP						
Rasterized (RIPped) jobs	LET_L_11.PPT	David Wong	14:02:15	07/29/98	1	DocuColor	8.2 MB
	11x17.ps	yeung	13:15:58	07/29/98	1	DocuColor	205.0 KB
	portrait_100_efirgb.ps	davidw	13:12:28	07/29/98	1	DocuColor	6.0 MB
Print status bar	Print						
Printed jobs	demoguide.pdf	ADMIN	08:10:46	07/30/98	1	DocuColor	1.9 MB
	demoguide.pdf	ADMIN	08:10:34	07/30/98	1	DocuColor	1.9 MB
	calib_patch.ps	ADMIN	08:10:16	07/30/98	1	DocuColor	46.8 KB
	saveprms.2ps	Unknown	21:32:51	07/29/98	1	DocuColor	6.7 KB
	saveprms.2ps	Unknown	20:51:26	07/29/98	1	DocuColor	6.7 KB
	Untitled-1	Ralph	20:44:31	07/29/98	1	DocuColor	3.3 MB
System information indicators	RAM 0 25 50 75 100% 96.0 MB		Drive 0 25 50 75 100% 2.1 GB				

The Spool, RIP, and Print areas of the Job List window represent the stages of printing a job. Jobs come in at the top level (Spool) and drop down to the Print level, unless they are held along the way.

- **Spooled jobs**—Jobs listed in the area below the Spool status bar area are PostScript files stored on the DocuColor 40 CP disk. These jobs were sent to either the Print queue (white icons) or the Hold queue (yellow icons). These PostScript files are saved on the server's hard disk. PostScript files can come in packets from the network, or from another place on the server hard disk. Jobs are added to a queue in the order in which they arrive, and they generally move to another queue in the same order unless an operator has intervened to change the order.
- **RIPped jobs**—Jobs listed in the area below the RIP status bar are ready to print. They have already been rasterized (RIPped, or processed for printing) and are waiting, in order, for access to the printer. Rasterized jobs can also be held; held jobs are shown with a yellow icon. During RIPping, PostScript commands are

interpreted in the DocuColor 40 CP to allow the DocuColor 40 to print the file the way its originator intended. The result of this interpretation is a *raster* file associated with the original PostScript file. In this raster file (raster image), color data is associated with each dot that can be rendered by the print engine. The color data tells the print engine whether or not to apply cyan, magenta, yellow, or black toner to each position on the page.

- **Printed jobs**—Jobs listed in the area below the Print status bar have already been printed. Printed jobs can be stored on the DocuColor 40 CP disk. The number of jobs that can be stored (from 1 to 99) is defined in Setup. While the PostScript file is usually saved to disk, raster images are held in RAM during and after each print job. However, you can request that the DocuColor 40 CP save the raster image to disk along with the PostScript file. Saving the raster image to disk offers some advantages—raster files are already processed so they print quickly, and each part of the raster file is still identified with a page in the original document, which means that individual pages of a saved raster file can be accessed.
- **Errors**—Jobs with an error are shown in red. To display the error, double-click the job line.

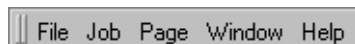
If you are logged in with Administrator or Operator privileges, you can interact with a job in the window by selecting it and choosing a command from the Job menu, or by double clicking it and setting print option overrides. (However, if passwords have been set and you are logged in with Guest privileges, you can only view jobs; you cannot interact with them.)

The job icons displayed in the WebSpooler window are explained on page 3-9.

NOTE: If your job does not appear anywhere in the WebSpooler window, it may have already been printed; if so, it will appear in the Job Log. To view the Job Log, choose Show Job Log from the Window menu. (For more information on the Job Log, see page 3-25.)

Menu bar

The menu bar has five menus. When an action is not available in the current context, the command is dimmed.



Menu:	Choose this:	To do this:
File	Print Job Log	Print the Job Log
	Delete Job Log	Delete the Job Log
	Export Job Log	Export the Job Log
	Exit	Exit WebSpooler
Job (For more information on these commands, see page 3-12)	Delete Job(s)	Delete one or more selected jobs
	Duplicate Job(s)	Duplicate one or more selected PostScript data jobs in the Spool or Print areas
	Rename	Rename a selected job
	Hold	Hold the selected job(s); see page 3-7
	RIP and Hold	RIP and then hold the selected job(s); see page 3-7
	Print	Print the selected job(s); see page 3-11
	Print and Hold	Print the selected job(s) and then hold it in the RIP area; see page 3-7
	Process Next	Give top priority to this job
	Remove Raster	Remove the raster information from the selected job(s); see page 3-14
	Override Print Settings	View and edit print settings for the selected job(s); see page 3-14
	Thumbnail A	Open a selected <i>held</i> raster data job in the Thumbnail A window where you can view a full-screen preview of the job, edit the job, or merge it with raster data from other jobs; see page 3-16
	Thumbnail B	Open a selected raster data job (not necessarily a held job) in the Thumbnail B window for viewing or for copying pages into a job in the Thumbnail A window; see page 3-18
Page (DocBuilder commands for Thumbnail A)	Delete	Delete the selected page(s)
	Duplicate	Duplicate the selected page(s)
	Preview	View a full-screen preview of the selected page; see page 3-24
	Undo	Undo previous Page menu commands (multiple undos available)

Menu:	Choose this:	To do this:
Window	Show Job List	Show the Job List window
	Show Job Log	Show the Job Log window
Help	About	View the WebSpooler information screen

Status bars

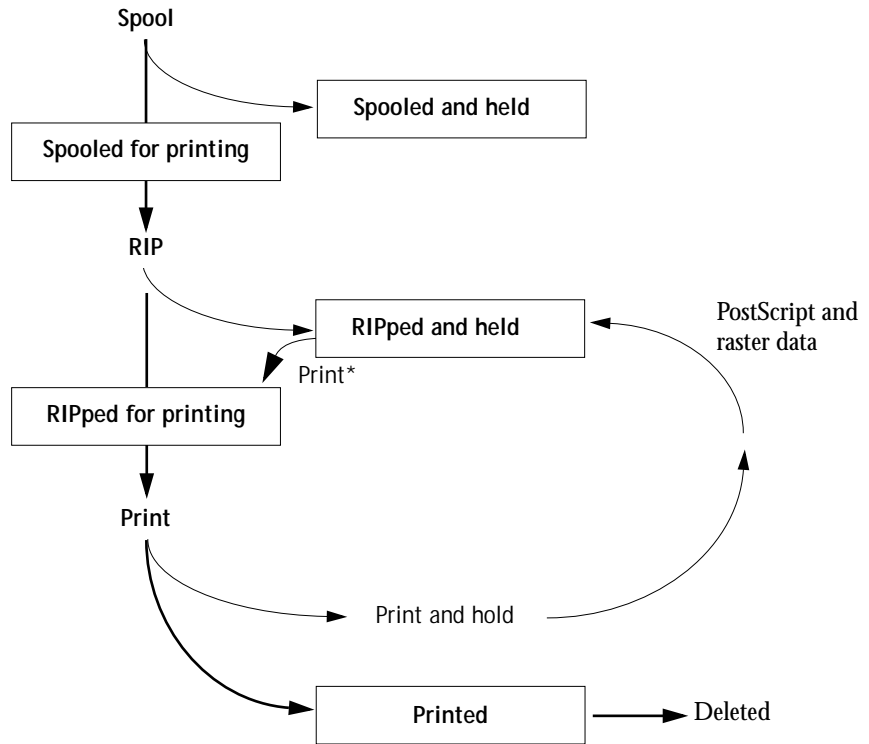
Jobs actively involved in the three processes (spooling, rasterizing, and printing) are listed in the status bars that span the Job List window.

Status bars show the filename and user name for the active process, and an indication of its progress. Each status bar heads the list of jobs that have completed the process. Thus, beneath the Spool status bar, you see a list of spooled files; beneath the RIP status bar, you see a list of rasterized (RIPped) files. Beneath the Print status bar, you see a list of jobs that have already been printed.

NOTE: In the Spool status bar, the filename and user information always appear as “Unknown” (as shown below). This information is not available until the job has finished spooling to the DocuColor 40 CP disk.

Active jobs and Held jobs

You can *hold* a job at any stage of the process we have described, as illustrated below. In the figure, boxes indicate types of job icons you would see in the Job List window.






*A copy of the held job is printed; the held job remains in the RIP area.

Jobs that are held are shown with a yellow icon, just beneath the Spool or RIP status bar. Jobs that are held must be activated with a command in order to print.

Active jobs are shown with white icons; new jobs are added above older jobs.





Job icons

There are three types of icons that are used for both active jobs and jobs on hold.

Icon:	Active jobs: (white icons and rows)	Jobs on Hold: (yellow icons and rows)
  Printer icons	PostScript or raster data headed for printing (top) or after printing (bottom)	PostScript data headed for Print and Hold or job on Hold after printing (Hold)
 Raster icon	PostScript and raster data after printing, ready for fast reprint	PostScript data already rasterized and held

Spool area

The job icons in the Spool area are described below:

Spool area icon:	What it indicates:	How long you see the job:
1  Yellow printer icon Yellow job row	PostScript data from a user on the network; no destination is defined	Until a destination is chosen
2  White printer icon White job row	PostScript data headed for Print	Until the RIP is free
3  Yellow raster icon White job row	PostScript data headed for RIP and Hold	
4  Yellow printer icon White job row	PostScript data headed for Print and Hold	

The Spool area is both the receiving area for jobs from users on the network (Hold queue) and the waiting area for jobs that will be RIPped (jobs in the Spool queue).



Hold queue jobs When printing requires an operator (because the Print queue and Direct connection are disabled), the operator must assign a destination to all jobs received from users on the network (icon 1 in the table above). Once assigned, jobs (icons 2, 3, and 4) move down the Spool queue for processing. All jobs printed to the Hold queue require routing by an operator.

Print queue jobs When printing does not require an operator, network jobs sent to the Print queue appear in the Spool area where they are shown with a white printer icon (icon 2). When they reach the head of the queue, they are RIPped and printed without operator intervention.

Direct connection jobs Jobs printed to the Direct connection are not displayed in the job lists. They are displayed briefly in the status bars (where they cannot be selected) and are included in the Job Log.

RIP area

The job icons in the RIP area are described below:

RIP area icon:	What it indicates:	How long you see the job:
1  Yellow raster icon Yellow job row	Raster data, no destination defined; may have been printed before and held	Until it is deleted or stripped of its raster data and sent to the Spool area
2  White printer icon White job row	Raster data headed for Print in its turn; no hold defined	Until copier is free to print the job

After a job is rasterized, it goes into the RIP area. The RIP area holds only raster data (i.e., jobs that have been rasterized). Jobs in the RIP area are either waiting for the copier to be free (Print queue jobs, icon 2 in the above table), or they are being held.

Held jobs in the RIP area have already been rasterized (RIP and Hold) or they have been printed and their raster data has been routed back to the RIP area (Print and Hold), where they are shown in yellow rows (icon 1).



NOTE: Raster jobs in the RIP area that are waiting to print (icon 2 in the table above) cannot be manipulated by job commands.

Jobs held in the RIP area remain there until the operator deletes them. Printing these jobs does not remove them from the RIP area. Instead, a copy of the job is created and printed.

NOTE: For all rasterized jobs, the print option settings, in addition to the current calibration state of the DocuColor 40 CP, remain with the saved raster data each time the job is reprinted. To print the job with new print option settings and with new calibration data, you must remove the raster data and reRIP the job.

Print area

The job icons in the Print area are described below:

Print area icon:	What it indicates:	How long you see the job:
1  White printer icon White job row	PostScript data only—raster data has been deleted	Until the job limit is reached
2  White raster icon White job row	Raster and PostScript data If RAM is needed to RIP an active job, the raster data is deleted and the job gets the PS icon (icon 1, above)	Until the job is reprinted or the job limit is reached

The Print area, also referred to as the Printed queue, contains jobs that have already been printed. These jobs were assigned the Print destination (white printer icon in the Spool or RIP areas) without any Hold instructions; therefore, they all have white icons and rows.

NOTE: A job row that appears in light red indicates that a PostScript error occurred while printing the job. To see the error, double-click anywhere in the row.

Newly printed jobs are added to the Printed queue, and are shown at the top of the list. Jobs are saved in the Printed queue until the job limit is reached. When the first job over the limit is printed, the oldest job is deleted from the disk. The default job limit is 10 jobs. The value for Jobs Saved in Printed Queue can be changed in Setup by the administrator.

NOTE: If you reprint a job in the Printed queue, the job returns to its original position in the Printed queue after it is printed.

While it is printing, a job consists of PostScript and raster data. The raster data in RAM is not cleared until memory is needed to rasterize the next job. As long as the raster data is intact, the job can be reprinted from the Printed queue. Printed jobs that still have their raster data are represented by a white raster icon in the Printed queue (icon 2 in the previous table); jobs with only PostScript data remaining are represented by a white PS icon (icon 1). If the job was printed from a held raster job (in the RIP area), the raster data in the RIP area remains and can be used to reprint the job after the raster data has been cleared from the Printed queue.

Job commands

Using the commands in the Job menu, you can alter the destinations, priorities and other characteristics of jobs that appear in the WebSpooler window.

Job commands are used to assign a selected job to a new destination or process. These commands are available from the Job menu (see page 3-5). The job commands available at a given time depend on the context; unavailable commands are dimmed.

The job commands available for selected jobs in the Job List window are listed in the following table. The table also describes the effect of each command on raster data associated with the affected job(s).

Choose this:	To do this:	Raster data is:
Delete Job(s)	Delete the job(s)	Deleted
Duplicate Job(s)	Duplicate one or more selected PostScript data jobs in the Spool or Print areas. You can use the duplicate job(s) for different print options or a different destination. (The Duplicate command actually creates a reference to the original job, with the same name)	NOTE: The Duplicate command is not available for raster jobs
Rename	Rename the job (PostScript file with or without raster)	Unaffected, but associated with the new name NOTE: If the renamed job is printed, the Job Log reflects the job's original name.
Hold	Hold the job in the current place (except for a job in the Print area, which is moved to the Spool or RIP area, depending on whether it still has raster data associated with it)	Held in RIP area, if included with job
RIP and Hold	RIP the job and hold it in the RIP area	Held in RIP area indefinitely
Print	Print the job in its turn (RIP it first if it does not have raster data) After printing, keep the printed job in the Print area until the job limit is reached.	Temporarily held in RAM after printing until memory is needed for another job (If the job was printed from a held job in the RIP area, the raster data in the RIP area is kept indefinitely)
Print and Hold (Like the user print option Save Fast Reprint)	Print the job in its turn (RIP it first if it does not have raster data) After printing, hold the PostScript data and the raster in the RIP area	Held in RIP area indefinitely (saved to disk)
Process Next	Give top priority to this job RIP (and then print) it as soon as the processor is free, before other waiting jobs Option is dimmed if there are no other waiting jobs	NOTE: This command is available only for jobs in the Spool area that are not currently held.

Choose this:	To do this:	Raster data is:
Remove Raster	Remove the raster data from a job that has raster data (indicated by a raster icon); leave the PostScript data unaffected	Deleted NOTE: If you remove raster from a job in the RIP area, the job is sent to the Spool area.
Override Print Settings	View and override print settings for a selected job or a group of selected jobs	Possibly deleted and regenerated, depending on whether you change any settings that require re-RIPping
Thumbnail A	Open the selected <i>held</i> raster data job in the Thumbnail A window where you can view a full-screen preview of the job, edit the job, or merge it with raster data from other jobs	May be changed if job is edited
Thumbnail B	Open the selected raster data job (not necessarily a held job) in the Thumbnail B window for viewing or for merging into a job in the Thumbnail A window	Unchanged

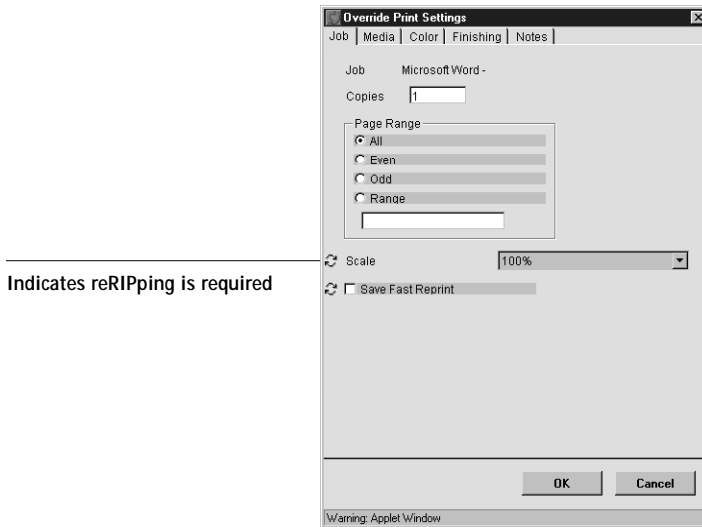
Overriding print settings

When logged in with Operator or Administrator privileges, you can use the Override Print Settings command to check and override the print option settings (properties) of all jobs.

