KONICA MINOLTA

The essentials of imaging

IC-301 Print Controller for bizhub PRO C500 Printer

Version 1.0

User Guide

powered by creo

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RE37,376	5,412,737	5,699,174	6,014,471	6,189,452	6,396,422	6,579,660
D478,608	5,420,702	5,699,740	6,016,752	6,191,882	6,407,849	6,587,211
4,558,302	5,420,722	5,708,736	6,043,865	6,204,874	6,409,331	6,589,710
4,743,091	5,459,505	5,713,287	6,060,208	6,205,364	6,414,755	6,590,635
4,992,864	5,473,733	5,742,743	6,063,528	6,208,369	6,422,801	6,593,064
5,049,901	5,481,379	5,764,374	6,063,546	6,214,276	6,425,565	6,601,888
5,113,249	5,488,906	5,771,794	6,072,518	6,217,965	6,430,136	6,605,407
5,132,723	5,508,828	5,785,309	6,090,529	6,252,241	6,435,091	6,609,459
5,155,782	5,509,561	5,802,034	6,093,447	6,252,522	6,441,914	6,611,363
5,157,516	5,517,359	5,813,346	6,096,461	6,255,033	6,443,571	6,618,187
5,177,724	5,519,852	5,818,498	6,098,544	6,260,482	6,450,092	6,628,435
5,208,818	5,576,754	5,854,883	6,107,011	6,266,080	6,456,396	6,632,584
5,208,888	5,579,115	5,861,904	6,112,663	6,266,134	6,471,335	6,637,329
5,247,174	5,583,551	5,861,992	6,115,056	6,267,054	6,476,342	6,637,860
5,249,067	5,592,309	5,875,288	6,116,160	6,268,948	6,476,931	6,640,713
5,283,140	5,594,556	5,894,342	6,121,996	6,270,204	6,477,955	6,641,772
5,291,273	5,600,448	5,900,981	6,130,702	6,283,589	6,493,064	6,641,978
5,305,091	5,608,822	5,934,196	6,134,393	6,295,076	6,494,965	6,646,669
5,323,248	5,615,282	5,946,426	6,136,509	6,299,572	6,503,691	6,648,468
5,325,217	5,625,397	5,947,028	6,137,580	6,318,266	6,509,903	6,652,088
5,339,176	5,625,766	5,958,647	6,147,789	6,328,408	6,511,163	6,654,147
5,343,059	5,636,330	5,966,504	6,158,345	6,336,708	6,520,084	6,660,997
5,355,446	5,649,220	5,969,872	6,159,659	6,340,817	6,530,317	6,661,561
5,359,451	5,650,076	5,973,801	6,164,637	6,352,816	6,541,181	6,665,048
5,359,458	5,652,804	5,986,819	6,165,658	6,353,216	6,544,336	6,665,121
5,367,360	5,680,129	5,995,475	6,180,325	6,366,339	6,545,772	6,670,986
5,384,648	5,691,823	5,996,499	6,181,362	6,371,026	6,550,388	6,684,783
5,384,899	5,691,828	5,998,067	6,181,439	6,377,739	6,564,018	6,704,123
5,412,491	5,696,393	6,003,442	6,186,068	6,387,597	6,567,713	

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Welcome

Welcome to the IC-301 Print Controller User Guide

Welcome to your IC-301 Print Controller for the bizhub™ PRO C500 Printer User Guide. This user guide provides you with information about the bizhub PRO C500 printer.

This user guide will help you operate the IC-301 print controller. It can also be used as a reference guide for questions or procedures. Study this user guide to take full advantage of the many unique and advanced features of the IC-301 print controller.

This user guide is for IC-301 print controller operators and system administrators and explains how you can quickly and easily print from the IC-301 print controller or from a client workstation. Step-by-step procedures are included for new and occasional IC-301 print controller users. Detailed information is provided for users who require in-depth knowledge of the IC-301 print controller.

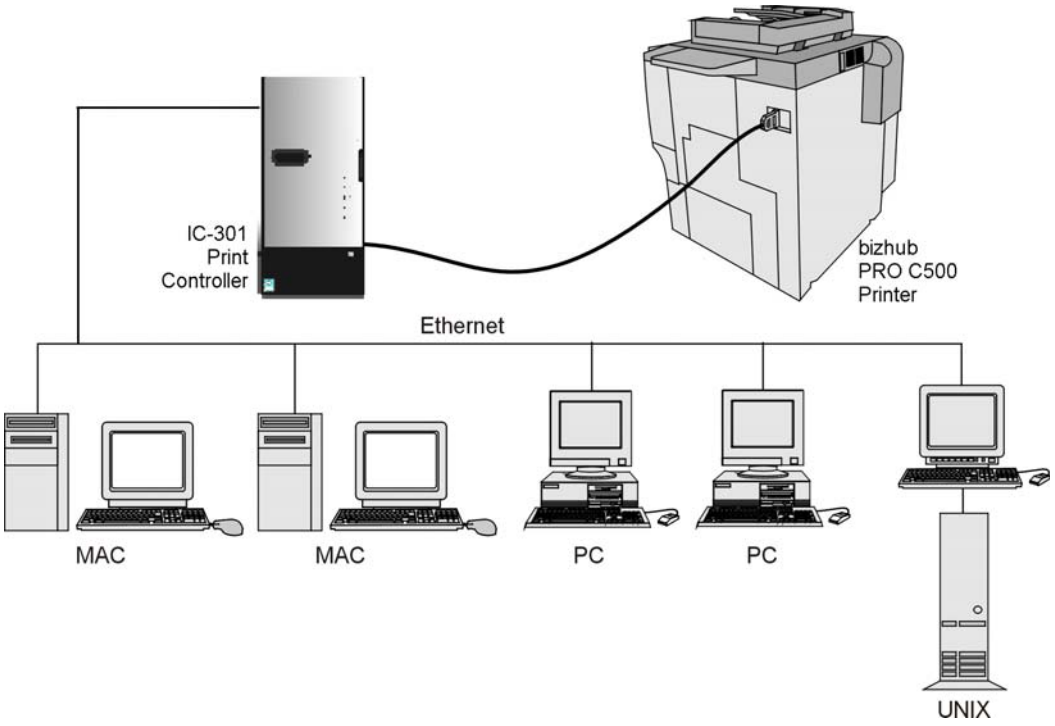
Overview of IC-301 Print Controller

The IC-301 print controller is an on-demand prepress system that uses Creo advanced prepress technologies, to drive a bizhub PRO C500 printer.

As an optimal digital color solution for printers, the IC-301 print controller enables you to print from Windows, Macintosh, and UNIX® client workstations. The IC-301 print controller processes image files in page-description language (PDL) formats—for example, PostScript, PDF, and Variable Information—using RIP (Raster Image Processor) technology. The system converts image files into a suitable processed format for direct, high-quality digital printing. The IC-301 print controller also streamlines the printing process by allowing printing with preset workflows.

In combination with the bizhub PRO C500 printer, the IC-301 print controller enables you to efficiently print flyers, brochures, pamphlets, dummy catalogs, short-run trials, and print-on-demand publications. When installed as a fast network printer with the IC-301 print controller, the bizhub PRO C500 printer prints up to 51 full-color A4 (210mm x 297mm) or 50 Letter (8.5 inches x 11inches) pages per minute.

The IC-301 print controller combines RIP functionalities, automation, control tools and special hardware development capabilities with PC architecture.



Hardware and Software Components

The IC-301 print controller is a dedicated KONICA MINOLTA platform that runs in a Windows XP environment.

The IC-301 print controller includes:

- KONICA MINOLTA hardware, including the interface board
- KONICA MINOLTA software
- Windows XP® Professional operating system
- Adobe® Acrobat® 6.0

Supported File Formats

The IC-301 print controller supports the following file formats:

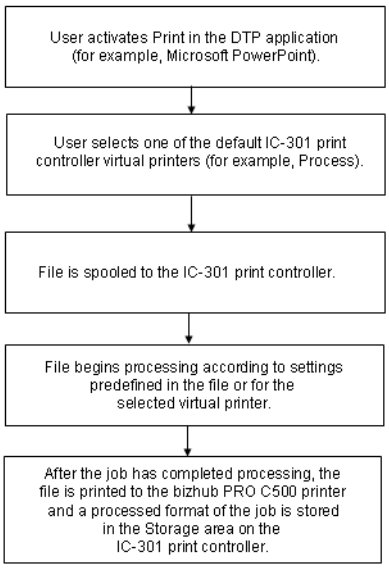
- PostScript (composite or pre-separated files)
- PDF
- EPS
- Creo VPS (Variable Print Specification)
- PPML (Personalized Print Markup Language)
- JPG
- Pre-separated formats

The IC-301 print controller can import and covert the following GAP (Graphic Art Port) file types:

- Brisque jobs
- TIFF
- TIFF IT
- CT / LW

Workflow

The IC-301 print controller basic workflow is as follows:



IC-301 Print Controller Network Printers

The IC-301 print controller provides three default network printers, known also as virtual printers.

Virtual printers are a function used for automating workflows, which then define job streaming. They contain preset workflows that are automatically applied to all print jobs processed with that virtual printer. There is no need to reset job settings for each job, thus increasing printing efficiency.

Note: By default, the job parameters set in the job (from the client workstation) override the parameters set in the virtual printer. If you add or edit a virtual printer, you can select the **Override PPD parameters** check box to override the parameters set in the PPD file.

The three default virtual printers are:

- **Store**
  Files are spooled directly to the **Storage** area and await operator processing. You can only import PDL files (such as: PostScript, PDF, VPS) to this virtual printer, not RIPped - processed files.
- **Print**
  Files sent to this virtual printer are processed and printed directly to the bizhub PRO C500 printer via the IC-301 print controller.
- **Process**
  Files sent to this virtual printer are automatically processed. After processing, the files are stored in the **Storage** area of the IC-301 print controller until the print operator re-submits them for printing.

With printing workflows tailored to your job requirements, the IC-301 print controller enables you to:

- Define new virtual printers
- Choose from which virtual printer to print

For information on creating and editing virtual printers, see *Creating Virtual Printers* on page 79.

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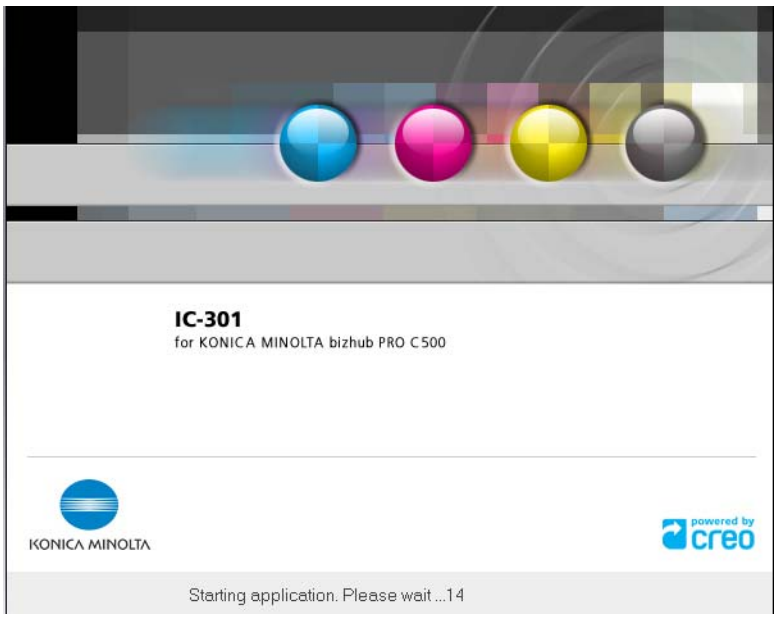
Getting Started

Turning On the IC-301 Print Controller

1. Turn on the monitor.
2. Open the front panel of the IC-301 print controller, and then press the power control button.

   The power indicator on the front panel lights up and the Windows operating system starts.The IC-301 print controller splash screen appears followed by the workspace.



Notes:

- If the workspace doesn't appear automatically, select **Start> IC-301>IC-301** from the Windows **Start** menu.
- By default, the **Auto Log On** check box is selected in the Preferences window. This option enables you to open the workspace without having to go through the IC-301 print controller logon process each time. If you want each user to have to log on to the IC-301 print controller, clear the **Auto Log On** check box, and then assign each user an access level and password.

For more information about designating access levels, see *Security* on page 137.

The Workspace

After you turn on the IC-301 print controller, the workspace automatically appears.

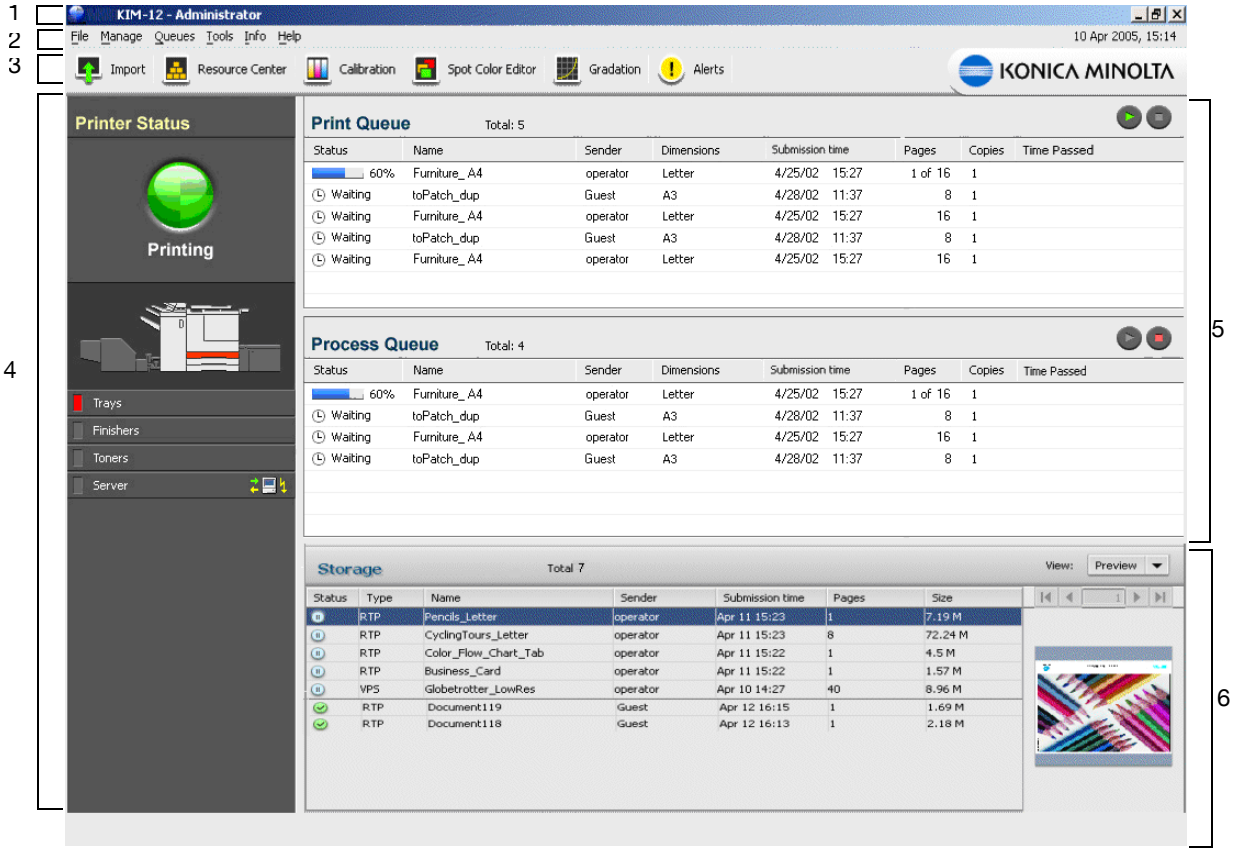
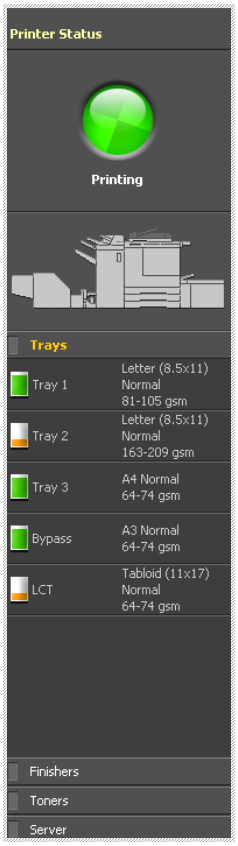


Table 1 describes the IC-301 print controller workspace.

Table 1: IC-301 print controller workspace

Item	Name	Description
1	Title bar	Displays the name of your server and the access level with which you logged on
2	Menu bar	Consists of the **File**, **Manage**, **Queues**, **Tools**, **Info,** and **Help** menus. Click a menu name to open the corresponding menu.
3	Toolbar	Consists of shortcut buttons for the Import window, Resource Center, Calibration, Spot Color Editor, Gradation, and Alerts
4	Printer Status	Displays messages about the current printer state and your printer configuration. You can also find information about the paper in each tray, the connected finishing devices, toner availability, and disk space and network details.
5	Queues	Consists of the **Process Queue**, which lists the files to be processed. After a file has been processed successfully, it moves either to the **Print Queue** (the upper area) or to the **Storage** area.
6	Storage	The **Storage** area contains files that: • were successfully printed • were held, were aborted, or failed during processing or printing • were sent directly from the client workstation to the **Storage** area or were imported to the **Storage** area

The Printer Status Pane



The **Printer Status** pane displays information about the current printer status—for example, Printing.

The printer icon displays the current printer configuration, according to the connected feeders and finishers.

Click **Trays**, **Finishers**, **Toners**, or **Server** to display information about the size and type of paper in each tray, the connected finishing devices, the available toner, and disk space and network details.

Under **Server**, you can also view the date that the printer was most recently calibrated. Progress bars display information about incoming and outgoing jobs.

If there is a problem with one of the printer components or with the server, a red indicator appears in the printer icon and next to the relevant component—for example, if a tray is empty.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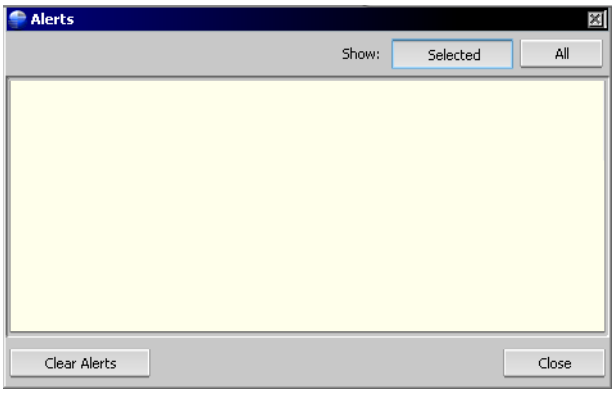
The Alerts Window



The Alerts window lists all of the alert messages that are generated during the workflow.

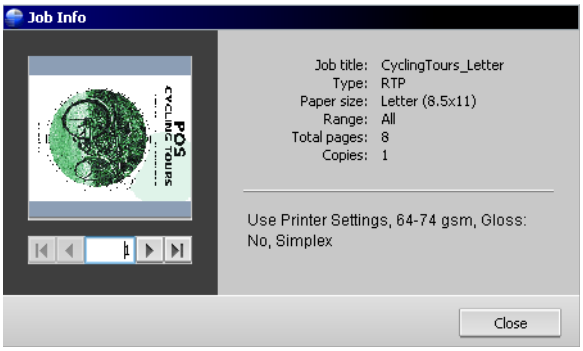
To open the Alerts window:

➢ On the toolbar, click **Alerts**.

The window has two view options:

- **All:** To view all messages
- **Selected:** To view alerts related to a selected job. This is the default view.

The Job Info Area



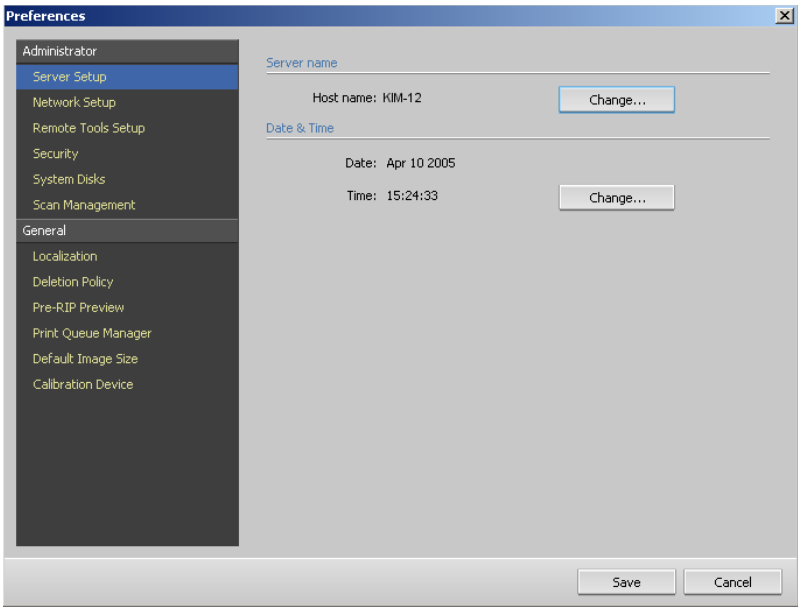
The **Job Info** area displays a small image of each page in the selected processed job. The **Job Info** area also contains the following information:

- Job's title
- File type
- Paper size
- Print range
- Total number of pages in the job
- Total number of copies to print
- A box to enter the required page number and arrow buttons to browse through the pages of your job

To open the Job Info area:

➢ Right-click a job in the **Process Queue** or **Print Queue**, and from the menu, select **Job Info**.

The Preferences Window



You can set all system preferences in the Preferences window.

To open the Preferences window:

➢ From the **File** menu, select **Preferences**.

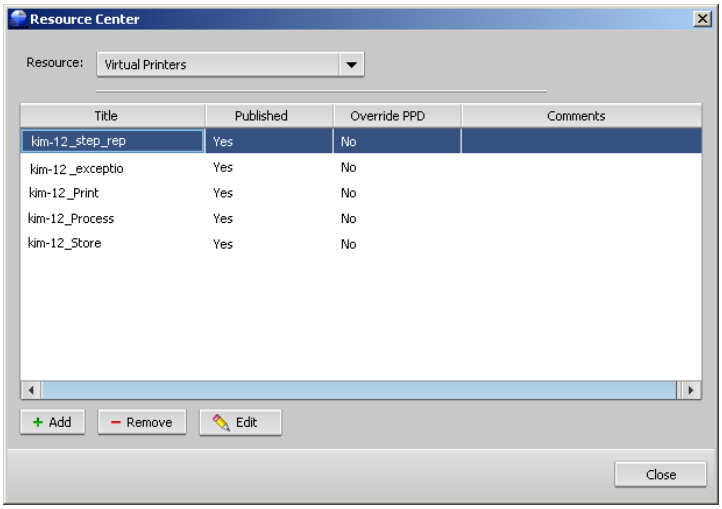
The window is divided into two areas:

- **Administrator:** All users can view these settings, but configuring these settings depends on the access level defined for each user.
- **General:** All users can view these settings, but only an administrator or operator can configure the settings.

Note: If you log on to the IC-301 print controller as a guest, the Preferences window is unavailable.

For more information about setting system preferences, see *Setting Up and Configuring the IC-301 Print Controller* on page 128.

The Resource Center



The Resource Center enables you to add, remove, and manage external resources for the IC-301 print controller.

To open the Resource Center:

➢ On the toolbar, click **Resource Center**  .

The Resource Center provides access to the following resources:

- Virtual printers, in which you can create, edit and remove virtual printers, see *Creating Virtual Printers* on page 79
- Fonts, see *Managing Fonts on the IC-301 Print Controller* on page 99
- Profile Manager, see *Managing Profiles* on page 108
- Backup & Restore configuration, see *Backing Up and Restoring the Configuration* on page 153

The Job Parameters Window

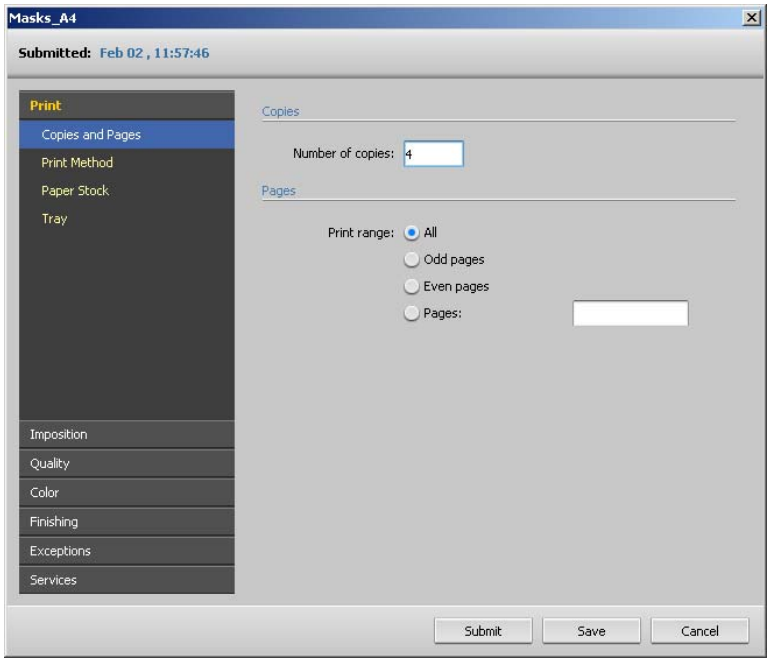
The IC-301 print controller enables you to edit imported PDL files and change the job settings—for example, paper size, imposition, and color settings—in the job parameters window.

➢ In the queues or **Storage** area, double-click the job whose parameters you want to view.

Note: In the queues, you can edit the parameters of jobs that have not begun to run. If you want to edit the parameters of a running job, you must first suspend the queue (click the suspend button).

The job parameters window appears.

Note: If you edit the parameters of a job in the **Print Queue** and the changes require re-RIPing of the job, it automatically moves to the **Process Queue**.



Each area in the job parameters window—for example, **Print**, **Imposition**, or **Quality**— has a set of related parameters and values that you can select.

Table 2: Description of buttons in the job parameters window

This button	Enables you to
Print	Set print related parameters—for example, **Print range** and **Media Type**. See *Print* on page 156
Imposition	Set parameters related to print layout—for example, **Trim Size** and **Imposition Method**. See *Imposition* on page 159
Quality	Set parameters related to print quality—for example, **Trapping** and **High Image Quality**—and improve the quality of printed jobs. See *Quality* on page 164
Color	Apply last minute color corrections, or set the output job to match other output devices. See *Color* on page 167
Finishing	Set parameters related to finalizing your printed document—for example, define settings for the front and back cover. See *Finishing* on page 171
Exceptions	Include special exceptions in a job—for example, use a different media type for a front and back cover. See *Exceptions* on page 174
Services	Set parameters that will assist your job workflow—for example, delete jobs, in the change the location of the entire printed image, or enter job information. See *Services* on page 176

The Help Menu

The **Help** menu enables you to access the user guide and provides information about the current version of the IC-301 print controller installed on your computer.

To open the About window:

➢ From the **Help** menu, select **About**.

The About window displays the following information:

- IC-301 print controller version number
- Date the version was installed
- Any updates that were installed on top of the version

To open the user guide:

➢ From the **Help** menu, select **Topics**.

Turning Off the IC-301 Print Controller

1. From the **File** menu in the workspace, select **Exit**.

   If there are jobs that are being processed or printed, the following message appears:

   ```
   There are currently jobs running, are you sure you want
   to exit the application?
   ```

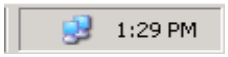
   If there are no jobs being processed or printed, the following message appears:

   ```
   Are you sure you want to exit the application?
   ```

   The IC-301 print controller workspace closes, and you return to the Windows desktop.

2. Verify that the IC-301 icon has disappeared from your taskbar.

Taskbar with IC-301 icon



Taskbar without IC-301 icon

3. From the Windows desktop, select **Start**>**Shut Down**.
4. In the shutdown dialog box, select **Shut down**.
5. When the Windows shutdown is complete, turn off the monitor.
6. On the IC-301 print controller, click the power button behind the front door.
   The power LED on the front panel turns off.

Note: Some situations may require the power button to be depressed for more than 4 seconds.

3 Printing From Your Computer

Overview

To print a job from a client workstation, select one of the following methods:

- Print the job via one of the IC-301 print controller network (virtual) printers—for example, **Print**.
  The job is spooled and then processed or printed (according to the selected job flow of the virtual printer). If you use this method, you can print from any application —for example, Microsoft Word— and use any file format from any client workstation (Windows, Macintosh, or UNIX).

For more information about printing from a client workstation, see *Printing From Windows* on page 26 and *Printing from a Macintosh* on page 31.

- Drag the files to a hot folder.
  The job is spooled and processed or printed (according to the selected job flow of the corresponding virtual printer).

For more information about hot folders, see *Using Hot Folders* on page 36.

If you use the hot folder method, you can print most PDL files on the IC-301 print controller— for example, PostScript, PDF, EPS, and Variable Print Specification files.

Note: PDL jobs that are spooled to the IC-301 print controller must have the appropriate file name extensions—for example, *.ps or *.pdf.

Defining a Printer in Windows

The IC-301 print controller can print from a Windows client workstation that has one of the following operating systems:

- Windows ME
- Windows NT 4.0
- Windows 2000
- Windows XP
- Windows 2003
- Windows 2003 Server

The following section describes how to define a IC-301 print controller network printer for Windows XP.

You use the Windows Add Printer wizard to define the IC-301 print controller network printers.

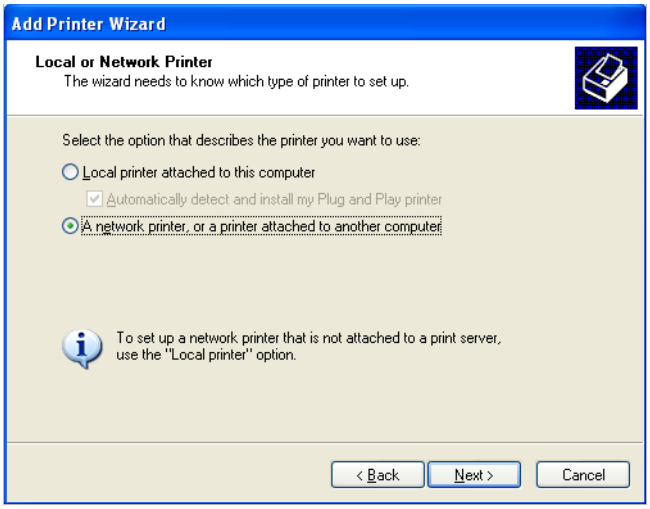
Note: When you add a new IC-301 print controller network printer to a client workstation, there is no need to install the IC-301 print controller PPD file and Adobe PostScript printer driver separately. They are installed automatically in the Windows Add Printer wizard.

Defining a Printer - Windows XP

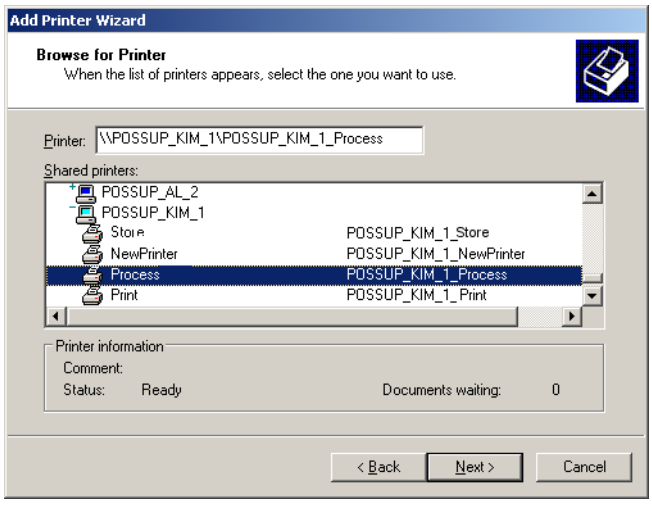
To define a network printer using the Windows Add Printer wizard:

1. On your desktop, click the **Start** button and select **Settings**>**Printers and Faxes**.
2. In the **Printer Tasks** area, select **Add a printer.**

   The Add Printer wizard appears.
3. Click **Next.**



4. Select **A network printer, or a printer attached to another computer** and then click **Next.**
5. Select **Browse for a printer,** and click **Next.**
6. Find the **IC-301 print controller** and double-click it to display the list of network printers.



7. Select the printer you wish to setup, and click **Next.**
8. Select **Yes** if you want to set this printer as the default printer on your computer. Otherwise, select **No.**

9. Click **Next**.
10. Click **Finish** to close the wizard.

    The IC-301 print controller network printer is added to your printer list.

To define a network printer in Windows XP using the network neighborhood:

1. Browse to the IC-301 print controller and open it.
2. From the list of network printers, find the desired network printer.
3. Double-click on the network printer icon.
4. The network printer is defined on your Windows client workstation.

