ElecRoc 6

Founder ElecRoc™

An Integrated JDF/PDF Pre-press Workflow System

Version 6

User Guide

June 2014

Beijing Founder Electronics Co., Ltd.

FOUNDER

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This manual provides a complete introduction to all the functions and features of Founder ElecRoc Workflow Management System. However, some of them are available upon additional payment, the user interface and functions may vary accordingly. For more information, contact Founder's sales personnel.

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Part 1 Using ElecRoc Server

Chapter 1 Server UI

The server-side control program can be started by choosing **Start** > **All Programs** > **Founder ElecRoc** > **ElecRoc 6 Server**, or by double-clicking the program icon on your desktop. The main interface then appears.

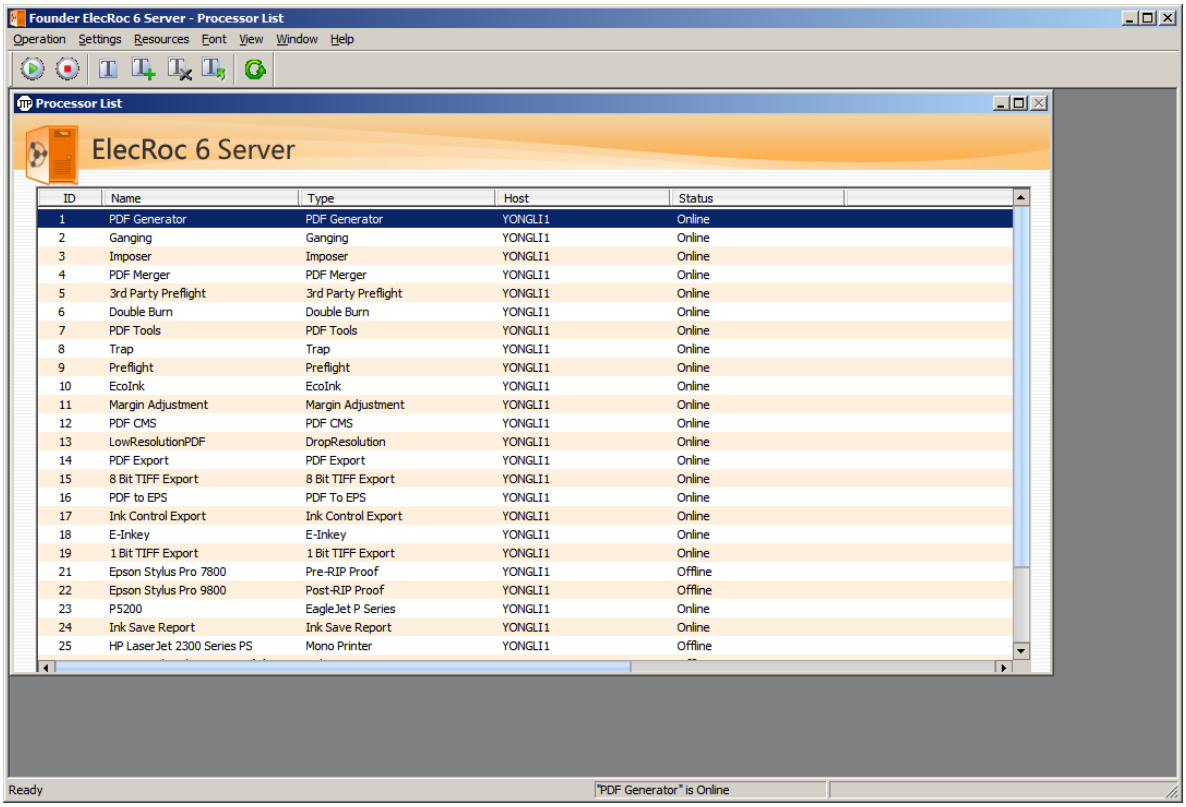


Figure 1-1

Main menu: provides commands for you to control and configure the ElecRoc Server.

Toolbar: represents part of the menu commands, for you to quickly perform some common operations and configurations.

Processor list: lists all the processors in your ElecRoc system, displaying related information such as ID, name, type, version, host, and status.

Status bar: shows the status of your selected item in processor or font list.

The table below shows the main menu commands and their functions:

Menu	Item	Function
Operation	**Start Processors**	Start all the processors in the list.
	Stop Processors	Stop all the processors in the list.
	Exit	Exit the server, and stop all the processors.
Settings	**General**	Configure ElecRoc's system directories, input directories, and image path.
	Database	Automatically cleanup the process record in the database prior to specified days.
	Authorization	Control the authorities for Clients to access the Server and those for ElecRoc users to access the shared folders on the server.
	Space Alert	Alert when free disk space is less than specified value.
Resources	**PPD Creator**	Create PPD file specific to certain device, for PC or MAC platform.
Font	**Font List**	List all fonts installed in ElecRoc system.
	Add Font File	Install fonts into ElecRoc.
	Delete Fonts	Delete unneeded fonts in ElecRoc.
	Reset Fonts	Check the fonts installed, and update the font configuration in ElecRoc.
	Start/Stop Installing Fonts	Install fonts into ElecRoc.
View	**Refresh**	Refresh the processor status.
	Toolbar	Show or hide the toolbar.
	Status bar	Show or hide the status bar.
Window	**Cascade**	Arrange all opened windows in cascade.
	Horizontal Tiling	Arrange all opened windows in horizontal tiles.
	Arrange Icons	Arrange the minimal icons when all windows are minimized.
Help	**About Founder ElecRoc 6**	View the version and copyright information about ElecRoc.
	ElecRoc 6 License Information	View the license information.

Table -1

The icons and their functions in the toolbar  from left to right: **start processors**, **stop processors**, **font list**, **add font file**, **delete fonts**, **reset fonts**, and **refresh**.

Chapter 2 Using ElecRoc Server

2.1 Processor control

2.1.1 Start processor

By default, all the processors are offline after the Server is started. At this moment, you can login ElecRoc, but cannot run the processors to process files. Before you can run the processors, you must start them.

Choose **Operation** > **Start Processors** from the main menu, you can start all the processors. If you want to start only one or some of the processors, choose these processors in the list, then right-click and choose **Start**. The Shift or Ctrl key helps you to choose more than one processor one time. If the processor is installed on a different computer, make sure the computer is powered on.

2.1.2 Stop processor

Choose **Operation** > **Stop Processors** from the main menu, you can stop all the processors. If you want to stop only one or some of the processors, choose these processors in the list, right-click and choose **Stop**.

2.1.3 Delete processor

With the right-click menu item **Delete**, you can remove unneeded processor from the list.

2.1.4 Configure PDF Generator

PDF Generator is one of the core processors in ElecRoc, required in each job. Its processing speed influences the overall efficiency of ElecRoc workflow. To improve this speed, especially its parallel processing speed, ElecRoc enables you to configure multiple synchronous sub-processors. Theoretically speaking, more sub-processors enable higher speed, as long as your machine provides sufficient computing capacities.

Choose PDF Generator, right-click and choose **Configure**.

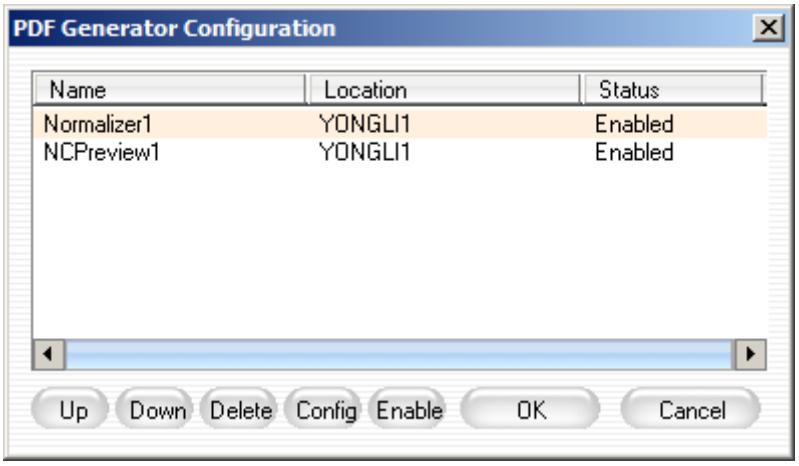


Figure 1-2

By default, each PDF Generator is composed of two sub-processors, Normalizer and

NCPreview. The former is designed to generate PDF (i.e. converts standard PDF, or non-PDF such as PS, EPS, Tiff, to PDF), the latter is used to generate thumbnail image for preview. You can base on the quantity your dongle permits, the computer's capacity, and your actual production needs, to re-configure the quantity of the two sub-processors.

Click **Config**. Input the quantity separately in the *Normalizer* and *GenPreview* edit boxes.

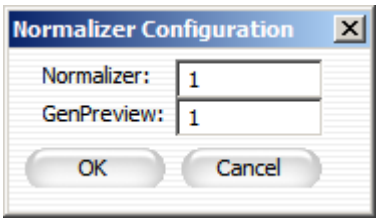


Figure 1-3

Return to the configuration window. You can use the **Enable**/**Disable** button to individually enable or disable each of the sub-processors. And you can use the **Up** and **Down** button to change their priority. The **Delete** button is used for deleting unneeded sub-processor.

The configuration takes effect after you reboot the PDF Generator.

2.2 Font Setting

When a file itself doesn't provide the fonts it uses, you must install these fonts in ElecRoc, so as to output the file correctly with the fonts it asks. ElecRoc supports three types of fonts: 1) Founder-developed CID fonts; 2) Third party PostScript fonts including Type1 font on Macintosh, developed by other font vendors; 3) TrueType fonts available in your operating system. ElecRoc provides 35 basic fonts by default.

Operations below are available only when you stop and choose PDF Generator, and can be performed by using either the menu items, or toolbar icons, or right-click menu items.

2.2.1 View Font

Choose **Font** > **Font List** from the main menu to view all the fonts installed in ElecRoc.

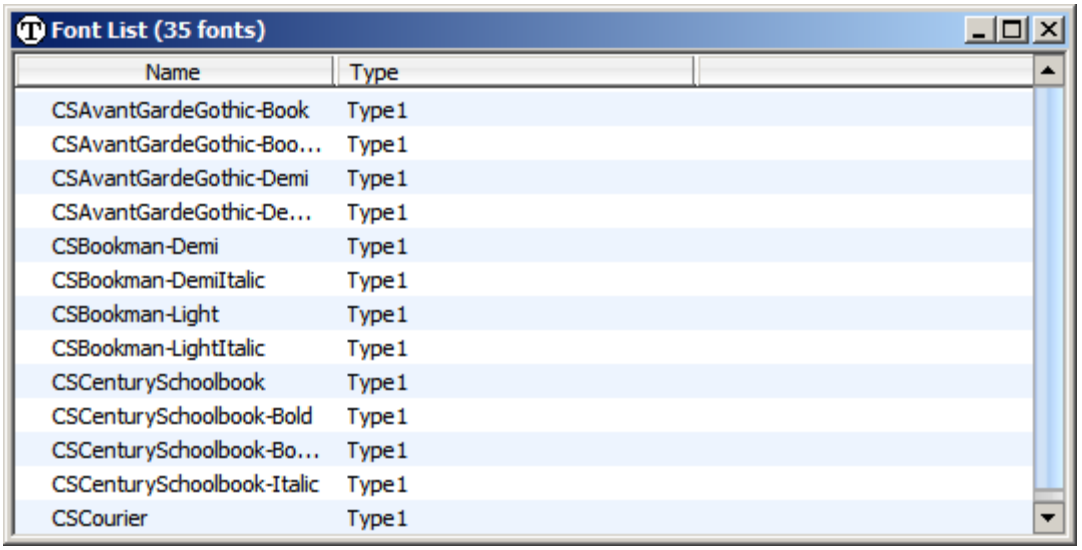


Figure 1-4

2.2.2 Install Font

Choose **Font** > **Add Font File** if the font is provided in PS file. In the pop-up dialog box, browse and open the PS file, ElecRoc will then automatically complete the installation.

Choose **Font** > **Start Installing Fonts** if the font is provided via CD. Then insert the CD into CD-ROM drive. And then ElecRoc starts the install program to install the fonts. After the installation, choose **Font** > **Stop Installing Fonts**.

Reset the fonts after the installation.

2.2.3 Reset Font

Perform this operation after you install or delete a font. It will check all the fonts installed, and update the font configuration in ElecRoc. Choose **Font** > **Reset Fonts** to perform.

Reset TrueType fonts: It pops up the following dialogue before the resetting. Click **Yes** to add the TrueType fonts from your operating system to ElecRoc, otherwise, click **No**.

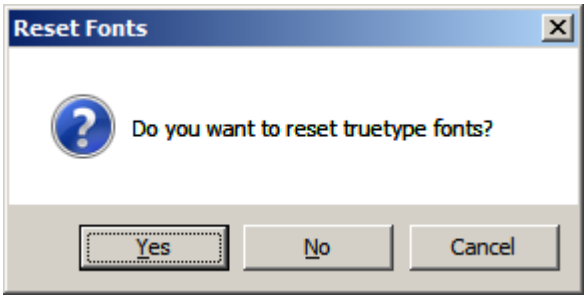


Figure 1-5

2.2.4 Delete Font

Choose **Font** > **Delete Fonts** to delete unneeded font from the font list.

2.3 System Settings

2.3.1 General Setting

You can choose **Settings** > **General** from the main menu to configure ElecRoc's system directory, input directory and image paths.

1. ElecRoc Directory

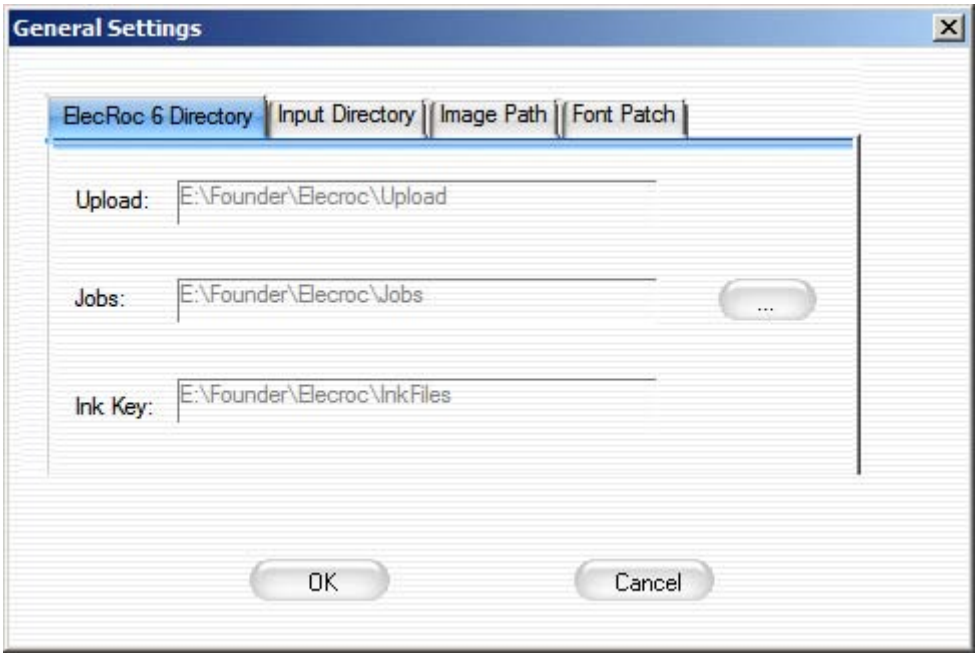


Figure 1-6

Upload: Refers to a location where you can upload source files. The default location is a shared folder on the server, named *Upload*. ElecRoc users can access it via the path \\Servername\Upload, and upload source files in it.

Jobs: A directory that stores job data. Be cautions in changing this directory since it may result in loss of all the job data. If needed, we strongly recommend you to change it at the very beginning, even before the first job, and never change it from then on.

Ink Key: This directory stores ink control files.

To change above directories, click the button ... to open a dialog box, and then specify new directory, either local directory on the Server or network directory over the LAN (network directory must be a shared one available for users to write).

2. Input Directory

It refers to a directory that stores source files, and the source files are files that can enter into ElecRoc workflow for being processed. At the time you submit files manually at the PDF Generator node, or automatically by way of a hot folder, you need to look for source files under a certain directory. The *Upload* mentioned above is just one of the input directories. It requires the user to upload the source files in advance. If you don't want to upload, you can provide only the path for the source files, instead.

Click **Add** to add a path. Input the path in the pop-up dialog box appeared later on. The **Delete** button enables you to delete a selected path.

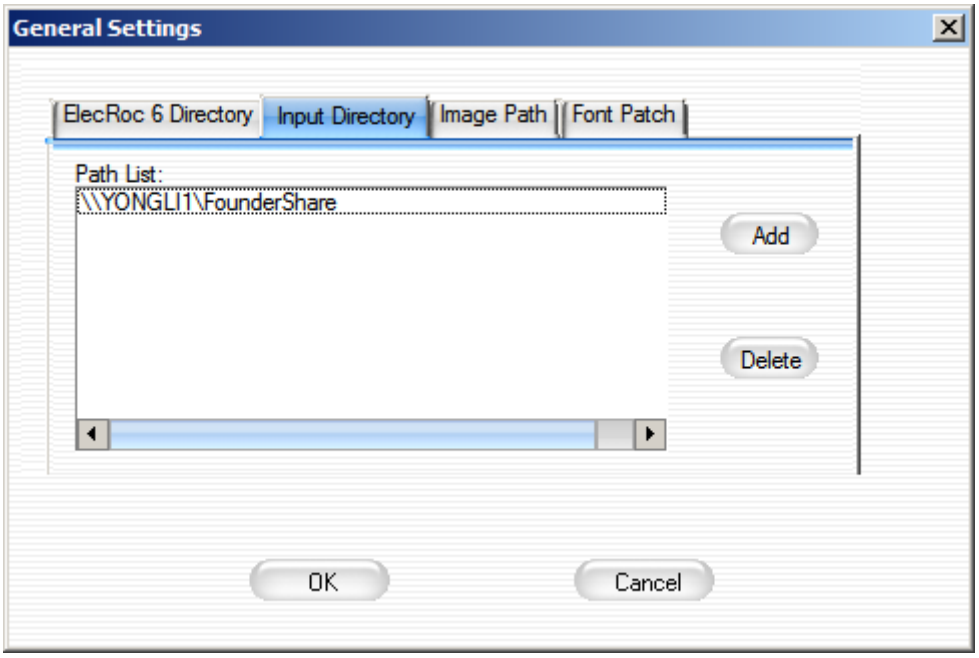


Figure 1-7

3. Image Path

Here you provide the options for PDF Generator's **Image Path** parameter. With the image path, ElecRoc can correctly locate the images the source file contains. In case that the source file and the images it contains are stored together (not including composite PS file that contains DCS images), you do not need to specify image path.

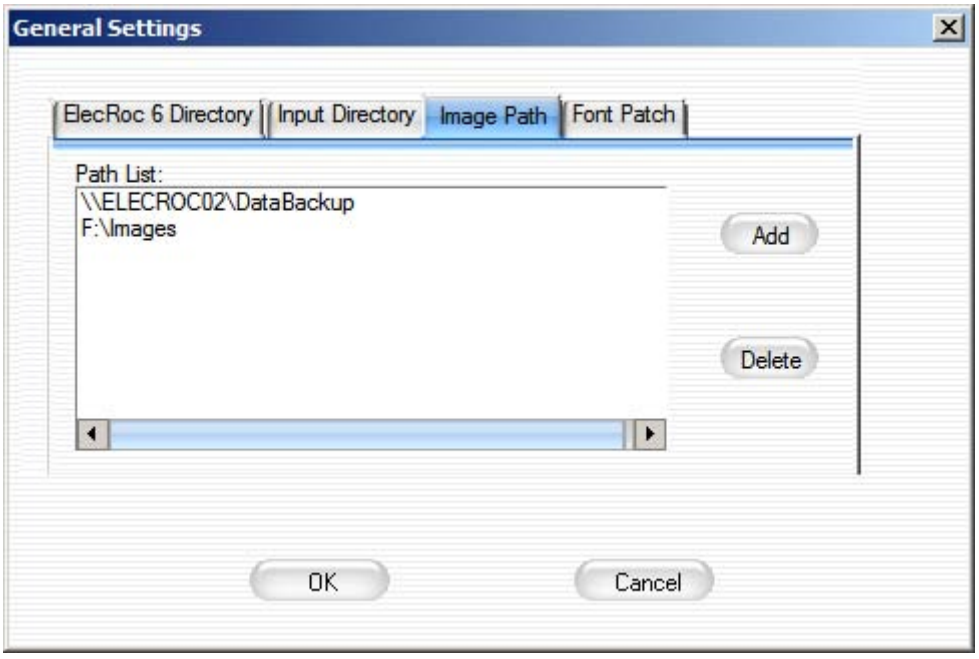


Figure 1-8

2.3.2 Database Cleanup

ElecRoc uses a database to store process data. To prevent the stored data from lowering

the overall efficiency after a long time running, ElecRoc can automatically clean up the earlier data for you. By default, it cleans up the data 3 days ago. You can choose **Settings** > **Database** from the main menu to specify another.

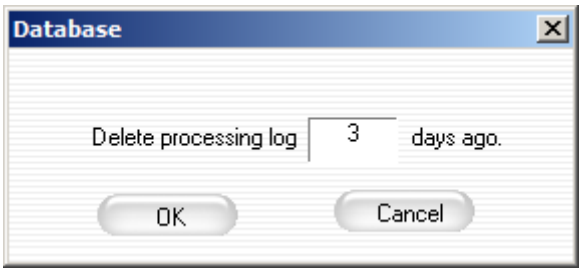


Figure 1-9

2.3.3 Authorization

Choose **Settings** > **Authorization** from the main menu. Here you can control if a Client can login the Server, and if an ElecRoc user can access the shared folders on the server.

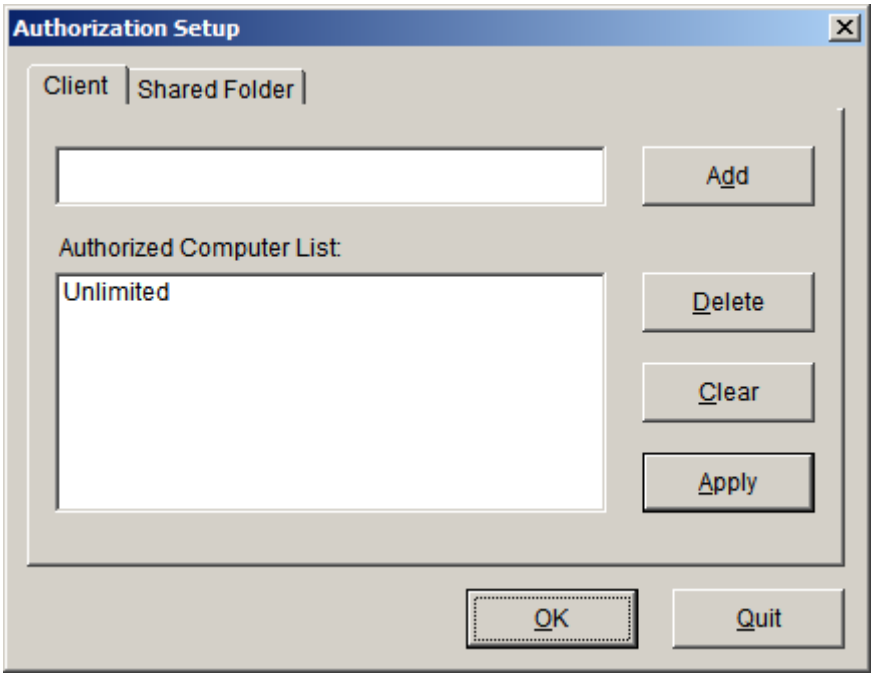


Figure 1-10

Under the **Client** tab, you can control the authorities for the Clients to login the Server. Only Clients having been authorized can log on the Server. To authorize, input the client name (not IP address) into the edit box, and click **Add** to include it into the **Authorized Computer List**, and then click **Apply**. The **Delete** and **Clear** buttons are used to remove the authorities. Click **Apply** after the deletion or clearing.

Under the **Shared Folder** tab, you can control the authorities for ElecRoc users to access the shared folders on the Server. Only users having been authorized can access the shared folders. Methods for authorizing and un-authorizing are the same as above. By default, there is an *Everyone* in the **Authorized Users** list, indicating that everyone is authorized to access the shared folders. For reasons of security, you may need to restrict this authority. For this, you can click **Delete** to delete *Everyone*, and then input the user name into the edit box, click **Add** and then **Apply**.

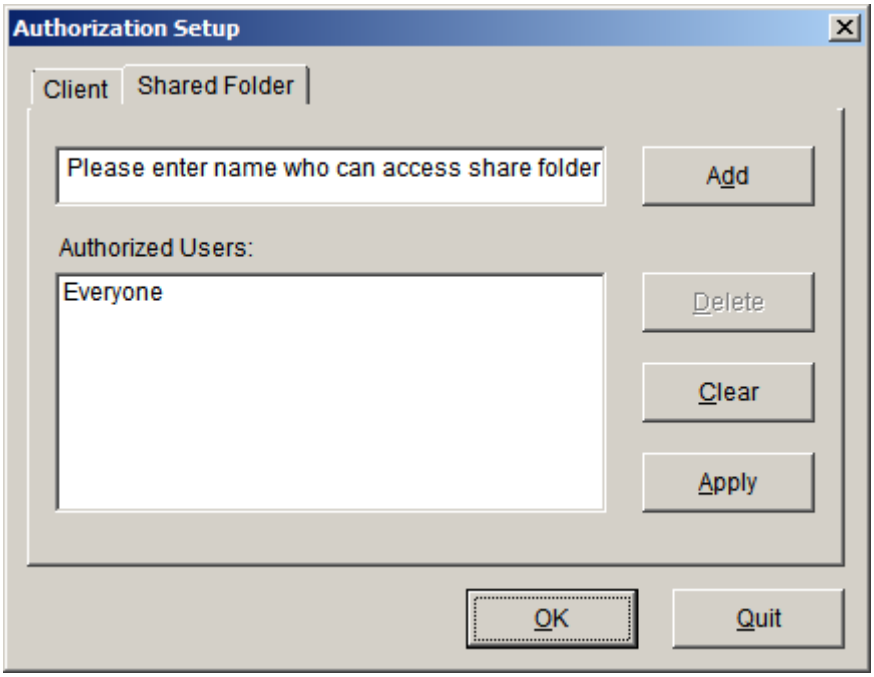


Figure 1-11

2.3.4 Space Alert

Choose **Settings** > **Space Alert** from the main menu. Here you can specify a threshold. ElecRoc will alert you when the free disk space is less than this threshold.

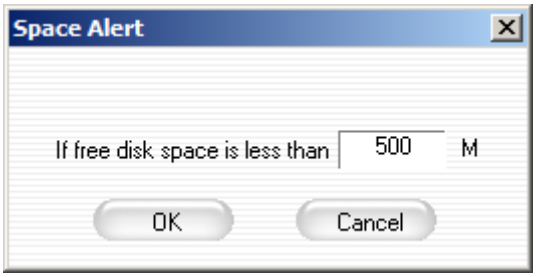
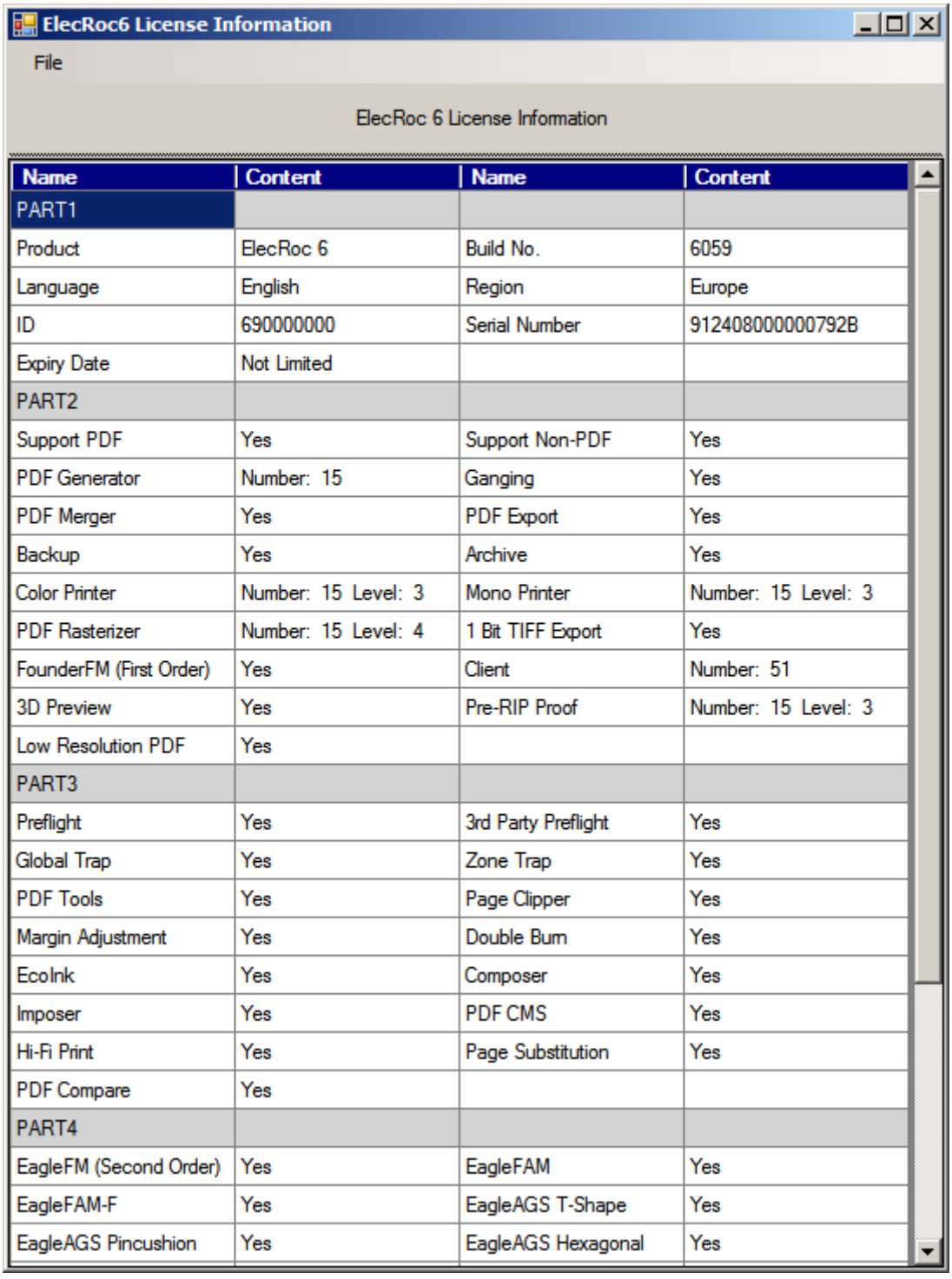


Figure 1-12

2.4 License Information

Choose **Help** > **ElecRoc 6 License Information** from the main menu to open the license information window.

In this window, you can view the license information. Take the case of using a physical dongle as example, you can see such information as dongle ID, expiration date, whether the processors are licensed, the quantity of PDF Generators and Clients allowed, and the quantity and levels as to print and proof.



Name	Content	Name	Content
PART1			
Product	ElecRoc 6	Build No.	6059
Language	English	Region	Europe
ID	690000000	Serial Number	912408000000792B
Expiry Date	Not Limited		
PART2			
Support PDF	Yes	Support Non-PDF	Yes
PDF Generator	Number: 15	Ganging	Yes
PDF Merger	Yes	PDF Export	Yes
Backup	Yes	Archive	Yes
Color Printer	Number: 15 Level: 3	Mono Printer	Number: 15 Level: 3
PDF Rasterizer	Number: 15 Level: 4	1 Bit TIFF Export	Yes
FounderFM (First Order)	Yes	Client	Number: 51
3D Preview	Yes	Pre-RIP Proof	Number: 15 Level: 3
Low Resolution PDF	Yes		
PART3			
Preflight	Yes	3rd Party Preflight	Yes
Global Trap	Yes	Zone Trap	Yes
PDF Tools	Yes	Page Clipper	Yes
Margin Adjustment	Yes	Double Burn	Yes
EcoInk	Yes	Composer	Yes
Imposer	Yes	PDF CMS	Yes
Hi-Fi Print	Yes	Page Substitution	Yes
PDF Compare	Yes		
PART4			
EagleFM (Second Order)	Yes	EagleFAM	Yes
EagleFAM-F	Yes	EagleAGS T-Shape	Yes
EagleAGS Pincushion	Yes	EagleAGS Hexagonal	Yes

Figure 1-13

If needed, you can choose **File** > **Print** to print out the above information. Before you print, you can configure the print setup.

2.5 Configuration Tools

On ElecRoc server, choose **Start** > **All Programs** > **Founder ElecRoc** > **Configuration**

Tools, and there you can see such menu items as **Dongle Extension**, **License Manager**, **Processor Configuration**, and **Restart Dongle Services**, their functions are as follows.

2.5.1 Dongle Extension

The dongle extension tool is used when you want to extend the expiration date of your ElecRoc dongle. It is not needed if your dongle has no time-limited.

If your dongle is time limited, ElecRoc will generally pop up a related hint like *"This timer version ElecRoc 5 will be expired in xx days, please contact your service provider for upgrade as soon as possible"*, within 30 days before the expiration. After you see this hint, please make an extension in time, so that your ElecRoc can continue to work properly. Steps to extend are as follows:

1. Before the extension, please contact Founder's sales representative to gain a KEY file.

2. Stop running your ElecRoc Server and Client, and then run this tool.

3. Check if the dongle-related information is correct. The tool can automatically read the dongle ID, device ID, and expiry time, and you can also manually click **Check** to read it.

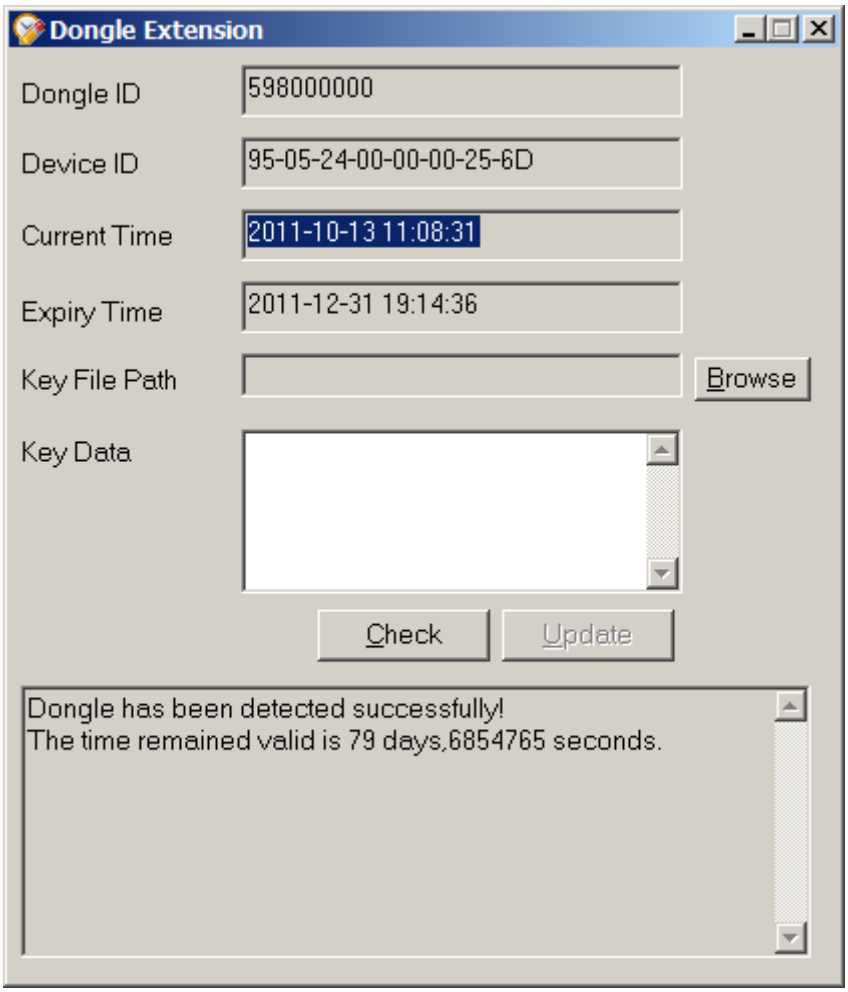


Figure 1-14

4. Click **Browse**, find out and open the KEY file. Or copy the content of the KEY file onto the **Key Data** area.

5. Click **Update**.

2.5.2 License Manager

You can use this tool when you need more value-added features or modules for your ElecRoc system. Steps to use this tool:

1. Before you run this tool, please contact Founder's sales representative to gain the License Key file.

2. Stop running your ElecRoc Server and Client, and then run this tool.

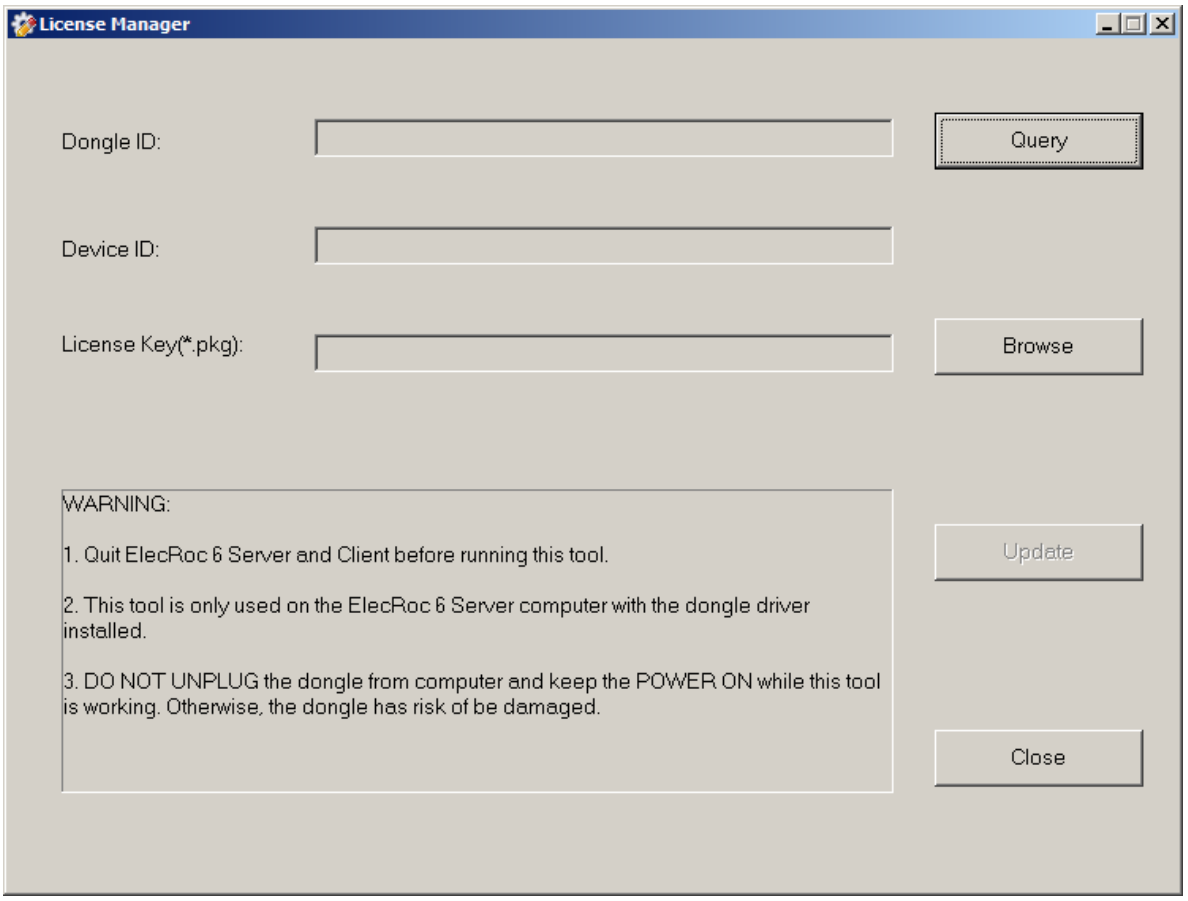


Figure 1-15

3. Check if the dongle ID and device ID is correct. The tool can automatically read the dongle ID and device ID, and you can also manually click **Query** to read them.

4. Click **Browse**, find out and open the License Key file.

5. Click **Update**.

2.5.3 Processor Configuration

During the process of using ElecRoc, in cases that the location of your dongle is changed, or that you need to add more ElecRoc processors, you can use this tool.

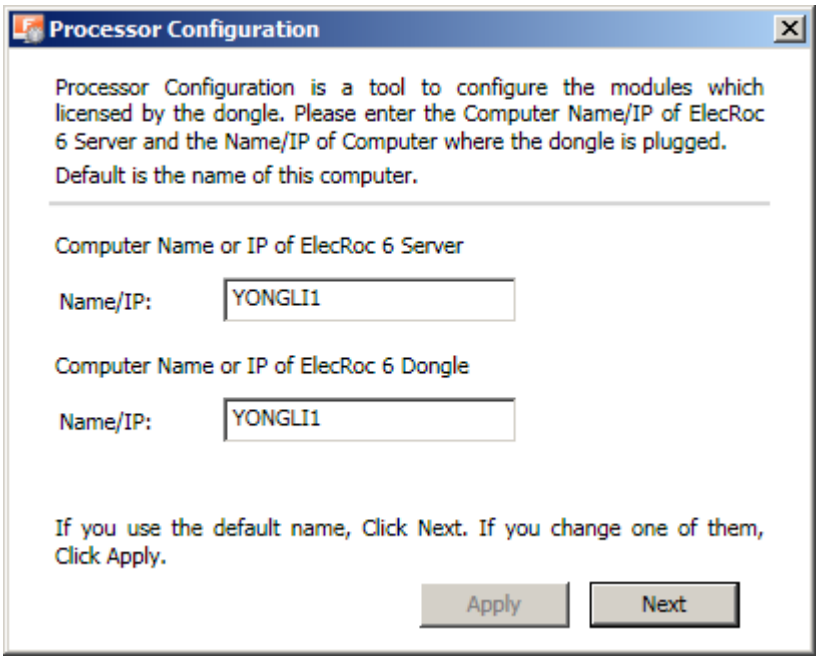


Figure 1-16

In case that the dongle location is changed, please re-input the name or IP of the computer where your dongle is located, and then click **Apply**.

In case that you need to add more ElecRoc processors, please make sure that the computer name or IP of your dongle is correct, and then click **Next** to enter in the processor install window, where you can then add more processors as needed. For details on processor installation, refer to *Founder ElecRoc 6 Installation Guide*.

2.5.4 Restart Dongle Services

This tool is used to restart dongle service in cases such as when the dongle service was stopped by accidental cause.

Chapter 3 Using Console

When you have installed one or more ElecRoc processors with the Server install program, regardless of locally or non-locally, you will see a shortcut icon named **ElecRoc 6 Console** appearing on the computer desktop. By double-clicking this icon, you can open the ElecRoc's Console window shown as follows. From this window, you can start or stop the processors you have installed into ElecRoc system, and configure such processor properties as the frame bitmap storage directory, and RIP temporary storage directory.

Moreover, as to the proof processors, here you can perform the color-related operations, including color solution making, spot color measuring, Delta E comparing, re-calibrating, and remote calibrating.

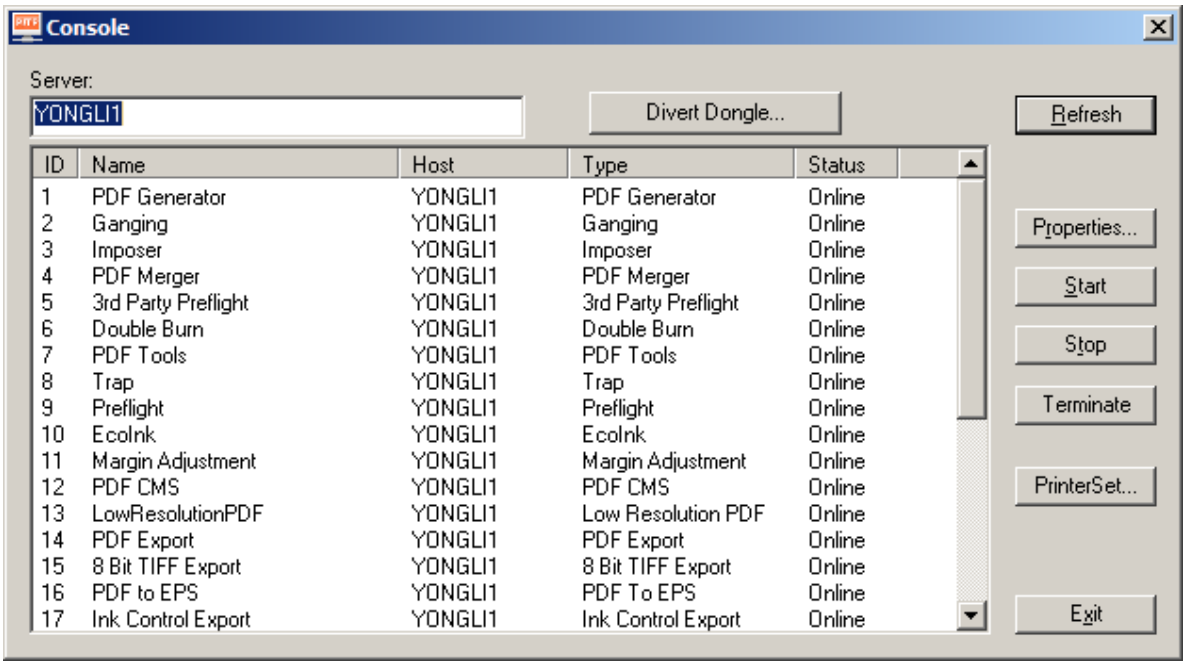


Figure 1-17

The **Server** edit box displays the server that the processors belong to. Once you input the server name here, the table below will list all processors you have installed into this server. Click the **Refresh** button, and you can display the processors' latest status.

Divert Dongle: Click this button in case that the computer where the dongle is installed (generally i.e. the server) is changed, and then input the name or IP address of the computer in the follow-up dialog box, so as to ensure that all the installed processors can continue to run normally.

3.1 Processor Control

3.1.1 Start Processor

Choose a processor in **Offline** status from the processor list, and then click **Start** at the right of the list, and the processor will be started, with the status turning to **Online**. A processor can be used to process files only when it has been started.

A process can be started from ElecRoc Server as well. The Server control program manages all the processors in your ElecRoc system, not only the local ones residing on the server, but also the non-local ones installed from other connected computers. The console manages only the processors installed from the current computer. In other words, a processor can be started from both ElecRoc Server and the console. If you have started it from the Server, you can see the status change on the console; in reverse, if you start it from the console, you can see the status change on the Server.

The **Refresh** button enables you to know the latest processor status.

3.1.2 Stop Processor

Choose a processor in **Online** status from the processor list, and then click **Stop** at the right of the list, and the processor will be stopped, with the status turning to **Offline**. A processor can also be stopped from ElecRoc Server.

3.1.3 Terminate processor

In case that a processor cannot be stopped for some reason, you can click **Terminate** to forcibly stop it. Perform this operation with caution, for it may result in unexpected error.

3.2 Processor Properties

Choose a processor in the Console window, then click **Properties**, and you can open the property setup window for this processor, configuring parameters like frame bitmap storage directory and RIP temporary storage directory. Such property window for the proof processor provides also buttons for you to access the color tools.