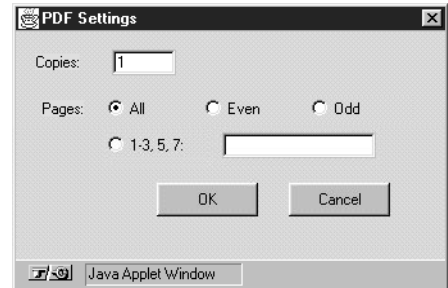
You can use this command for several purposes:

- To override a setting based on printed output or other print device conditions
- To change settings for a duplicate of the original job
- To print a single copy of a job before printing the number of copies required by the user

To change the job options of a job, double-click the job line or select the job and choose Override Print Settings from the Job menu. If necessary, scroll down to see all the various job options.



Override Print Settings dialog box for PostScript files



PDF Settings dialog box for PDF files

The options you set here are the same ones you set from the Print dialog box when you print from an application. For information about print options, see the *Printing Guide*.

For some options, changing the setting requires that the job be reRIPped; these options show an icon to the left of the option name.

For PDF files, you can override only the number of copies and page range from the Properties dialog box.

If you want to retain a copy of the job with its original settings, duplicate the job and rename the duplicate before you change any settings (see “Job commands” on page 3-12).

The Override Print Settings dialog box displays all the job settings encoded by the PostScript printer driver that can be decoded by the DocuColor 40 CP. If you (as operator) have not changed anything, these are the settings a user entered before sending the job.

NOTE: Some print options that are available in the printer driver are not displayed in the Override Print Settings dialog box.

For information on print option settings, see the *Printing Guide*.

Thumbnails and full-screen previews (DocBuilder)

The WebSpooler includes a powerful DocBuilder tool that allows you to preview and edit raster data. (For information on how to identify a raster data job, see page 3-9.) DocBuilder consists of two thumbnail windows and several page-manipulation commands (listed in the Page menu).

The DocBuilder tool can be used in the following ways:

- In the Thumbnail A window, you can see thumbnails of the currently RIPping job, as it is processed, or of any raster data job.
- From the Thumbnail A window you can open a full-screen preview of a raster file.
- Using the Thumbnail A and Thumbnail B windows together, you can merge raster data from more than one file, even if the files were printed from different applications on different computer platforms.

DocBuilder's merge features eliminate the limitations of particular software applications. You can merge raster pages of documents of different types, and even different computer operating systems. You can merge color pages from graphics programs with text pages from a word processor.

Previewing print jobs

You can use the Thumbnail A window to preview pages of the currently RIPping job. You can also use Thumbnail A, as well as Thumbnail B, to preview any raster data job in the RIP or Print areas.

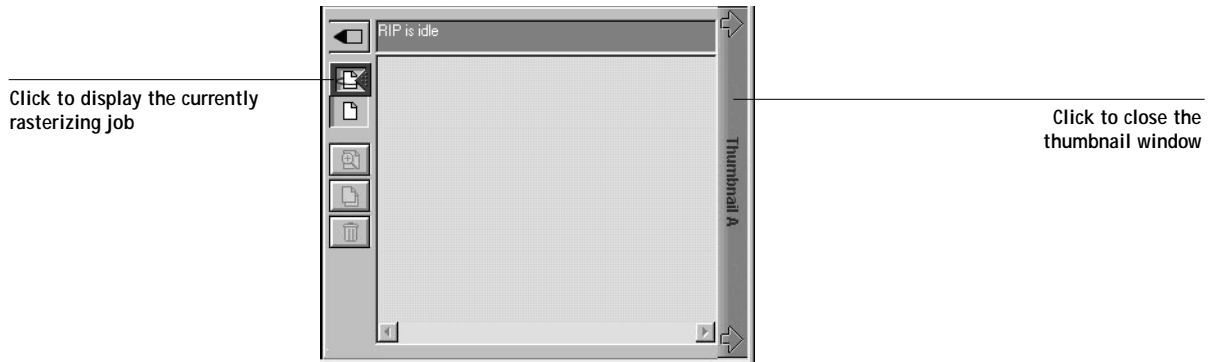
The thumbnail windows also allow you to open an editable thumbnail view of a held raster job in the RIP area and perform electronic collation or document merging. This feature, called DocBuilder, is described on page 3-18.

To see the progress of jobs as they are RIPped, you can leave the Thumbnail A window open in RIP preview mode.

TO VIEW THUMBNAILS OF THE CURRENTLY RIPING FILE:

1. Click the Thumbnail A tab at the right of the Job List window to open the slider.
2. Click the RIP preview icon at the left side of the window.

In this mode, Thumbnail A displays each page of the currently processing job after it has been RIPped.



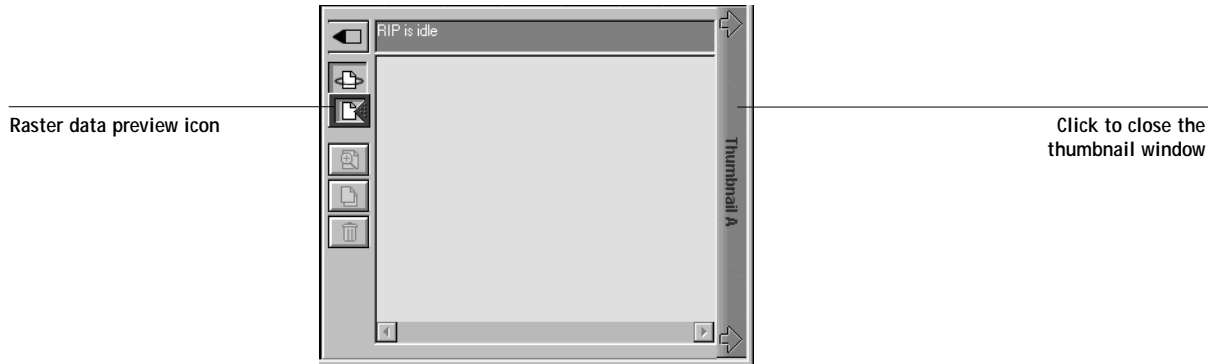
3. Choose a PS file in the Spool or Print area and select RIP and Hold, Print, or Print and Hold.
As pages are RIPped, they are displayed in the Thumbnail A window.
4. When you have finished viewing, click the Thumbnail A tab to close the thumbnail window.

TO VIEW THUMBNAILS OF ANY RASTER DATA FILE:

1. Select any raster data job in the RIP or Print area.
2. Choose Thumbnail A or Thumbnail B from the Job menu.

If you choose Thumbnail A, make sure the raster data preview icon (at the left side of the window) is selected.

NOTE: Wait until all pages have been displayed before opening another raster file with Thumbnail A. If the job contains many pages, it may take some time for the entire job to be displayed.



3. When you have finished viewing, click the Thumbnail A or Thumbnail B tab to close the thumbnail window.

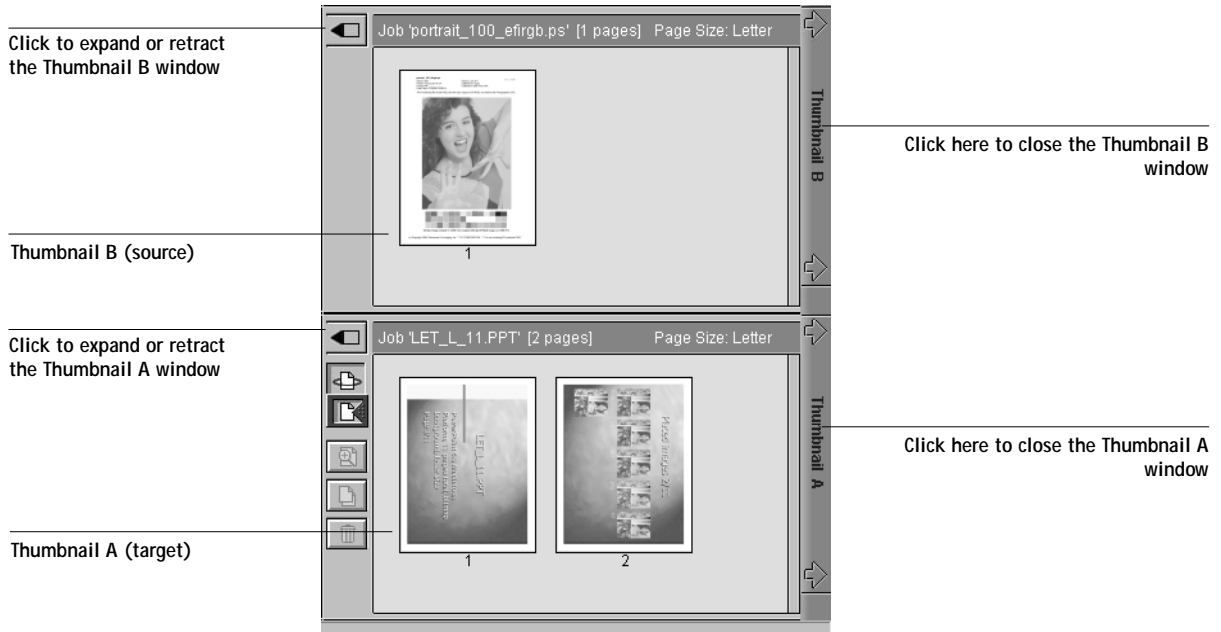
Editing and merging files with DocBuilder

When you select a raster data job and choose the Thumbnail A or Thumbnail B command from the Job menu, the corresponding Thumbnail slider opens automatically, displaying thumbnails of the editable file. To close the Thumbnail slider, click anywhere in the tab along the right edge of the Thumbnail window. When the Thumbnail window is open, the arrows in the tab point to the right, indicating that clicking the tab retracts the slider.

With the Thumbnail A window you can see thumbnail views of any raster data job—that is, any file that is currently RIPping, or any file that has been RIPped and held to disk. You can also use the Thumbnail A window to edit a raster file—you can change the sequence of pages, delete pages, duplicate pages, and copy pages from other raster files into the Thumbnail A window. You can save the edited raster file as a new printable document.

The Thumbnail B window can also display thumbnails of a raster job, and the document displayed in Thumbnail B can be used as a source for editing the document shown in Thumbnail A.

NOTE: Be careful not to delete a Thumbnail job entirely without first saving a copy.



You can merge documents by dragging (copying) one or more entire pages from Thumbnail B to Thumbnail A. This creates a new document in the Thumbnail A window. If you select one or more pages in the Thumbnail A window, the commands in the Page menu give you additional editing possibilities. Multiple undos of Page menu commands are possible.

You can merge pages from multiple documents into the Thumbnail A document by opening documents one after another in the Thumbnail B window. Documents in the Thumbnail B window are view-only, and while you can copy pages from Thumbnail B to Thumbnail A, you cannot edit the Thumbnail B document. A merged document that you create in Thumbnail A can be saved (with a different name) as a new raster data file.

The ability to work with raster files gives you new opportunities to combine documents from different sources into a single printer file. For example, you can combine full color covers and chapter head pages created in a page layout application with two-color text pages created in a document processing application. Or, you can customize a slide presentation by inserting slides from a different presentation.

You can display two raster files at once: a source file and a target file. The target file is displayed in the Thumbnail A window, the source in Thumbnail B. Both files must be held raster jobs in the RIP area.

NOTE: You cannot create a new PostScript file in this process; you must print the merged raster file, which has references to the original PostScript files. Before editing or merging files with DocBuilder, make sure the source files were RIPped using the print option settings and the resident calibration you want for the final output. Raster files edited with DocBuilder cannot be reRIPped.

TO VIEW AND EDIT RASTER DATA JOBS:

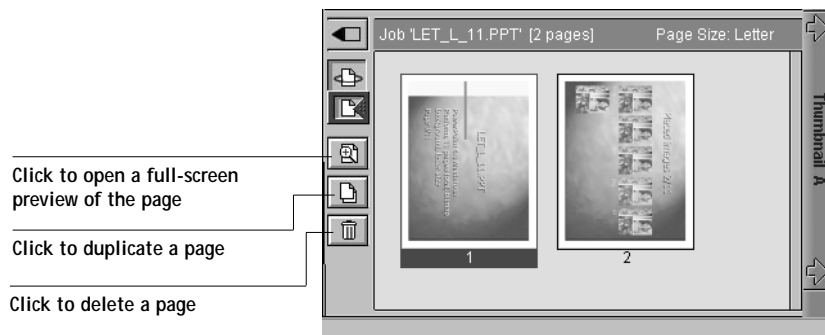
1. Select a raster data job and choose Thumbnail A from the Job menu.

The file must be a held raster job in the RIP area.

2. Select the Page menu to see the commands available for pages in Thumbnail A.

These commands can also be accessed from the buttons along the left side of the Thumbnail A window (see illustration below).

To scroll through the pages in Thumbnail A, you can click in the empty area to the left or right of the slider bar, or click on the arrows.



Delete deletes the currently selected page.

Duplicate duplicates the currently selected page.

Preview opens a full-screen preview of the currently selected page (see "Full-screen previews" on page 3-24).

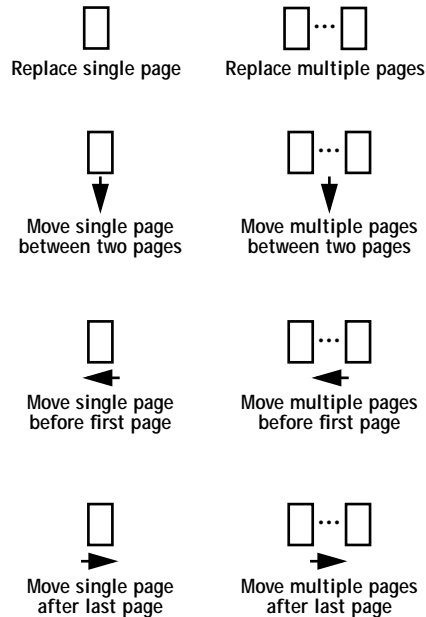
Undo undoes the previous DocBuilder command—this command is available *only from the Page menu*.

3. To move pages within Thumbnail A, left-click to select the page(s) and hold down the mouse button as you drag the selected page(s) to the new location.

Shift-click to select multiple, sequential pages; Ctrl-click to select multiple, non-sequential pages. Make sure to release the Shift or Ctrl key before moving the pages.

If you move the page(s) on top of existing page(s), the page(s) will be overwritten.

If the icon does not have an arrow, the page(s) will be replaced; if the icon has an arrow, the page(s) will be inserted.



4. When you are finished editing, click the Thumbnail A tab.

If you have edited the job, you are prompted to save the job (click Yes) and enter a new name.

5. Enter a new name and click OK.

The new raster file is now in the RIP area, ready to print. If you saved the edited file with a new name, the original source file remains held in the RIP area.

TO MERGE TWO RASTER DATA JOBS:

1. In the Thumbnail A window, display the document you wish to edit.

The file must be a held raster job in the RIP area.

2. Select another source document file (a held job with a raster icon) and choose Thumbnail B from the Job menu.

The Thumbnail B tab opens a second thumbnail view which cannot be edited but can be a source for pages added to the document in Thumbnail A.