Note: To install additional network printers, repeat the process

Copying the Printer Driver from Windows

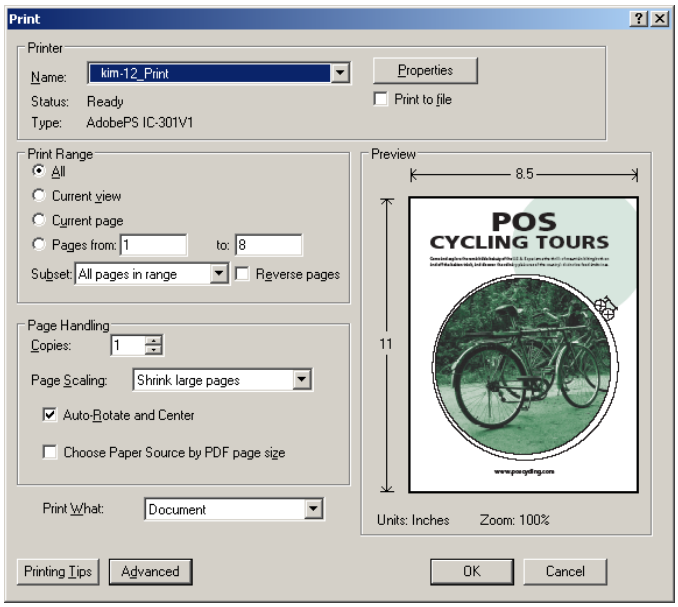
Perform this procedure if your client workstation is not on the same network as the bizhub PRO C500 printer and you want to create PostScript files.

1. In the IC-301 print controller, locate the **D:** drive and then double-click the **Utilities** folder.
2. Click **PC utilities**, and then **Printer Driver**.
3. Find the directory of the driver relevant to your version of Windows.
4. Compress the directory, and either copy it to a disk or send it by email to the customer.

Printing From Windows

1. Open the file you would like to print in the corresponding application—for example, open a PDF file in Adobe Acrobat.
2. From the **File** menu, select **Print**.

   The Print dialog box appears.
3. In the **Name** list, select the desired IC-301 print controller network printer—for example, **<servername>_Print**.



4. If desired, click **Properties** and modify the job parameters.

Notes:

- Unless the **Override PPD Parameters** option was selected in the virtual printer, any changes to the printer parameters override the parameters of the selected virtual printer.
- **Printer's Default** indicates that the value is taken from the settings of the selected virtual printer on the IC-301 print controller.

5. Click **OK**.

6. Click **OK** in the Print dialog box.

   The file is sent to the IC-301 print controller.

For more information abut setting PPD file settings, see *Setting Parameters in the PPD File* on page 180.

Defining a Printer on Macintosh Client Workstations

This section describes how to define a IC-301 print controller network printer for Macintosh client workstations. The IC-301 print controller can print to Macintosh client workstations running Mac OS 9 and Mac OS X (10.3).

You can also submit jobs using the IC-301 print controller virtual printers over a TCP/IP protocol. This connection enables a significantly higher spooling speed.

Copying the IC-301 Print Controller PPD File for Mac OS 9

To print from your Macintosh computer to the bizhub PRO C500 printer, you first need to manually copy the IC-301 print controller PPD file to the Macintosh.

1. From the **Apple** menu, select **Chooser**.
2. Select **AppleShare**, and then locate the IC-301 print controller on the network.
3. Click **OK**. The Login window appears.
4. Select the **Guest** option, and then click **Connect**.

   The corresponding IC-301 print controller window appears.
5. Select **Utilities**, and then click **OK**.

Note: Do not select the **Utilities** check box. If you do, **Utilities** will mount each time you restart your computer.

6. On the desktop, double-click the **Utilities** volume.

   The Utilities window appears.

7. Double-click the **PPD** folder, and then double-click the folder for the desired language—for example, **English**.
8. Copy the PPD file to the **System Folder**>**Extensions**>**Printer Descriptions** folder.

   The IC-301 print controller PPD file is now installed in the **Printer Descriptions** folder. It is ready to be configured with one of the IC-301 print controller network printers.

Setting the Network Printer for Mac OS 9

1. Make sure that the IC-301 print controller PPD file has been copied to the **Printer Descriptions** folder on your client workstation.

For more information about copying the PPD file, see *Copying the IC-301 Print Controller PPD File for Mac OS 9* on page 27.

2. From the **Apple** menu, select **Chooser**.
3. Select **LaserWriter** and then locate the IC-301 print controller on the network.
4. Select one of the IC-301 print controller's network printers—for example, **<servername>_Process**—and click **Create**.

   The system automatically locates the IC-301 print controller PPD file and configures the printer as a IC-301 print controller network printer.

   If you have the Desktop Printer Spooler extension enabled, a printer icon appears on the desktop.

Note: Use this icon when you want to download PostScript files to the IC-301 print controller.

Copying the IC-301 Print Controller PPD File for Mac OS X (10.3)

To print from your Macintosh computer to the bizhub PRO C500 printer, you first need to manually copy the IC-301 print controller PPD file to the Macintosh.

1. From the **Go** menu, select **Connect to Server.**

   The Connect to Server dialog box appears.

2. Locate the desired IC-301 print controller in the network and then double-click it.
3. In the Connect to Server dialog box, select **Guest.**
4. Click **Connect.**
5. Select the **Utilities** volume, and click **OK.**
6. On the desktop, double-click the **Utilities** volume icon.
7. Double-click the **PPD** folder.
8. Double-click the **English** folder.
9. Double-click the **MAC** folder and locate the **IC-301V1.PPD** file. It is recommended that you copy the PPD file by dragging it to the specified folder in your local disk. To do this open another Finder window.
10. From the **Go** menu, select **Computer.**
11. Click the **MacOSX** disk icon, and locate the following folder: **Library\Printers\PPDs\Contents\Resources\en.lproj.**
12. Drag the **IC-301V1.PPD** file to the **en.lproj** folder.

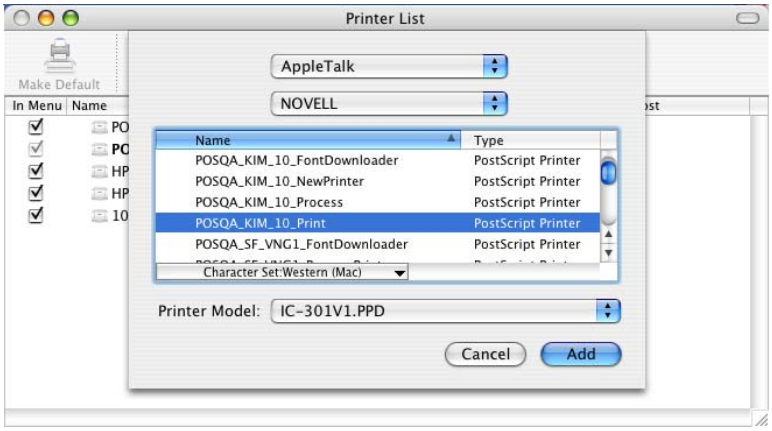
Setting the Network Printer for Mac OS X (10.3)

1. Copy the IC-301 print controller PPD file to the **Library\Printers\PPDs\Contents\Resources\en.lproj** folder on your client workstation.

For more information about copying the PPD file, see *Copying the IC-301 Print Controller PPD File for Mac OS X (10.3)* on page 29.

2. From the **Go** menu, select **Applications.**

3. Open the **Utilities** folder and then double-click **Printer Setup Utility**.
4. Click **Add**.
5. In the upper box, select **Apple Talk**.



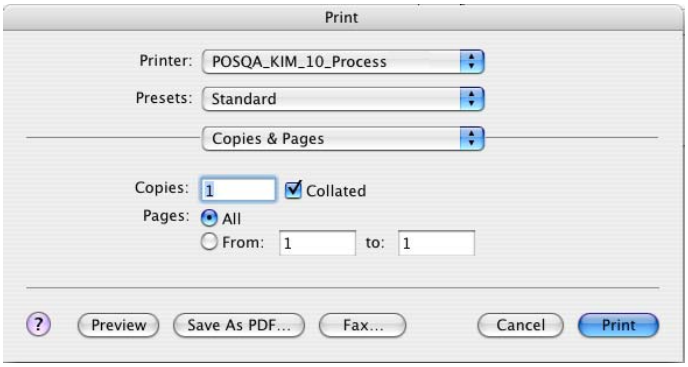
6. In the lower box, select the required AppleTalk Zone from the list (as instructed by your system administrator).
7. Locate the IC-301 print controller name in the list.
8. From the printers list, select **<server_name>_Print**.

   Any jobs sent to this printer will be automatically processed, printed, and stored.
9. In the **Printer Model** list, select **Other.**
10. In the Choose a File dialog box, double-click the folder to which you copied the PPD file:
    MACOSX\Library\PPDs\Contents\Resources\en.lproj.
11. Locate the **IC-301V1.PPD** file and double-click it.
12. Click **Add.**

    You have successfully installed a network printer for the IC-301 print controller and are ready to start printing.

Printing from a Macintosh

1. Open the file you would like to print, in the corresponding application—for example, open a Quark file.
2. From the **File** menu, select **Print.**

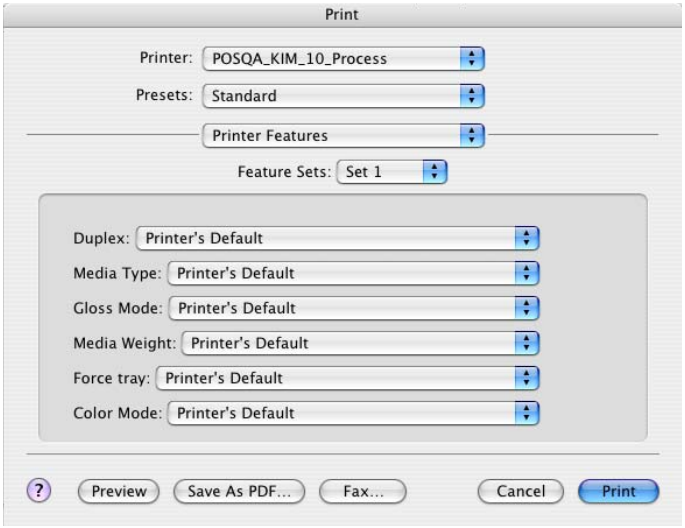


3. In the **Printer** list, select the desired printer—for example, **<server_name>_Print.**

For more information about installing the IC-301 print controller network printers on client workstations, see *Copying the IC-301 Print Controller PPD File for Mac OS 9* on page 27 and *Setting the Network Printer for Mac OS X (10.3)* on page 29.

4. In the **Copies & Pages** list, select **Printer Features.**

   A window similar to the one shown below appears. You can set job parameters.



5. Adjust the printer options as desired.

Notes:

- The **Printer's Default** option indicates that the value is taken from the virtual printer that is currently selected.
- The PPD parameters are divided into eight feature sets.

6. After modifying the job settings, click **Print**.

   The file is sent to the IC-301 print controller.

Web Center

The Web Center is a web page that provides online information and can be accessed from client workstations.

The Web center enables you to:

- View the status of jobs in the queues, the Alerts window in its current state, and the printer system information
- Download remote client tools, utility applications, color profiles, and print drivers

To connect to the Web Center from a client workstation:

Important: To connect to the Web Center from a client workstation, you must first enable the web connect service on the IC-301 print controller, see *Remote Tools Setup* on page 136.

1. On your desktop, click the **Internet Explorer** icon.

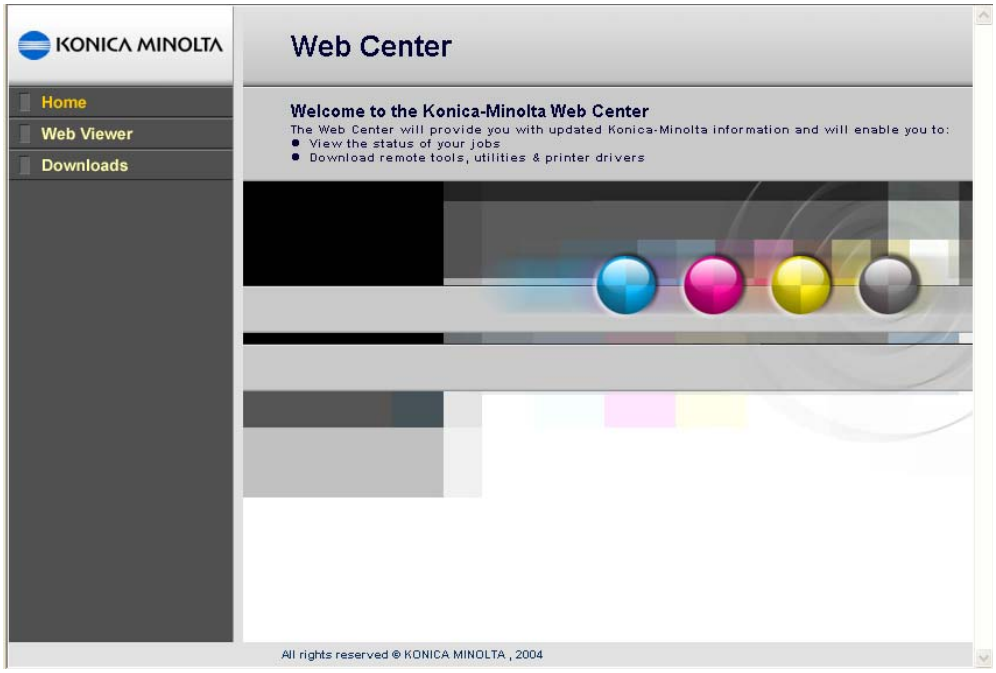
Note: To connect to the Web Center, use Internet Explorer 5.0 or later.

2. When the Internet Explorer starts, in the address field type: http://<IC-301 name>—for example, if the IC-301 station name is FALCON_E, type http://FALCON_E.

Note: You can also use the IC-301 print controller IP address—for example,
http://192.168.92.10.

Important: If you would like to connect to the IC-301 print controller from a Macintosh client workstation, contact your system administrator to add the IC-301 name to the DNS. This is required since Windows name resolution protocols are not supported in Macintosh. The DNS addition is required when clients go through a main server on the network.

The IC-301 print controller Web Center appears.



The Web Viewer

The Web Viewer page consists of three tabs and enables you to view the jobs that currently reside in the IC-301 print controller queues and **Storage** area, and also view messages that currently appear in the Alerts window. This information is important when you print from a client workstation because it enables you to monitor your jobs in the queues and then make any necessary changes.

Table 3: Description of Web Viewer tabs

This tab	Enables you to view
Queues	Jobs that are currently running in the IC-301 print controller **Print Queue** and **Process Queue**.
Storage	IC-301 print controller **Storage** area and the jobs that reside in this window
Alerts	IC-301 print controller alerts. For example, if a job that you sent to print from your client workstation has failed—you can view the message in the Alerts window, edit the job parameters, and then resend it for processing and printing on the IC-301 print controller.

Web Viewer API

If you have an application that uses XML protocol, the **JobList.xml** file and the **Printer Status.xml** file enable you to retrieve information about the job list and the printer status.

The **JobList.xml** file contains information about files in the **Print Queue**, **Process Queue**, and the **Storage** area.

To see the Job List view, type the following path:
http://<ComputerName>/WebViewer/GetView.asp?View=JobList_xml.

The **Printer Status.xml** file contains information about the various printer states. To see the Printer State view, type the following path:
http://<ComputerName>/WebViewer/GetView.asp?View=PrinterStatus_xml.

Downloads

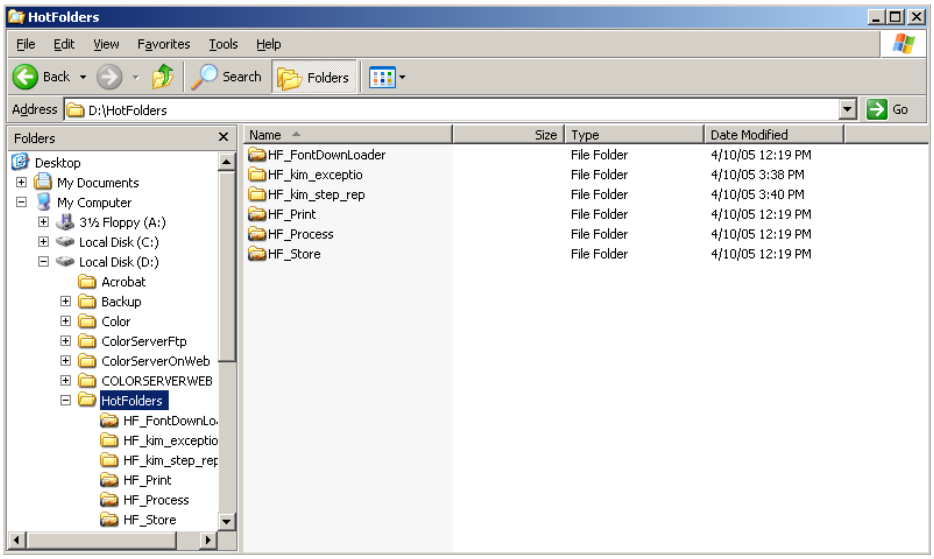
The Downloads page enables you to download the most updated IC-301 print controller utilities for Windows and Macintosh client workstations. You can download the following items:

- PPD file
- Color profiles
- Utilities folder

Using Hot Folders

For every published IC-301 print controller network printer that you define on a client workstation, a corresponding hot folder is automatically created in the IC-301 print controller **D:\Hot Folders** folder. The IC-301 print controller has three default hot folders, **HF_Print**, **HF_Process**, and **HF_Store.** These hot folders correspond to the three default printers.

Each hot folder carries the virtual printer's name (HF_printer's name), see the following graphic.



When you connect from a client workstation to the IC-301 print controller over the network, you can use the hot folder to submit PDL jobs to the IC-301 print controller. When you establish a connection, drag your jobs onto the desired hot folder (according to the selected workflow).

Tip: You can also drag the hot folder icon to your desktop and create a short cut to the hot folder.

Jobs that reside in the hot folder will automatically be submitted to the IC-301 print controller through the corresponding virtual printer. Consequently, all of the virtual printer job parameters, inclusive of the workflow, will be applied to the job.

As soon as the job has been spooled to the IC-301 print controller, it disappears from the hot folder and enters the IC-301 print controller **Process Queue** or **Storage** area, according to the selected workflow.

Note: If you send files for printing through a hot folder while the IC-301 print controller application is down, when the application restarts, the files that reside in hot folders will immediately be imported to the system.

Hot Folder File Formats

Hot folders may contain all PDL formats that are supported by the IC-301 print controller, PS, PDF, EPS, PRN, VPS, PPML, TIF, JPG and GAP.

Note: When you use hot folders to print GAP jobs, the process is automated and the job is converted to a PDF, which is displayed in the IC-301 print controller queues. The PDF files can then be programmed and printed as any other PDF file.

Files with unsupported formats that are moved to a hot folder, will not be imported to the IC-301 print controller and will remain in the hot folder.

Using Hot Folders From Your Computer

You can use hot folders to process and print files from any computer. The following procedures explain how to print using hot folders from Windows and Macintosh OS X.

To print a job using a hot folder from Windows:

1. On your Windows desktop, double-click the **Network Neighborhood** icon.
2. Find your IC-301 print controller.
3. Double-click the IC-301 print controller.
4. Double-click the desired hot folder—for example, **HF_Process**.

Tip: You can also drag the hot folder icon to your desktop to create and use a shortcut to the folder in the future.

You can now drag the desired files to the hot folder. All the files are processed and printed automatically to the printer, according to the hot folder workflow.

To print a job using a hot folder from a Mac OS X:

1. From the **Finder** menu bar, select **Go**>**Connect to Server**.

   The Connect to Server window appears.
2. Find your IC-301 print controller on the network, and click **Connect**.
3. Select **Guest**, and then click **Connect**.
4. From the list, select the desired hot folder—for example, **HF_Process**—and then click **OK**.

The hot folder icon appears on your desktop. You can now drag the desired files to the hot folder icon. All the files are processed and printed automatically to the printer, according to the hot folder workflow.

Setting Up the Remote Desktop

The Remote Desktop utility enables you to connect, view, operate, and perform administrative procedures on the IC-301 print controller from a client workstation. While the remote connection and operation takes place, the regular operation of the IC-301 print controller is not affected.

Notes:

- Only one user at a time can operate and perform administrative tasks on the IC-301 print controller workspace, either from the Remote Desktop utility or the IC-301 print controller.
- This tool is designed exclusively for the system administrator. Users that want to connect to the IC-301 print controller from a client workstation can use the Web Center to view and monitor jobs in the IC-301 print controller queues.

For more information about viewing jobs from a client workstation, see *Web Center* on page 32.

The Remote Desktop utility is integrated into the Windows XP Professional operating system, while for Windows 9x 98/ME, 2000, and Mac OS, the remote desktop must be set up.

Setting up the remote desktop connection utility for Windows 9x 98/ME, 2000:

1. From the system administrator workstation, connect to the desired IC-301 print controller, and double-click the **Utilities** folder.
2. Double-click the **PC Utilities** folder, and then double-click the **Remote Desktop.EXE** file.
3. On your desktop, click **Start>Program>Accessories>Communications>Remote Desktop Connection.**

   The Remote Desktop Connection dialog box appears.
4. In the **Computer** box, type the host name, and then click **Connect.**

   The Log On to Windows dialog box appears.

5. In the **User name** box, type your user name.
6. In the **Password** box, type your password.
7. Click **OK**.

   The desktop appears.

Setting up the remote desktop connection utility for Mac OS X:

1. From the system administrator workstation, connect to the desired IC-301 print controller, and double-click the **Utilities** folder.
2. Double-click the **Mac Utilities** folder, and then drag the **RemoteDesktop.hqx** file on your desktop.
3. Double-click the **RemoteDesktop.hqx** file.

   The Remote Desktop Connection window appears.
4. Drag the **Remote Desktop Connection** directory to the **Application** folder on your local disk.
5. Double-click **Remote Desktop Connection.**

   The Remote Desktop Connection (RDC) window appears.
6. In the **Computer** box, type the IC-301 print controller name or IP address, and then click **Connect**.

   The Log On to Windows dialog box appears.
7. In the **User name** box, type the Windows user name for the IC-301 print controller.
8. In the **Password** box, type the Windows password for the IC-301 print controller.

Note: The default logon user name for Windows XP is **Operator**, and the password is **colorserver**.

9. Click **OK**.

   The IC-301 print controller workspace appears.

4 Basic Workflows

Basic Job Workflow

The basic workflow in the IC-301 print controller consists of three main stages:

1. Submitting a file from a client workstation, or importing and printing from the IC-301 print controller, see *Submitting* on page 42
2. After a job is imported, the print engine starts to process the job, see *Processing* on page 42
3. The job is printed and stored in the **Storage** area for future use, see *Storage* on page 43

Submitting

There are two methods for submitting a file for printing:

- Submit a file from an application on your client workstation—for example, PDL formats that were created on client workstations that are not connected to the IC-301 print controller, or files that are available only on external media.
- You can also import job files that reside locally on the IC-301 print controller.

Processing

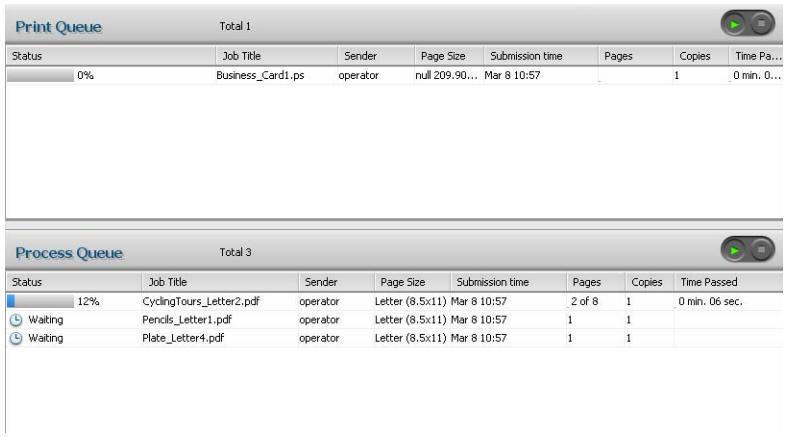
After a job enters the IC-301 print controller, it resides in the queues or the **Storage** area, depending on the job flow. The queues consists of two areas:

- The **Process Queue** lists the job currently being processed and all the jobs that are waiting to be processed.
- The **Print Queue** lists the job that is currently printing and all the jobs that were processed successfully and are waiting to be printed. The **Print Queue** also lists held jobs—for example, jobs for which the specified paper stock is not available.

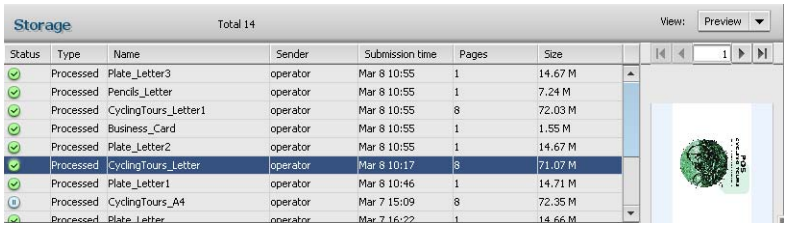
Each queue holds jobs in the order in which they enter the queue.

The top job in the queue is the currently running job, while all the others are waiting to run. The **Print Queue** and **Process Queue** areas show you the number of jobs and their status. You can change the order of jobs, view and edit the parameters. The **suspend** and **resume** buttons in each queue indicates whether the queue is suspended (red) or not (green).

For more information about how to manage the queues, see *Managing the Job Queues* on page 54.



Storage



The **Storage** area is the main repository for jobs. It can contain:

- Completed jobs
- Jobs that were manually moved to the **Storage** area
- Jobs that were aborted during processing or printing
- Jobs that failed to complete processing or printing
- Jobs that were imported or spooled directly from a client workstation

For more information about the **Storage** area, see *Managing the Storage Area* on page 62.

Importing and Printing Jobs

You import jobs for printing in the following situations:

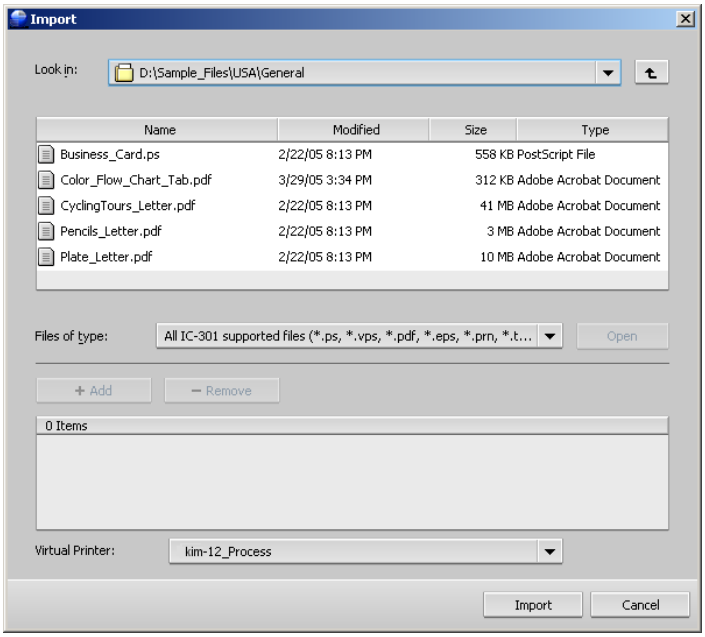
- When a page-description language (PDL) file is created on a client workstation that is not connected to the IC-301 print controller
- When a PDL file is located on an external medium, such as a CD-ROM
- When the desired file resides locally on the IC-301 print controller

Importing Files

To import files to the IC-301 print controller:

1. From the **File** menu select **Import**.

   The Import window appears.



2. To access the desired files, click the **up one level** button  , or double-click on the file folders to go down the file tree.
3. In the upper list in the Import window, select the desired file and click **Add**  .

   The file appears in the lower list.
4. Select a printer from the **Virtual Printer** list.

Note: To remove a file, select the desired file in the lower list in the Import Job window and click **Remove**  .

5. Click **Import.**

   All files currently listed on the lower list are sent to the IC-301 print controller to be processed and printed as defined in the selected virtual printer.

Resubmitting

You can easily reprint processed jobs that are stored in the **Storage** area. Select the job you want to reprint and then submit it. The job is automatically placed in the **Print Queue**.

The IC-301 print controller enables you to change job parameters and edit jobs prior to reprinting.

You can change job parameters in the job parameters window. Certain changes to the job parameters require you to re-RIP the job. The IC-301 print controller automatically determines whether your file requires re-RIPing and places it in the appropriate queue when you submit it for reprinting.

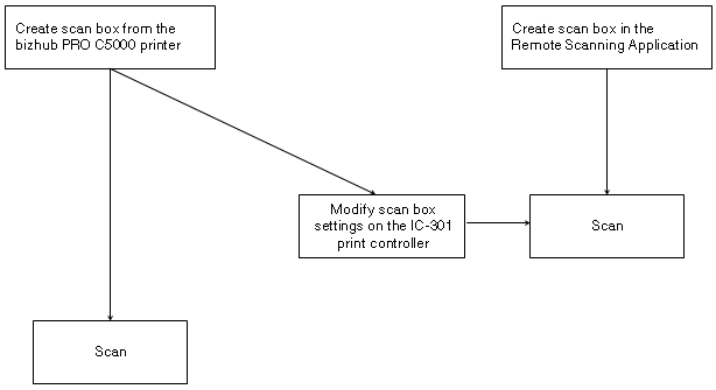
Remote Scanning Application

Before you begin using the the Remote Scanning Application, you need to install the application on your client workstation. You can find the setup file in the **Utilities** folder on the installation CD.

The Remote Scanning Application enables you to:

- Set up scan boxes either from the bizhub PRO C500 printer or your client workstation, and then set parameters that specify the location of your scanned data, the format in which it is saved, and security settings
- Manage scanned images

A typical scanning workflow with the Remote Scanning Application is as follows:



Setting Up Scan Boxes

You can set up scan boxes:

- On the bizhub PRO C500 printer. This enables you to set up a scan box on the fly, and then scan an image. You can modify the scan box settings later on the IC-301 print controller, see *To set up a scan box from the bizhub PRO C500 printer:* on page 47.
- On the Remote Scanning Application. This provides a central location for the system administrator manage the scan boxes, and set security, see *To set up a scan box from the Remote Scanning Application:* on page 48.

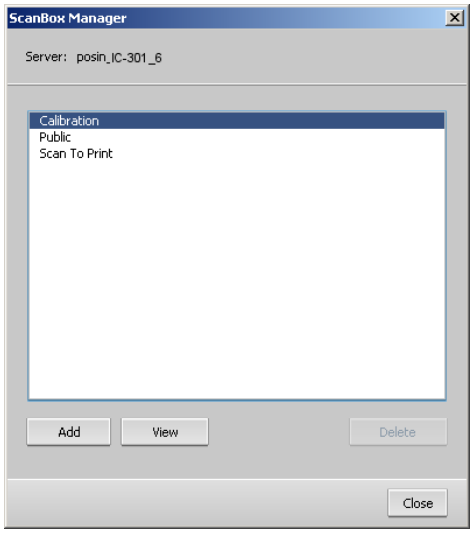
To set up a scan box from the bizhub PRO C500 printer:

1. On the printer's control panel, press the SCAN key.
2. On the printer's touch screen, touch the **HDD** button.
3. Touch the **Add manual input** button, and then touch the **Address manual input** box.
4. Touch the **Input Key Indicate** button, and then on the control panel type a name for the new scan box.
5. On the touch screen, touch the **OK** button.
6. Touch the **BoxNo** box.
7. On the control panel, type a serial number for the scan box.

8. On the touch screen, touch **OK**.
9. Place the image that you want to scan on the printer, and then press the START key.
10. To access your scanned data, open the Remote Scanning Application, see *Managing Scanned Images* on page 50

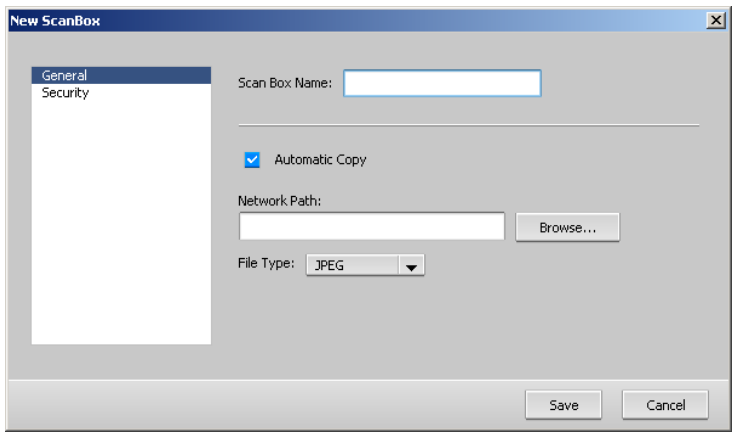
To set up a scan box from the Remote Scanning Application:

1. From the **Start** menu, select **Programs**>**KIM**>**Remote Scan Application**>**Remote Scan**.
2. From the **Server Name or IP** list, type, or choose, the server hostname or IP address to which you want to connect, and click **Connect**.
3. In the Remote Scanning Application dialog box, click the **Scan Box Manager** button.

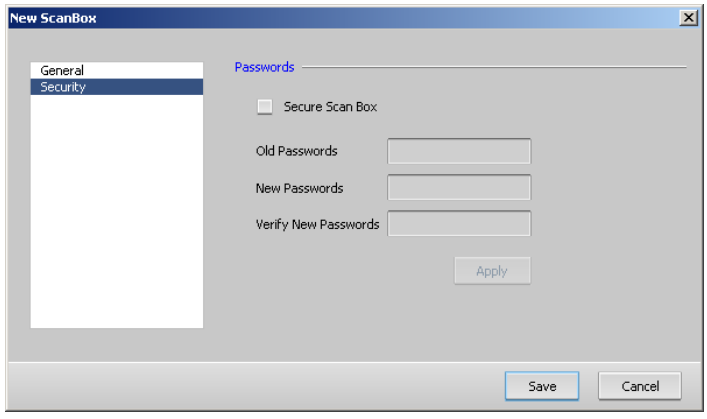


The scan box list is displayed.