3.2.1 Most processors

The properties for most processors, including PDF Generator, Imposer, Ganging, Preflight, Trap, PDF Export and 8 Bit TIFF Export, are inalterable. If you choose one of them and click **Properties**, ElecRoc will pop up message, hinting that properties are not editable.

3.2.2 Printer processors

Include mono and color printers.

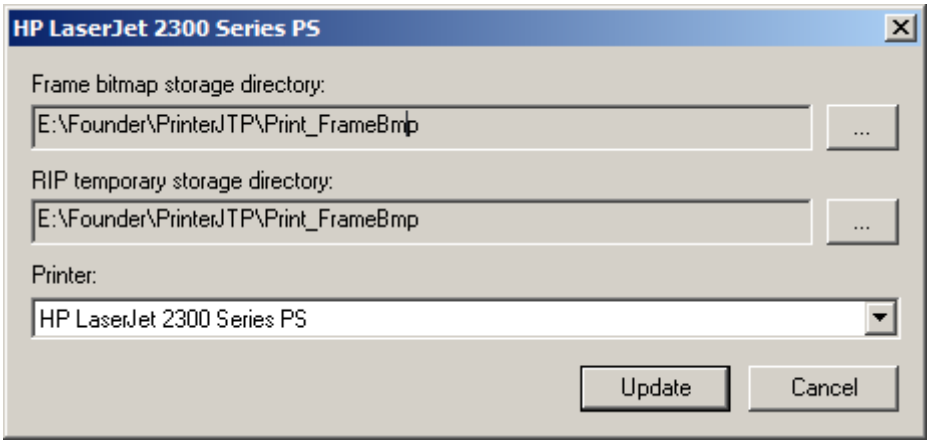


Figure 1-18

Frame bitmap storage directory: Under this directory, ElecRoc stores the frame bitmap files generated in printing. You can click the button at the right to choose another.

RIP temporary storage directory: The storage directory for temporary files in RIP process.

Printer: It is the actual printing device used by the processor. Options in the dropdown list are the printers installed in your current computer, including those shared printers from other connected computers.

3.2.3 PDF Rasterizer

Generate Thumbnail: If checked, during the rasterizing process, this processor will generate a thumbnail image for you to preview the bitmap.

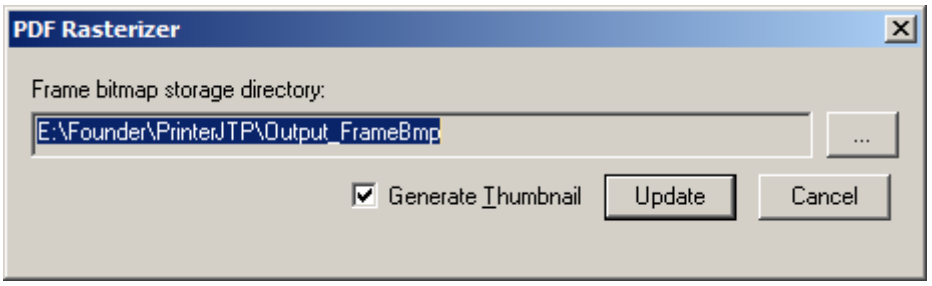


Figure 1-19

3.2.4 Winprint

If you open the property window for a Winprint post-RIP proof processor, you can see an **Advanced** button. With it, you can open the device's advanced parameter setup window.

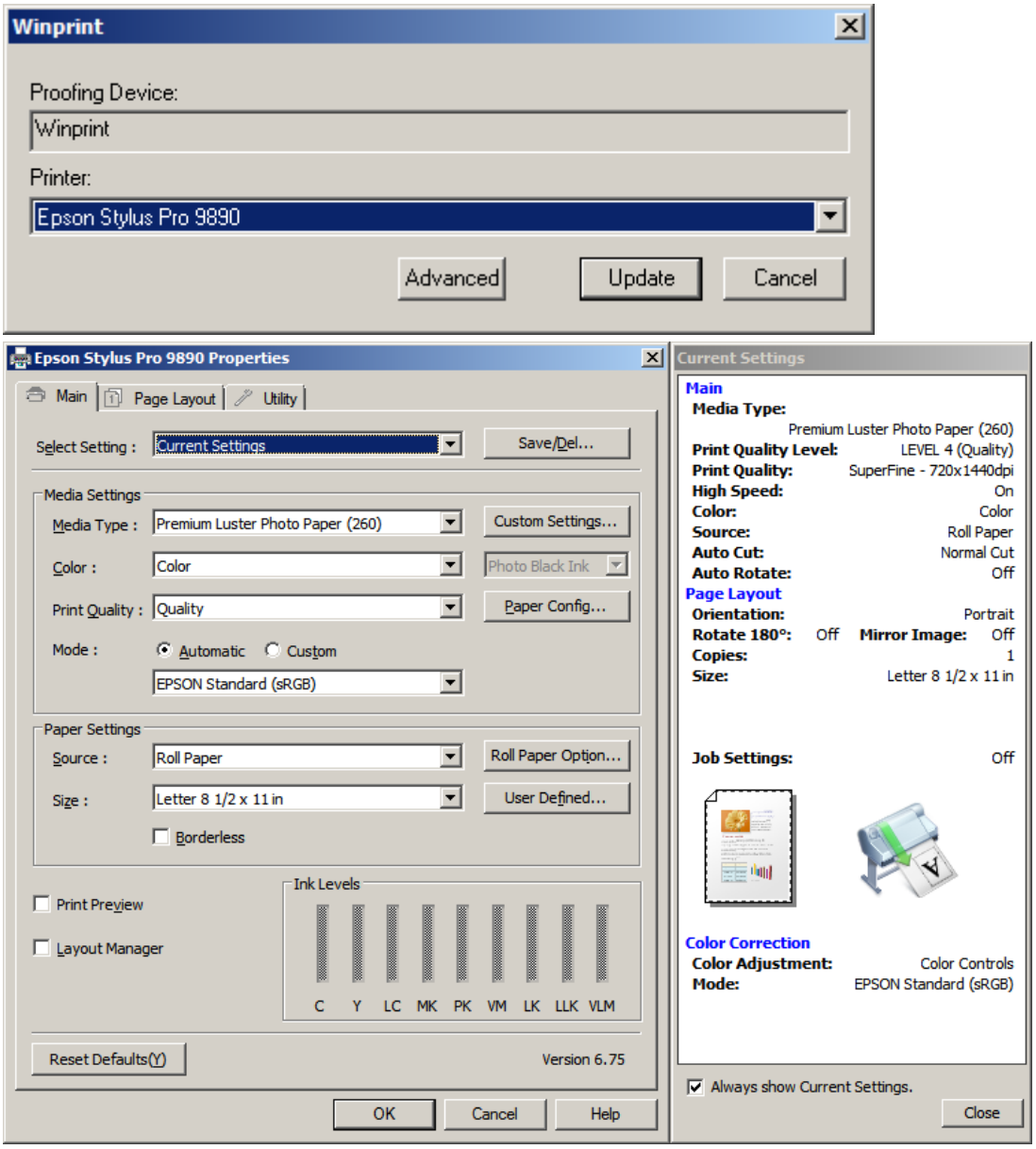


Figure 1-20

The advanced parameters are specific to the device, i.e. those for another Winprint device may be significantly different. Take Epson 9908 as example, here you can not only configure such general parameters as paper size, paper source, type, copies, direction, and color mode, but also perform adjustments like nozzle check, printing head cleaning, printing head calibration, and etc. For details, refer to the instructions attached to the device.

3.2.5 Digital & Inkjet printing

Here we take the digital printing device Indigo C3500 and Founder's EagleJet inkjet printing device P5200 as examples.

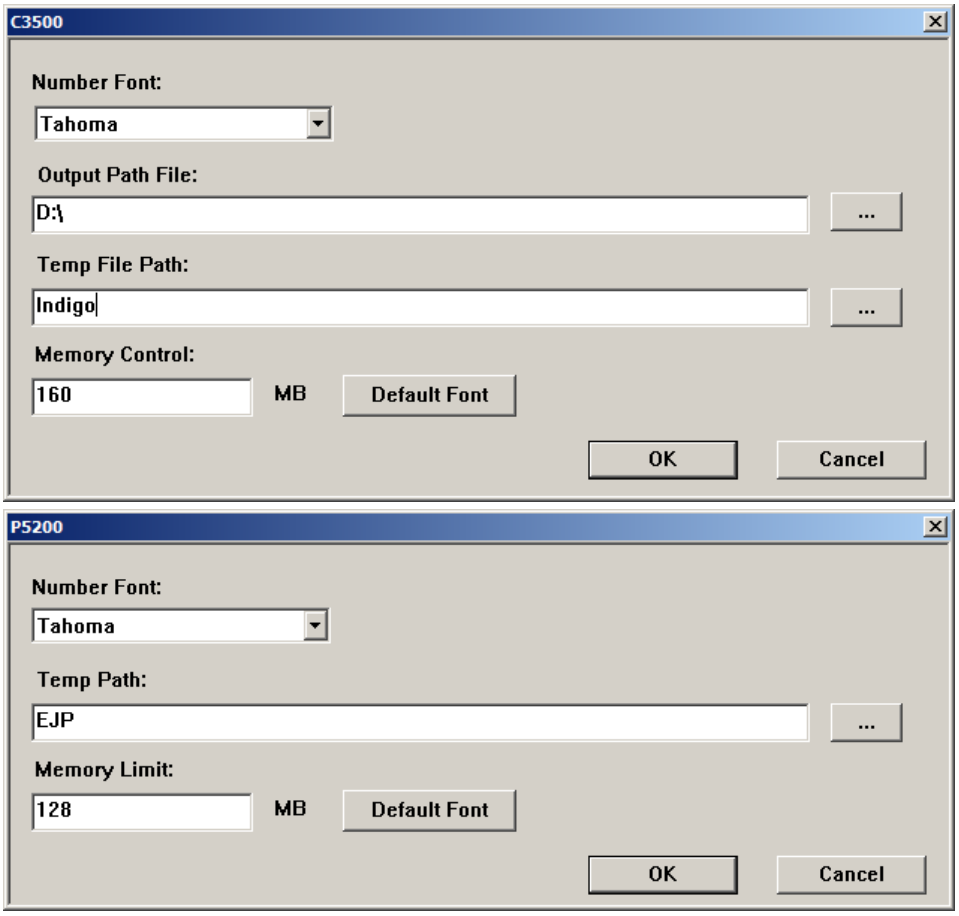


Figure 1-21

Number Font: This parameter controls the font for the module automatic numbering. If you click the button **Default Font**, you can reset the font to the default one.

Output Path File: This parameter is applied to the Indigo series. It refers to the output path for the generated jlt files.

Temp File Path/**Temp Path**: This parameter is applied to the Indigo and EagleJet series. It refers to the storage directory for the intermediate files or temporary files.

IP, **Port**: This parameter is applied to the devices such as K6250 and K110. In case that the IP address or port of the device changes, here you can specify it over again.

3.3 Create a print template

Template here refers to the device parameter template for use by the mono printer processor. In the ElecRoc's Console window, click **PrinterSet** to open the following window.

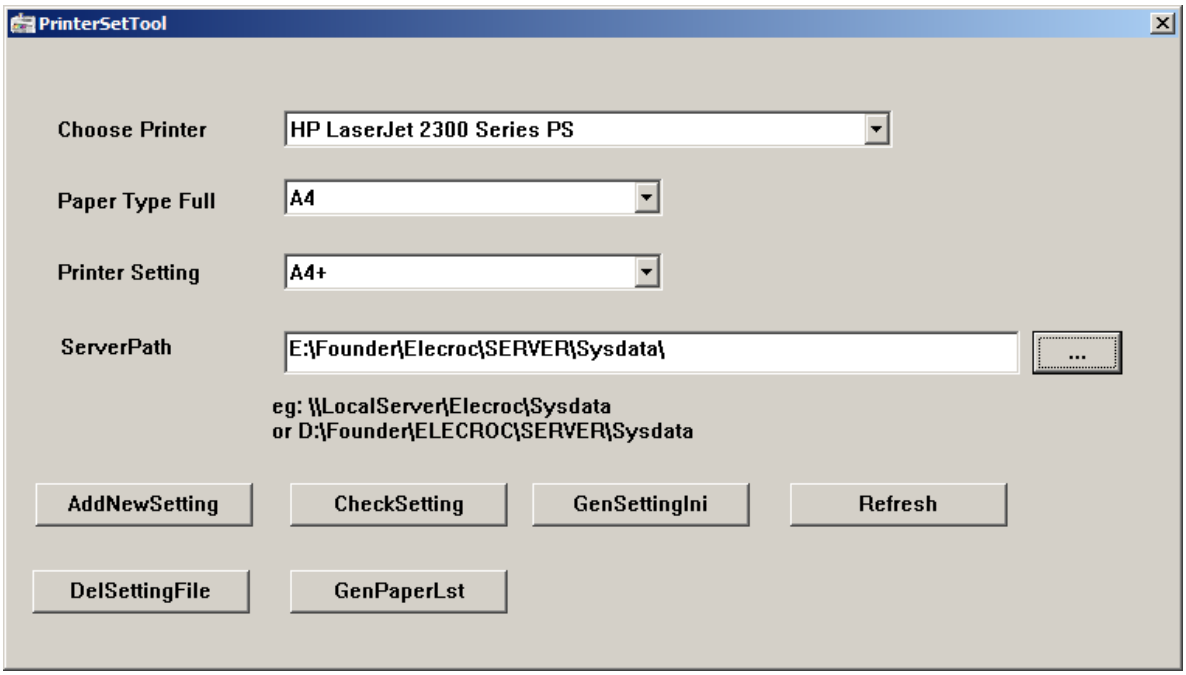


Figure 1-22

Steps for creating a device parameter template:

1. Choose a printer. Choose the actual printer used by the current processor from **Choose Printer** list. This list includes all the printers installed in current computer.

2. Choose a paper. Click the button **GenPaperLst** at the bottom of the window to generate paper sizes that can be supported by current printer in **Paper Type Full**. And then choose a paper you want to use from the list.

3. Configure print template. This template refers to the printer device parameter template configured at **Printer Setting** dropdown list.

1) Create new template. Click **AddNewSetting** to open the printer's device parameter setup window, and define the properties such as if to enable bi-directional print, the paper tray, paper size, direction and copies.

After that, click **OK** to enter in the following dialog box. Input the name of the print template, by default, it is named with the paper size.

And then click **OK** to finish. The newly-created template then appears in **Printer Setting** list. In case that you have added more than one template as per the above method into the list, make sure that you have chosen the right template in the list.

2) Check template. You can click **CheckSetting** to view the parameter settings of the currently-selected template in **Printer Setting** list.

3) **DelSettingFile**: This button is used only when you want to delete the currently-selected template in the **Printer Setting** list.

4. Specify the server path. If the current computer is not the ElecRoc server, please use the format \\LocalServer\Elecroc\Sysdata, LocalServer referring to the actual server name. If the current computer is the ElecRoc server, use the format such as

D:\Founder\ELECROC\SERVER\Sysdata, D:\Founder referring the actual disk partition and root directory where your ElecRoc is located.

5. Generate template file. Click **GenSettingIni** to open a dialog box.

There would be more than one mono printer processor on the server; in this case, you need to specify the one with ID number. Input the ID and click **OK** to complete the creation of the device parameter template.

After you have created a device parameter template for the mono printer processor, you can start the Client, enter in the **Administrator** > **Processor Management** or a job window, to open the mono printer's processor or node parameter setup window, and then find out the **Media** parameter under the **Print** tab, you can see an option named **Use device template**. Checking it, and then you can see in the above dropdown list the created device parameter template. If your template is selected, the size and the device parameters it defines will then be applied in the file printing.



Figure 1-23

Part 2 Using ElecRoc Client

Chapter 1 ElecRoc Client

1.1 Client Login

Start up ElecRoc Client, and the login interface appears:

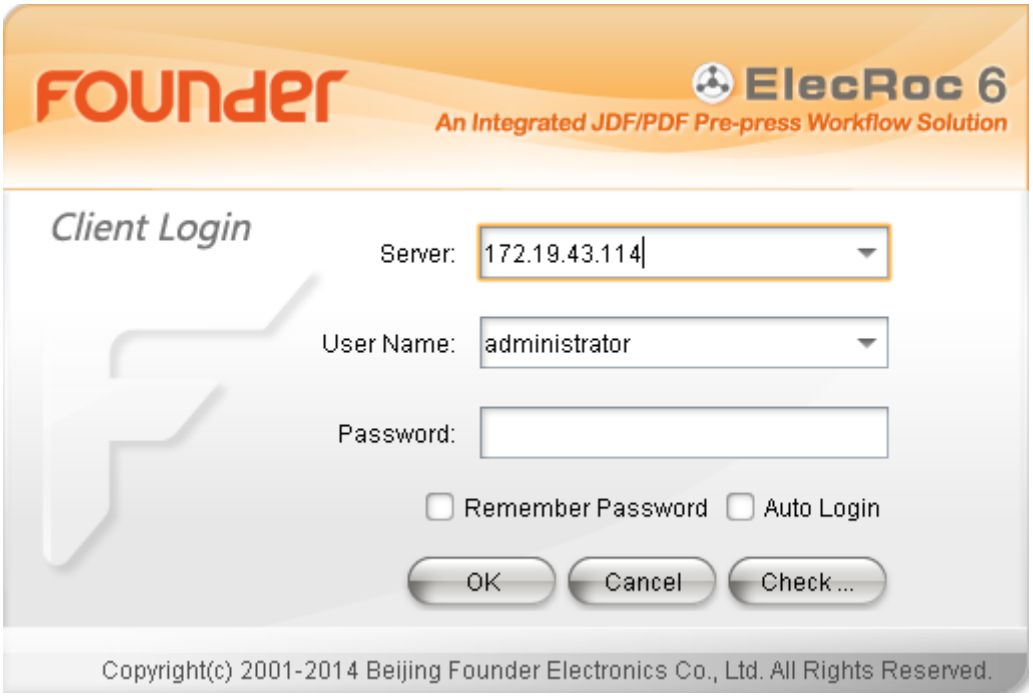


Figure 2-1

Enter correctly the server name (or IP address, or choose a server name from the dropdown list), the user name and password, and then click **OK**. If successfully, the main interface of ElecRoc Client then appears.

Exceptions or other responses during the login may include:

1) If you enter an invalid or incorrect server name, or user name, or password, ElecRoc will display corresponding message, such as **Cannot connect to the selected server** or **Incorrect username or password**. Enter a valid one to retry.

2) If the Client is not authorized, it displays **This machine has no authority to access the server**, in this case, authorize the Client on the Server (main menu **Settings** > **Authorization**).

3) If you cannot use a Mac Client to connect the Server, you can try to run the command in Terminal: sudo scutil -set HostName xxx.local, xxx refers to the computer name. And use this xxx.local as computer name to authorize (from the Server, choose **Settings** > **Authorization** > **Client**).

4) If the ElecRoc Server is installed and running on Windows 7, when you start up a Client

to login, your Windows Firewall will pop up a dialog box asking whether to block or unblock ElecRoc. When your client system is Windows XP or 2003, choose **Unblock** in the pop-up dialog box; when it is Mac OSX, choose **Always Allow**;



Figure 2-2

and when it is Windows 7, in case that you are in a domain network, check **Domain networks …**, in case that you are NOT in the domain, you need to check the other two options **Private networks …** and **Public networks …**.

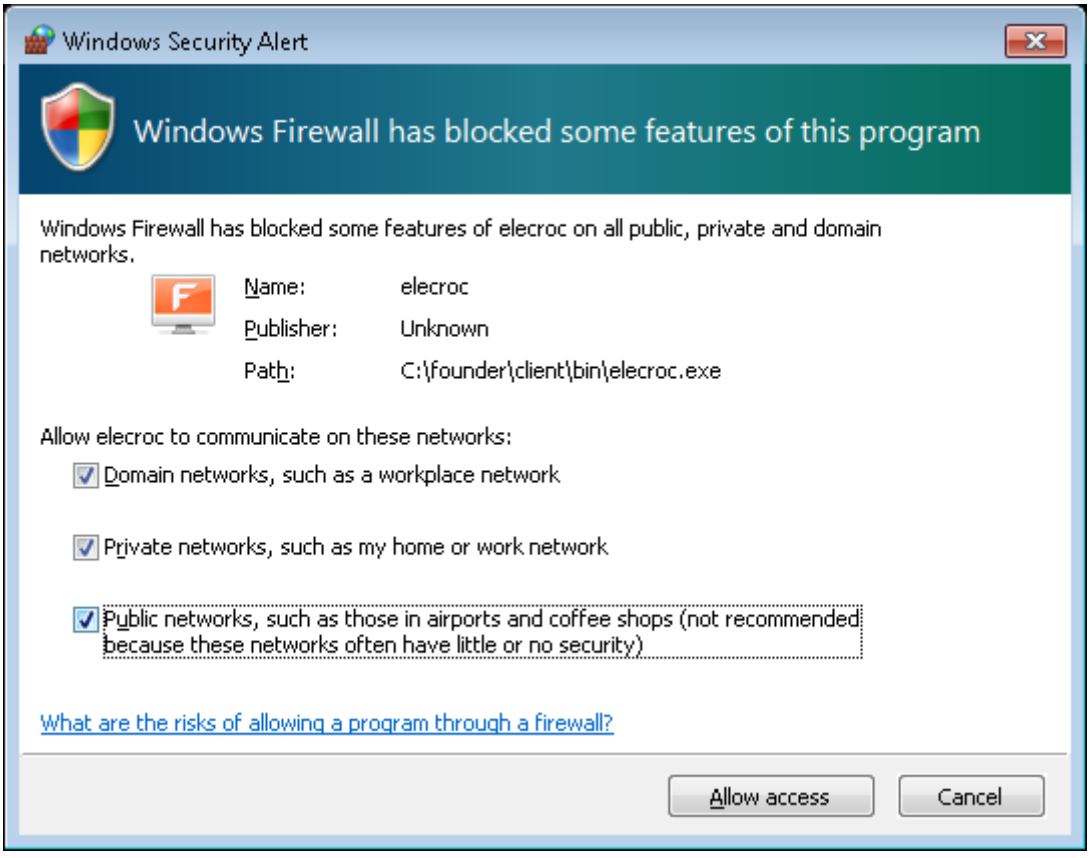


Figure 2-3

5) If you still cannot login when you have excluded the above reasons, you can click the button **Check** on the login interface, and perform an overall checkup, such as the computer and network configuration, so as to find out the reason why you cannot login.

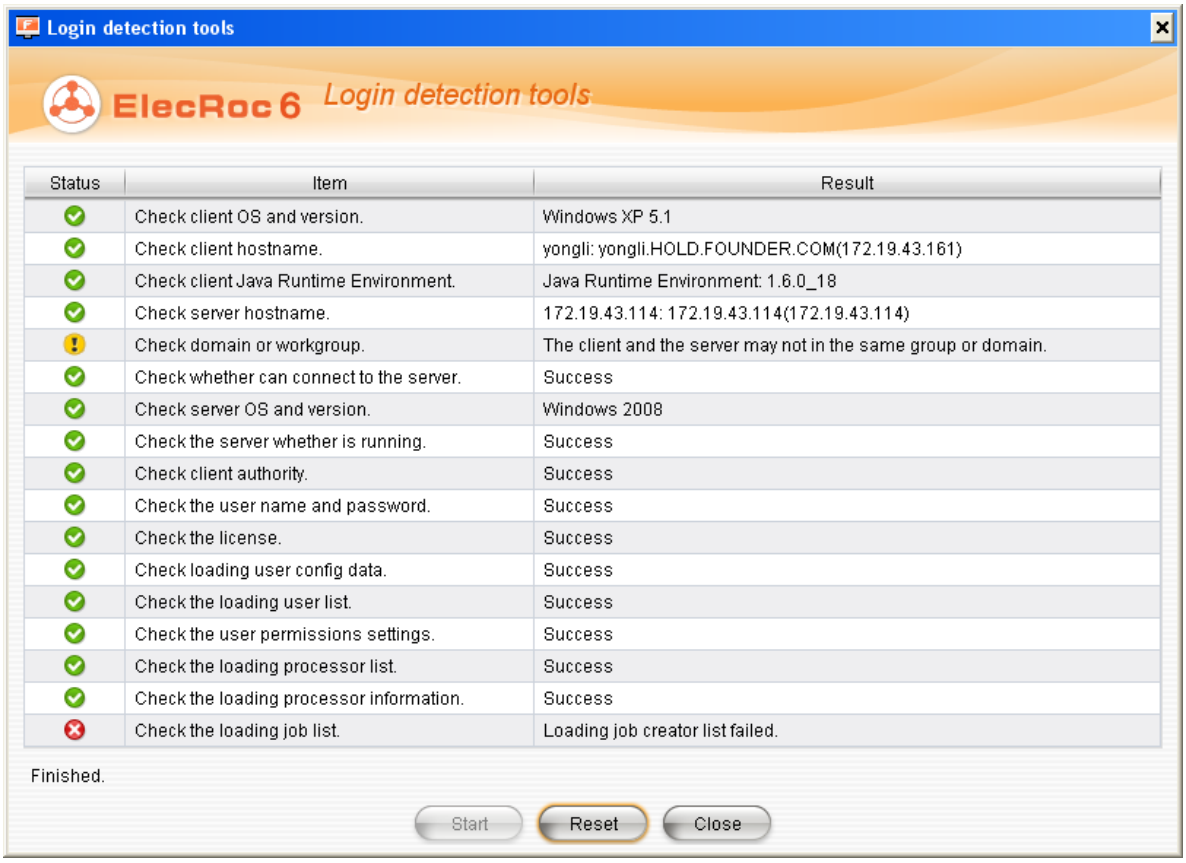


Figure 2-4

The window displays the check items at the left, including local machine's configuration, the server's status and configuration. Click **Start** to begin the checkup, and you can then see the result at the right of the window. According to the result, you can easily know the reason why you cannot login.

A click on **Reset** can clean the result. The ***server*** in checklist item **Check server hostname**, and the ***user name*** and ***password*** in the item **Check the user name and password**, refer to the server, user, and password currently input in the login interface.

1.2 Main Interface

Main interface of the Client is composed of three parts:

Main menu: at upper-right, provides menu items for you to control/configure the Client.

Navigator: below the main menu, contains five icons, *Jobs*, *Status*, *Resources*, *Administrator*, and *Statistics*.

Workplace: the body of the interface is the operating area of the module you select in the Navigator area. The default operating interface every time when you login is that of the module *Jobs*.

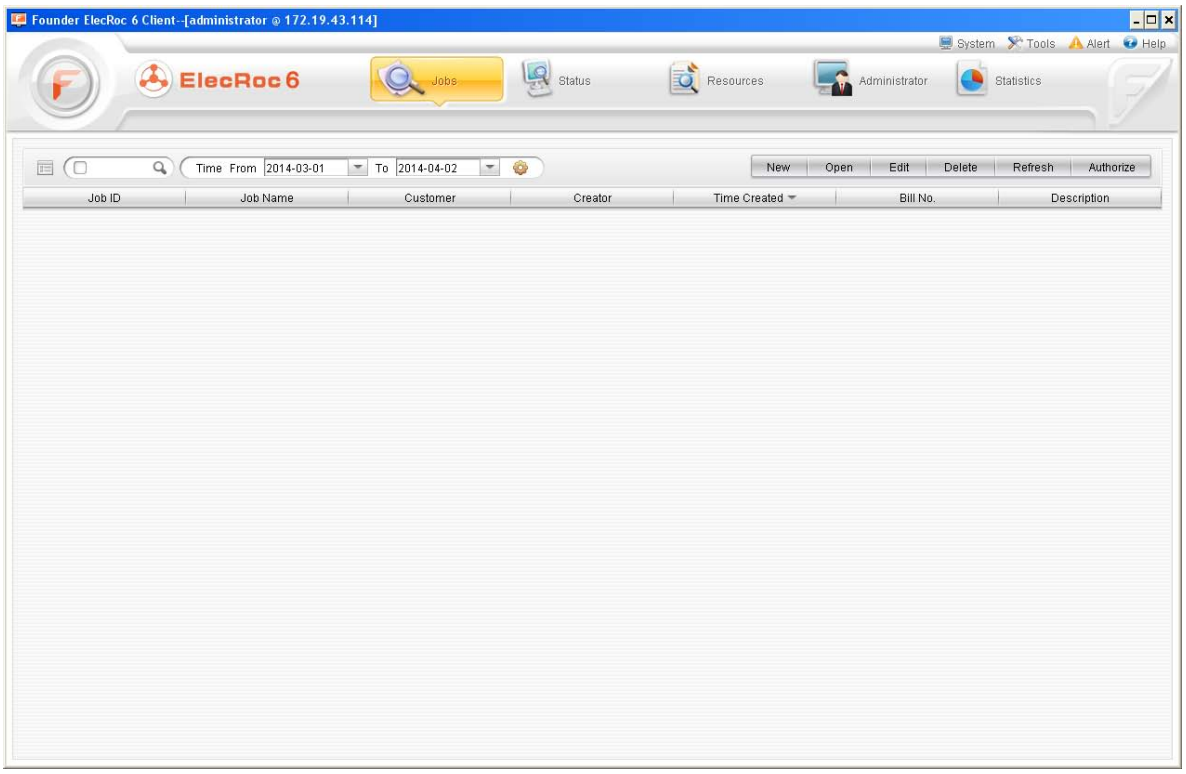


Figure 2-5

1.3 Main Menu

The main menu contains the following commands:

Menu	Item	Function
System	**Change Password**	Change or create the password for current user.
	Switch User	Log off the current user, and return to the login dialog box.
	Exit	Log off and exit the Client.
Tools	**Backup Manager**	Completely backup all or some of the jobs.
	Preferences	Configure system preference specific to current user, such as appearance, unit, scale and preferences.
Alert	**Alerting Info Dialog**	Open the **Alert** information dialog box, in which you can view the alter information existing in system, and open the abnormal job. Here you can also clear the alert information.
	Display Alerting Icon	If checked, a twinkling alert icon appears at the navigator when exception or error occurs during the job process.
	Pop Alerting Info Dialog	If checked, ElecRoc pops up the **Alert** information dialog box when exception or error occurs during the job process.
	Sound Alerting	If checked, ElecRoc issues sound alert when exception or error occurs during the job process.
	Alerting Option	Configure to which job, processor, user the alert is applied, and define the alert sound.
Help	**About**	Display the version number and copyright information.

	Readme	Open the readme file, in which you can find out the introduction to ElecRoc, description of the new & key features, and content summary on the installation DVD.

Table -2

1.3.1 Backup Manager

Choose **Tools** > **Backup Manager**. Here you can completely backup all or some of the jobs in ElecRoc, including nodes, node parameter setup, files the job contains, and resources applied in the job such as color solution and profiles.

The backup manager not only provides all the capacities that the archive management (Administrator > Archive Management) does, but also enables you to backup Tiff resource, as well as information about users, user groups and processors. But the archive management brings more flexibility when it comes to the selection of jobs and profile resource, and more ease for you to upgrade. Note that the upgrade from lower to higher version with backup manager or archive management does not recover the node parameter setup.

1. Backup

Perform under the **Backup** tab, as follows:

1. Choose backup mode. **Full Backup** enables you to backup all jobs currently existing in system, while **Selective Backup** backups only the selected one(s). Here we take selective backup as example. And then, click **Next**.

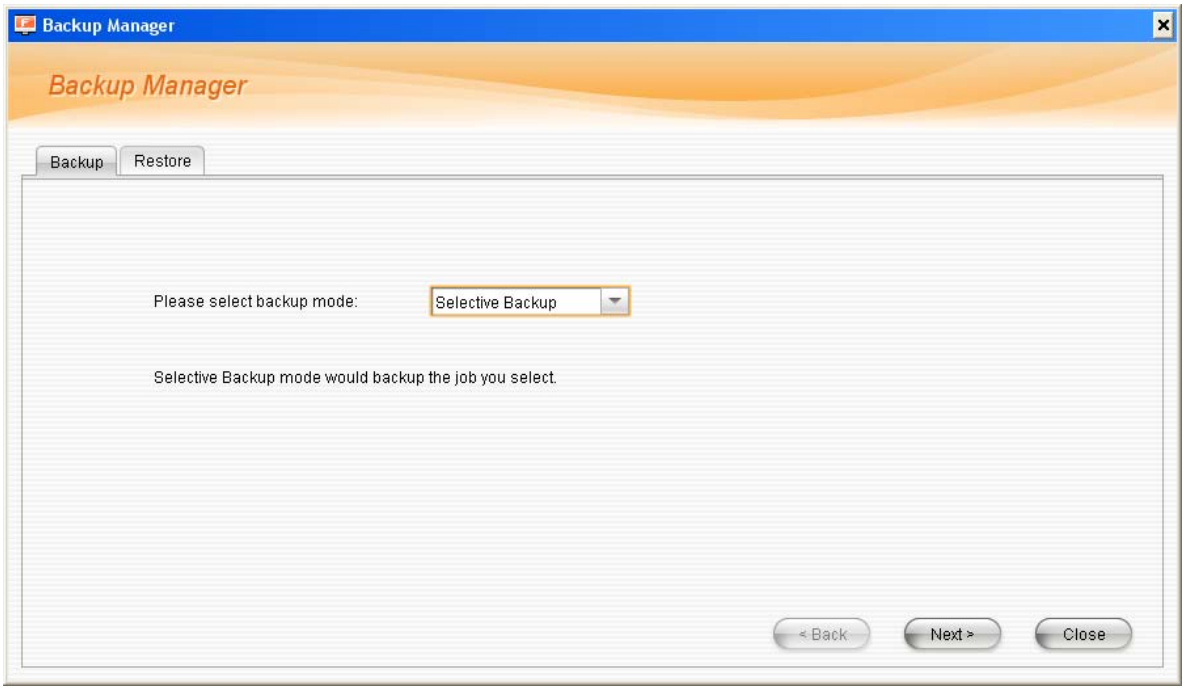


Figure 2-6

2. Choose the jobs. In the next window, you can see all the jobs existing in system. Check the jobs from the **Backup** column. At the **PDF & Signature** and the **1-bit TIFF** columns, you can further decide whether to backup the PDFs and signatures, and 1-bit tiff files available in the job. And then click **Next**.

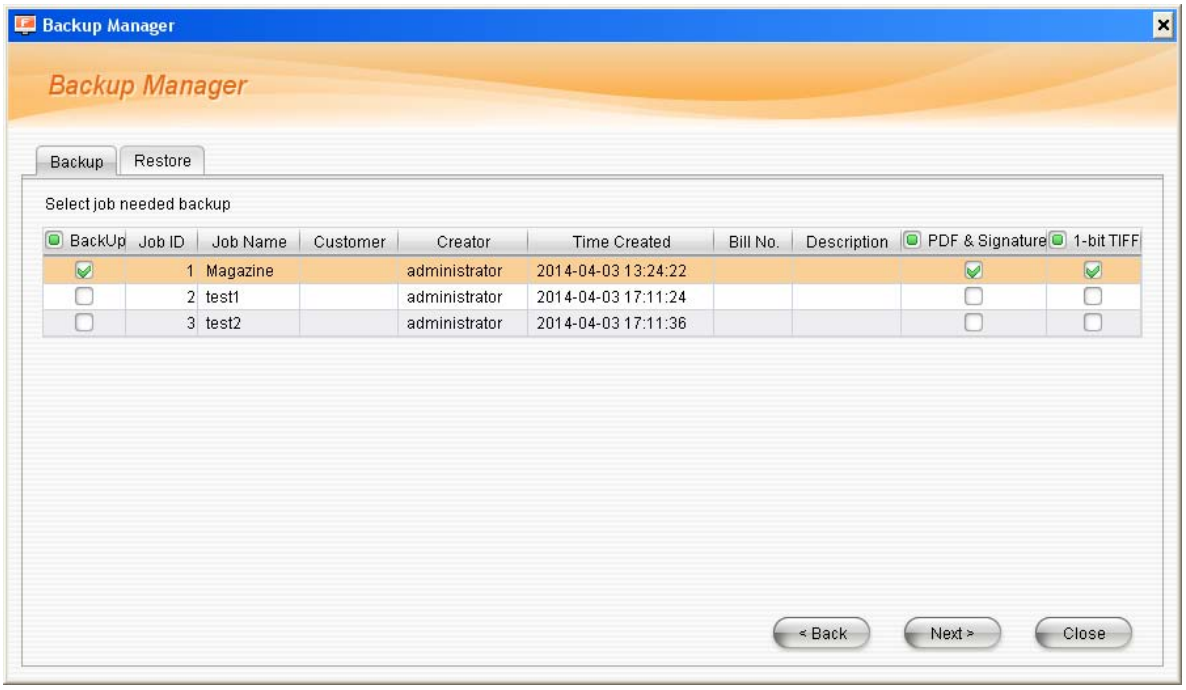


Figure 2-7

3. ElecRoc calculates and displays the disk space needed for the backup. Reserve enough free disk space and click **Next**.

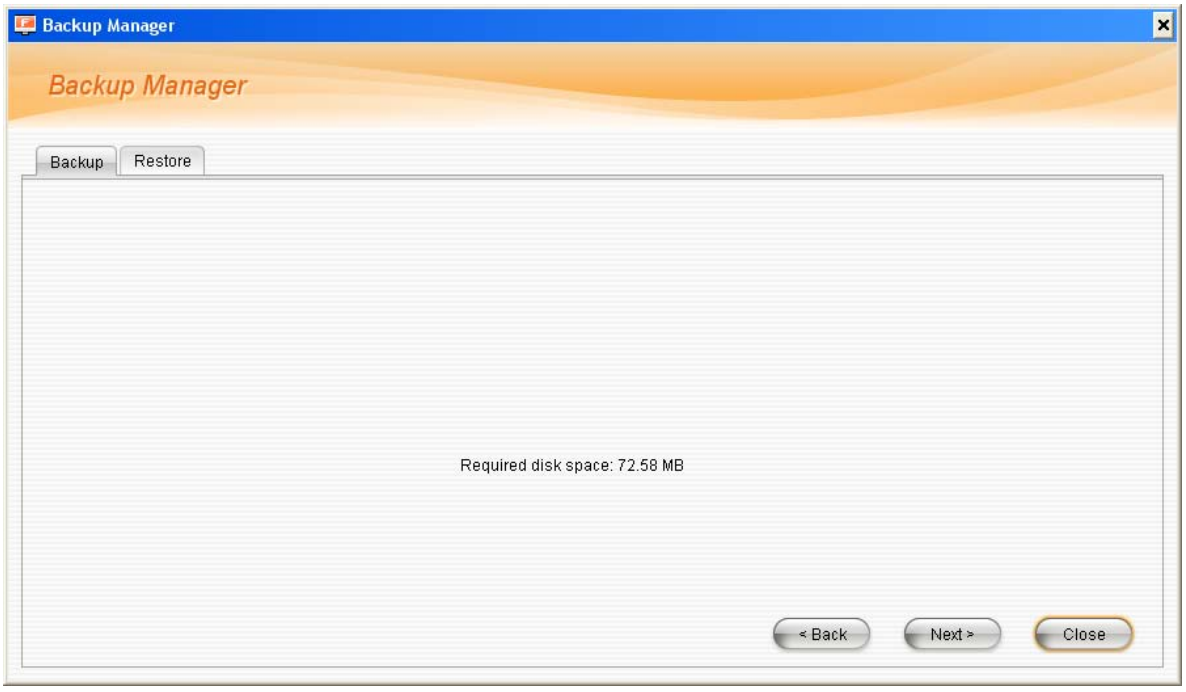


Figure 2-8

4. Specify the location for the backup file.

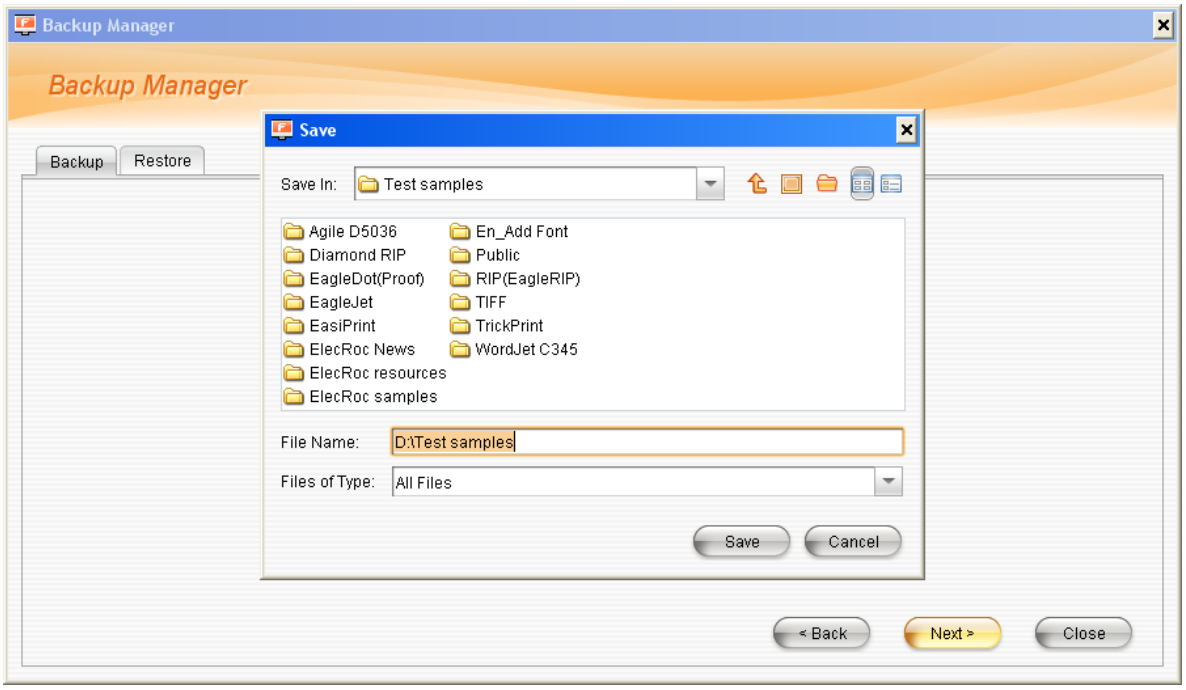


Figure 2-9

5. ElecRoc starts to backup, and displays the progress with a bar.

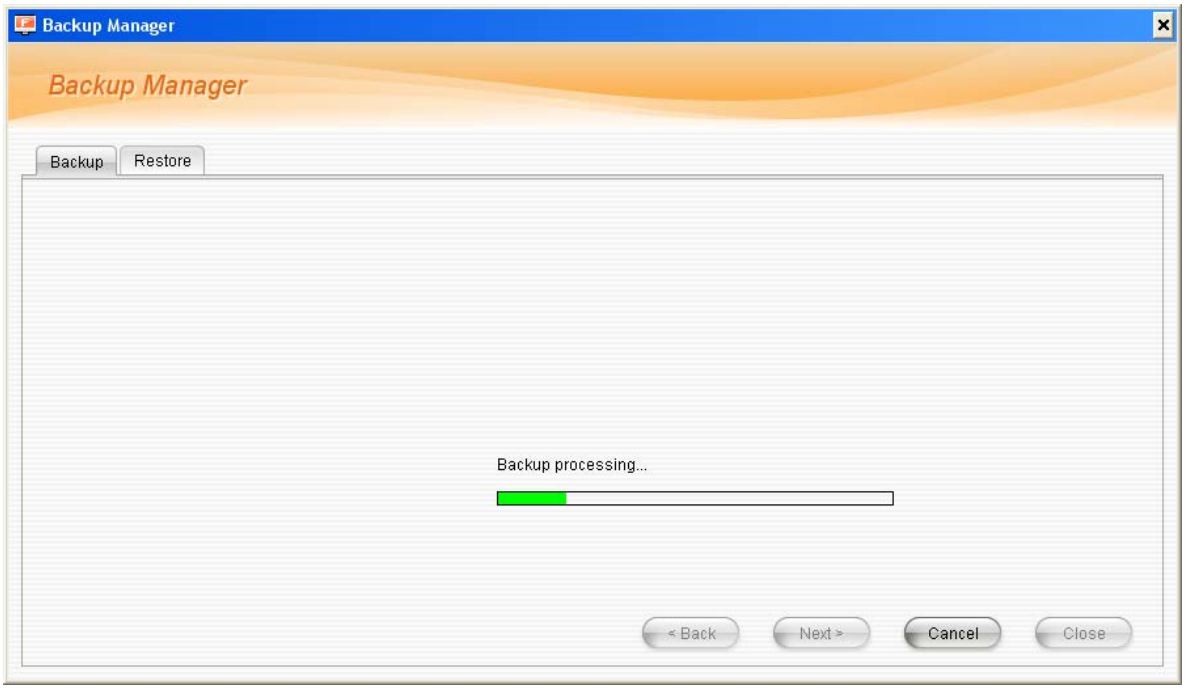


Figure 2-10

6. When the bar reaches 100%, it displays *Backup has completed*.

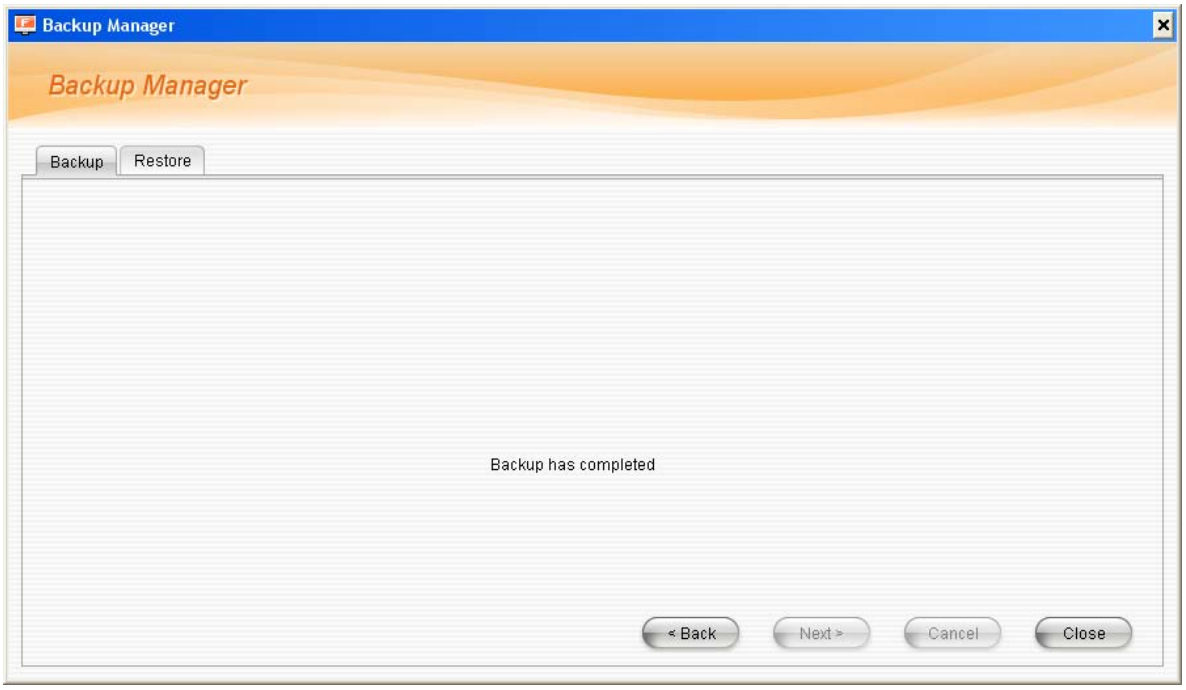


Figure 2-11

2. Restore

Switch to the **Restore** tab. Here you can restore the backup resource to ElecRoc.