NOTE: To merge documents, *the page sizes of the source document and the target document must be the same.*

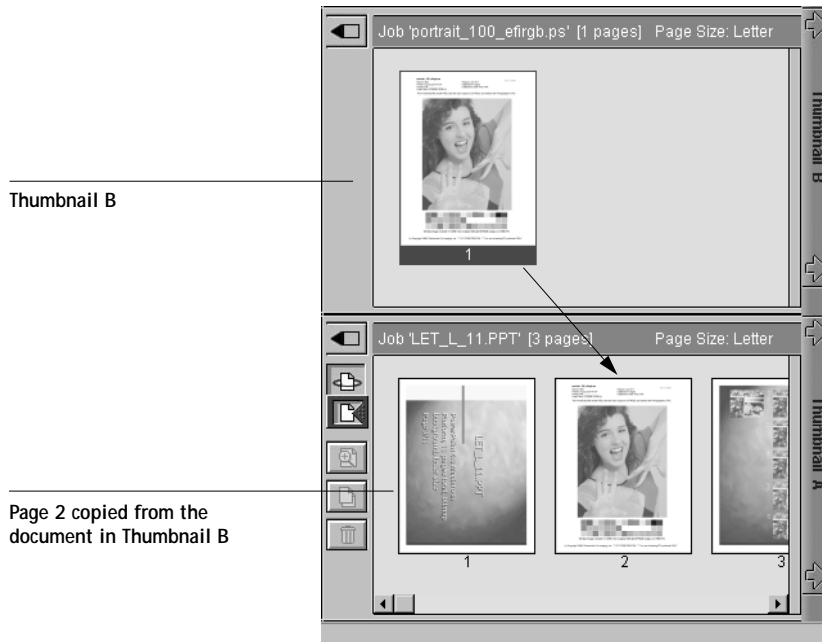
3. In the Thumbnail B window, left-click to select the page(s) and hold down the mouse button as you drag the selected page(s) to the new location in Thumbnail A.

Shift-click to select multiple, sequential pages; Ctrl-click to select multiple, non-sequential pages. Make sure to release the Shift or Ctrl key before moving the pages.

To scroll through the pages in Thumbnail A and Thumbnail B, you can click in the empty area to the left or right of the slider bar, or click on the arrows.

To replace page(s), drag Thumbnail B page(s) on top of page(s) in Thumbnail A; to add page(s), drag the page(s) to a new position between pages, before the first page, or after the last page in Thumbnail A (see the icons on page 3-21).

NOTE: To insert a Thumbnail B page directly after the last Thumbnail A page, drag the Thumbnail B page so that it is just to the right of the last Thumbnail A page and shows an arrow pointing to the right. If the Thumbnail B page is placed too far to the right of the last Thumbnail A page, the Thumbnail B page will replace the last Thumbnail A page.



Multiple undos are available; use the Undo command (from the Page menu) to undo all the way back to your first edit. There is no Redo function.

NOTE: Make sure to save the merged job before deleting any of the source jobs you used to create the merged job.

Thumbnail B pages moved into Thumbnail A adopt some specific attributes of the Thumbnail A job, such as the document and user name. However, many color-related print options that are set in the Thumbnail B page, such as CMYK Simulation and Rendering Style, remain with the specific page. This could result in a merged job being made up of pages with different attributes.

Generally, the print option settings specified for the Thumbnail A job that are adopted by the pages copied from Thumbnail B *do not* require reRIPping to take effect. The one exception is the setting specified for the Save Fast Reprint option, which requires reRIPping if you want to change it.

The print option settings that remain with the pages copied from Thumbnail B into Thumbnail A are generally those that *do* require reRIPping to take effect.

Attributes that do not require reRIPping can be changed for the newly merged job without having to reRIP any original PostScript files. Attributes that require reRIPping result in reRIPping of the original PostScript file(s) associated with Thumbnail A.

4. To close the Thumbnail view, click once on the same tab you used to open it (Thumbnail A or Thumbnail B tab).
5. If you have edited Thumbnail A, you are prompted to save the job (click Yes) and enter a new name. Enter a new name and click OK.

The new raster file is now in the RIP area, ready to print, together with the original source and target files.

NOTE: If you print the edited raster file, it appears in the Job Log with the name of the original job, *not* the new name you specified for the edited job.

Since you cannot create a new PostScript file by merging two raster data jobs, you must print the merged raster file, which has references to the original PostScript files. If a merged job is reRIPped and printed, then only the pages of the original PostScript job in Thumbnail A will be processed and printed.

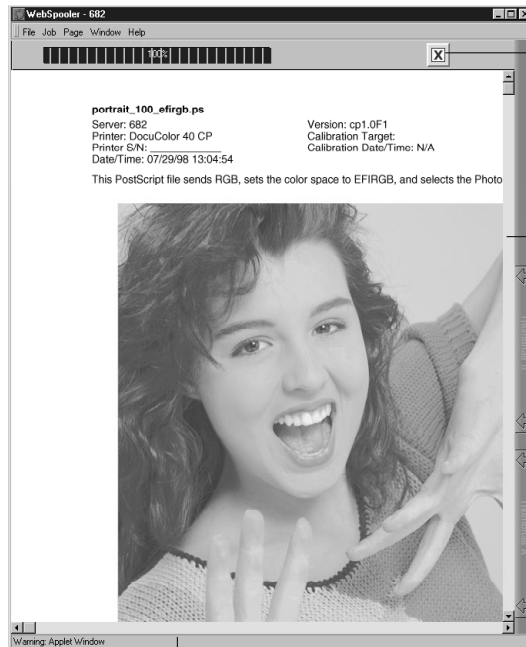
NOTE: In cases where multiple users are connected to the DocuColor 40 CP via WebSpooler and one user makes changes to a Thumbnail A job, not all users may see the results of those changes. If you are unable to view changes in a job, or if selecting a Thumbnail window results in a message indicating zero pages, then close and relaunch WebSpooler.

Full-screen previews

Double-clicking any page in the Thumbnail A window opens a full-screen preview of the page. The full-screen preview is a view-only display, and it takes time to retrieve the data. Once begun, the process cannot be canceled.

NOTE: If you have edited a raster job with DocBuilder, you must *save* the edited file before you can view full-screen previews of all its pages.

Using the icons in the full-screen preview, you can display adjacent pages, rotate the page, or close the preview.



Click to close the full-screen preview

Click in empty spaces or move bar to scroll up or down

Click in empty spaces or move bar to scroll left or right

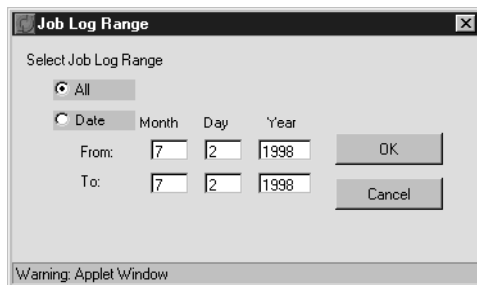
Using the Job Log

From WebSpooler, you can view and print a log of all jobs printed by the DocuColor 40 CP, including jobs downloaded with Downloader.

NOTE: If you are logged in with Administrator privileges, you can delete the Job Log from WebSpooler (see page 3-27). The Job Log is not available if you are logged in with Guest privileges.

TO DISPLAY, UPDATE, PRINT, DELETE, AND EXPORT THE JOB LOG:

1. Choose Show Job Log from the WebSpooler Window menu.
2. Click All or specify a date range.



Job Log Range

Select Job Log Range

☒ All

☐ Date Month Day Year

From: 7 2 1998

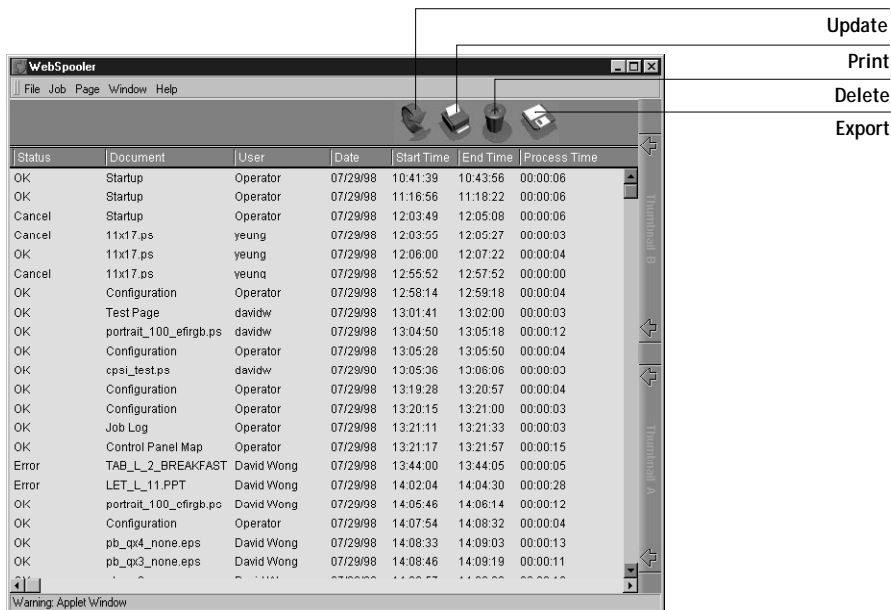
To: 7 2 1998

Warning: Applet Window

3. Click OK.

The Job Log appears in a new browser window.

NOTE: The Delete button appears only if you are logged in with Administrator privileges.



WebSpooler

File Job Page Window Help

Update
Print
Delete
Export

Status	Document	User	Date	Start Time	End Time	Process Time
OK	Startup	Operator	07/29/98	10:41:39	10:43:56	00:00:06
OK	Startup	Operator	07/29/98	11:16:56	11:18:22	00:00:06
Cancel	Startup	Operator	07/29/98	12:03:49	12:05:08	00:00:06
Cancel	11x17.ps	yeung	07/29/98	12:03:55	12:05:27	00:00:03
OK	11x17.ps	yeung	07/29/98	12:06:00	12:07:22	00:00:04
Cancel	11x17.ps	yeung	07/29/98	12:55:52	12:57:52	00:00:00
OK	Configuration	Operator	07/29/98	12:58:14	12:59:18	00:00:04
OK	Test Page	davidw	07/29/98	13:01:41	13:02:00	00:00:03
OK	portrait_100_cfrgb.ps	davidw	07/29/98	13:04:50	13:05:18	00:00:12
OK	Configuration	Operator	07/29/98	13:05:28	13:05:50	00:00:04
OK	cpsi_test.ps	davidw	07/29/98	13:05:36	13:06:06	00:00:03
OK	Configuration	Operator	07/29/98	13:19:28	13:20:57	00:00:04
OK	Configuration	Operator	07/29/98	13:20:15	13:21:00	00:00:03
OK	Job Log	Operator	07/29/98	13:21:11	13:21:33	00:00:03
OK	Control Panel Map	Operator	07/29/98	13:21:17	13:21:57	00:00:15
Error	TAB_L_2_BREAKFAST	David Wong	07/29/98	13:44:00	13:44:05	00:00:05
Error	LET_L_11.PPT	David Wong	07/29/98	14:02:04	14:04:30	00:00:28
OK	portrait_100_cfrgb.ps	David Wong	07/29/98	14:06:46	14:06:14	00:00:12
OK	Configuration	Operator	07/29/98	14:07:54	14:08:32	00:00:04
OK	pb_qx4_none.eps	David Wong	07/29/98	14:08:33	14:09:03	00:00:13
OK	pb_qx3_none.eps	David Wong	07/29/98	14:08:46	14:09:19	00:00:11

Warning: Applet Window

The Job Log displays each job and the following information: status, document name, user name, date, start time, end time, process time, file size, device, paper size, media, number of originals, number of color pages, number of black-and-white pages, total number of pages, Note1, and Note2.

The Status column provides the following information about jobs:

OK	The job was printed normally.
ERROR	An error occurred during processing or printing.
CANCEL	The job was canceled before printing was completed.

4. To update the Job Log, click the Update button.
5. To print the Job Log, choose Print Job Log from the File menu or click the Print button.

The information displayed in the Job Log window prints to the current DocuColor 40 CP. When you print the Job Log, totals are printed for all appropriate columns.

6. If you are logged in with Administrator privileges, you can choose Delete Job Log from the File menu or click the Delete button to clear the Job Log.

The system administrator can also print and clear the Job Log from the Control Panel.

7. To export the Job Log, click the Export button or choose Export Job Log from the File menu.

The information displayed in the Job Log window is saved as a tab delimited file which can be imported into a word processing or spreadsheet application for administration purposes.

Chapter 4: Color Calibration

Calibrating the DocuColor 40 CP ensures consistent, reliable color output. You can calibrate the DocuColor 40 CP in the following ways:

- Using AutoCal from the DocuColor 40 CP Control Panel—AutoCal allows you to obtain measurements from the DocuColor 40 and apply a calibration using a desktop scanner.
- Using Print Calibrator and a scanner or densitometer from a remote computer—By connecting an X-Rite DTP32 automatic scanning densitometer to the serial port on your computer, you can quickly measure color patches and download measurements to the DocuColor 40 CP using Print Calibrator.

This chapter describes the purpose of calibration and provides instructions for all calibration procedures. Calibrating with AutoCal from the DocuColor 40 CP Control Panel is described first; calibrating with Print Calibrator is described on page 4-6.

For information on advanced calibration and simulation features available with DocuColor Print Calibrator, such as editing targets and creating custom targets, see Chapter 5.

Print Calibrator procedures described in these chapters are fundamentally the same for Windows and Mac OS computers. The main differences are the interface cable and the port used to connect to the densitometer. The term “computer” is used to refer to any computer running Print Calibrator.

Introduction to color calibration

A calibration is generated from two components that originate separately: *measurements* and a *target*.

- Measurements represent the actual color behavior of the DocuColor 40; they are computed from readings taken by a scanner or a densitometer.
- Targets represent the goal of printing, such as obtaining pleasing color from the DocuColor 40 or simulating another print device. A DocuColor 40-specific target is provided with the DocuColor 40 CP.

Calibration generates curves describing various color densities based on a specified target and a set of measurements that you provide.

Once you have calibrated the DocuColor 40 CP with AutoCal or Print Calibrator, a calibration is stored on the DocuColor 40 CP; this calibration is referred to as the “resident calibration.” The resident calibration is applied to *all* print jobs unless bypassing of calibration is specified by setting the CMYK Simulation print option to Match Copy (see the *Printing Guide*).

NOTE: Changing the resident calibration has the potential to affect *all* jobs for *all* users, so you may want to limit the number of people authorized to perform calibration. An Administrator password can be set to control access to calibration from the DocuColor 40 CP Control Panel. Administrator and Operator passwords can be set from WebSetup to control access to calibration with Print Calibrator.

Understanding calibration

The DocuColor 40 CP allows you the flexibility to choose a standard calibration or a custom calibration. A standard calibration uses the target provided with the DocuColor 40 CP with a new set of measurements.

Calibration allows you to:

- Maximize the color reproduction capabilities of the DocuColor 40 CP
- Ensure consistent color quality across time
- Produce consistent output across DocuColor 40 CP servers of the same engine
- Achieve better color matches when reproducing spot colors, such as PANTONE colors or other named color systems
- Optimize the DocuColor 40 CP for using ColorWise Color Rendering Dictionaries (CRDs) and CMYK simulations, and for using ICC-compatible profiles when printing RGB color data

Chapter 5 discusses advanced calibration techniques, including how to:

- Use the DocuColor 40 CP as a proofing system by printing press simulations
- Create custom calibration and simulation targets

How calibration works

Success in obtaining satisfactory print quality from a digital color printer depends on many factors. Among the most important are establishing and maintaining optimal toner densities. Density is a measure of the light absorbed by a surface. By carefully regulating toner densities, you can obtain consistent printed color.

Even with a calibrated system, toner density is affected by such variables as room humidity and service settings; it also tends to drift over time. Regular measurement detects day-to-day variations in densities, and calibration corrects for them.

Calibration works by creating calibration curves on the DocuColor 40 CP that compensate for the difference between actual and desired density values.

Calibration curves and target curves are the graphic equivalent of *transfer functions*, which are mathematical descriptions of changes that will be made to the data you start with. Transfer functions are often graphed as Input/Output curves.

Target curves (targets, for short) result from applying one or more transfer functions in sequence. The server generates calibration curves after comparing measured values to the final target values for each of the four toner colors.

Measurements

Measurements files contain numerical values that correspond to the toner density produced by the DocuColor 40 when it prints solid cyan, magenta, yellow, and black, and graduated tints of those colors.

To create a measurements file, you first print a page of color patches from the Control Panel or from Print Calibrator to the DocuColor 40. Then you measure the patches, using either a desktop scanner or an X-Rite DTP32 densitometer. The new measurements are automatically downloaded to the DocuColor 40 CP.

You can print a calibration Comparison Page showing the result of using the new measurements with any of the current targets. When you are satisfied with a particular combination of measurements and target, you apply the calibration to the DocuColor 40 CP; this becomes the new resident calibration.