4. Click the **Add** button to add a new scan box.



5. In the **Scan Box Name** box, type a name for the scan box.
6. Select the **Automatic Copy** checkbox to specify that your data is automatically copied to the scan box.
7. In the **Network Path** box, enter the location to which you want to save the scan box.
8. In the **File Type** box, enter the format in which you want to save the data that is saved to the scan box. The available options are **JPEG**, **TIFF** and **PDF**.
9. Select **Security**.



10. Select the **Secure Scan Box** checkbox to secure the scan box, and specify a password.

Click **Apply**, and then **Save**.

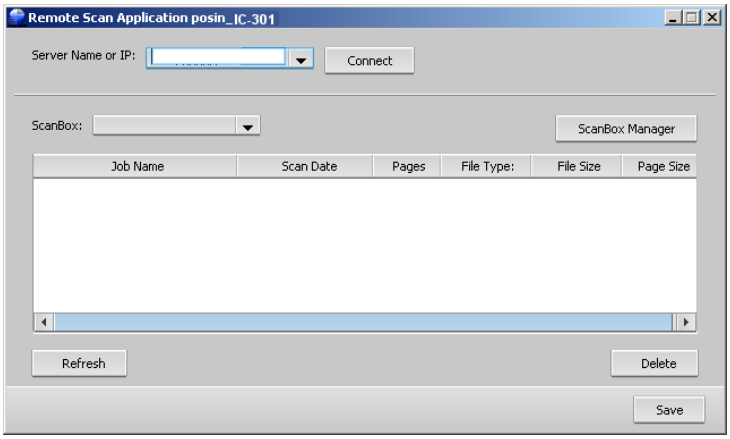
Managing Scanned Images

The Remote Scanning Application provides the following default scan boxes:

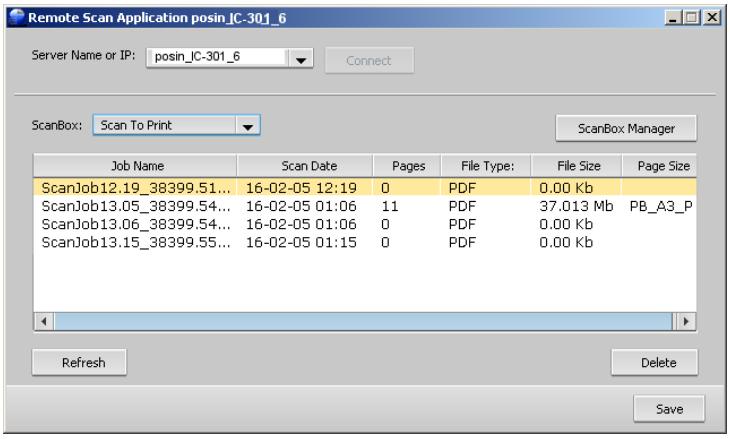
- **Public**—the settings for the **Public** folder can be managed by all users or by an administrator only. These settings are specified in the Preferences window. For more information, see *Scan Management* on page 141.
- **Scan to Print**—from which data is sent to the **Process Queue** to be processed and printed.
- **Calibration**—which contains the data saved during calibration.

To manage scanned images:

1. From the **Start** menu, select **Programs**>**KIM**>**Remote Scan Application**>**Remote Scan**.



2. From the **Server Name or IP** list, type, or choose, the server hostname or IP address to which you want to connect, and click **Connect**.
3. From the **ScanBox** list select the scan box you want to access.



All jobs scanned to the selected scan box are displayed.

4. Select the desired job, and click **Save**.

   The Save dialog box opens.

5. Select a destination, and click **Save**.

   You can now open, and work with your scanned data.

5

Managing Jobs

Managing the Job Queues

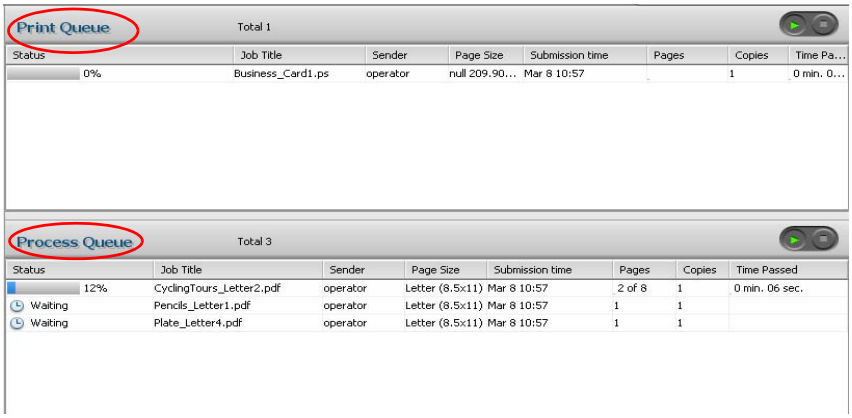
After entering the IC-301 print controller, a job resides either in the queues or in the **Storage** area, depending on the job flow.

There are two queues, **Process** and **Print**.

- The **Process Queue** lists the job that is currently being processed and the jobs that are waiting to be processed.
- The **Print Queue** lists the currently printing job and the jobs that were processed successfully and are waiting to be printed. The **Print Queue** also lists held jobs —for example, jobs for which the specified paper stock is not available.

At any time, you can view information regarding the number and status of the jobs in the queues. You can also change the order of the jobs and suspend or resume the queue.

After you start the IC-301 print controller, the queues are displayed.



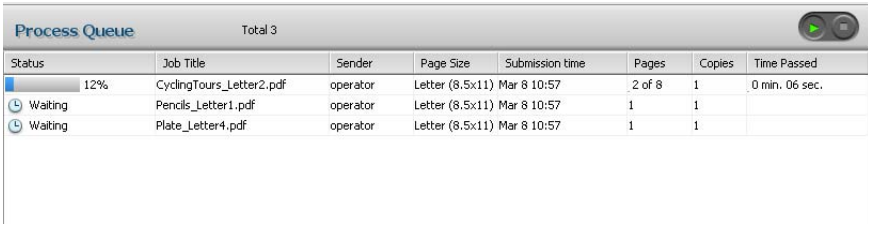
Each queue holds jobs in the order in which they enter it. The top job in the queue is currently running, while all others are waiting to run.

Note: If there are very short jobs in the **Print Queue**, several jobs may be printing at the same time. The jobs marked as **printing** are listed first and printed in the order they are listed.

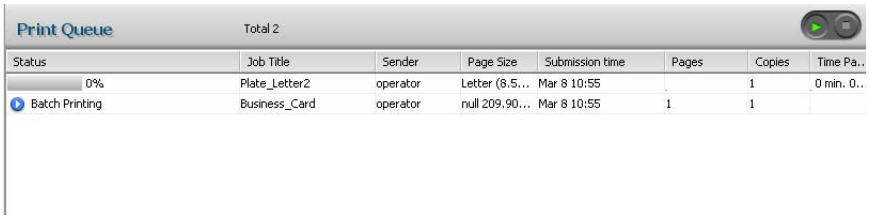
If necessary, you can change the order of the jobs that are waiting in the queues. You can also view and edit the jobs' parameters.

The Queues

After you submit PDL jobs (or resubmit PDL jobs), the **Process Queue** lists the files to be processed.



Once a file has been processed successfully, it moves to the **Print Queue** and waits to be printed or to the **Storage** area (depending on the current job flow or virtual printer).



For more information about operations on the jobs residing in the queues, see *Aborting a Running Job* on page 59.

The queues list information about the jobs that are being processed. Status indicators indicate the status of each job. Table 4 describes the status indicators used in both the **Process Queue** and **Print Queue.**

Table 4: Process Queue and Print Queue status indicators

This Status Indicator	Indicates This
12%	The job is printing or processing.
	The job is on hold in the **Print Queue.** If a job is on hold, it indicates that the selected paper stock is not available

Table 4: Process Queue and Print Queue status indicators

This Status Indicator	Indicates This
	The job is waiting.

You can add, remove, and reorder the columns in the **Process Queue** and in the **Print Queue**.

To add columns:

- Right-click the column heading row, select **Add** and then select the column that you want to add.

  The column is added to the right of the selected column.

To remove columns:

Similarly, you can remove columns in the **Process Queue** and in the **Print Queue**. Right-click the column heading row, select **Delete**, and then select the column you want to remove.

To reorder column headings:

In addition, you can change the order of the column headings. Right-click the column heading row, select **Move** and then select **Left** or **Right**.

Table 5: Process Queue and Print Queue column descriptions

This Column	Indicates This Information:
Status	Current status of the job
Job Title	Original name of the job and file extension—for example, **Lizard.pdf**
Owner	User name of the system from which this file originated
Page Size	Page size of the finished, trimmed document

Table 5: Process Queue and Print Queue column descriptions

This Column	Indicates This Information:
Submission time	Date and time this job was first submitted to the IC-301 print controller
Pages	Number of pages to be processed in a PDF job. If the DTP application supported it, the number of pages is indicated for other PDL jobs.
Copies	Number of copies that were requested to be printed
Time Passed	Amount of time that has passed since job processing started
File Type	File format of the PDL job—for example, **PS** (.ps), **PDF**(.pdf), **VPS**(.vps)
Media Type	Media type defined in the job parameters window
Account	Account name defined in the job parameters window
Color Mode	Color mode defined in the job parameters window: **grayscale** or **color**
Comments	Comments entered in the job parameters window

Status Information

The printing and processing status areas contain the following information:

- The **suspend** and **resume** buttons
- The queue name.
- The number of jobs in the queue—for example, 2.

Suspending and Resuming Queues

If necessary, you can stop a queue temporarily and then later continue its operation afterwards. To do this, use the **suspend** and **resume** buttons:

To suspend a queue:

➢ Click the **suspend** button  .

The processing or printing stops after the current job has finished running.

To resume a queue:

➢ Click the **resume** button  .

The top job in the queue starts processing or printing.

Changing the Order of Jobs in the Queues

You can rearrange the jobs in a queue to change the order in which they will be processed or printed. This feature is useful when you have an urgent job that takes priority, for example.

To move a job up in the queue:

➢ Right-click the job and select one of the following options:

- **Promote:** to move the job up one step
- **Promote to top:** to move the job to the top of the queue

Note: The job is placed below the **Printing** or **Processing** job.

To move a job down in the queue:

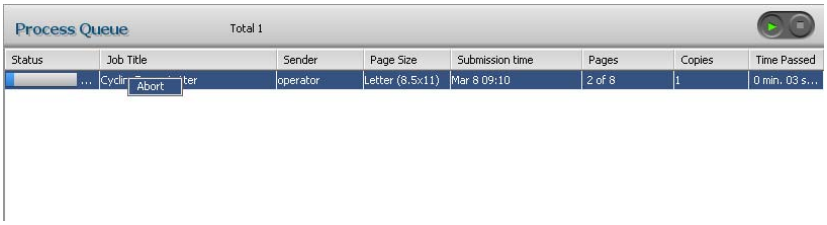
➢ Right-click the job and select one of the following options:

- **Demote:** to move the job down one step
- **Demote to bottom:** to move the job to the bottom of the queue.

Aborting a Running Job

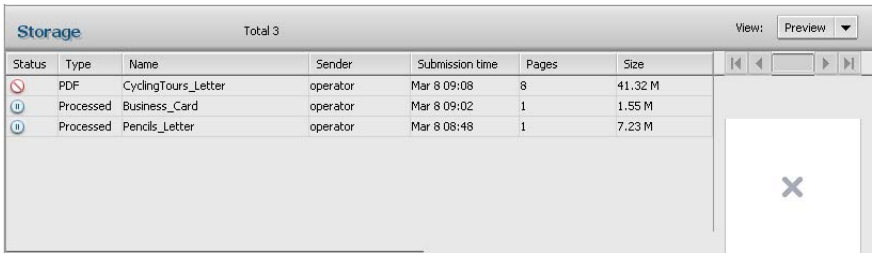
To stop processing or printing a running job:

➢ Right-click the running job in one of the queues, and from the menu, select **Abort**.



The job moves from the queue to the **Storage** area.

The **Aborted** status is assigned to the job, and the next job in the queue starts running.



To return a job to the Process Queue or Print Queue:

➢ In the **Storage** area, right-click the job and select **Submit**.

Batching Jobs

The job-batching workflow combines jobs with similar attributes into a single batch to enable the printer to print the jobs continuously without pausing. This feature saves printing time, especially for a large number of small jobs. Jobs that use paper of the same size and weight are suitable for batching.

When a job enters the **Print Queue,** the IC-301 print controller checks whether the job is suitable for batching with the previous one:

- A job that can be batched appears with the **printing** status indicator. The printer prints both jobs without pausing between them. All jobs that are batched are grouped together and highlighted.
- A job that cannot be batched with the previous one waits in the queue and appears with the **waiting** status indicator. It is printed only when the printer finishes the previous job and comes to a stop.

The IC-301 print controller batches suitable jobs only if they are consecutive in the queue. Two jobs are not batched if a job that is not suitable comes between them in the queue.

The job batching option is active by default.

To deactivate job batching:

➢ In the Preferences window, select **Print Queue Manager.**

For more information about job batching, see *Print Queue Manager* on page 146.

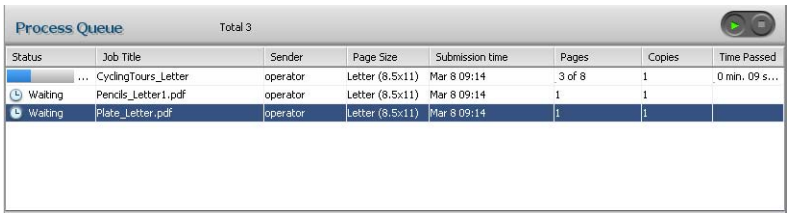
Moving a Waiting Job to the Storage Area

To postpone processing or printing of one or more waiting jobs, use the **Move to storage** option.

To move a waiting job to storage:

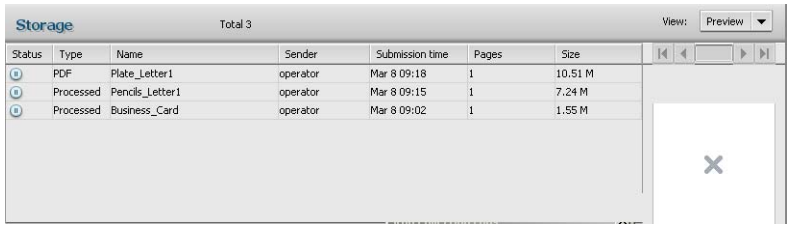
Note: You can only perform this action if the job is waiting in the queue. If the job is active, this option is not available.

1. Select the job in the **Print Queue** or **Process Queue**.



2. Right-click the job(s), and select **Move to storage**.

   The job(s) move(s) from the queue to the **Storage** area and appears with a **Waiting** status.



To return a held job from the Storage area to its original queue:

➢ Right-click the job, and from menu select **Submit**.

The job moves from the **Storage** area to the appropriate queue .

Deleting a Job

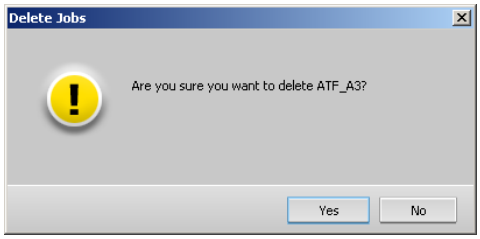
Once you delete a job from the **Process Queue**, **Print Queue**, or **Storage** area, you need to resubmit it for processing and printing. To temporarily remove a job from a queue, use the **Move to storage** option (see *Moving a Waiting Job to the Storage Area* on page 60).

To delete a job:

Note: You can only perform this action if the job is waiting in the queue. If the job is active, this option is not available.

1. Right-click the desired job in the queue or **Storage** area, and select **Delete**.

   The following message appears.



2. Click **Yes**.

   The selected job(s) is deleted.

Note: You can delete more than one job at a time: Select the jobs, and from the **Job** menu, select **Delete**.

Managing the Storage Area

In the **Storage** area, you can see the number of jobs that are in storage, their status, and select one of the three views in the **View** list:

- **List:** Displays a list of all jobs in the **Storage** area
- **Preview:** Displays a list of all jobs and a thumbnail view of the selected job
- **Gallery:** Displays thumbnail of the first page of each job in the **Storage** area

The **Storage** area contains jobs of various types:

- Printed jobs
- Jobs that you moved to the **Storage** area or aborted during processing or printing
- Jobs that failed during processing or printing
- Retrieved jobs
- Jobs that were imported directly to the **Storage** area from the client workstation (by selecting the **Store** option for the job flow)

Each job in the **Storage** area is assigned a status as shown in Table 6.

Table 6: Storage area status descriptions

Icon	Status	Indicates This
	**Completed**	The job has finished printing.
	**Waiting**	You moved the job from the queues to the **Storage** area; or the current job flow or virtual printer moved the job to the **Storage** area automatically.
	**Failed**	The job failed during processing or printing.
	**Aborted**	You aborted the job in the queues while the job was running.

Handling Jobs in the Storage Area

In the **Storage** area you can perform the following actions:

- Submit a job. See *Submitting Jobs* on page 64.
- Archive a job. See *Archiving and Retrieving Jobs* on page 64.
- Delete a job. See *Deleting a Job* on page 61.

- Duplicate a job. See *Duplicating Jobs* on page 64.
- Preview a job, using the Job Preview. See *Previewing a Job* on page 67.
- View a job's history (in the Job Log window). See *Viewing the Job History Window* on page 67.
- View the job report for a job. See *Job Report* on page 81.
- Go back to the original PDL file
- Export as PDF2Go. See *Export as PDF2Go* on page 95.

Submitting Jobs

To submit a job in the Storage area:

➢ In the **Storage** area, right-click the job, and select **Submit**.

Processed jobs are submitted to the **Print Queue**; all other jobs are submitted to the **Process Queue**.

Duplicating Jobs

To duplicate a job:

1. In the **Storage** area, right-click the job and select **Duplicate**.

   The selected file is duplicated and is given the name of the original job followed by the suffix **_dup**.

Notes:

- Duplicating a processed job creates a PDL version of the job.
- Once you duplicate a job, you can only edit parameters in the Job Preview & Editor window that do not require re-RIP.

Archiving and Retrieving Jobs

To keep enough disk space free, it is recommended that you back up jobs and their related files to an external server and then delete them from the **Storage** area.

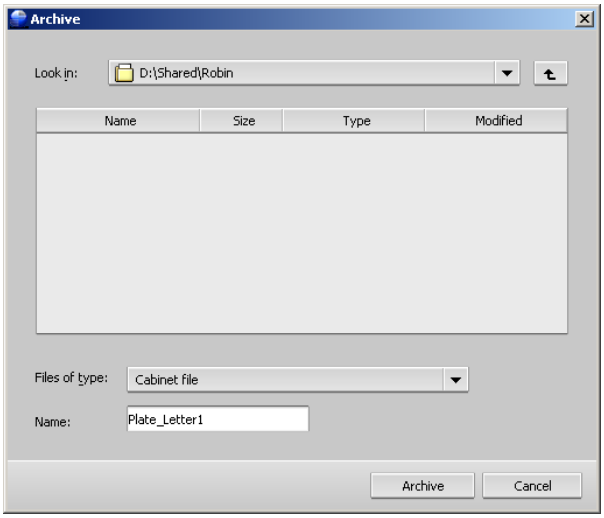
This backup process is called archiving. You can retrieve archived jobs and related files later for further use.

To archive a job on an external server:

Before you begin this procedure, make sure that you create a folder in which to store the archived jobs.

1. In the **Storage** area, right-click the job you want to archive and select **Archive**.

   The Archive dialog box appears.



2. Find the desired folder, and then click **Archive** Archive.

   A cabinet file (a compressed file) that contains all the files related to the archived job is created at the selected location.

Notes:

- The archived job retains its current status (that is, completed, failed, held, or aborted) and is archived with the information in its job parameters and Job History windows.
- When retrieved, the archived job retains the original job name, not the name assigned when archived.
- You can archive two or more files simultaneously.

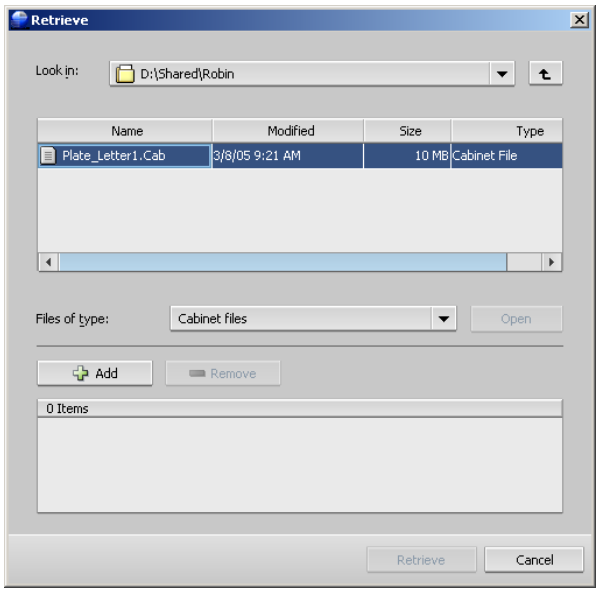
3. Delete the job from the **Storage** area.

To retrieve an archived job:

1. From the **File** menu, select **Retrieve**.

   The Retrieve dialog box appears.

2. Find the archived job under its archive name, and select the related cabinet file.



3. Click **Add** 

.

   The selected job appears in the lower list in the Retrieve dialog box.

4. Click **Retrieve** 

.

   The selected job appears at the top of the list in the **Storage** area. It is assigned the status that is had before archival.

Notes:

- You can retrieve more than one job at a time.
- The files related to the job (for example, PDL) are also retrieved.
- The job is retrieved with the information in its job parameters and Job History windows.
- The cabinet file is not deleted.

5. In the Message Viewer window, verify that the file has been successfully retrieved.

Viewing the Job History Window

➢ In the **Storage** area, right-click the job and select **Job History.**

The Job History window appears.

For more information about the Job History window, see *Job History* on page 149.

Previewing a Job

The Job Preview & Editor window enables you to preview and edit an RTP job before it is sent to print. You can see all of the job details and verify the job quality and content. While you navigate to the various pages of a job, you can view thumbnails of the job. For an imposed job, you can view the imposed sheets, including the layout of the pages on each sheet.

To open the Job Preview & Editor window:

➢ In the **Storage** area, right-click an RTP job that you want to preview, and select **Job Preview**.

The Job Preview & Editor window appears, displaying the first page of the selected job.

Navigation Buttons

The navigation buttons 

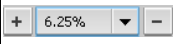
enable you to view the pages of the current job.

Note: When the first page of a booklet is in view, the **Previous Page** navigation button takes you to the previous booklet. When the last page of a booklet is in view, the **Next Page** button takes you to the next booklet.

Using the Preview Tools

The preview buttons enable you to switch the display mode of the page.

Table 7: Description of preview buttons

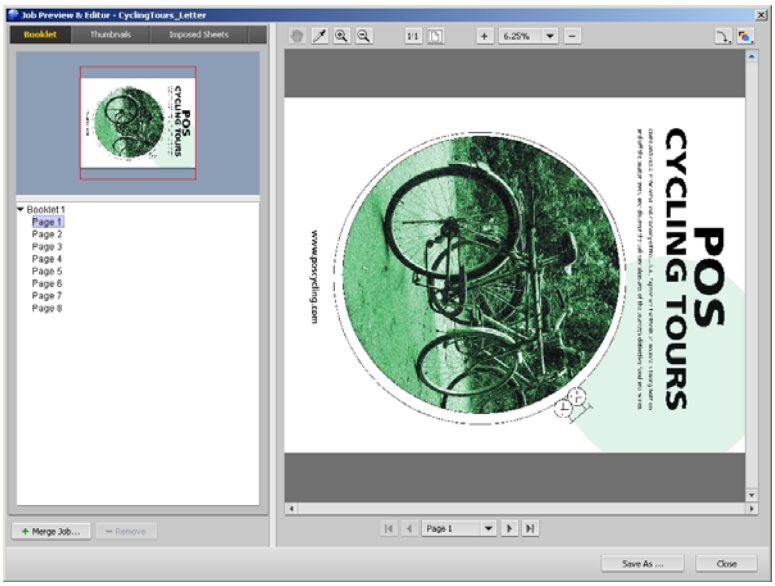
This button	Enables you to
 **Pan**	View a different area of the image
 **Eye Dropper**	Find out the CMYK values of a specific area on the page. To find the values, first click the **Eye Dropper** button. Then move the pointer to the point on the page where you want to measure the color values and click. The CMYK density values and spot color values appear as a tool tip.
 **Zoom In**	Magnify the selected area of the page. To return to the previous view, click the **Zoom Out** button.
 **Zoom Out**	Reduce the size of the selected area of the page by 50%. To return to the previous view, click the **Zoom In** button.
 **One to One Zoom**	View the actual size of the page one-to-one (1:1).
 **Fit to Screen**	Scale the page to fit the available screen space.
	View the image at different preset levels of magnification by selecting a percentage in the list.
 **Rotate View**	Rotate the page 90°, 180°, and 270°.
 **Show/Hide Separation**	Turn on or off one or more separations

Viewing Pages in the Job Preview & Editor Window

The Job Preview & Editor window has three tabs—**Booklet**, **Thumbnails**, and **Imposed Sheets**—which enable you to switch between views.

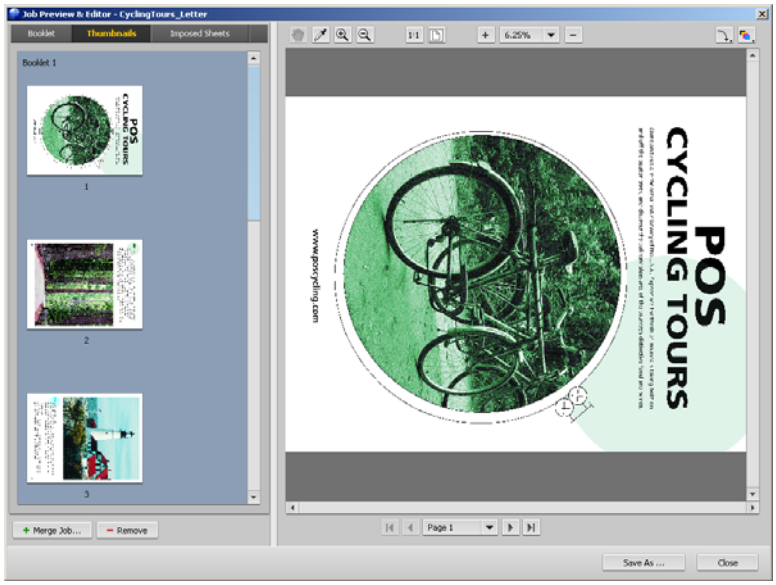
The Booklet Tab

The **Booklet** tab displays the booklets included in the selected job and the names and numbers of the pages in each booklet. The **Booklet** tab opens by default. To examine a specific page, double-click the page you want to view on the left pane of the **Booklet** tab. The page is displayed on the right pane.



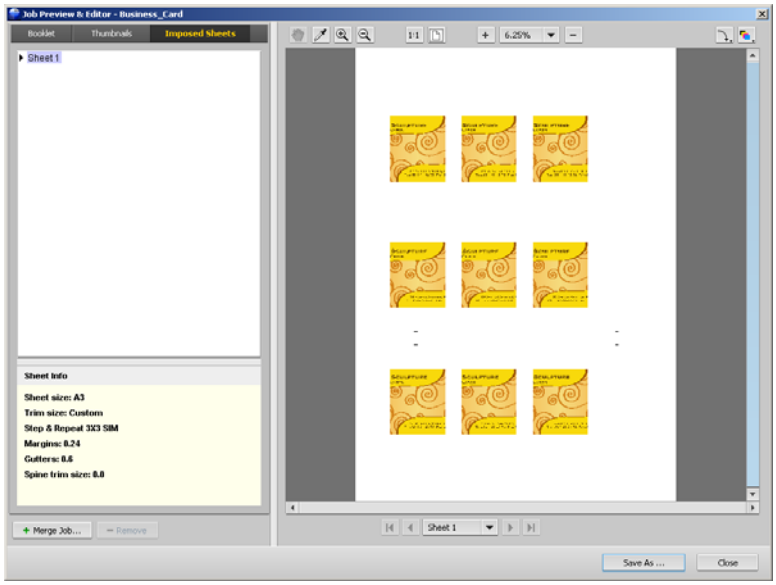
The Thumbnails Tab

The **Thumbnails** tab displays miniature views (“thumbnails”) of each page in the selected booklet. These thumbnails enable you to find a specific page more easily. To examine a specific page, double-click the page you want to view on the left pane of the **Thumbnails** tab. The page is displayed on the right pane.



The Imposed Sheets Tab

The **Imposed Sheets** tab displays imposed RTP jobs. This tab enables you to view the imposed sheets and check your imposition parameters.



Editing an RTP Job

You can edit an RTP job in the following ways:

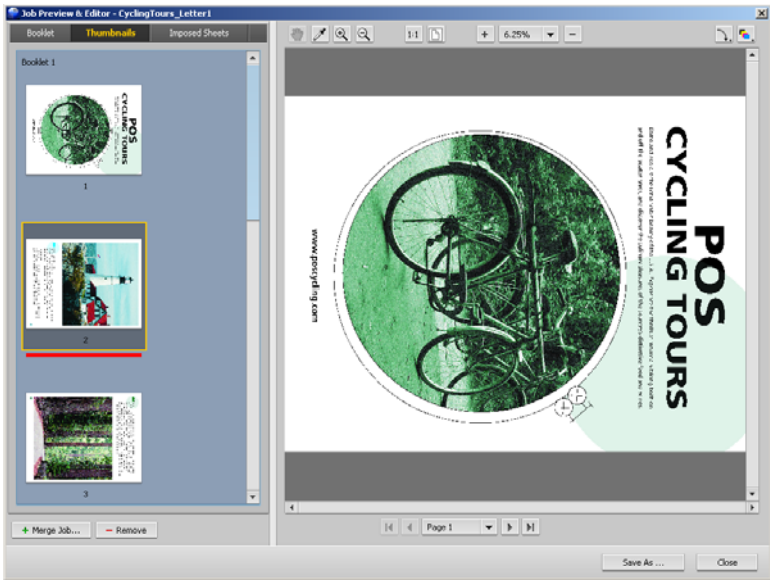
- Move pages within the job
- Delete pages from the job
- Insert pages from another job

Note: Jobs that you can edit in the Job Preview & Editor window can't be re-RIPed. Once a job has been saved in the Job Preview & Editor window, it is a new RTP file without an associated PDL file. You can't apply parameters that require re-RIPing to such jobs.

To move a page in a job:

1. Click the **Thumbnails** tab.
2. In the Thumbnail pane, click the page that you want to move.
3. Drag the page to the target location.

Note: The red marker indicates where the page will be inserted.



The page moves to the selected location, and the page numbers are updated accordingly.

4. Click **Save As** to save the changes in the job.

To delete a page from a job:

1. In the Job Preview & Editor window, click the page that you want to delete, and click **Remove**.
2. Click **Save As** to save the changes.

Copying Pages Into a Job

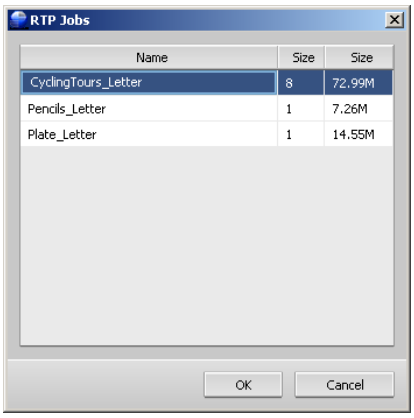
You can copy one page or all pages from one job to another.

To copy a page into a job:

1. In the Job Preview & Editor window, open the job that you want to edit.
2. Click **Merge Job** 

.

   The RTP Jobs window appears.



Note: The IC-301 print controller displays only those RTP jobs that the same page size and orientation as the job that you are editing.

3. Select the job that includes the page you want to copy, and then click **OK**.

   The thumbnails of the second job appear in a separate window.

4. Find the page you want to copy, and then drag the page to the target location in the job that you are editing.

Note: The red marker indicates where the page will be inserted.

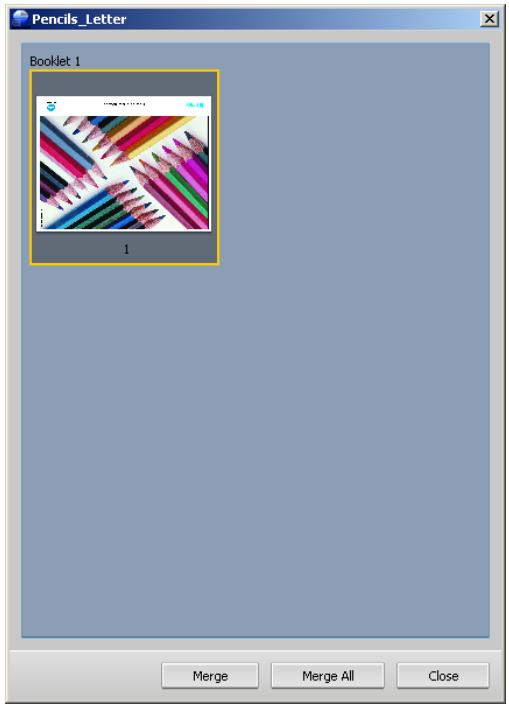
The copied page is inserted in the desired location, and the page numbers are inserted accordingly.

To copy all the pages of a job into another job:

1. In the Job Preview & Editor window, open the job that you want to edit.
2. Click **Merge Job**.

   The RTP Jobs window appears.
3. Select the job that you want to merge, and then click **OK**.