1. Choose the backup file. The table lists the backups made on current Client. The **Refresh** button is used to update the table, and the **Add** button to add more backup files to the table. Click **Next** when you have chosen a backup file.

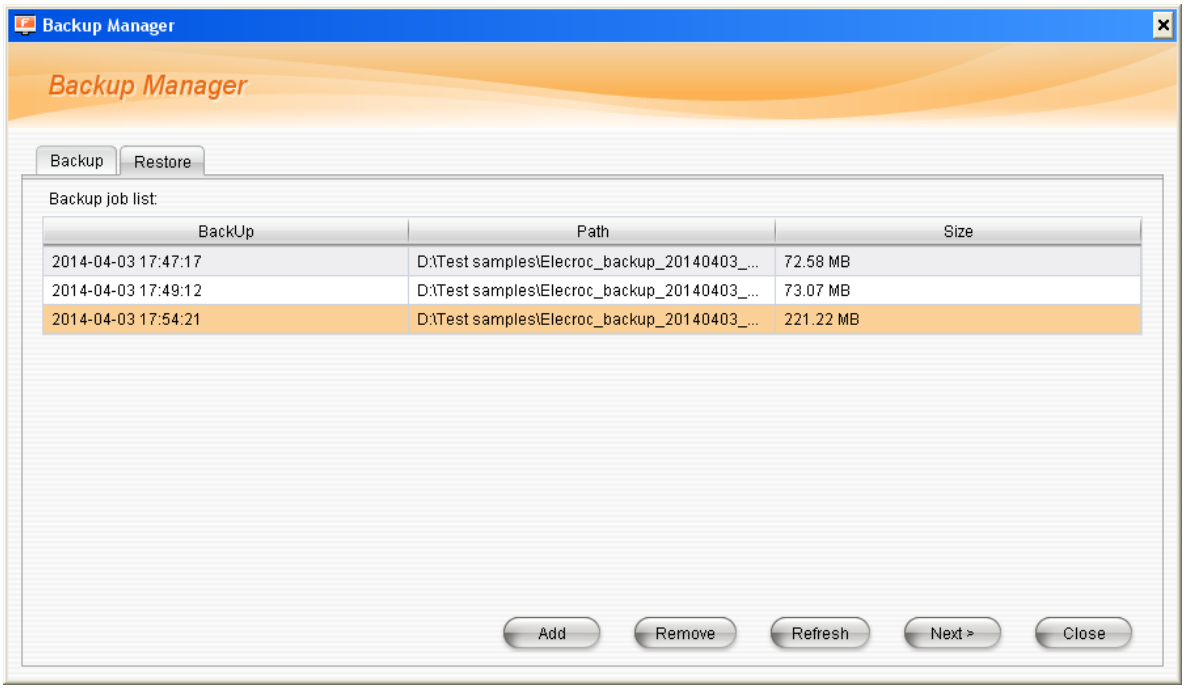


Figure 2-12

2. If more than one processor of same type exists in current system, you need to link the

old processor with one of the current processors in the follow-up table.

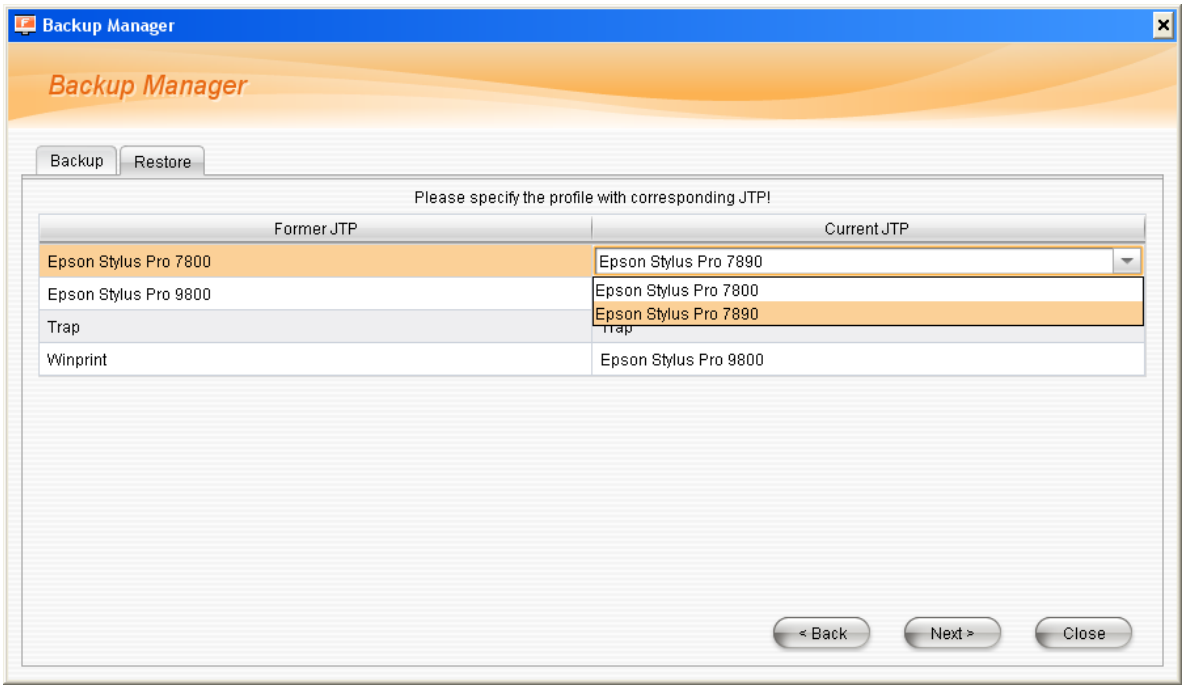


Figure 2-13

At the time you backup jobs, whether in full or selective backup mode, ElecRoc backups also the resource files applied in processors. Therefore, at the time they are being restored, you should assign corresponding processors for these resource files. If more than one processor of same type exists in system, click the corresponding cell in the **Current JTP** column and choose a processor. Click **Next** after the assignment.

3. Determine whether to replace or remain jobs with same name in system.

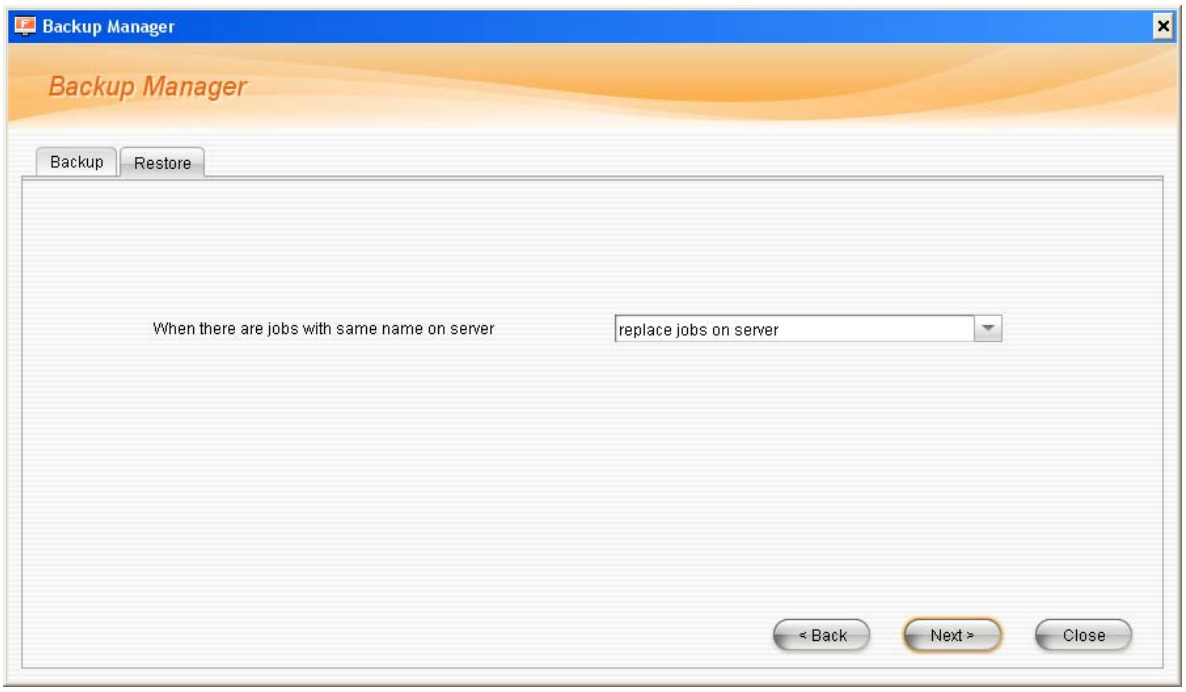


Figure 2-14

4. ElecRoc starts to restore, and displays the progress.

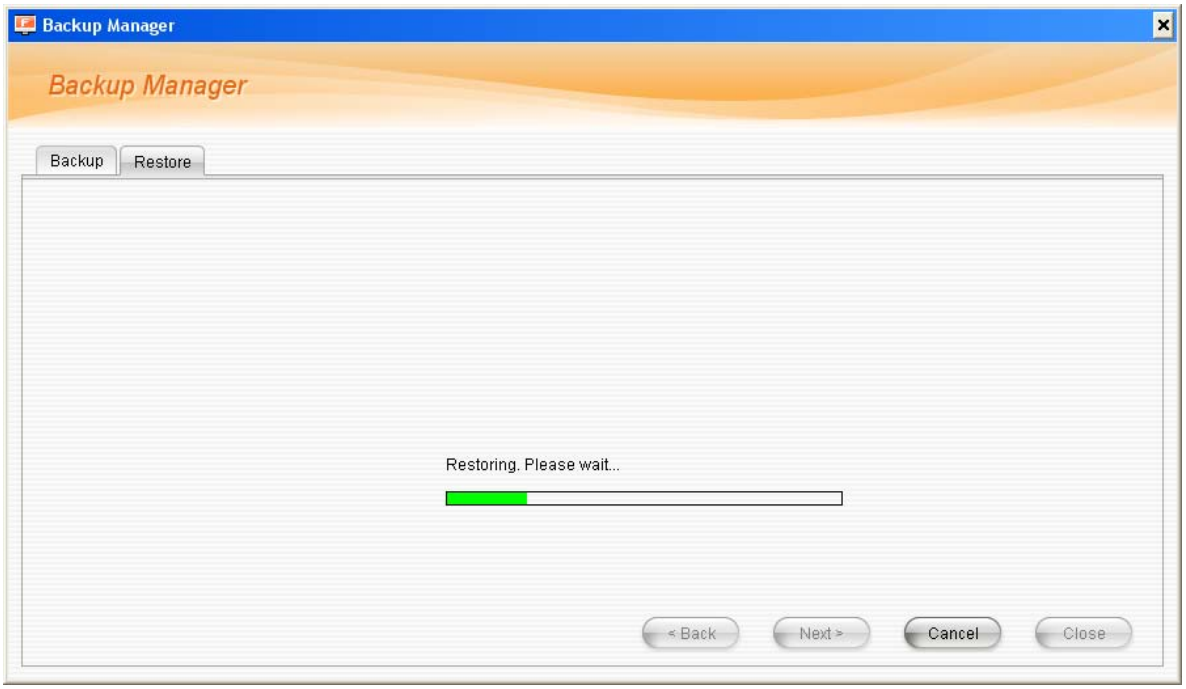


Figure 2-15

5. When the bar reaches 100%, it displays *Restore has completed*.

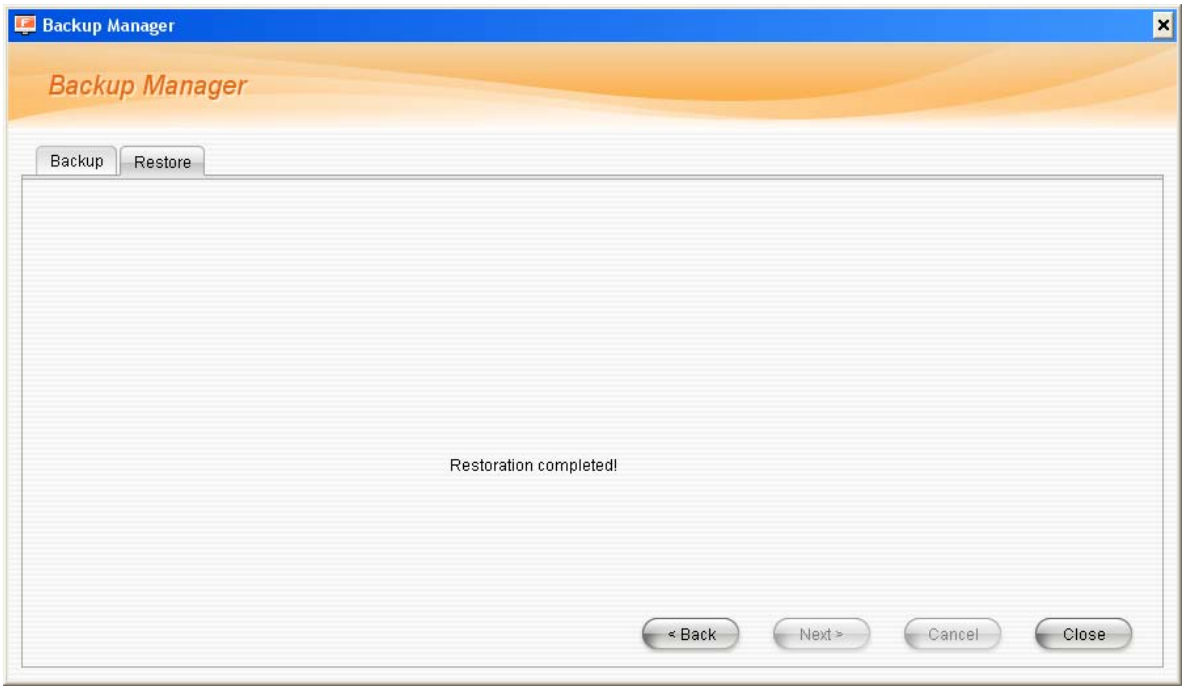


Figure 2-16

1.3.2 System Preferences

Choose **Tools** > **Preferences**. Here you can configure the system setting related to the appearance, unit, scale, and preference specific to the current user.

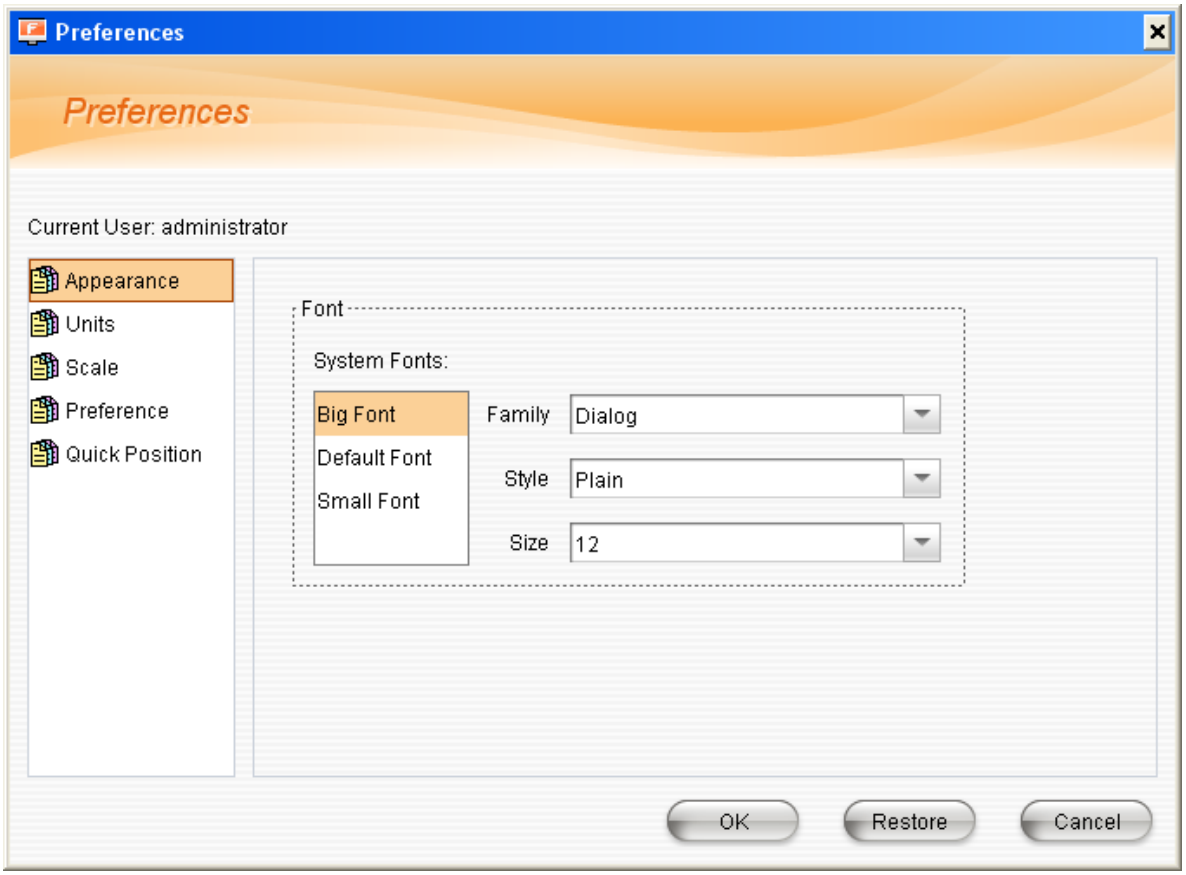


Figure 2-17

- **Appearance**

The Client user interface employs three sorts of fonts: *Big Font*, *Default Font* and *Small Font*. Here you can specify the type, style and size for each font. You can apply the fonts installed in your operating system to display the Client.

- **Units**

ElecRoc supports three length units: mm, inch and point.

- **Scale**

It refers to the initial scale for the page and surface previews.

Preview display border: If checked, the border of the preview image will be displayed when you preview any PDF page or surface.

- **Preference**

Retain previous settings after submitting: If checked, when you submit files from current node to another node in job window, ElecRoc remains displaying the current node and its files.

Change JTP to new settings after submitting: If checked, when you submit files from current node to another node, ElecRoc switches to display the new node and its

files.

Pop out run information dialog when submitting: If checked, ElecRoc pops up the job process window once the job is submitted. Otherwise, the window will not automatically appear.

Pop out confirming dialog when submitting: If checked, at the time you submit files in job window by clicking the **Run** icon, ElecRoc pops up a dialog for you to confirm the submission.

Disable magnification in processor list when mouse moves on processor: When you move the mouse onto the processor list at the left of the job window, you may see an animated visual effect. It is designed to highlight the processor that your cursor rests on. If needed, you can check this option to disable this effect.

Disable node sharing (to optimize process speed): ElecRoc supports you to share a node across various jobs (see section 3.2.3 in this part for details). This sharing operation is performed with the node's right-click menu item **Share node** (and **Cancel shared**) in job window. But this function may slow the speed you open the right-click menu or the process speed of other nodes in case that there are too many nodes and files existing in your job. In this case, you may check this option to disable the node sharing. If checked, the items **Share node** and **Cancel shared** will disappear in the node right-click menu.

Default priority of Hot Folders: The default priority for jobs submitted by way of hot folder.

Login set: Options here are used to control whether or not to enable the options **Remember Password** and **Auto Login** in the Client login window. Only when you have checked the two options in the Client login window, the two options here can then be activated. The enabling or disabling for the option **Remember Password** can also be controlled in the Client login window. As to the option **Auto Login**, when enabled, it will hide the login window at the time you login ElecRoc, therefore, you need to come here to disable when you want to disable it.

- **Quick Position**

This setting is designed for you to specify the table columns that are to be used when you quickly position your job in the job list. In quick positioning, input a keyword, and ElecRoc will then search for the jobs that contain this keyword, from the columns that you have specified here. The columns that can be specified include job id, job name, customer, creator, time created, order number, bill number, plan end time, description, and order detail. When you specify the columns, you can use the button **Select All** or **Clear** to select or unselect all the columns at one time, or you can also use the button **Restore** to restore the setting to its default state.

- **Net Config**

Net Config parameters are available only for ElecRoc Client running on Mac computer. You need to configure them before you want to use the preflight and trap plug-ins and open the PDF page files.

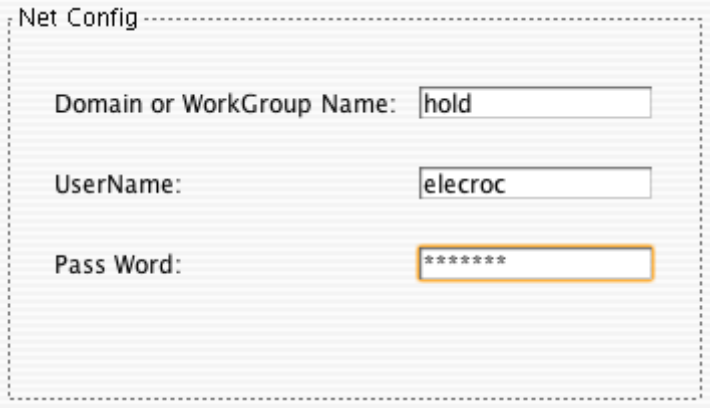


Figure 2-18

Domain or Workgroup Name: The name of the domain or workgroup where your ElecRoc system is deployed.

User Name: Any user with whom you can access your ElecRoc server machine online from the current Mac computer.

Pass Word: The password for the user defined above, if any.

1.3.3 Alert

ElecRoc provides you with many means to inform the exception or error occurred during the process, including the alert information dialog, alert icon, and alert sound. The alert information dialog employs a table to display the errors and exceptions. With the buttons in the dialog, you can open a job's process information window to view detailed alert information, and you can also open a job's operating window. Besides, you can clear the alert information. The alert icon here refers to an icon twinkling at the navigator.

From the main menu, choose **Alert** > **Alerting Option**. Here you can specify not only the job, JTP and user that the alerting is applied to, but also the alert sound to be issued.

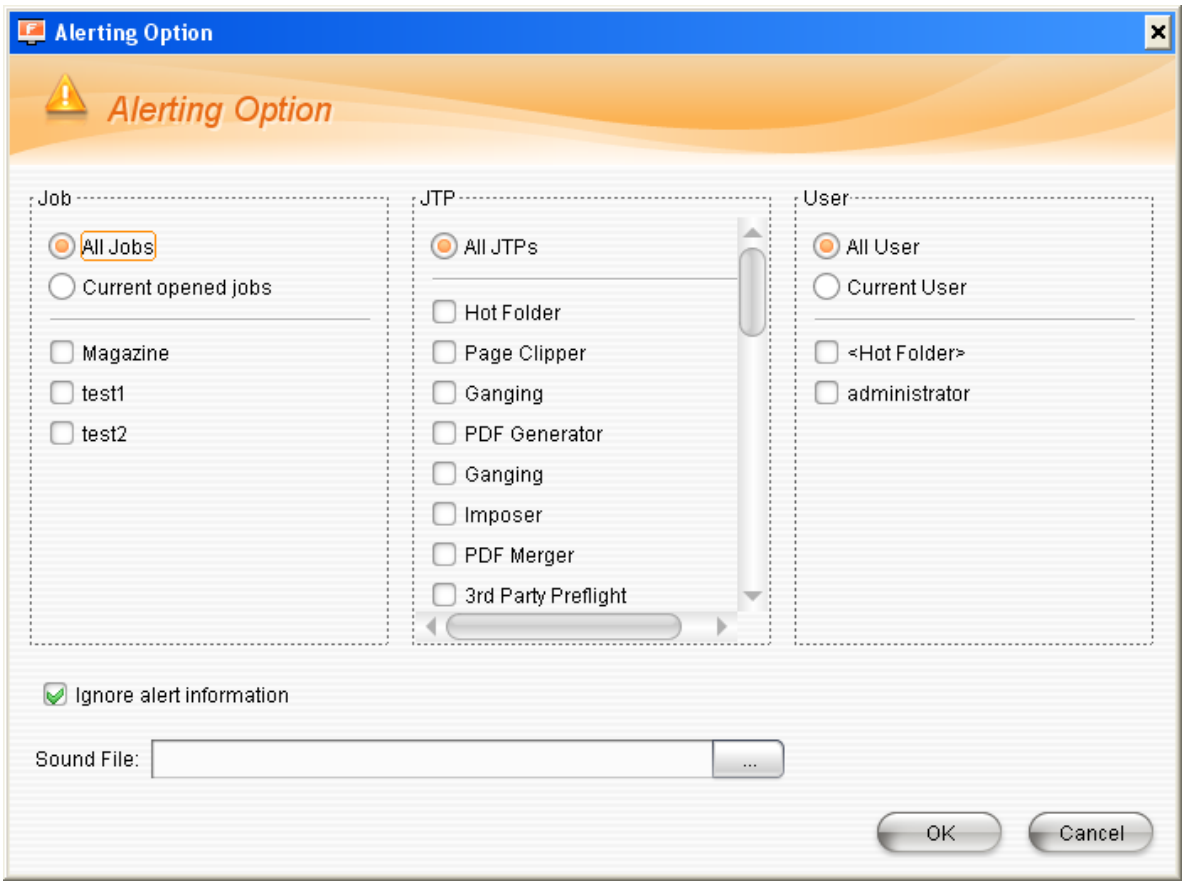


Figure 2-19

Job: If you choose **All Jobs**, ElecRoc alerts once exception or error occurs in any job. If you choose **Current opened jobs**, ElecRoc alerts only when exception or error occurs in currently opened jobs. In addition, you can choose specific jobs from the job list below.

JTP: If you choose **All JTPs**, ElecRoc alerts once exception or error occurs at any processor node. Here you can also choose specific node from the node list below.

User: If you choose **All Users**, ElecRoc alerts all the users login on ElecRoc. If you choose **Current User**, ElecRoc alerts only to the current user. In addition, you can choose specific users from the user list in the below.

Ignore alert information: If checked, ElecRoc ignores the process information in pink, and alerts only when information in red appears. If not, ElecRoc always alerts as long as the information appears, regardless of whether it is in pink or red.

Sound File: Here you can customize a .wav audio as the alter sound.

Chapter 2 Administrative Tools

Administrative tools as a whole refer to the tools for administrator to manage ElecRoc system, and they are classified under three navigator modules, i.e. **Resources**, **Administrator**, and **Statistics**.

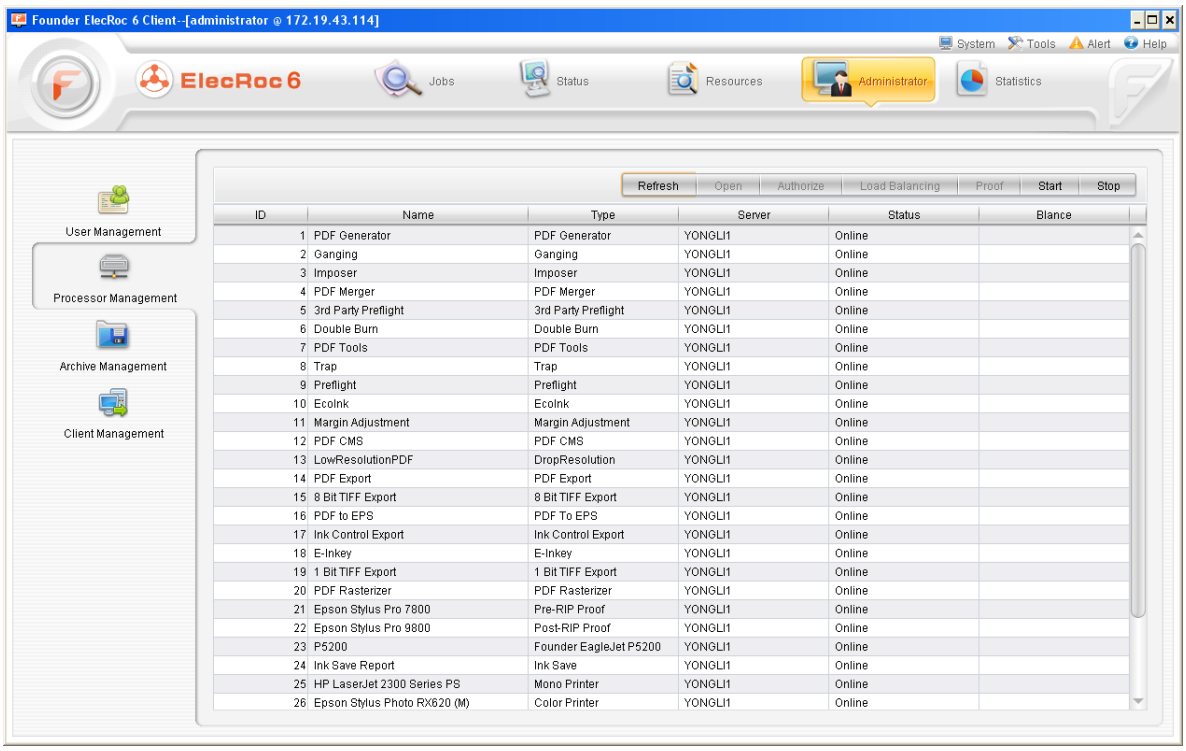


Figure 2-20

Resources	Administrator	Statistics
Profile Resource Imposer Template Digital Proof Traditional Press Digital Press Job Ticket	User Management Processor Management Archive Management Client Management	Ink Amount

Table -3

2.1 Users Management

In the module **Administrator** > **Users Management**, you can create, edit or delete a user or user group, and control its authority to use the modules of ElecRoc.

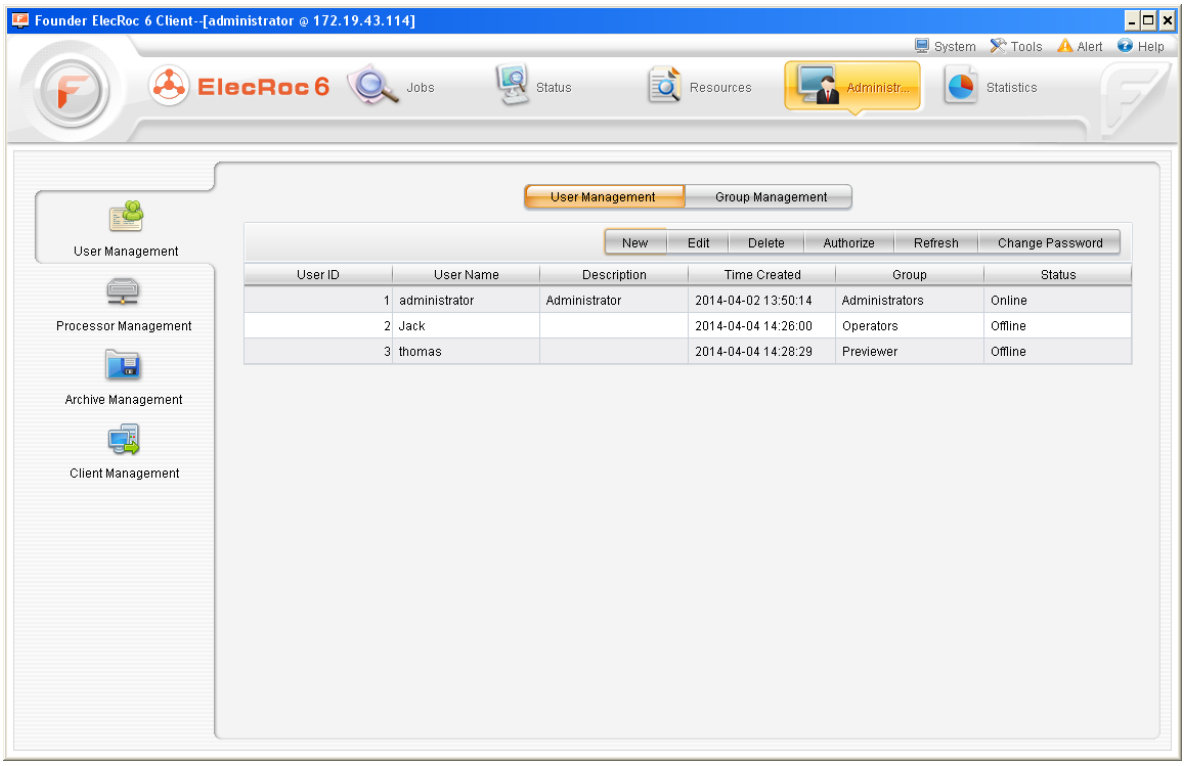


Figure 2-21

2.1.1 User Management

1. View Users

You can view all users in your ElecRoc system, learning its name, description, time created, group it belongs to, and the status. The *administrator* is the system-defined user to administer ElecRoc.

The **Refresh** button enables you to manually update the information in real time.

2. Create a User

Click **New** to open the **New User** dialog box, see the left figure below.

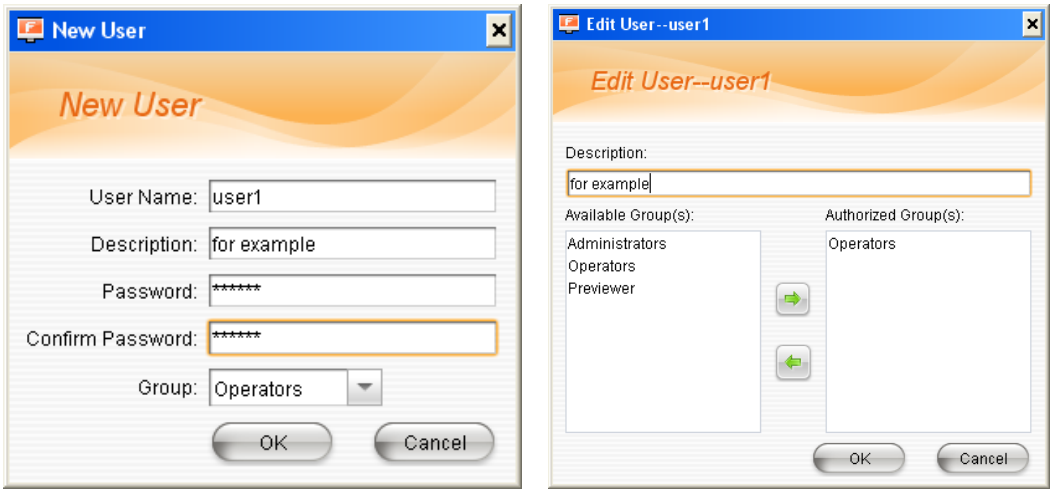


Figure 2-22

Input the user name, and if needed, the description and password. And then click **OK**. Note that the upper and lower case letters are distinct for the user name, for example, User1 and user1 are two different names.

3. Edit a User

To add a user into one or more user groups, or to modify its description, double-click the user in the user list, or choose it and click **Edit**. The **Edit User** dialog box then appears. See the right figure above.

At the left lists all the user groups in your ElecRoc system; at the right shows the group(s) the user belongs to. Choose a group from the left and click the arrow, the group will be added to the right. Choose a group from the right and click the arrow, the group will be removed from the right.

You can modify the description in the **Description** edit box.

4. Authorize a User

To manage the user's authority for using ElecRoc's functional modules, click **Authorize**.

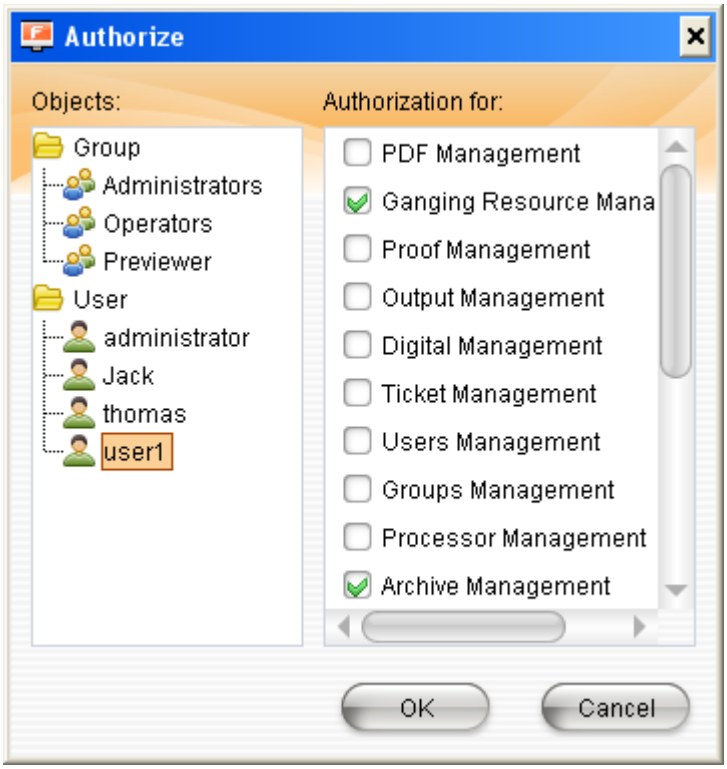


Figure 2-23

The left column shows all the groups and users in ElecRoc, the right list displays ElecRoc's modules. Choose a user or group at the left, and you can see at the right the authority the user or group has. The modules authorized are checked. Some checked modules may not be canceled; this must be that the user belongs to a group and the group has been authorized for these modules. You can cancel these modules when you choose the group at the left.

To re-define the user or group's authority, you can check or uncheck the modules as needed. And then click **OK** to confirm.

Modules that can be authorized include:

PDF Management **Proof Management** **Output Management** **Digital Management** **Ticket Management** **Users Management** **Groups Management** **Processor Management** **Archive Management** **Ink Statistic Management**	They represent the administrative modules under the three navigator icons **Resources**, **Administrator** and **Statistic**s. If checked, the user can access corresponding modules. E.g., if you leave the box **Processor Management** unchecked, after the user logins ElecRoc he or she cannot see and use the module **Administrator** > **Processor Management**.
Ganging Resource Management	It controls if the user can see and use the administrative module **Resources** > **Imposer Template**, and if the user can see and use the Composer modules, including the tabs *Plate*, *Paper*, *Template* and the resource explorer.
Backup Management	It controls if the user can access the item **Backup Manager** under the **Tools** menu. Only the user who has been authorized can see and execute this menu item.
Jobs Management	It controls if the user can open and delete jobs.
Jobs Resource Deletion	It controls if the user can delete the resource in jobs. In case that this module is NOT checked but the user has been authorized for modifying jobs in job authorization, the user can not delete the resource in the jobs created by other users, but can still delete the resource in the job created by him or her.
Page Replace	It controls if the user can use the Substitution function when he or she uses the Page Compare/ Substitution module in the job.
Status Monitor Management	It controls if the user can perform operations in ElecRoc Client's Status monitor. The user who has not been authorized for this module cannot control any other user's jobs, such as to stop jobs submitted by other user, however, he or she can still view all other users' operations. Irrespective of whether the user has been authorized or not for this item, he or she can always control his or her own jobs.
Imposer Template Management	It controls if the user can use the template module in Imposer.
Inx Management	It controls if the user can use the VDP (variable data print) module in the job.

Table -4

5. Change Password

Here the administrator can reset other user's password.

6. Delete a User

Choose a user from the list and click **Delete**, if you want to remove it from ElecRoc system.

2.1.2 Group Management

The group management is the same as the user management on the whole.

A little difference lies in that you should specify the users the group contains. In the **New Group** or **Edit Group** dialog box, choose the user(s) from the left and click the arrow to add the user(s) into the group. Choose the user(s) from the right, and then click the arrow to delete the user(s) from the group. In addition, as to the group authorizing, note that the authorized modules are available for all the users the group contains.

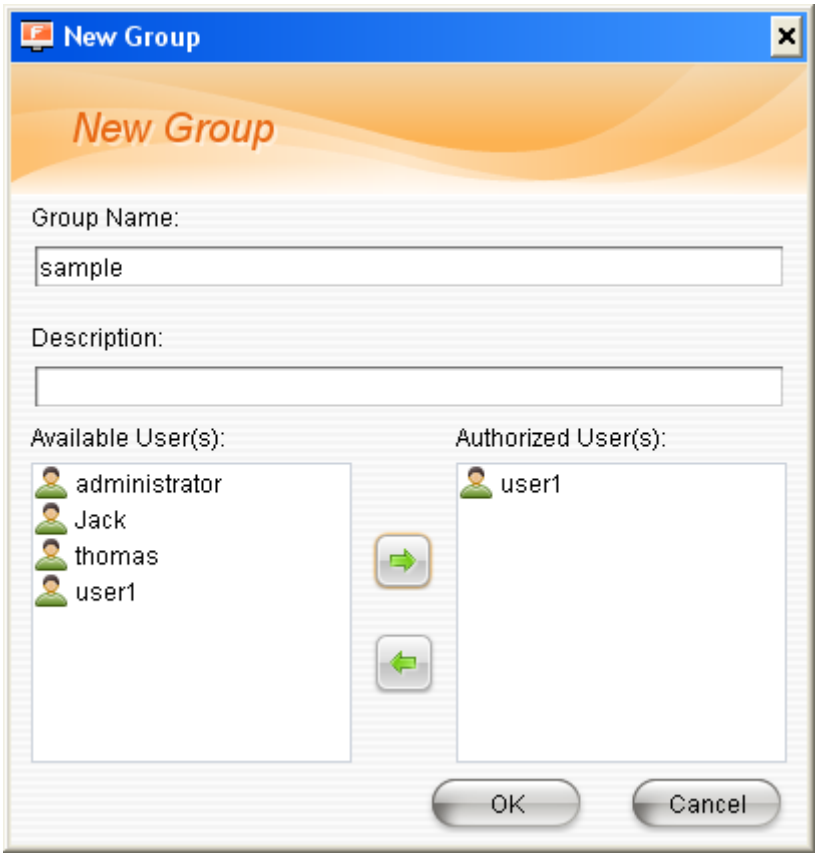


Figure 2-24

2.2 Processor Management

In the module **Administrator** > **Processor Management**, you can view all the processors available in your ElecRoc, start or stop their running, define their default parameter setting, and control if ElecRoc users can use them.

2.2.1 View Processors

You can view what processors are installed in your ElecRoc, their names, types, versions, servers, and status. The **Refresh** button enables you to manually update the processor information.

2.2.2 Start or Stop

Click the button **Start**, and you can start all the processors. The processors can be used to process files only when they have been started. Click the button **Stop**, and you can stop all the processors. If you want to start or stop only one of the processors, please choose the processor and right-click your mouse, and then choose the item **Start** or **Stop** from the pop-up menu.

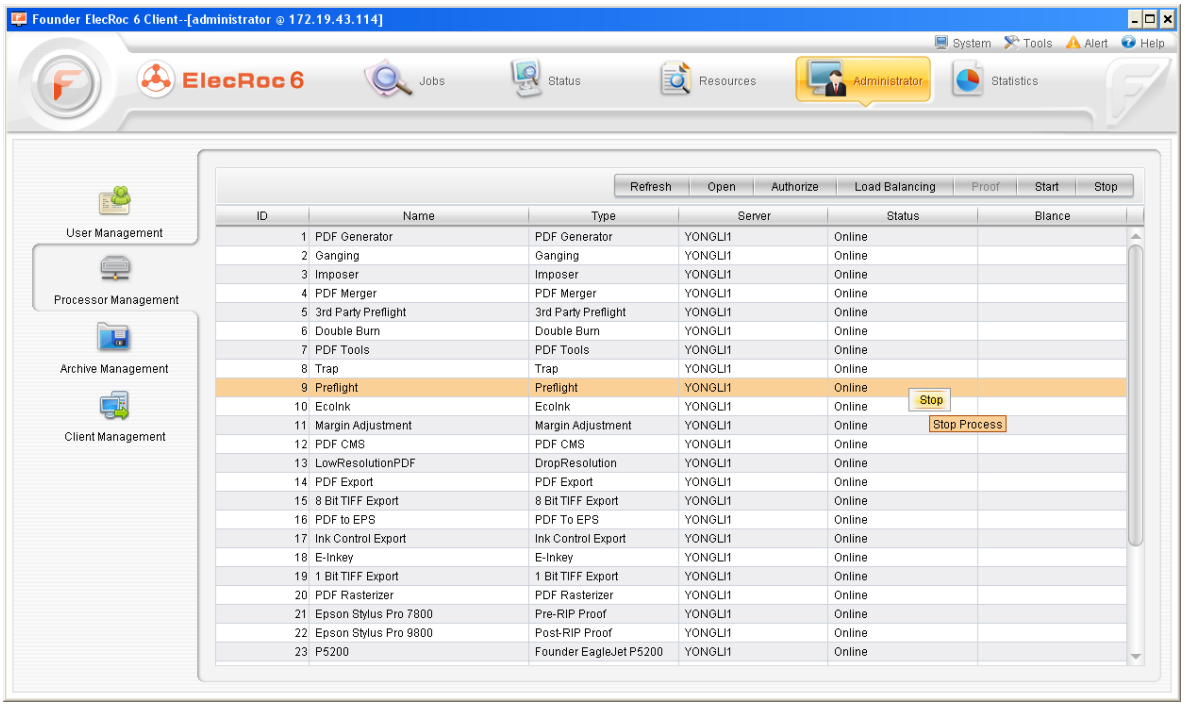


Figure 2-25

2.2.3 Define Default Parameter Setup

Double-click a processor in the list, or choose it and click **Open**, to open its parameter setup window, and then configure the parameters as needed. After the configuration, click **Apply** to save the setting as the global parameter setup, i.e. the default parameter setup for this processor when you add it as a node into a job. For details, refer to Chapter 4 Processor Parameter Setup.

2.2.4 Authorize

Choose a processor and click **Authorize**. In the pop-up window you can control the authorities for ElecRoc users to use the processor, view and modify its parameter setup.

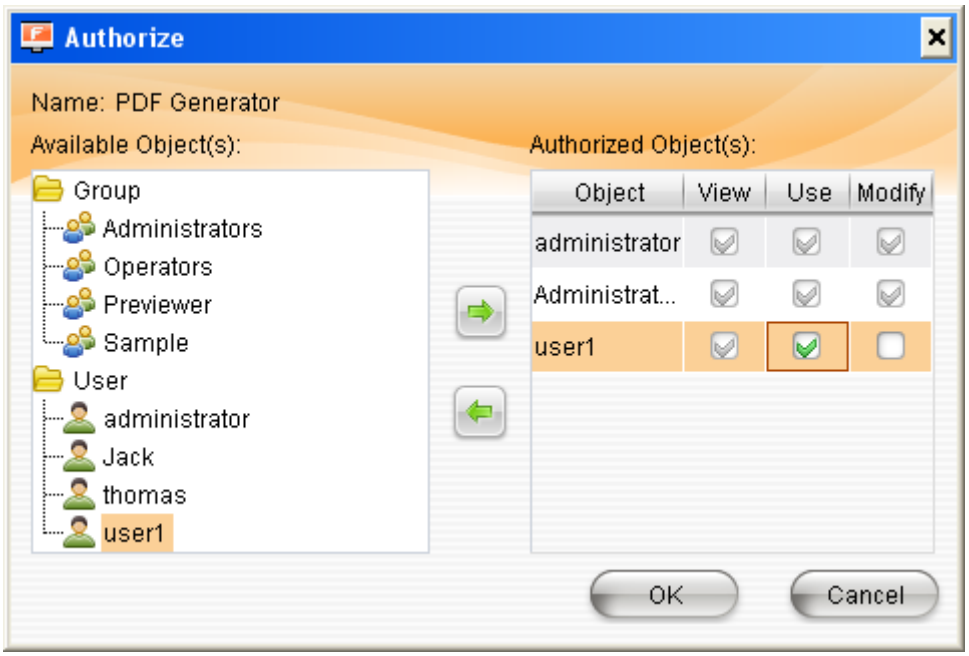


Figure 2-26

At the top displays the name of the current processor. The left are ElecRoc users, and the right lists authorized users or user groups. To authorize, choose one or more users or user groups at the left, and click the button, adding it to the right list. And after that, you can control the specific authorities of an authorized user by way of the **View**, **Use** and **Modify** checkboxes, i.e. whether the user can view its parameter setup in the job, use it in the job, and modify the parameter setup.