NOTE: You might also be able to create measurements with a different brand Status T densitometer if the densitometer manufacturer provides utility software to create a measurements file.

Targets

Target files define desired calibration results. A copier-specific target file is provided with the DocuColor 40 CP. You can create additional custom targets by modifying an existing target with Print Calibrator. When you calibrate the DocuColor 40 CP, you can select the target file that corresponds to the typical printing goals at your site. This becomes the resident calibration target that is used by default.

You can store targets on the computer where you use Print Calibrator, on another connected disk, or on the DocuColor 40 CP disk (or all three).

Scheduling calibration

In general, you should calibrate the DocuColor 40 CP at least once a day, depending on the volume of print jobs. If it is very important to maintain consistent colors, or if the DocuColor 40 is subject to wide fluctuations in temperature or humidity, calibrate every few hours. Calibrate when you change paper stock. In general, to get the best performance from the DocuColor 40, calibrate whenever there is a noticeable change in print quality.

If you need to split a print job into two or more batches, it is especially important to calibrate before printing each batch.

You should also calibrate the DocuColor 40 CP system after DocuColor 40 maintenance. However, because the DocuColor 40 may be less stable immediately after maintenance, wait until you have printed approximately 50 pages before you calibrate.

NOTE: Output from the DocuColor 40 is very sensitive to changes in temperature and humidity. To minimize these effects, the DocuColor 40 should not be installed near a window or in direct sunlight, or near a heater or air conditioner. Paper is sensitive to climate changes as well, and should be stored in a cool, stable environment.

The DocuColor 40 has a self-calibration feature (Automatic Gradation Adjustment, or AGA) that optimizes toner densities after scanning two test prints on the DocuColor 40 glass. The DocuColor 40 has a self-calibration feature that optimizes toner densities. If you never calibrate the DocuColor 40 CP from Print Calibrator or from the Control Panel, the self-calibration feature can improve the color output of print jobs. Using the DocuColor 40's self-calibration feature alone will not necessarily bring output densities from the DocuColor 40 to the optimal values for DocuColor 40 CP printing. However, if you regularly calibrate the DocuColor 40 CP, your print jobs can sometimes be improved by asking a service technician to disable the DocuColor 40's self-calibration feature.

The DocuColor 40 allows you to adjust printed color from its touch panel display. You can typically increase or decrease toner density for one or all toner colors. These control panel settings affect copies made from the DocuColor 40 glass, and may affect DocuColor 40 CP output as well. If they do, make sure these settings remain the same (preferably at a neutral position) prior to calibration, and from one print job to the next. If you change these settings, calibrate the DocuColor 40 CP when you have finished changing settings.

Print some standard color pages such as the Color Charts from the Control Panel and the Color Reference pages included with the user software (see *Getting Started*). All of these pages include fully saturated color patches and pale tints of cyan, magenta, yellow, and black. Images with skin tones offer a very good basis for comparison. You can save and compare pages you printed at different times. If there is a noticeable change in appearance, you should calibrate the DocuColor 40 CP system.

If the solid density patches (100% cyan, magenta, yellow or black) look less saturated with time, show the pages to the DocuColor 40 technician to find out whether adjusting the DocuColor 40 can improve the output.

Checking calibration status

You can check whether the DocuColor 40 CP is calibrated, what target was used, and when the printer was last calibrated. You can view information about the last calibration:

- By printing a Configuration page or Test Page from the Control Panel.

- With Print Calibrator, by choosing Server Status from the Server menu (see page 4-15).

Calibrating with AutoCal from the Control Panel

You can calibrate the DocuColor 40 CP from the Control Panel using AutoCal, which calibrates the DocuColor 40 CP using a desktop scanner as a densitometer. If an Administrator password has been set, you will need it for calibration.

For instructions on using the DocuColor 40 CP Control Panel, and for more details on the AutoCal options, see the *Configuration Guide*.

Connecting the scanner to the DocuColor 40 CP

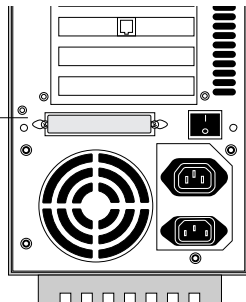
Print Calibrator is designed to work with a desktop scanner. Before you calibrate the DocuColor 40 CP, you need to connect the scanner to prepare for measuring the printed patches. For additional information on setting up and using the scanner, see the documentation included with it.

NOTE: You will need the SCSI cable included in the Accessory Kit (part number 45000257) to connect the scanner to the DocuColor 40 CP. Do *not* use the cable that is included with the scanner.

TO CONNECT THE SCANNER TO THE DOCUCOLOR 40 CP:

1. Turn off the DocuColor 40 CP.
2. Connect the larger end of the SCSI cable to the SCSI port on the back of the DocuColor 40 CP.

SCSI port (shown with terminator installed)



3. Connect the smaller end of the SCSI cable to the DB-7 port on the scanner.
4. Plug in and turn on the scanner.
5. To perform calibration, follow the instructions for using AutoCal below.

Using AutoCal

After you have set up and connected the scanner to the DocuColor 40 CP as described above, use the following procedure to calibrate with AutoCal.

For information on error messages you may see during the AutoCal procedure, see “AutoCal error messages” on page A-8.

NOTE: To calibrate using AutoCal, you will need the Kodak Gray Scale strip that came in the media pack with your DocuColor 40 CP.

TO ACCESS AND USE AUTOCAL:

1. Reboot the DocuColor 40 CP, and be ready to press a button at the Control Panel shortly after startup diagnostics.
2. Press any key when the DocuColor 40 CP message “For software update or setup, press any key.” appears.
3. Choose Run Setup.
4. From the Setup menu, choose Calibration.
5. From the Calibration menu, choose Set Up Calibration.
6. For Tray, choose the paper source for the patch page.
LTR/A4 prints 21 patches per color; 11x17/A3 prints 34 patches per color.
7. Choose Calibrate.
The Select Target screen appears.

8. Select the target.

You can choose from the list of all targets on the DocuColor 40 CP. This includes the target included with the DocuColor 40 CP and any custom targets you have created with DocuColor Print Calibrator.

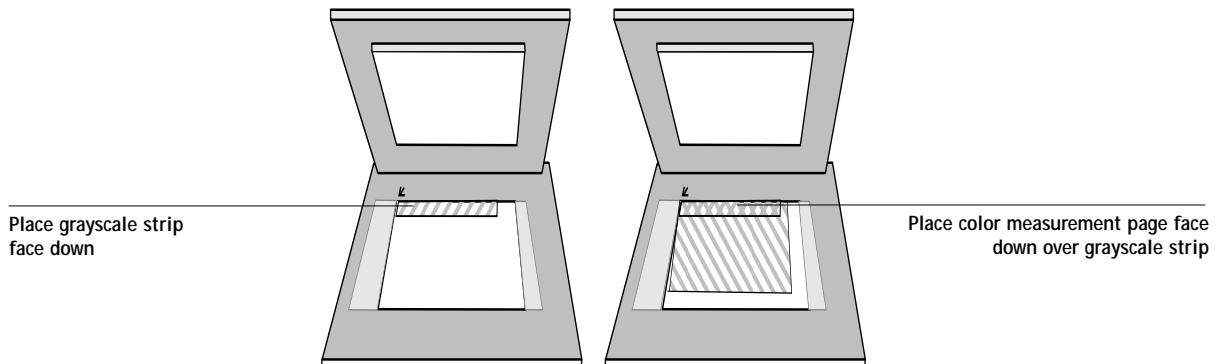
9. When prompted, select Yes to print the measurement page.

This page is comprised of swatches of color that will be measured by the scanner and then compared to the target color values.

After the page is printed, the Measure Page screen is displayed.

10. Select Yes in the Measure Page screen.

11. When prompted on the Control Panel, place the Kodak Gray Scale strip face down along the top of the scanner glass.



12. Place the color measurement page face down over the grayscale strip.

Align the top-left corners of the grayscale strip and the color measurement page with the arrow at the top-left corner of the scanner glass.

Make sure the patches on the grayscale strip do not overlap the color patches.

13. Close the scanner lid, being careful not to move the grayscale strip and color measurement page.

14. Select OK.

Status messages display the progress of scanning and calculating measurements.

15. When prompted to Print Comparison Page, select Yes.

This page provides you with a preview of the selected calibration.

16. When prompted to overwrite calibration, select Yes.

17. Select Yes to confirm.

Status messages display progress information. The new calibration becomes the resident calibration.

18. When calibration is complete, choose Exit Calibration.

This automatically restarts the DocuColor 40 CP.

Removing calibration

It is also possible to remove calibration from the DocuColor 40 CP. In general, it is not necessary because any new calibration replaces the existing one.

TO REMOVE CALIBRATION FROM THE CONTROL PANEL:

1. From the Control Panel, access the Calibration menu as described on page 4-7.
2. Choose Remove Calibration.
3. When prompted, verify that you want to proceed with removing calibration.

The current calibration curves are removed, and a default calibration is restored.

Calibrating with Print Calibrator

Print Calibrator allows you to calibrate from a computer networked to the DocuColor 40 CP. You can calibrate to the target provided with the DocuColor 40 CP as described in this chapter, or you can customize targets and calibration curves to suit the specific needs of your printing environment as described in Chapter 5. Print Calibrator is designed to work with the X-Rite DTP32 reflection densitometer so that color measurements are entered automatically. You can also use color measurements from a desktop scanner.

Using a scanner

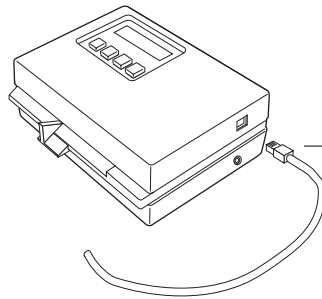
If you are using the scanner, you must perform calibration from the Control Panel before using Print Calibrator. Because the scanner is connected to the DocuColor 40 CP instead of your computer, the color measurements file from the scanner must be stored on the server before you can use Print Calibrator.

Using a densitometer

Before you calibrate the DocuColor 40 CP, you need to connect, configure, and calibrate the densitometer to prepare for measuring the printed patches (see “Calibrating the densitometer” on page 4-23). For additional information about setting up and using the densitometer, see the documentation included with it.

TO CONNECT THE X-RITE DTP32 TO THE COMPUTER:

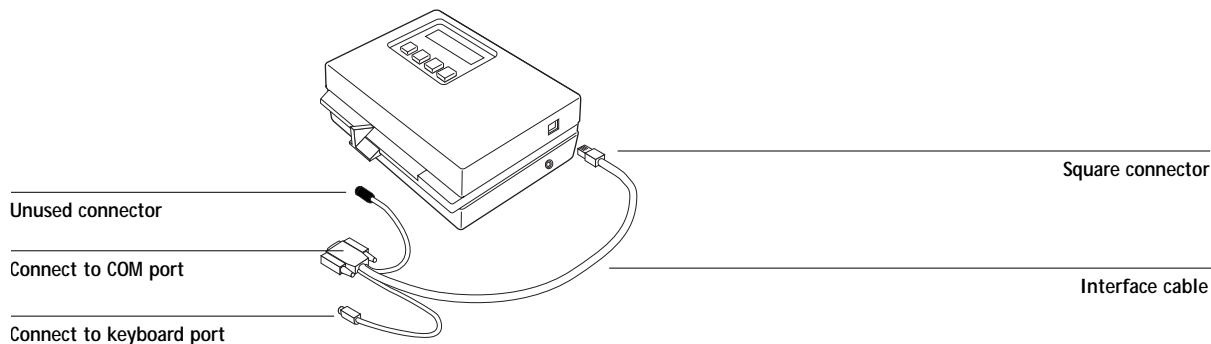
1. Turn off the computer.
2. Plug the square end of the interface cable (like a modular phone plug) into the I/O port on the side of the X-Rite DTP32.



Square connector

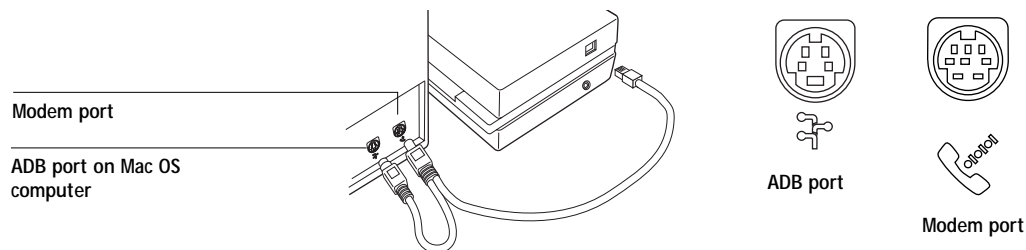
3. Attach the connector to the computer.

For a Windows computer, attach the 9-pin connector to the COM1 or COM2 port on the computer and tighten the screws.



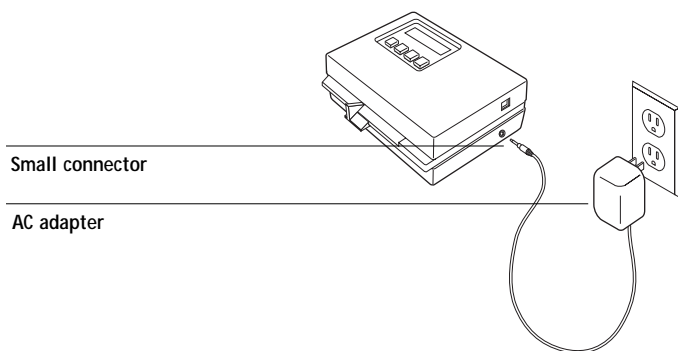
For a Mac OS computer, use the Macintosh interface cable to connect the 8-pin DIN plug to the printer or modem port of the computer.

Connect the 4-pin DIN plug to an ADB port of the Mac OS computer.



4. Use the optional AC adapter (available from X-Rite) to provide power.

Plug the small connector on the adapter cable into the side of the X-Rite DTP32 and plug the adapter into a wall outlet.



5. Turn on the computer.
6. Calibrate the densitometer (see page 4-23).
7. Use Print Calibrator to calibrate the DocuColor 40 CP (see the next section).

TO USE PRINT CALIBRATOR:

1. Launch Print Calibrator and connect to the server you want to calibrate.

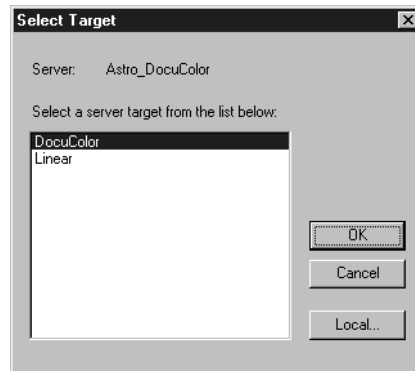
To calibrate a different DocuColor 40 CP, choose Open from the File menu.

For instructions on configuring the connection to the DocuColor 40 CP from a Windows computer, see *Getting Started*.

2. If this is the first time you are calibrating, you are prompted to select a target.

The first time you use Print Calibrator, you see only the target provided with the DocuColor 40 CP. You can store additional targets on the DocuColor 40 CP and on your computer. You can designate any target stored on the DocuColor 40 CP as the resident target.

The initial default target is the DocuColor 40 target; it is the one with the DocuColor 40 device name.

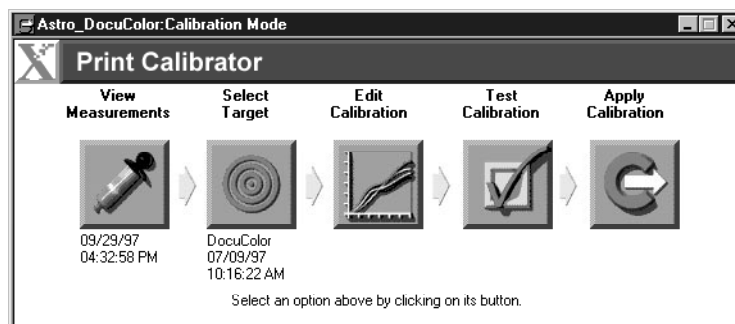


3. Select a target and click OK.

The target you choose becomes the default target. The target can be changed independently of your measurements.

The Calibration Mode window

The Calibration Mode window of Print Calibrator has large buttons which indicate the sequence for the main Print Calibrator functions. There is a menu bar with File, Edit, Measurements, Server, and Window menus, and a status message at the bottom of the window. The functions that are unavailable at any particular time are dimmed and cannot be selected.