   The thumbnails of the second job appear in a separate window.



4. Click **Merge All** 

, and then click **Close**.

   All of the pages from the second job that you opened are inserted at the end of the job that you are editing.

5. Click **Save As** to save your changes.

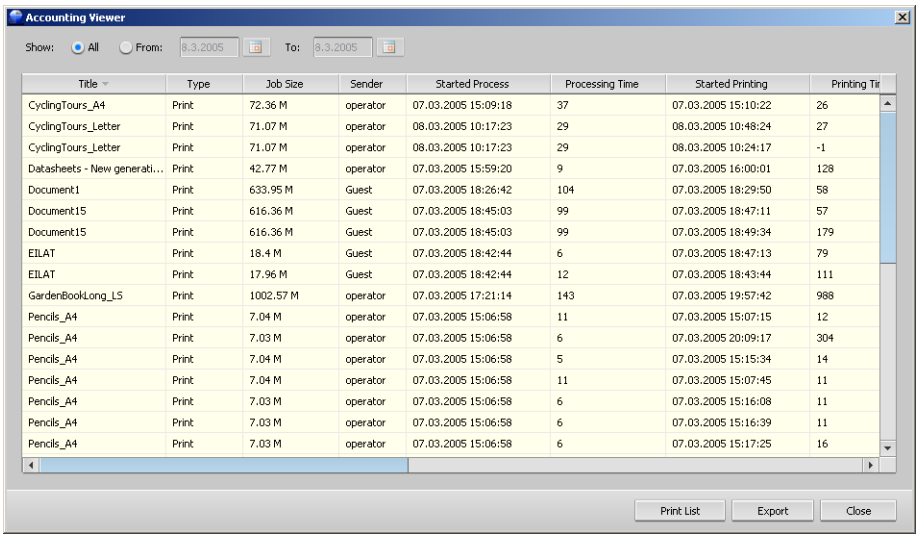
Job Accounting

The Accounting Viewer window provides information about all of the jobs that were printed successfully via the IC-301 print controller. By default, all of the jobs that were handled during the past 90 days are listed. The report is in the form of a tab-delimited file. You can filter, sort, and print the jobs in the report and also export the report to a spreadsheet application—for example, Microsoft Excel—where you can manipulate the data.

Viewing the Accounting Information

➢ From the **Info** menu, select **Accounting**.

The Accounting Viewer window appears, and lists information related to all the jobs that printed successfully via the IC-301 print controller.



Each row in the accounting report contains information related to a specific job.

Note: To see additional columns, use the horizontal scroll bar.

The columns indicate the following information.

Table 8: Description of columns in the Accounting Viewer

Column name	Indicates the
Title	Original name of the file related to this job (that is, without the extension)
Type	Type of job, scan or print
Job Size	Job size in MB
Sender	User name of the system from which this job originated
Started Process	Date and time in which the job first started processing
Processing Time	Total time during which the job was processed

Table 8: Description of columns in the Accounting Viewer

Column name	Indicates the
Started Printing	Date and time in which the job first started printing
Printing Time	Total time during which the job was printed
Paper Size	Size of the media set for the job—for example, Letter, A3, A4
Media Type	Paper type
Weight	Paper weight in gs/m
B/W Pages	Number of black-and-white pages in the original PDL file
Color Pages	Number of color pages in the original PDL file
Blank Pages	Number of blank pages, inserts, or interleaves in the original PDL file
Total Pages	Number of pages that were printed
Account	[Optional] string of text, if such was entered in job parameters window
Recipient	[Optional] string of text, if such was entered in job parameters window
Job Comments	[Optional] string of text, if such was entered in job parameters window

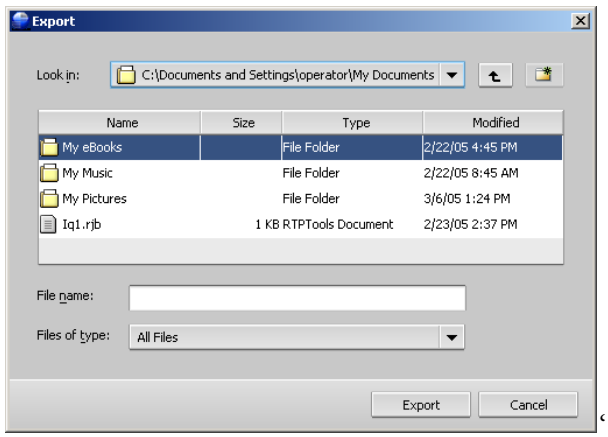
Printing and Exporting the Accounting Log

You can save the accounting information to an ASCII Tab delimited file.

To export the accounting information:

1. In the Accounting Viewer window, filter the information as desired.
2. Click **Export**.

   The Export dialog box appears.



3. Find the folder in which to save the report.
4. Click **Export**.

   The accounting log is saved as a Tab delimited text file in the specified location.

Notes:

- The accounting log includes all the columns (even those that were hidden), listed in the original order and sorting.
- To export specific rows, select them before you click **Export.** The exported accounting log will include only these rows.
- The exported data is not deleted from the accounting report on the IC-301 print controller (that is, it will still be displayed in the Accounting Viewer window).

5. If desired, open the *.txt file in a text editor or in a spreadsheet application—for example, Microsoft Excel—and manipulate the data.

You can print the accounting information (filtered and sorted) to any connected printer.

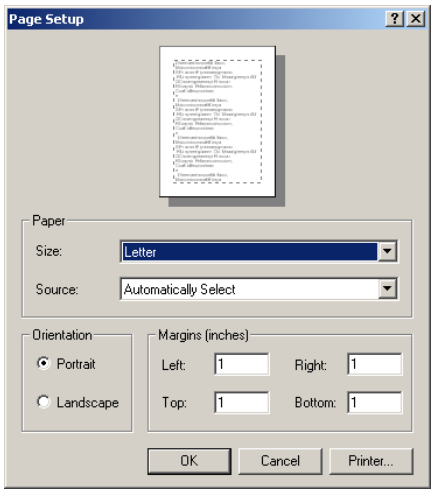
To print the accounting log:

1. In the Accounting Viewer window, filter and sort the report as desired.

Note: To print specific rows, select the desired rows now. The printed report will include only these rows.

2. Click **Print List**.

   The Print window appears.



3. Set the printing options as desired and click **OK.**

   The data is printed according to the current filtering and sorting.

Notes:

- To fit the maximum amount of columns on the page, print using Landscape orientation (if your printer supports it).
- The report includes all the columns (including those that were hidden), listed in the original order.

Creating Virtual Printers

The IC-301 print controller is predefined with three virtual printers:

- **Print**
  Files sent to this printer are automatically processed and printed to the printer through the IC-301 print controller.
- **Process**
  Files sent to this printer are automatically processed and stored in the **Storage** area of the IC-301 print controller. You can later submit the jobs to be printed, or change the parameters of a job and resubmit it for processing.
- **Store**
  Files sent to this printer are automatically stored in the IC-301 print controller's **Storage** area until the print operator submits them for processing and printing.

When you add a new virtual printer, you can specify if it is published on the network and if the parameters of the virtual printer will override the PPD parameters.

If a job that is either sent from the client or downloaded to a particular virtual printer contains preset parameters from the PPD file, these options overwrite the parameters set in the virtual printer for that job. The printer default options defined in the PPD file use the default parameters set for that particular virtual printer.

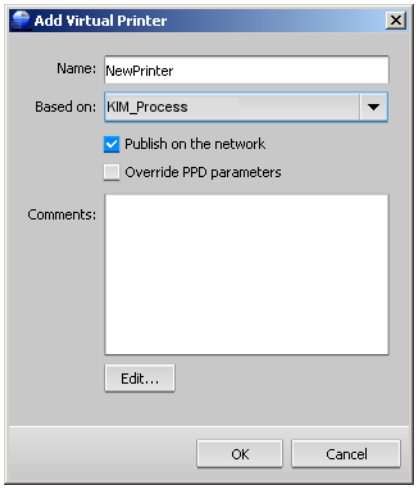
To create a new virtual printer:

1. From the **Tools** menu, select **Resource Center.**

   The Resource Center opens.

2. In the **Resource** list, select **Virtual Printers**.
3. Click **Add.**

   The Add Virtual Printer dialog box appears.



4. In the **Name** box, type a name for the new printer you want to add.
5. From the **Based on** list, select an existing printer with similar settings.
6. The **Publish on the network** check box is selected by default. Clear the check box if you do not want to publish the printer on the network.
7. Select the **Override PPD parameters** check box if you would like the virtual printer settings to override the parameters set in the PPD file.
8. In the **Comments** box, type any comment regarding the virtual printer parameters (optional).
9. Click the **Edit** button to edit the job parameters of your new virtual printer.

Note: If you don't edit the job parameters, the settings of the new virtual printer are taken from the printer on which it was based.

10. Click **OK** in the Add Virtual Printer dialog box.

    The new printer appears in the **Printer** list.

Job Report

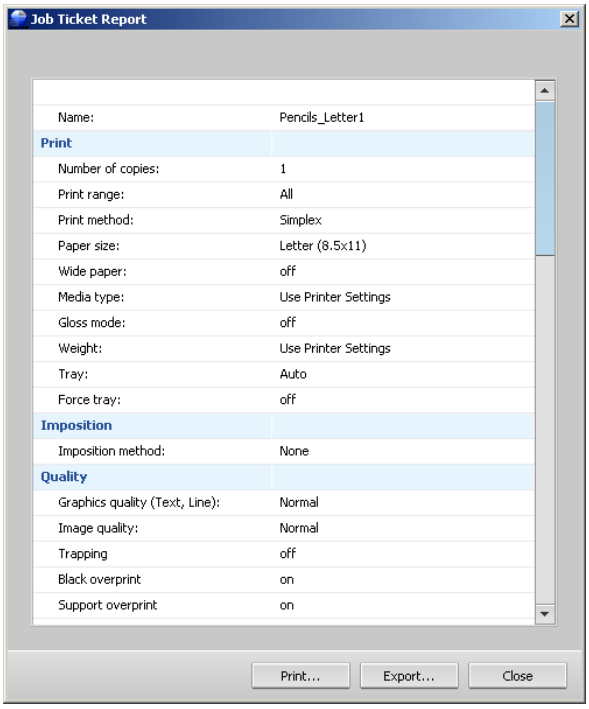
The Job Report window contains all of the information from the job parameters window (including job parameters window title bar data). The Job Report window displays the job parameters on a single sheet and may be exported or printed as a hard copy.

This feature is useful for:

- Retaining job parameters when the same job is planned to be re-printed in the future.
- Providing the client/customer a follow-up tool regarding printed job parameter information.

To open the Job Report window:

1. Right-click a job in the **Storage** area, and from the menu select **Job Report**.



2. Click **Print** or **Export** to print or export the report as a text file.

6

Production Printing

Imposition

Imposition is the process of positioning page images on a virtual sheet of paper so that when a printer or digital printing press prints the sheet, the page images will be in the right order. It is part of the process of producing finished documents.

In addition to page images, you can add various marks to the sheets to aid the production process. These marks show where the paper should be folded or trimmed.

Imposition does not affect the content of the individual page but rather affects only the placement of the page images on a press sheet. Imposition is a combination of content and layout. The content is the pages that should be printed, and the layout is the location of the page on the sheet, along with the page's printing marks, crop marks and fold marks.

Imposition Workflows

The two examples in this section are typical imposition workflows. The first example shows you how to print business cards, and the second example shows you how to print a brochure.

Printing Business Cards

This example demonstrates how to use the repeat-image imposition method to print business cards. With the repeat-image method, you can print multiple copies of the same image on one large sheet.

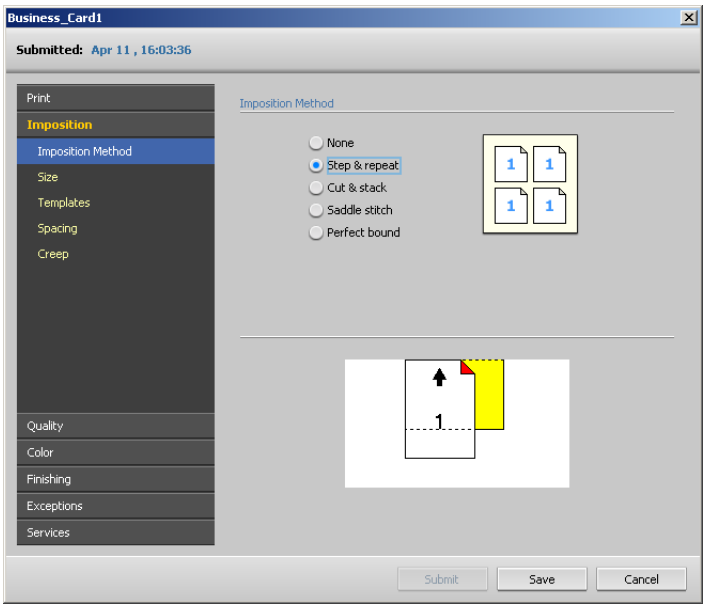
In this example, the job contains business cards that are 50 mm × 90 mm (2 in. × 4 in.), imposed on A3 paper.

1. Click the **suspend** button to temporarily stop the **Process Queue**.
2. Click **Import** to open the Import window.
3. Import your business card file.

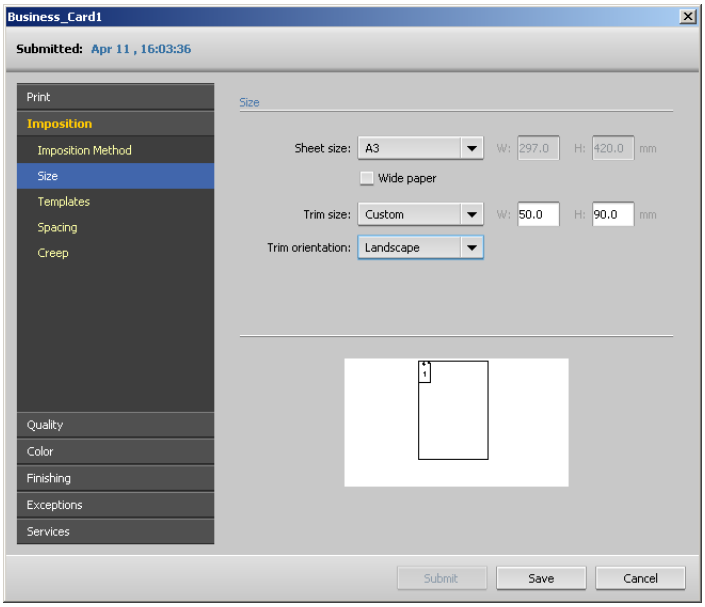
   The file is imported to the **Process Queue** with a **Waiting** status.
4. Double-click the business card file in the **Process Queue**.

   The job parameters window appears.

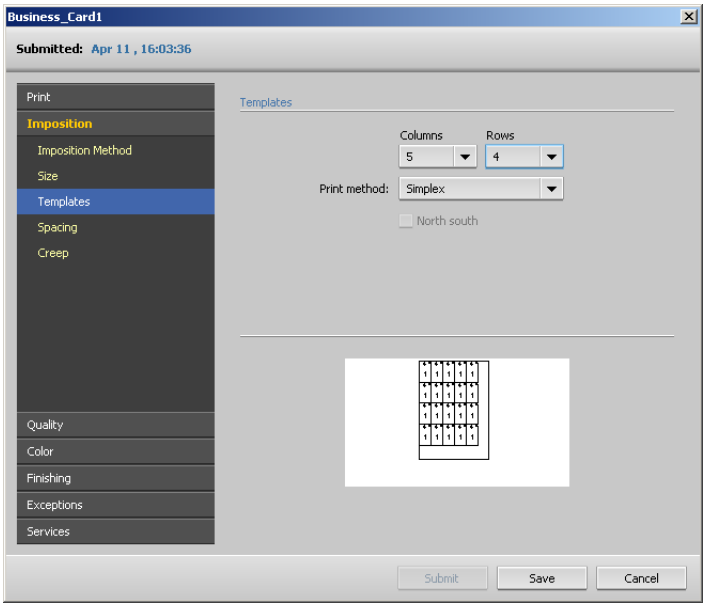
5. Click **Imposition**.
6. For **Imposition Method**, select **Step & repeat**.



7. Click **Size**, and select the following options:
   a. In the **Sheet size** list, select **A3**.
   b. In the **Trim size** list, select **Custom** and then type the custom size in the height and width boxes—for example, `50.0 mm × 90.0 mm`.
   c. In the **Trim orientation** list, select **Landscape**.

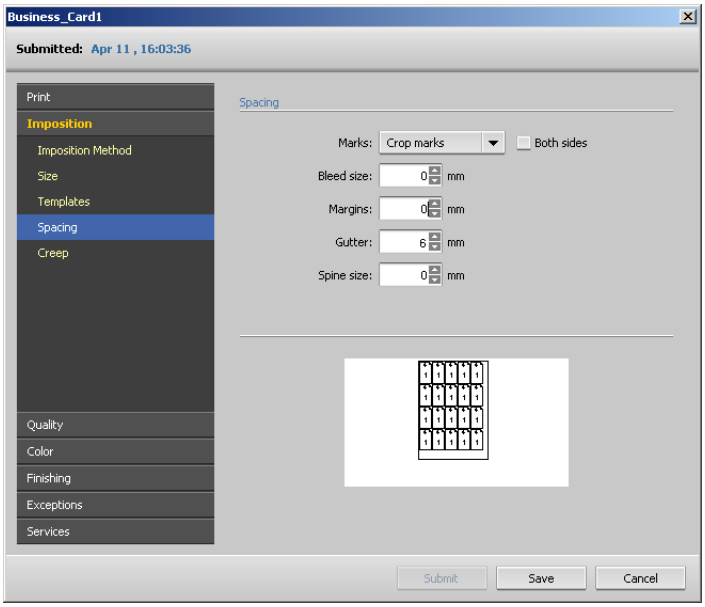


8. Click **Templates**, and select the following options:
   a. In the **Columns** list, select **5**.
   b. In the **Rows** list, select **4**.
   c. In the **Print method** list, select **Simplex**.



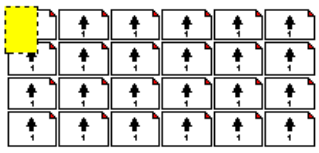
9. Click **Spacing.**
10. In the **Marks** list, select **Crop marks.**

Note: Gutter is automatically set to **6 mm**.



A preview of the template layout appears, showing you whether the pages fit on the sheet. If there are conflicts, they are indicated in the following manner:

- Red corners: The trim size is bigger than the sheet size.
- Yellow corners: The margin settings are not suitable for your paper size.
- Dotted lines: The trim size and template settings conflict—for example, A3 trim size for a repeat-image 2×2 duplex template.



11. Click **Submit**, and then click the **resume** button to start processing the job.

    The business cards are printed imposed on A3 paper.

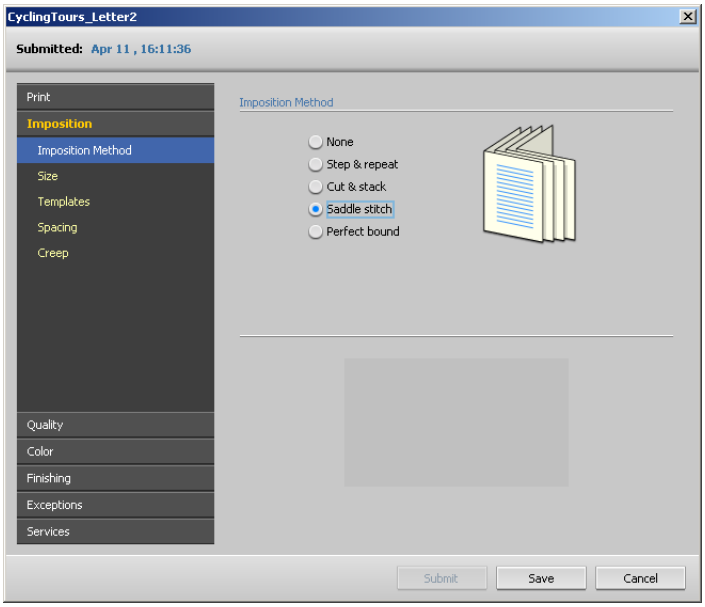
Printing a Brochure

This example demonstrates how to use the saddle stitch imposition method to print a brochure on the IC-301 print controller. The saddle- stitch method arranges the page images on the sheets so that when the sheets are printed, you can take the sheets out of the printer, fold them, and staple them in the center. In this example, the job contains ten letter-size pages imposed on tabloid paper.

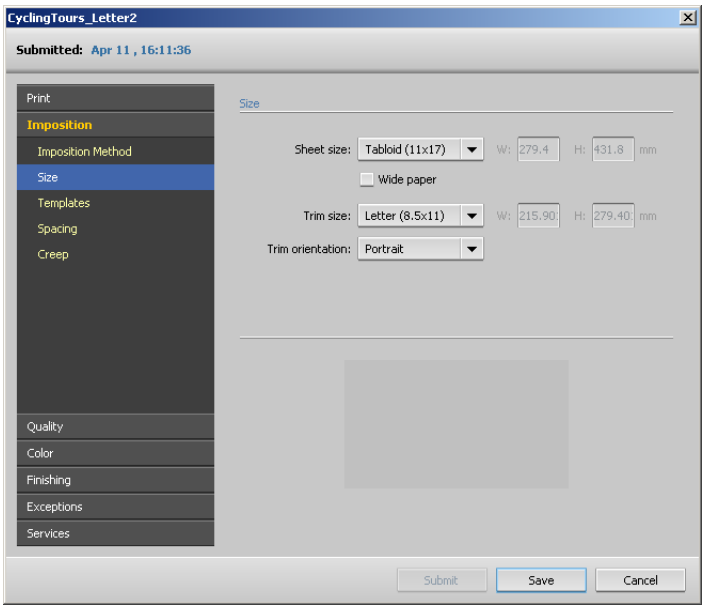
1. Click the **suspend** button to temporarily stop the **Process** queue.
2. Click **Import** to open the Import window.
3. Import your brochure file.

   The file is imported to the **Process Queue**with a **Waiting** status.
4. Double-click the brochure file in the **Process Queue**.

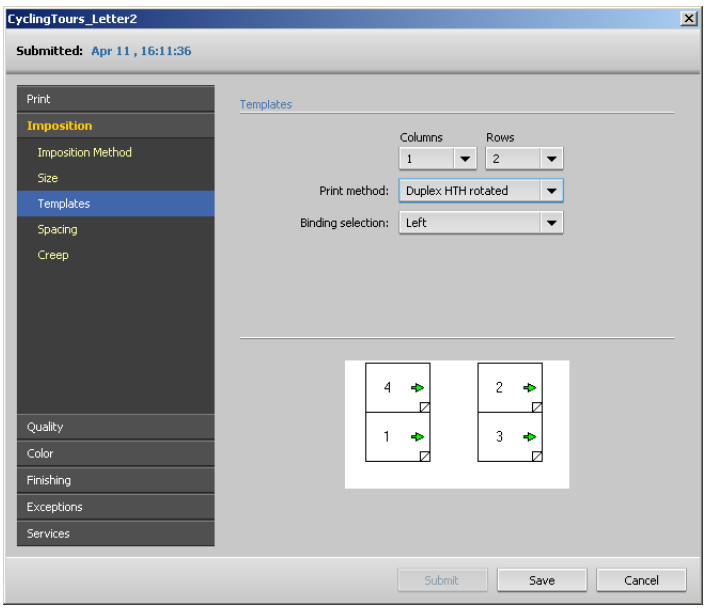
   The job parameters window appears.
5. Click **Imposition**.
6. For **Imposition Method**, select **Saddle stitch**.



7. Click **Size**, and set the following options:
   a. In the **Sheet size** list, select **Tabloid (11 × 17)**.
   b. In the **Trim size** list, select **Letter (8.5 × 11)**.



8. Click **Templates**, and select the following options:
   a. In the **Columns** list, select **1**.
   b. In the **Rows** list, select **2**.
   c. In the **Print method** list, select **Duplex HTH rotated**.



9. Click **Submit**, and then click the **resume** button to start processing the job.

   The brochure is printed imposed on tabloid paper, and is ready for folding and finishing with a staple in the center pages.

For more information about setting parameters in **Imposition**, see *Imposition* on page 159.

You can use an IC-301 print controller virtual printer to predefine your imposition settings. When you create a new virtual printer or edit an existing one, define the imposition settings for that particular printer. These settings become the printer's default options and are applied to all jobs that use the printer.

For more information about adding virtual printers, see *Creating Virtual Printers* on page 79.

Printing with Page Exceptions

Page exceptions enable you to select a different media type for specific pages within your job. The example in this section uses the brochure from the imposition workflow (see *Printing a Brochure* on page 89) to print a cover with a different paper weight.

1. Make sure that the tray contains tabloid paper that is heavier than the paper needed for the rest of the job.
2. In the workspace, verify which tray contains the heavy paper.
3. In the **Storage** area, double-click the processed brochure job.

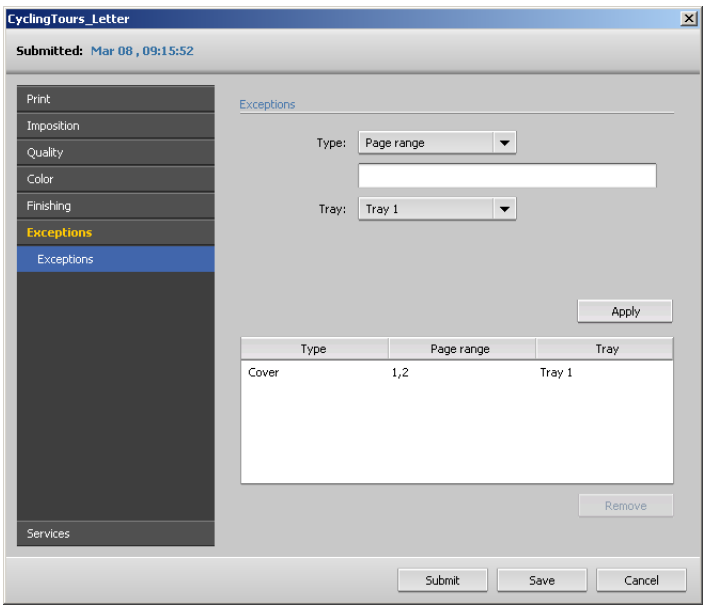
   The job parameters window appears.

Note: This job contains the imposed settings that you set in the previous example.

4. Click **Exceptions**, and perform the following steps:
   a. In the **Type** list, select **Cover**.

Note: The options in the **Type** list are different when the imposition method is **saddle stitch**.

   b. Select the **Duplex** check box.
   c. In the **Tray** list, select the tray with the tabloid paper that has the heavy paper—for example, **Tray 1**.
   d. Click **Apply**, and then click **Submit**.



The brochure is printed with a tabloid-size cover on heavy paper.

For more information about setting parameters in the **Exceptions** area, see *Exceptions* on page 174.

High-Resolution Workflow

Working with high-resolution files during the design and page layout process can often times be long and inefficient. Processing and manipulating large files and graphics can be very time consuming. To speed up production, it is common to work with low-resolution files until the RIPing stage.

The IC-301 print controller provides Creo APR (Automatic Picture Replacement) and supports Open Prepress Interface (OPI) image replacement workflows for replacing low-resolution files with high-resolution files during the RIP.

High-Resolution Image File, 5.23 MB

Low-Resolution Image File, 306 KB

Creo APR

Creo APR is an image replacement method for PostScript files. Creo APR is a standardized set of file instructions that specify how an external high-resolution image is placed in a PostScript file as it

goes to RIP. The instructions specify the type, size, position, rotation, cropping and location of the high-resolution images themselves.

When you send your PostScript file to be processed, the IC-301 print controller checks it for Creo APR instructions. It then searches for the external high-resolution file, performs the specified image replacement and RIPs the PostScript file.

For more information about setting a high-resolution path and selecting high-resolution or low-resolution images, see *APR/OPI* on page 177.

Export as PDF2Go

PDF2Go is a port through which you can export RTP and PDL files, and convert them to a PDF file during export.

The IC-301 print controller is capable of exporting jobs that are standard PDF files, both before and after processing. For an exported RTP job, the PDF file includes the rasterized data of the job.

The operation converts the RTP information to raster files that can be encapsulated in a PDF format. This process ensures that the file can be processed and printed on any PDF printer.

To export as PDF2Go:

➢ Select one of the following options:

- **Print Optimized**: Generates a high-resolution PDF file in 300dpi.
- **Screen Optimized** (default): Generates a low-resolution PDF file in 72 dpi.

Tip: Use the **Screen Optimized** option when you want to generate a light PDF file—for example, a file that you can send as a proof by e-mail.

Fonts

This section lists all the fonts available on the IC-301 print controller, and explains how to work in the **Fonts** area of the Resource Center.

A step-by-step procedure explains how to use the Adobe® DownLoader driver to download fonts from a Macintosh client workstation.

You can download Windows fonts from a client workstation to the IC-301 print controller.

Font List

The fonts listed alphabetically in this section are the standard fonts that are available on the IC-301 print controller server.

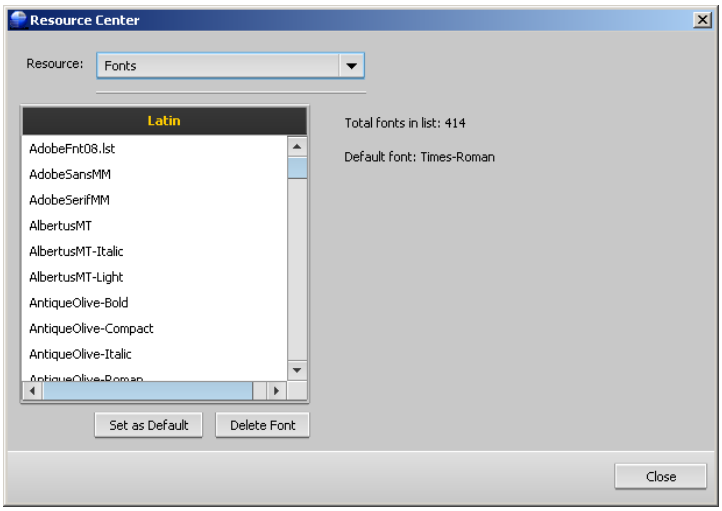
AdobeSansMM	AdobeSerifMM	AlbertusMT
AlbertusMT-Italic	AlbertusMT-Light	AntiqueOlive-Bold
AntiqueOlive-Compact	AntiqueOlive-Italic	AntiqueOlive-Roman
Apple-Chancery	Apple-ChanceryCE	Arial-BoldItalicMT
Arial-BoldMT	Arial-ItalicMT	ArialCE
ArialCE-Bold	ArialCE-BoldItalic	ArialCE-Italic
ArialMT	AvantGarde-Book	AvantGarde-BookOblique
AvantGarde-Demi	AvantGarde-DemiOblique	AvantGardeCE-Book
AvantGardeCE-BookOblique	AvantGardeCE-Demi	AvantGardeCE-DemiOblique
Bodoni	Bodoni-Bold	Bodoni-BoldItalic
Bodoni-Italic	Bodoni-Poster	Bodoni-PosterCompressed
Bookman-Demi	Bookman-DemiItalic	Bookman-Light
Bookman-LightItalic	BookmanCE-Demi	BookmanCE-DemiItalic
BookmanCE-Light	BookmanCE-LightItalic	Carta
Chicago	ChicagoCE	Clarendon
Clarendon-Bold	Clarendon-Light	CooperBlack

CooperBlack-Italic
Copperplate-ThirtyThreeBC
Copperplate-ThirtyTwoBC
Coronet-Regular
CoronetCE-Regular
Courier
Courier-Bold
Courier-BoldOblique
Courier-Oblique
CourierCE
CourierCE-Bold
CourierCE-BoldOblique
CourierCE-Oblique
EuroMono-Bold
EuroMono-BoldItalic
EuroMono-Italic
EuroMono-Regular
EuroSans-Bold
EuroSans-BoldItalic
EuroSans-Italic
EuroSans-Regular
EuroSerif-Bold
EuroSerif-BoldItalic
EuroSerif-Italic
EuroSerif-Regular
Eurostile
Eurostile-Bold
Eurostile-BoldExtendedTwo
Eurostile-ExtendedTwo
Geneva
GenevaCE
GillSans
GillSans-Bold
GillSans-BoldCondensed
GillSans-BoldItalic
GillSans-Condensed
GillSans-ExtraBold
GillSans-Italic
GillSans-Light
GillSans-LightItalic
Goudy
Goudy-Bold
Goudy-BoldItalic
Goudy-ExtraBold
Goudy-Italic
Helvetica
Helvetica-Bold
Helvetica-BoldOblique
Helvetica-Condensed
Helvetica-Condensed-Bold
Helvetica-Condensed-BoldObl
Helvetica-Condensed-Oblique
Helvetica-Narrow
Helvetica-Narrow-Bold
Helvetica-Narrow-BoldOblique
Helvetica-Narrow-Oblique
Helvetica-Oblique
HelveticaCE
HelveticaCE-Bold
HelveticaCE-BoldOblique
HelveticaCE-Cond
HelveticaCE-CondBold
HelveticaCE-CondBoldObl
HelveticaCE-CondObl
HelveticaCE-Narrow
HelveticaCE-NarrowBold
HelveticaCE-NarrowBoldOblique
HelveticaCE-NarrowOblique
HelveticaCE-Oblique
HoeflerText-Black
HoeflerText-BlackItalic
HoeflerText-Italic
HoeflerText-Ornaments
HoeflerText-Regular
HoeflerTextCE-Black
HoeflerTextCE-BlackItalic
HoeflerTextCE-Italic
HoeflerTextCE-Regular
JoannaMT
JoannaMT-Bold
JoannaMT-BoldItalic
JoannaMT-Italic
LetterGothic
LetterGothic-Bold

LetterGothic-BoldSlanted	LetterGothic-Slanted	LubalinGraph-Book
LubalinGraph-BookOblique	LubalinGraph-Demi	LubalinGraph-DemiOblique
Marigold	Monaco	MonacoCE
MonaLisa-Recut	NewCenturySchlbk-Bold	NewCenturySchlbk-BoldItalic
NewCenturySchlbk-Italic	NewCenturySchlbk-Roman	NewCenturySchlbkCE-Bold
NewCenturySchlbkCE-BoldItalic	NewCenturySchlbkCE-Italic	NewCenturySchlbkCE-Roman
NewYork	NewYorkCE	Optima
Optima-Bold	Optima-BoldItalic	Optima-Italic
Oxford	Palatino-Bold	Palatino-BoldItalic
Palatino-Italic	Palatino-Roman	PalatinoCE-Bold
PalatinoCE-BoldItalic	PalatinoCE-Italic	PalatinoCE-Roman
StempelGaramond-Bold	StempelGaramond-BoldItalic	StempelGaramond-Italic
StempelGaramond-Roman	Symbol	Tekton
Times-Bold	Times-BoldItalic	Times-Italic
Times-Roman	TimesCE-Bold	TimesCE-BoldItalic
TimesNewRomanPS-BoldItalicMT	TimesNewRomanPS-BoldMT	TimesNewRomanPS-ItalicMT
TimesNewRomanPSMT	Univers	Univers-Bold
Univers-BoldExt	Univers-BoldExtObl	Univers-BoldOblique
Univers-Condensed	Univers-CondensedBold	Univers-CondensedBoldOblique
Univers-CondensedOblique	Univers-Extended	Univers-ExtendedObl
Univers-Light	Univers-LightOblique	Univers-Oblique
Wingdings	Wingdings-Regular	ZapfChancery-MediumItalic
ZapfChanceryCE-MediumItalic	ZapfDingbats	

Managing Fonts on the IC-301 Print Controller

1. On the toolbar, click **Resource Center** .
2. In the **Resource** list, select **Fonts**.



To set the default font:

➢ Select a font from the list and click **Set as Default**.