To cancel the authority, choose one or more users or user groups at the right, and click the button.

2.2.5 Proof

This function is applied to digital proof processors, color digital printing devices, and inkjet printing devices. It can start up the Color Tools, with which you can create the CMF file for selected processor or printing device, so as to ensure the color consistency and improve the quality for your output.

To create a CMF file, choose an applied processor and click the button **Proof**, and you can see that ElecRoc will automatically create a job and put in related processor nodes in that job. Here we take the proof processor as example, the auto-created job will then contain a proof node. Double-click the proof node to open its parameter setup window, and then define related proof parameters, and after that click the **Proof** button in the parameter setup window. The Color Tools will then be started up.

For details about the Color Tools, see the manual *Color Tools User Guide*.

2.2.6 Load Balancing

This function is designed to balance the workload among the processors of same type, with an aim to avoid overload. It's applied to such types of processors as PDF Generator, Margin Adjustment, Preflight, EcoInk, PDF Export, PDF Rasterizer, 1 bit TIFF Export, Printer, and Proof. When there are two or more than two processors of same type existing in your ElecRoc system, you can open the following dialog box by choosing one of the

processors and clicking the button **Load Balancing**.

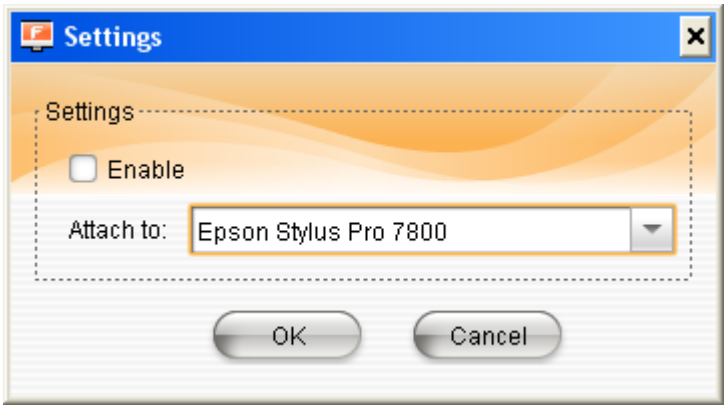


Figure 2-27

Check the box **Enable** and choose a processor in the dropdown list. The overload on the current processor (if any) will then be assigned automatically to your chosen processor here, to realize the workload balancing.

2.3 Archive Management

The module **Administrator** > **Archive Management** enables you to archive the job resource, such as nodes, node parameter setup, pages, signatures, and the system resource, including user-defined marks, preflight and trap profiles, proof color solutions, curves, and spot color tables, to media like local hard disk. You can also upload the archived resource into ElecRoc.

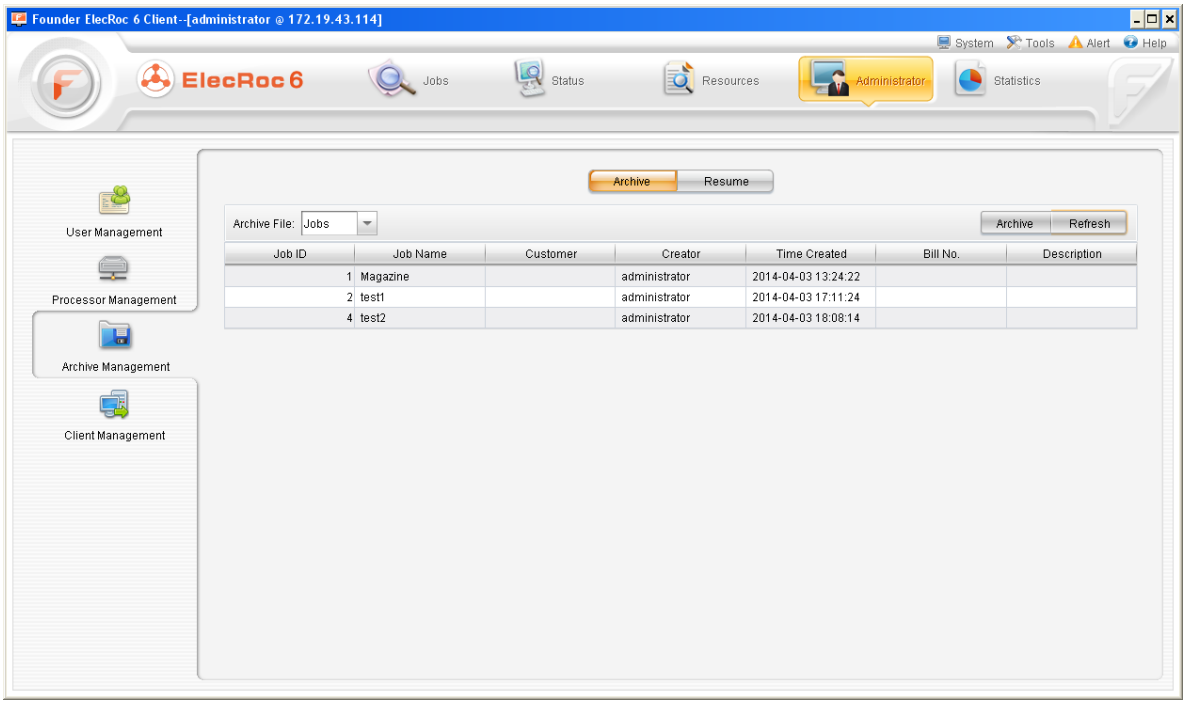


Figure 2-28

2.3.1 Archive

Under the **Archive** tab lists all the resources currently in system that can be archived, classified into two types: **Job** and **Resource**, as in the **Archive File** dropdown list. Choose specific resource to be archived (use the right-click menu item **View Info** to view the resource size), and then click the **Archive** button. After you specify the name and location for the archive file in the popup dialog box, ElecRoc will start the archiving. A bar appears, showing the progress. The archiving completes when the bar reaches 100%.

Archive files for jobs and resources are suffixed respectively with .arc1 and .arc2. The archived files are all displayed under the **Resume** tab. At the time you specify the name and location for the archive file, if found an archive file with same name existing under the specified location, ElecRoc will prompt you whether to overwrite the file. In addition, do not perform other operations while the archiving is under way, such as modifying parameter setup, processing files, for these operations may slow down the archiving speed, and may result in unexpected error.

2.3.2 Upload

Switch to the **Resume** tab. Here lists all the archived resources, accordingly in two types: **Job** and **Resource**, as in the **Archived File** dropdown list.

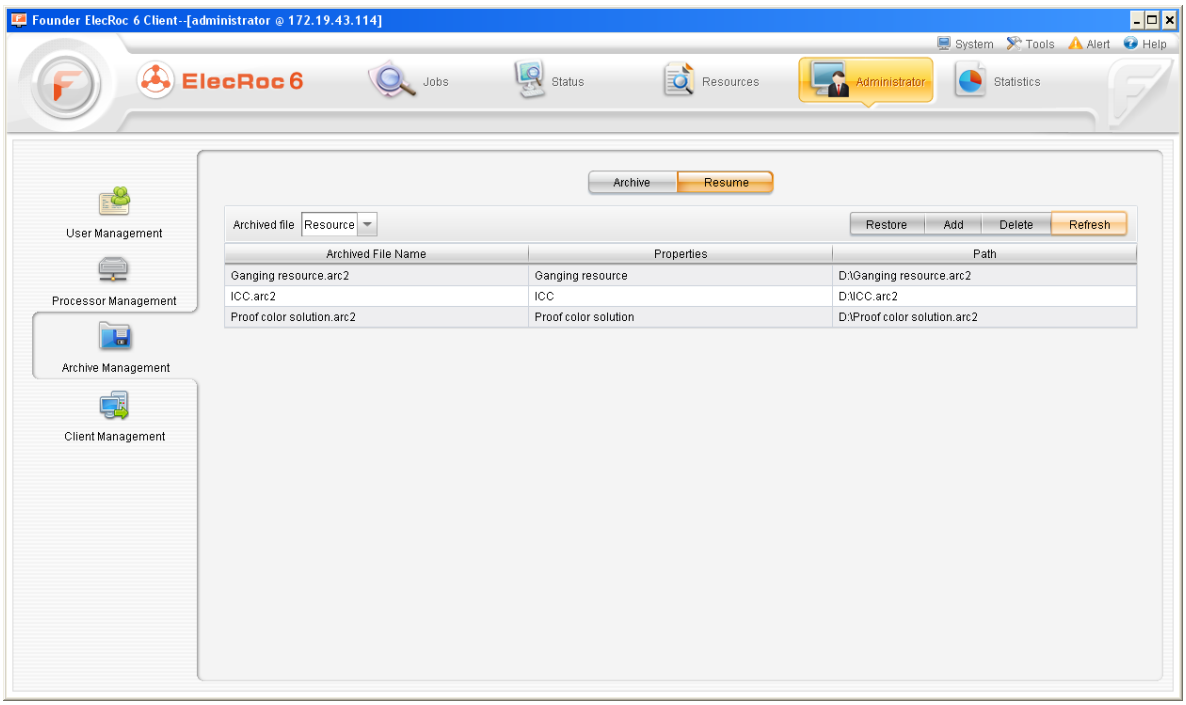


Figure 2-29

To upload the archived resource into ElecRoc system, choose the archive file and click **Restore** (or right-click and choose **Restore**). If the archive file you want to upload is not listed here, you can click Add to add it into the list.

If found a job or resource file with same name existing in system, ElecRoc will prompt you whether to overwrite the job or file. The uploading progress is shown with a bar. You can cancel the uploading when the bar doesn't reach 100%.

The **Add** and **Delete** buttons under the **Resume** tab are used to add and delete archive resources into or from the list. **Refresh** can update the list. **Restore**, **Add**, **Delete** are

also available in right-click menu.

2.4 Client Management

In the module **Administrator** > **Client Management**, you can view what clients are connecting your ElecRoc server. The information includes computer name, IP address, and the latest login time. The **Refresh** button enables you to manually refresh the information in real time. And if needed, you can forcibly disconnect any of the clients. To do this operation, please choose the client you want to disconnect, and then click the button **Force Disconnect**.

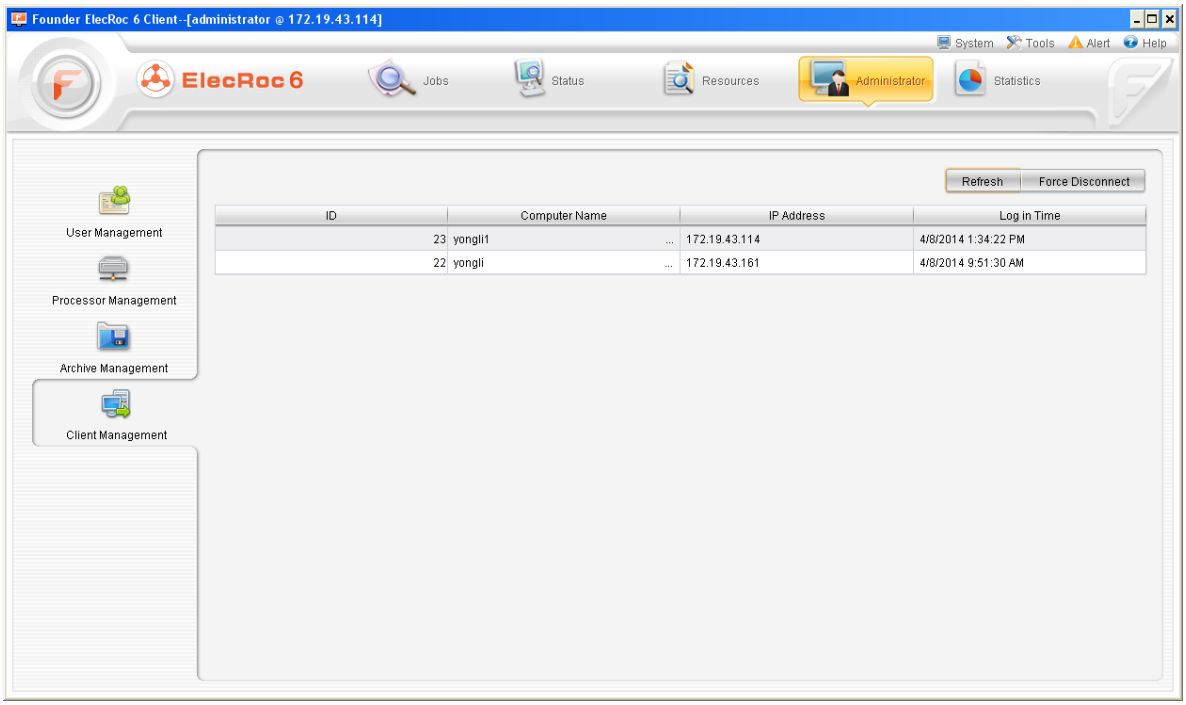


Figure 2-30

2.5 Profile Resource

In the module **Resources** > **Profile Resource**, you can manage the resource applied in PDF process, including preflight profiles, trap profiles, ICC profiles, spot color tables, and EcoInk solutions, for use by processor nodes like 3rd Party Preflight, Trap, PDF CMS, PDF Rasterizer, and EcoInk in your job.

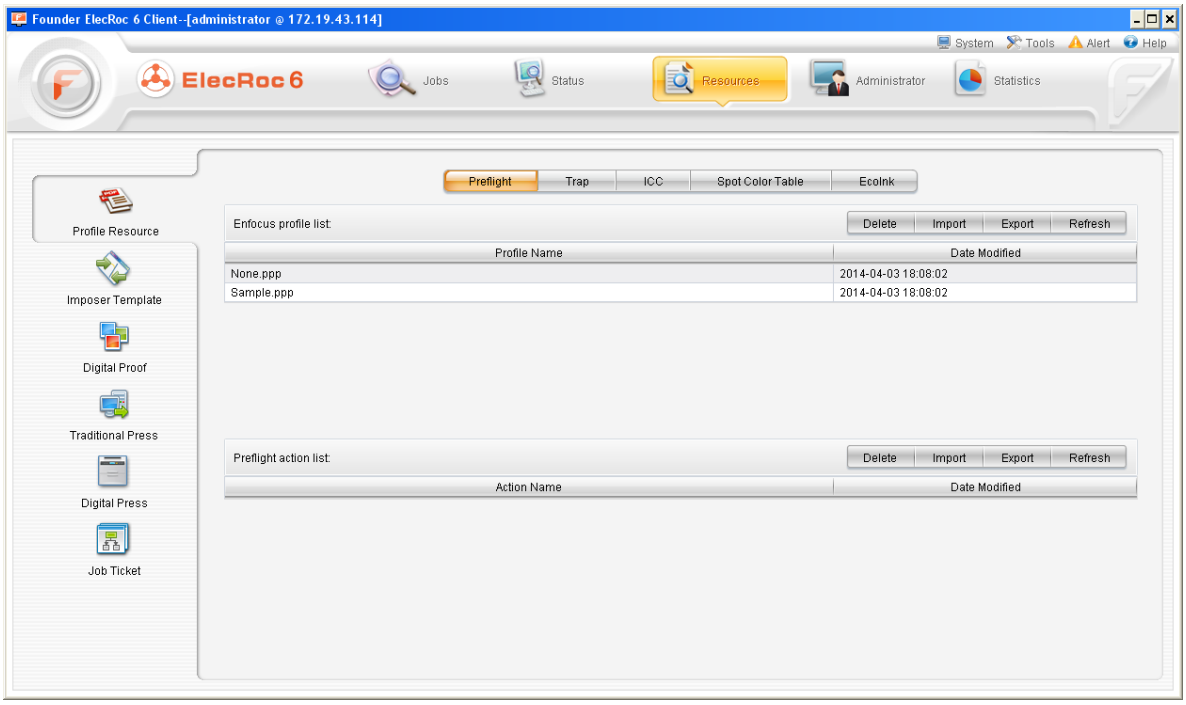


Figure 2-31

2.5.1 Preflight

ElecRoc integrates with the preflight module from the third-party Enfocus. Here you can view, import, export or delete the preflight profiles and action files used by this preflight.

To import these two types of files into ElecRoc, click **Import**. Enfocus preflight profiles have the file extension of .ppp, while action files have an extension of .eal. To export for some reasons e.g. backup, click **Export**. And click **Delete** to remove unneeded files.

Enfocus preflight profile and action file are available at Enfocus' website:

http://www.enfocus.com/contentpage.php?id=918

http://www.enfocus.com/contentpage.php?id=929

2.5.2 Trap

Here you can create, edit, delete, import or export the ink profiles used by the Trap processor.

At the time you configure the ink setting in the Trap processor parameter setup window, you need to apply an ink profile. This profile defines the separations in job files, the ink densities and ink types.

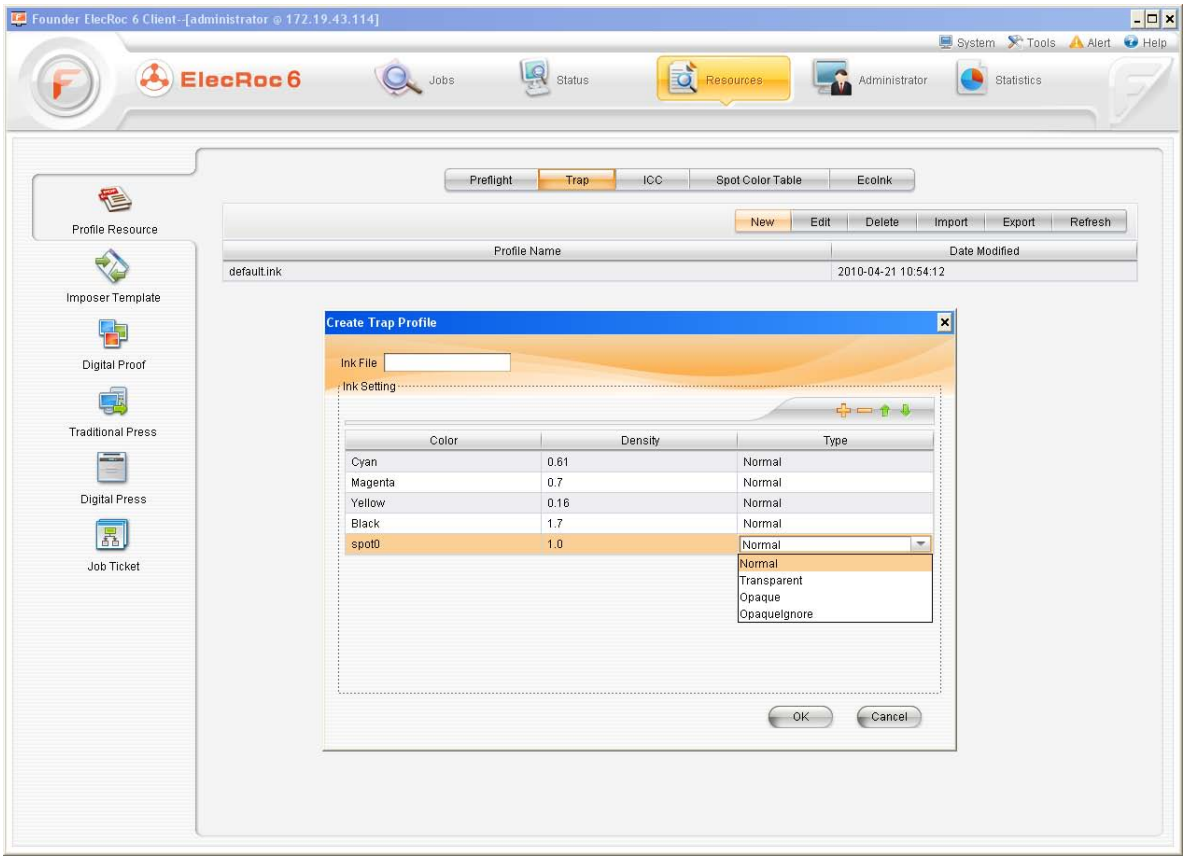


Figure 2-32

In each ink profile, the four basic separations, C, M, Y and K, are absolutely necessary. They cannot be renamed or deleted, their ink types are fixed to normal, and only their ink densities can be edited. The spot colors can be added or deleted without limit. Their ink densities, ink types and trap sequence can all be edited. There are four ink types for spot color, normal, transparent, opaque, and ignore opaque. For details on ink density, ink type and trap sequence, refer to Chapter 4.6 Trap.

The window for creating an ink profile can be opened by clicking the **New** button. The adding, deleting and sequence adjusting of spot colors can be performed with the buttons, , and . The window for editing an ink profile is the same, which can be opened by double-clicking the profile, or by clicking **Edit**.

In addition, you can export the ink profiles from ElecRoc to a specified location, or import ink profiles into ElecRoc. Before exporting, you can choose one profile, or more than one profile, at the same time.

2.5.3 ICC

Here you can import or export various types of ICC profiles that can be used later when you configure the color management parameters for the PDF CMS or PDF Rasterizer node, or when you make an EcoInk solution.

The **ICC Type** dropdown box lists 7 ICC profile types, CMYK, CMYKLink, RGB, RGBLink, Gray, GrayLink and DeviceN. Among them, xxxLink refers to Device Link, and DeviceN refers to the optional ICC profiles when the output mode is set to HiFi in PDF CMS's processor parameter setup.

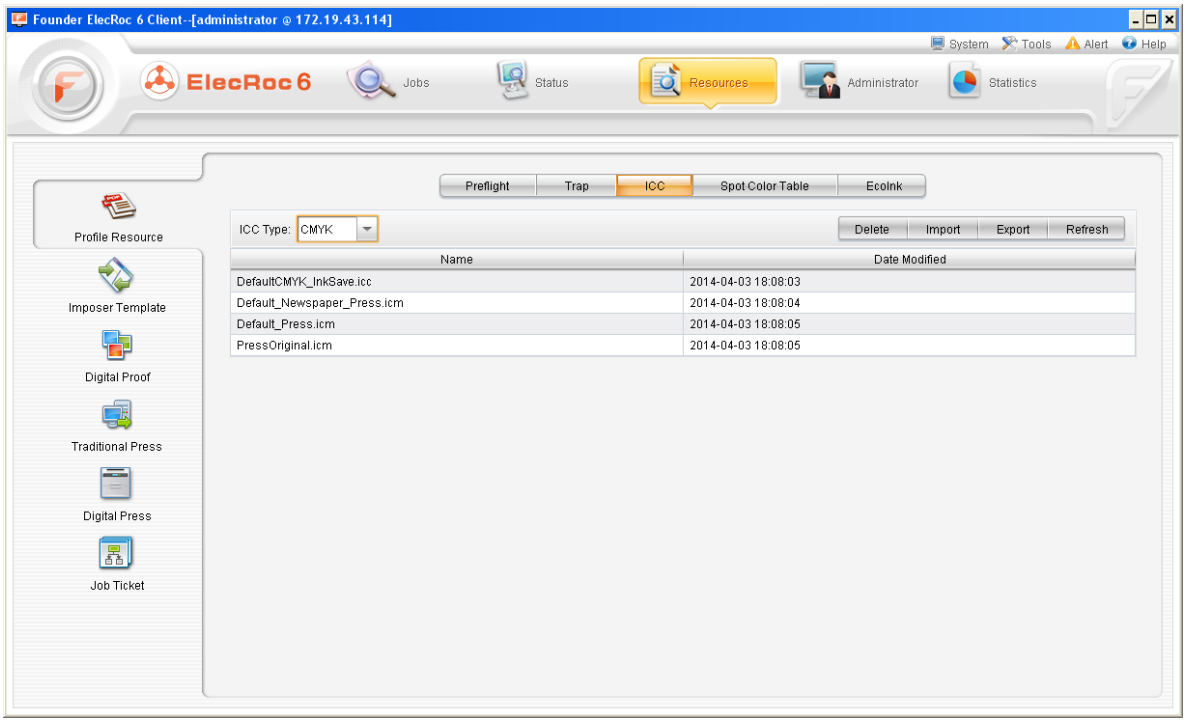


Figure 2-33

2.5.4 Spot Color Table

Spot color table is used to control the output color value for each spot color when it is output by way of CMYK simulation. Classified into two types, **Custom** and **System**, the spot color tables are widely used in digital proof, rasterizing, and digital printing.

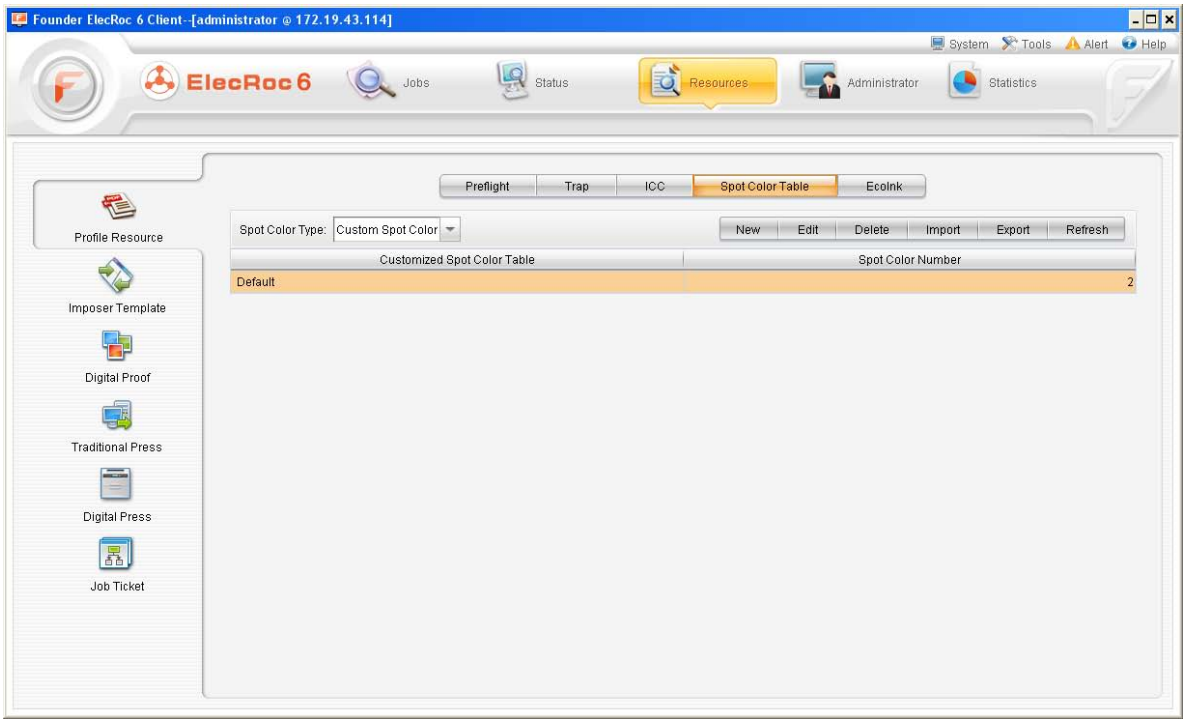


Figure 2-34

Here you can create, edit, delete, import and export the user-defined spot color tables, which can be used later in configuring the color parameters for digital proof, the PDF Rasterizer parameters, or the color parameters for the digital printing devices.

Here you can also view the system-provided spot color tables.

1. Create spot color table

Switch the type to **Custom Spot Color**, and click **New**.

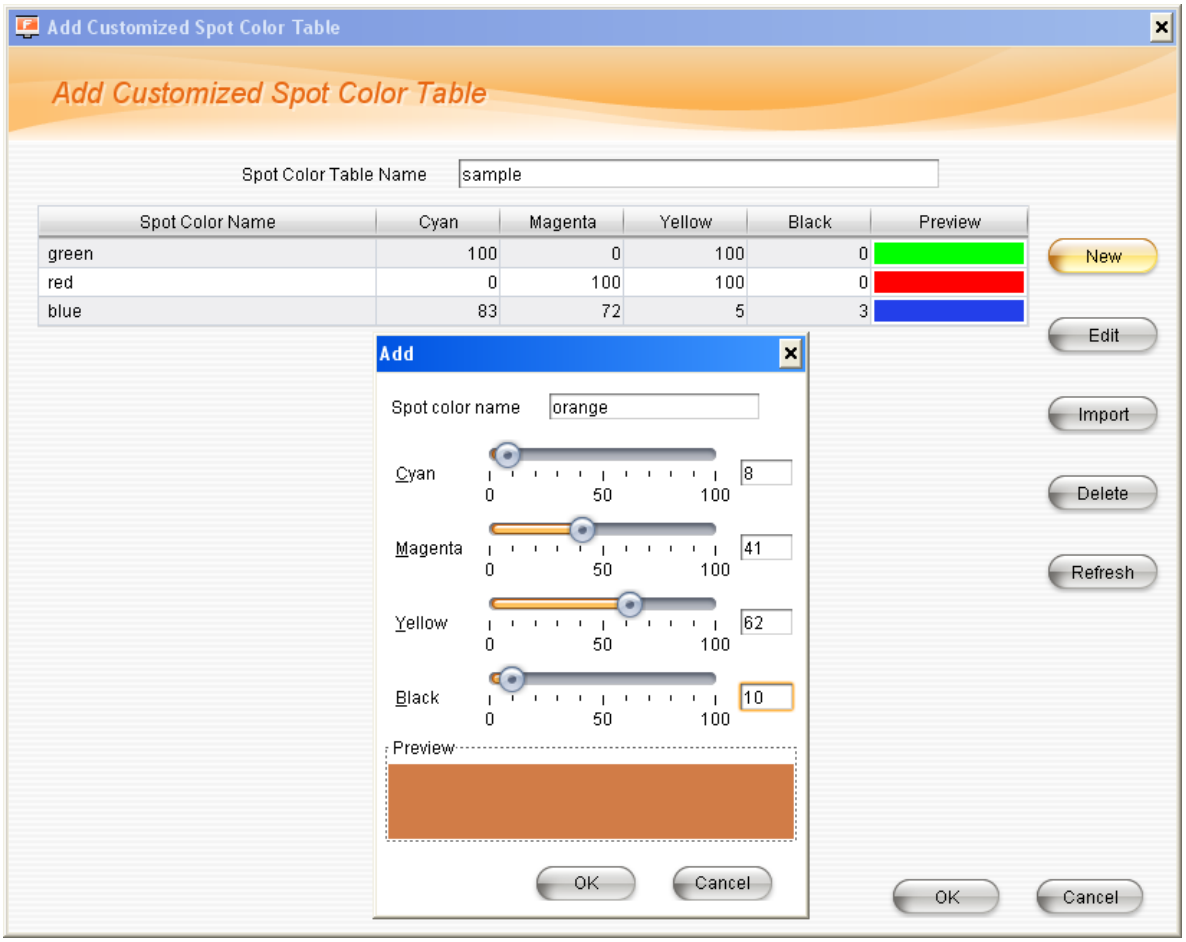


Figure 2-35

First, input the table name in the **Spot Color Table Name** edit box.

Then, click **New** to add spot color. You need to specify the spot color name and its CMYK values. After you add a spot color, you can click **Edit** to modify the values, or **Delete** to remove unneeded spot color. You can also click **Import** to import spot colors from other spot color tables.

And then, click **OK** to save the table.

2. System spot color table

This table collects the system-provided spot colors that aren't allowed to be edited or deleted.

You can import the system spot color to a specified custom spot color table. Open the system spot color table and choose any spot color, then right-click and choose **Import to custom spot color table**.

3. Apply spot color table

For digital proof or digital printing, please perform as follows:

1. Create a custom spot color table according to the introduction above (for simpleness, you can also directly use the system-built-in spot color table *Default*).

2. Submit your file to PDF Generator in your job. After PDF Generator's processing, choose the generated PDF page, right-click and choose **Page Info**, and then you will see all the spot colors contained in your file. Composite file usually contains complete spot color names and color values, while separation file usually doesn't. In case that the source file doesn't contain detailed spot color values, by default, ElecRoc will define the values as C=M=Y=0 K=100.

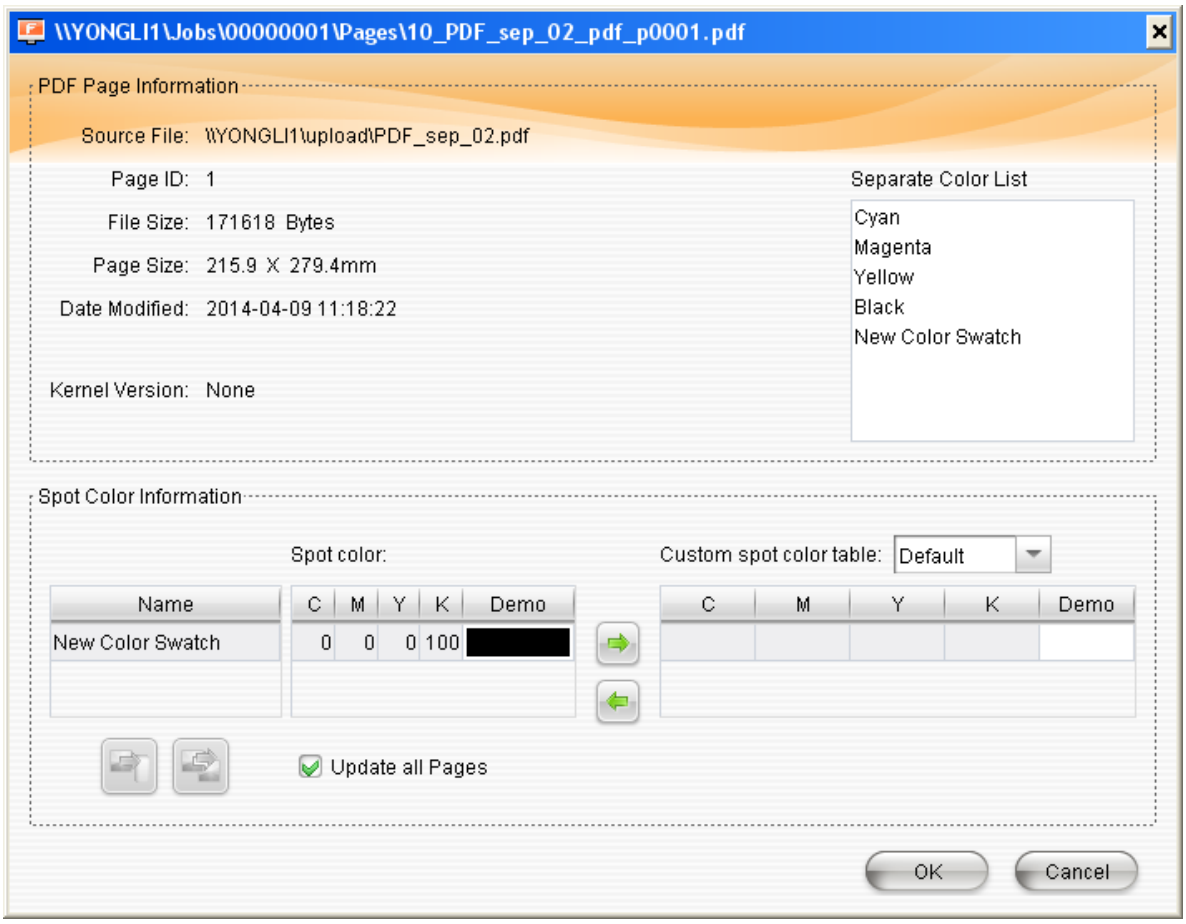


Figure 2-36

3. Confirm if the color values are exactly the ones you want the spot colors to be output with. If not, please click the values to modify. This step is especially necessary for separation file that hasn't defined the spot color values.

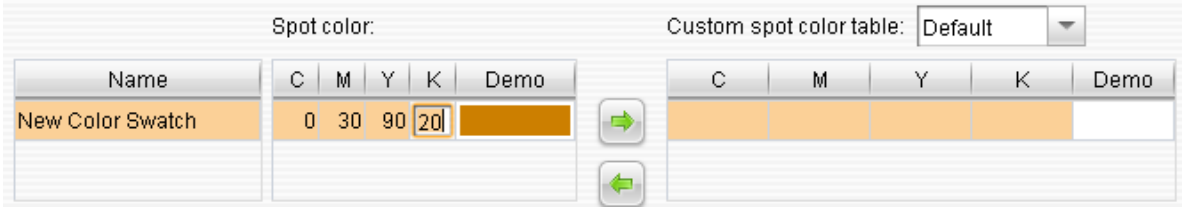


Figure 2-37

4. At the **Custom spot color table** dropdown list, choose the table that you want to use. And then choose the modified job spot color(s), and click the button to add them into the table.

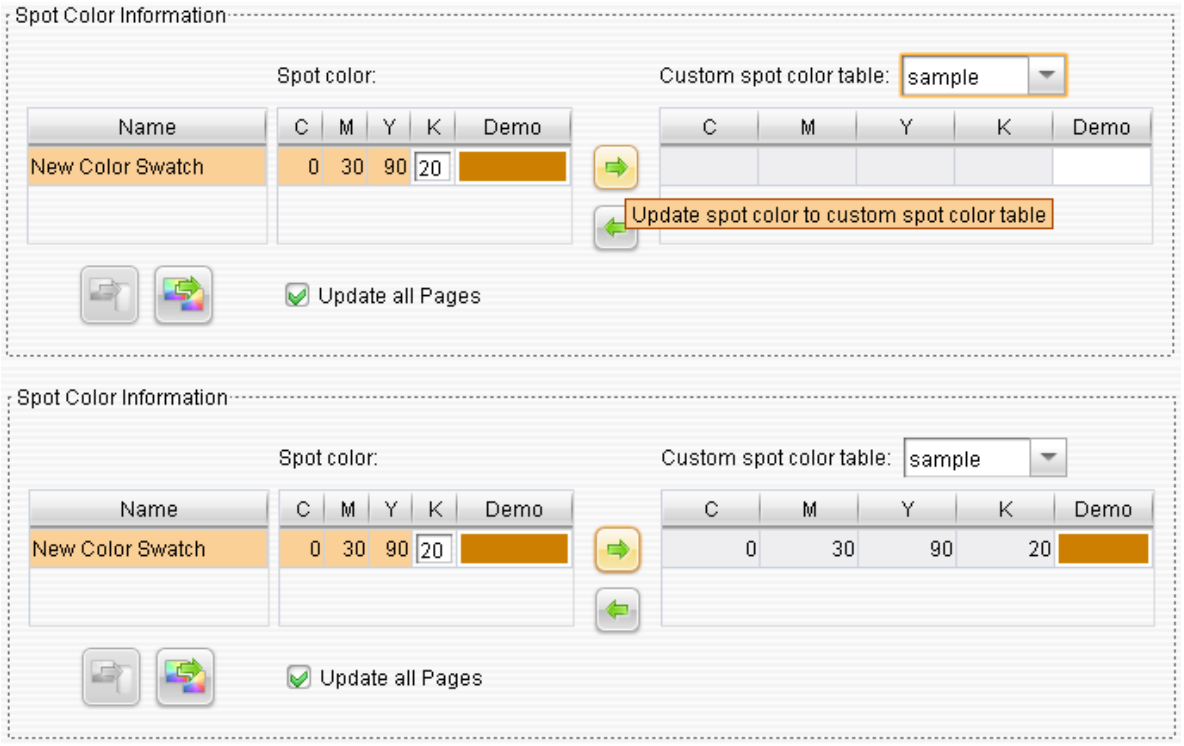


Figure 2-38

5. Repeat the operations above to examine the spot colors on other pages. Modify their values if needed, and then add them to the spot color table.

6. At the time when you modify the output values for the spot colors, you can also first add the spot colors into the spot color table, and then switch to the module **Resources** > **Profile Resource** > **Spot Color Table**, to modify the color values.

7. Double-click the proof node or digital printing device node in your job, find out the parameter **Color** > **Spot Color Table**, or **Color Calibration** > **Spot Color Replace**, and then choose your spot color table.

8. Rules for ElecRoc to process the spot colors when you have applied a spot color table: 1) if you have applied a CMF file and have defined the spot colors within the applied CMF file, ElecRoc will first use the color values defined within the CMF file to output spot colors; otherwise 2) use the values defined in spot color table to output spot colors, but as to spot colors with same name, if the color values pre-defined in source file are different from those defined in the spot color table, ElecRoc will still use those defined in the table to output spot colors; 3) in case that you haven't added spot colors into your spot color table, ElecRoc uses the values pre-defined in the source file to output spot colors.

For PDF rasterizing:

The steps to apply a spot color table are similar to those above. When you have added the spot colors from the source page to your spot color table, double-click the PDF Rasterizer node in your job, and under the **Screen** tab, click to import the spot colors from the spot color table. After the importing, you can configure the output mode, color values, and screen setting for the spot colors, and after the configuration, you can click to save

the modified color information, including color name and values, back into the table.

2.5.5 EcoInk

Here you can create, edit, delete, import and export EcoInk solutions, which can be used when you configure the parameter EcoInk Solution for the processor EcoInk.

To create a new solution, click **New**. Define the parameters in the pop-up window, including the solution name, and then click **OK**.

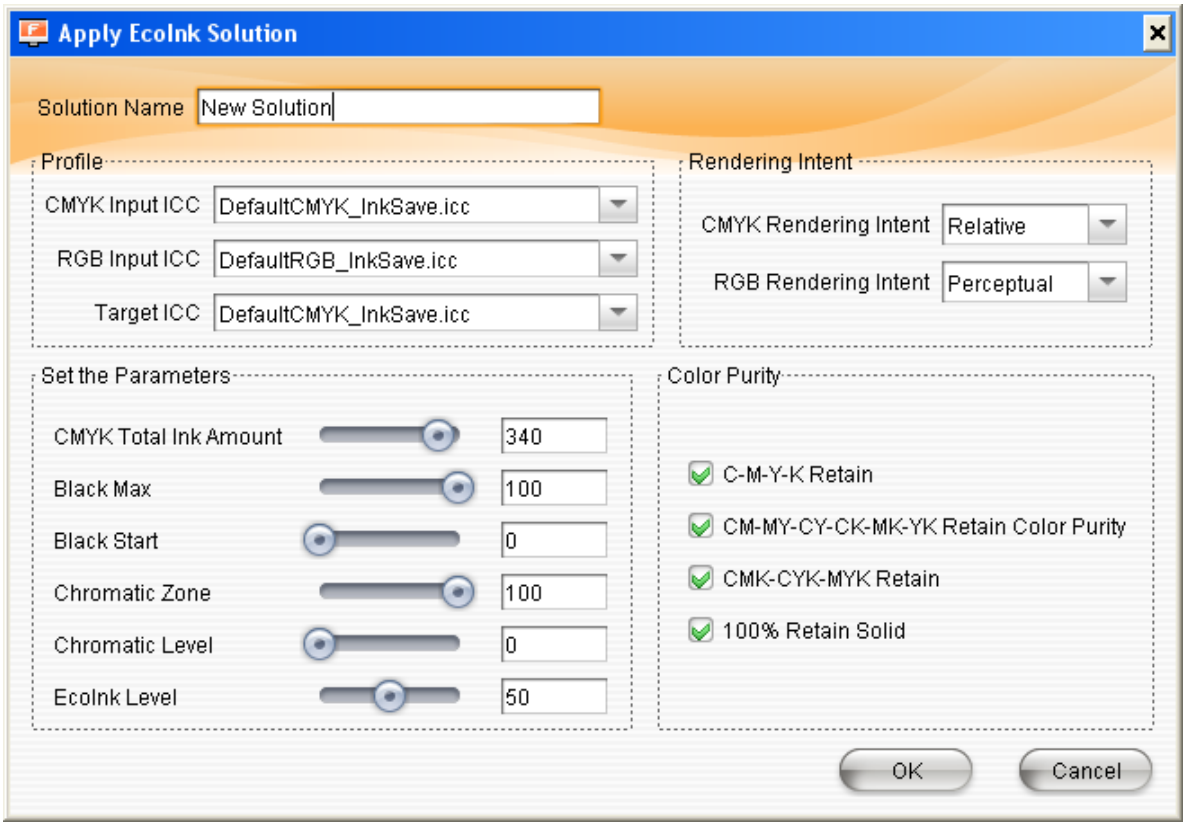


Figure 2-39

- **Solution Name**

The name of EcoInk solution. It becomes non-editable when you edit the solution.

- **Profile**

EcoInk process changes color values, and therefore, you need to provide the input and target ICC profiles, to ensure the color quality and consistency. ElecRoc builds in a few ICC profiles for you to choose, some of them are industry standard ICC profiles. You can also use custom profiles, but need to import them into ElecRoc beforehand, under the module **Resources** > **Profile Resource** > **ICC**.

- **Rendering Intent**

You can separately configure the rendering intent for CMYK and RGB. There are 4 options, Perceptual, Saturation, Relative, and Absolute.

- **Set the Parameters**

CMYK Total Ink Amount: To limit the total amount of CMYK inks to the value specified here. This limit can maximize the ink saving, but if the value is set too low, it may reduce

the color space, resulting in color loss.

Black Max: The maximum amount of black ink.

Black Start: It controls from which point the black substitution starts, and it determines the shape of the black substitution curve. The start point for black substitution in the tone is also called GCR start point. The range of black substitution is from the start point to the darkest in the shadow. The bigger this value, the less the GCR is applied to the gray in high light.

Chromatic Zone: It controls the range of CMY chroma space. Bigger value enables wider range.

Chromatic Level: 0-100, the bigger the value, the higher the level will be, and the more the color inks remain, less ink is thus saved.

EcoInk Level: The higher the level, the more the black ink can be used for CMY. The default value is 50.

- **Color Purity**

During the EcoInk process, you can keep the purity of some colors unchanged. These colors may include:

C-M-Y-K Retain: only one of CMYK is unequal to 0, the rest three all equal 0.

CM-MY-CY-CK-MK-YK Retain Color Purity: any two of CMYK are unequal to 0, the rest two both equal 0.

CMK-CYK-MYK Retain: any three of CMYK are unequal to 0, the rest one equals 0.

100% Retain Solid: i.e. the color value for at least one separation is 100%.

Here ElecRoc also supports you to import or export the EcoInk solutions. You can export a selected EcoInk solution as a ZIP file from ElecRoc to your specified location, such as local hard disk, for backup or for use in upgrade. And you can import an EcoInk solution from an outside source into ElecRoc. When you import, you can choose whether or not to import the original ICC profiles at the same time, i.e. ICC profiles applied in the solution. Note that, if you choose to import the profile, you may replace existing profile with same name in your ElecRoc system, if any.

2.6 Imposer Template

In the module **Resources** > **Imposer Template**, you can create, edit or modify the imposer templates and composer templates that can be used by all ElecRoc clients.