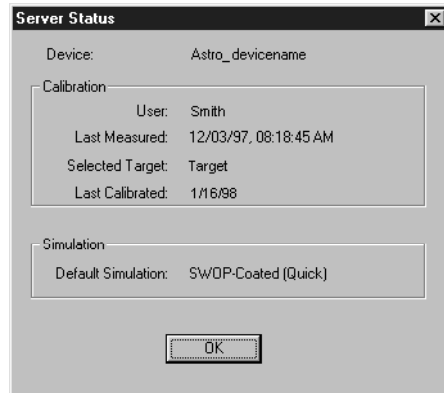


The buttons and their actions are:

- **View Measurements**—Displays a table of density values in the current measurements file. Below the button is the date of the active measurements.
- **Select Target**—Allows you to select a new target for calibration or for customizing. Below the button is the name and creation date of the currently selected target. This target is not necessarily the resident calibration target used by the DocuColor 40 CP.
- **Edit Calibration**—Allows you to view the current measured and target curves and customize the selected target.
- **Test Calibration**—Prints a page so that you can view the results of calibration before updating the resident calibration on the DocuColor 40 CP.
- **Apply Calibration**—Updates the resident calibration on the DocuColor 40 CP.

In order to Apply Calibration to the DocuColor 40 CP, you must have a Measurements file and a Target.

To view current calibration information, choose Server Status from the Server menu.



If the DocuColor 40 CP is calibrated, the Server Status dialog displays the user name or login name of the person who last calibrated the DocuColor 40 CP, the name of the current DocuColor 40 CP, the date and time of the current measurement file, the name of the resident calibration target, and the date and time of the most recent calibration.

Measurements

Measurements files provide toner values that correspond to standard color patches. Typically, you measure a page of patches with a densitometer and the measurements are loaded on the DocuColor 40 CP.

The creation date and time of the current measurements file appears below the Measurements button in the Calibration Mode window.

NOTE: For demonstration purposes only, if you do not have a measurements file, you can use the DEMO.MEA file on the User Software CD. This file should *not* be used to calibrate the DocuColor 40 CP.

Measuring values with a DTP32 densitometer

To create a measurements file you print a patch page and feed it into the densitometer. The densitometer scans the density of the patches on the page and automatically transmits the measured values to DocuColor Print Calibrator.

After each column of patches is scanned, you move the page to scan another column. The DTP32 densitometer has an adjustable strip guide to the right of the strip entrance. The density measurements are used to create a Measurements file. In general, valid measurements for all patches fall within the range of 0 to 3.05. Values between -0.01 and +0.005 are shown in DocuColor Print Calibrator as 0. Values that appear in the Measurements window as negative numbers might indicate a problem with the densitometer.

TO PRINT PATCHES FOR MEASUREMENT:

1. From the Calibration Mode window, choose Print Patch Page from the Measurements menu.
2. Select a page size and paper tray.

Letter/A4 prints 21 patches per color; 11x17/A3 prints 34 patches per color.

The DocuColor 40 CP downloads the patch page to the DocuColor 40. The patch page has four columns of progressively less saturated tints of each process color.

TO PRINT SPECIAL PATCHES FOR CALIBRATING:

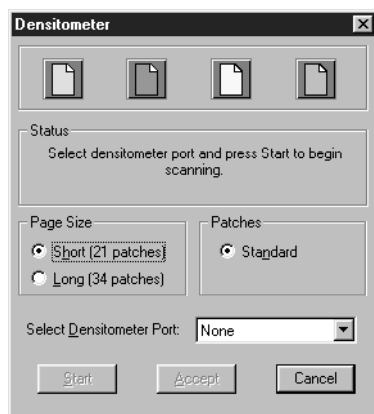
- With Downloader for Windows, download one of the following from the C:\files\Calibrat folder on the User Software CD:
Custom21.ps or Standard21.ps (21 patches)
Custom34.ps or Standard34.ps (34 patches)

With Downloader for Mac OS, download one of the following from the Color Files:Calibration folder on the User Software CD:
Custom21.ps or Stand21.ps (21 patches)
Custom34.ps or Stand34.ps (34 patches)

These files are PostScript measurements files. Custom21.ps and Custom34.ps are provided to enable you to download measurement patches that incorporate the copier's current calibration set, while Standard21.ps and Standard34.ps are provided to enable you to download standard measurement patches that ignore the copier's current calibration set. These files are provided for expert users and should not be used for day-to-day calibration.

TO MEASURE CALIBRATION PATCHES WITH AN X-RITE DTP32:

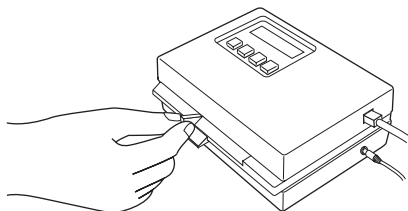
1. Make sure your X-Rite DTP32 is connected (page 4-10) and calibrated (page 4-23).
2. Choose Densitometer from the Measurements menu.



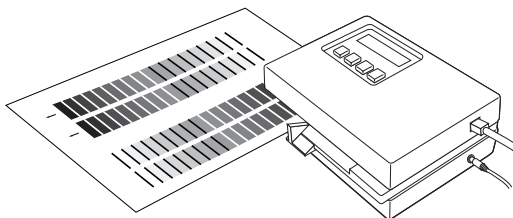
3. Select the page size that matches the patch page you printed.
The Long page size has more patches with more finely distinguished color gradations.
4. In the Select densitometer port pop-up menu, choose the port with the densitometer interface cable.
If the densitometer screen does not display MAIN MENU, for example after calibrating the densitometer, press the two MENU buttons at the same time.
5. Click Start.
6. Follow the on-screen instructions to measure patches.

7. When prompted, position the pointer on the strip guide to 15.

The first column you'll measure is the cyan column.



8. With the arrow above the cyan column pointing towards the densitometer, align the right side of the patch page with the strip guide.



9. Insert the patch page into the densitometer until it rests against the drive rollers and the motor is activated.

There may be a slight hesitation before the rollers start.

10. Hold the page against the guide to prevent any skewing while the strip is being measured.

After the strip is measured, Pass #1 of 1 OK! appears in the densitometer display. Transmitting Data appears briefly after each pass.

11. When prompted (onscreen and on the densitometer), move the strip guide to 30 and feed the patch page to measure the magenta column.

After the magenta strip is measured, Pass #1 of 1 OK! appears in the densitometer display.

12. Turn the patch page around so that the arrow above the yellow column is pointing toward the densitometer.

Leave the strip guide set to 30.

13. When prompted, align the right side of the patch page with the strip guide and measure the yellow column.

After the yellow strip is measured, Pass #1 of 1 OK! appears in the densitometer display.

14. When prompted, move the page guide to 15 and measure the black column.

After the black strip is measured, Pass #1 of 1 OK! appears in the densitometer display.

NOTE: If there is a problem measuring a color, follow the instructions on the densitometer to remeasure it.

15. When all four columns have been measured, click Accept in the Densitometer window.

The Densitometer window closes; the date beneath the Measurements button is updated to the current date because the measurements have been saved to the DocuColor 40 CP.

TO SAVE THE MEASUREMENTS FILE:

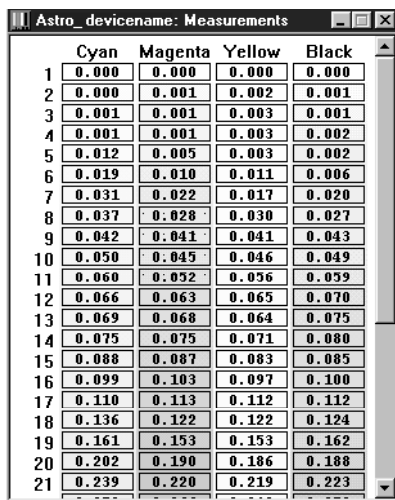
- Choose Export from the Measurements menu to save the measurements file to your computer hard disk.

If you save the measurements file to your hard disk, use it only as a backup for your own reference. You can import this file later without having to remeasure, but this is usually not recommended. For optimal calibration, use a new measurements file based on current densitometer values.

For your information, exported measurements files are tab-delimited ASCII files that you can open in a word processing, spreadsheet, or database program.

TO VIEW STORED MEASUREMENT VALUES:

- Click the View Measurements button to view values in the current measurements file.



	Cyan	Magenta	Yellow	Black
1	0.000	0.000	0.000	0.000
2	0.000	0.001	0.002	0.001
3	0.001	0.001	0.003	0.001
4	0.001	0.001	0.003	0.002
5	0.012	0.005	0.003	0.002
6	0.019	0.010	0.011	0.006
7	0.031	0.022	0.017	0.020
8	0.037	0.028	0.030	0.027
9	0.042	0.041	0.041	0.043
10	0.050	0.045	0.046	0.049
11	0.060	0.052	0.056	0.059
12	0.066	0.063	0.065	0.070
13	0.069	0.068	0.064	0.075
14	0.075	0.075	0.071	0.080
15	0.088	0.087	0.083	0.085
16	0.099	0.103	0.097	0.100
17	0.110	0.113	0.112	0.112
18	0.136	0.122	0.122	0.124
19	0.161	0.153	0.153	0.162
20	0.202	0.190	0.186	0.188
21	0.239	0.220	0.219	0.223

Print Calibrator displays the current measurements on the DocuColor 40 CP. They are the measurements that were stored on the DocuColor 40 CP when you last clicked Accept.

Testing and applying calibration

You can view a sample calibration before applying it to the DocuColor 40 CP as the resident calibration. Since the measurements have already been updated, you are actually checking the combination of your measurements with one or more targets.

You can use the Comparison Page provided with the DocuColor 40 CP to test a calibration before applying it. This page shows a comparison of uncalibrated and calibrated data.

The Comparison Page provides the following calibration information:

RGB using Color Rendering Dictionary section

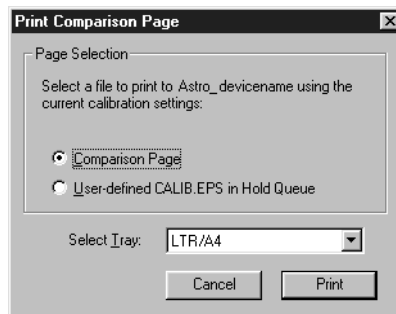
- **Name**—the name of the DocuColor 40 CP defined in Setup
- **Model**—the DocuColor 40 CP model name and DocuColor 40 model
- **Target**—the currently selected target in Print Calibrator, not necessarily the target for resident calibration on the DocuColor 40 CP
- **Measurements**—how measurements were obtained
- **Rendering Style**—the default rendering style specified in Setup
- **Date & Time**—when the Comparison Page was printed

For a description of the information in the section of the page labeled “Press CMYK using Simulation” see page 5-19.

You can also create your own comparison page. To do this, create a PostScript or an EPS (Encapsulated PostScript) file and name it Calib.eps. Use Downloader to download the Calib.eps file to the Hold queue of the DocuColor 40 CP.

TO TEST AND APPLY CALIBRATION:

1. Click **Test Calibration** in the Calibration Mode window.
2. Select a page, choose a paper tray, and click **Print**.



3. If you are satisfied with colors on the printed page, click **Apply Calibration**, and click **Continue** to update the resident calibration.

Or if you are not ready to apply the calibration, you can print a **Comparison Page** with a different target or saved measurements file.

4. Select the target or measurements file, and click the **Test** button.
5. When you have finished working with DocuColor Print Calibrator, choose **Exit** (Windows) or **Quit** (Mac OS) from the **File** menu.

Calibration checklist

Once you have calibrated the DocuColor 40 CP and, if necessary, adjusted your target to get satisfactory output, calibrating again is just a matter of taking new color measurements and applying them to the current target. A summary of the steps follows.

Prepare the densitometer

- ☐ Connect and configure the densitometer.
- ☐ If color is critical, calibrate the densitometer. Otherwise, wait until you are prompted to do so.

Use Print Calibrator

- ☐ Start Print Calibrator.
- ☐ Check the target indicated in the main window. This is your current target.
- ☐ Choose **Print Patch Page** from the **Measurements** menu.
- ☐ Choose **Densitometer** from the **Measurements** menu.
- ☐ Choose the densitometer port and click **Start**.
- ☐ Pick up the patch page from the DocuColor 40 and feed it into the densitometer, following the prompts in the **Densitometer** dialog box on the **Print Calibrator** screen.
- ☐ When you have measured all four colors, click **Accept** in the **Densitometer** dialog box.

Check the results

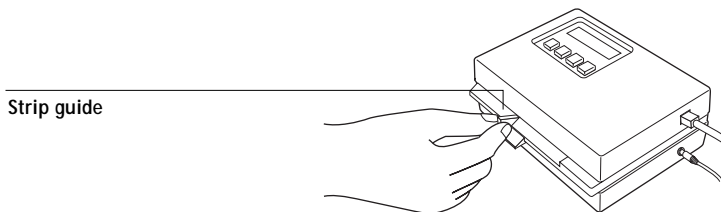
- ☐ Click Test in the main window to print a calibration Test Page.
- ☐ Compare the calibrated and uncalibrated color. If the result of using the new measurements is satisfactory, click Apply Calibration. If not, either measure again or edit the target, and test once more before clicking Apply Calibration.
- ☐ Click OK in the confirmation dialog boxes and close Print Calibrator.

Calibrating the densitometer

You will need the black-and-white Auto-Cal strip included with the densitometer. Calibrating the densitometer does not require DocuColor Print Calibrator.

TO CALIBRATE THE X-RITE DTP32:

1. Connect the densitometer to the computer and supply power (see page 4-10).
2. On the X-Rite DTP32, simultaneously press the two buttons marked MENU.
The words MAIN MENU appear in the display.
3. Press the p1 key until p2 appears.
4. Press the cal key.
CALIBRATION appears in the display.
5. Press the den key.
CALIBRATING TRANSMISSION is displayed, followed by the words INSERT CAL STRIP.
6. Position the strip guide at 5.



7. Insert the arrow end of the AutoCal strip into the entrance of the X-Rite DTP32 until the roller starts pulling the strip.

READING appears momentarily, followed by the density values and CALIBRATION OK.

If UNRECOGNIZABLE STRIP appears, try cleaning the strip (see the X-Rite DTP32 Operating Manual).

8. Start Print Calibrator and proceed to calibrate the DocuColor 40 CP (see page 4-16).

Recalibrate the densitometer at least once month. For critical color, calibrate the densitometer every time you calibrate the DocuColor 40 CP.

Chapter 5: Advanced Print Calibrator Topics

This chapter describes advanced features of Print Calibrator, including customizing calibration and simulation targets. For introductory information about Print Calibrator and for instructions on performing calibration, see Chapter 4. For information on the simulation capabilities of the DocuColor 40 CP, see the *Printing Guide*.

The Print Calibrator procedures described in these chapters are fundamentally the same for Mac OS and Windows computers. The main differences are the interface cable and the port used to connect to the densitometer. The term *computer* is used to refer to any computer running Print Calibrator.

The following section describes the advanced *calibration* features of Print Calibrator. For information on working with *simulations*, see “Using advanced simulation features” on page 5-11.

Using advanced calibration features

Print Calibrator offers additional flexibility for advanced users. You can:

- Use a different measurements file stored on your computer
- Select a different target when your printing goals change
- Edit an existing target to suit your needs, test it, save it as a custom target, and save it on the DocuColor 40 CP
- Save measurements as a target
- Back up the targets that are stored on the server
- Remove targets from the server

Choosing a measurements file

Although you can import a saved measurements file, the measurement file you use should reflect the current color behavior of the copier. Therefore, import saved measurements only if you have reason to doubt your current measurements, or if you don't have access to a scanner or densitometer. You cannot edit measurement values with Print Calibrator.

NOTE: The measurements file is copied to the server as soon as you load a new one. It is also copied as soon as you accept new measurements in the Densitometer dialog box (see Chapter 4).

Any measurement accepted or imported into DocuColor Print Calibrator automatically becomes *the* measurements file for the connected DocuColor 40 CP. This measurements file is used to create the resident calibration as well as all the other calibrations stored on the DocuColor 40 CP.

NOTE: You should view or back up the current measurements before changing them.

TO USE A MEASUREMENTS FILE:

1. To view the density values in the current measurements file, click the Measurements button.
2. To back up the measurements, choose Export from the Measurements menu and enter a descriptive name.
3. To use a different stored measurements file, choose Import from the Measurements menu and select a saved measurements file from your computer.