To delete a font:

➢ Select the font, and click **Delete font**.

To add new fonts:

➢ Copy the new fonts to the **C:\IC-301\General\RIP\fonts** folder.

Downloading Fonts

Downloading Fonts in a Macintosh Network

The Downloader driver enables you to download fonts from a Macintosh client workstation. The driver functions as a communications port and sends messages between the driver and the IC-301 print controller. Through the Downloader driver, you can only send fonts.

To download fonts from Mac OS 9

Note: Mac OS 10 users that want to download fonts need to use a previous Mac OS version—for example, Mac OS 9. It is recommended that you embed the fonts in your file.

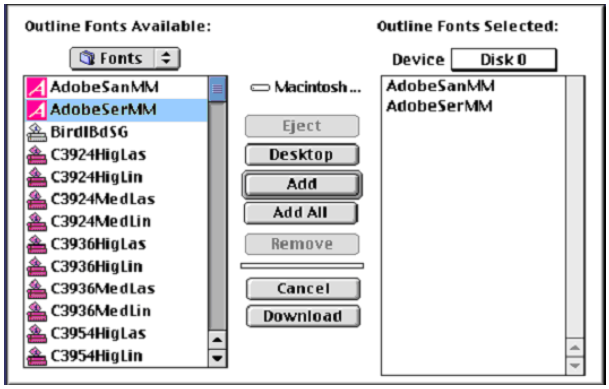
1. From the **Apple** menu, select **Chooser**.
2. Select **AppleShare** and find the IC-301 print controller.
3. Select the IC-301 print controller—for example, **IC-301**—and then click **OK**. The Login dialog box appears.
4. Log in as **Guest**, and click the **Connect** button.

   The corresponding IC-301 print controller window appears.
5. Select the **Utilities** folder, and then click **OK**.

Note: Do not select the check box, otherwise it will mount every time you restart.

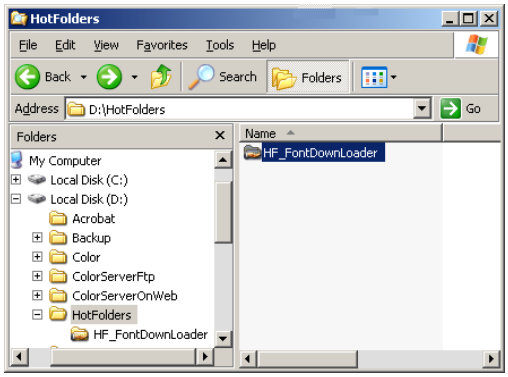
6. Double-click the **Adobe Downloader 5.0.5** folder.
7. Copy the **Adobe Downloader 5.0.5** to your desktop.
8. From the **Apple** menu, select **Chooser**.

   The Chooser window appears.
9. Select **LaserWriter (8.*x*)** and select the desired fontdownloader.
10. Click **Create**.
11. Double-click the **Downloader 5.05** on your desktop.
12. On the **File** menu, select **Download Fonts**.



13. In the **Fonts** list, select the desired font folder.
14. Verify that the selected device is **Disk 0**.
15. Add all the desired PostScript fonts and click **Download**.

Downloading Fonts in a Windows Environment



You can use the **HF_Fontdownloader** hot folder to install new or missing fonts to the IC-301 print controller fonts dictionary. The hot folder is located in **D:\HotFolders** and can be used with the following operating systems:

- Windows NT 4.0
- Windows 2000
- Windows XP
- Windows 2003

To download Windows fonts:

➢ Drag the fonts from your client workstation to the **HF_Fontdownloader** hot folder.

7 Color Workflow

Calibration

One of the most important issues in obtaining satisfactory print quality is steady toner density. Toner density is affected by many factors such as heat, humidity, and service settings. You should perform calibration every 24 hours to compensate for these factors.

The calibration process corrects the printer colors by measuring their density and creating calibration look-up tables. The IC-301 print controller uses the data in these tables to compensate for the differences between the actual, measured density level and the target level, the target density.

You should perform calibration in the following instances:

- When prints show “color casts”
- After machine maintenance or hardware changes—for example, replacing a “Charge Coroton”
- On drastic ambient changes (temperature and humidity)

Color Calibration Method

The IC-301 print controller uses the target calibration method. This method ensures consistency over time and that the density values of the printed output do not exceed the predefined density values.

Target calibration enables you to calibrate the bizhub PRO C500 printer according to the following predefined density values:

Table 9: Fixed density values for uncoated paper

Toner	Density value
Cyan	1.35
Magenta	1.365
Yellow	0.934
Black	1.7

Table 10: Fixed density values for coated paper

Toner	Density value
Cyan	1.6
Magenta	1.66
Yellow	1.054
Black	1.8

Choosing a Calibration Mode

The IC-301 print controller provides you with two calibration modes:

- Off-the-glass: Uses the scanner platen to perform off-the-glass calibration
- Densitometer: Uses the DTP34 densitometer, which is a “high speed”color measurement instrument, to report densitometer and dot data

You select the calibration mode in the Preferences window, see *Calibration Device* on page 148.

Calibration Process

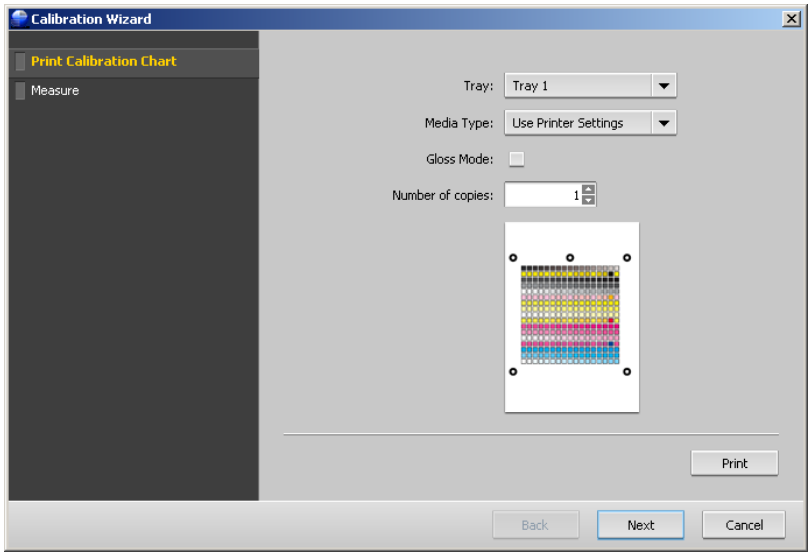
This section describes the off-the glass calibration process. If you want to use the DTP34 densitometer to calibrate, refer to the *X-Rite DTP34 Densitometer Operator’s Manual* and follow the IC-301 print controller calibration wizard

Note: It is recommended that:

1. After you perform the first calibration, you print the **IQ_Test_(TAB/A3).pdf** file from the **D:\Sample_Files\(USA/Europe)\IQ Files** folder. Each time you calibrate, use this file as a visual reference to verify that the printer has returned to its start point.
2. You calibrate both the printer and scanner at the same time. If you only place the print chart on the platen, the printer is calibrated. If you only place the scanner chart on the platen, the scanner is calibrated.

1. On the toolbar, click **Calibration**.

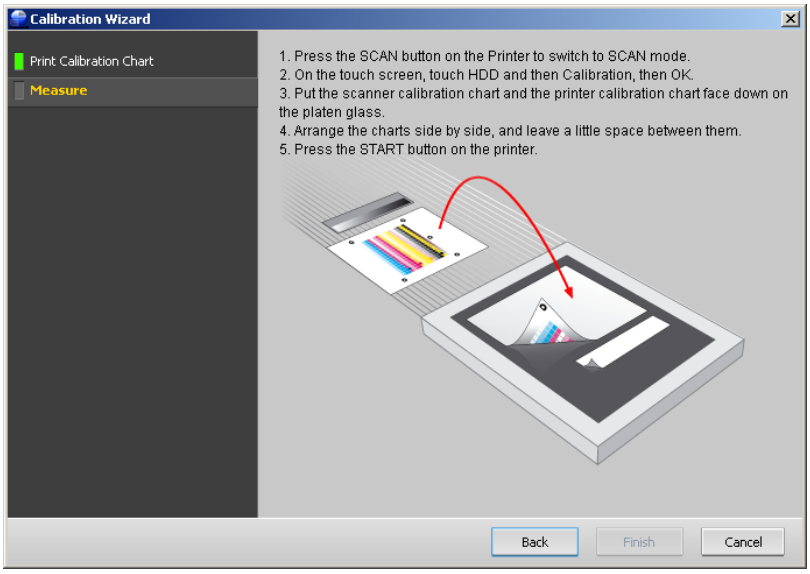
   The Calibration Wizard appears.



2. In the **Tray** list, select the desired tray. The default is **Tray 1**. You can print the calibration chart on any paper size that is equal to or larger than A4 or Letter.
3. In the **Media Type** list, select the desired media type—for example, **Coated**. The default setting is **Use Printer Settings**. When this option is selected, your job is printed on the media type that is defined on the bizhub PRO C500 printer.
4. If you want a glossy look applied to your printed outputselect the **Gloss Mode** check box.
5. In the **Number of copies** box, enter the number of copies you want to print.
6. Click **Print**.

   The calibration chart prints.

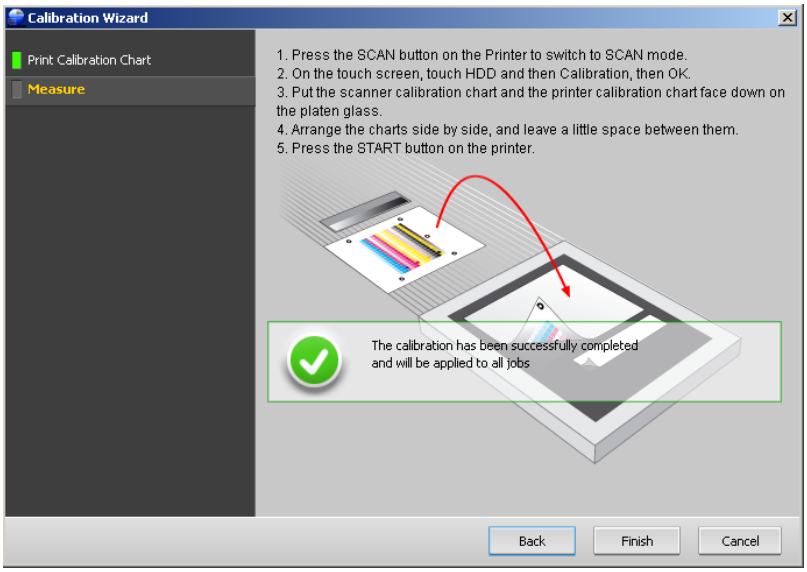
7. Click **Next**.



8. Place both the printer and scanner charts next to each other on the platen and follow the instructions in the Calibration Wizard.

Note: If the calibration chart is not placed within the defined scanning area on the platen, the calibration process may not be successful. To ensure that the calibration process is successful, on the bizhub PRO C500 printer, press **HDD**>**Calibration**>**OK**. Then, press **Size Settings**>**Full Area Size**.

9. When the last chart is successfully measured, click **Finish** to save the new calibration.



Color Tools

The IC-301 print controller provides you with a number of tools and options that enable you to adjust and improve the color quality in your jobs. The following tools are available:

- Profile Manager, in which you can manage source and destination ICC profiles, see *Managing Profiles* on page 108
- Spot Color Editor, see *Editing and Creating Spot Colors* on page 111
- Gradation Tool window, see *Using the Gradation Tool to Adjust Color* on page 114

Managing Profiles

The Profile Manager window enables you to import and delete source and destination ICC profiles.

Source profiles are used to emulate other devices, or color spaces. You can import source CMYK or RGB profiles.

Destination profiles define the color space of your printer and are based on the combinations of paper and toner that you are using. For different media types, you need different destination profiles. Each custom destination profile will be used with coated and uncoated paper.

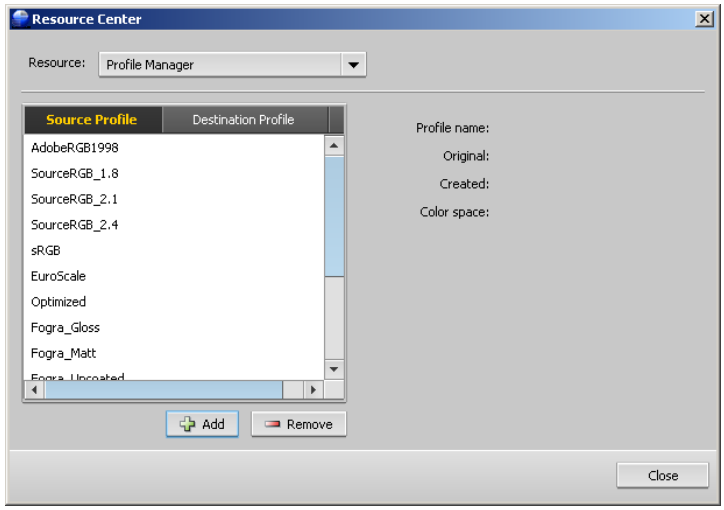
For more information about selecting source and destination profiles in a job, see *Color* on page 167.

To import a source ICC profile:

1. On the toolbar, click **Resource Center** .

   The Resource Center appears.

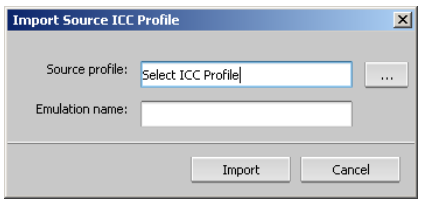
2. In the **Resource** list, select **Profile Manager.**



   The **Source Profile** tab displays the predefined source ICC profiles.

3. Click **Add** .

   The Import Source ICC Profile dialog box appears.



4. In the **Source profile** area, click the **browse** button  . Locate and select the required source profile, and then click **Open**.

   The new emulation name is displayed in the **Emulation name** box; if you would like to change the name you may do so.

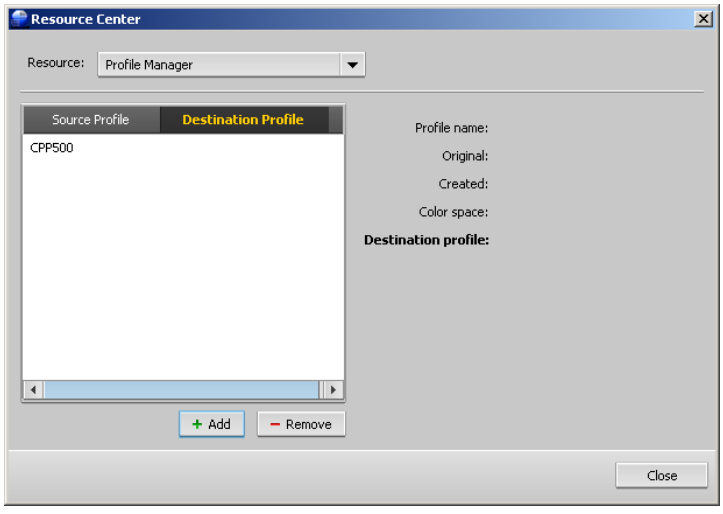
5. Click **Import**.

   The new source ICC profile is added to the **Color Flows** tab in the job parameters window.

To import a destination ICC profile:

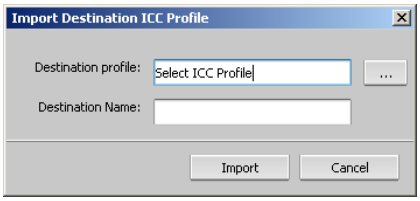
1. In the **Resource Center**>**Profile Manager**, click the **Destination Profile** tab.

   The predefined ICC profiles are displayed.



2. Click **Add**  .

   The Import Destination ICC Profile dialog box appears.



3. In the **Destination profile** area, click the **browse** button ... . Locate the required source profile, and then click **Open**.

   The new emulation name is displayed in the **Destination Name** box; if you would like to change the name you may do so.

4. Click **Import**.

To delete an ICC Profile:

1. In the **Resource Center**>**Profile Manager**, select the profile that you want to delete.

   Note: You cannot delete predefined ICC profiles.

2. Click the **Remove** button − Remove .

   The profile is deleted from the profile list.

Editing and Creating Spot Colors

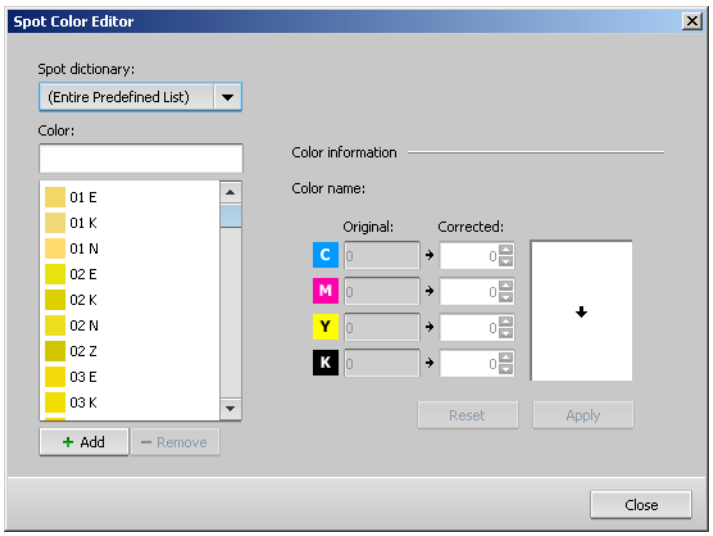
Individual job pages can contain continuous tone (CT), line work (LW), and spot color elements. The IC-301 print controller Spot Color Editor enables you to edit the CMYK values of every spot color in the **Spot dictionary**. You can edit these values without affecting the CT or LW page elements. The Spot Color Editor also enables you to create custom spot colors and to define fixed CMYK values for those spot colors. The IC-301 print controller supports HKS and PANTONE 2000 spot colors.

Note: Spot colors—for example Pantone—are not affected by CMYK emulation. A spot color has the same appearance with any selected CMYK emulation.

To edit an existing pantone color:

1. From the **Tools** menu, select **Spot Color Editor.**

   The Spot Color Editor dialog box appears with the IC-301 print controller's entire collection of colors listed.



2. To search for a specific color, perform one of the following actions:

   - In the **Color** list, search for a particular color. **.**

   Note: You cannot perform an exact query in the **Color** list. This input stream only reads one character. For example, if you want “Cool Grey 4” and type “Cool”, as soon as you type “C”, the cursor only moves to “Cool Grey 1” and does not continue to a more specific selection.

   - In the **Spot dictionary** list, select the color dictionary that contains the color you want to edit.

   Note: Use the PANTONE CV dictionary if you are working in—for example, QuarkXPress.

3. Highlight the required color.

   The color's CMYK values and a color preview appear in the right hand side of the Spot Color Editor dialog box.

4. Change the CMYK values as required.

5. Click **Apply**.

   The new color is added to the Custom color dictionary.

To create a new spot color:

Note: If you create a new spot color for an RTP job, perform the following steps before printing:

1. Revert back to the original PDL file.
2. Re-RIP the job.

1. In the Spot Color Editor dialog box, click **Add**.

2. Type the new color name as it exists in the PostScript file.

   Note: The spot color names are case sensitive and should match the name as it appears in the DTP application.

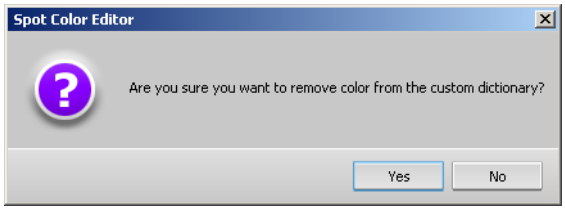
3. Adjust the CMYK values as required.
4. Click **Save**.

   The new color is added to the **Custom Dictionary**.

To delete a spot color (from the custom dictionary only):

1. In the **Spot dictionary** list, select **Custom Dictionary**.
2. From the list of custom colors, highlight the color you wish to delete.
3. Click **Remove**.

   The following message appears.



4. Click **Yes** to delete the color.

Using the Gradation Tool to Adjust Color

Sometimes you need to perform tone corrections when you print a job. The IC-301 print controller enables you to create a gradation table that will correct your printed output. Changes in gradation can include brightness, contrast, and color balance adjustments throughout the tone range of an entire image or in specific tone ranges.

The Gradation Tool window enables you to create and edit gradation tables as well as visually check the effect of your gradation tables on a specific processed job. The new gradation tables you create are added to the **Gradations** list in the **Color** parameter and can be applied to print jobs.

For more information about selecting gradation tables in the **Color** parameter, see *Gradation* on page 169.

To open the Gradation Tool window:

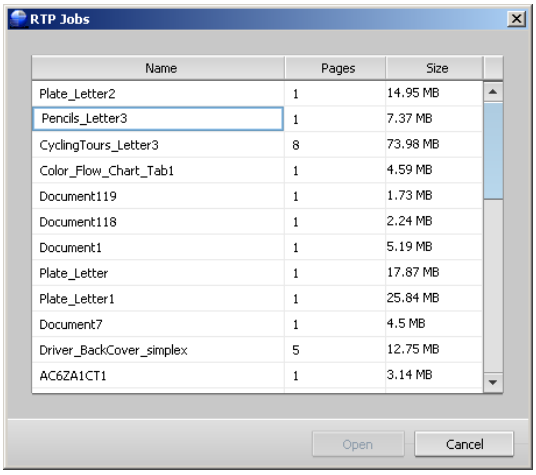
➢ From the **Tools** menu, select **Gradation**.

The Gradation Tool window appears.

Previewing a Job

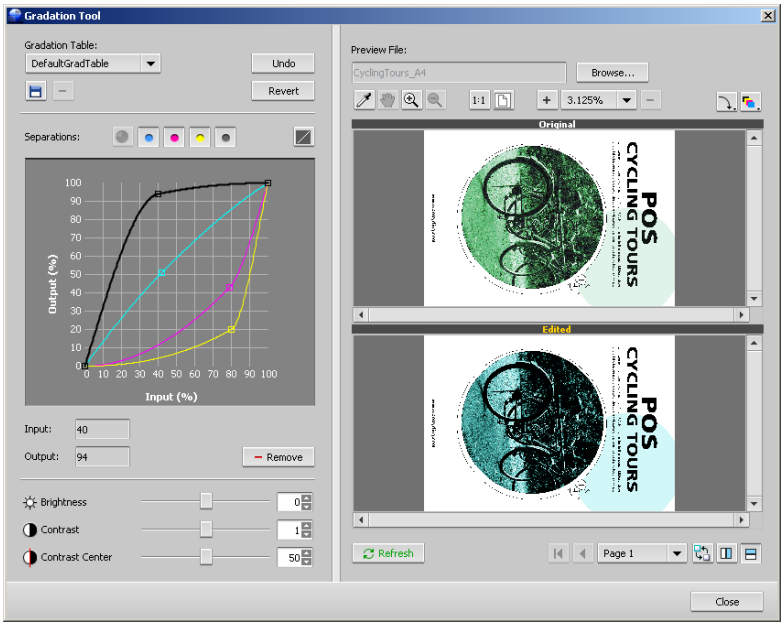
1. Click the **Browse** button next to the **Preview File** list.

   The Processed Jobs dialog box appears. The jobs that are displayed are the jobs listed in the **Storage** area.



2. Select the job that you want to preview, and then click **Open**.

   The **Original** and **Edited** views display your job.



Editing Gradation Tables

When you open the Gradation Tool window, the default gradation table, **DefaultTable**, is selected in the **Gradation Table** list, and is displayed in the graph. This table serves as a baseline and consists of a 45° gradation curve, with **Brightness** and **Contrast** set to 0, and **Contrast Center** set to 50. All of the color separations are selected.

The **Gradation Table** list includes four other predefined gradation tables:

- **Cool:** Blue tones appear clearer
- **Lively:** Increases the color saturation
- **Sharp:** Increases the contrast
- **Warm:** Sets the hues in the low densities to a bright reddish color

Gradation tables that you create or edit also appear in the **Gradation Table** list. When you select a gradation table, the predefined settings are immediately applied to the processed job that you are working with.

The **Separations** buttons enable you to select one, all, or any combination of separations to edit for a specific gradation table. Selecting a specific separation enables you to change the color balance for a specific tonal range.

When you open the Gradations Tool window, all of the separations are selected.

1. Click the **All Colors** button  to edit all the separations simultaneously.
2. Click the individual separations you wish to edit—for example, select the cyan separation only

3. Click the curve in the graph to add a point, and then drag the point to modify the separation. When you select a point, its value appears in the **Input** or **Output** boxes.

   The **Input** axis represents the tone values of the image before gradation changes. The **Output** axis represents the tone values of the image after gradation changes.

4. To view gradation changes in your job, click **Refresh**. Changes are automatically applied to the displayed image in the **After** view.

5. To remove a point on the curve, select the point and then click **Remove**.

6. To reset the gradation curve to a 45° curve, click **Reset**  .

7. To revert to the original gradation settings, click **Revert** 

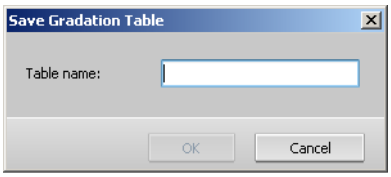
.

8. To remove the last change you made to the gradation graph, click **Undo**.

Creating a New Gradation Table

1. In the Gradation Tool window, modify your gradation table as required.

2. Click **Save**  .



3. In the **Table name** box, type the required name for the new gradation table.

4. Click **OK**.

   The gradation table is saved and added to the **Gradation Table** list and to the **Color Modes** tab in the job parameters window.

Deleting a Gradation Table

➢ Select the gradation table, and then click **Remove**.

Note: You cannot delete predefined gradation tables.

Navigation Buttons

The navigation buttons 

enable you to view the pages or booklets of the current job.

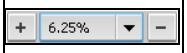
Using the Preview Tools

The preview buttons enable you to switch the display mode in the **Original** and **Edited** views.

Table 11: Description of preview buttons

This button	Enables you to
 **Eye Dropper**	Find out the CMYK values of a specific area on the page. To find the values, first click the **Eye Dropper** button. Then move the pointer to the point on the page where you want to measure the color values and click. The CMYK density values and spot color values appear as a tool tip.
 **Pan**	View a different area of the image
 **Zoom In**	Click an area of the page to magnify the area. To return to the previous view, click the **Zoom Out** button.
 **Zoom Out**	Click an area of the page to reduce the size of the page by 50%. To return to the previous view, click the **Zoom In** button.
 **One to One Zoom**	View the actual actual size of the page one-to-one (1:1)

Table 11: Description of preview buttons

This button	Enables you to
 **Fit to Screen**	Scale the page to fit the available screen space
	View the image at different preset levels of magnification by selecting a percentage in the list
 **Rotate View**	Rotate the page 90°, 180°, and 270°
 **Show/Hide Separation**	Turn on or off one or more separations
 **Original/ Edited view**	Toggle between the **Original** and **Edited** views
 **Original/ Edited view**	View the **Original** and **Edited** views in portrait
 **Original/ Edited view**	View the **Original** and **Edited** views in landscape

Brightness and Contrast Slider Controls

The **Brightness** and **Contrast** slider controls are active only when all of the separations are selected.

Brightness

The **Brightness** slider increases or decreases the luminance of the image. Increasing brightness brightens the image and results in a concave curve. Decreasing brightness darkens the image and results in a convex curve.

- Move the **Brightness** slider to the right to increase brightness or to the left to decrease brightness.

Contrast

The **Contrast** slider increases the image contrast by making the highlights lighter and the shadows darker. It can also be used to decreases the contrast.

- Move the **Contrast** slider to the right to increase contrast (S shaped curve), or to the left to decrease contrast (inverted S shaped curve).

Contrast Center

The **Contrast Center** slider increases the image contrast mainly in the midtones. Using Contrast Center, you can adjust where the contrast is increased. To enhance contrast in highlights, the Contrast Center is shifted toward the highlights. To enhance contrast in shadows, the Contrast Center is shifted toward the shadows.

- Set the **Contrast Center** slider to the right to enhance contrast in highlights, or to the left to enhance contrast in shadows.

  Your change affects the gradation graph by moving the point where the curve changes from convex to concave.

Note: Contrast Center only affects the image if **Contrast** has also been adjusted.

8

VI Workflow

VI Overview

Variable information (VI) jobs are jobs in which the printed materials are individualized for specific recipients or purposes. These materials can include bills, targeted advertising, and direct mailings.

VI jobs are composed of booklets, which are personalized copies of a document. A booklet can consist of one or several pages, but the entire document is targeted at a specific individual or address. For example, a booklet can be either a single-page gas bill or a multipage personalized document.

Each page in the booklet is constructed as a collection of individually RIPed elements that may differ from booklet to booklet, including text, graphics, pictures and page backgrounds. These elements are self-contained graphical entities that may be line art, text, RIPed images, or a combination of these. There are two types of elements in VI jobs:

- Unique elements are used only once for a specific individual or purpose. An individual's name is an example of a unique element.
- Reusable VI elements can be used more than once in different pages, booklets, or jobs. A company logo is an example of a reusable element.

Pages are assembled from the pre-RIPed reusable elements and the RIPed unique elements just before printing. Then the job is printed in the same way as all other jobs

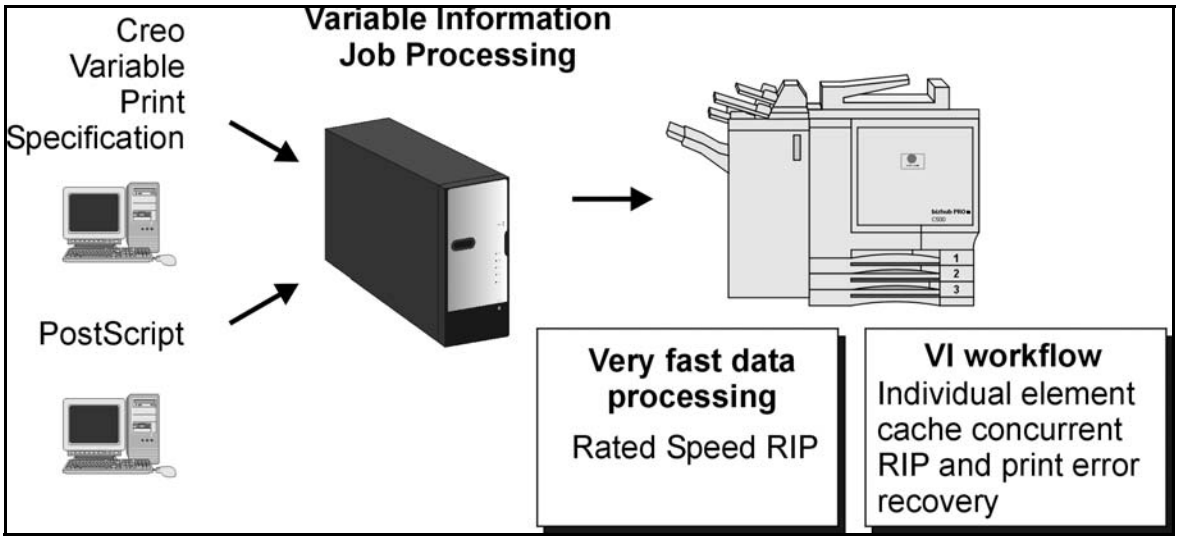
VI Document Formats

VI jobs are created using VI authoring programs that support Variable Print Specification formats. Most VI authoring programs can convert VI files to conventional PostScript files, which can also be processed by the IC-301 print controller, although less efficiently than Variable Print Specification files. Each authoring program creates VI code that instructs the RIP where to place the VI elements and each authoring program does so in a slightly different manner.