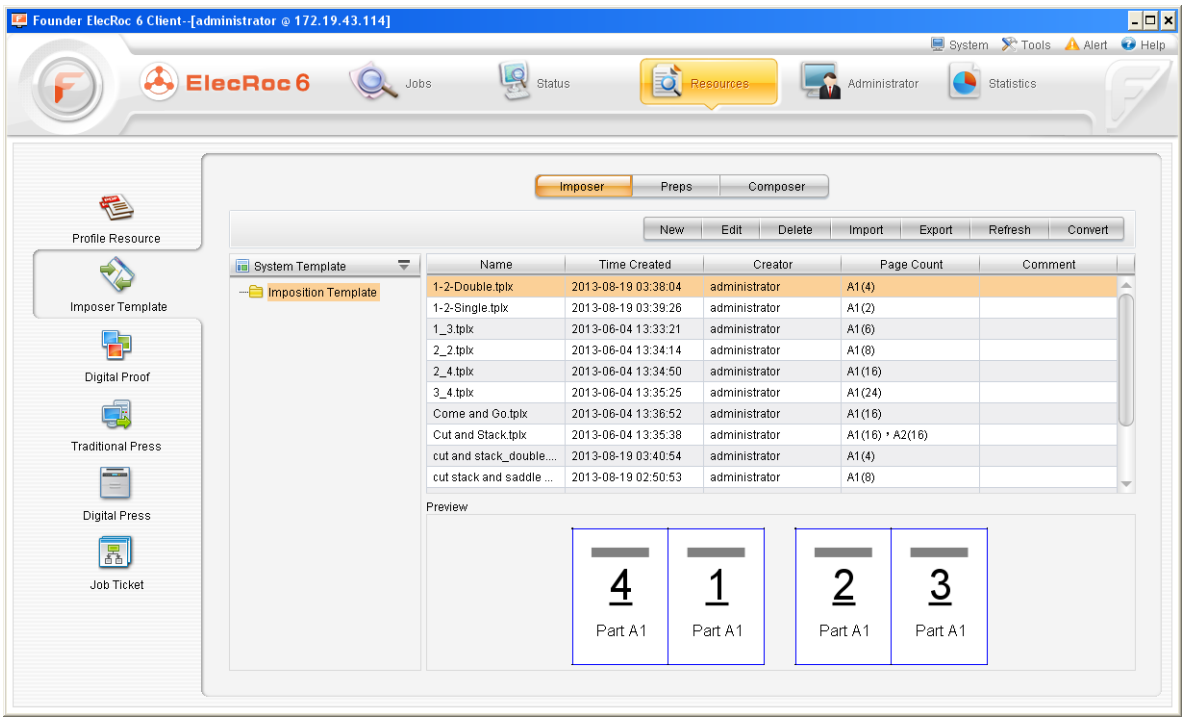


Figure 2-40

Note: *We will no longer provide the old imposer module and related maintenance since ElecRoc 6. For both our new and old customers, we strongly recommend the new imposer integrated in 6, i.e. the formerly named Imposer in v5.x. For our old customers using the old imposer, although we will remain this module for you during the upgrade, so as to ensure the consistency between original and renewed publications after the upgrade, we still strongly recommend you to use the new imposer to handle your new jobs. Old imposer templates can be converted to the format that the new imposer supports.*

2.6.1 Imposer

The operating window is shown above. The imposer templates refer to the templates used by ElecRoc Imposer processor. They are classified into system ones and job-level ones. System templates can be used in any job, by any user, on any Client, while the job-level templates are available only to one or more specific jobs.

Templates listed here are system ones. As shown at the left of the window, they are sorted and managed under a template directory, in which the *Imposition Template* is the root directory. Under this root directory, you can directly store your templates (by default, system built-in templates are stored under this directory), or you can create sub-directory. Click the icon ▼ aside, and you can expand a shortcut menu, and by using the items therein, you can create, delete, or rename a subdirectory.

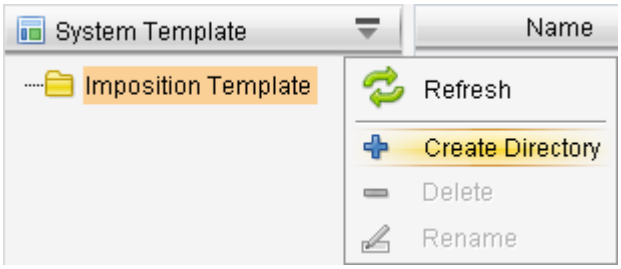


Figure 2-41

Choose one directory, and you will see all the templates under that directory at the right of the window, where you can view detailed information about the templates, including template names, time created, creator, page count, and comment.

The **Preview** area shows the preview image of your selected template.

Here you can create, edit, delete, import, export and convert templates, by using the buttons above the template list.

New, **Edit**: By clicking the button **New**, you can start up the imposer template editing program. After the editing, you can upload it to ElecRoc server. A click on **Edit** also starts the editing program, and in this case, you can edit selected template.

Import, **Export**: The exported file is suffixed with .tplxz, named as outputTplx.tplxz by default. You can customize the file name, and you can export more than one templates at one time.

2.6.2 Preps

ElecRoc imposer also supports you to use Preps templates.

Here you can create, delete, import, and export Preps templates. By clicking the button **New**, you can start up the Preps program. Make sure that you have installed the Preps software in your computer, or ElecRoc will report an error after you click **New**.

2.6.3 Composer

Templates here refer to the templates used by ElecRoc Composer processor.

Same as imposer templates, the composer templates are also sorted and managed under a template directory, in which you can create, delete and rename subdirectory. Choose a directory, and you can see all the templates under that directory. Information displayed about the templates includes template name, time created, creator, page count, and comment. Choose any template, and you can see its preview image. And by using the buttons above the template list, you can create, edit, delete, import, export, and refresh the templates.

2.7 Digital Proof

In the module **Resources** > **Digital Proof**, you can manage two types of resource involved in pre/post-RIP proof: CMF calibration files and color tune curves. Among them, the CMF files can be made by the Color Tools, while the color tune curves can be created here.

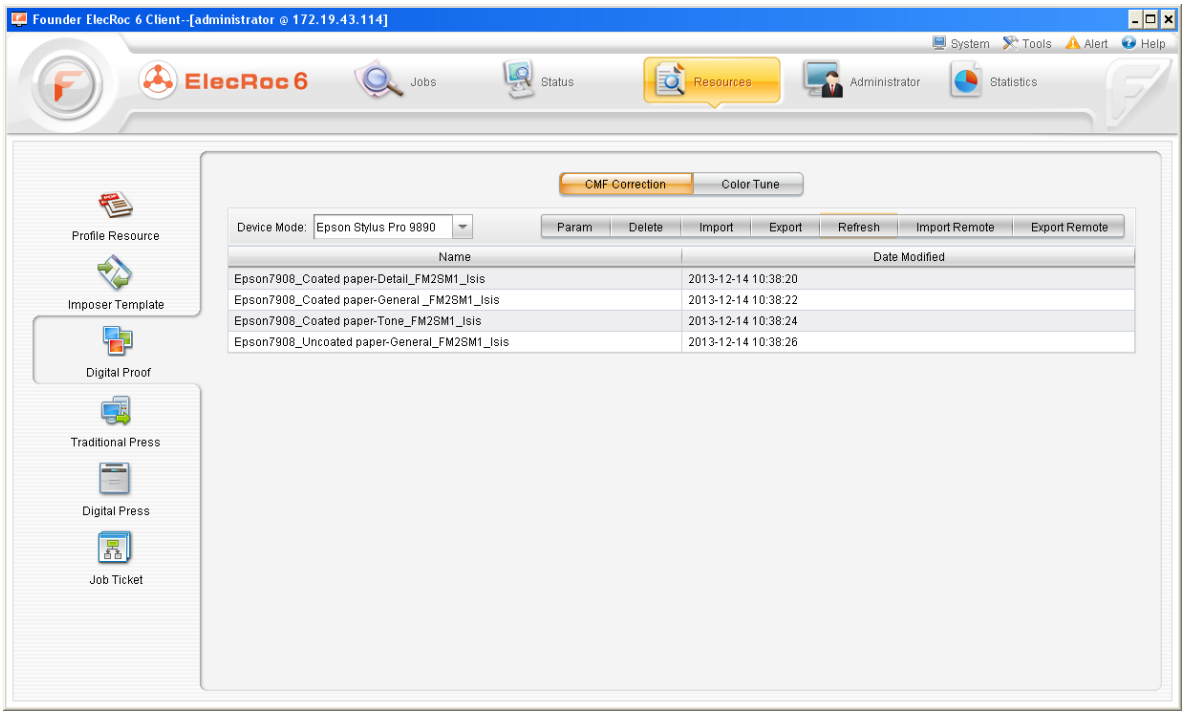


Figure 2-42

2.7.1 CMF Correction

A color calibration solution refers to a set of color management parameters, used for the user to proof with ease and efficiency. ElecRoc provides many built-in color solutions for each proof device model it supports. They are designed for the diverse environments the user may encounter, and can effectively meet their demands.

1. View Color Solution

Under the **CMF Correction** tab, choose a proof device from the **Device Mode** dropdown list, and then you can see in the below all the color solutions available for the device, including the system-defined ones and user-added ones. Double-click a solution, or choose it and click **Param**, to view its detailed information, such as applicable devices, color mode, resolution, ink type, media type, total ink, and etc.

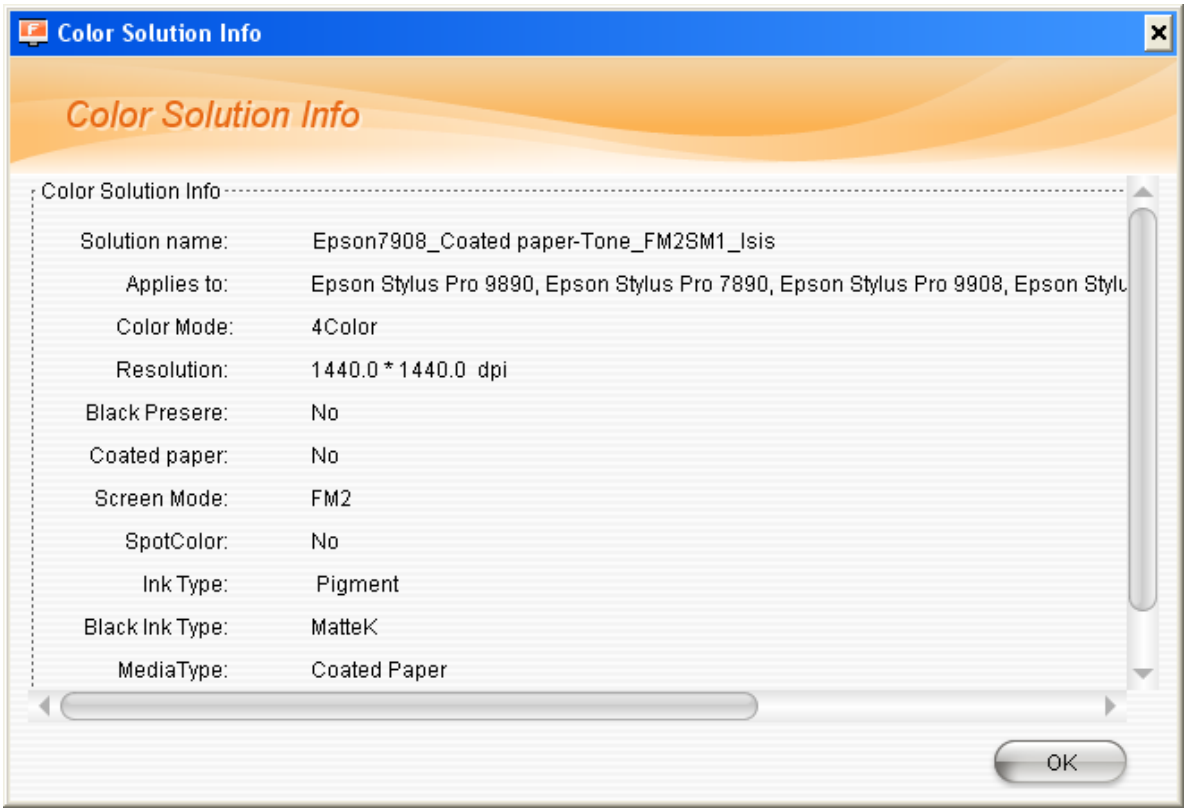


Figure 2-43

2. Remote Proof

Remote proof is designed to employ a time-saving and effort-saving method, to ensure your proof devices, of same model but from different locations, able to output proof samples consistent with each other. The general steps for remote proof are as follows:

1. Enter in **Resources** > **Digital Proof** > **CMF Correction**, choose a solution and then click **Export Remote**.

2. Send the exported solution file to your nonlocal colleague or customer.

3. Receive the solution at the remote location, then enter in **Resources** > **Digital Proof** > **CMF Correction**, choose **Import Remote**, importing the solution into ElecRoc.

4. Enter in **Administrator** > **Processor Management**, choose the processor and start up the Color Tools. Use it to perform a re-calibration on the solution. The solution can then be used as a formal and local solution after the calibration.

2.7.2 Color Tune

Curves here are applied to digital proof, and can be used when you configure the proof parameter **Color** > **Color Tune**. Operations on curves like creating, editing, deleting, importing and exporting are all supported.

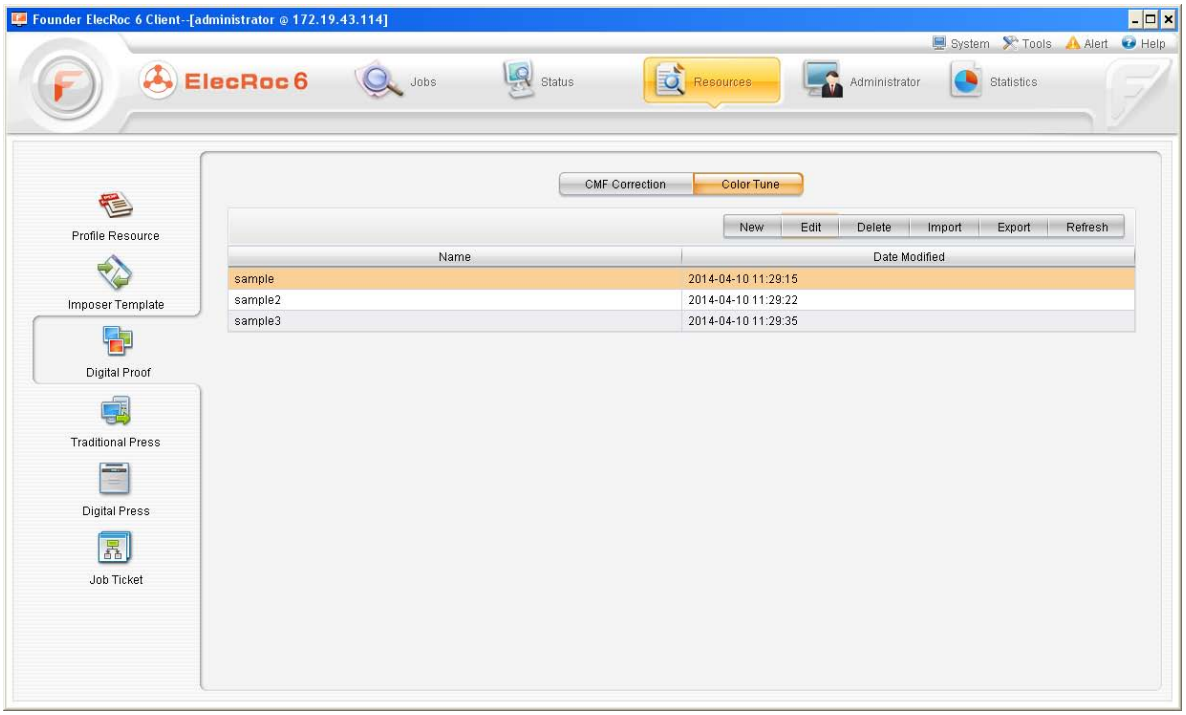


Figure 2-44

Steps for you to create a new curve:

1. Click **New** in the window to open the curve setup window.

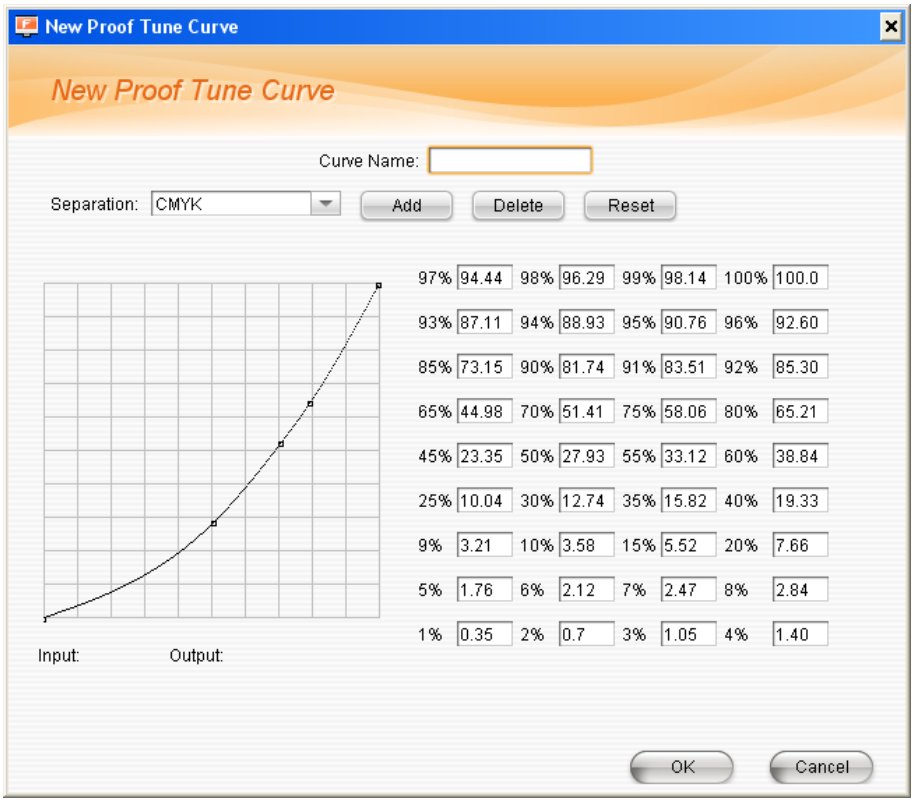


Figure 2-45

2. Input a name in the **Curve Name** edit box.

3. Choose a color separation in the **Separation** dropdown list. By default, options include CMYK, Cyan, Magenta, Yellow and Black. If you need to define curve for spot color, click **Add**, and then in the pop-up dialog box, choose spot color from spot color table existing in your ElecRoc system. In case that you haven't added the spot color into ElecRoc system, please switch to **Profile Resource** > **Spot Color Table**, to add the spot color.

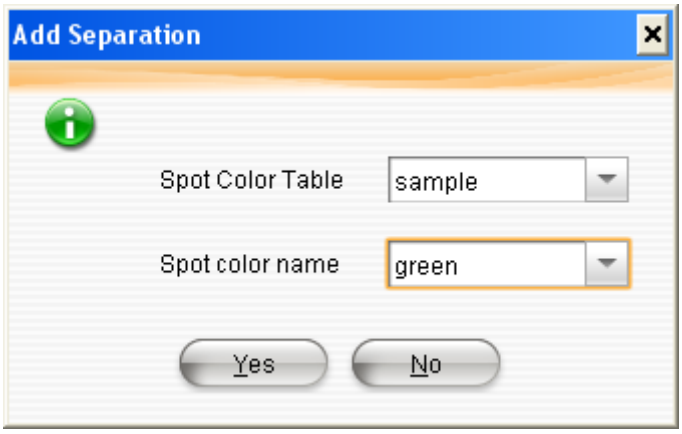


Figure 2-46

Note: *If you have defined a common curve for CMYK and meanwhile have also defined a curve separately for each separation, C, M, Y and K. At the time ElecRoc outputs, it will apply the separately-defined curve to output the corresponding separation, and only apply the common curve to those separations that you haven't separately define a curve.*

4. And now define the curve. You can drag any point on the curve to make a rough adjustment, or base on a print sample or even a measurement, to type accurate output values into the percentage boxes. The **Reset** button enables you to restore the default curve shape.

5. Click **OK** to save the curve.

2.8 Traditional Press

With the tool **Resources** > **Traditional Press**, you can manage resource related to the traditional printing, such as the linear curves, color tune curves, intended and actual press curves, all of which can be used in PDF rasterizing. Managing operations include create, save as, edit, import, export, delete, and recalibration.

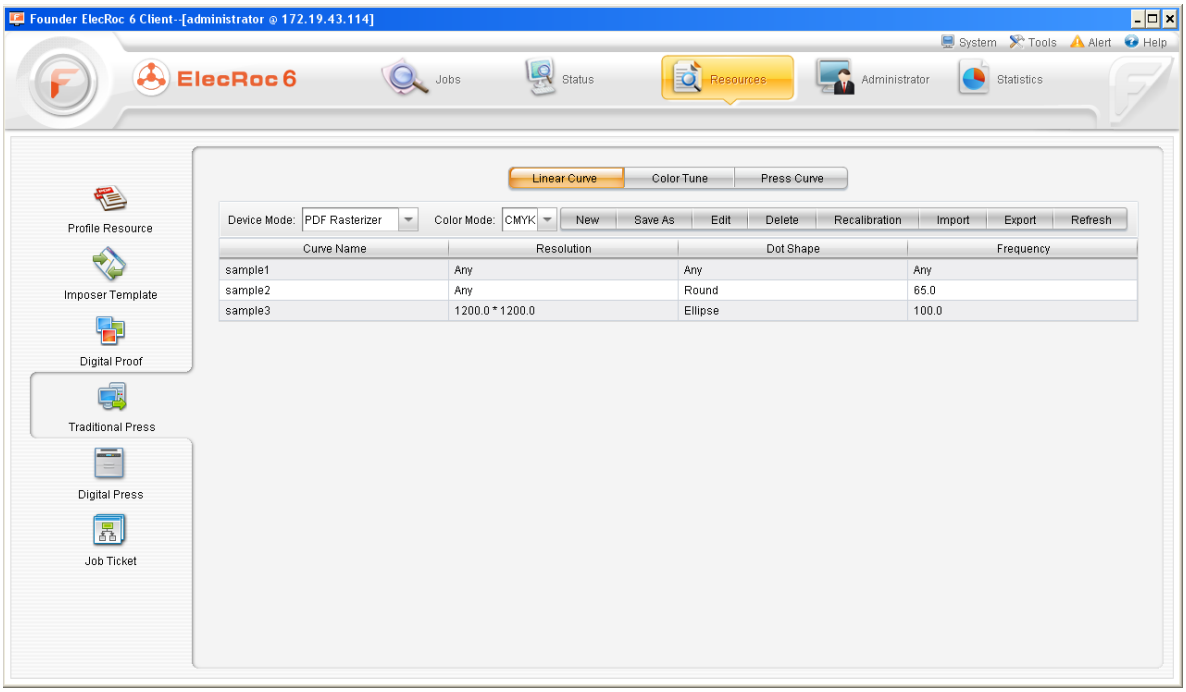


Figure 2-47

2.8.1 Linear Curve

It refers to the calibration curve in PDF Rasterizer processor parameters, sorted into two modes, CMYK and Gray.

1. Create a curve

As indicated by the options in the **Color Mode** dropdown list, linear curves are sorted in two modes, CMYK and Gray. Before you perform curve operations like viewing, creating, editing, or importing and exporting, you need first to choose a proper color mode.

Click **New** to open the following dialog box, define the parameters and then click **OK**.

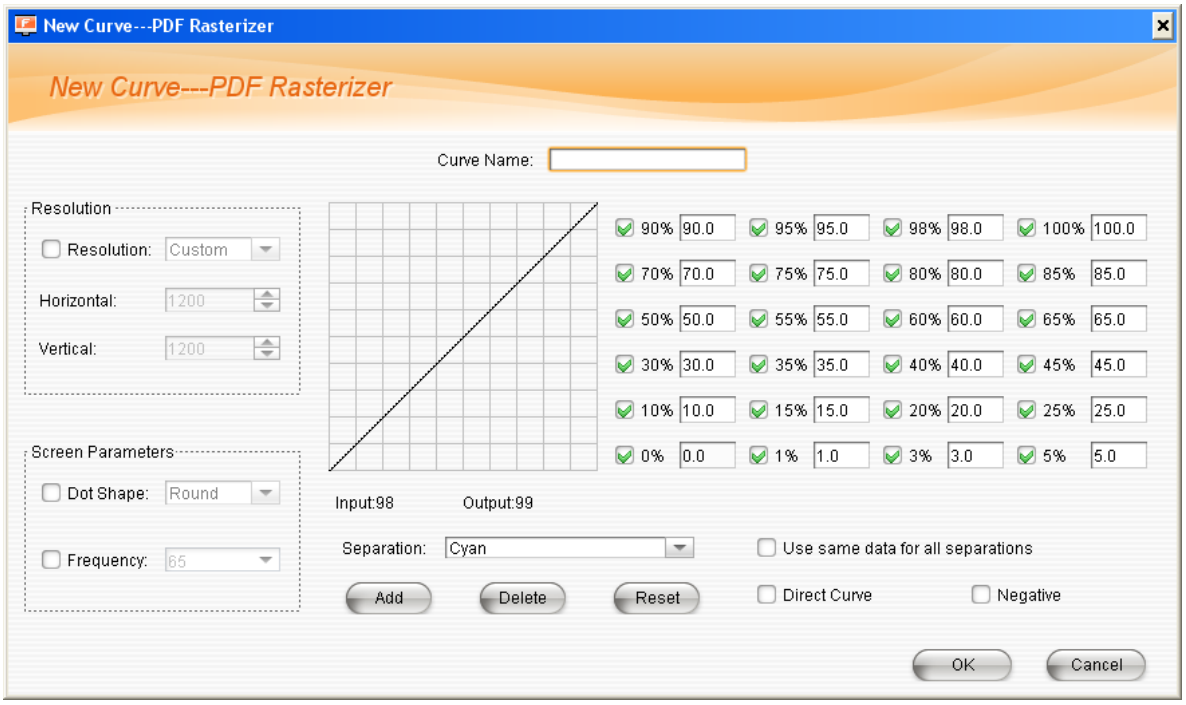


Figure 2-48

Curve Name: Here you can specify the curve name.

Curve setting: Totally there are 24 pairs of checkboxes and edit boxes. The percentage at checkbox represents original dot density, while value in edit box represents actual dot density. The actual dot percentage can be measured with a photometer on printed linearization chart. Tick the checkbox to activate corresponding edit box.

Separation: You can define a curve for each separation. In CMYK mode, the default separations include *Cyan*, *Magenta*, *Yellow*, *Black* and *Default Separation*. The former four are process color separations, and the latter represents spot color. The curve defined for *Default Separation* is the default curve for all spot colors. In Gray mode, the default separations include *Gray* and *Default Separation*. The latter is the same as above.

Add/**Delete**: In addition to the default separations, you can also add a specific spot color separation to define a curve for it. The spot color separation can be deleted, but the process color separations and the *Default Separation* cannot be deleted.

Reset: To reset the curve for the currently-elected separation to original curve shape.

Use same data for all separations: If checked, apply current curve to all the other separations.

Direct Curve: If checked, ElecRoc will directly use the data entered by the user, without RIP calculation. For example, if you want 10% area to be output 8%, check this option, and then input 8 in the 10% edit box.

Negative: Check this option in case that the printed linearization chart for you to measure the actual dot percentage is negative.

Resolution: Here you can label the applicable screen resolution of your curve.

Dot Shape: Here you can label the applicable screen dot shape.

Frequency: Here you can label the applicable screen frequency.

2. Save As

Return to the main interface of the Linear Curve tool. Choose a curve and click **Save As**. In the follow-up dialog box, input the curve name and click **OK**. In this way, you can save the curve with another name and another location.

3. Recalibration

Recalibration aims to update a curve, making it adapt to the latest change in the proof environment. Choose a curve and click **Recalibration** to open the recalibration window. The window is same as that for creating or editing a linear curve.

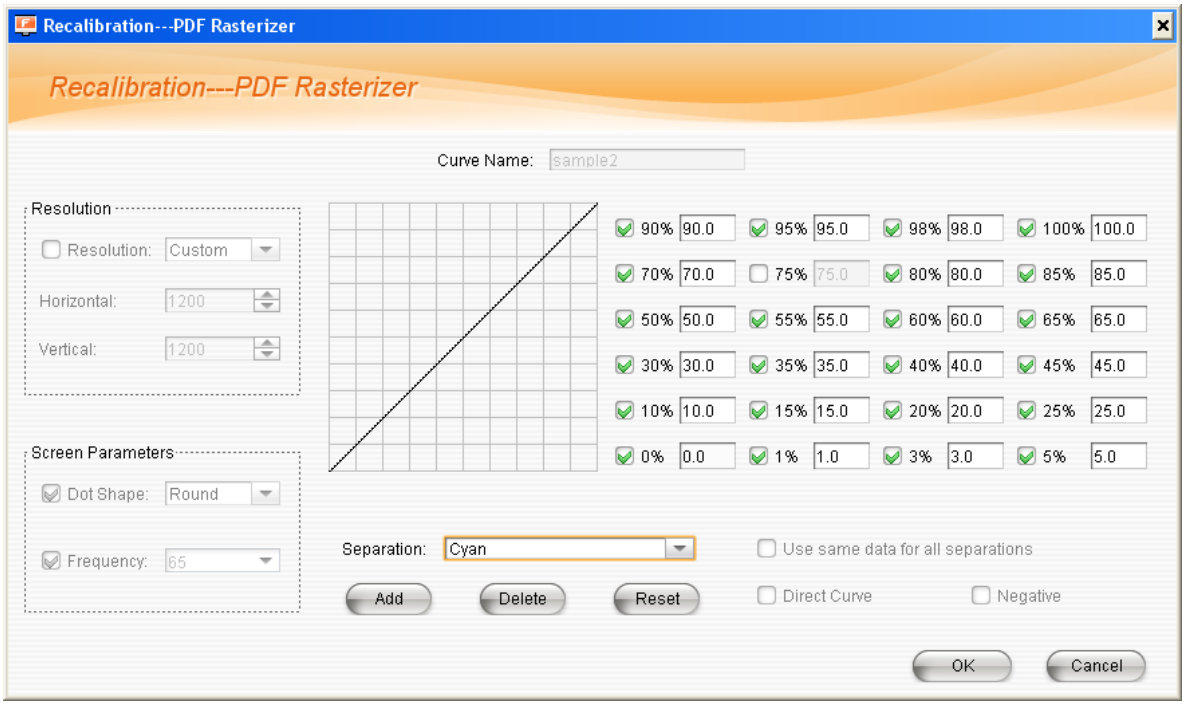


Figure 2-49

First, apply the curve to print out a chart and measure it. Then, input the measured values into corresponding dot percentage edit boxes in the recalibration window. And then, you can apply the calibrated curve to print out the chart again, to check the calibration effect. Repeat the printing and measuring till you get satisfactory result.

2.8.2 Color Tune

The tool **Traditional Press** > **Color Tune** helps you to manage the color tune curves that can be used by PDF Rasterizer. It supports you to create, save as, edit, delete, import, and export the curves.

Please see the introductions above for the operations and parameter settings, for they are similar to the linear curve. When you create or edit a tune curve, you will see a parameter named **Use same data for all separations**, if you check it, you can apply the current curve to all the rest separations.

2.8.3 Press Curve

The tool **Traditional Press** > **Press Curve** helps you to manage the intended and actual press curves that can be used by PDF Rasterizer. It supports you to create, save as, edit,

delete, recalibrate, import, and export the curves.

Please see the introductions above for the operations and parameter settings, for they are similar to the linear curve.

2.9 Digital Press

In the module **Resources** > **Digital Press**, you can manage the resource applied in digital printing, such as the CMF color solution files, the color tune curves, and the linear curves.

2.9.1 CMF Correction

Digital printing also employs the CMF color solution file to manage the color output. In digital printing, the CMF file can be put to use through the processor parameter **Color Calibration** > **Use CMF file**.

Here you can view, delete, import, and export this file. If you want to create a new solution file for digital printing, please use the Color Tools. For details, see the manual *Color Tools User Guide.*

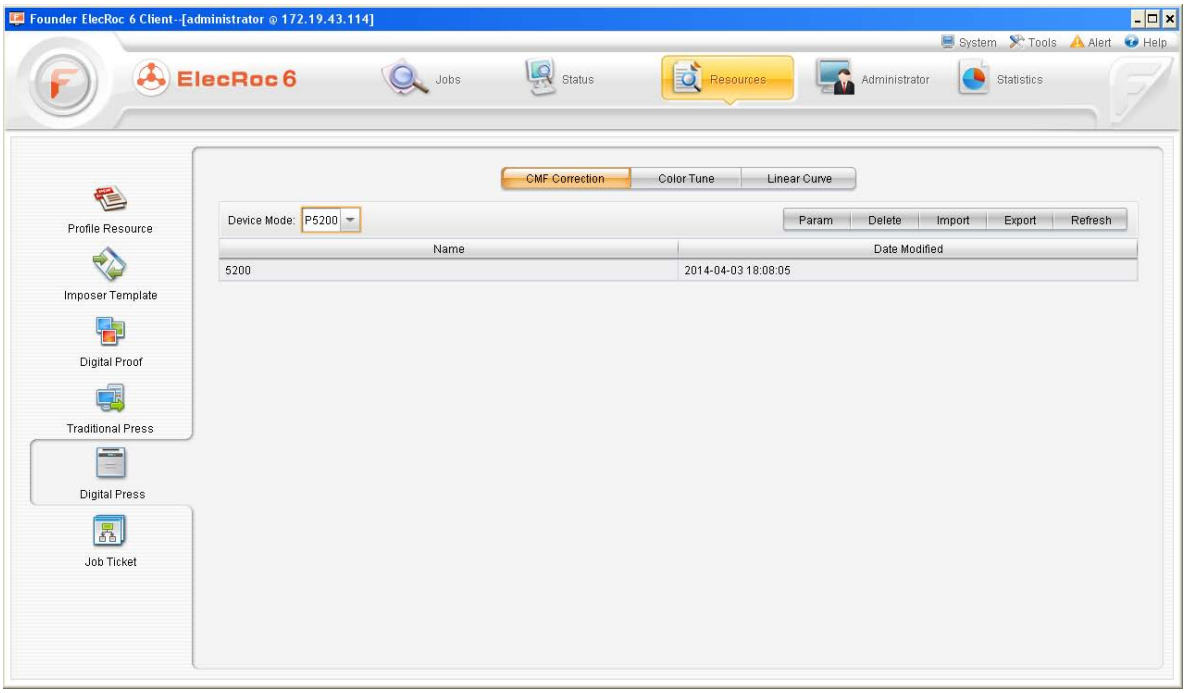


Figure 2-50

2.9.2 Color Tune

Here you can create, edit, delete, import, and export the color tune curves that can be used in digital printing. The tune curve is put to use through the processor parameter **Color Calibration** > **Curve**.

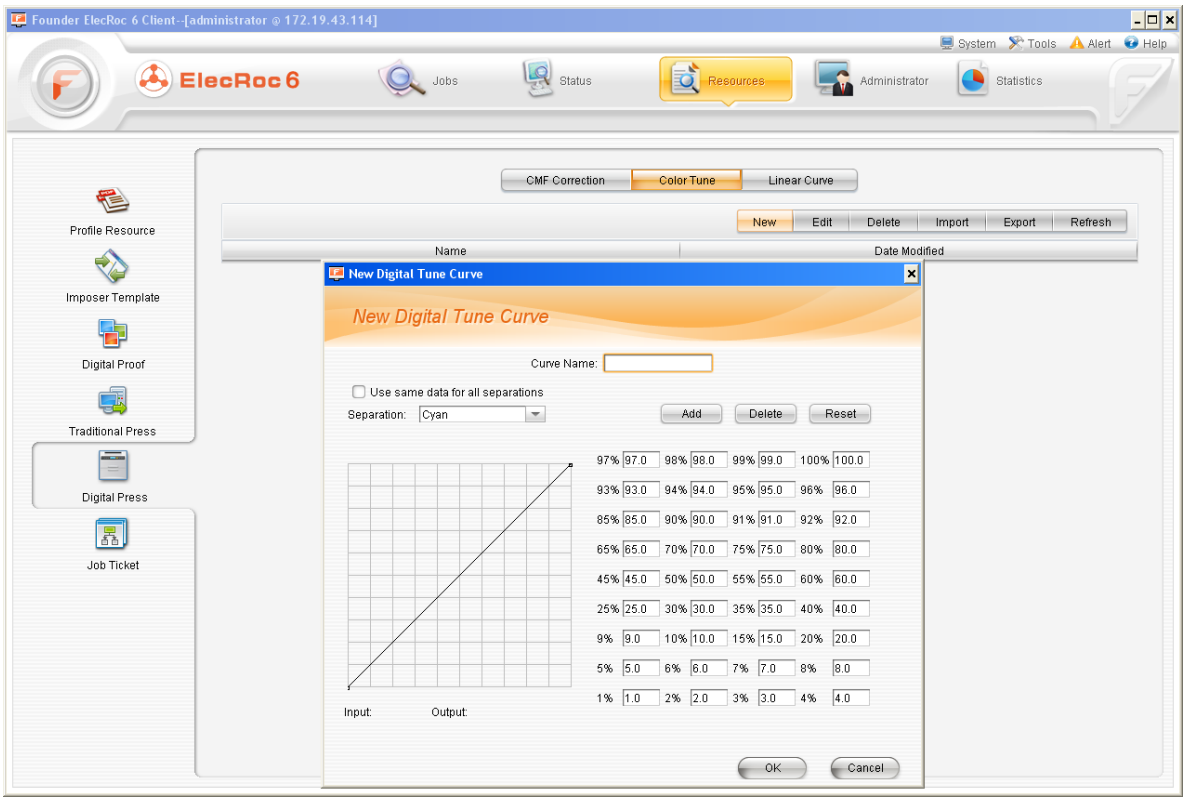


Figure 2-51

Steps for creating a new curve:

1. Click **New** to open the curve setup window.

2. Input the name of the curve into the **Curve Name** edit box.

3. Choose a separation. By default, options include *CMYK*, *Cyan*, *Magenta*, *Yellow*, *Black*, and *Default Separation*. *Default Separation* represents default spot color separation. If you want to define a curve for a specific spot color, please click **Add**, and then in the pop-up dialog box, type the spot color name.

Use same data for all separations: If checked, all the separations including spot colors will use a same curve.

4. And now define the curve. You can drag any point on the curve to make a rough adjustment, or type accurate output values into the percentage boxes. The **Reset** button enables you to restore the default curve shape.

5. Click **OK** to save the curve.

2.9.3 Linear Curve

Curves here are applied to black & white digital printing devices. It can be created in a manner similar to that for the color tune curve. Note that, because this curve is applied to white and black printers, therefore in general, you need to check the option **Use same data for all separations**, or define the curve only for the *Black* separation.

Moreover, the internal calculation logics for the linear curve and the tune curve are different, so their shapes may come to be in reversed appearance. For instance, in order to reduce the ink output and thus make the color lighter, the tune curve may decrease the values in the percentage boxes, making the curve sunk in the lower-right direction, while

the linear curve may increase the values in the percentage boxes, making the curve rise in the upper-left direction.

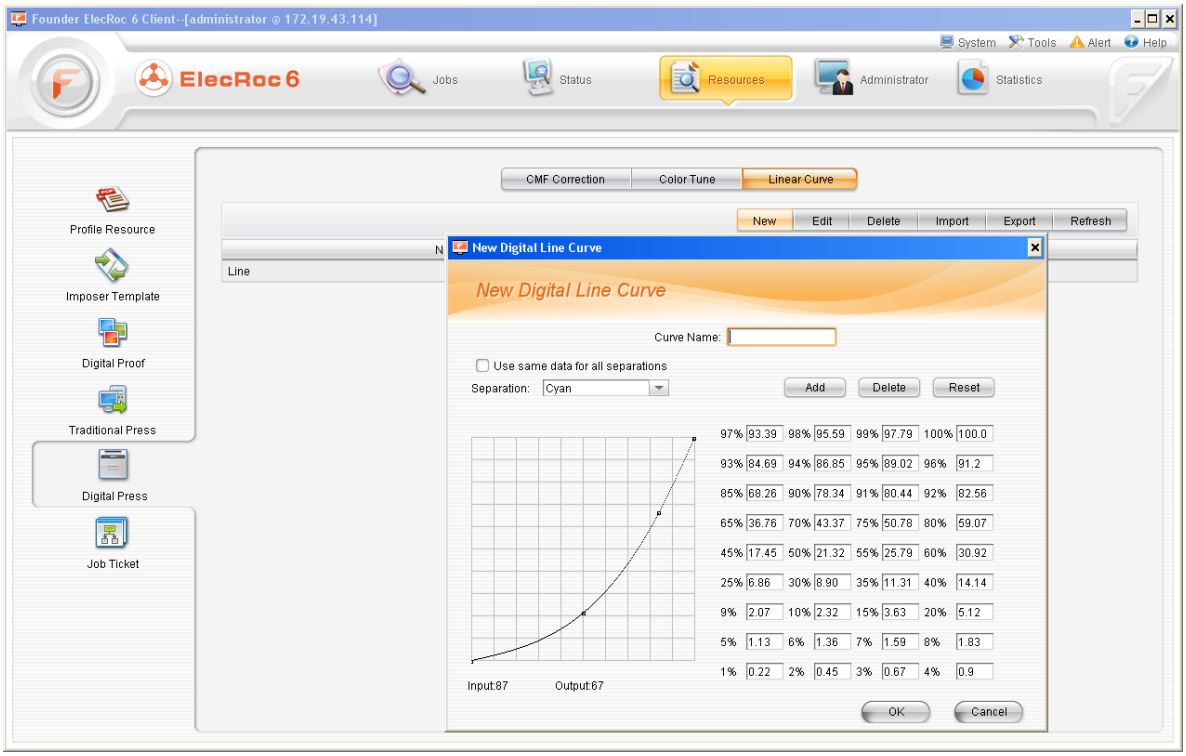


Figure 2-52

2.10 Job Ticket

In the module **Resources** > **Job Ticket**, you can manage the job tickets in your ElecRoc system. Job ticket can be generated in the job window, by clicking the icon from the top toolbar. It stores all the nodes and their parameter settings in your job as a template, for ease in later re-use.

Here you can delete, import, and export these job tickets.

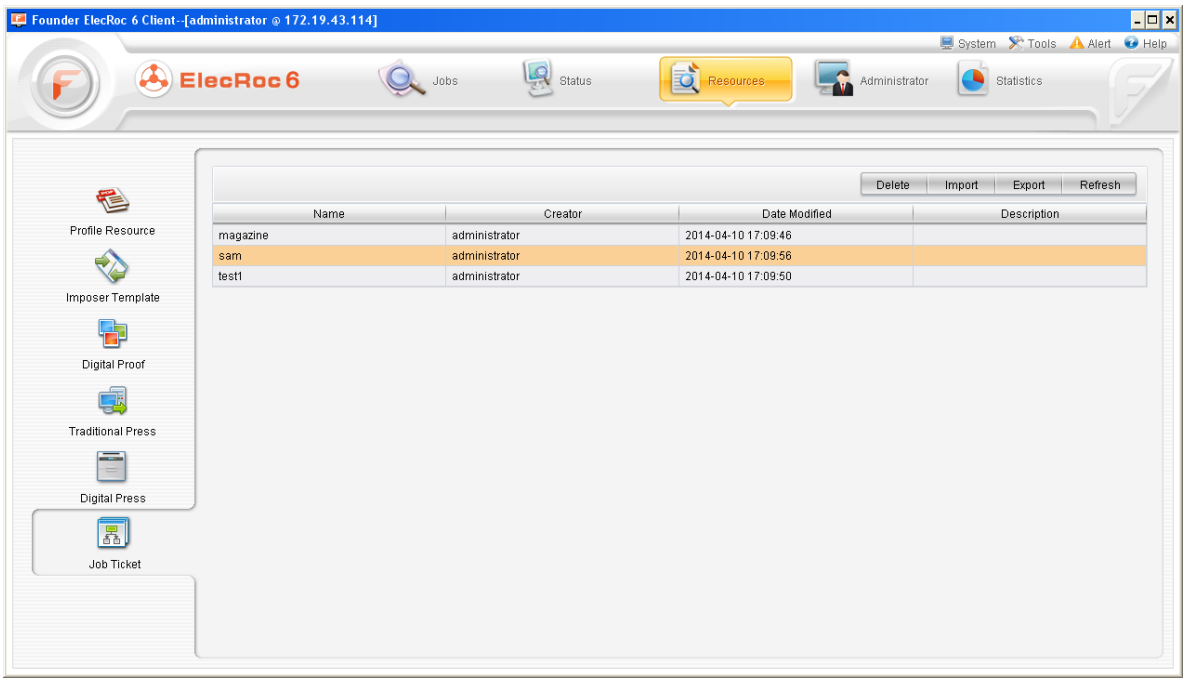


Figure 2-53

Delete job ticket: Choose the job ticket(s) that you want to delete, and then click **Delete**.

Export job ticket: Choose the job ticket(s) that you want to export, and then click **Export**. Specify the destination and file name in the pop-up dialog box. The file is saved with a suffix .jt.

Import job ticket: Click **Import**, and then choose the .jt file from the pop-up dialog box. In case that it finds out a job ticket with same name existing in your system, it will ask you whether or not to overwrite it.

2.11 Ink Amount

In the module **Statistics** > **Ink Amount**, you can obtain the ink-saving data across a specified time period, in all the jobs, from the files processed by the processor Ink Save Report.

The only thing you need to do is to specify the starting and ending time at the **Time From** and **To** dropdown-lists, and after that, it automatically displays the ink-saving data. The icon can help you to choose a frequently-used time period, such as latest week, latest two weeks, latest month, and etc.

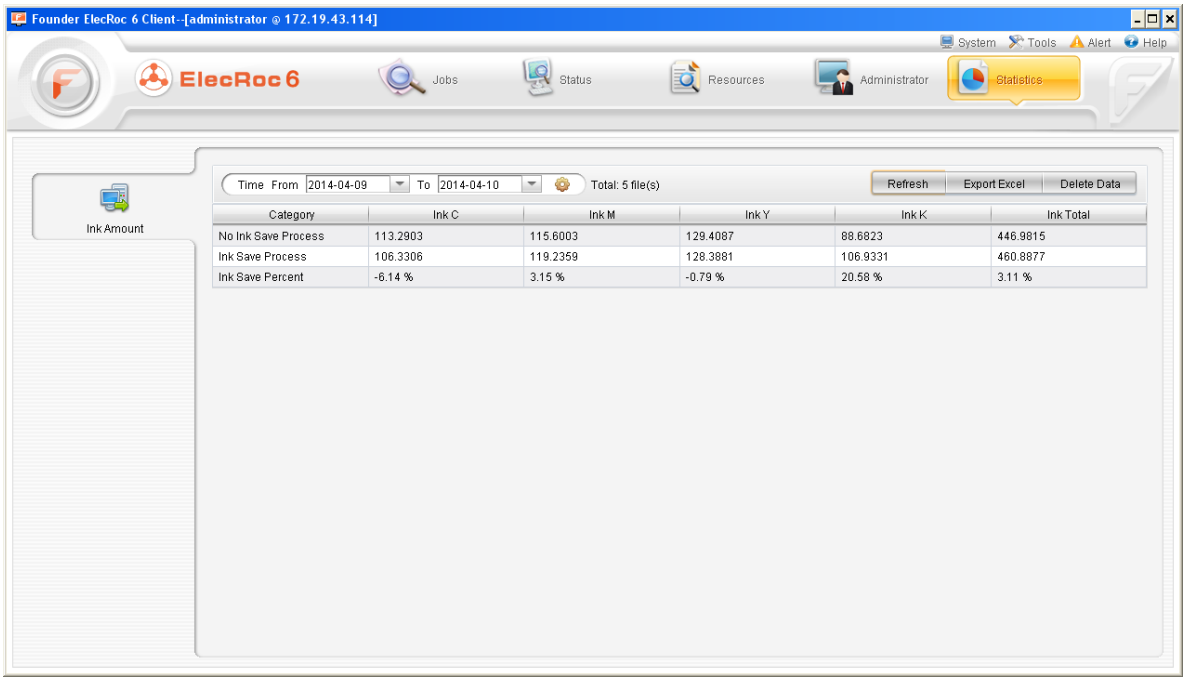


Figure 2-54

The statistic data comes from the system database, therefore, even if you may have deleted some of the files processed by the node Ink Save Report in your job, or you may even have deleted the node Ink Save Report, but as long as you haven't deleted the corresponding ink-saving data in the system database, you will still get the data as usual.