Working with targets

The target file provided with the DocuColor 40 CP contains desired calibration goals. You can view your current measurements and compare them with the current target. You can also edit the target file and save the changes as a new target file. This allows you to fine-tune the calibration on the DocuColor 40 CP to meet your exact specifications.

Custom targets are always based on an existing target. Select the target to use as a base for the custom target on a target. In most cases, you'll use the copier target.

The target for the resident calibration can be the provided target, or a custom target with any name. (Instructions for creating custom targets are provided later in this chapter.) Select a target to use for the resident calibration, and click Apply Calibration.

You can test calibrations by comparing calibrated and uncalibrated image data on the Comparison Page, which uses both CMYK and RGB images. You can also create a custom comparison page as described on page 4-21.

Comparing the measured and target curves

Before editing a target curve, compare it to the current measured curve. By doing so, you can determine how close the measured color densities are to the target densities. The closer the measured densities are to the target densities, the better the results you get from calibration.

NOTE: Large differences between the standard copier target and measured curves may mean that the copier needs servicing.

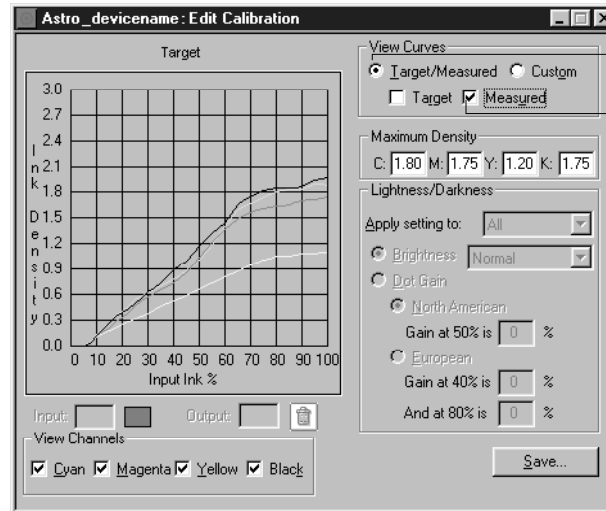
TO COMPARE THE MEASURED CURVE AND THE CURRENT TARGET CURVE:

1. Start Print Calibrator and select a target from the list of available target files.



The targets in this list are stored on the DocuColor 40 CP. Alternatively, click Local to use a target stored on your computer.

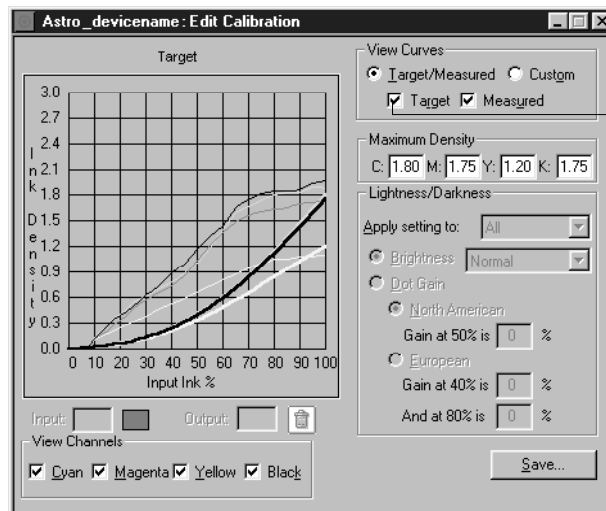
2. Click OK.
3. Click the Edit Calibration button in the Calibration Mode window.
4. Select Target/Measured and turn on the Measured option in the View Curves region.
These curves represent the values in the measurements file and cannot be changed.



Select Target/Measured

Turn on Measured

- Turn on the Target option and compare the target curve (thick lines) to the measured curve (thin lines).



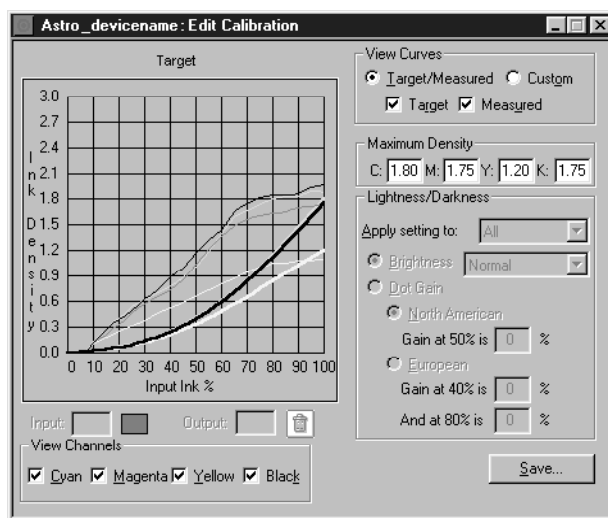
Turn on Target

Customizing calibration targets

The copier's calibration target provided with the DocuColor 40 CP should be used for general printing purposes. You may, however, have special printing needs that require a custom calibration. In this case, you can use Print Calibrator to edit an existing calibration target and save it as a custom target.

The Edit Calibration window provides information about your current target and measurements in graphic form and lets you edit curves and values to create a new target.

NOTE: All changes are stored as you make them. To discard changes, reload the target from the server or your computer.



The graph on the left side of the window allows you to view and manipulate color output values. The View Channels check boxes (beneath the graph) and the View Curves areas (to the right of the graph) specify the curves displayed on the graph.

You can change several components of a target. The changes are accumulated in the custom target that you eventually save. You can:

- Change the maximum density (Dmax).

An adjusted target is created with the new maximum density.

Independently, you can:

- Adjust brightness
- Adjust dot gain for more saturated output without affecting the overall color balance
- Load a custom curve and edit points in the curve

The current custom curve is applied to the original target curve or, if you adjusted the Dmax, it is applied to the target with the new maximum density.

- By clicking Save, save a copy of the edited target to your computer
- Choose Apply Calibration when you are ready to update the resident calibration on the DocuColor 40 CP

NOTE: The values in the following illustrations *do not* represent standard values. They are intentionally exaggerated for example purposes.

TO ADJUST MAXIMUM DENSITY (D_{MAX}):

1. Select the target to edit (see page 4-13).
2. Click the Edit Calibration button.
3. In the View Curves area, click Target/Measured and Target.
4. For each color, enter a value in the Maximum Density areas, and press Tab or Enter to adjust the endpoint of the target curve as needed.

You can enter a value from 0.1 to 3.0.

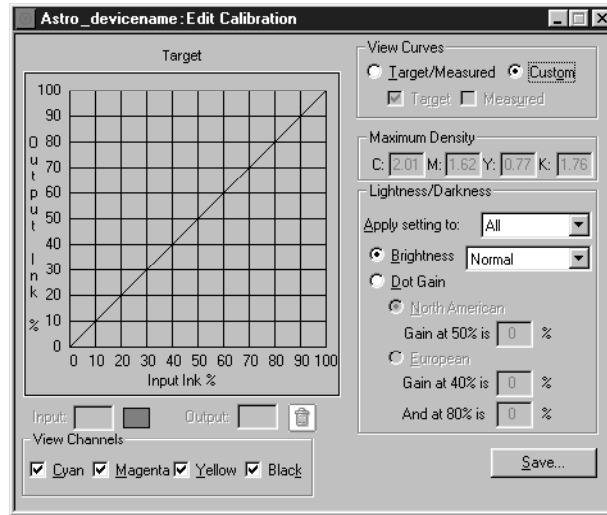
The rest of the curve adjusts to make a smooth transition to the new endpoint. The adjusted target is stored. To discard changes, reload the target from the server or from the local disk.

TO CUSTOMIZE A TARGET:

1. Select the target to edit (see page 4-13).
2. Click the Edit Calibration button.

3. In the View Curves area, click Custom to edit the input/output curve.

The graph maps input ink percentage to output ink percentage by analogy to ink on a press. Initially, the graph is a 45° straight line; that is, input values equal output values. This is the starting place for your editing.



As you make changes, you either increase or decrease the amount of toner that will be used to render a certain percentage tone. An ink density of 100% is a fully saturated color; 0 to 5% is a highlight color.

4. In the View Channels area, select the channels to edit.

You can view information for all four colors at the same time (cyan, magenta, yellow, and black), or any combination of these. Working with only one or two colors at a time helps you to distinguish the curves and to fine-tune your adjustments, especially when using a monochrome monitor.

5. In the "Apply setting to" menu, choose the channel to adjust in the Lightness/Darkness area of the window.
6. Use the Brightness menu to adjust brightness as needed.

7. Adjust the dot gain as needed.

These values are used independently of the Brightness curve. Changing the values for dot gain can give more saturated color output without affecting the overall color balance. The dot gain values *simulate* dot gain, not compensate for dot gain.

You can choose either the North American or European standard and then enter the desired Dot Gain. The valid values for North American gain at 50% input are 0% to 50% output. The valid values for European gain at 40% input must be less than the 80% input setting plus 40%; the valid values for European at 80% input are 0% to 20% gain on output.

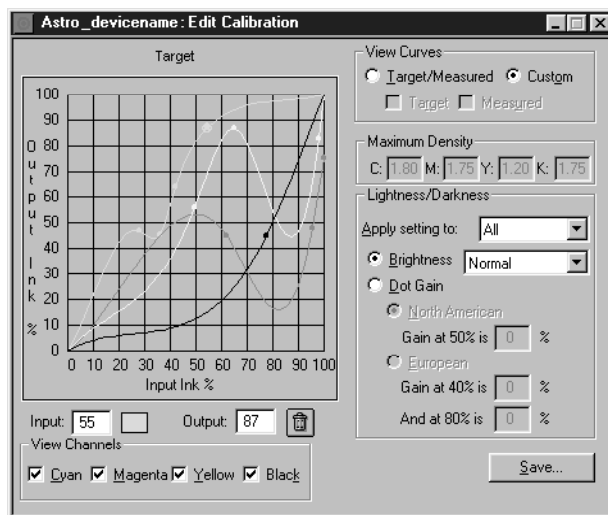
If you use Dot Gain values, the curve will be smoothed so that there are no spikes or jumps in output value.

NOTE: You should measure this value from actual press output, using a densitometer.

8. In the graph, drag points to adjust the curve as needed.

The graph maps input percentage to output percentage in 10% increments. Points along the curve are marked so that you can adjust them.

NOTE: You should adjust points in this way *after* you have applied a brightness or dot gain curve. If you attempt to change a brightness or dot gain setting after you have adjusted the points on the graph, your earlier changes are not registered.

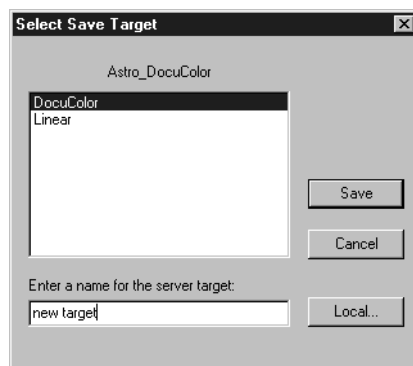


9. You can test the changes now by using the Test Calibration button in the Calibration Mode window, or customize the target further.

If you edit a local target file, you are prompted to save it on the DocuColor 40 CP before calibration can be changed.

NOTE: You cannot use the name of an existing target.

10. Enter a name for the edited target file and click Save.



11. To save the target on your computer, click Save (in the Edit Calibration window) and enter a name for the new target.

You can use a saved target again or continue editing it later.

Backing up DocuColor 40 CP targets

If you think you may need a target later, you can back up the target to your computer before you delete it from the DocuColor 40 CP. You should always back up targets before updating DocuColor 40 CP system software to ensure that no custom targets are lost.

TO BACK UP TARGETS:

- Choose Back Up Targets from the Server menu.

This copies the target files from the DocuColor 40 CP to your computer.

Deleting custom targets

If desired, you can delete custom targets permanently from the DocuColor 40 CP. You may want to do this to make sure no one applies a calibration using the wrong target file. You cannot delete the original target.

TO DELETE CUSTOM TARGETS FROM THE DOCUCOLOR 40 CP HARD DISK:

1. Start Print Calibrator.
2. Choose Delete Target from the Server menu.
3. Select the target and click OK.

NOTE: Deleting the target used for the resident calibration does not affect the resident calibration. To delete a calibration based on a deleted target, you must apply another calibration that uses a different target, or remove calibration as described in the next section.

Removing calibration

If desired, you can remove calibration from the DocuColor 40 CP. When you remove calibration, the resident calibration curves are removed, and a default calibration is restored. This default calibration is not optimized for the copier and is not recommended for general use.

TO REMOVE CALIBRATION:

1. Choose Remove Calibration from the Server menu.
2. When prompted, confirm that you want to remove calibration.

Using advanced simulation features

Print Calibrator offers simulation features for advanced users. You can:

- Change the default simulation on the DocuColor 40 CP
- Edit an existing simulation to suit your needs, test it, save it as a custom simulation, and save it on the DocuColor 40 CP
- Back up the simulations that are stored on the server
- Remove simulations from the server

Working with simulations

Simulations, or *press simulations*, allow you to use the DocuColor 40 as a proofing device for jobs that will print on an offset press. Because the range of colors available on the DocuColor 40 is different from that of a press, the DocuColor 40 CP automatically adjusts the color so that the output falls within the range of colors a press can produce.

Several simulations are provided with the DocuColor 40 CP, and you can create additional ones by editing existing simulations with Print Calibrator. A default simulation target is specified by the administrator in Setup. You can change the default simulation using Print Calibrator.

The simulations provided with the DocuColor 40 CP are:

- DIC—Japanese press standard
- Euroscale—European press standard
- SWOP-Coated—US press standard
- Match Copy—Bypasses calibration and produces output that matches a copy made from the copier glass

Each of the press simulations has both a Quick and Full version. These versions correspond to the method of mapping colors from your copier's color gamut to that of the desired press standard as follows:

- Quick—Compensates for only density (one-dimensional mapping)
- Full—Corrects for hue as well as density (four-dimensional mapping)

The PPD for the DocuColor 40 CP provides placeholders for five custom simulations named Custom-1, Custom-2, and so on. These can be made available for users to select from the CMYK Simulation print option when printing a job.

You can store targets on the computer where you use Print Calibrator, on another connected disk, or on the DocuColor 40 CP disk (or all three). However, only the original simulations and five custom simulations are available to users who choose a simulation on a job-by-job basis (with the CMYK Simulation print option).

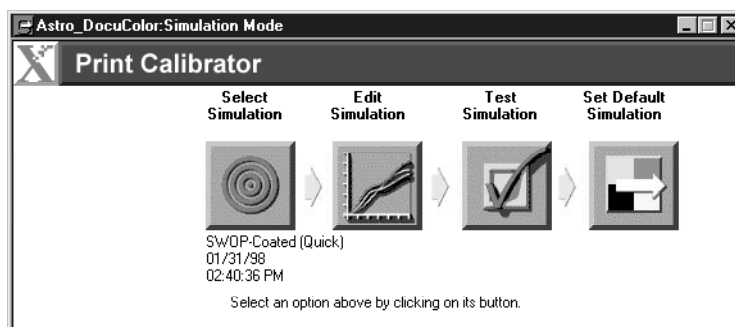
For a custom simulation intended to be available only as a CMYK Simulation setting in Setup, any name can be used. For a custom simulation intended to be available for users to choose on a job-by-job basis, the name must be “Custom-1”, “Custom-2”, and so on.

NOTE: The custom simulation names “Custom-1” and “Custom-2” appear in the users’ CMYK Simulation settings, and users can choose them, whether or not the corresponding custom options have been created and loaded on the DocuColor 40 CP. Jobs printed with a nonexistent custom simulation fail printing and show an error.

For more information on the CMYK Simulation and CMYK Simulation Method print options, see the *Printing Guide*.

Using the Simulation Mode window

After starting Print Calibrator, choose Simulation Mode from the File menu. The Simulation Mode window has buttons for the most frequently used Print Calibrator functions. There is also a menu bar with File, Edit, Measurements, Server, and Window menus, and a status message at the bottom of the window. Functions unavailable at any particular time are dimmed and cannot be selected.