The format you choose can be a stand-alone format that covers all aspects of document design, data management and text capture or it can be an extension of an existing program that enables the creation of VI documents and VI jobs.

The IC-301 print controller can process VI jobs that are in one of the following file formats:

- Creo Variable Print Specification
- Personal Print Markup Language (PPML)
- PostScript



Creo Variable Print Specification

Creo Variable Print Specification is the Creo developed formal language designed for effective production of VI documents.

Creo Variable Print Specification is comprehensive and can specify a complete range of VI documents. It also provides the means for efficient implementation - fast and efficient data processing, and storage prior to printing.

A Variable Print Specification job consists of the following components:

- **Booklet**
  A personalized copy of a document within a single print run where pages and/or elements within a page may vary from booklet to booklet.
- **Sub-job**
  All copies of a particular document—for example, book, brochure, or flyer—within a single print run. On the IC-301 print controller, sub-jobs can be deleted, archived, or reprinted at any time. However, you can still maintain reusable elements for future runs. Reusable elements are cached elsewhere, so only the unique data, which is embedded in the job, is deleted.
- **Reusable Elements**
  Self-contained graphical entities that can be line art, text, raster images or a combination of these types. Reusable elements are represented in PostScript and can be stored as EPS files when appropriate. Reusable elements include clipping and scaling instructions as well as the image data.

Note: Grayscale TIFF and EPS images that are created in CMYK applications (such as PhotoShop) are counted correctly as **B&W** instead of **Color** in both the IC-301 print controller and the bizhub PRO C500 printer billing meters.

Reusable elements can be used repeatedly in different pages, booklets and jobs. On the IC-301 print controller, all reusable elements are processed once and cached as elements for further use. They can then be reused either within the sub-job itself, or in additional runs of sub-jobs.

- **Inline Elements**
  Unique information is drawn from a database and is embedded in the sub-job. This data prints only once for individual booklets.

PPML

The PPML format is a new XML-based industry standard that print-technology manufacturers developed for the high-speed production of reusable page content.

The IC-301 print controller supports PPML formats. Some of the features that are included enable you to:

- Process PPML jobs efficiently
- Import jobs in various VI formats to the IC-301 print controller

PPML has a hierarchical structure. Document components are separated from their submission file and can be organized and stored in different levels of the hierarchical structure.

PostScript Files

PostScript files are suitable for simple, very short run jobs. All page elements are re-RIPed for each page. These jobs do not use a VI authoring tool at all. Instead, they use a mailmerge function in a Microsoft Word document or a Microsoft Excel spreadsheet.

Using Creo Variable Print Specification to Print a VI Job

To print a VI job:

➢ Submit your job to the IC-301 print controller.

Reusable elements are identified and processed and then are ready for rapid assembly into pages and for reuse during the printing stage.

Your VI job is processed and printed on the IC-301 print controller. The bizhub PRO C500 printer prints booklets at full engine speed working uninterrupted from the printer disk. Booklets are compiled concurrently while the printer prints. As pages are sent to the print engine, they are assembled from the various inline and reusable elements on-the-fly.

After the job is completed, it is placed in the **Storage** area. This job contains the complete variable job including all booklets, variable images, and unique elements.

9

System Administration

Setting Up and Configuring the IC-301 Print Controller

Basic system configuration and settings are defined in the IC-301 print controller Preferences window. The Preferences window contains items that enable you to manage your system.

To open the Preferences window:

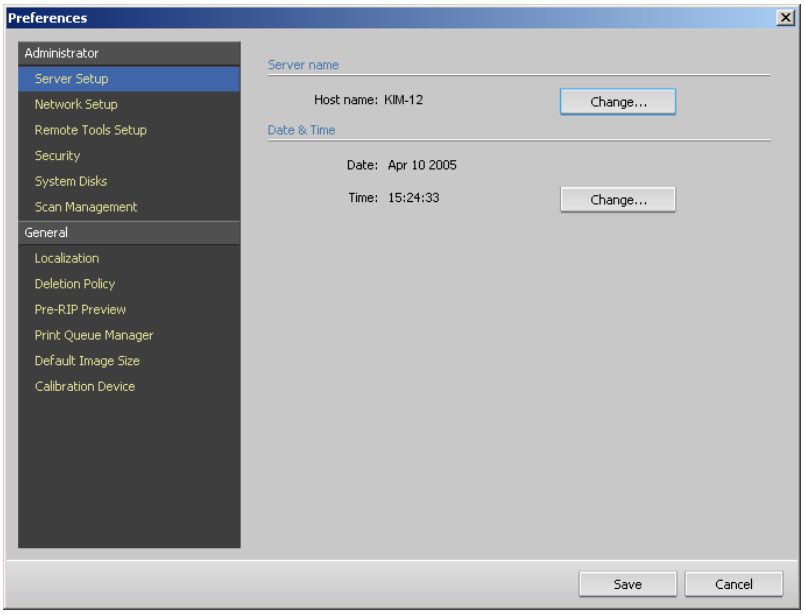
➢ From the **File** menu select **Preferences**.

The Preferences window appears. The settings are divided into two lists: **Administrator** and **General**. Both lists are explained in the following sections.

Administrator items can be viewed by users of all levels, but are only available to users of Administrator level. **General** items can be viewed by all user levels, but are only available to users of Administrator and Operator user levels. All items in the Preferences window are view only to Guest users.

Server Setup

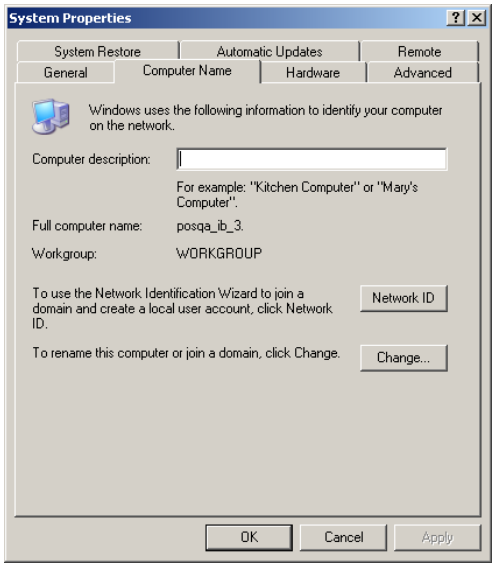
Set the server's name and the current date and time in **Server Setup**.



Changing the Server Name

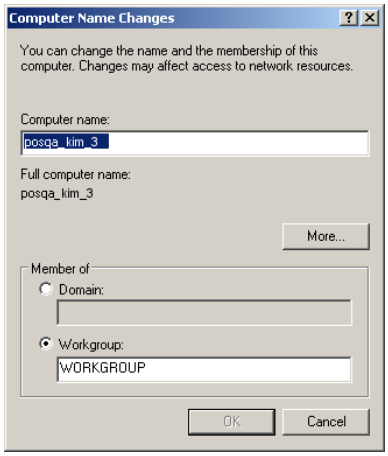
1. In the Preferences window, select **Server Setup**.
2. In the **Server name** area, click **Change**.

   The System Properties dialog box appears.



3. In the **Computer Name** tab, click **Change.**

   The Computer Name Changes dialog box appears.



4. In the **Computer name** box, type a new name for the computer.
5. If you want to change the **Workgroup** or the **Domain** in which your computer appears, select the desired option and type a new name in the corresponding box.

Note: Do not change the workgroup or domain unless you are instructed to do so.

Important: If you want to change the domain, you will be required to type the password for the domain account. If the password is unavailable, the computer will be locked.

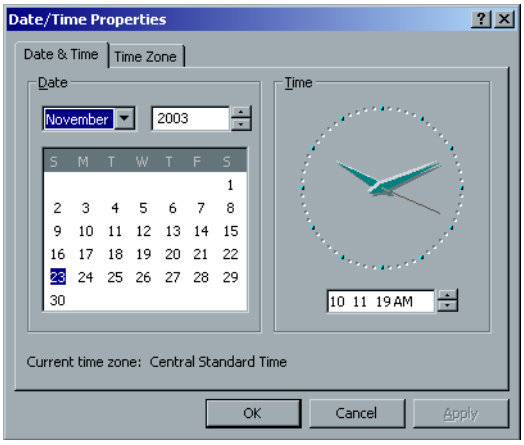
6. Click **OK**.
7. Click **OK** in the System Properties window.

   The system prompts you to reboot your computer for the new settings to take effect.
8. Click **No** if you want to change other system parameters, or click **Yes** and reboot your computer.

Changing the Date and Time

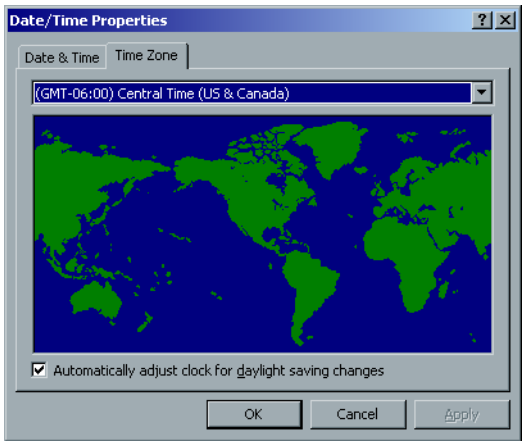
1. In the Preferences window, select **Server Setup**.
2. In the **Date & Time** area, click **Change**.

   The Date/Time Properties dialog box appears.



3. In the **Date & Time** tab, select your local time settings.

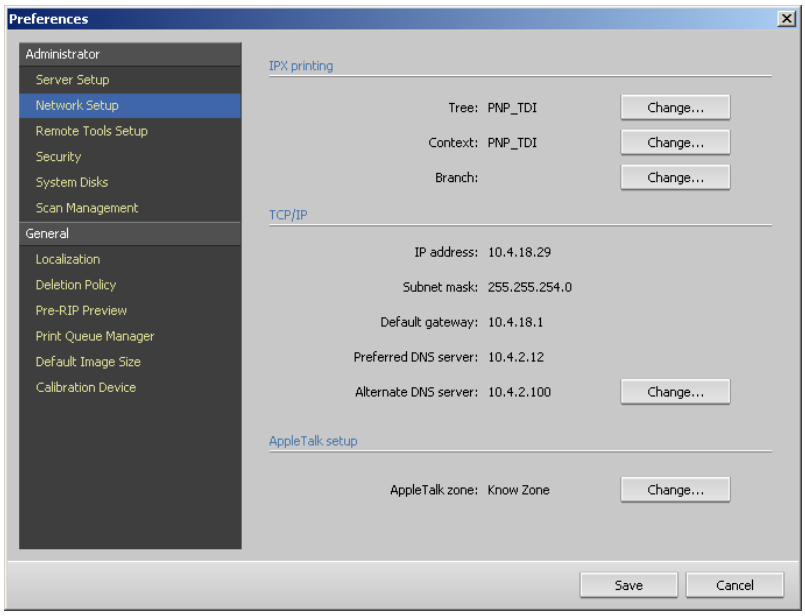
4. Select the **Time Zone** tab and set the correct time zone.



5. Click **OK**.

Network Setup

The **IPX printing** settings, **TCP/IP** settings and the **Apple Talk setup** settings are specified in the **Network Setup** parameter.



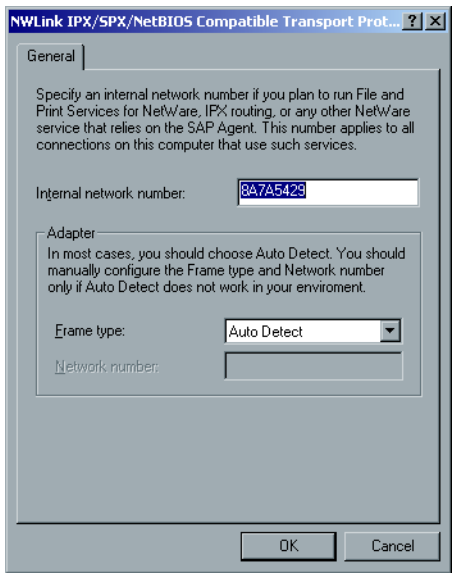
IPX Printing

IPX printing enables the IC-301 print controller to act as a job server for the Novell queue. A job server checks each assigned queue at a specified interval, taking care of jobs on a first-in, first-out basis. Once a job is processed, its associated file is deleted from the queue directory.

To set the IC-301 print controller IPX parameter:

1. In the Preferences window, select **Network Setup**.
2. In the **IPX printing** area, click **Change** next to the **Tree** parameter.

   The Local Area Connection Properties dialog box appears, followed by the NWLink IPX/SPX Properties dialog box.



3. To change the frame type, select a frame type from the **Frame type** list, then click **OK**.
4. Click **OK** also in the Local Area Connection Properties window.

   You are prompted to restart your computer.
5. Click **No** if you need to make more changes, or **Yes** to reboot.

Note: Using this procedure requires further setup by the network administrator.

TCP/IP Setup

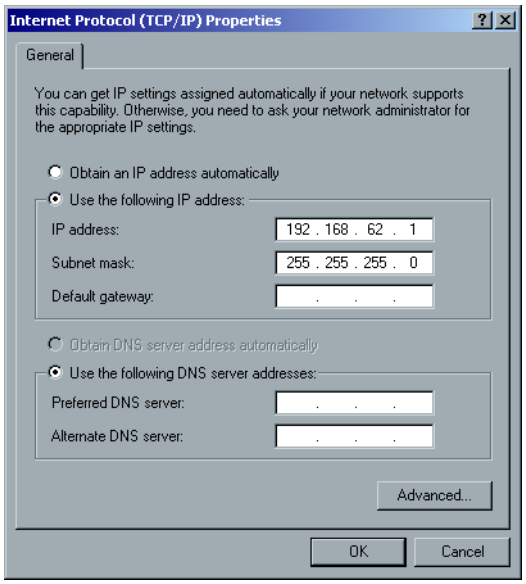
The IC-301 print controller is predefined with a default IP address. The TCP/IP option enables you to change this IP address and other TCP/IP settings.

Note: Before changing the network settings, consult your System Administrator.

To change the TCP/IP network settings:

1. In the Preferences window, select **Network Setup**.
2. In the **TCP/IP** area, click **Change Settings** next to the **IP Address** parameter.

   The Local Area Connection Properties dialog box appears, followed by the Internet Protocol (TCP/IP) dialog box.



3. Select one of the following options:
   - **Obtain an IP address automatically:** To change the IP Address
   - **Use the following IP address:** Type the desired address—for example, **IP address:192.168.62.1** and **Subnet mask:255.255.255.0.**
4. Click **OK**.

5. Click **OK** in the Local Area Connection Properties window.

   You are prompted to restart your computer.

6. Click **No** if you need to make more changes, or **Yes** to reboot.

Apple Talk Setup

The **AppleTalk Setup** utility enables you to change the AppleTalk zone in which your IC-301 print controller is located.

To change the Apple Talk network settings:

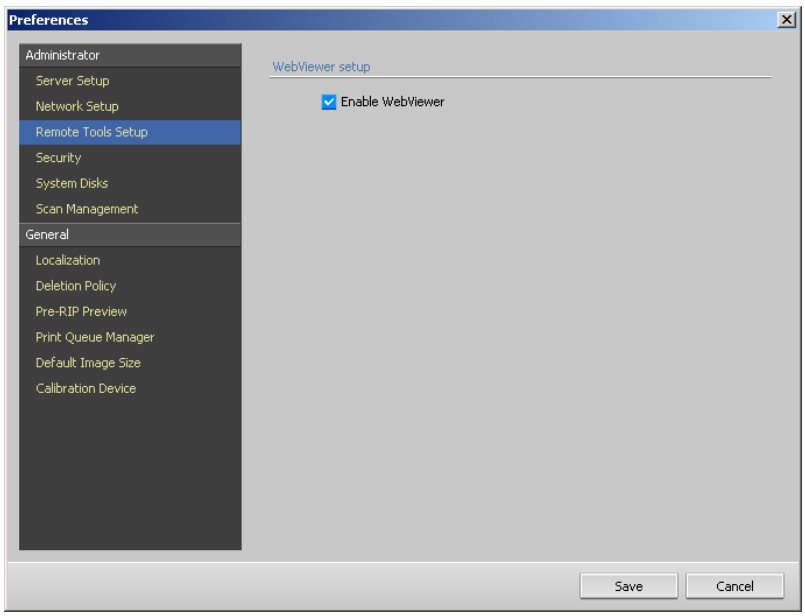
1. In the Preferences window, select **Network Setup**.
2. In the **Apple Talk Setup** area, click **Change** next to the **The System will appear in zone** parameter.

   The Local Area Connection Properties dialog box appears, followed by the AppleTalk Protocol Properties dialog box.

3. From the zone list, select the desired AppleTalk zone for your computer, and click **OK**.

Remote Tools Setup

The Remote Tools Setup enables you to connect from a client workstation to the IC-301 print controller over the network using the Web Center .

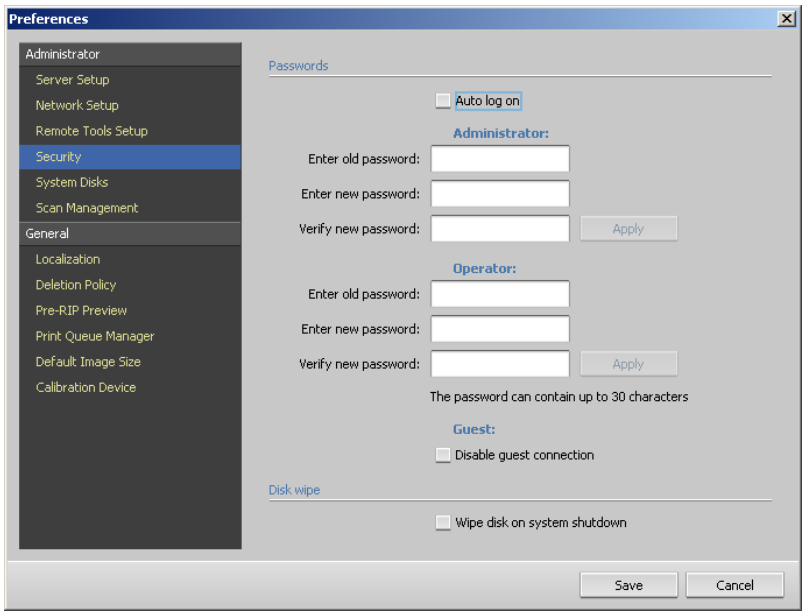


To enable web connections:

1. In the Preferences window, select **Remote Tools Setup.**
2. In the **Web connect setup** area, select **Enable Web Viewer.**

For more information about viewing and monitoring your jobs from a client workstation, see *Web Center* on page 32.

Security



User Passwords and Access Levels

The **Auto Log on** check box is selected by default so that you don't have to log on to the IC-301 print controller each time. If you want each user to have to log on to the IC-301 print controller, you need to set the security settings. You can assign each user an access level and password. There are three access levels:

- **Operator (default):** Enables the user to operate the IC-301 print controller and configure the **General** area in the Preferences window
- **Administrator:** Enables the user to access all features and settings in the IC-301 print controller
- **Guest:** Enables the user to import a job through an existing virtual printer and view the workspace

To set Password settings:

1. In the Preferences window, select **Security**.
2. If you want each user to have to log on to the IC-301 print controller, clear the **Auto Log On** check box.

3. In the **Administrator** area, perform the following steps:
   a. If you are changing an existing password, type the password in the **Enter old password** box.
   b. In the **Enter new password** box, type a new password.
   c. In the **Verify new password** box, type the new password again.
   d. Click **Apply.**
4. If you want to set a password for operators, repeat steps 3a-d in the **Operator** area.
5. If you don't want guest users to access the IC-301 print controller, select the **Disable guest connection** check box.

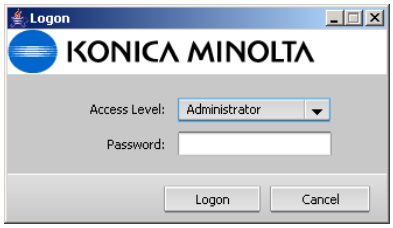
Note: This option is not available if you selected the **Auto Log On** option.

6. Click **Save.**

Logging On as a Different User

If you are already working in the IC-301 print controller workspace, you can change your access level—for example, if you are logged on as an operator and you need administrator priveleges.

1. From the **File** menu, select **Log On As Different User.**



2. In the **Access Level** list, select a different access level.
3. If you want to log on as an administrator or operator, type your password.

Note: If you want to log on as a guest, you don't need a password.

4. Click **Logon**.

   You are logged on with the new access level.

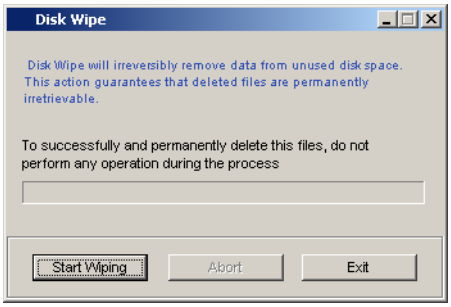
Disk Wipe

Usually when you delete a file, the file's dictionary entry is removed but data still remains on the disk. The Disk Wipe utility enables you to clear previously deleted files. The utility eliminates the contents of your deleted files by scanning all of the empty sectors on the disk and replacing them with zeros. Non empty sectors are left untouched. This feature enables you to work in a more secure environment. If there is a system shutdown, the disk wipe operation can begin immediately.

To operate the IC-301 Disk Wipe utility:

1. In the Preferences window, select **Security**.
2. Select the **Wipe disk on system shutdown** check box.
3. Click **Save**.
4. Exit the IC-301 print controller software.

   After a few minutes, the following window appears.



5. Click **Start Wiping**.

   A progress bar appears while the disk wipe operation permanently deletes files.

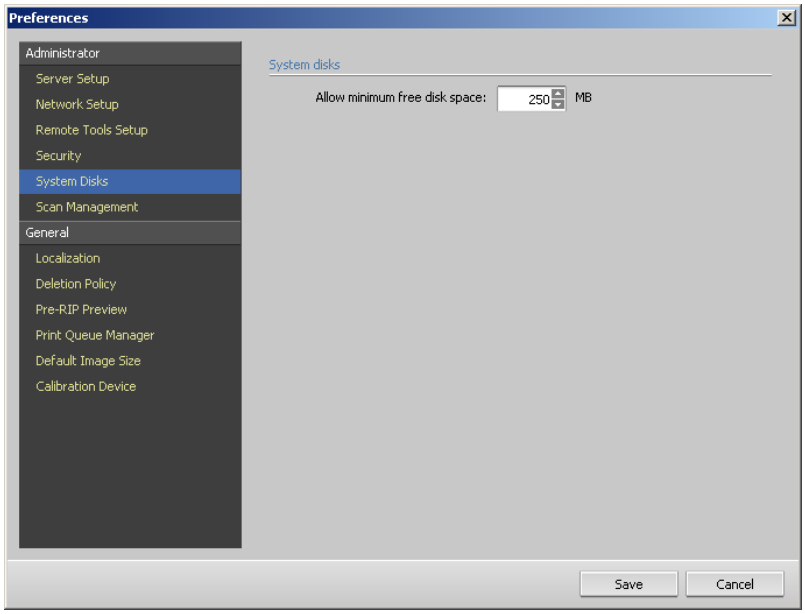
6. When the message `Disk wiping was completed successfully` appears, click **Exit**.

Notes:

- The disk wipe operation does not function well when the Norton Utilities application is installed. Before you activate the Disk Wipe utility, make sure that Norton Utilities is not installed on the IC-301 print controller.
- In rare cases, the process of deleting files from the **Storage** area is not completed—for example, the system shuts down before the deletion process is completed. In these cases, parts of the deleted files still reside in the **D:\Output** folder. Therefore, it is recommended that before you start the disk wipe operation, check the **D:\Output** folder to ensure that all the relevant files were deleted.
- The Disk Wipe utility affects the user disk and Printer disk.
- Do not operate the Disk Wipe utility while another application is running.
- The supported language is English.

System Disks

When the Printer disk or User disk reaches a pre-defined threshold of minimum available space (the default is 250 MB), RIP is suspended and the system provides a warning message. The RIP will resume automatically only after disk space is available.



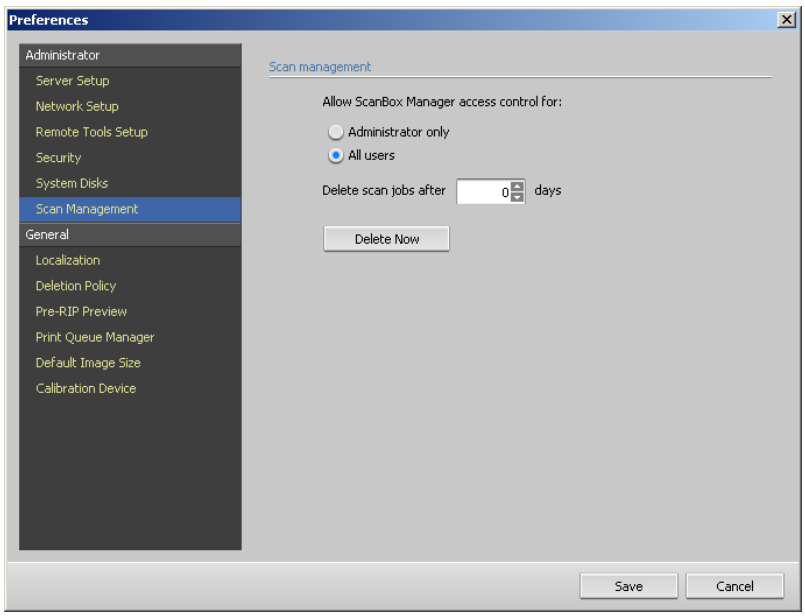
To set the system disks threshold:

1. In the Preferences window, select **System Disks**.
2. In the **System Disks** area, set the minimum free disk space desired for RIP.

Scan Management

The scanbox access control and scan jobs settings are set in the Scan Management settings.

For more information about using scan boxes, see *Setting Up Scan Boxes* on page 47.



Setting the Scanbox Access Control

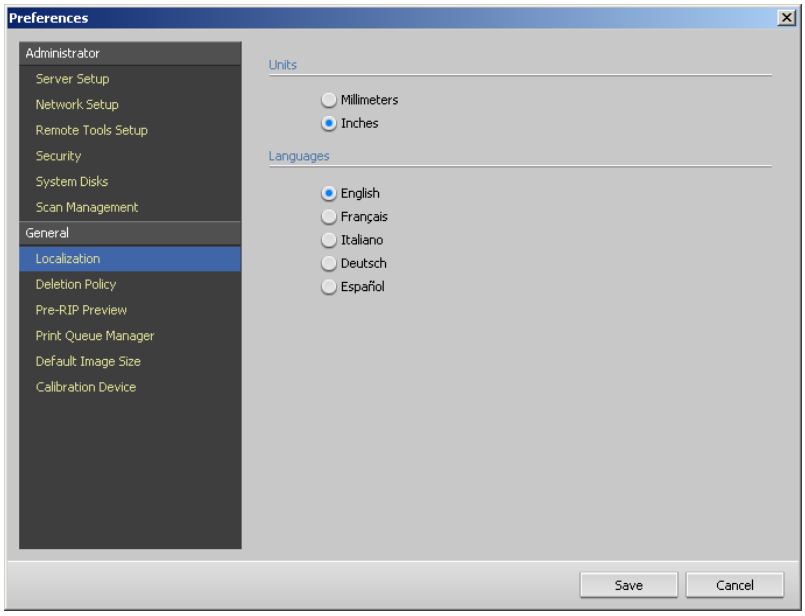
1. In the Preferences window, select **Scan Management.**
2. Set the **ScanBox Manager access control** for the administrator only or for all users. This option specifies who can set up and manage scan boxes.

Setting the Delete Scan Jobs

1. In the Preferences window, select **Scan Management.**
2. In the **Delete scan jobs after** box, set the desired number of days after which the system automaticallly deletes scanned jobs saved to the Public scan box. By default, the system deletes all of the scanned jobs in the Public scan box on a daily basis.
3. Click the **Delete Now** button to delete scanned jobs from the Public scan box..

Localization

The **Localization** measurements and the **Language** are set in the **Localization** area.



Setting the Localization Measurement

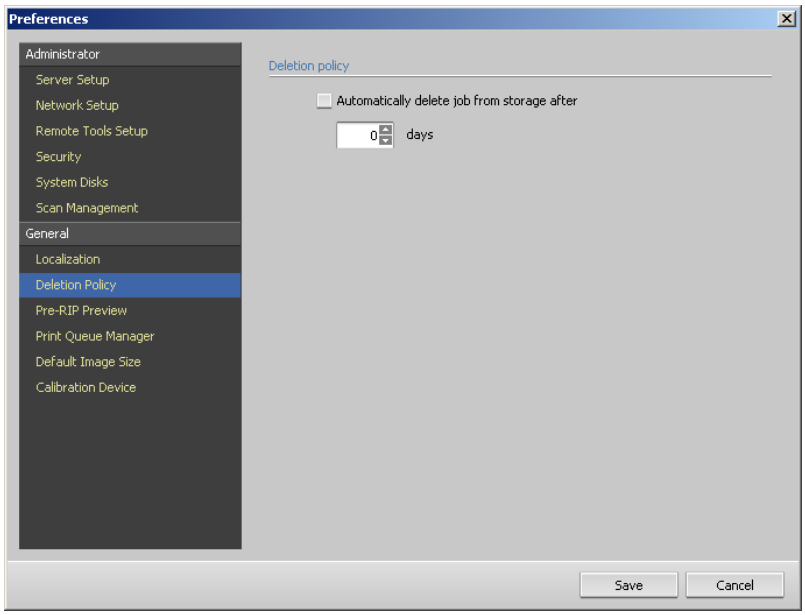
1. In the Preferences window, select **Localization**.
2. In the **Units** area, select **Millimeters** or **Inches**, as desired.

Setting the Language

1. In the Preferences window, select **Localization**.
2. In the **Language** area, select the language, as desired.

Note: If you switch to another language, you need to restart the IC-301 print controller software.

Deletion Policy

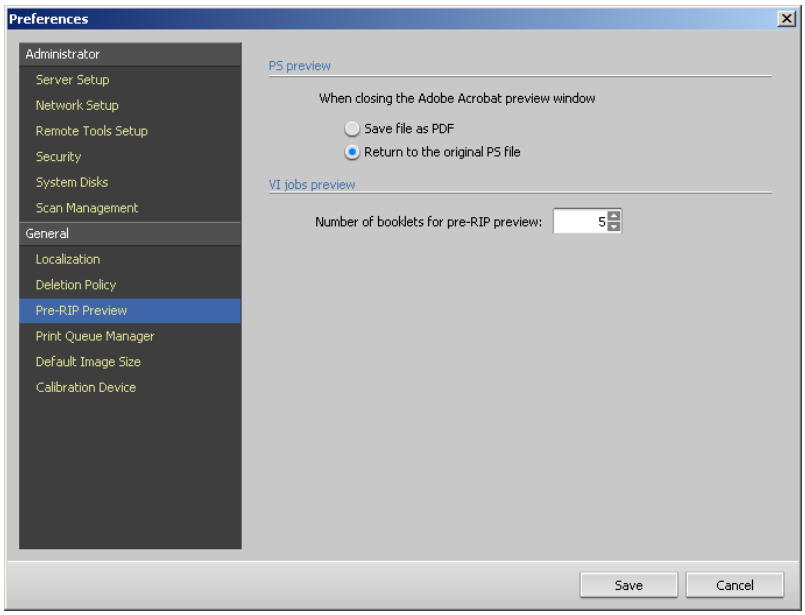


When jobs have been handled by the IC-301 print controller, they are stored in the the **Storage** area. You can specify a number of days after which the jobs are removed from the **Storage** area.

To delete jobs from the Storage area:

➢ Select the **Automatically delete jobs from Storage** check box, and enter the desired number of days.

Pre-RIP Preview



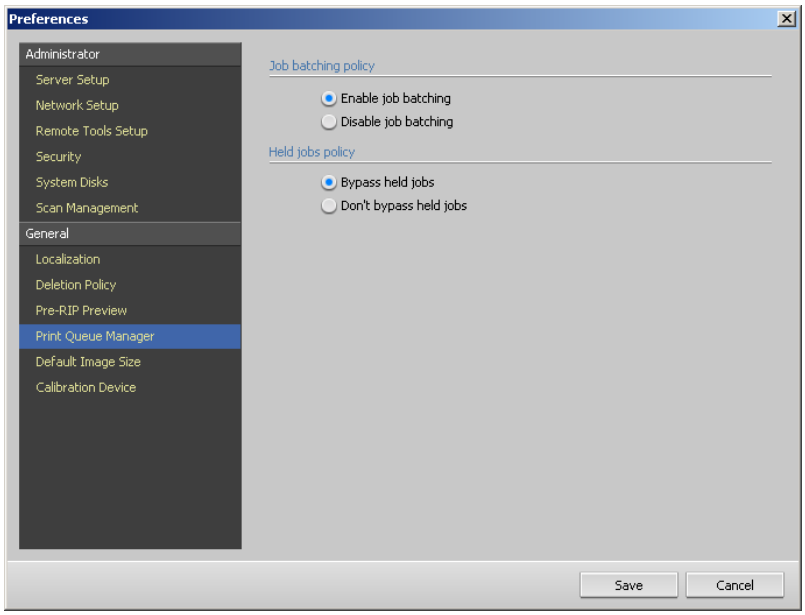
Setting the PS Preview Preferences

1. In the Preferences window, select **Pre-RIP Preview.**
2. In the **PS Preview** area, specify the desired action when you close the Adobe Acrobat preview window, save the file as a PDF, or return to the original PS file.