If needed, you can click the button **Export Excel** to export the statistic data as an Excel datasheet. The datasheet shows the detailed data comparison for each file before and after the ink-saving.

If needed, you can click the button **Delete Data** to delete unneeded ink-saving data of a specified time period from the system database. A dialog box will pop up, asking you to specify the time period.

Ink-saving statistic can also be carried out in your job, so as to obtain the ink-saving data for one or more files in your job.

1. Add the nodes PDF Rasterizer and Ink Save Report into your job, the latter node can be directly connected behind the former.



Figure 2-55

2. At the PDF Rasterizer's processor parameter **ICC** > **Screen EcoInk Solution**, you need to choose an EcoInk solution.

3. Submit your file for rasterizing, and after that, continue to submit for ink saving. The process on big and complex file may take a relatively longer time, please wait a little while till the process ends up.

4. Choose the Ink Save Report node, and you can see that there is only an input file queue under the node. Choose one or more files, then right-click and choose **Ink Save Report Result**.

5. A window pops up, showing the statistic result, including the number of files being counted, the ink data before and after the ink-saving, and the ink-saving percentages.

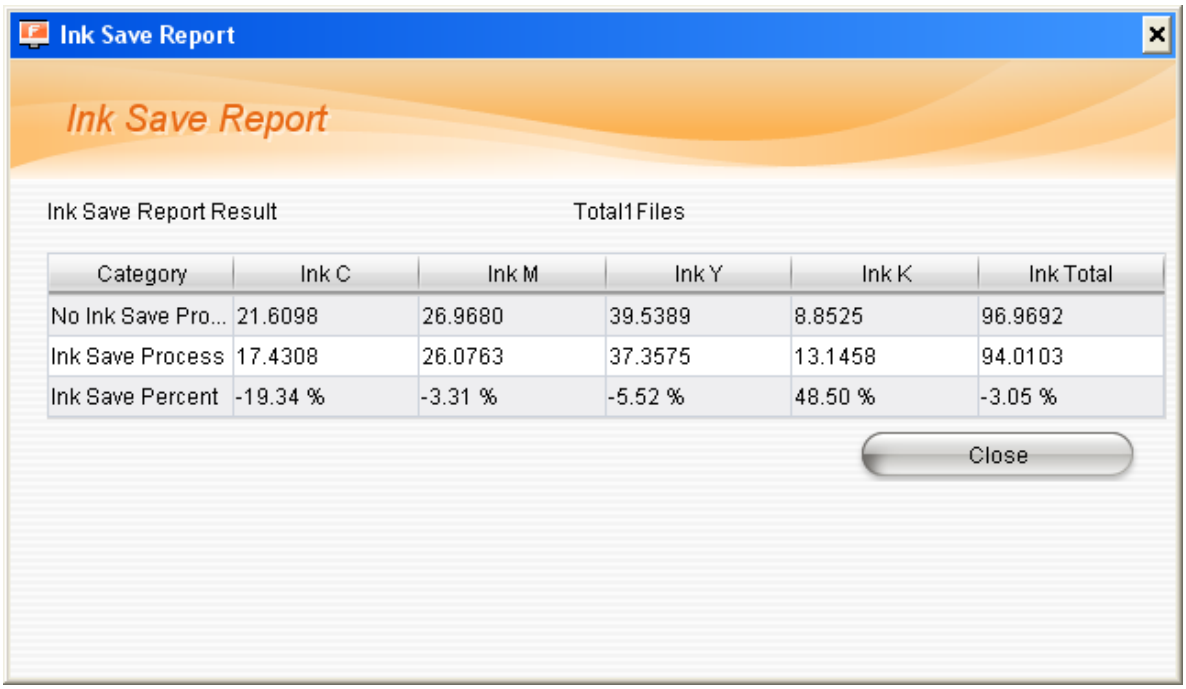


Figure 2-56

Chapter 3 Workflow

Founder ElecRoc is a digital workflow management application. The ElecRoc workflow enables various pre-press and printing processes or procedures to work smoothly and efficiently, as in a pipeline.

3.1 Create a Job

3.1.1 About Job

The processes on files in ElecRoc, such as imposing, composing, rasterizing, proofing, are all implemented by way of a job. Job, or called job ticket, is the platform to build a pre-press and printing file process workflow. It defines the specific procedures constituting the workflow, the sequence of the procedures, each procedure's processing manner, and enables the user to submit, process, monitor and output files, and manage the input and output files of each procedure.

Here the procedures, or processes, are performed by ElecRoc processors, or called JTP. Each processor independently takes responsibility for a specific procedure. ElecRoc processor family grows to a lot of members in years of innovation and development, such as PDF Generator, Imposer, Composer, Preflight, Trap, Rasterizer, Proof, Digital Printing, Inkjet Printing, with the total number coming close to 30, covering the various aspects in pre-press and printing. These processors in a detailed job are called processor nodes, or nodes. They can produce very flexible combination and connection, forming various workflows to meet diverse business requirements.

In the job window, each job is composed of one or more processor nodes. These nodes can not only link each other, but can also exist independently. The quantity of jobs is not limited in ElecRoc, so you can create more than one job as needed, and you can manage the authority for ElecRoc users to access or control each of the jobs, so as to enhance the security of your critical business data.

3.1.2 Job Management

The job creation and management are performed in ElecRoc's **Jobs** window. After you login to ElecRoc from the Client, by default, you will enter in this user interface.

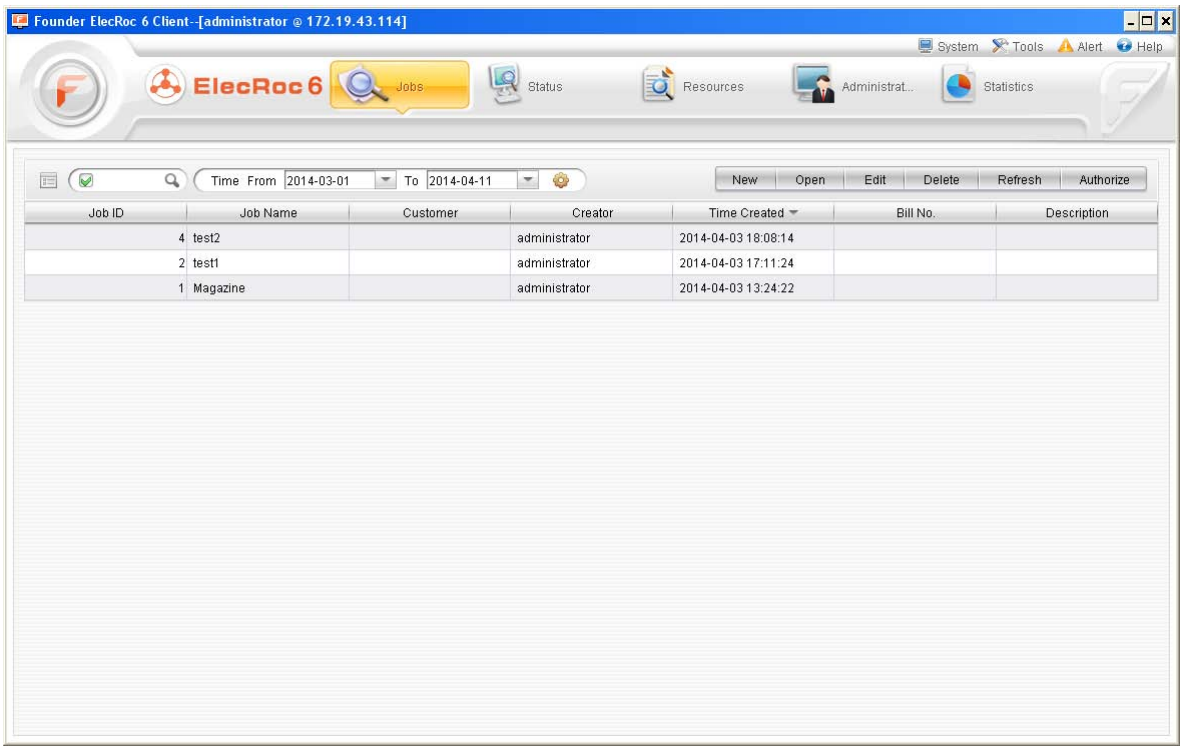


Figure 2-57

1. Job list

Job list displays all the jobs in ElecRoc, providing job information such as job ID, job name, customer, creator, time created, bill No. and description. By clicking the head of the table on any column, you can sort the list in ascending or descending order.

Job ID: ElecRoc assigns an ID once a job is created. It is unique and non-editable.

Job Name: The job name is specified at the time you crate the job. It cannot be edited once specified.

Customer: The customer name filled in by the user when the job is created.

Creator: The name of the user who created the job.

Time Created: The time when the job is created.

Bill No.: The bill number filled in by the user when the job is created. It can be edited.

Description: The description filled in by the user when the job is created. It can be edited.

Order No.: The number of online order, auto-produced by the online print system.

Plan End Time: The date on which you plan to end the tasks of the order.

Order Detail: Only the online order comes with an icon in the job list, and by clicking on this icon, you can view the details on the order, including the printing requirement, distribution information, and charge summary.

2. Create a job

Click **New** on top of the job list to open a pop-up dialog box.

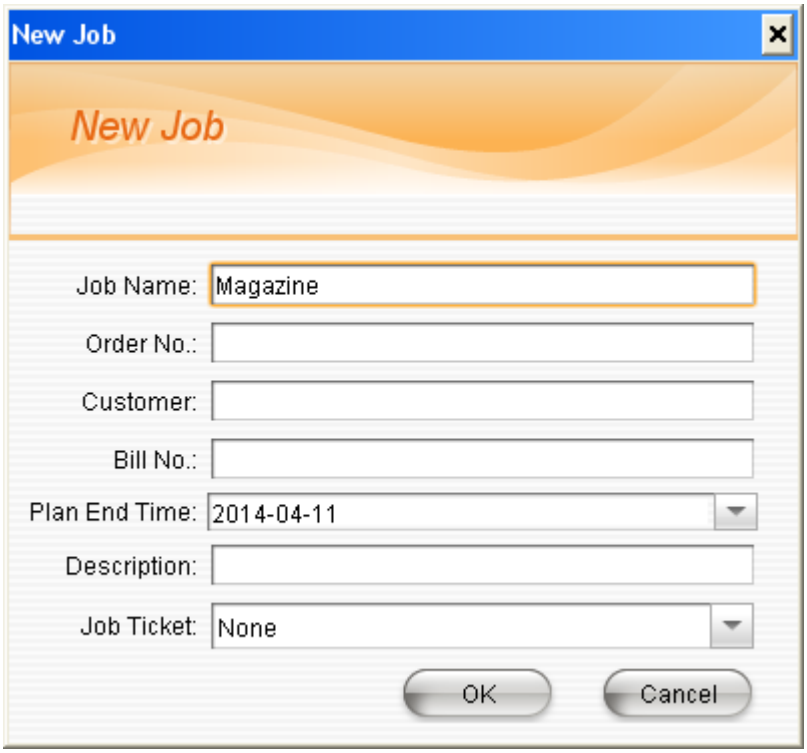


Figure 2-58

Job Name is a required item, thus cannot be empty, and cannot be the same with an existing job. Other items are optional. Click **OK** when you complete the filling-in. The job's operating window then appears automatically.

If needed, you can base on a job ticket to create your job, in this case, please choose a suitable ticket in the **Job Ticket** dropdown list. See section 3.2.3 for details on how to create and apply a job ticket.

After you have created a job, choose the job in the job list and then click **Edit**, you can edit the job's bill number, description, order number, plan end time, and etc.

3. Open a job

To open a job and enter into its operating window, double-click the job in the job list, or choose the job and then click **Open**. An icon appears at the upper-right corner of the job window when you have opened a job. With this icon, you can close the opened job.

You cannot open a job in case that the access to the job is limited and you are not authorized.

4. Authorize a job

Choose a job in the job list and click **Authorize**. Here you can configure the authority for ElecRoc users to access the job.

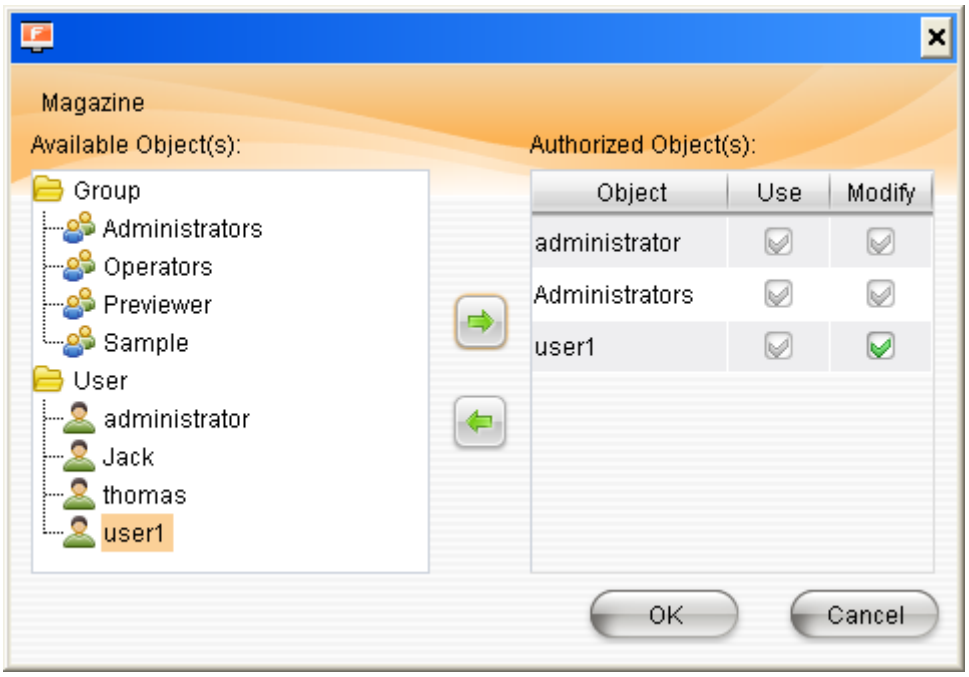


Figure 2-59

At the top of the dialog box is the name of the job you want to authorize, at the left are ElecRoc users, and at the right are authorized users. Choose a user or user group at the left, and then click the arrow to add it into the right list. The added user or user group now can use the nodes in the job to process files. The **Modify** box controls if the user or user group can modify the nodes' parameter setup.

To cancel the authorization, choose the user or user group at the right, and then click the arrow.

Note: *Choose the directory **User** or **Group** at the left, and then click, you can add all users or user groups to the right, in a batch.*

5. Search Job

In case that there are too many jobs in your ElecRoc system, you can use the search combo box to quickly find out your job.

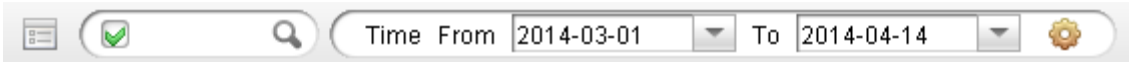


Figure 2-60

The **Search** combo box is located on top of the job list. First you should check the box at the leftmost, then type a keyword behind, and specify a period of time. If the job ID, name, customer name, bill number or description (i.e. the search scope) contains the keyword, and the job is created in the specified time period, such jobs will be displayed in the job list.

You can click the icon to define the search scope. If you limit the scope to specific columns, e.g., **Job Name** only, ElecRoc will only search the jobs whose names contain the keyword. The icon at the right-most enables you to choose a frequently-used time period, such as latest week, latest two weeks, latest month, and etc.

Make sure that you have specified proper time period. If you don't specify, the end date can update itself. ElecRoc can help you remember the search conditions and the time period. You can see the latest search configuration if you reboot the Client. Therefore, in

case that you don't see your job in the job list, please take a look at the Search combo box, to see if your job has been filtered.

6、Rapid Positioning

Press key combination Ctrl + F while you have chosen a job in the job list, and you can see an activated **Rapid position** control. Input a keyword that has something to do with the job you want to position, such as the job name, full name or part of the name, starting with the first character, and then you can immediately see the job in the job list, being highlighted by ElecRoc.

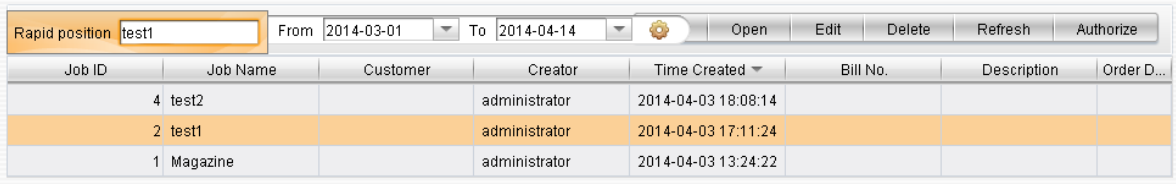


Figure 2-61

In case that the job list contains more than one qualified job, you can press the direction key ↓ and ↑ to switch over.

7. Other operations

Delete job: Choose the job(s) you want to delete, and click **Delete**. This operation deletes all data related to the job(s) from your ElecRoc system.

Refresh job list: The job list can be updated manually if you click **Refresh**.

3.1.3 Job Window

As shown in the below, the job window is composed of three parts.

At the left displays the processor list and shared resource list. The former contains all processors installed in your ElecRoc system. If the processor is online, i.e. has been started on the Server, it appears in color. In this case, if you add it into a job and submit files, it can immediately process the files. If the processor is offline, i.e. has not been started or has been stopped, it appears in gray. If you add it into a job and submit files, it cannot process the files immediately. The shared resource refers to shared processor nodes and workflows.

The upper-right area is used for you to create and manage the workflow. It may contain one or more independent or connected nodes. ElecRoc provides a toolbar and right-click menu in this area, for you to perform workflow-related operations.

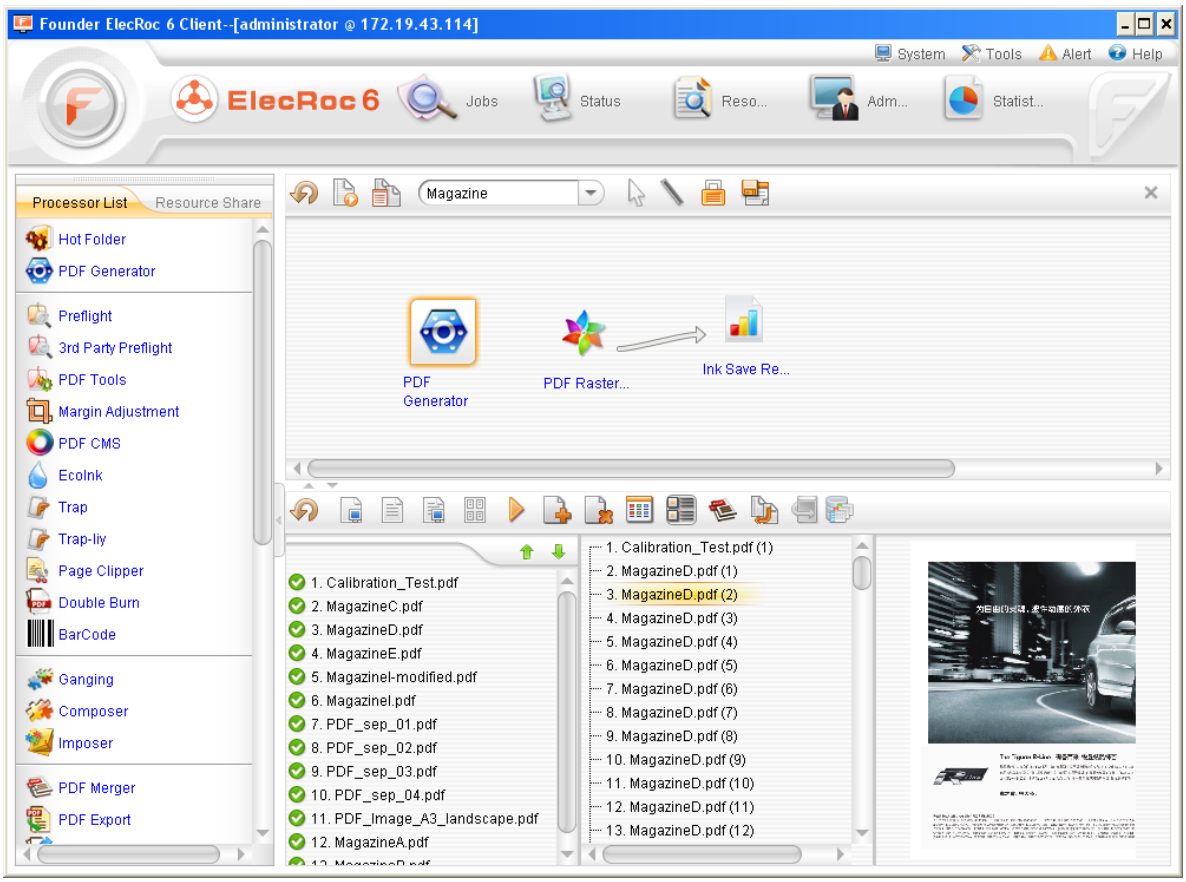


Figure 2-62

The lower-right area is designed for you to manage and process node-specific files. It can display each node's input and output files, and also can display all the files in the workflow of a specific file format, such as all the source files, all the PDF pages, and all the signatures. The management and operation on these files, such as submitting, previewing, downloading, can also be performed with the toolbar icons on the top and the right-click menu items.

You can freely adjust the sizes of the three areas above, and hide or expand them with the icons◀, ▶, ▲and▼.

3.2 Create a Workflow

3.2.1 Create a new workflow

You can create a workflow in the job window now that you have created a job. This operation can be divided into three steps. 1, add the nodes, i.e. to specify the procedures constituting the workflow; 2, connect the nodes, i.e. to determine the sequence of the procedures; 3, configure the node parameter setup, i.e. to define how each procedure processes. For processor parameter setup, refer to Chapter 4.

1. Add Nodes

A node represents a procedure. A processor can be added into the job as a node in two ways. 1) Choose a processor in the processor list (just place the cursor over the processor), and then drag it into the upper-right area. 2) Right-click any place in the upper-right area and choose **New**, and then choose a node from the node list.

You can add more than one node of same type into the job, e.g. more than one PDF Generator. In this case, ElecRoc will automatically add an ID in the node name to identify the nodes of the same type. The added node can be dragged anywhere in the job window. If you choose more than one node, you can drag them together. You can also change the node position, making them appear in order, with the **Align** and **Auto Arrange** commands from the right-click menu.

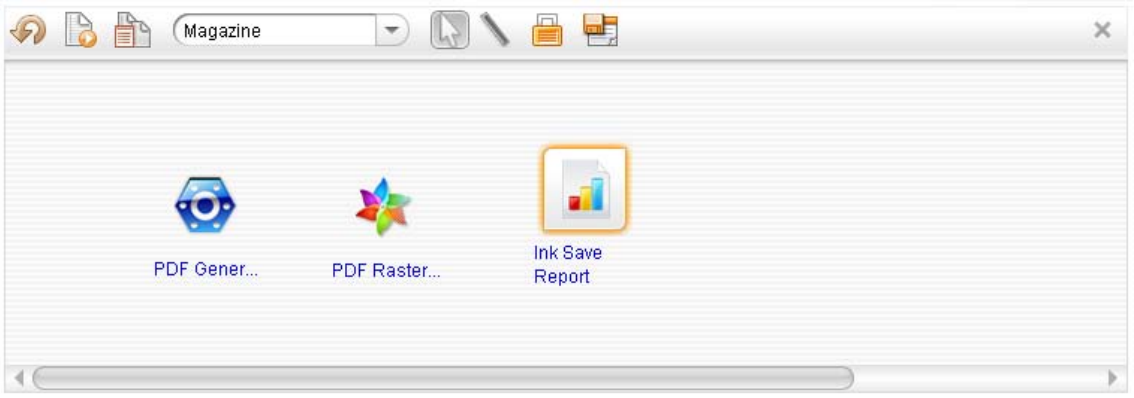


Figure 2-63

2. Connect nodes

Connect the added nodes in sequence, so as to form a workflow like a pipeline. In this way, when a node finishes its task, it can automatically send the processed files to the next node in the workflow, till all the nodes in the workflow finish their tasks. Workflow enables fully-automated processes, and improves the production efficiency.

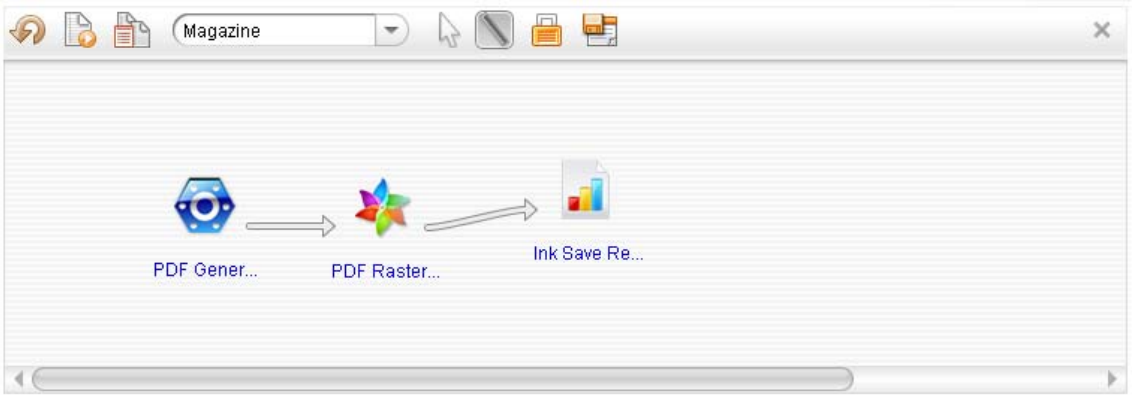


Figure 2-64

Method 1, choose the **Connect** tool in the toolbar, place the cursor on the beginning node, click and hold your left mouse button, and then drag the cursor to the node you want to connect. If the two nodes can connect, an arrow appears between them, showing the process sequence. If not, ElecRoc pops up warning message.

Method 2, at the time you add a node, drag the node to an existing node. If they can connect, ElecRoc can automatically add the node behind the existing node after you release your mouse.

Method 3, choose an added node, right-click and choose **New**. Now ElecRoc will list all the nodes that can be added behind the node. Choose any of them as needed.

It's flexible for you to create workflow. You can connect all or part of the nodes, or you can also make all or part of them independent. ElecRoc builds in powerful logic to judge

if two nodes can connect or not, and it will pop up warning in time for the user to avoid error.

We call the node before a node in the workflow as parent node, and the node behind it as child node. The first node in the workflow is called root node. Each node can have only one parent node in front, but may have more than one child node behind. The root node has no parent node.

3.2.2 Manage Workflow

You may make some management or control to the workflow after you have created it.

1. Toolbar

There is a toolbar on top of the workflow. The icons and their functions are as follows:

Icon	Function
	Refresh manually the processing status of the nodes in current job, and the online/offline status of the processors displayed at the left of the job window.
	Open the **Run List** window to view the running information of the nodes in current job.
	View the page substitution record.
Job list	It lists the latest jobs opened by current user for a fast switch-over among them.
	When checked, you can choose, move one or more nodes in the workflow freely.
	Used for connecting nodes. Double-clicking any blank place in the workflow area switches to the tool.
	Lock the node in the job window. Click this icon once again to cancel the locking.
	Save the workflow as a job ticket, for public use in ElecRoc system.

Table -5

2. Node right-click menu

A shortcut menu is available when you right-click a node in the workflow. It contains the following menu items.

Item	Function
Select File	Used for selecting the source files you want to process, this item appears only when you right-click the node PDF Generator. It will then open the Select Files dialog box, see section 3.3.1 for details.
New	Automatically list all the nodes that can be connected behind. By simply choosing one from the list, you can add the node into the job and make it connected behind the current one.
Hold	Stop processing the files automatically-submitted by the preceding node in the workflow.
Parameters	Open the processor parameter setup window to view or modify the node's parameter setting.
Remove	Delete the currently selected node from the workflow. This operation deletes the input and output files under the node, or even the input files

	under the next node, as well. ElecRoc pops up message for you to confirm before the deletion.
Rename	Re-define the name of the node. There may be more than one node with same name and of same type in your job.
Disconnect with Parent	Disconnect the parent node.
Disconnect with Child	Disconnect the child node.
Replace by	Replace the current node with another node of same type.
Stop Running	Stop the current node running the files you submitted last time. ElecRoc allows you to submit one or more than one file at one time. If you have submitted more than one file last time, this item will stop running all the files you submitted that time.
Stop All Process	Stop the current node running all the files you submitted, i.e. all the running files and all the waiting files under the current node.
Share node /Cancel shared	Share the current node in ElecRoc. The shared node can be added into any other job. A shared node can also be cancelled.

Table -6

Note: *The item **Share node** above and the item **Import the shared node** mentioned below are available only when you haven't checked the Client menu option **Tools** > **Preferences** > **Preference** > **Disable node sharing**.*

3. Right-click Menu

Right-click any blank place in the workflow area, you will get a shortcut menu. It contains the following menu items.

Item	Function
New	It lists all the available nodes in your ElecRoc system at this moment. You can choose any of them to add it into the job.
Empty	Delete all the nodes and the files they will or did process in current job.
Refresh	Refresh the nodes and their status in the job.
Align	Automatically align the out-of-order nodes.
Auto Arrange	Automatically arrange the nodes in the job as per workflow, or type.
Import the shared node	Add a shared node into the job. ElecRoc will list all the shared nodes behind this item for you to choose.

Table -7

4. Interrupt

It's necessary to interrupt the workflow at a specific point, in case that you want to check and confirm the process result of a certain node before it submits the result to the next node. If interrupted, the node will not automatically process the files from its preceding node, after these files enter in its input file queue. At this moment, you can check and confirm the result of the preceding node timely. After this, you can manually submit the files to the current node for process.

To interrupt at a certain node in the workflow, choose this node, right-click and choose **Hold**. An interrupted node is shown with a sign. Right-click the node and choose

Resume to cancel the interruption.

3.2.3 Share Node and Workflow

1. Share node

You can share the node, the node parameter setup, the node's input and output files in ElecRoc, for use by other jobs. The sharing and using shared nodes are only available for users who are authorized for using the processors and modifying the jobs. If you have shared a node and used it in other jobs, when you alter the node's parameter setup in current job, change its input or output files, or submit new files, you or other users can simultaneously see all these changes in other jobs. The modifying node parameters and adding/deleting files are allowed only in the job that you share the node. In the jobs that you use the shared node, you can only submit files.

Share a node: Choose a node, right-click and choose **Share node**. When shared, the node is shown with a sign. Right-click and choose **Cancel shared** to cancel the sharing.

Use a shared node: You see all the shared nodes under **Resource Share** > **Share Nodes** at the left of the job window. Choose the node and drag it into the job. Or you can right-click any blank place in the workflow area, choose **Import the shared node**, and then select the node from the node list, as needed.

Note: *If you have checked the Client menu option **Tools** > **Preferences** > **Preference** > **Disable node sharing**, the right-click menu items **Share node** and **Import the shared node** will disappear.*

2. Share workflow

You can share the workflow by way of job ticket. The ticket can refer to an aggregation of one or more nodes and their parameter setup. It defines the process workflow that the files will go through and the process manner, helping the user to batch process files of same type.

Click the toolbar icon **Export Job Ticket**, input the ticket name in the pop-up dialog box, and then click **OK**. Except the input and output files, this operation will fully export the nodes, node sequence, node parameter setup, even the space between them in the job window.

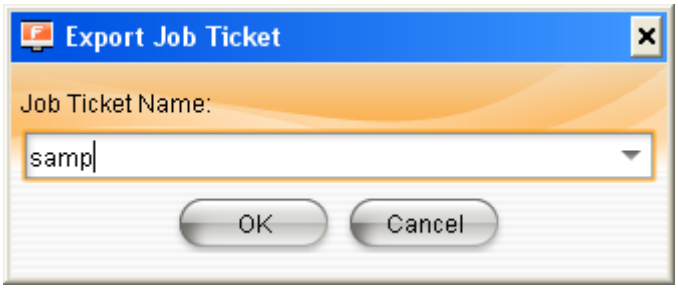


Figure 2-65

To import one of the shared workflows into the job, please switch to **Resource Share** > **Job Tickets** at the left of the job window, choose the shared job ticket and then directly drag it into your job.

Note: *In the administrative module **Resources** > **Job Ticket**, you can perform managing operations to all the job tickets in your ElecRoc system, such as deleting, importing and exporting.*

3.3 Run and Monitor

3.3.1 Select Source Files

It refers to the operation of providing source files to ElecRoc. ElecRoc supports various types of files, including PDF, PS, EPS, TIFF, PRN files. These files can get into ElecRoc workflow in two ways: the **Select Files** interface of PDF Generator, and the hot folder.

1. PDF Generator

Choose the PDF Generator node to activate the icon **Select Files** in the toolbar below. Click this icon to open the **Select Files** dialog box.

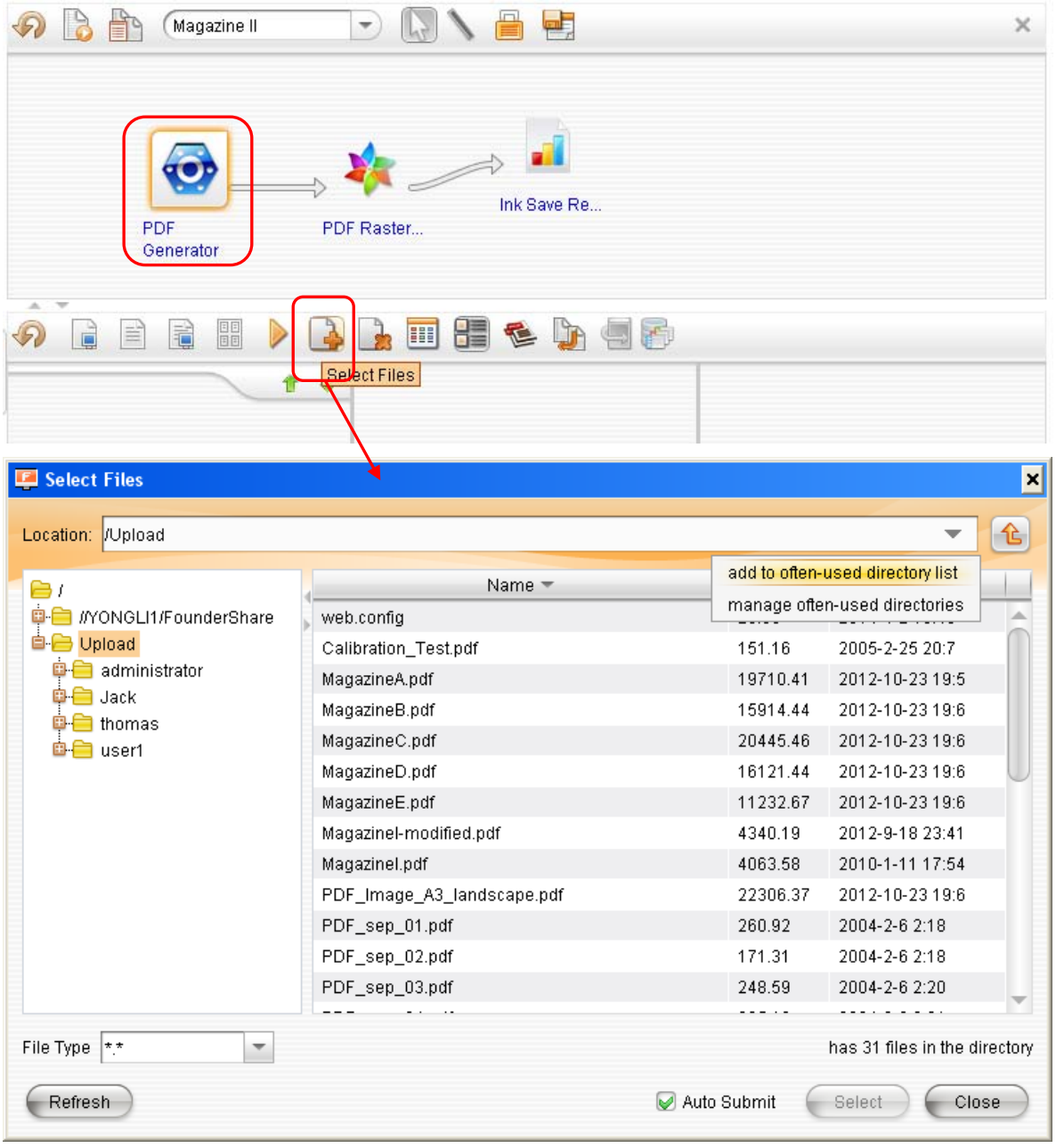


Figure 2-66

- **Select Files**

Choose the files under certain directory, and let them get into ElecRoc workflow system. Here the optional directories must be specified beforehand on the Server (main menu **Settings** > **General**). The **Upload** directory is the default folder shared on the server for public use. You can upload the source files into this folder. Other directories are those defined at **General Settings** > **Input Directory**.

To add source files into ElecRoc system, double-click the files under some directory, or select the files and then click **Select**. The files you choose will then enter into the input file queue under the PDF Generator node.

The **File Type** dropdown box lists the file types ElecRoc supports. When a file type is selected, the dialog box will only display the files of that type. The **Refresh** button enables you to refresh the files under the current directory in real time.

- **Auto Submit**

This is an important option. If checked, ElecRoc will automatically submit the source files to PDF Generator for process, once you have chosen the source files and closed the current dialog box. If not, after the source files enter into the input file queue of the PDF Generator node, ElecRoc will not automatically submit them for process. By default, this option is checked.

- **Common directories**

You can save your commonly-used source file directories into a dropdown list, which can be triggered with the triangle icon at the right-most of the **Location** column. To save the current directory into the list, click and then choose **add to often-used directory list**. Click once again, and you will see the current directory in the list. Next time you can quickly open this directory to choose source files. If you want to delete a directory from the list, or change its position in the list, choose **manage often-used directories**.

2. Hot Folder

When you use a hot folder as the root node of your workflow, you can upload the source files into the folder specified by your Hot Folder node. ElecRoc can automatically detect the folder, and if it finds new files, it will automatically submit the files to the next node connected with the hot folder node, such as PDF Generator.

3.3.2 Submit Files

1. Auto Submit

As to the source files, those entering into the hot folder will automatically be submitted to the next connected node behind the hot folder. Those chosen from the **Select Files** dialog box from the PDF Generator node, when the **Auto Submit** option is checked, can also be submitted automatically to the PDF Generator for process.

In your workflow, if you don't **Hold** any node, each node can automatically submit the files after its process, to the next connected node.

2. Manual Submit

When the **Auto Submit** option is NOT checked, after you have chosen the source files, you need to manually submit them under the PDF Generator node, so that the generator can start the process. There are three ways to submit.

1) Click the toolbar icon. All the source files under the node will be submitted.

2) Choose the files in the source file queue, right-click and choose **Submit**. Only those files you choose will be submitted.

3) Choose the files you want to submit, and then drag to the PDF Generator node.

Manual submit is also applied to cases when some node is held, or when your job contains independent nodes, or when files need to be processed cross nodes, or re-processed. In such cases, you can also use the toolbar icon or right-click menu item **Submit**, to submit all or part of the input files under any node to itself for process. You can also choose the input files or output files under any node, and then drag them to current node or any other node in the workflow for process.

3.3.3 Process Files

The node starts the process once the files are submitted. The process information window now appears.

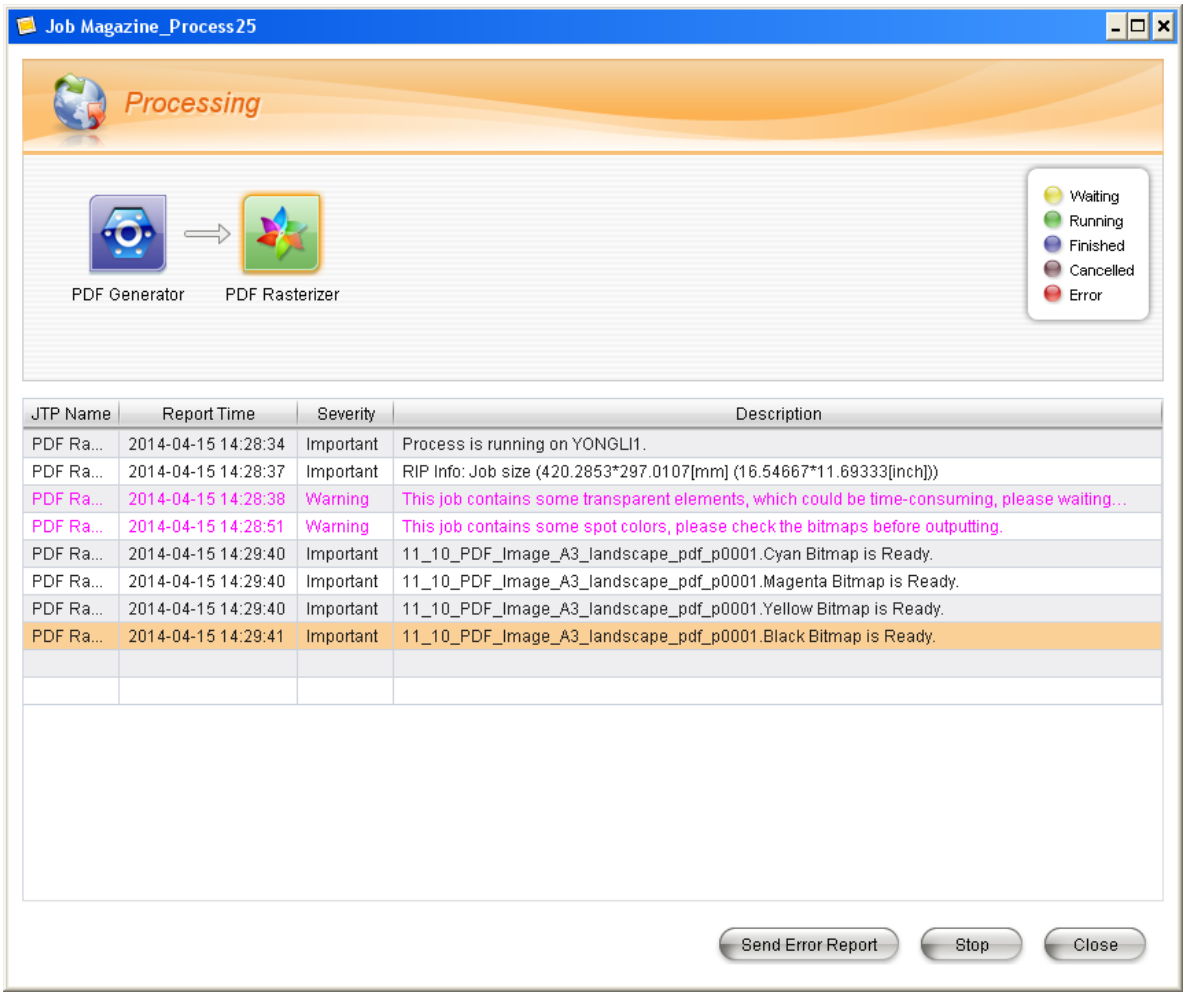


Figure 2-67

1) You can learn the progress from the color changes on the node icons, or from the messages displayed in the below.

2) You can use the **Stop** button to interrupt the ongoing process at any time. You can also right-click the node and choose the item **Stop Running** or **Stop All Process** to interrupt. The former item stops the files submitted last time, while the latter stops all the ongoing

files submitted many times.

3) You may see that the node icon turns to red, or that the messages turn to pink or red, or that a warning window pops up, or even that the process is terminated, if some exception or error occurs during the process.

4) In general, the error of a single file has no influence on the rest of other files simultaneously-submitted, but the error file will NOT be submitted automatically to the next node in your workflow.

5) You can send an email to Founder technician for support in case that an exception or error occurs during the process. Click **Send Error Report** to email.

3.3.4 Run List

The run list is designed for you to monitor the processes of the nodes in current job. On top of the workflow area, click the toolbar icon **Run List** to open the **Run List** window.

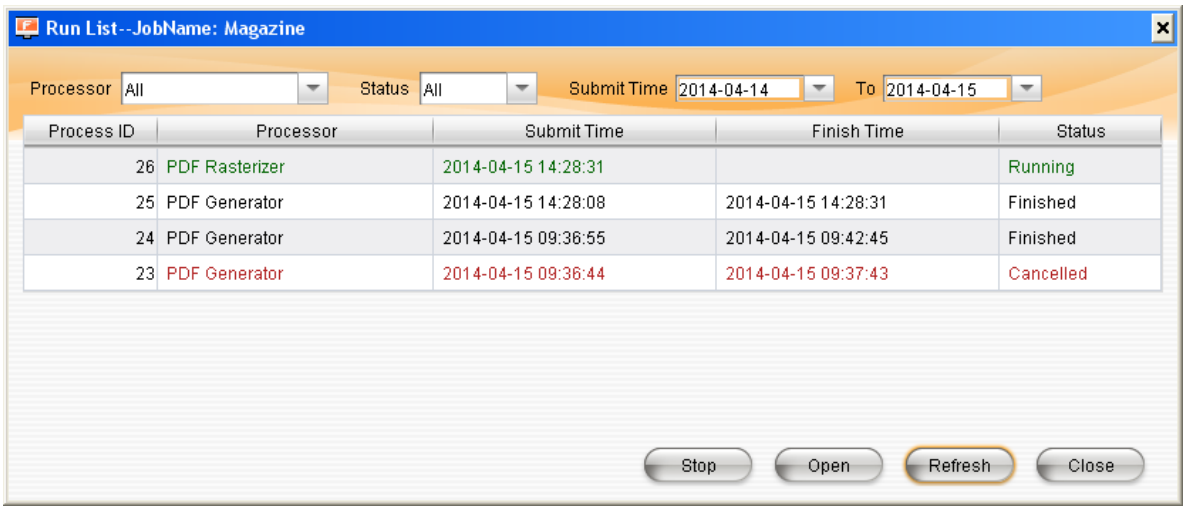


Figure 2-68

Here you can view each process's status. There are 6 types of statuses: waiting, running, finished, cancelled, error, and abnormal. In running or waiting status, you can click **Stop** to terminate the node's process.

Choose any row of information and then double-click or click **Open** to view the detailed process information. The **Refresh** button enables you to manually update the list. The **Open**, **Refresh** and **Close** operations can also be performed with right-click menu items.

3.3.5 Status Monitor

The status monitor enables you to fully monitor the processes of all the jobs in your ElecRoc system. You can not only view the process information, such as the overall job progress, the node status, the resource involved in the process, but also can control these processes, such as to adjust the priority of a waiting process, to cancel a waiting or running process.