The buttons and their functions are:

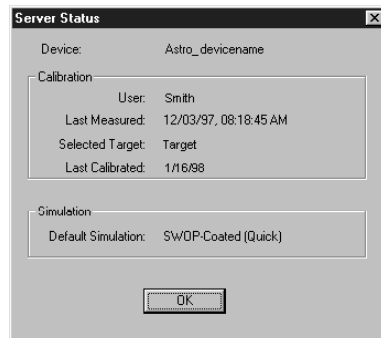
- **Select Simulation**—Allows you to select a simulation to work with. You must select a simulation before editing or applying it to the DocuColor 40 CP. Below the button are the name and creation date of the currently selected simulation, which is not necessarily the default simulation on the DocuColor 40 CP.
- **Edit Simulation**—Allows you to view and customize the current simulation.
- **Test Simulation**—Prints a test page so that you can view the results of the simulation you are currently working with.
- **Set Default Simulation**—Updates the default simulation on the DocuColor 40 CP.

Checking the current simulation

You can use Print Calibrator to see the simulation currently selected as the default on the DocuColor 40 CP.

TO VIEW INFORMATION ABOUT THE CURRENT SIMULATION:

1. Start Print Calibrator and connect to the DocuColor 40 CP.
2. Choose Server Status from the Server menu.



The bottom section of the Server Status window displays the default simulation.

Editing simulations

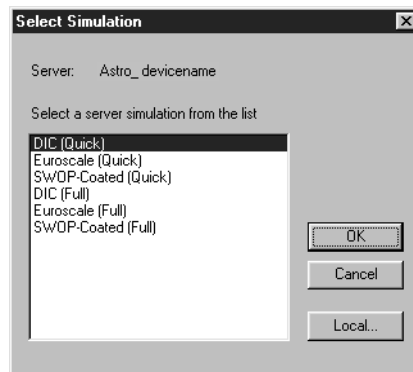
You can edit a press simulation to meet your exact specifications. You can also save the changes as a new simulation.

NOTE: The values in the following illustrations *do not* represent standard values. They are intentionally exaggerated for example purposes.

TO EDIT A SIMULATION:

1. Start Print Calibrator and connect to the DocuColor 40 CP.
2. Choose Simulation Mode from the File menu.
3. Click the Select Simulation button.

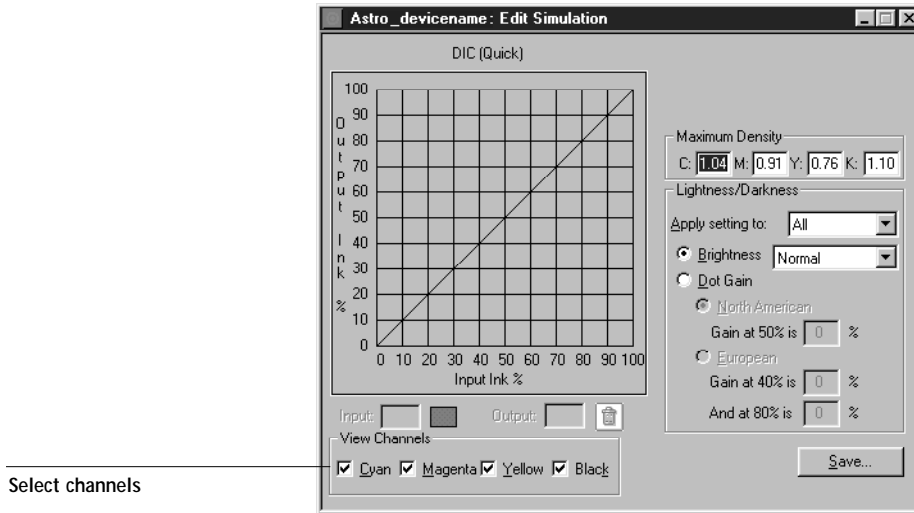
A dialog box displays the simulations available on the DocuColor 40 CP.



4. Select a simulation and click OK.

Click Local to select a simulation on your computer.

5. Click the Edit Simulation button.



You can use this dialog box to view or to edit simulations.

6. In the View Channels area, select the channels to edit.

You can view information for all four colors at the same time (cyan, magenta, yellow, and black), or any combination of these. Working with only one or two colors at a time helps you to distinguish the curves and to fine-tune your adjustments, especially when using a monochrome monitor.

7. For each color, enter a value in the Maximum Density areas and then press Tab or Enter to adjust the endpoint of the target curve as needed.

You can enter a value from 0.1 to 3.0.

The rest of the curve adjusts to make a smooth transition to the new endpoint. The adjusted target is stored. To discard changes, reload the target from the server or from the local disk.

8. From the "Apply setting to" menu, choose the channel to adjust in the Lightness/Darkness area of the window.

9. Use the Brightness menu to adjust brightness as needed.

NOTE: If you change a value for a color with the Brightness menu, it overrides values set elsewhere in the dialog box.

10. Adjust the Dot Gain value as needed.

You can choose either the North American or European standard and then enter the desired Dot Gain. The valid values for North American gain at 50% input are 0% to 50% output. The valid values for European gain at 40% input must be less than the 80% input setting plus 40%; the valid values for European at 80% input are 0% to 20% gain on output.

If you use Dot Gain values, the curve is smoothed so that there are no spikes or jumps in output value.

11. In the graph, click and drag points to adjust the curve as needed.

The graph maps input percentage to output percentage in 10% increments. The points along the curve are marked so that you can adjust them.

NOTE: You should adjust points on the curves after you have entered values in the other areas of the window. If you change values after you have adjusted the curve on the graph, values might not be valid.

12. When you are finished, click Save and enter a name for the new simulation.

This saves the simulation to DocuColor 40 CP. Use Local to save the simulation to your computer hard disk so that you can use it again or continue editing it later.

- Give the simulation a new name. You cannot overwrite the name of an original press target.
- Include part of the original name in the new name, for example, “SWOP-New.” This helps you remember what the new simulation is based on.
- To allow users to print with the simulation on a job-by-job basis, you must use the exact names “Custom-1”, “Custom-2”, and so on. Give users a description of the custom simulations because they see only the “Custom” names from the printer driver interface.

NOTE: If custom simulations are later deleted from the server, users might still select them when they print. However, jobs printed with non-existent custom simulations will fail printing and report an error.

Managing simulations

With Print Calibrator, you can back up and delete simulations. You can also set the default simulation to None.

TO BACK UP SIMULATIONS:

- Choose Backup Simulations from the Server menu to copy the simulations from the DocuColor 40 CP to your computer.

Simulations are saved in a folder called Backup in the folder where Print Calibrator is located. You can save simulations for safekeeping. You should always save simulations before updating DocuColor 40 CP system software to ensure that no custom simulations are lost.

TO DELETE CUSTOM SIMULATIONS FROM THE DOCUCOLOR 40 CP HARD DISK:

1. Choose Delete Simulation from the Server menu.
2. Select the custom simulation and click OK.

You can delete simulations to make sure no one uses the wrong simulation file. You should always use the Backup Targets command to save simulations before you delete them.

TO SET THE DEFAULT SIMULATION TO NONE:

1. Choose Set Default Simulation to None from the Server menu.
2. When prompted, confirm you want to reset the default.

Testing and setting a new default simulation

You can use the Comparison Page provided with the DocuColor 40 CP to test a simulation before making it the default simulation on the DocuColor 40 CP. This page shows a comparison of images with and without simulation applied.

The Comparison Page provides the following simulation information:

Press CMYK using Simulation section

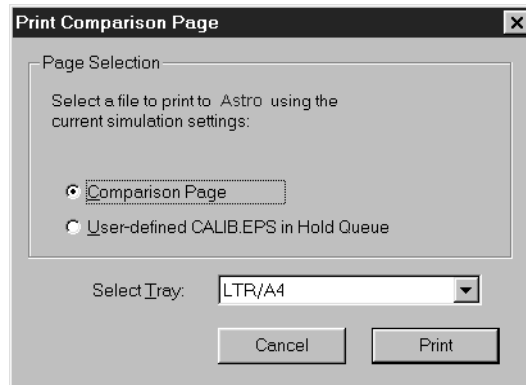
- **Simulation**—The currently selected simulation in Print Calibrator, not necessarily the default simulation on the DocuColor 40 CP.
- **Method**—Quick or Full. **Quick** corrects for only the density of colors (one-dimensional mapping) to the press goal. **Full** corrects for both density and hue (four-dimensional mapping).
- **Press**—The press standard for which the sample CMYK images were separated (for example, SWOP or Euroscale).

For a description of the information in the section of the page labeled “RGB using Color Rendering Dictionary,” see page 4-21.

You can also create your own comparison page. To do this, create a PostScript or EPS (Encapsulated PostScript) file and name it Calib.eps. Use Downloader to download the Calib.eps file to the Hold queue of the DocuColor 40 CP.

TO TEST AND APPLY A SIMULATION:

1. In the Simulation Mode window, click Test Simulation.



2. Select a page and choose a paper tray.
3. Click Print.
4. When you have visually verified that the test page displays appropriate colors, click Set Default Simulation.
5. Select the simulation to set as the default.

The default simulation is used when users select the Printer's Default setting for the CMYK Simulation print option. Users can choose a different simulation on a job-by-job basis.

Appendix A: Troubleshooting

This section lists error messages you might see, and provides some troubleshooting guidelines should a problem arise. If you are unable to resolve a problem after referring to this chapter, contact your authorized service/support center.

Error messages

Error messages can result from problems with the print job, the DocuColor 40 CP, or the copier. Some of the most common error conditions are listed here.

When an error interferes with printing, you will see a message in WebSpooler. The status bar that displays the message indicates the process where the error occurred. Following are the messages (listed in alphabetical order), with the appropriate corrective action for each one. You can cancel the pending print job while you attend to the error condition. A few normal status messages are included in this list in case they cause concern.

DocuColor 40 CP message:	Corrective action/additional information:
Add fuser oil	The copier does not have any fuser oil. Printing will resume when you add fuser oil.
Add staples	The stapler has run out of staples. The job that requires stapling will be finished after you add staples.
Add toner: C/M/Y/K	Add toner of the specified color.
Belt waste toner bottle almost full	This warning message appears on the DocuColor 40 CP Info screen and indicates that you should replace the belt waste toner bottle as soon as possible, although you may continue to print in the meantime.
Broken tray: 1/2/3	There is a problem with the named tray. Make sure that it is present and there is no mechanical problem.

DocuColor 40 CP message:	Corrective action/additional information:
Call for service Error # x-xxx	The system has detected an error that requires a service call. Before calling for service, power cycle the copier and the DocuColor 40 CP. If that does not resolve the error, call your authorized service representative and provide them with the error number that is displayed. Only the service representative can clear this type of error.
Check power & cable	There is a problem with the print engine power or cable connection. First check to make sure that the print engine is turned on. There may also be a problem with the cable connection between the DocuColor 40 CP and the print engine. Make sure that the cable has not come loose. The DocuColor 40 CP will resume printing when the cable is securely connected to both the DocuColor 40 CP and the print engine.
Clearing paper path	This is a normal status message (LCD is solid green), displayed on the DocuColor 40 CP Info screen when the copier is clearing the paper on the race track.
Close copier door	One of the doors on the copier is open. Close the door to resume printing.
Close tray: 1/2/3	One of the trays on the copier is open. Close the tray to resume printing.
Connecting: Press "CM"	If this message is displayed on an Info screen (DocuColor 40 CP LCD is solid green), it is a normal status message indicating that the DocuColor 40 CP is requesting control of the copier. You can either wait for the connection to be made or speed up the connection process by pressing the copier's CM button. If this message is displayed on an Abort screen, you must press the copier's CM button for printing to proceed.
Copier adjustment in progress...	This is a normal status message (LCD is solid green), displayed on the DocuColor 40 CP Info screen when the printer is performing internal adjustments.
Copier is offline	The Suspend Printing option has been selected from the Functions menu. Press Resume Printing in the Functions menu to reconnect the DocuColor 40 CP to the copier.

DocuColor 40 CP message:	Corrective action/additional information:
Disk full	The DocuColor 40 CP disk is almost full. In this state, a new job can only be printed when the oldest printed job is deleted. This is not an efficient way to print, and may lead to delays and printing errors, so you should delete unneeded jobs from the Queues window. Also delete unneeded fonts. If these do not work, you can use the Clear Server command.
Empty belt waste toner bottle	Belt waste toner bottle is full. Printing will resume after you empty the belt waste toner bottle.
Empty finisher	You must remove the paper from the finisher before continuing the job.
Empty sorter bins	You must remove the paper from the sorter bins before continuing the job.
Empty waste toner bottle	The waste toner bottle is full. Printing will resume after you replace the waste toner bottle.
Finisher is not ready	The copier's finishing unit is being used in manual mode, or is not connected, or is out of order.
Fuser oil almost empty	This warning message appears on the DocuColor 40 CP Info screen and indicates that you should replace the fuser oil as soon as possible, although you may continue to print in the meantime.
Fuser web almost used up	This warning message appears on the DocuColor 40 CP Info screen and indicates that you should replace the fuser web as soon as possible, although you may continue to print in the meantime.
Idle	This is a normal status message (LCD is solid green). The DocuColor 40 CP is idle, waiting for the next job.
Illegal paper size for output device	The paper size specified is larger than the attached output device. Specify a smaller paper size to continue.
Illegal paper size for sorter bins	The paper size specified is larger than the sorter bin. Specify a smaller paper size to continue.
Illegal transparency size	The transparency size specified is incorrect. Transparencies must be Letter (US) or A4 (Japan and Europe) size.

DocuColor 40 CP message:	Corrective action/additional information:
Internal error	An error has been detected by the DocuColor 40 CP system software. In the unlikely event that you see this error, report it to your authorized service representative.
Ld ____ film in bypass	The copier's bypass tray is not loaded with the film size or type specified. The DocuColor 40 CP will print when the bypass tray is loaded with the required film.
Ld ____ in bypass	The copier's bypass tray is not loaded with the paper size or type specified. The DocuColor 40 CP will print when the bypass tray is loaded with the required paper.
Ld ____ in tray ____	The copier's specified tray (1, 2, or 3) is not loaded with the paper size specified. The DocuColor 40 CP will print when the named tray is loaded with the required paper.
Load thick ____ in bypass	The copier's bypass tray is not loaded with the thick paper size specified. The DocuColor 40 CP will print when the bypass tray is loaded with the required thick paper.
Ld ____ transp in bypass	The copier's bypass tray is not loaded with the transparency size specified. The DocuColor 40 CP will print when the bypass tray is loaded with the required transparency.
Low toner: C/M/Y/K	This is a warning message indicating that the toner for one of the colors is running low.
Paper jam	There is a paper jam in the copier. Open the copier doors and check the locations indicated on the copier display. The DocuColor 40 CP will resume printing when you have cleared the paper jam and closed the copier doors.
Printing . . .	This is a normal status message indicating that printing is in progress.
Recycle copier power	Turn off the copier power switch, then turn it on again.
Re-establishing comm Please wait . . .	When the DocuColor 40 CP is not communicating with the printer, it displays this message while it tries to connect. An error may have occurred with the copier. See the copier message panel for information.
Replace fuser web	The copier's fuser web is used up. Printing will resume when it is replaced.

DocuColor 40 CP message:	Corrective action/additional information:
Run setup and enter DocuColor key	This message is displayed if your model requires that you enter a security code. Call your authorized service representative and request a valid security code.
Sorter is broken Call for service	The copier's sorter unit is malfunctioning. Call your authorized service representative.
Sorter is not ready	The copier's sorter unit is in use—possibly someone is removing paper from the sort bins. Printing will proceed when the sorter unit is not being used.
Stapler is broken Call for service	The copier's stapler unit is malfunctioning. Call your authorized service representative.
Unknown error	An error occurred with the print engine.
Video hardware failed	This message is displayed on the LCD when the system detects an error in the video board upon power up, such as an incorrect video card installed.
Warming Up . . .	This is a normal status message. The print engine is powering up. It will be ready for printing in a few minutes.
Waste toner bottle almost full	This warning message appears on the DocuColor 40 CP Info screen and indicates that you should replace the waste toner bottle as soon as possible, although you may continue to print in the meantime.

Maintaining optimal system performance

The DocuColor 40 CP does not require maintenance. Beyond the routine requirements of servicing and maintaining the print engine and replenishing consumables there are a few things you can do to improve the overall performance of your system:

- Reduce unnecessary two-way communication.

If users notice that the server is frequently too busy to receive jobs, it may be because several users are running utilities that are updated often. Large numbers of remote users running Downloader or DocuColor 40 CP WebTools may have a significant effect on DocuColor 40 CP performance.