Setting the VI Jobs Preview

➢ In the **VI jobs preview** area, select the desired number of booklets you want to preview before the job is processed.

Print Queue Manager



Setting the Job Batching Policy

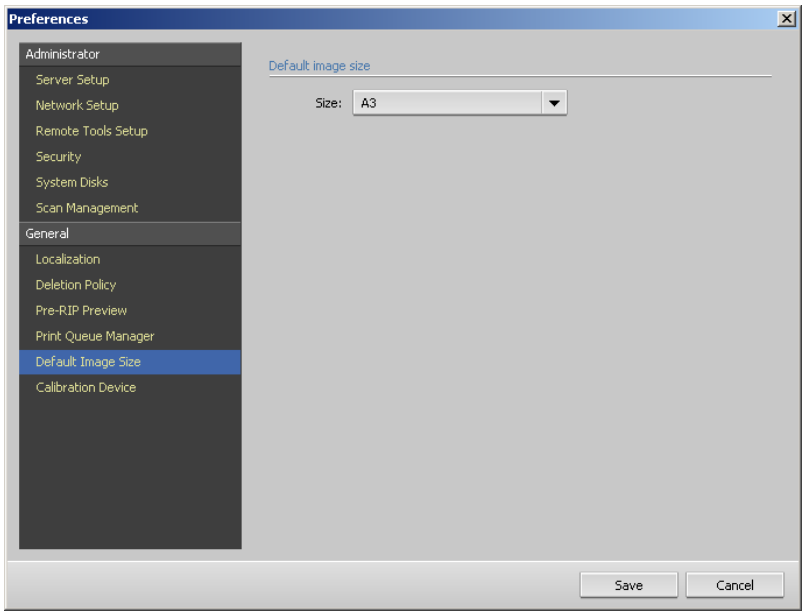
1. In the Preferences window, select **General Defaults.**
2. In the **Job batching policy** area, enable or disable the job batching option.

Held Jobs Policy

➢ In the **Held jobs policy** area, select one of the following options:

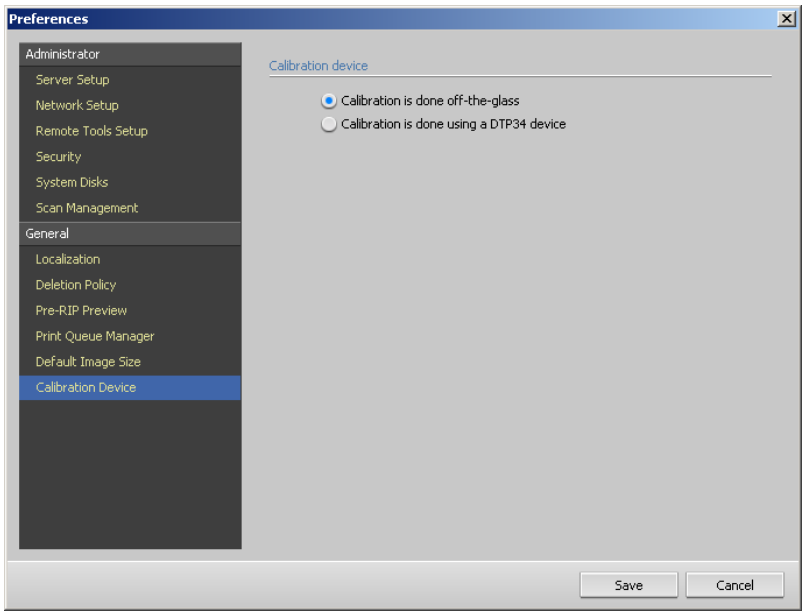
- ❒ **Bypass held jobs:** To bypass held jobs in the **Print Queue**
- ❒ **Don't bypass held jobs:** To stop printing from the **Print Queue** when a job is assigned a held status

Default Image Size



1. In the Preferences window, select **Default Image Size.**
2. Select the default size in which to view images in a job.

Calibration Device



1. In the Preferences window, select **Calibration Device**.
2. In the **Calibration Device** area, select one of the following options:
   - **Calibration is done off-the-glass:** Uses the scanner platen to measure the calibration charts
   - **Calibration is done using a DTP34:** Uses the DTP34 densitometer to measure the calibration charts

For more information about how to perform calibration, see *Calibration Process* on page 105.

System Messages

While jobs are being handled by the IC-301 print controller, various messages are emitted. Messages about each job are stored in the Job Log and messages generated during a session are stored in the Messages window.

System Disks Threshold Message

When the Printer disk or User disk reach a pre-defined minimum available space threshold (usually of 250 MB), RIP is suspended and the system provides a warning message. The RIP resumes automatically only after disk space is available. In this case, you may increase the system disk threshold.

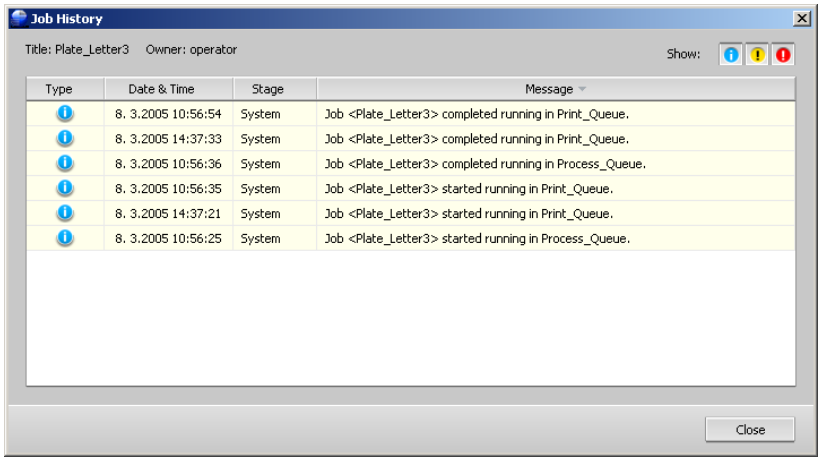
For more information about setting the system disks threshold, see *System Disks* on page 140.

Job History

The Job History window lists all of the messages that were generated during the workflow of the selected job. You can view the job title and owner (the user name of the system from which the job originated).

To open the Job History window:

➢ Right-click a job in the **Storage** area, and from the menu select **Job History**.



Message Information

For each message, the following information is indicated by default:

- An icon denoting the type of message (Error, Warning, or Information)
- Date and time on which the message was emitted (the time stamp)
- Stage in the workflow—for example, **Print Queue** or **Process Queue**
- Message text

You may filter the messages by type, and/or sort the list by one of the column headers.

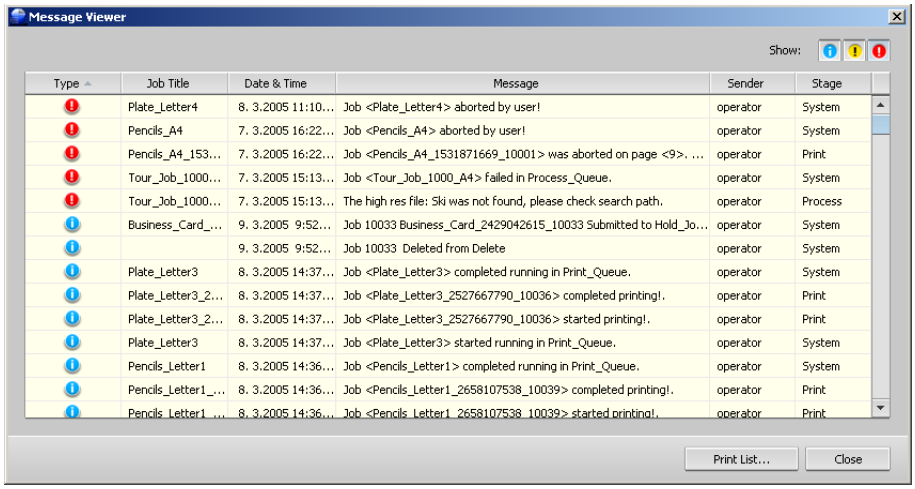
Messages

To open the Message Viewer window:

➢ From the **Info** menu, select **Messages**.

The Message Viewer window appears and lists all of the messages that were generated during the workflow.

For more information about viewing messages related to a specific job, see *Job History* on page 149.



By default, all the jobs that were handled during the last 3 months (90 days) are listed.

Managing Messages

You can filter the messages by type, and/or sort the list by one of the column headers. In addition, you may print the list of messages.

If desired, you may reorder and resize columns, filter the list or sort the list by one of its column headers.

Notes:

- This section is relevant for the Message Viewer window and the Job History window.
- These settings are retained after closing a window.

Filtering the Messages by Type

Each message in the Message Viewer window and Job Viewer window is assigned an icon to denote the message type:

 Information

 Warning

 Error

You can filter the list in order to view only messages of certain types. By default, all message types are listed in the Message Viewer window.

Note: If the message type is not selected, messages of this type do not appear in the list.

➢ Click any message type icon—for example, **Error**— in order not to list such messages.

The list updates accordingly.

Printing the Message List

You can print the information as it is presented in the Message Viewer window (as it is currently filtered and sorted).

To print the message list:

1. Filter and sort the list as desired (the data is printed according to the current filtering and sorting).
2. Click **Print List**.

   The Print window is displayed.
3. Set the printing options as desired, and then click **OK**.

Backing Up and Restoring the Configuration

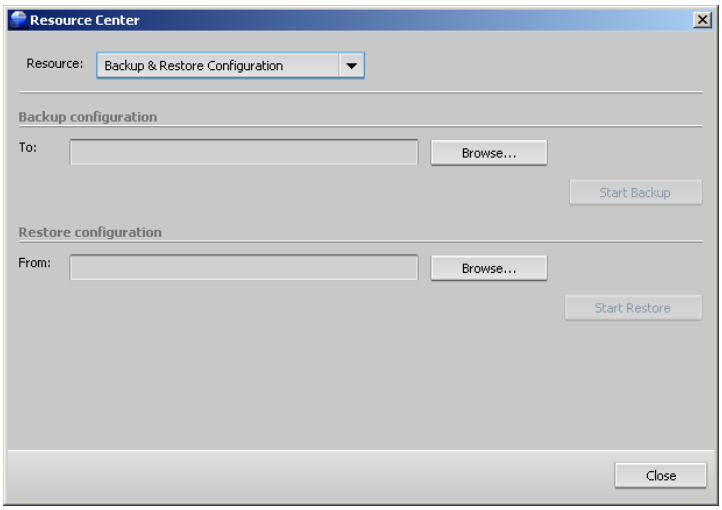
The **Backup & Restore Configuration** feature enables you to backup your IC-301 print controller configuration to a local hard disk, network drive, or to an external media—for example, an external zip drive—connected to the IC-301 print controller.

To backup the configuration of your IC-301 print controller:

1. On the toolbar, click **Resource Center**.

   The Resource Center window appears.

2. In the **Resource** box, select **Backup & Restore Configuration**.



3. In the **Backup configuration** area, click **Browse**.

   The Save dialog box appears.

4. Find the desired directory path for the backup.

Note: You can also backup to an external media.

5. Enter the required file name.

Note: It is recommended that you use the current date as part of the file name.

6. Click **Save**.

7. In the Resource Center window, click **Start Backup**.

   After a few minutes, the backup completed message appears.

Note: The last path will be saved and displayed to the path box. If the backup was made to an external media, the displayed path will be the default: **C:\IC-301\General\Configuration**.

To restore the configuration of your IC-301 print controller:

1. On the toolbar, click **Resource Center**.

   The Resource Center window appears.

2. In the **Resource** box, select **Backup & Restore Configuration**.
3. In the **Restore Configuration** area, click **Browse**.

   The Open dialog box appears.

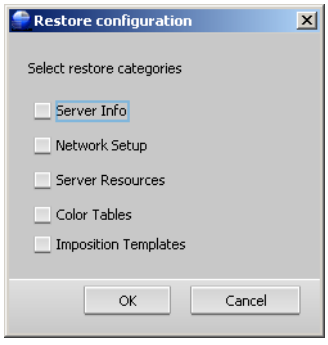
4. Locate the directory path in which you backed up the configuration.
5. Select the file, and then click **Open**.

Notes:

- You may also restore the configuration from an external media.
- The configuration file extension will always be **.cnf**.

6. Click **Start Restore**.

   The Restore configuration window appears.



7. Select the categories you want to restore, and click **OK**.

Note: When you restore the configuration, all the custom tables and sets—for example, new virtual printers—are added to the system.

A

Setting Parameters

Setting Parameters in the Job Parameters Window

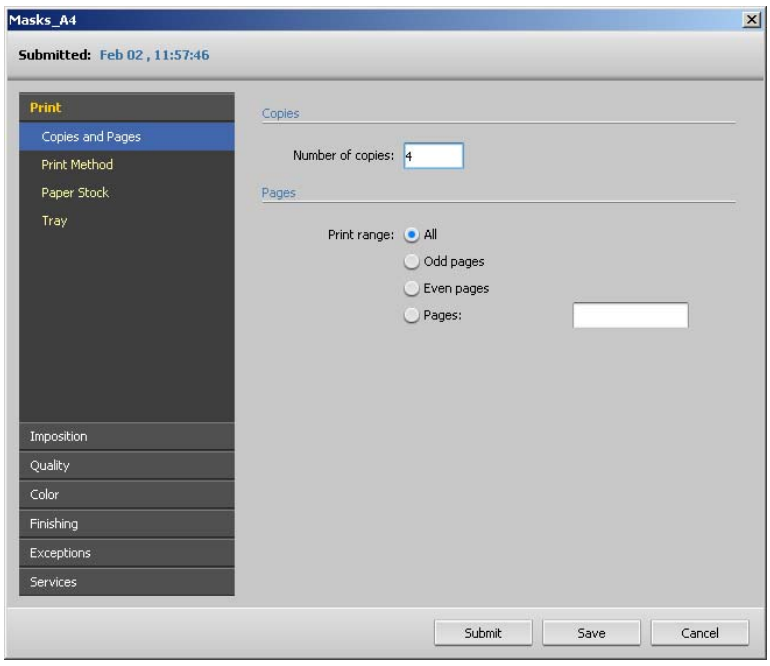
This appendix describes each parameter in the job parameters window.

Print

The **Print** parameters enable you to set print-related job parameters such as the print range, the number of copies you would like to print, the print method and order.

The IC-301 print controller uses multiple paper stock parameters such as **Paper size**, **Media type**, and **Tray** to specify the media type.

If the selected media type is unavailable, the current job is held until the appropriate set is available (the job receives an **on hold** status indicator, and a message appears in the Message Viewer window). Other jobs can print while jobs are held.



Copies and Pages

Copies

➢ Enter the number of copies to be printed.

Pages

➢ Select a page range.

If the printed job is a VI job, the **Pages** option changes to **Booklets**. To select specific pages, booklets, or page ranges, specify the pages or booklets to be printed as follows:

- Type one or several numbers separated by commas and no spaces—for example, **1,3,5**.
- Type a range of pages or booklets with a hyphen between the starting and ending numbers in the range—for example, **1-5**.

Note: For imposed jobs, instead of typing the desired pages, type the desired imposed sheets.

Print Method

➢ Select one of the following options:

- **Simplex:** for single-sided printing
- **Duplex head to head:** for printing book-style hard copies (usually used with portrait jobs)
- **Duplex head to toe:** for calendar-style hard copies (usually used with landscape jobs))

Paper Stock

Paper Size

➢ Select the desired paper size. If you select **Custom**, type the required width in the **W** box and the required height in th **H** box**.**

Note: Units of measurement (mm or inches) reflect system configuration. You choose units in the Preferences window (see *Localization* on page 143).

Wide paper

This check box supports the wide paper option in the bizhub PRO C500 printer.

Media type

➢ Select the desired media type. The default setting is **Use Printer defaults**. When this option is selected, your job is printed on the media type that is defined on the bizhub PRO C500 printer.

Gloss Mode

➢ Select this check box to give a glossy look to your printed output.

Weight

➢ Select the desired media weight. The default setting is **Use Printer defaults**. When this option is selected, your job is printed on the paper weight that is defined on the bizhub PRO C500 printer.

Tray

➢ Select the desired tray:

- **Tray 1, Tray 2, Tray 3, Bypass**, **LCT**: Load the specified stock in this tray.
- **Force Tray:** Centers and prints the job on the paper size that is in the selected tray. The **Paper Stock** options are ignored.

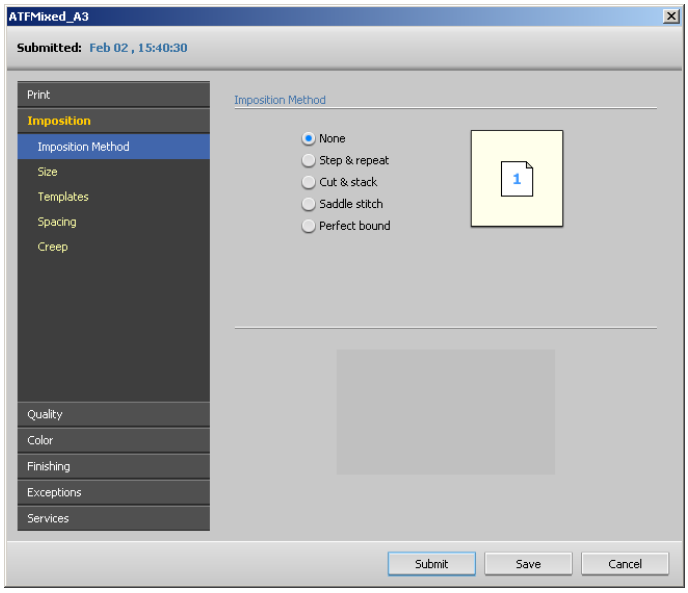
Note: If you select the **Force Tray** check box for a job that uses imposition, the paper size that is in the selected tray is printed on the imposed sheet.

- **Auto**: The bizhub PRO C500 printer will use any tray with the specified stock.

Note: The **Auto** tray option uses the paper in the selected tray only if it complies with all the other paper stock parameters. If the paper stock in the assigned tray doesn't match all of the job's parameters, the job is held.

Imposition

The **Imposition** parameters enable you to select job options related to the positioning, folding, trimming, and binding of pages.



Imposition Method

The **Imposition Method** parameter specifies how printed sheets are finished. You to choose a method according to the finished format that you need.

➢ Select one of the following options:

- **None:** This is the default option. If you select **None**, the imposition parameters are unavailable and the thumbnail viewer does not display an image.
- **Step & repeat:** Use this option for printing multiple copies of the same image so it fills up a larger sheet. This method is used mainly for printing business cards.
- **Cut & stack:** Use this option to enable step & repeat jobs to be printed, cut, stacked and bound in the most efficient manner, while preserving the original sorting. A job's pages, booklets, or books are sorted in a Z-shape. In other words,

each stack of pages is sorted in consecutive order. When stacks are piled one on top of another, the entire job is already sorted up or down.

- **Saddle stitch:** Use this option for a book-finishing technique where the pages of a book are attached through stitching or stapling in the spine fold —for example, brochures.
- **Perfect bound:** Use this option for a book-finishing technique where the pages of a book are attached through trimming of the spine fold, roughening the edges of the gathered pages and gluing them together—for example, hardcover books.

Size

Sheet size

➢ Select the required sheet size. If you select **Custom**, type the required width in the **W** box, and the required height in the **H** box.

Wide paper

This check box supports the wide paper option in the bizhub PRO C500 printer.

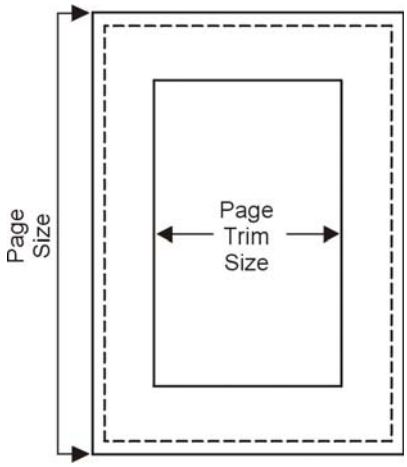
Trim size

➢ In the **Trim size** list, select the desired trim size. If you select **Custom**, type the required width in the **W** box**,** and the required height in the **H** box.

Trim orientation

➢ Select the desired orientation, **Portrait** or **Landscape** for the trim size.

Trim size is the size of the finished, trimmed document.



You can adjust your page size by adjusting the trim size.

Note: If you set the trim size to be smaller than the page size set in the DTP application, some of the data is cropped. Setting a larger trim size results in a larger border on the printed page.

Trim orientation specifies the orientation, portrait or landscape, for the trim size. If the wrong orientation is specified, an unsuitable template might be selected and the job might be cropped as a result.

Templates

Category

1. In the **Columns** list, select the number of pages to place horizontally. The rows and columns indicate how the pages will be placed on the sheet.
2. In the **Rows** list, select the number of pages to place vertically.

Print method

- Select the desired layout—for example, **Duplex HTH** or **Duplex HTT**.

North south

- Select this check box if the template you chose is either step and repeat 2×1 or 1×2. The pages will be placed 180 degrees from each other, on the same side of the imposed sheet.

Right Binding

This check box is only available if the imposition method is either saddle stitch or perfect bound, and the template is 2×1, 2×2, or 4×2.

Spacing

Marks

➢ In the **Marks** list, select one of the following options:

- **Crop marks:** To print the lines that indicate where the sheet should be cropped. To print the crop marks on both sides of the page, select the **Both Sides** check box.

Notes:

- If you want to use crop marks incorporated in the DTP application, make sure that enough space is left around your page in the PostScript file so that the page prints with crop marks.
- If your job already includes crop marks incorporated in the DTP application, you do not need to add crop marks here. If you do add crop marks, both sets of crop marks can be printed.
- If you want to use crop marks incorporated in the DTP application, make sure that enough space is left around your page in the PostScript file so that the page prints with crop marks.

- **Fold marks:** To print the lines that indicate where the sheet should be folded.

Bleed size

➢ Enter a value. The value that you enter depends on the paper size and imposition method you choose.

When you set bleed options, you extend part or all of the printed image beyond the trimming boundary. The bleed options ensure that an inaccurate trim setting will not leave an undesired white

space at the edge of the page. The bleed options produce sharp page boundaries with color that extends all the way to the edge of the page.

Notes:

- You cannot extend the bleed size beyond the sheet fold lines. Bleed does not affect the position of crop.
- Bleeding must be defined in your DTP application in order for the IC-301 print controller to be able to apply the bleed options.

Margins

➢ Enter a value to adjust the spaces between the outside edges of pages and the edges of the sheet on which they are printed.

Notes:

- Margin settings should suit finishing equipment and requirements.
- Confirm binding parameters with your binder when planning your sheet.

Gutter

➢ Enter a value. The value that you enter depends on the paper size and imposition method you choose.

The gutter size is the space between pairs of pages (according to the trim size) on a sheet. When the pages are folded into a booklet, the gutter allows space for trimming.

Spine size

➢ Enter a value. The value that you enter depends on the paper size and imposition method you choose.

Creep

Creep is a common problem in saddle-stitch jobs. When signatures are inserted inside one another, the signatures inserted last are the farthest from the center of the booklet. As a result, the outer edges of the inner pages creep past the outer pages.

Note: It is recommended that you use a border around all documents when you use creep.

Creep in

➢ Select one of the following options:

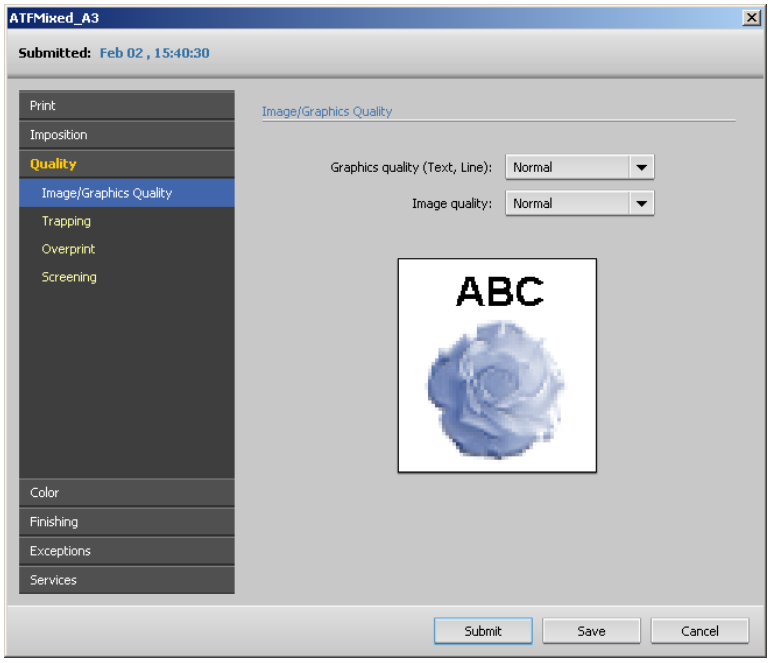
- ❒ **Auto**: To automatically set a value based on media weight
- ❒ **Custom**:To enter a custom value

Creep out

➢ Enter a value.The value that you enter depends on the paper size and imposition method you choose.

Quality

The **Quality** parameters enable you to set print quality related job parameters and to improve the quality of printed jobs. These parameters include the possibility to enhance text and graphics quality, set trapping, and to define the black overprint.



Image/Graphics Quality

Graphics quality (Text, Line)

➢ Select **High** to improve the text quality in a job.

Note: It is recommended that you use this option only if your source file includes diagonal lines or text with jaggies.

Graphics quality (Text, Line) refers to the Creo anti-aliasing algorithm for text quality. This option causes blends to appear smooth with no banding, and displays crisp diagonal lines without (or with minimal) jaggies (rough edges) that are the result of the limited resolution of the print engine.

Image quality

➢ Select **High** to improve the quality of images in a job.

Image quality refers to the ability to maintain the same detail and smoothness with different degrees of enlargement. This feature is especially useful when your PostScript file includes several images at different qualities—for example, images that were scanned at different resolutions, were rotated, or downloaded from the internet.

Trapping

1. Select the **Enable Trapping** check box to apply trapping.

Note: If you don't select the **Enable Trapping** check box, it does not affect trapping incorporated by DTP applications—for example, Photoshop. FAF should not be used with application based trapping. In a PostScript file that already contains trapping from the originating application, it is not necessary to use IC-301 print controller trapping.

2. In the **Frame thickness** box, enter the desired value for the thickness of the trapping frame.

Protect small text

➢ Select this check box so that any text that is smaller or equal to 12 pt. is not framed during FAF.

Trapping is a solution that solves misregistration between color separations in both offset and digital printing. This occurs no matter the accuracy of the printing device, and results in white lines around objects on top of a background (in a knock-out procedure) and also between adjacent colors.

Protect small text is an option you may apply for small or complex images, since thicker frames can decrease quality by hiding parts of an image. Selecting this option will protect any text smaller or equal to 12 pt by not framing it while applying the FAF algorithm.

Frame thickness refers to the thickness of trapping. The thicker the frame, the less chance that white areas appear between images.

Overprint

Black overprint

- Select this check box to ensure that black text prints cleanly within a tint or picture area.

The text appears in a richer, deeper black, with the underlying CMY values equal to those of the printed background.

PS overprint

- Select this check box to use the overprint information that exists in the PostScript file.

This parameter also determines whether the DTP application PostScript overprint settings are honored in the RIP.

Screening

- Select the required option. For CT images, use a dot option, and for LW images, use a line option.

Screening converts CT (Continuous Tone) and LW (Line Work) images into information (halftone dots) that can be printed. The human eye “smooths out” this information, which seems visually consistent with the original picture. Thus, the more lines per inch, the more natural the image appears.

Screening is achieved by printing dots in numerous shapes or lines in an evenly spaced pattern. The distance between the screen dots or lines is fixed and determines the quality of the

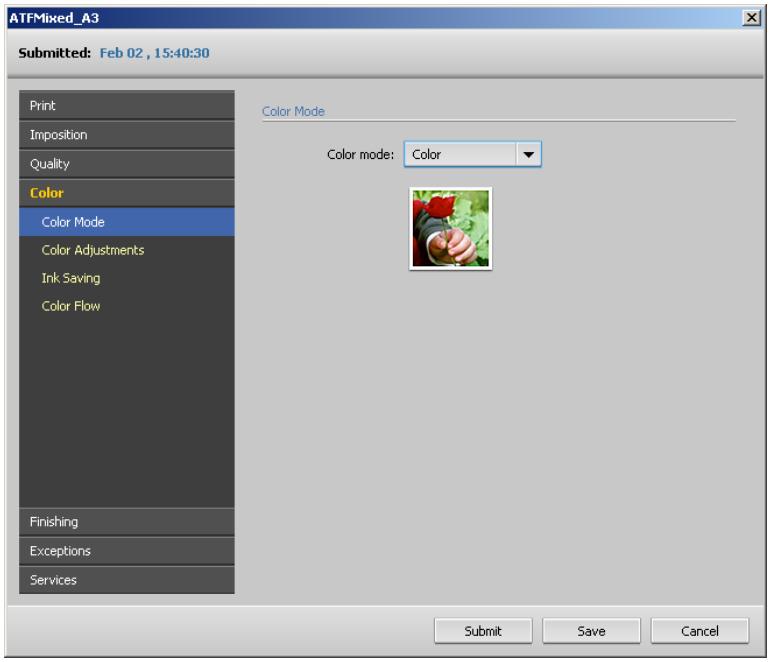
image.

Printers can work with even amounts of toner and still produce a wide range of colors when you use screening. The darker the color, the larger the dot.

Color

The **Color** parameters provide you with tone compression tools such as brightness, contrast and gradation. You can also select rendering intent, source profiles for RGB and CMYK, and destination profiles.

The tone compression tools, **Gradation**, **Brightness**, and **Contrast** can be applied to your processed jobs without requiring the IC-301 print controller to re-RIP the jobs. The color tools, **Destination Profile**, **Rendering Intent**, **Emulate Paper Tint**, and **Spots**, should be applied prior to initial RIPing or your job will need to be re-RIPed.



Color Mode

➢ Select one of the following options:

- **Grayscale:** To print the job as black and white using Black (K) toner only. When a color job is printed using the **Grayscale** option, the Cyan (C), Magenta (M), and Yellow (Y) separations are also printed in Black (K) toner, giving a dense appearance similar to the CMYK grayscale image.

Note: Grayscale images created in RGB applications, such as PowerPoint, should be specified as Monochrome or submitted to the system with **Grayscale** selected in the PPD file. This selection ensures that grayscale images are counted as black and white instead of color in both the IC-301 print controller and in the bizhub PRO C500 printer billing meters.

- **Color:** To print the job in color using CMYK.

Color Adjustments

Brightness

➢ Select the required brightness level (the range starts from **Lightest**, which applies -15%, to **Darkest**, which applies +15%).

Brightness is generally used to make last-minute adjustments to the print job after proofing. By changing the **Brightness** setting, you can control how light or dark your output will appear.

Contrast

➢ Select a contrast level for the print job, (the range starts from **Less** which applies -10%, to **More** which applies +10%).

Adjusting the **Contrast** enables you to control the difference between the light tones and the dark tones in your image.

Contrast is generally used to make last-minute adjustments to the print job after proofing.

Saturation

➢ Select one of the following options:

- **Normal**: To maintain the gray balance throughout the range of colors in the print job file
- **High**: When you need dark colors that are more intense.

Gradation

➢ Select one of the following options:

- **None:** The printer applies maximum dry ink coverage. This is the default setting.
- **Cool:** Blue tones appear clearer
- **Lively:** Increases the color saturation
- **Sharp:** Increases the contrast
- **Warm:** Sets the hues in the low densities to a bright reddish color

The **Gradation** parameter contains a list of gradation tables that were created in the IC-301 print controller Gradation Tool window. Each gradation table contains specific settings for brightness, contrast, and color balance.

When you select your predefined gradation table, your job is adjusted according to the specific table's settings.

Ink Saving

GCR

➢ Select **Yes** to conserve toner by replacing the gray component (CMY) of pixels with black toner.

The gray component replacement also prevents the consequences of excessive toner buildup, such as flaking and cracking, or the "curling" effect that may occur when printing transparencies.

While the gray component of each color is replaced by black, there is no change in the color quality of the printed image.

Identify black

➢ Select this check box if you want RGB gray text and graphics to be printed with black toner only.

The **Identify black** check box not only affects R=G=B values, but may also cause slightly different values (R+/-4=G+/-4=B+/-4) to produce gray.

Color Flow

CMYK source profile

➢ Select the desired CMYK source profile. If you select an emulation profile the following options are available:

- **Emulate source paper tint**: To emulate the original paper tint if it is included in the profilel

Notes:

- If the job is simplex, only the front side will be printed using the tint emulation.
- When the **Emulate paper tint** check box is selected, **Absolute Colorimetric** will be used as the rendering method.

- **Preserve pure colors:** Preserves pure cyan, magenta, yellow, and black during transformation
- **Emulate RGB Elements:** Converts RGB elements according to the selected CMYK emulation method. The RGB elements receive the same look as the CMYK elements, creating a consistent appearance.

CMYK rendering intent

➢ Select the desired CMYK rendering intent.

For more information about rendering intent, see *Rendering Intent* on page 194.

RGB source profile

➢ Select the desired RGB source profile.

RGB rendering intent

➢ Select the desired RGB rendering intent.

Spot handling

➢ Select one of the following options:

- **Print as spot:** To use the spot color dictionary
- **Print as process:** To ignore the spot color dictionary

For more information about the spot color dictionary, see *Editing and Creating Spot Colors* on page 111.