1. Monitor Process Information

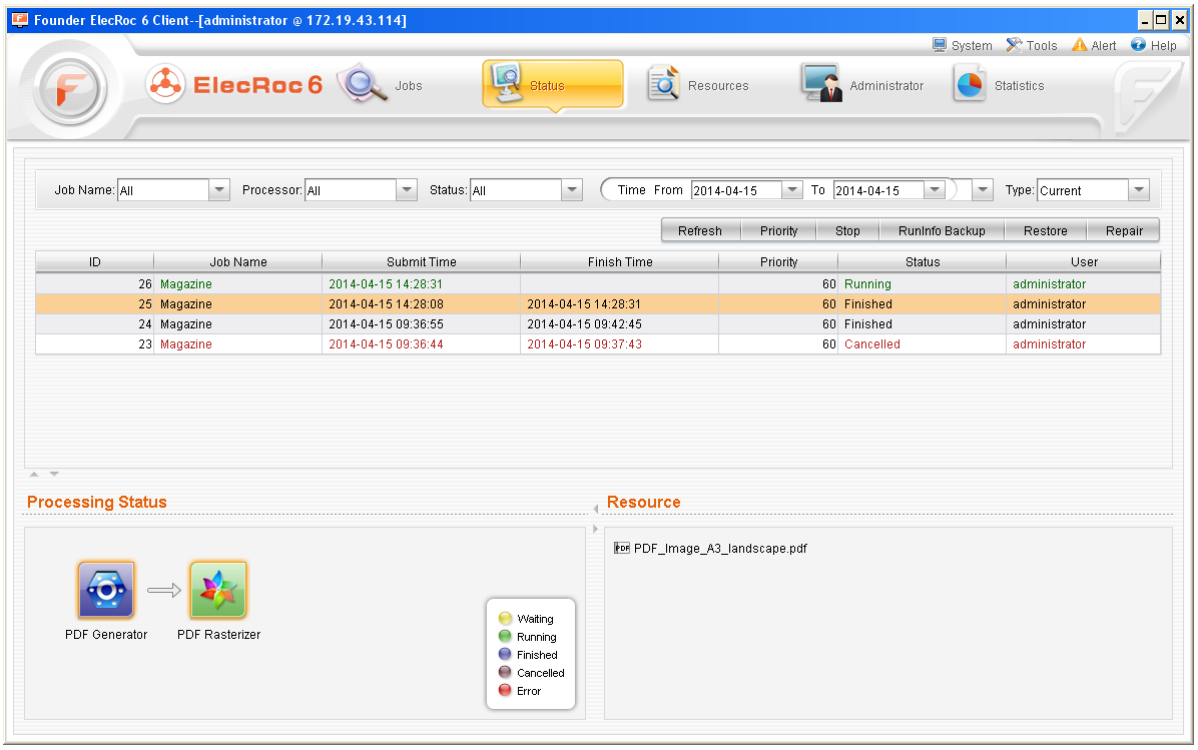


Figure 2-69

1) Process list

The list displays processes performed by single node at one time, unrelated with the file quantity. For example, if you submit a batch of files to a workflow like PDF Generator → PDF Rasterizer, although the two nodes are connected and you submit once, here ElecRoc would display it as two processes in the list: one is *PDF Generator → PDF Rasterizer*, and the other is a single *PDF Rasterizer*.

The displayed process-related information includes job ID, job name, submitted time, finished time, priority, status and the user submitting the files. You can click the head of any column to sort the whole table in ascending or descending order. The **Refresh** button is used to manually update the progress and status of all the processes.

The displayed processes in the process list are results that meet certain search conditions. You can define the search conditions on top of the list. The processes can be searched as per name, processor, status, user and type. Among them, the status is divided into all, waiting, running, finished, cancelled, error, and abnormal, and the type is classified into current and history.

2) View process information

Double-click any row in the process list to open its process information window, in which you can view the detailed process information.

3) Progress and resource

Choose any record in the process list, and then you will see the progress and status of all the nodes involved in the process, in the **Processing Status** area at the bottom of the monitor window. The **Resource** area will then list all the files involved in the process.

2. Control the Processes

1) Change priority

Priority controls the order of the waiting processes. As to processes in waiting status, the one with a higher priority will be processed prior to the one with a lower priority. To change a waiting process' priority, choose it in the process list and click **Priority**, then input a new value in the pop-up dialog box, and then click **OK**. The value range is 1-100. Higher value represents higher priority. For processes with same priority, the order is sorted by the submitted time.

2) Stop a process

Choose one or more running processes in the process list and click **Stop**.

3) Backup, restore and repair

The **Backup** button enables you to back up the process information. The **Restore** button enables you to restore the backup information into the monitor. And the **Repair** button is used for you to clean up the processes that are not normally ended.

3.4 Manage Job Resource

The lower-right area of the job window is designed for you to view and manage the job files, and to perform various processes on these files. This area is composed of a toolbar and files of various types. Its appearance is specific to the toolbar icon and the job node you currently select.

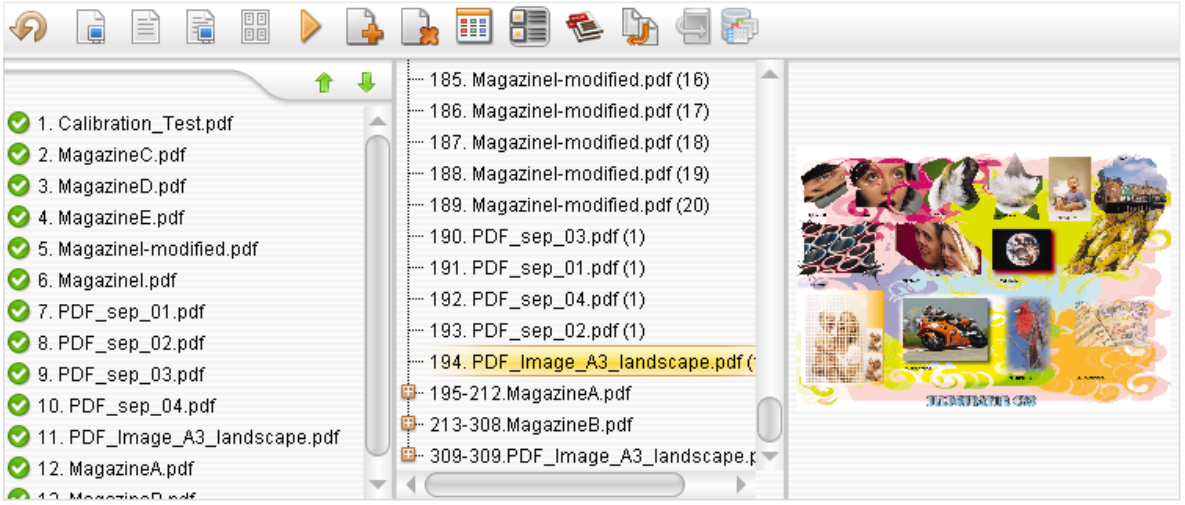


Figure 2-70

Processes on the files, both the input and output files, are mainly implemented with the toolbar icons and the right-click menu items.

3.4.1 Files

When the **Files** icon in the toolbar is selected, you can view all the source files in the current job, i.e. the input files under the PDF Generator and Hot Folder nodes.

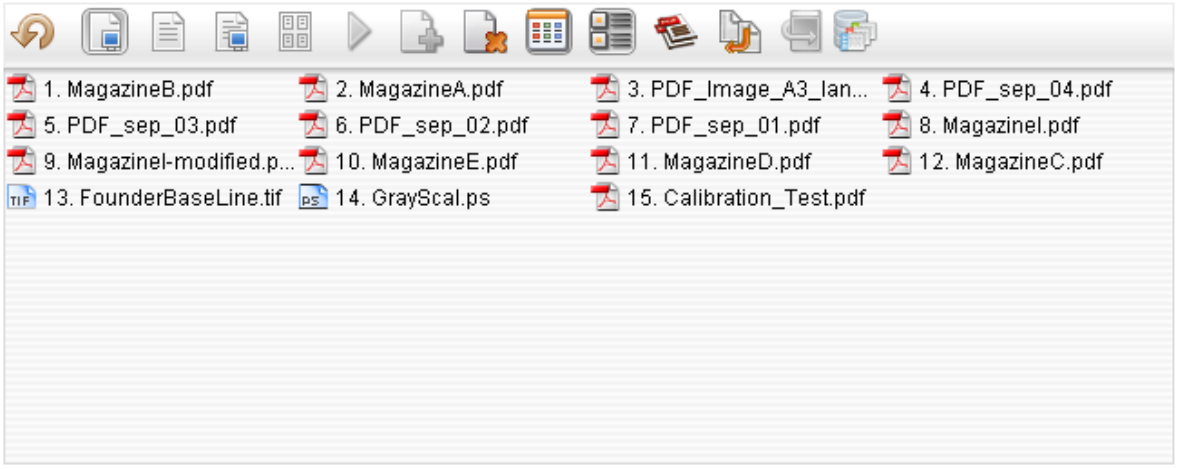


Figure 2-71

3.4.2 Pages

When the **Pages** icon in the toolbar is selected, you can see all the PDF page files in the current job, i.e. the output files under such nodes as PDF Generator, Preflight, and Trap.

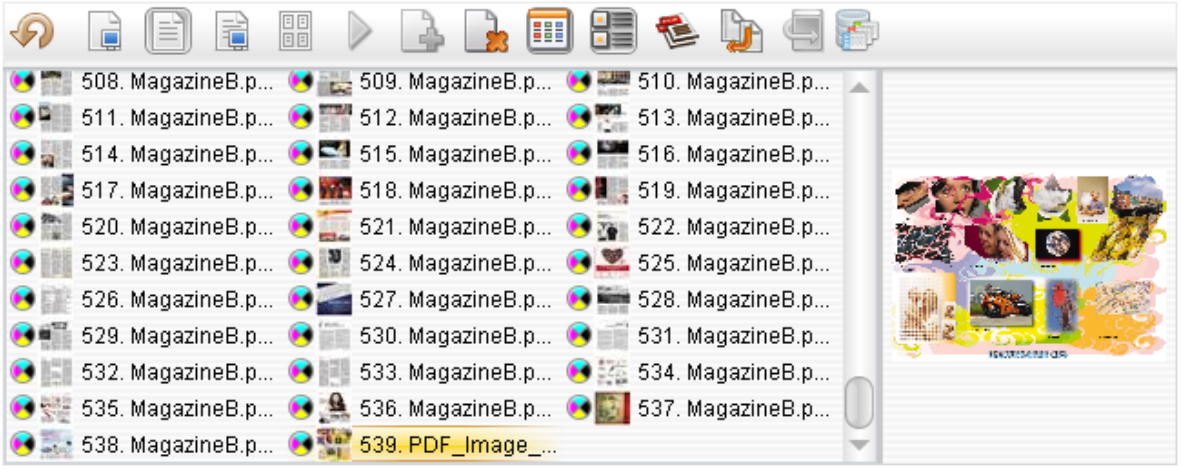


Figure 2-72

3.4.3 Files and Pages

When the **Files and Pages** icon in the toolbar is selected, you can see all the source files and PDF page files in the current job.

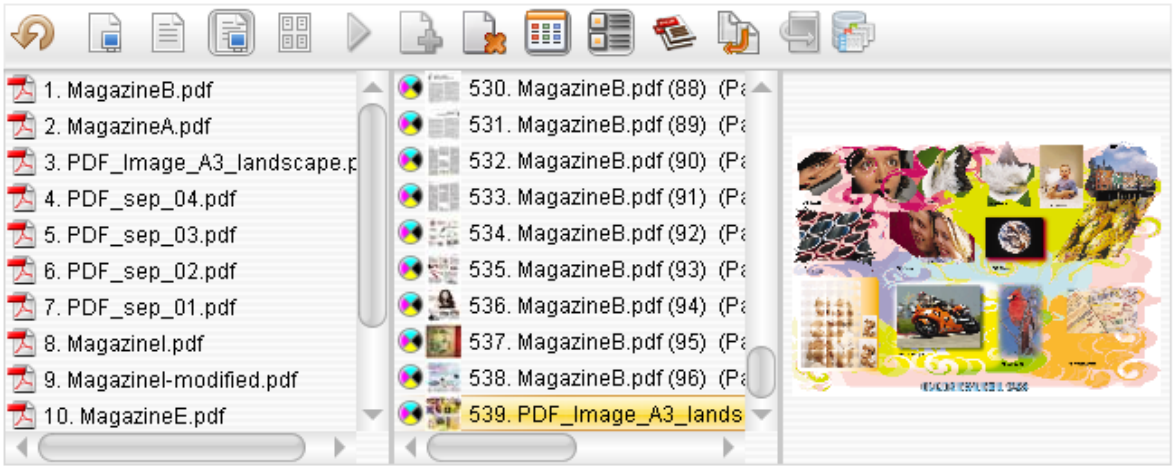


Figure 2-73

3.4.4 Signatures

When selected, the **Signatures** icon in the toolbar enables you to view all the signature files in the current job, i.e. the output files from the Imposer, Composer and Ganging nodes.

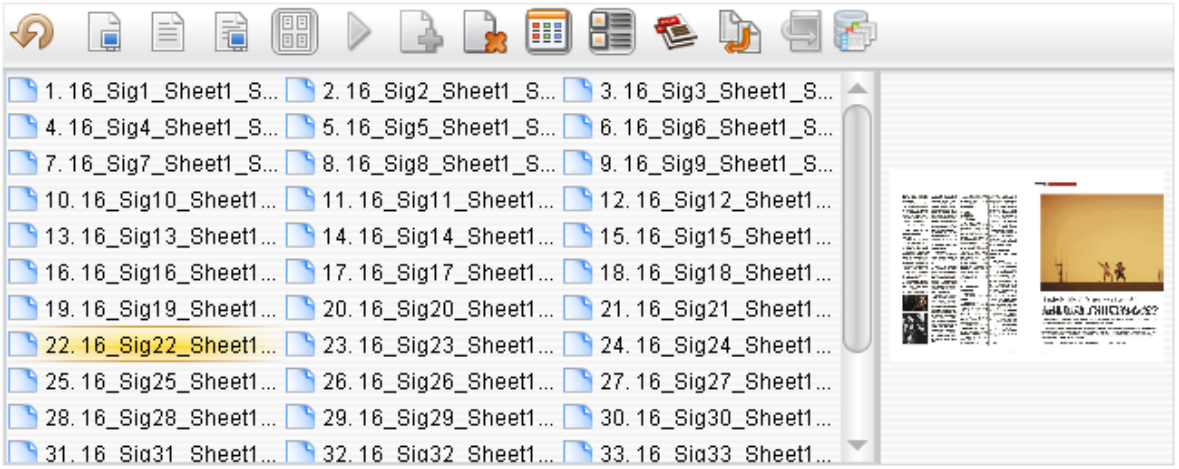


Figure 2-74

3.4.5 Job Resource Clearing

All the input and output files in your job can be cleared off if you click the toolbar icon **Clear Resources**. Be careful to perform this operation. Before the clearing, you need to stop all the ongoing processes (if any), and ElecRoc will ask you to confirm.

3.4.6 View Control

A status indicator and a thumbnail image appear in front of each file if you have the **Thumbnail** icon in the toolbar selected. The sign indicates the file has been submitted to the node for process, while indicates it has NOT been submitted.

The file name can be simplified in the display if the **Toggle File Name** icon is selected. If needed, you can click the **Refresh** icon to manually update the job resources.

3.5 File Process

3.5.1 Source File Process

Under the PDF Generator node, or when the **Files** icon in the toolbar is selected, you can use the right-click menu items to perform a series of processes to the source files.

Item	Function
File Information	Learn information on the file location.
Submit	Submit the selected files to current node for process.
Copy	Copy the selected files.
Paste	Paste the copied files under the current node.
Delete	Delete the selected files.
Empty	Delete all the source files under the node.
Sort	Auto-arrange the files in the list.
By Name	Sort files by file name.
By Type	Sort files by file type.
By Time Up	Sort files by date modified, starting from the earliest.
By Time Down	Sort files by date modified, starting from the latest.
Refresh	Refresh the file status, such as whether it has been submitted.
Select File	Select more than one file at the same time from the list.
By Odd	Select more than one file in the odd positions at the same time from the list.
By Even	Select more than one file in the even positions at the same time from the list.

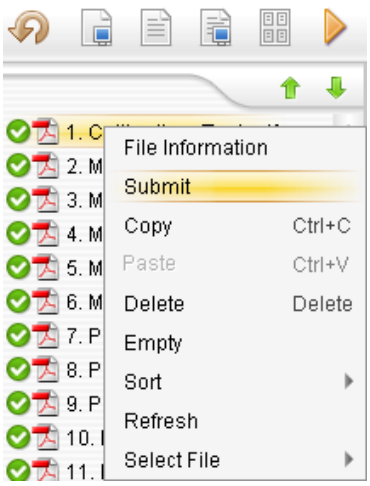


Table -8

1. Learn File Information

Learn the current file's name and location.

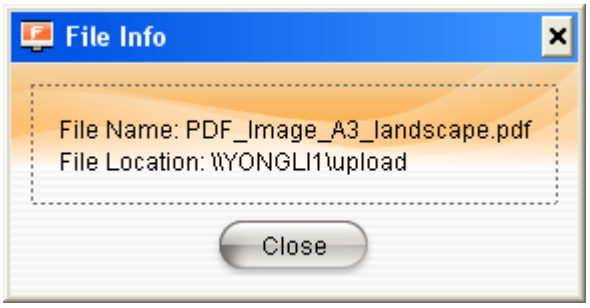


Figure 2-75

2. Submit Files

Submit the selected files to the current node for process. You can select more than one file each time.

3. Adjust File Process Sequence

If file priorities are equal, ElecRoc processes your submitted files in the sequence as they are in the file list. To change the file sequence in the file list under PDF Generator node, choose one or more files and then click the icon or .

4. Refresh, Copy, Paste, Delete, Empty

Refresh: Manually refresh the source file status, i.e. submitted or not.

Copy, **Paste**: You can carry out the copy & paste operation across nodes, or even across jobs. First, under the node *PDF Generator A*, choose one or more source files and use the right-click menu item **Copy**. Then, switch to the node *PDF Generator B*, right-click in the source file area and choose **Paste**. In this way, you copy source files from node A to node B. The two nodes may belong to two different jobs.

Delete: Delete the selected files.

Empty: Delete all the source files.

5. Sort Files

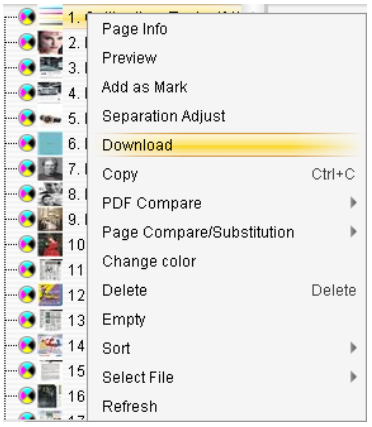
You can direct ElecRoc to auto-arrange the file positions in the list by file name, or by file type, or by date modified. With this operation, you can view the files more clearly. But note that it changes the file process sequence. If file priorities are equal, ElecRoc processes your submitted files in the sequence as they are in the file list. Therefore, this operation may change the process sequence of the source files.

6. Select Files

Select more than one source file in the file list at the same time. **Select File By Odd** enables you to select all the files that are in the odd positions, while **Select File By Even** enables you to select all the files that are in the even positions.

3.5.2 PDF Process

Processes to single-page or multi-page PDF files are also performed with right-click menu items. The PDF files here may be the PDF pages generated by PDF Generator, also may be the files in PDF format that result from a further process on such PDF pages. Therefore, the processes introduced in the below and are enabled with right-click menu items, are available to files such as: the output files under PDF Generator; the PDF pages displayed when the **Pages** toolbar icon is selected; the input and output files under other PDF nodes like Preflight, Trap, PDF CMS, and even the input files under PDF Rasterizer.



The following command table and figure at the left are only an example of the right-click menu on PDF Generator's output PDF page file. For more PDF operation commands and their functions, please see the introductions in the sections behind the table.

Item	Function
Page Info	Learn page size, file size and spot colors.
Preview	Preview PDF pages.
Add as Mark	Add a page as a mark that can be used in Imposer and

	Composer.
Separation Adjust	Adjust the logic page numbers of a separation file.
Download	Download the PDF files to local disk.
Copy	Copy the selected files.
PDF Compare	Compare two PDF files to find out their difference.
Set as page before modification	Set the file as the old file in the comparison.
Set as page after modification	Set the file as the new file in the comparison.
Page Compare /Substitution	Compare two files for page substitution.
Mark as finished	Mark the file as the finished file in the comparison and substitution.
Mark as modified	Mark the file as the modified file in the comparison and substitution.
Change color	Change the color mode to gray or color.
Delete	Delete the selected files.
Empty	Delete all the files in the current queue.
Sort	Auto-arrange the files in the list by file name, or by date modified, or by page type.
By Name	Sort files by file name.
By Time Up	Sort files by date modified, starting from the earliest.
By Time Down	Sort files by date modified, starting from the latest.
Reverse	Sort files in reverse order.
By Page Type	Sort files by page type.
Select File	Select more than one file at the same time.
Select File By Odd	Select the files in odd position at the same time.
Select File By Even	Select the files in even position at the same time.
Refresh	Refresh manually the file status.

Table -9

1. Preview Pages

1) Normal Preview

You can open an independent window to preview the PDF pages generated by PDF Generator, or PDF pages output by other PDF processors.

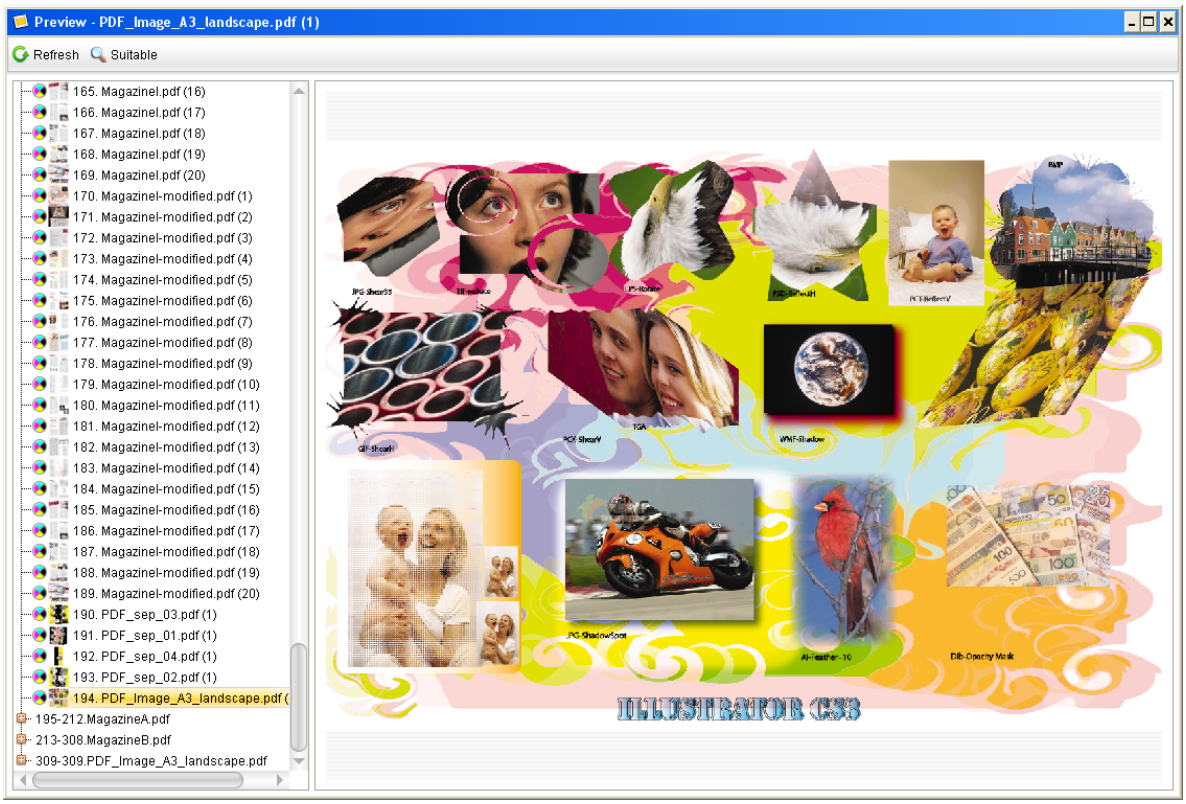


Figure 2-76

Enable preview: The PDF Generator parameter **Parameters** > **Enable Preview** controls if ElecRoc generates a thumbnail image for preview purpose during the PDF Generator process. If unchecked, the preview becomes unavailable. Besides, in case that the file name contains invalid characters, the preview may become unavailable either.

Preview image resolution: The resolution is controlled by the PDF Generator parameter **Parameters** > **Thumbnail Parameters** > **Resolution**.

Refresh preview image: Click the icon in the preview window to manually refresh in case that the page is changed during the preview.

Zoom display: Fixed zoom options include Suitable, 25%, 50%, 75%, 100%, 200%, 300%, 500%, and 800%. The default is Suitable. You can also zoom in and out by dragging with the right mouse button.

Switch previews: The page list at the left shows all the pages under current node, providing you with ease to switch among the previews of these pages.

2) Fast Preview

Under the PDF Generator node or any other PDF node in the job window, you can fast preview the PDF pages by holding down the left mouse button on the thumbnail image located at the lower-right corner of the window. A zoomed-in thumbnail image will then immediately spread out on the window. Like the normal preview mode, you need also to check the PDF Generator parameter **Parameters** > **Enable Preview** before the PDF Generator process, and can also control the thumbnail image resolution through the PDF Generator parameter **Parameters** > **Thumbnail Parameters** > **Resolution**.

In addition, you can customize the zoom percentage of the pop-up thumbnail image. To do this, right-click on the thumbnail image located at the lower-right corner of the

window, and then choose a proper zoom option from the pop-up list. Options include 25%, 50%, 100%, 150%, 200%, and 300%.

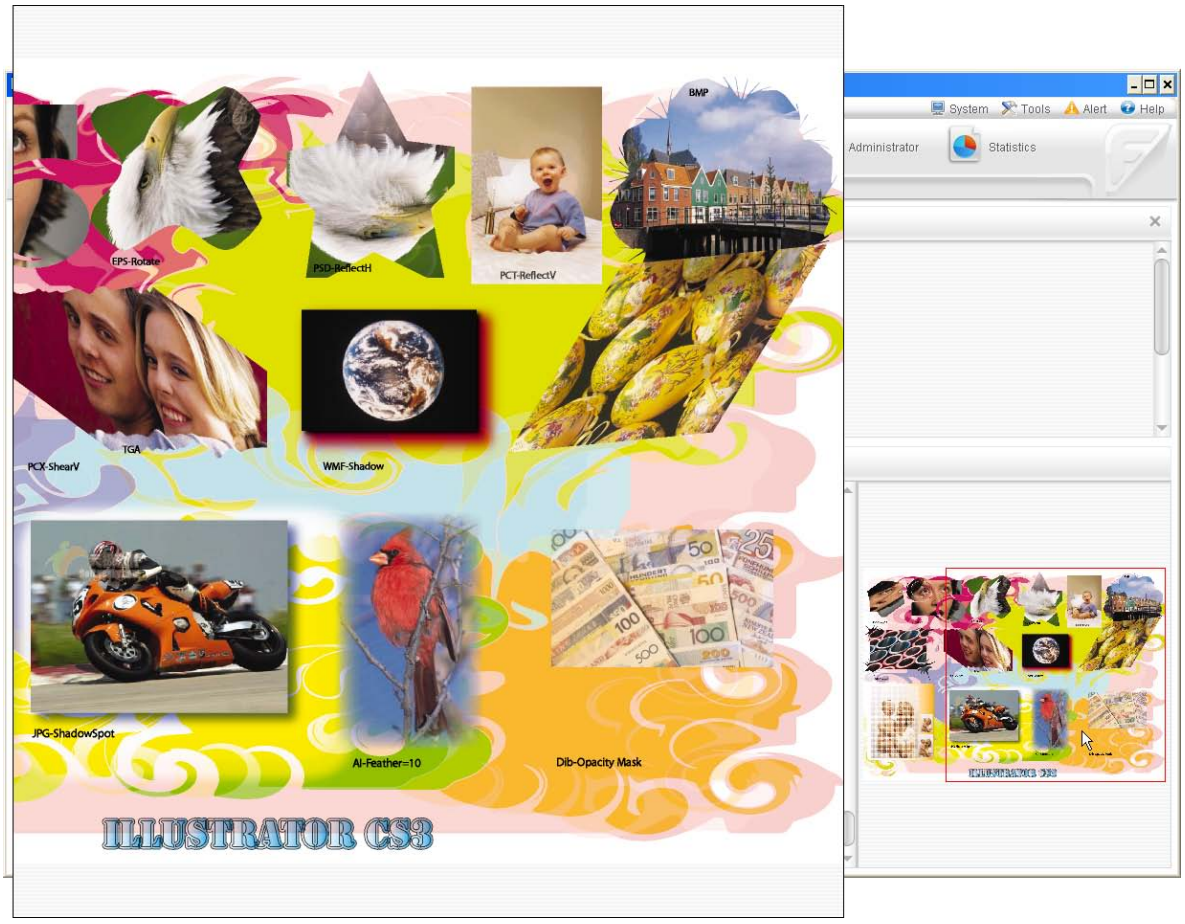


Figure 2-77

3) 3D Preview

This capability requires you to install .NET Framework 3.5 or later version in your client.

Under the Imposer node, choose one or more PDF pages (may include blank page) from the input file queue, click the toolbar icon, or right-click and then choose **3D Preview**. The follow-up preview window differs for Clients running on MAC and PC platforms.

- **On PC Client**

As shown in the below, the 3D Preview window displays the PDF pages in the sequence as they are in the input file queue, two pages each time. To simply turn pages backward, click on the right page; to turn pages forward, click on the left page. Or place the cursor on the left corners of the left page or the right corners of the right page to roll up a page corner, then hold down the left mouse button and drag in any direction (left, right, upward, or downward), and then release, and in this way you can gain an experience like you are turning pages with fingers.



Figure 2-78

The icons at the bottom are designed to help you turn the pages.

Icon	Function
Auto Turn	Turn all the pages automatically for you to preview.
Cover	Turn to the first page.
Back Cover	Turn to the last page.
Previous	Turn a page forward.
Next	Turn a page backward.
Go to	Turn to a specified page.
Full Screen	Display the preview window in full screen mode.

Table -10

Icons are also seen at the top of the 3D Preview window, including:

Exit: To close the 3D preview window.

Zoom: You can choose a commonly-used zoom option from the dropdown list, or you can also hold down and drag the right mouse button to zoom in and out the pages.

3D Preview: To open an independent window, as shown in the below (the left figure), in which you can drag the page (always the first and last pages separately on the front and back sides) in any direction, at any angle, to produce the 3D preview effect. The page can be zoomed in and out by holding down and dragging the right mouse button.



Figure 2-79

Setting: To open a pop-up dialog box to make the setting as follows (the right figure). **Time Interval** refers to the time interval between two page turns in auto turning. **Background** of the 3D Preview window can be a **Pure** color (the **Color 1**), a **Gradient** (**Color 1** and **Color 2**), or a **Photo** (three optional background patterns are available, or you can click **More** to specify other photo). The **Turn** setting provides two turning modes, in **Turn page** mode, you turn the pages fore and back; in **Turn over** mode, you turn pages up and down.

Navigation: If checked, a navigator appears at the upper-left corner of the window, showing a thumbnail image of the pages being previewed. Click on this thumbnail, and you can quickly navigate on the zoomed-in pages.

- **On Mac Client**

The preview window is shown as follows.



Figure 2-80

You can also manually click to turn the pages forward and backward, or hold down and drag the pages to roll up and turn. The toolbar icons at the upper-left corner help you to turn pages forward and backward as well. And with the icon **AutoFlip**, the pages can be automatically turned.

4) Remote 3D Preview

This capability is based on the 3D preview, enabling 3D preview outside ElecRoc system. With it, you can save your PDF pages as a single or a series of .zip files, and then email them to a remote user. After receiving these .zip files, the remote user can use a separate tool to unzip them, and then the user can do the 3D preview as that on ElecRoc Client.

Under the Imposer node, choose one or more PDF pages (may include blank page) from the input file queue, right-click and then choose **Remote 3D Preview**. Specify the file name and path for the .zip file, and then click **Save**.

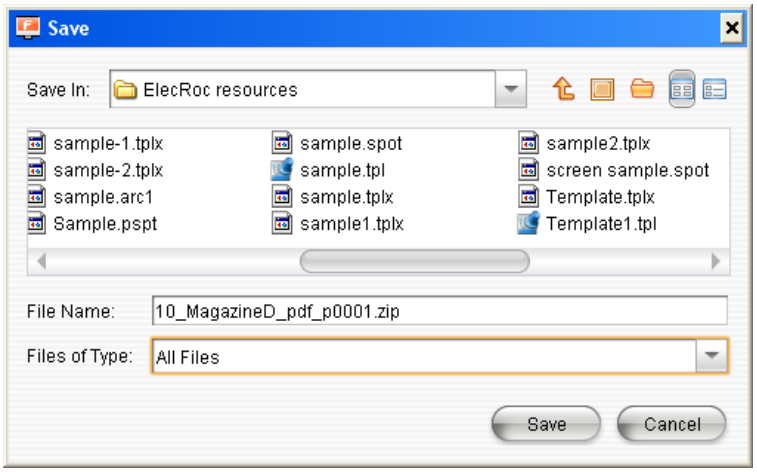


Figure 2-81

Now you can email the .zip files to a remote user.

The remote user can then unzip and do the 3D preview. For details on the unzip tool, refer to Appendix C.6.

2. Page Information

PDF Generator can read such page information as page size, separation color, and spot color, during its process. You can learn such information in the PDF page information window, which can be opened with the right-click menu item **Page Info**. And in this window, you can also import the spot colors found in the page into a spot color table.

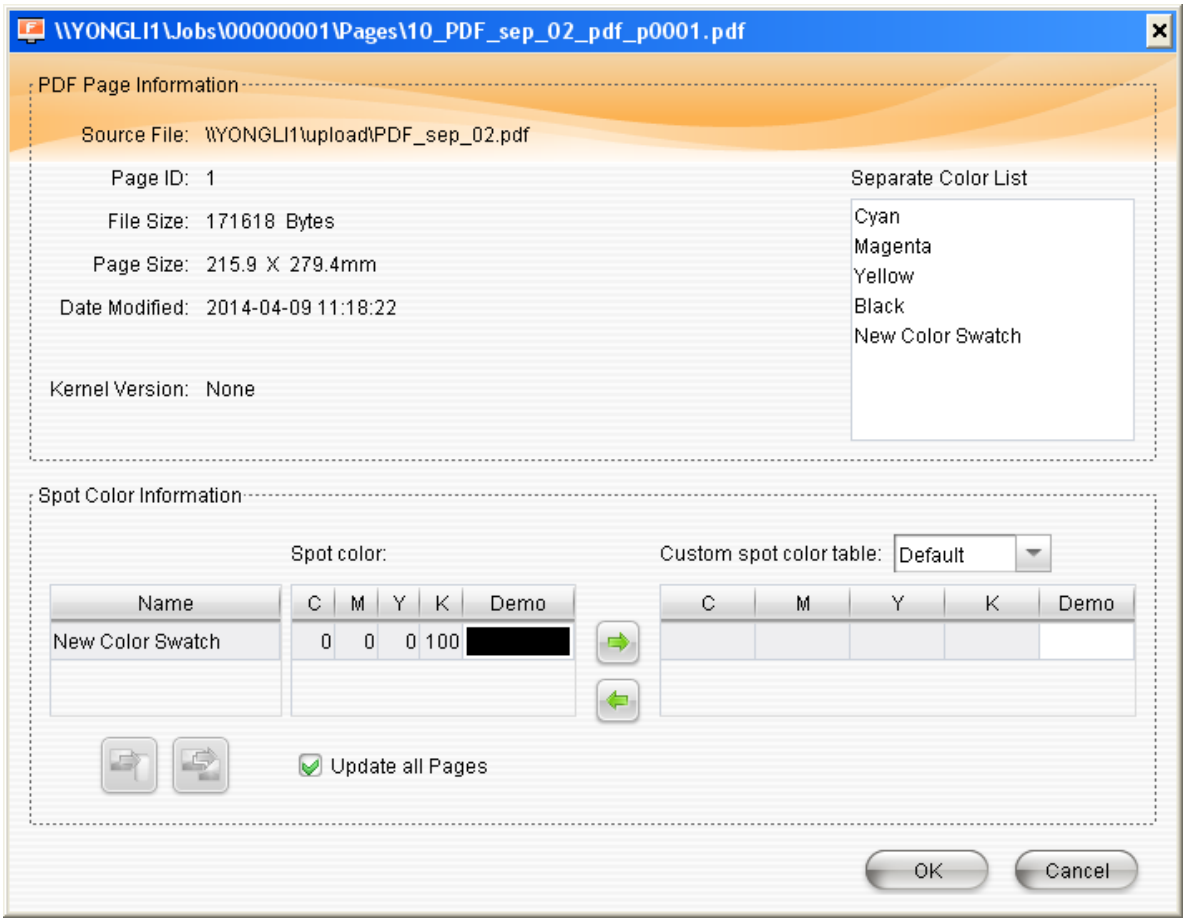


Figure 2-82

1) PDF Page Information

Source File: The full path of the source file.

Page ID: The page number of the page in the source file.

File Size: The size of the PDF file.

Page Size: The size of the PDF page.

Separate Color List: The colors contained in the separation file.

Date Modified: The latest time the PDF page was processed.

2) Spot Color Information

ElecRoc displays the spot colors contained in the page. You can see the spot color name

and its cmyk values. In general, if the source file is a composite file, you can get the full information, but if it is a separation one, you may only get the spot color name, its color value is assigned by default as K=100.

3) Spot Color Process

You can not only view the spot colors in the page, but also can import them into any trap ink profile or spot color table, for use in the later-on spot color processes.

Before you perform such operation, you can change the spot color value. Double-click any of the CMYK value to activate an edit box for this change. If you check **Update all Pages**, the change on the color value will apply to all the rest pages generated from the same source file.

1) **Import to spot color table**: Choose a table in the **Custom spot color table** dropdown box (displaying the colors with same name in the below, if any), and then choose the spot colors in the page at the left, click the arrow. Color substitution occurs if such color with same name exists in the table (a message pops up for you to confirm prior to the substitution). If you choose spot colors in the table and then click the arrow, you can substitute for the page spot colors conversely.

2) **Import as system spot color**: To import the spot colors into the system spot color table, choose all or part of the spot colors (choose color name) in the page, right-click and choose **Import to system spot**.

3) **Import to trap ink profile**: Choose the spot colors in the page, click the first icon in the below, or right-click and choose **Import to trap ink**. And then, choose a trap ink profile in the pop-up dialog box, click **Add**.

4) **Copy spot color name**: Choose one spot color in the page, click the third icon in the below, or right-click and choose **Copy Spot Name**. In this way, you can copy the name of the spot color into clipboard, for you to paste anywhere later-on as needed, e.g., as the name of new spot color in spot color table, or in Windows' notepad.

3. Define Page Type

Under the PDF Generator node, after files are processed in multiple-page mode, choose a page of any file in the output file queue, then right-click and choose **Custom page type**.

Now you can define a book page type for the currently selected page. There are four such types here, Cover, Preface, Text and Illustration. The **File** option refers to the pages apart from these four types. All the PDF pages in ElecRoc are of this type by default. After you define the page type, please further define the page number of the page under the specified type, with the **Start page No.** parameter.

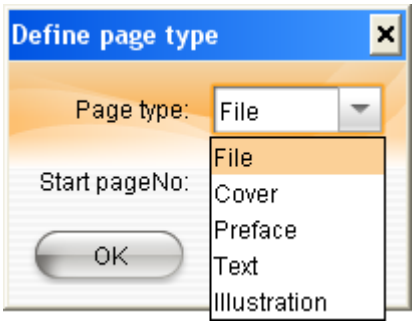


Figure 2-83

When you have defined proper page types, you can then submit them to **Page Compare**

/Substitution for the intelligent compare.

In addition, you can sort such pages by page type. As you can see the following figure, the left list shows pages that you have NOT defined page type, sorted by name; the middle shows pages that you have defined page type, sorted by name; the right shows pages that you have defined page type, but sorted by page type, i.e. arranged according to a sequence of Cover, Preface, Text and Illustration.

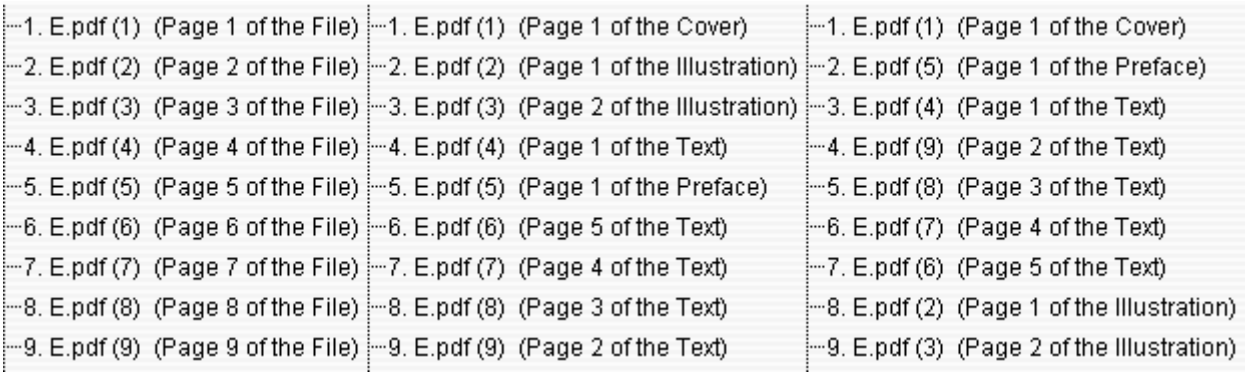


Figure 2-84

4. PDF Compare

ElecRoc enables you to compare two PDF files, each of which may consist of more than one page, so as to find out their difference. It's useful especially when you want to compare a revised PDF to an earlier one, in order to know the change made in the file modification.

To use this feature, you need to install Adobe Acrobat 9.0 or higher version and Microsoft .NET Framework 3.5 or later version in your computer.

1) Objects and Range for Comparison

The objects applicable for the comparison must be PDF files that have been processed at least by PDF Generator, regardless of single-page or multiple-page mode, and their full names can NOT be the same.

You must specify the two PDF files before the comparison. Separately choose two files, then right-click and choose **PDF Compare** > **Set as page before modification** or **Set as page after modification**. The comparison is based on the old file (i.e. before modification), with an aim to check the modification on the new file (i.e. after modification).

Click the toolbar icon **PDF Compare** above the file queues to open the setup window.

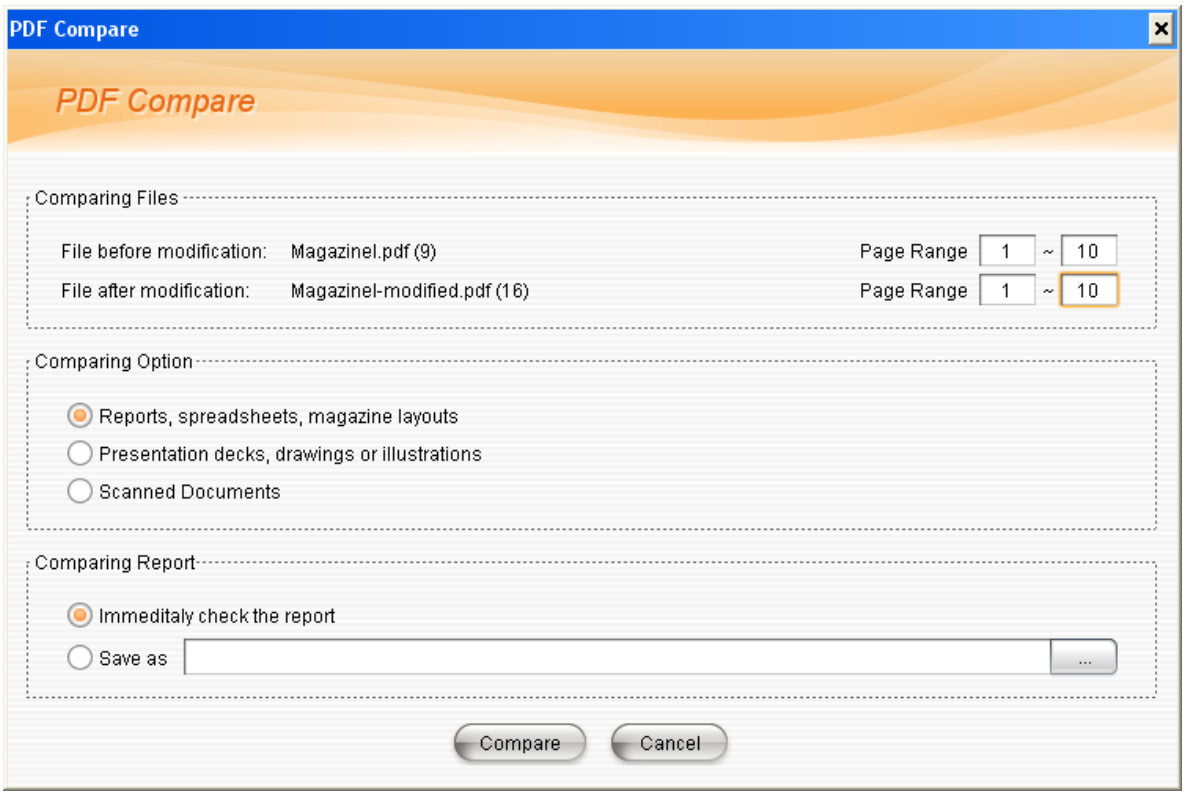


Figure 2-85

The window shows the old and new files for you to confirm. The page range parameters are designed for you to specify the pages to compare. E.g. you can compare the first page from the old file with the second page from the new file. The page range can be freely specified, but note that each range must be continuous, and the value shall be no more than the actual total page number.

2) Compare Option

ElecRoc classifies the PDF files into three categories: 1) Reports, spreadsheets, magazine layouts, 2) Presentation decks, drawings or illustrations, 3) Scanned Documents. Please choose a category that best describes your files.

3) Compare Report

After comparing the two PDF files, ElecRoc shows the result in the form of a compare report. In the above window, you can choose if you want to immediately view the report, or to save it in a specified path, such as a folder in your local disk.