- Schedule the printing workload by checking job ticket information before printing. Print jobs with the same output and paper specifications together to minimize paper changes. Also, print routine jobs while you prepare to print jobs with special instructions or special media.
- Avoid printing with the server Disk full warning.

If you see this warning, delete jobs from the Queues window that have been held for a long time and are not likely to be needed. Avoid this condition by deleting old jobs on a regular basis. The date associated with a job is the original date it was sent.

As a last resort, you can use the Clear Server command.

Troubleshooting

In case of problems, and before you call for service, check the guidelines in this section. If you are unable to resolve the problem, make a note of the error condition and contact your authorized service/support center.

Unexpected printing results

If this happens:	This is the problem:
A cover page is not printed when you reprint a saved raster job.	The cover page identifies the originator of the job and the time the job was sent. Time stamp and user information on the cover page of a reprinted job are not meaningful.
The job settings are not carried out as you expected.	<p>If the user printed from the Mac OS or Windows 3.1x platform, there may be two conflicting print settings. You can check the job properties by double-clicking the job. See the <i>Printing Guide</i> for a table of job properties and conflicting properties. Notify the users of these conflicts so they can avoid them in the future.</p> <p>If you expected the settings you see in the Properties window, be aware that the Copies and Collation fields do not currently reflect user settings, and that Page Range and Scale percent are All and 100%, respectively, unless they were changed after being sent for printing.</p>
The job doesn't print.	Some printing errors may be displayed in the Print status bar. When the job is in the Printed queue, jobs that had a PostScript error are displayed in a light red job row. Double-click anywhere in the row to see the error message.

If this happens:	This is the problem:
There are font errors.	If user-specified fonts that are not resident on the DocuColor 40 CP are not printing correctly in PostScript files that are downloaded by users, request that they embed the fonts in the PostScript file or print directly from their application. When users print from their applications, if special fonts are not downloaded automatically, they should be downloaded directly to the DocuColor 40 CP with Downloader. This can be done by the user or by the operator, provided the Direct connection is enabled. For information about Downloader, see the <i>Printing Guide</i> .

Clearing the server

Clearing the server is an Administrator option that can be used as a last resort if a job persists in the system and prevents printing despite attempts to cancel or delete it. Clearing the server deletes all jobs currently saved on the server and the Job Log.

Before clearing the server, export the Job Log if you haven't recorded the information in it. If you can, notify users that you will clear their jobs from the server so they can back them up and resend them when the server is back in operation.

Users are unable to connect to the printer

If users are unable to connect to the printer, or are unable to find the printer from their workstations, the network administrator may need to troubleshoot their network connections, and check settings on the servers they use for printing. If settings have changed, it may be necessary to reconfigure the DocuColor 40 CP.

For example, if print servers or print queues on a Novell server are renamed or deleted, or if accounts or permissions are changed, the DocuColor 40 CP administrator may have to edit settings or enter new settings in IPX (Novell) Setup to reflect the new configuration.

If users cannot connect to the printer with Downloader from Windows 95 or Windows NT 4.0, you may need to reconfigure the utility's connection to the server. See *Getting Started* for details.

Mac OS users may fail to see the printer if a network administrator has assigned it to a different zone, or has added zones where previously there were none.

If you have configured the DocuColor 40 CP and set up client computers and network servers according to guidelines in the *Configuration Guide* and *Getting Started*, try printing a Test Page.

If you are able to print the test page but still can't print a file from a remote computer, contact the system administrator to troubleshoot the network connection.

If you are unable to connect, and you *cannot* print the Test Page, check the copier's touch panel display.

If this happens:	Try this:
It displays a diagnostic or error message.	Take the appropriate corrective action, as described in the copier manual or in the section "Error messages" on page A-1.
The display is completely blank.	Check the copier's Standby function. If the copier is in Standby mode, press the Standby key to see any messages on the display.
The copier is not in Standby mode.	The copier's Automatic Power-Off function may have shut down the copier. Turn the copier on, and then try printing a Test Page again when the copier has warmed up.
You still cannot print a Test Page.	Make a copy. If you can make a copy, restart the DocuColor 40 CP, and when you see Idle on the status line of the DocuColor 40 CP display, try printing a Test Page again. If the Test Page still fails to print, contact your authorized service/support center.

Setup error messages

For information on Setup error messages, see the *Configuration Guide*.

AutoCal error messages

AutoCal error messages can result from problems during the AutoCal procedure.

DocuColor 40 CP message:	Additional information:
Error 5	The calibration file cannot be opened.
Error 6	The calibration file was not read correctly.
Error 8	The measurement page did not scan properly, either because it is crooked or the data is corrupted.
Error 11	The color strips on the measurement page are inconsistent.
Error 12	The copier model being used is not supported.
Error 20	The measurement page cannot be scanned because the dots per inch (dpi) are incorrect.
Error 102	The grayscale strip is crooked or is positioned incorrectly.
Error 103	The grayscale strip is positioned too far to the left or to the right of the measurement page.
Error 104	The grayscale strip is positioned too far above the measurement page.
Error 111	The grayscale strip could not be found; either reposition the strip correctly or position it vertically.

Index

Numerics

4-pin DIN 4-11
8-pin DIN plug 4-11
9-pin connector 4-11

A

access
 levels xiv, 2-2
 restricting xiv, 2-4
active jobs 3-8
Administrator password xiv, 1-6, 2-2, 2-4
AGA, *see* calibration
Alert Status screen 1-3
Apply Calibration option 4-14, 4-22
AutoCal calibration 4-6, 4-8, 4-9
Automatic Gradation Adjustment, *see*
 calibration--AGA

B

Backup Simulations option 5-18
Back Up Targets option 5-9
brightness, adjusting in custom curves 5-7,
 5-8
Brightness menu 5-17
broken LCD xv
buttons, Control Panel 1-2

C

CALIB.EPS file 4-21, 5-19
calibration
 adjusting brightness 5-7, 5-8
 AGA (copier's self-calibration) 4-5
 applying 4-22
 bypassing 5-11
 checking status 4-5
 checklist 4-22
 COM1 and COM2 port 4-11
 Comparison page 4-20, 5-19

current 4-2
custom curves 5-6
editing 5-2 to 5-9, 5-15
expert features 5-1 to 5-20
from the Control Panel 4-2, 4-6, 4-9
from the Print Calibrator 4-2
measurements 4-1, 4-2, 4-3
measurement values 4-16 to 4-20
measuring patches 4-17
overview 4-1, 4-2, 4-3
port 4-17
removing 5-10
resident 4-2, 5-2
scheduling 4-4
self-calibration 4-5
standard procedure 4-10 to 4-23
targets 4-1, 4-2, 4-3, 4-13
testing 4-20, 4-22, 5-9, 5-19
viewing status 4-15
 see also densitometer, Print Calibrator
Calibration Mode window 4-14
Calibration option 1-7
calibration patch page 4-3, 4-16
Cancel Job
 from the Control Panel during
 printing 1-3
 from the Control Panel during
 RIPping 1-3
Change (Administrator) Password
 option 1-7
Clear Server command 1-7
CMYK Simulation option 5-12
Color Charts 1-5, 4-5
Color Reference pages 4-5
Color Setup option 1-7
Comparison Page 4-3, 4-20, 4-21, 5-19
Configuration page 1-5, 4-5
Configure button, WebTools 2-4

Control Panel

- activity light 1-1, 1-4
 - buttons 1-2
 - calibration from 4-2
 - down button 1-2
 - line selection buttons 1-2
 - Menu button 1-2
 - removing calibration 4-9
 - status screens 1-3
 - up button 1-2
- Control Panel map 1-5
- copier, adjusting printed color from 4-5
- curves
- Brightness 5-8
 - input/output 5-7
 - target 5-7, 5-8
- custom Comparison page 4-21, 5-19
- custom simulations 5-12

D

- Delete command 3-6, 3-13, 3-20
- Delete Job Log command 3-6
- Delete Simulation option 5-18
- DEMO.MEA file 4-15
- densitometer
- calibrating 4-23, 4-24
 - DTP32 4-1, 4-10 to 4-12, 4-16, 4-23, 4-24
 - for calibration 4-7
 - selecting port 4-17
 - Status T densitometer 4-4
- Densitometer window 4-19
- density patches 4-5
- DIC simulation 5-11
- Direct connection 3-10, A-7
- disk space used 3-3
- display window 1-3
- Dmax, *see* maximum density
- DocBuilder
- Delete command 3-20
 - Duplicate command 3-20
 - editing options 3-20

- merging two files 3-22
- Preview command 3-20
- Undo command 3-21

DocuColor WebTools

- accessing 2-3, 2-4
- Configure button 2-4
- home page 2-3
- Installer 2-2
- passwords 2-2
- Status 2-1, 2-4
- WebLink 2-1, 2-5
- WebSetup 2-2
- WebSpooler 2-1

Dot Gain

- adjusting 5-17
- simulating 5-7, 5-8

down button 1-2

- Duplicate (page) command 3-20
- Duplicate command 3-6

E

- Edit Calibration options 4-14
- Edit Calibration window 5-5
- Edit Simulation button 5-16
- Edit Simulation options 5-13
- error messages
- AutoCal A-8
 - during Setup A-8
 - general A-1 to A-5
- Euroscale simulation 5-11
- Exit command 3-6
- Exit Setup option 1-7
- Export command 4-19
- Export Job Log command 3-6

F

- File menu commands 3-6
- fonts
- downloading A-7
 - printer fonts on server 1-5
 - printing font list 1-5
- Full Simulation 5-19
- Functions menu, Control Panel 1-4

G

Guest access xiv, 2-2, 3-3

H

held jobs 3-8, 3-10

Help menu commands 3-7

Hold command 3-6, 3-13

I

icons

Print area 3-11

RIP area 3-10

Spool area 3-9

Info Status screen 1-4

Installer WebTool, *see* DocuColor WebTools

J

job

active 3-8

areas 3-4

defined xii

deleting 3-13

environment xiii

flow diagram 3-8

held 3-8

limit 3-11, 3-12

order of display 3-8

overrides 3-14

previewing 3-20

remove raster and reRIP 3-11

job icons

Print area 3-11

RIP area 3-10

Spool area 3-9

types 3-9

Job Log

displaying 3-26

printing from the Control Panel 1-5

using (from WebSpooler) 3-25

viewing printed jobs 3-5

Job Log Setup option 1-7

Job menu commands 3-6, 3-12

Jobs Saved in Printed Queue 3-12

job ticket information A-6

L

LCD xv, 1-1

line selection buttons 1-2

M

Macintosh interface cable 4-11

Mac OS ADB port 4-11

Match Copy simulation 4-2, 5-11

maximum density 5-6, 5-16

Maximum Density area 5-16

measured curve, viewing 5-6

measurements file 4-3

color patches 4-15

creating 4-16 to 4-20

description 4-3

file format of 4-19

saving 4-19

view 4-14

Menu button 1-2

messages, *see* error messages

N

Network Setup option 1-7

O

on/off switch 1-6

Operator password xiv, 2-2, 2-3, 3-3

Override Print Settings command 3-6, 3-14

P

PANTONE 1-5

passwords

Administrator 2-2

Change (Administrator) Password
option 1-7

for calibration 4-2

Operator 2-2, 2-3, 3-3

patch page 4-16, 4-17, 4-19

performance, optimizing A-5

- permissions xiv
 - port, densitometer 4-17
 - PostScript
 - definition xii
 - error 3-11
 - icon 3-9
 - RIP xii
 - PostScript Setup option, *see* PS Setup option
 - power switch 1-6
 - press simulations, *see* simulations
 - Preview command 3-6, 3-20
 - previewing print jobs 3-17
 - Print and Hold command 3-6, 3-13
 - Print area 3-4, 3-11
 - Print Calibrator
 - advanced features 5-1 to 5-20
 - calibration from 4-2
 - Calibration Mode window 4-14
 - checking calibration status 4-6
 - displaying measurements 4-20
 - function buttons 4-14, 5-13
 - main window 4-14
 - overview 4-9 to 4-23
 - press simulations 5-14
 - Simulation Mode window 5-13
 - storing targets 4-4
 - Print command 3-6, 3-13
 - Printed queue 3-5, 3-11
 - printer (job) icon 3-9
 - printer settings, customizing 3-6
 - Printer Setup option 1-7
 - printing
 - Comparison page (calibration) 4-20
 - Comparison page (simulation) 5-19
 - Configuration page 1-5
 - defined xii
 - font list 1-5
 - server information pages 1-5
 - Print Job Log command 3-6
 - print jobs
 - deleting from queue 3-6
 - previewing 3-17
 - Print Pages command 1-5
 - Print Patch Page option 4-16, 4-17, 4-19
 - Print Status screen 1-3
 - Process Next command 3-6, 3-13
 - PS Setup option 1-7
- ## Q
- queues 3-4
 - Queues window
 - deleting held jobs A-6
 - spooled jobs 3-4
 - Quick Simulation 5-19
- ## R
- RAM
 - in use 3-3
 - total 3-3
 - raster
 - data 3-10, 3-13
 - icon 3-9
 - needed for DocBuilder 3-20
 - raster files
 - editing 3-19
 - previewing 3-16
 - saving 3-5
 - saving an edited document 3-21, 3-24
 - rasterizing, *see* RIPping
 - Reboot Server command, from Control Panel 1-5
 - remote users A-5, A-7
 - Remove Calibration option 5-10
 - Remove Raster command 3-6, 3-14
 - Rename command 3-6, 3-13
 - resident calibration
 - applying 4-22
 - bypassing 4-2
 - definition 4-2

- restricting access to server xiv
- Resume Printing command 1-5
- RIP, defined xii
- RIP and Hold command 3-6, 3-13
- RIP area 3-4, 3-10
- RIPped jobs 3-4
- RIPping
- RIP Status screen 1-3

S

- safety xv
- Save Target option 5-9
- Select Simulation button 5-13, 5-15
- Select Target option 4-14
- server
 - cleaning xv
 - clearing the A-7
 - display window xv
 - restarting 1-7
 - shutting down 1-8
- Server Setup option 1-7
- Server Status option 4-6, 4-15
- Server Status window 5-14
- Set Default Simulation button 5-13
- Simulation Mode window 5-13
- simulations
 - applying 5-20
 - backing up 5-18
 - Comparison Page 5-19
 - custom 5-12
 - deleting 5-18
 - editing 5-15
 - Full method 5-19
 - overview 5-11
 - Quick method 5-19
 - removing 5-18
 - saving 5-17
 - selecting 5-15
 - testing 5-19, 5-20
 - viewing 5-15

- source file 3-20
- spool, defined xii
- Spool area 3-4, 3-9
- spooled jobs
 - displayed in WebSpooler 3-5
 - icons 3-9
 - listed 3-4
- starting the server 1-6
- status bars
 - active jobs 3-7
 - Print 3-3
 - RIP 3-3
 - Spool 3-3
- status screens, Control Panel 1-3
- Status WebTool, *see* DocuColor WebTools
- Suspend Printing command 1-5
- SWOP-Coated simulation 5-11
- system performance A-5

T

- target curve, *see* targets
- target file 3-20
- targets
 - backing up 5-9
 - calibration 4-3
 - curves 5-4
 - custom 5-5 to 5-6, 5-7
 - measured curves 5-4
 - provided with the color server 4-4
 - removing 5-10
 - saving 5-9
 - viewing and editing 5-6
 - working with 5-2
 - see also* calibration *and* simulations
- Test Calibration option 4-14
- Test Page
 - printing A-8
 - printing from Control Panel 1-5
 - problem printing A-8
- Test Simulation button 5-13, 5-20

Thumbnail A

- command 3-6, 3-14
- editing options 3-20
- page commands 3-19
- page display 3-17
- window 3-20

Thumbnail B 3-6, 3-14, 3-20

- transfer functions 4-3

troubleshooting

- general guidelines A-6
- unexpected printing results A-6, A-7
- users are unable to connect to the printer A-7

U

- undo, in editing thumbnail views 3-19, 3-23

- Undo command 3-6, 3-21

- up button 1-2

V

- View Channels area 5-16

- View Measurement icon 4-20

- View Measurements option 4-14

W

warning

- "Disk full" A-6

- display window breakage xv

- WebLink, *see* DocuColor WebTools

- WebSetup WebTool, *see* DocuColor WebTools

WebSpooler

- accessing 3-1

- Job menu 3-12

- Operator password 3-3

- overview 2-1

- status bars 3-3

- WebTools, *see* DocuColor WebTools