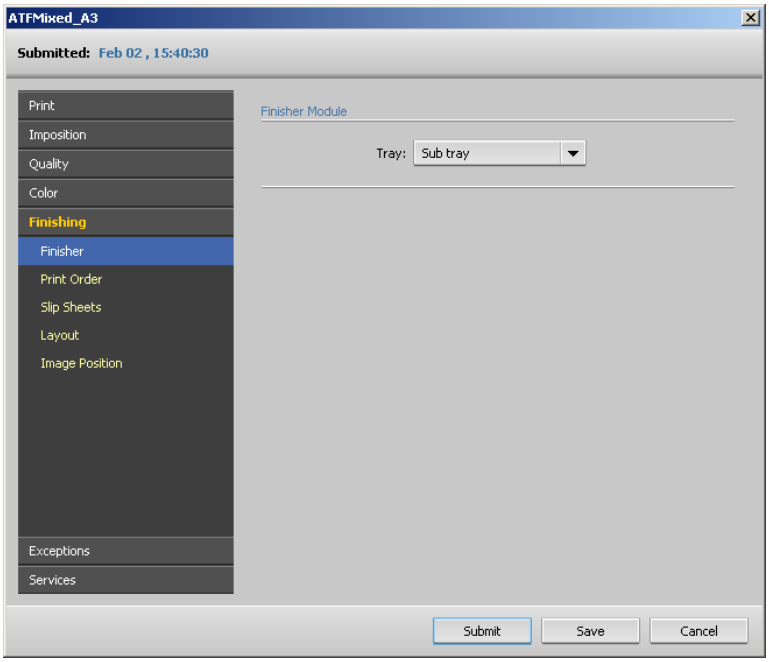
Destination profile

➢ Select the required profile. You can select a custom or the predefined destination profile, **CPP500**.

When you import a custom destination profile via the Profile Manager, it will then be displayed in the **Destination Profile** list.

Finishing

The **Finishing** parmeters enable you to select various options to finalize your printed documents.



Finisher Module

Tray

➢ Select one of the following exit trays for your printed output:

- **Paper Exit tray:** Use this option if a finisher is not connected.
- **Sub tray:** Prints to the finisher's upper tray
- **Main tray:** Prints to the finisher's stack tray
  - The **Offset** check box is selected by default. If you don't want to use an offset between sets, clear this check box.
  - The **Staples** list enables you to specify where you want to position the staples on the page.
  - The **Punch** check box is active only if a punch kit is available. There are three punch units available, 2 hole, 3 hole , or 4 hole.
- **Booklet tray:** Prints to the booklet finisher
  - In the **Tray** list, select the fold type. **Center Fold** folds your booklets in the center of the page. **3-Fold** folds your booklets in an accordion fold.
  - Select the **Staples** check box if you want center staples.
  - The **Trim** check box is active only when a trimmer unit is available.

Note: If you want to staple or punch the other side of your job, select the **Rotate 180** check box on the **Print Method** parameter.

Print Order

Collated

➢ Select this check box to print a complete copy of the job before the first page of the next copy is printed.

Reverse print order

➢ Select this check box to set the print order from back to front.

Face up

➢ Select this check box to deliver a job face up.

Face down

➢ Select this check box to deliver a job face down.

Note: When you collate a document, select **Face down (Face up)** and **From N to 1 (From 1 to N)** in the **Print order** parameter to print the set in the correct order.

Slip Sheets

Slip sheets between copies

1. Select this check box to print slip sheets with your job.

   If you want to collate the job, the slip sheets are printed between sets. If you want the job uncollated, the slip sheets are printed between groups.

2. In the **Tray** list, select the tray in which the specified media type is loaded.

Layout

Rotate 180

➢ Select this check box to rotate your job by 180°.

Scaling

➢ Select one of the following options:

- **Manual**: Enter the percent by which you want to proportionally decrease or increase the image size.
- **Fit to ouput sheet size**: For the image to fit the selected paper sheet size.

Note: You can also use the **Fit to output sheet size** option to scale the layout for imposed jobs.

Image Position

The **Image Position** feature enables you to change the location of the entire printed image on the sheet (simplex or duplex).

This function uses the following terminology:

- **Rear:** the sheet's edge near the printer rear, where printing stops
- **Lead:** the edge of a sheet at which printing begins

The page's lead and rear edges are determined just after the page is printed out, before making any change in the page orientation.

➢ Select one of the following options:

❒ To print your job in the center of the page, click **Center**.

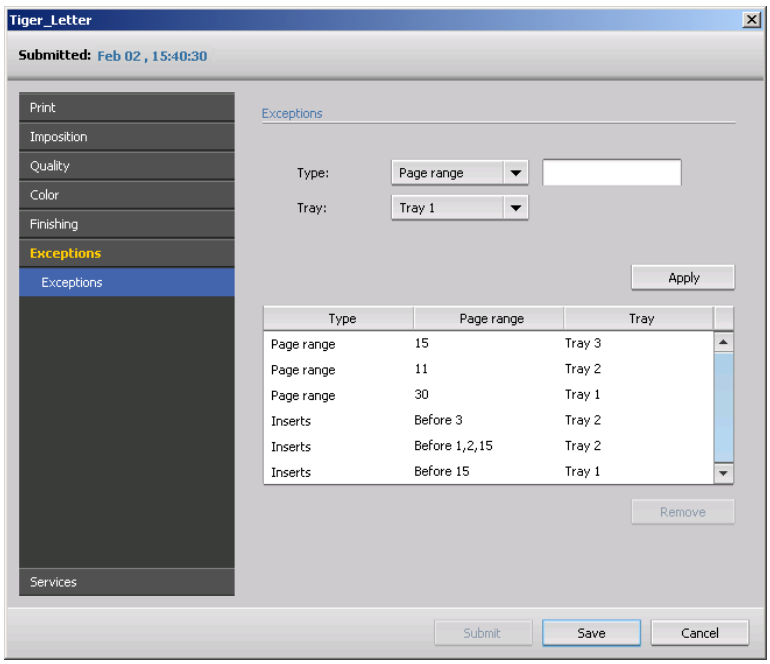
❒ To set page offsets, enter **Rear** and **Lead** values.

➢ To apply page offset values to both odd and even pages, select the **Same on both sides** check box.

Note: Use this option to move duplex page data away from the spine.

Exceptions

Exceptions are used when you want to use different media types for special exceptions within a job or add inserts (interleaves).



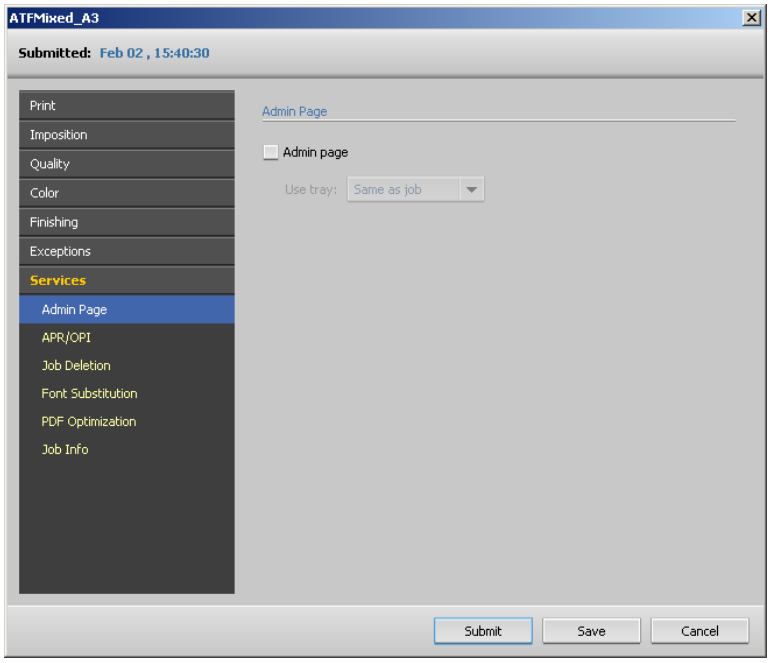
1. In the **Type** list, select the pages in your job in which the media type will be different.
2. Depending on the option you selected in the **Type** list, perform one of the following steps:
   a. For **Page range**, type the page range in the box.
   b. For **Front cover** or **Back cover**, select **Duplex** to print the first two (or last two) pages of the job as the cover page (back cover).

      Note: If the imposition type is saddle stitch, select **Cover** to print both a front and back cover page on a different media type. Select **Middle sheet** to print the internal sheets on a different media type.

   c. For **Inserts**, select **Before** or **After** and type the page number that will precede or follow the insert. Then, in the **Quantity** box, type the total number of inserts you want to add.
3. In the **Tray** list, select the tray in which the specified media type is loaded.
4. Click **Apply**.

Services

The **Services** parameters enable you to set job parameters that will assist your job workflow.



Admin Page

1. Select the **Admin Page** check box.
2. In the **Use Tray** list, select the tray in which the media type you want to use is loaded.

The administration page contains job-related information such as the job title, page size, number of pages or sets, and the sender name.

The administration page is printed in the same order as the job, for face-down printing the page is printed before each set and for face-up printing the page is printed after each set.

Note: If you change the options in the **Admin page** parameter, the job needs to be re-RIPed.

APR/OPI

In the **APR/OPI** area, select one of the following options:

- **High resolution images:** To replace low-resolution images in your job with high-resolution images that are located in a specified APR or OPI path.
- **Low resolution images:** To print the job with the existing low-resolution images—for example, for proofing purposes.

There are two default paths in which the IC-301 print controller searches for high-resolution images:

- **Search in the input folder:** The IC-301 print controller first searches for high-resolution images in the same folder as the PDL file.
- **D:\Shared\High Res:** If you want to save your high-resolution files in this folder, copy the files to **D:\Shared\High Res**.

You can also add a new high-resolution path, and then edit, or delete the path.

Paths other than the default paths are defined on a per-job basis, or set in the virtual printer. You can specify paths on local hard drives, CD-ROM drives, and the floppy drive connected to the IC-301 print controller. You can also specify paths on remote clients or file servers.

To add a high-resolution path:

1. Under the **APR path** box, click **Add**.

   The HiResPath dialog box appears.

2. Click **Add**.

   The Select dialog box appears.

3. Locate your high-resolution images, and then click **Select**.

   The new path is displayed in the HiResPath dialog box.

4. To promote or demote a selected APR path, use the arrow buttons.

Note: The order in which the APR paths are listed is the order in which the IC-301 print controller searches for the high-resolution images.

To delete a high-resolution path:

1. In the **HiResPath** dialog box, select the path you want to delete.
2. Click **Remove.**

   The selected path is deleted.

Job Deletion

Select this parameter when you are printing a large VI job that takes up a substantial amount of the IC-301 print controller disk space. When you select this parameter, the IC-301 print controller deletes each page on the fly once it has been successfully printed. In this way, the IC-301 print controller maintains enough free disk space for the duration of the print run. Reusable elements are not deleted.

➢ Select one of the following options:

- ❒ **Delete printed jobs:** To remove pages or jobs from the IC-301 print controller after printing is completed
- ❒ **Delete failed jobs:** To remove failed jobs while processing or printing from the IC-301 print controller

Notes:

- The **Delete failed jobs** option sustains enough free disk space for the duration of the print run and only affects the sub-job.
- The Variable Print Specification file is also deleted.

Font Substitution

➢ Select this check box to substitute a missing font with the default font that is set in the Resource Center.

Notes:

- If a font is substituted, a message appears in the Job History window.
- You can only substitute Latin fonts.

PDF Optimization

Select the **PDF optimization** check box if you have a PDF job with repeated elements and want to significantly decrease processing time by applying the PDF workflow. The PDF workflow caches the

repeated elements in the PDF once, and reuses them as much as required without repeated processing.

To ensure that repeated elements are marked as repeated in the PDF file, distill the PostScript file using the Adobe Acrobat Distiller software.

Important: Verify that in your Acrobat Distiller settings, **Optimize for Fast Web View** is selected (in Acrobat 4.0 the corresponding option is **Optimize PDF**).

Job Info

This parameter provides the following information:

- **Job title:** Original name of the file related to this job
- **Sender:** User name of the system from which this job originated
- **Account:** Account number of a specific customer or group
- **Recipient:** Name of customer
- **Job comments:** Any special instructions that you want to include with your job

Setting Parameters in the PPD File

You can set job parameters from a client workstation using the IC-301 print controller PPD file, or you can define a virtual printer with predefined PPD file settings. Table 12 lists all of the PPD parameters available.

Notes:

- In the PPD file, the **Printer's Default** option is selected for all PPD file parameters. The **Printer's Default** option corresponds to the settings of the currently selected virtual printer.
- The parameter settings that were last modified or applied are the settings that are applied to the job. However, the print settings defined in the job file override the settings of the virtual printer.
- Grayscale images created in RGB applications (such as PowerPoint) should be specified as monochrome or you should select **Identify Black** in the PPD file when you submit the job to the IC-301 print controller. This selection ensures that grayscale images are counted as black and white instead of color in both the IC-301 print controller and in the bizhub PRO C500 printer billing meters.

Table 12: “List of PPD file parameters

PPD Parameter	Printing Options
Duplex	See *Print Method* on page 157
Paper Size	See *Paper Size* on page 157
Media Type	See *Media type* on page 158
Gloss Mode	See *Gloss Mode* on page 158
Media Weight	See *Weight* on page 158
Tray	See *Tray* on page 158
Force Tray	See *Tray* on page 158
Color Mode	See *Color Mode* on page 168
Brightness	See *Brightness* on page 168
Contrast	See *Contrast* on page 168
Saturation	See *Saturation* on page 169
Spots	See *Spot handling* on page 171
Gradations	See *Gradation* on page 169
GCR	See *GCR* on page 169
Identify Black	See *Identify black* on page 170
CMYK Source Profiles	See *CMYK source profile* on page 170
Emulate Paper Tint	See *CMYK source profile* on page 170
Preserve Pure Colors	See *CMYK source profile* on page 170
Emulate RGB Elements	See *CMYK source profile* on page 170
Rendering Intent for CMYK	See *CMYK rendering intent* on page 170
RGB Source Profiles	See *RGB source profile* on page 170

Table 12: “List of PPD file parameters

PPD Parameter	Printing Options
Rendering Intent for RGB	See *RGB rendering intent* on page 170
Destination Profile	See *Destination profile* on page 171
High Text and Graphic Quality	See *Graphics quality (Text, Line)* on page 165
High Image Quality	See *Image quality* on page 165
Trapping	See *Trapping* on page 165
Black Overprint	See *Black overprint* on page 166
PS Overprint	See *PS overprint* on page 166
Screening	See *Screening* on page 166
Exit tray	See *Finisher Module* on page 172
Staples	See *Finisher Module* on page 172
Punch	See *Finisher Module* on page 172
Fold	See *Finisher Module* on page 172
Trim	See *Finisher Module* on page 172
Offset	See *Finisher Module* on page 172
Face up	See *Face up* on page 173
Reverse print order	See *Reverse print order* on page 172
Slip Sheets	See *Slip Sheets* on page 173
Collation	See *Collated* on page 172
Rotate 180	See *Rotate 180* on page 173
Image Scale	See *Scaling* on page 173
Front Cover (Simplex)	See *Exceptions* on page 174

Table 12: “List of PPD file parameters

PPD Parameter	Printing Options
Front Cover (Duplex)	See *Exceptions* on page 174
Back Cover (Simplex)	See *Exceptions* on page 174
Back Cover (Duplex)	See *Exceptions* on page 174
Admin Page	See *Admin Page* on page 176
APR	See *APR/OPI* on page 177
Automatic Deletion	See *Job Deletion* on page 178
Image Orientation	See *Image Position* on page 174
Job Info (PC Only)	See *Job Info* on page 179

Glossary

24 bit/3 byte image

An image can be either RGB or CMY and each of the three colors uses 1 byte or 8 bits of data. Since 3 bytes equals 24 bits, these images are also known as 24 bit images. This system is used for high quality video imaging and scanning. For process color printing, a fourth color (black) is added for optimum effect.

32 bit/4 byte image

An image that uses 8 bits each for CMYK pixels, or 8 bits for each RGB pixel and 8 pixels for a mask layer or other future use. Since 4 byte equal 32 bits, these images are also known as 32 bit images. An 8 bit CMYK image is the minimum required for high quality print reproduction.

4 color printing

Color reproduction method used to create full color output by overlaying cyan, magenta, yellow and black inks.

8 bit/1 byte image

An image limited to 256 tones of one color or 256 different colors. Since 1 byte contains 8 bits and each bit has two choices, 1 byte equals 28 choices or 256 possibilities.

Additive color model

Color system in which the picture is composed of the combination of Red (R), Green (G) and Blue (B) light transmitted by the original subject. Effective for monitors and TV's but not for print. Scanners normally first scan in RGB and it is converted into CMYK for printing. See also *RGB*, *CMYK*, *Process colors*, *Subtractive color model*.

Absolute Colorimetric

A rendering intent method similar to Relative Colorimetric except that it does not make adjustments according to the white point. In this method, colors that do not fit within the output color space are rendered at the extremes of the output color space. Colors that fall inside the output color space are matched very accurately.
This method is valuable for representing “signature colors“. Colors that are highly identified with a commercial product such as the cyan in the Creo logo.

Amplitude Modulation Halftone screening, as opposed to FM screening, has dots of variable size with equal spacing between dot centers.

Anti-Aliasing A step effect in which angled lines or curved edges of elements in an electronic image look broken or jagged, as a result of producing it in a grid format. Increasing resolution can reduce this effect or using a technique called anti-aliasing where the edges are softened.

Binding The process by which pages of a book or other publication are attached to one another.

Bit Abbreviation of binary digits. The smallest unit of information used to store information in a computer. Bits are expressed as a binary notation, that is, in ones and zeros.

Bitmap graphics An image composed of individual pixels. The color value and position of each pixel are individually described in bits and bytes of computer memory. It is called a bitmap because it is effectively a map of bits. See also *Raster file*.

Bleed An extra amount of printed image, which extends beyond the trim edge of the sheet or page.

Booklet VI jobs are composed of booklets, which are personalized copies of a document. A booklet can consist of several pages, but the entire document is targeted at a specific individual or address. VI jobs include elements that may differ from booklet to booklet, including text, graphics, pictures and page backgrounds.

Butt To join without overlapping or space between.

Byte A grouping of 8 bits of stored information, giving 256 levels of data. Each byte represents a value or character such as a letter or a number. In a color system, a byte can describe one out of 256 distinct shades.

CIE Abbreviation for Commission Internationale d'Eclairage. This body was created for the study of illumination problems. CIE color coordinates specify proportions of the three additive colors required to produce any hue and are used for comparative color measurement.

CMYK The process colors - Cyan, Magenta, Yellow and Black. See also *Color separations*, *Process colors*, and *Subtractive color model*.

Color gamut The range of colors possible with any color system.

Color separations Separate films are prepared for each of the process printing inks - cyan, magenta, yellow and black. These films are used to prepare the printing plates for printing on press. See also *CMYK*.

Composite mode In composite mode, the data required to separate a page into its CMYK components is all contained within one single (composite) file. Brisque or PS/M then separates the file into CMYK as part of the conversion process. This processing mode is the fastest and most efficient in the majority of cases.

Crop To eliminate portions of an illustration or photography so the remainder is more clear, interesting or able to fit the layout.

CSA (Color Space Array) The spectrum of specific variants of a color model with a specific gamut or color range. For example, within the color model RGB, there are numerous color spaces, such as Apple RGB, sRGB, and Adobe RGB. While each of these define color by the same three axes (R, G, and B), they differ in gamut and other specifications. CSA is comprised of a three-dimensional geometric representation of colors that can be seen or generated using a certain color model and are quantitatively measured. Source CSA is to be used only under the assumption that the upstream color workflow was managed and monitored. Otherwise it should be replaced with a Creo profile, which is the default.

CSA Profiles There are three CSA profiles with gammas of 1.8, 2.1 and 2.4. The higher the gamma, the darker the RGB appears. This workflow should be used when you have images from different sources, such as digital cameras, Internet, and scanners and you want the images to have the common RGB color spaces. Other possible CSA profiles are sRGB and Adobe RGB.

CT Abbreviation for continuous tone. Color or black and white photographic images with tones that change gradually from dark to light (unlike the abrupt changes in linework).

DCS Abbreviation for Desktop Color Separation, an EPS format containing 5 files. Four of the files contain the color information for each of the CMYK colors and the fifth is a low-resolution composite file for use in electronic page layout.

Degradé A gradual blend or transition between colors. Also known as vignette or graduated blend (*Vector drawing*).

Digital front end system In electronic publishing, this is the workstation or group of workstations containing the applications software for preparing pages of type and graphics. In prepress, this is the workstation that gives access to the user for the operation of hardware. For example, proofer, platesetter, imagesetter.

Digital proof A black and white or color image reproduction made from digital information without producing intermediate films. It can be output as a digital hard proof using a peripheral output device or displayed as a digital soft proof on a video monitor.

Dot The individual element of a halftone.

Dot area The percentage of an area covered by halftone dots ranging from no dots at 0% to a solid ink density at 100%. The size of a single dot is stated in a percentage of the area it occupies.

DTP Abbreviation for Desktop Publishing. The process of page production using personal computers, off-the-shelf software and an output device such as a printer or imagesetter. Usually, these components form a system that is driven by a device-independent page description language such as PostScript.

EPS Abbreviation for Encapsulated PostScript, a graphic file format used to transfer PostScript, graphic files from one program to another. It includes both a low-resolution preview and the high resolution PostScript image description. On the Macintosh, the preview is in PICT format, on the PC it is in TIFF format. Also known as EPSF.

Finishing stage Stage following the press process, which may include procedures such as laminating, perforating and varnishing.

Font A complete assortment of letters, numbers, punctuation marks, characters etc. of a given design and size.

Frame A color overlap created intentionally at a color border so as to minimize the effects of misregistration. Also known as trap or grip. See also *Trapping*.

Frequency modulated screens A method of creating halftones where the spots are all the same size, but the frequency or number of dot changes in a given area. There are more dots in a dark area and fewer in a light area.

GCR Abbreviation for Gray Component Replacement. Method for reducing the CMY amounts that produce the gray component in a color, without changing the color hue.

Graduated blend See *Degradé.*

Gravure printing A printing method in which the image is engraved through a screen below the surface of a cylinder. The ink is transferred to paper when pressed to the cylinder. Gravure is used for very long print runs and on many substrates.

Gray component The amounts of CMY in a color, which result in neutral gray, based on the lowest separation value of the color. See also *GCR*.

Grayscale A scale of gray tones from white to black. Digitally, grayscale images have up to 256 different levels of gray. See also *8 bit/1 byte image*.

Halftone A negative or positive image whereby detail of the image is reproduced with dots varying area but of uniform density. Creates the illusion of continuous tone when viewed with the naked eye.

Held job A job for which the appropriate paper stock is not available, for example, the correct paper type, paper size or paper weight.

Highlights The whitest portions of the original or reproduction that have no color cast. The highlight dot is ranged in the reproduction from the smallest printable dot to approximately 25%. See also *Midtones* and *Shadows*.

HSL Abbreviation of Hue, Saturation and Lightness. This is a color model, which specifies a color by its wavelength (Hue), chroma or purity of the color (Saturation) and value of its brightness (Lightness).

Image area Portion of a negative or plate corresponding to inking on paper. The portion of paper on which ink appears.

Imposition The arranging of pages in a press form to ensure the correct order after the printed sheet is folded, bound and trimmed.

Ink jet proof A proof of a digital image printed by using jets that squirt minuscule drops of ink. Ink jet proofers can print onto a variety of surfaces.

Job Flow Job flow refers to the job parameter settings of selected virtual printers that are automatically applied to all jobs printed using that virtual printer. These settings determine how a sent or imported file is processed. For example, a file sent to a virtual printer with a Process & Print job flow will be RIPped, printed and stored in the **Storage** area. A file sent to a Process & Store job flow virtual printer will be RIPped and stored, without printing.

LEF A printer page orientation, where pages are delivered long edge first.

Laserwriter driver A part of the Macintosh system software which generates PostScript instructions from an application file when the Print command is activated.

Look-up table (LUT) A two or three-dimensional array of values stored for specified input-output relationships. When one input value is known, the system can automatically determine the correct output value. For example, the system can find the needed dot size for a given set of printing conditions based on the stored gray level; color setups can be saved in color tables (color transformation tables) which are one of the many kinds of LUTs.

Linework Linework graphics are characterized by sharply defined lines and very clear transitions from one color to another. Linework is stored in the computer as a series of geometric (vector) drawing instructions.

Metamerism

Metamerism occurs when two colors match under one light source, but appear different under another light source. Those two colors are called a metameric match. A metameric match might cause problems when trying to match proofs to press-sheets under different lighting conditions.

Midtones

Density values of an image (original or reproduction) between the highlights and the shadows. In the reproduction, midtones are printed with dot areas between approximately 40% or 60%. See also *Highlights* and *Shadows*.

Misregistration

A situation common during printing where one or more of the color separations is slightly misaligned with regard to the others on press. Misregistration shows up as white gaps or tinted overlaps at the borders of color pairs. Colors containing such files are trapped to compensate for this possibility. On Continous Tone images, misregistration can lead to blurring. See also *Overprint* and *Trapping*.

Moiré

An interference pattern caused by differences in halftone screen angles or rulings. In process color printing, screen angles are selected to minimize this pattern. If the angles are not correct, a pattern that distracts the eye from the picture may be produced.

Newton's rings

Small concentric circles that can appear on film when two surfaces are closed together but not in perfect contact.

Output resolution

The number of laser dots per unit of linear measurement (millimeter, inch etc.) on film or paper.

Output tone curve

A graph showing the relationship of original input densities and the corresponding dot percentages on film.

Overprint

A technique, which overlaps colored elements to eliminate the appearance of gaps between elements caused by misregistration of the various separations during printing. For example, black text is normally set to overprint. See also *Trapping* and *Misregistration*.

PDL Printer Description Language files (for example, PostScript, PDF, EPS, VPS). The IC-301 print controller processes image files in PDL formats, converting them into a suitable Ready-To-Print format for direct, high-quality printing.

PICT A Macintosh file format for bitmaps and vector graphics.

Perceptual (Photographic) (Default for RGB) A rendering intent method which preserves the visual relationship among the colors as they are perceived by the human eye. In other words, all colors are proportionally scaled to fit the output gamut. All or most colors in the original are changed but the relationship between them does not change.
This method is recommended when working with realistic images such as photographs, including scans and images from stock photography CDs.

Pixels Contraction of Picture Element. The smallest element of a digital image.

PostScript A programming and page description language that has become industry standard for electronic publishing. It is used to describe the entire page, including both text graphics and images. PostScript is completely independent of the printing device. Developed by Adobe Systems, Inc.™

Prepress Generic term used to describe the processes involved in preparing images for printing. Includes the input, edit and output stages.

Printer description files PPDs (PostScript Printer Definition), and PDFs (Printer Definition Files). These files are used by the Macintosh applications to prepare page and documents for specific output devices.

Process colors The four ink colors used to reproduce full color images - cyan, magenta, yellow and black.

Quartertone The tone area of an image influencing highlight detail and with density values between the white point and midtone. Typically, printed with a dot area near 25%. See also *Highlights*, *Midtones*, *Shadows.*

Raster file A file of data that was scanned, processed or output sequentially, bit by bit and line by line. Also known as a bitmap.

Rasterization The translation of vector information into bitmap information. Bitmaps may also require a new rasterization to comply with the screening parameters (dot shape, dot size) of the imagesetter that will expose them on film. See also *RIP* and *RIPing*.

Register Fitting of two or more printing images or plates in exact alignment with each other.

Register marks Crosses or other targets applied to original copy prior to printing. Used for positioning films in register or for register of two or more colors in process printing.

Relative Colorimetric A rendering intent method in which colors that fall within the output color space remain the same. Only colors that fall outside are changed to the closest possible color within the output color space.
When using this method, some closely related colors in the input color space can be mapped to a single color in the output color space. This reduces the number of colors in the image.

Rendering Intent

All printers, monitors and scanners have a gamut or range of colors that they can output (or view in the case of a scanner). If a color needs to be output and is outside the gamut of the output device, it must be mapped or approximated to some other color, which exists within the gamut. Rendering Intent enables you to compress out-of-gamut colors into the color capability of the press you are using. You can set any rendering intent value for RGB elements by selecting the required from the **Rendering intent options** list. The default value for RGB is **Perceptual (photographic)**. The default value for CMYK is **Relative Colorimetric.**
There are several methods that can be used when translating colors from one color space to another. These methods are called Rendering Intents because they are optimized for various uses. When working with ICC profiles, it is important that you select the Rendering Intent that best preserves the important aspects of the image. Each rendering method specifies a CRD for color conversions. You can modify the rendering method to control the appearance of images, such as prints from office applications or RGB photographs from Photoshop.

Resolution

The number of pixels, points or dots per unit of linear measurement. For example, pixels per millimeter on a video display, number of dots per inch or millimeter on film or paper.

The resolution of an image is usually set the same vertically and horizontally. For example, a square millimeter with a resolution of 12 contains 144 pixels. The higher the resolution, the more image detail is recorded and the larger the digital file size.

RGB

Abbreviation for the additive primaries Red, Green and Blue. They are used in video monitors, scanning, and other uses where the light is direct and not reflected. The component colors are the three predominant colors in the visible light spectrum detected by the human eye. Combining these 3 colors together creates white light.

RIP Abbreviation for Raster Image Processor. This is a software program or hardware device that converts vector information into pixel information to be imaged on an output file. This output file is imaged based on commands from the page description language.

RIPing The process of rastering or converting bitmaps and vector graphics into raster images suitable to the screening parameters of the output device. Files are RIPed prior to exposure or plotting.

Saturated color A color where the high and medium values approach 100%. In a saturated clean color, the values of the wanted colors are near 100% and the value of the unwanted color is near 0%. For example, when the color is red, 5% cyan, 90% magenta, 80% yellow is more saturated than 30% cyan, 90% magenta, 80% yellow.

Saturated (presentation) A rendering intent method which scales all colors to the strongest saturation possible. The relative saturation is maintained from one color space to another.
This rendering style option is optimal for artwork and graphs in presentations. In many cases, this style option can be used for mixed pages that contain both presentation graphics and photographs.

Saturation The strength of a color.

Screen angle The angle of rows of halftone dots represented in degrees. During output of films for reproduction, the dot arrangement of each separation film is placed at a distinct and different angle to the other separations. See also *Moiré*.

Screen rulings The number of rows of printing dots per inch on a halftone film. A 150lpi-screen ruling provides much better quality than 65lpi.

SEF A printer page orientation, where pages are delivered short end first.

Shadows The darkest part of an image (original and reproduction) having densities near to maximum density. In the reproduction, shadows are printed with dot areas between 80% and 100% See also *Highlights* and *Midtones*.

Shingling A procedure that moves the image area of a page toward the direction specified, usually towards the binding, in order to compensate for creep.

Signature Sheet of printed pages which when folded becomes part of the publication.

Solid The point in the picture printed with a dot area of 100%. See also *Highlights*, *Midtones* and *Shadows*.

Spot color An additional separation (fifth, or more) that is used with special inks to achieve difficult color combinations, such as gold, or chocolate brown. Spot color is sometimes used by graphic artists to define special corporate colors, for example, for company logos. On the IC-301 print controller, spot colors are tanslated into CMYK values using a dictionary, that can be edited to adjust CMYK values.

Step and Repeat The procedure of copying the same image by stepping it in position both horizontally and vertically according to a predetermined layout.

Stochastic screening A method of creating frequency-modulated halftones that depends on the number of laser dots in a given area rather than the size of the laser dots in a given area. The dots are randomly placed and very small. Areas with a higher dot percent have more spots exposed in that area and those with a low dot percent have fewer spots. Stochastic screening is used to eliminate moiré and improve picture detail and sharpness in high-end color printing.

Subtractive color model A color process in which the red, green and blue components of the original subject are reproduced as three super-imposed images in the complementary (subtractive) colors of cyan, magenta and yellow respectively. See also *CMYK*, *Process colors*, *Additive color model*.

Three quartertone Tone area of an image influencing the shadow detail and with density values between the Midtone and the Dark Point. Typically printed with a dot area near 75%.

Three quartertone Tone area of an image influencing the shadow detail and with density values between the Midtone and the Dark Point. Typically printed with a dot area near 75%.

Tone compression The reduction of the density range of an original to the density range achievable in the reproduction.

Tone reproduction curve A graph showing the density of each point of the original and its corresponding density on the reproduction.

Trapping Creating and overlap (spread) or an underlap (choke) between colors that adjoin each other to hide misregistration during printing. Trapping is sometimes referred to as spreads and chokes, or fatties and skinnies.

UCR Abbreviation of Undercolor Removal. This is a method for reducing the CMY content in neutral gray shadow areas of a reproduction and replacing them with black. As a result, the reproduction appears normal but less process color inks are used. See also *GCR*.

Unsaturated color A color whose highest value is less than approximately 80%. In an unsaturated, dirty color, the difference in the values of the wanted colors and the unwanted color is relatively low.

For example, when the color is red, 30% cyan, 80% magenta, 70% yellow is more unsaturated than 0% cyan, 90% magenta, 80% yellow.

Variable Information (VI) Variable information (VI) jobs are jobs in which the printed materials are individualized for specific recipients or purposes. These materials can include bills, targeted advertising and direct mailings.

Vector drawing The geometric system used to define lines and curves in many computer graphics most often used for line drawings.

Vignette See *Degradé*.

Virtual printer For Macintosh and Windows networks, the IC-301 print controller provides three default network printers, known as virtual printers. Virtual printers contain preset workflows that are automatically applied to all print jobs processed with that virtual printer.

White point

The whitest neutral area of an original or reproduction that contains detail and is reproduced with the smallest printable dot (typically 3% to 5%).

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