The compare report is shown as follows:

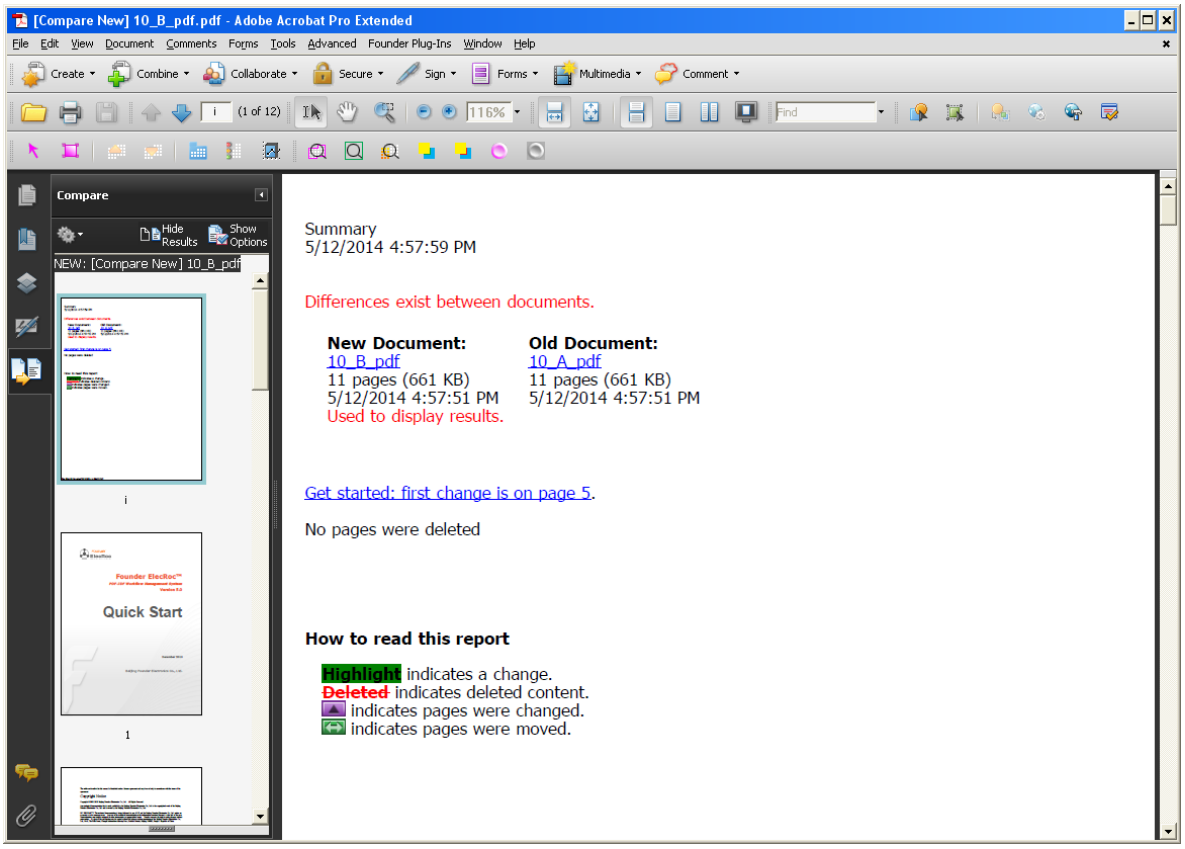


Figure 2-86

The first page is the summary of the compare result. The rest are pages from the new file, with annotations indicating the changes. ElecRoc also adds marks to show the change, the deleted content, the pages that were altered, and the pages that were removed.

On the **Compare** panel at the left, you can do any of the following:

To hide the annotations, click **Hide Results**. To define the display setting, click **Show Options**. You can specify the type of changes to display, the color scheme, and opacity of the annotations. To return to the page thumbnails, click **Hide Options**.

The **Options** menu provides more commands, including **Show**/**Hide Results** and **Show**/**Hide Options**. To show each of the documents in its own window, choose **Show Documents Tiled** or **Show Documents Side By** Side. To synchronize the relevant pages while showing the documents in their own windows, choose **Synchronize Pages**.

Click a page thumbnail to go to that page. To change the size of the page thumbnails, choose **Thumbnail Size** > [option] from the **Options** menu. Drag the splitter bar at the bottom of the **Compare** panel up to show thumbnails of the old document. Click a thumbnail from the old document to open it in a new window.

5. Page Compare/Substitution

This manager enables you to substitute one page for another, and before the substitution, it can compare the pages for the difference, so as to help you avoid any substitution error.

1) Choose Pages

Before the comparison and substitution, you need to specify the finished pages, or old pages, i.e. those that are finished already, and the modified pages, or new pages, i.e.

those that are modified.

To specify the finished pages, switch to the output file queue under PDF Generator node, or the PDF file queue under any other node, choose one or more pages or files, regardless of single-page or multiple-page, then right-click and choose **Page Compare /Substitution** > **Mark as finished**. To specify the modified pages, choose **Mark as modified**.

You can add in batches more PDF pages from other nodes as the finished or modified pages. The quantity of the finished and modified pages is not limited. Note that, all such specifying will be cleaned after you reboot the Client.

2) Compare Pages

Click the toolbar icon **Page Compare/Substitution** located above the file queue to open the compare & substitution window.

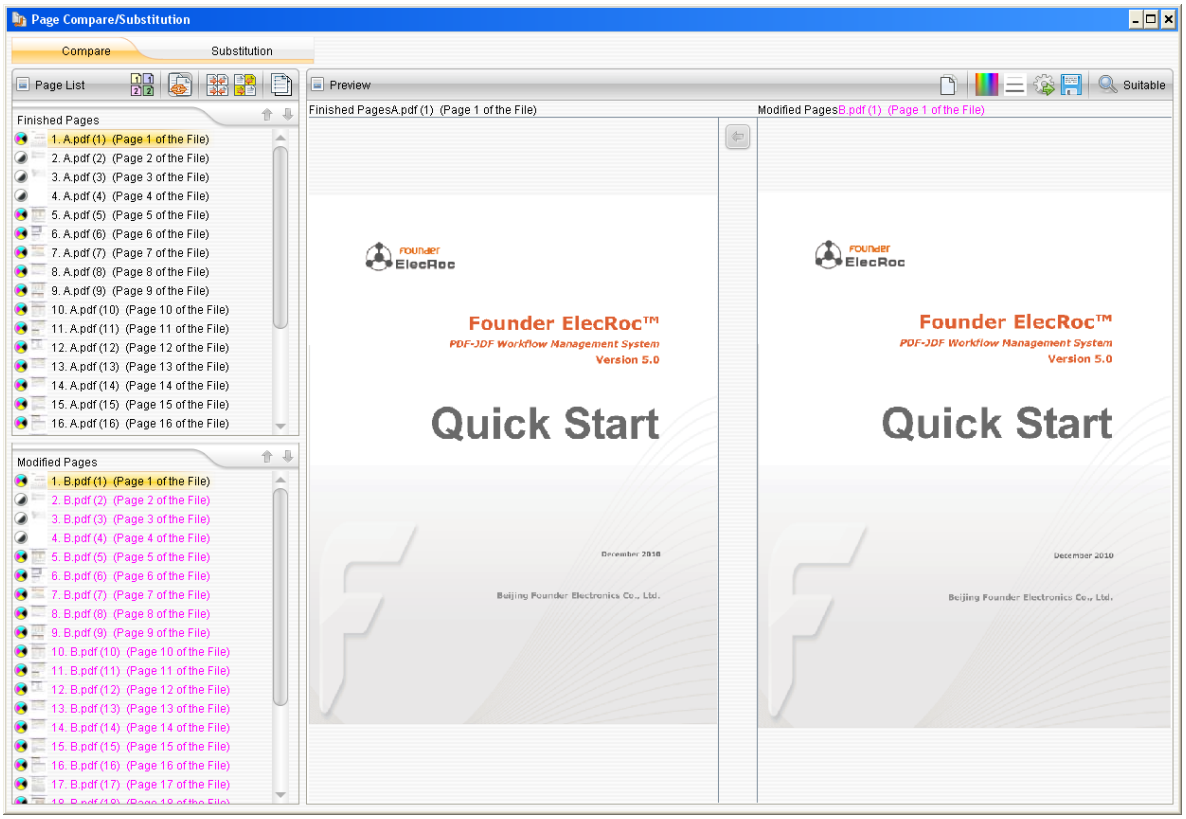


Figure 2-87

The compare operation is performed under the **Compare** tab.

- **Sequence Compare**

Compare page by page according to the page sequence in the **Finished Pages**/ **Modified Pages** lists.

In this mode, the page sequence in the two lists plays a critical role. You must ensure that the finished and modified pages are corresponding to each other in the two lists. The page sequence can be adjusted with the icons and , or the right-click menu items **Sort** and **Move To**. And you can choose more than one continuous or discontinuous pages at the same time to adjust. But note that, in case that the pages are from multiple-page file, their sequence in the list can NOT be adjusted. The icons and menu items mentioned

above would be grayed.

When the leftmost icon in the toolbar is displayed as, the finished and modified pages become related according to the sequence. In this case, if you choose or move a page in one list, you will see that the page with the same sequence number in the other list will be chosen or moved at the same time. E.g. if you move down the second finished page by 1 row, meanwhile the second modified page will be moved down by 1 row as well, vice versa. Click to turn it to, then you can separately choose and move the pages in the two lists, to adjust their sequence in the list.

You can use proper right-click menu items as you determine the pages and their sequence. You can use **Page Info** to view the page size, file size, spot colors and separation colors; or use **Download** to open the page with Acrobat, or use **Delete** or **Delete All** to remove unneeded pages from the lists.

Click the **Sequence Compare** toolbar icon to compare. The result is shown as follows:

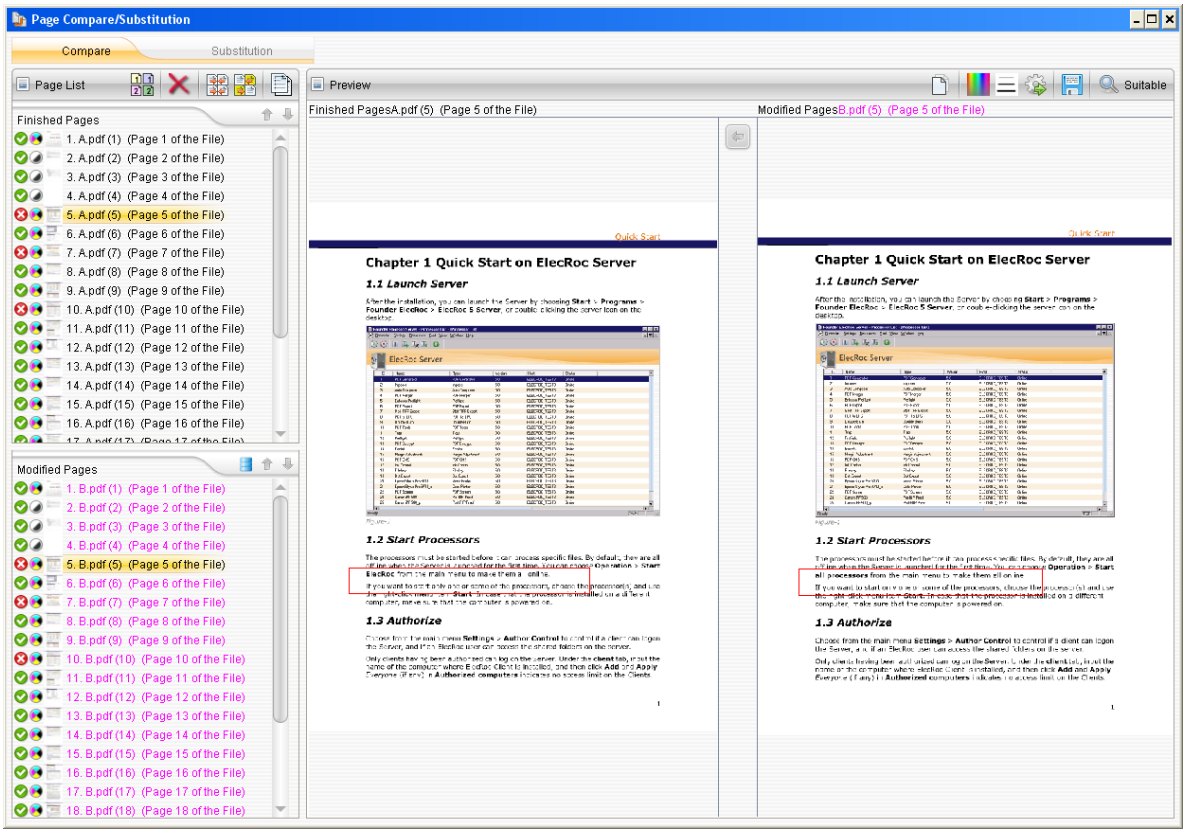


Figure 2-88

Two signs appear in front of the pages. The sign indicates no difference, while indicates difference. Blank indicates that the page has NOT been compared. Click the toolbar icon and choose in the follow-up dropdown list the items **Difference Resource**, **Same Resource**, **Did not deal with**, to display only one type of the pages at one time.

Choose a page with difference, then click the toolbar icon **Flat Differences** and choose a color in the pop-up dropdown list. Rectangles in your chosen color then appear on the thumbnails at the right, showing the contents with difference. With the options from the toolbar icon, you can redefine the line width of these rectangles. The **Scale**

tool enables you to zoom in or out the thumbnails.

- **Intelligent Compare**

This feature (when the toolbar icon is selected) is applied only to the PDF pages which are from the output file queue of the PDF Generator node, and for which you have defined page types, such as cover, preface, text, and illustration.

In this compare mode, ElecRoc compares page by page according to the page type, regardless of the page sequence in the two lists, and it compares only the pages that have been defined page types. E.g. the first *Text* page from the finished page list will therefore be compared with the first *Text* page from the modified page list, and the second *Cover* page from the finished page list will therefore be compared with the second *Cover* page from the modified page list.

- **Perspective Differences**

This operation can be performed before or after the comparing. Choose a finished and modified page, and then click the toolbar icon.

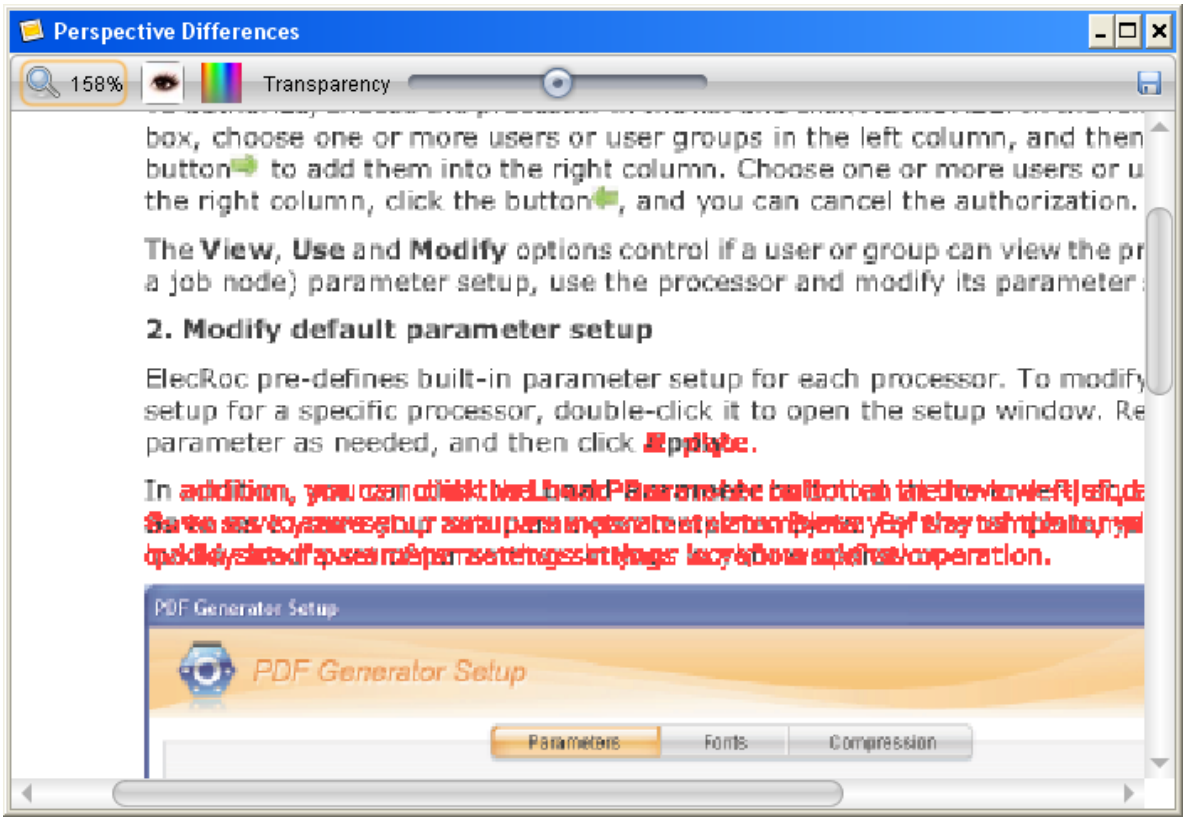


Figure 2-89

If the **Highlight** status (showing the icon) is enabled, ElecRoc applies the color specified with **Different Color** (click) to highlight the contents with difference. If you move the **Transparency** button to the left, you can see more content from the finished page; if you move it to the right, and you can see more content from the modified page. During the process of moving this button, you can visually check their difference.

- **Compare Accuracy**

Click the **Setting** icon in the toolbar to define the compare accuracy.

Area: ElecRoc divides the page into many equal areas for the comparing. The area quantity can be defined with five levels: 10, 20, 30, 50, and 100. The smaller the value, the less the quantity would be. If you want to gain the highest accuracy, choose 100.

Dissimilarity Number: In each of the areas divided as above, if the quantity of the pixels that are different is bigger than the number specified here, ElecRoc will consider such area as an area with difference. The range is 1-100. The less the value, the higher the accuracy is.

3) Page Substitution

The substitution is performed under the **Substitution** tab.

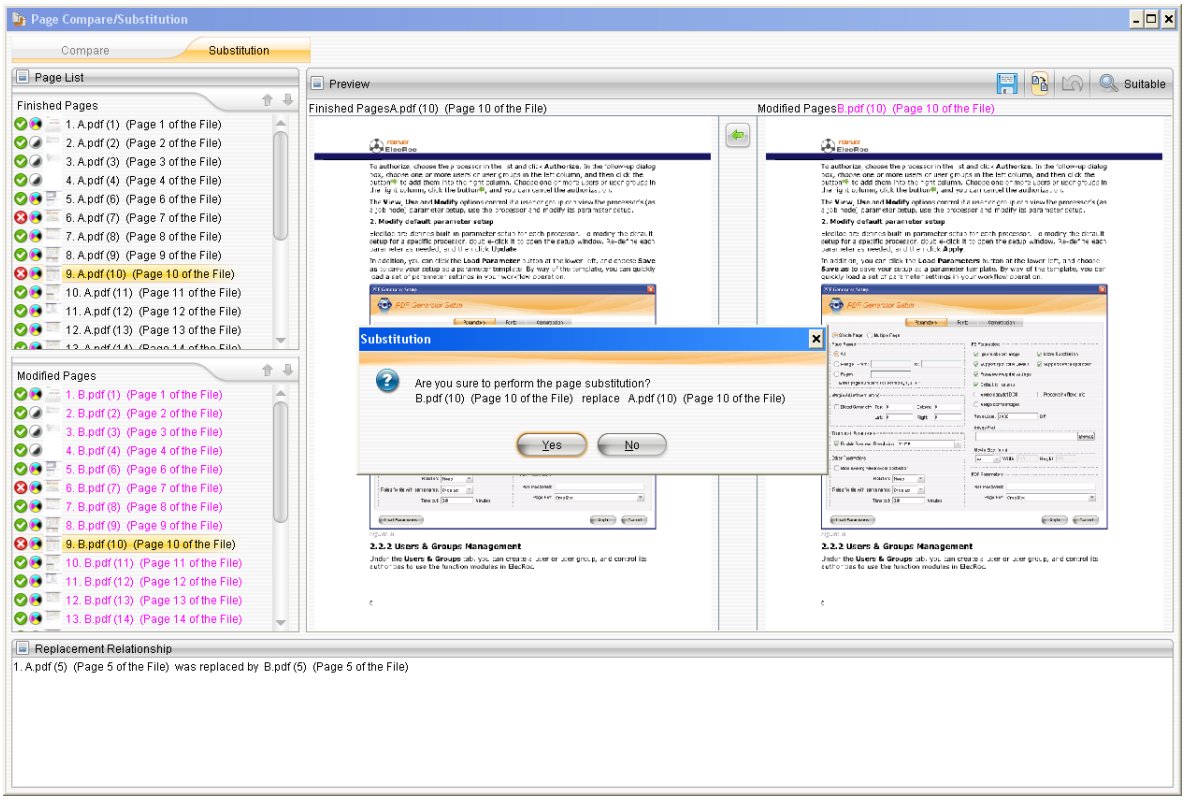


Figure 2-90

Choose a finished page and a modified page, and then click the **Substitution** icon in the toolbar to build a replace relation. Such relations are all displayed at the bottom of the window. If you want to cancel any relation, choose it and then click.

Click when you have determined all the relations.

Return to the file queue under the job node. The pages substituted are shown in pink. You can also check such substitutions in the **Page Substitution Record** window (click the toolbar icon on top of the job workflow area.

6. Download PDF

By choosing the right-click menu item **Download**, you open a dialog that contains three options: **Open**, **Save** and **Cancel**.

Open: Use Acrobat to open the PDF page immediately.

Save: Save the PDF page to your specified location, such as local disk.

7. Separation Adjust

The logical page numbers for some separation files may be special, and thus can NOT be normally identified by PDF Generator. ElecRoc provides this feature for you to manually solve the problem.

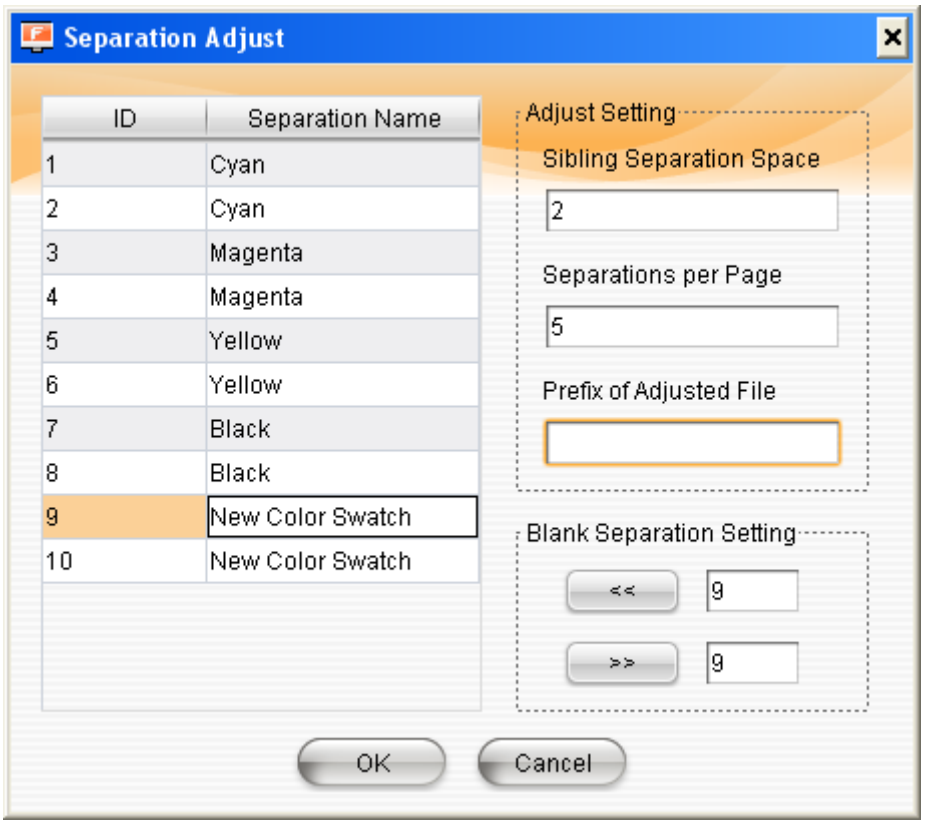


Figure 2-91

Separation List: Located at the left of the window, and composed of ID and separation names, this list displays all the color separations from a same source file in current job. You can double-click the separation name to edit it.

Sibling Separation Space: A page may consist of 1 to N separations. The sibling separation space refers to the space difference between two sibling separations, i.e. from separation 1 to separation 2, from separation 2 to separation 3, from separation N to separation N+1… For example, if the separations are "cyan, cyan, magenta, magenta…" here you can input "2".

Separation per Page: The number of separations per page.

When you configure **Sibling Separation Space** and **Separation per Page**, make sure that 1) each separation name is unique in each page; 2) separation numbers per page are equal for all pages; 3) the separation sequence is the same for all pages.

Prefix of Adjusted File: The file name prefix for the new page file generated after the adjustment. We recommend you to specify a prefix different from that of the current file.

Blank Separation Setting: To insert a blank separation before a separation in the separation list, choose the separation and then click <<. You can also input the insert position in the edit box behind. To delete one separation from the list, choose this separation and then click >>.

Example A: see the left figure below, if you set **Separation per Page** is 5, **Sibling Separation Space** to 1, you will get two new pages after the adjustment, with each in such separation sequence as *Cyan*, *Magenta*, *Yellow*, *Black*, *New Color Swatch*.

Example B: see the left figure below, if you set **Separation per Page** is 5, **Sibling Separation Space** to 2, you will get two new pages as well, with each in such separation sequence as *Cyan*, *Magenta*, *Yellow*, *Black*, *New Color Swatch*.

ID	Separation Name
1	Cyan
2	Magenta
3	Yellow
4	Black
5	New Color Swatch
6	Cyan
7	Magenta
8	Yellow
9	Black
10	New Color Swatch

ID	Separation Name
1	Cyan
2	Cyan
3	Magenta
4	Magenta
5	Yellow
6	Yellow
7	Black
8	Black
9	New Color Swatch
10	New Color Swatch

Figure 2-92

Example C: see the left figure below, if you set **Separation per Page** is 4, **Sibling Separation Space** to 1, you will get two new pages, but with different separation sequences. The separation sequence for the first page is as *Cyan*, *Magenta*, *Yellow*, *Black*. That for the second is as *Cyan*, *Yellow*, *Black*. In this case, you may need to insert a blank separation between the fifth and sixth separations, i.e. the Magenta separation.

ID	Separation Name
1	Cyan
2	Magenta
3	Yellow
4	Black
5	Cyan
6	Yellow
7	Black

ID	Separation Name
1	Cyan
2	Magenta
3	Yellow
4	Black
5	Cyan
6	M
7	Yellow
8	Black

Figure 2-93

If the adjustment fails, ElecRoc pops up error message. If succeeds, it generates new page files in the PDF page file queue.

8. Change Color

This feature is generally used in digital printing. With this feature, you can easily change the color mode of the PDF pages before the printing. When the toolbar icon is selected, each PDF page in the input and output file queues will appear with an icon indicating its color mode: icon refers to color while icon refers to gray.

Choose one or more pages, right-click and then choose **Change color**. If the color mode

was color, by choosing this menu item, you will change it to gray; if it was gray, you will change it to color.

9. Add as Mark

You can add the currently selected PDF page into ElecRoc system, as a custom mark for Imposer and Composer to use. This feature is available only to single-page PDF pages.

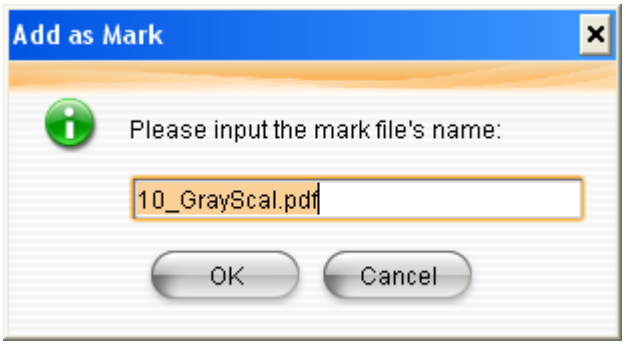


Figure 2-94

10. Readiness for Imposing & Ganging

You can perform the following operations or configurations to the PDF pages from the input file queue under the Imposer, Composer and Ganging nodes.

Start: This box is used for you to specify the starting sequence number for the pages in the left file queue. Input proper number in the box, as needed, and then press Enter key.

Sequence adjustment: When your imposer or ganging template defines page numbers, the page file sequence in the input file queue will directly determine the page sequence on the signature. In addition to the right-click menu item **Sort**, you can also use the icons and above the input file list, and the right-click menu items **Move To**, **Top**, and **Bottom** to adjust the page file sequence.

Define as part: Choose one or more pages, right-click and choose **Part** > **Custom part**, and then you will open a dialog box, in which you can specify a part, for use in imposing. If you need to cancel the part specification, you can choose the page, right-click and then choose **Part** > **Clean part**.



Figure 2-95

Insert blank page: Before you start the Imposer process, you can insert blank pages as needed in the input file queue to substitute for missing pages, so as to prevent the missing pages from affecting the positions of the rest pages on the signature. To do this, click the icon above the input file list, and then specify the position and quantity of the blank pages in the follow-up dialog box.

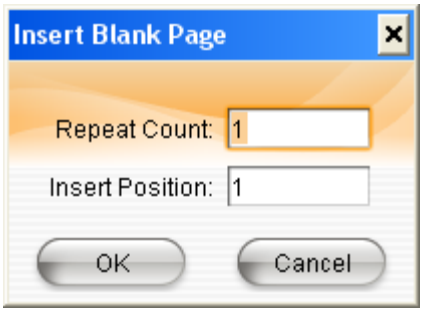


Figure 2-96

11. Submit, Copy, Paste, Delete, Empty, Sort, Refresh, Select File

Submit: submit the selected PDF pages to the current node for process.

Copy, **Paste**: Copy the PDF pages or PDF files (multi-page mode) currently selected. The paste operation can be performed across nodes and jobs. E.g. you can copy the PDF pages under the PDF Generator node in job A, and then paste them under the Preflight node in job B. Please note that, if you delete the original file being copied, you will meanwhile delete the copy file, i.e. in the previous example, if you delete the copied PDF pages under the node PDF Generator in job A, you will meanwhile delete the copy PDF pages under the Preflight node in job B.

Note: *When you have copied one or more PDF pages, if you switch to the output file queue under the PDF Generator node, right-click and then you will see a menu item **Paste File**. It also enables you to paste the copied file into the queue where you right-clicked, but the difference from the **Paste** menu item lies on that, the copy would not be deleted if you delete the copied page file.*

Delete: Delete the selected PDF pages. Be careful to perform this operation, for it may delete the input files under the node that connected behind.

Empty: Delete all the PDF pages under current node.

Sort: Sort the files by name, or by time (up or down).

Refresh: Manually refresh the PDF pages.

Select File: This right-click menu item enables you to select more than one file at the same time. Using the sub item **Select File By Odd**, you can select all the page files in the odd position, while using the sub item **Select File By Even**, you can select all the page files in the even position.

3.5.3 Signature Process

Here we take the signature (or surface) processes under the Imposer node as example. The processes can also be implemented with right-click menu items.

The right-click menu on any signature file contains items such as **Surface Info**, **Preview**, **Copy**, **Delete**, **Empty**, **Refresh**, **Ganging**, and **Preview Front and Back**.

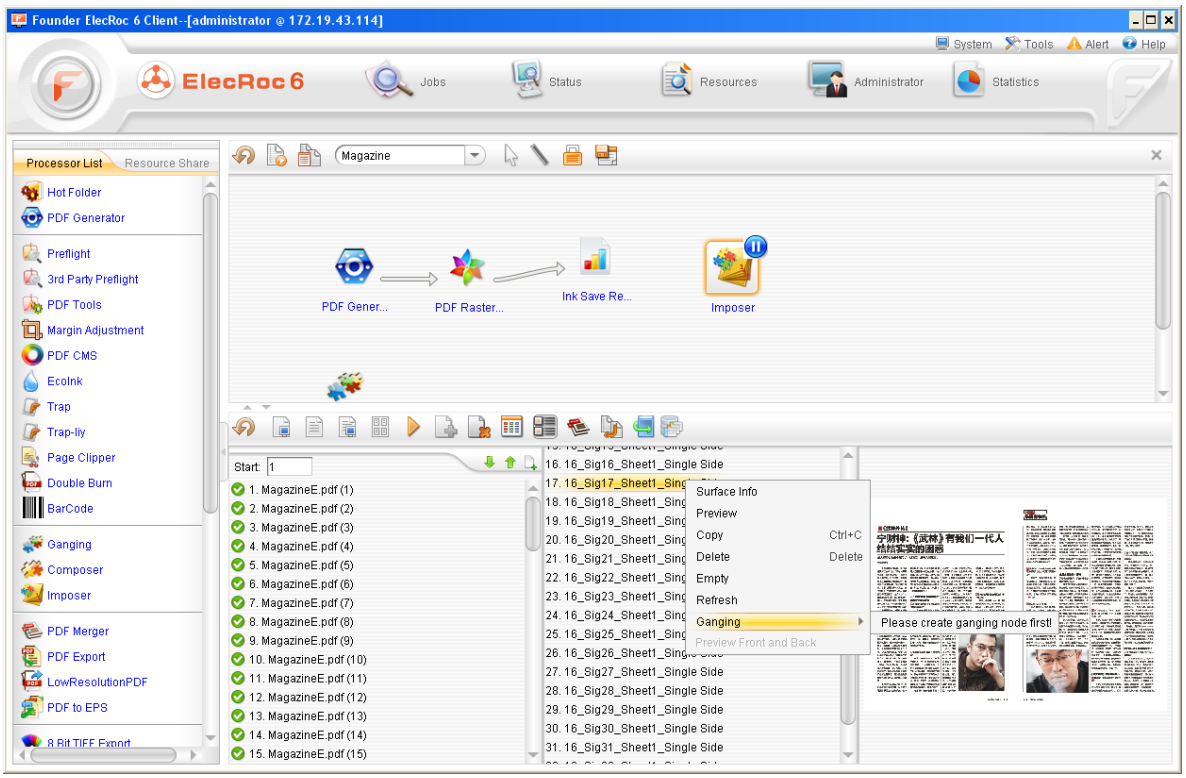


Figure 2-97

Compared with the source file and PDF page file processes, signature processes differ in the following features.

1. Surface Info

Show the information on the signature/surface: name, front/back, dimension, date modified, and input pages.

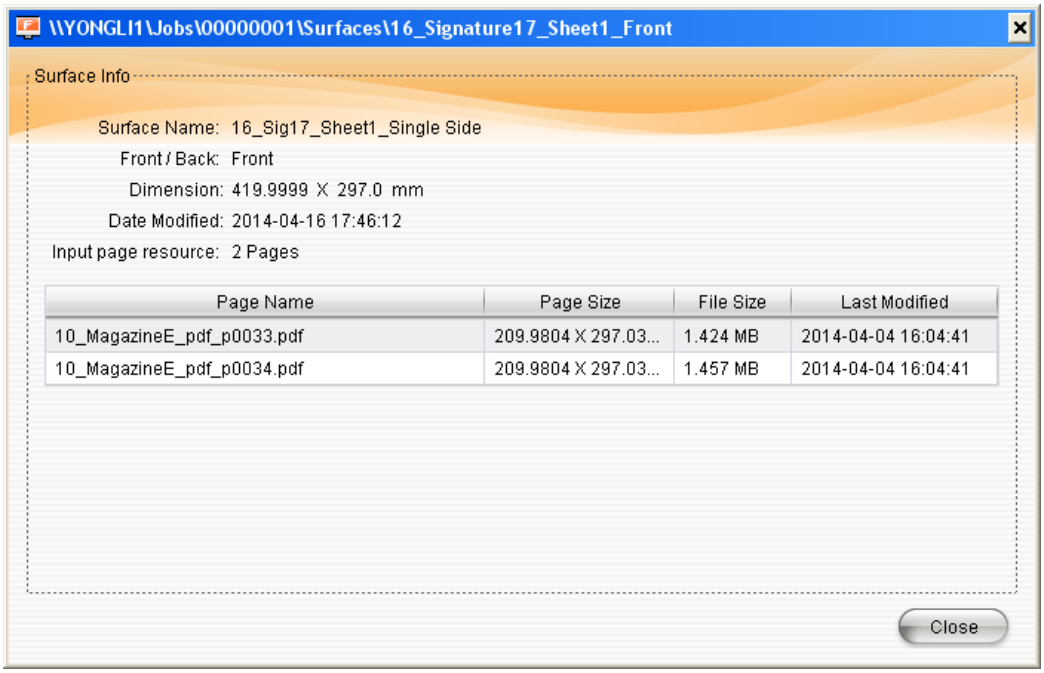


Figure 2-98

2. Signature preview

Normal preview and fast preview: They are the same as the PDF page previews. In normal preview mode, you can use the right-click menu item **Preview** to open an independent signature preview window. In the fast preview mode, you can fast preview the signature in the job window if you hold down the left mouse button on the thumbnail.

Front & Back Preview: When you choose two signatures at the same time, you can use the right-click menu item **Preview Front and Back** to check the composite effect of the front and back surfaces, and check if the register marks are in alignment, and etc. Click the **transparency** icon at the top of the preview window, you will activate a slider in the below, with which you can adjust the composite proportion.



Figure 2-99

3. Gang after imposing

With the right-click menu item **Ganging** > [Composer], you can submit the signature generated after the Imposer process to ElecRoc ganging program, in which you can gang the pages being imposed on the signature.

3.5.4 Tiff Process

Tiff files exist in the output file queue of the PDF Rasterizer node, or in the input file queue of the 1 Bit TIFF Export or Post-RIP Proof node. Similarly, you can use the right-click menu items to perform related operations, such as previewing, deleting, emptying, sorting, and refreshing.

1. Tiff information

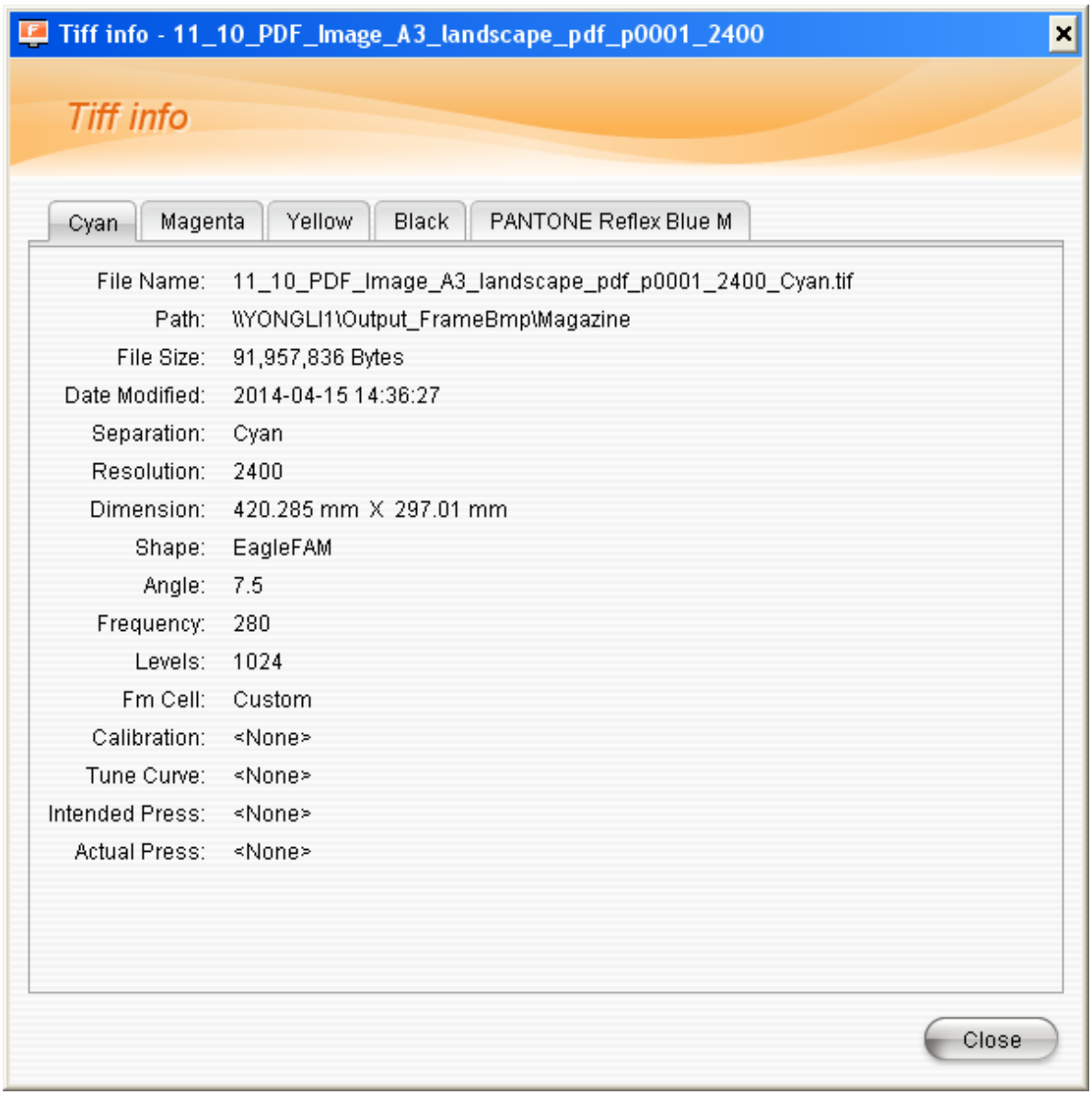


Figure 2-100

You can learn detailed information about each separation, including separation name, path, file size, dimension, date modified, and the screen setting such as resolution, shape, angle, frequency, levels, and curves.

2. Tiff preview

1) Normal Preview and Fast Preview

In normal preview mode, you can use the right-click menu item **Preview** to open an independent preview window. A difference from signature or page preview lies in that you can preview the whole file, or preview only one of the separations. And in the fast preview mode, you can fast preview the tiff in the job window if you hold down the left mouse button on the thumbnail.

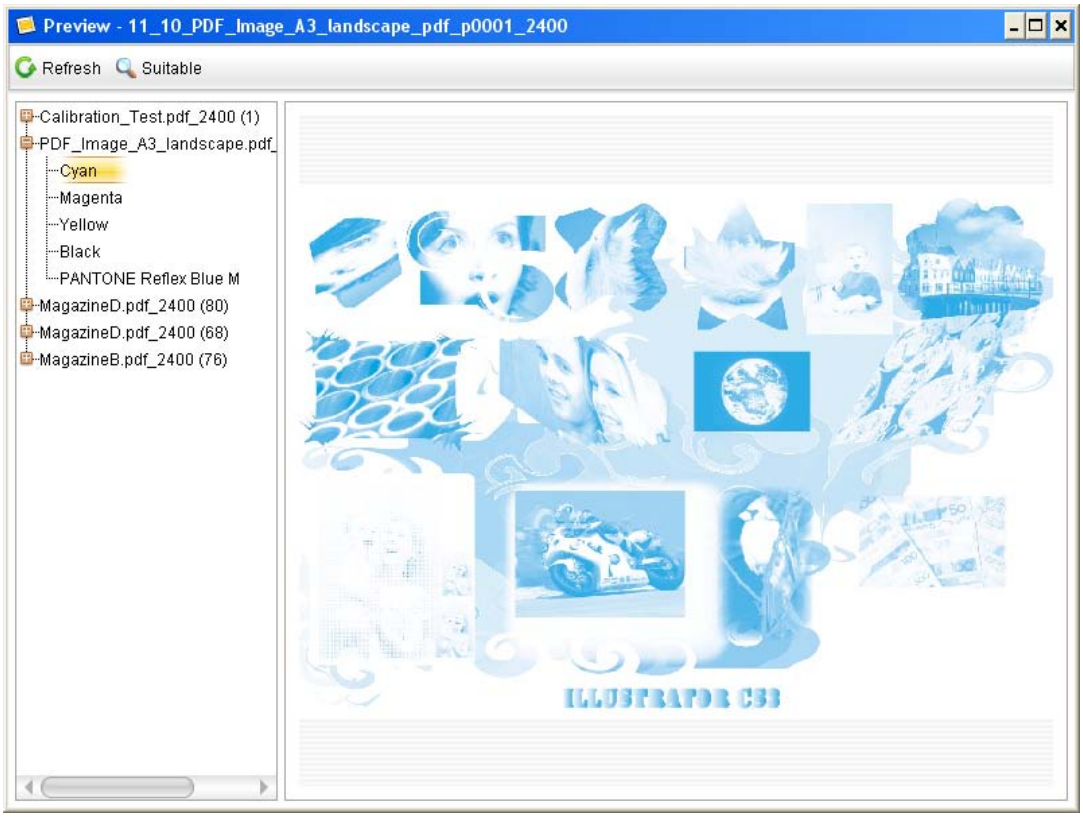


Figure 2-101

2) Tiff Preview

Choose the right-click menu item **Tiff bitmap preview** to open the dot preview window.

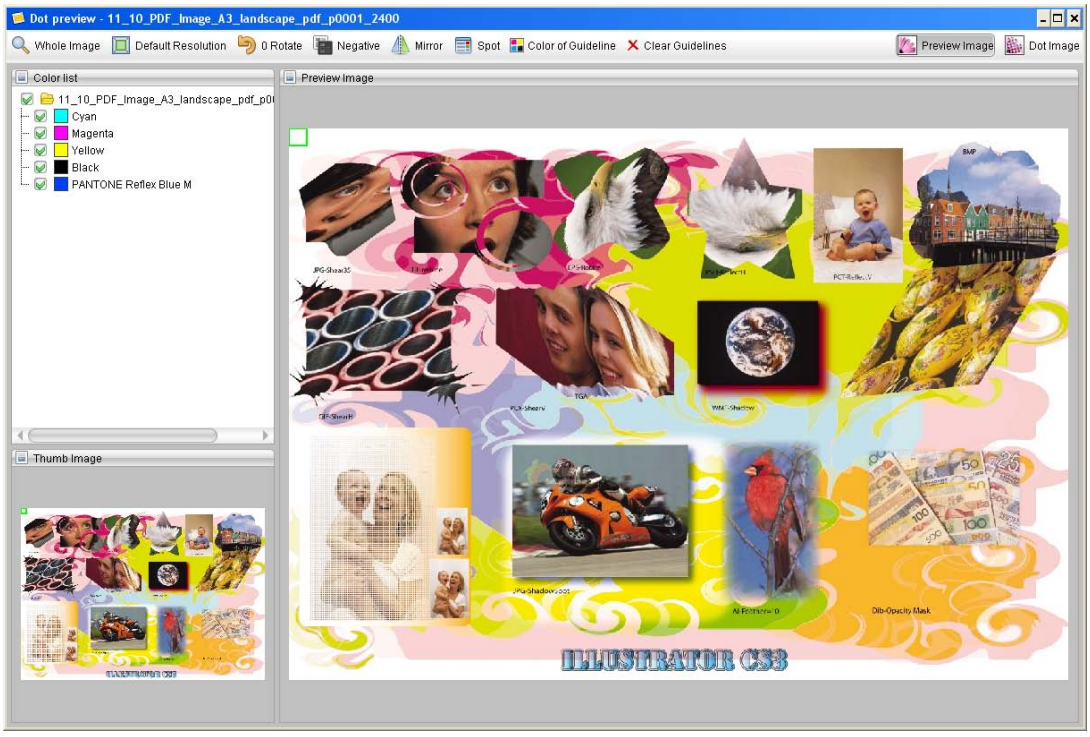


Figure 2-102

Separation preview: From the color list at the upper-left corner, you can choose any one, or some, or all of the separations to preview.

Thumbnail navigation: A green little box appears if you click on the thumb image located at the lower-left corner of the window. The content centered on this box will then be scaled up at the right area of the window. Therefore, by clicking, or by moving the little box, you can easily navigate and switch the content displayed at the right.

Zoom Display: You can click the first icon in the toolbar to choose a commonly-used zoom option, such as Whole Image, 25%, 100%, 200%, and etc. You can also zoom in or out the display by holding down the right mouse button on the thumb image and dragging.

Resolution: Click **Default Resolution** in the toolbar, and then choose a resolution from the dropdown list. In this way, you can preview the bitmap image in a different resolution.

Rotate: This icon enables you to rotate the thumbnail image.

Negative: This icon produces the negative effect.

Mirror: This icon produces the mirror effect.

Spot: This icon enables you to view and edit the spot colors.

Dot Image/**Preview Image**: Click **Dot Image** in the toolbar to open the dot image. Click **Preview Image** to return.

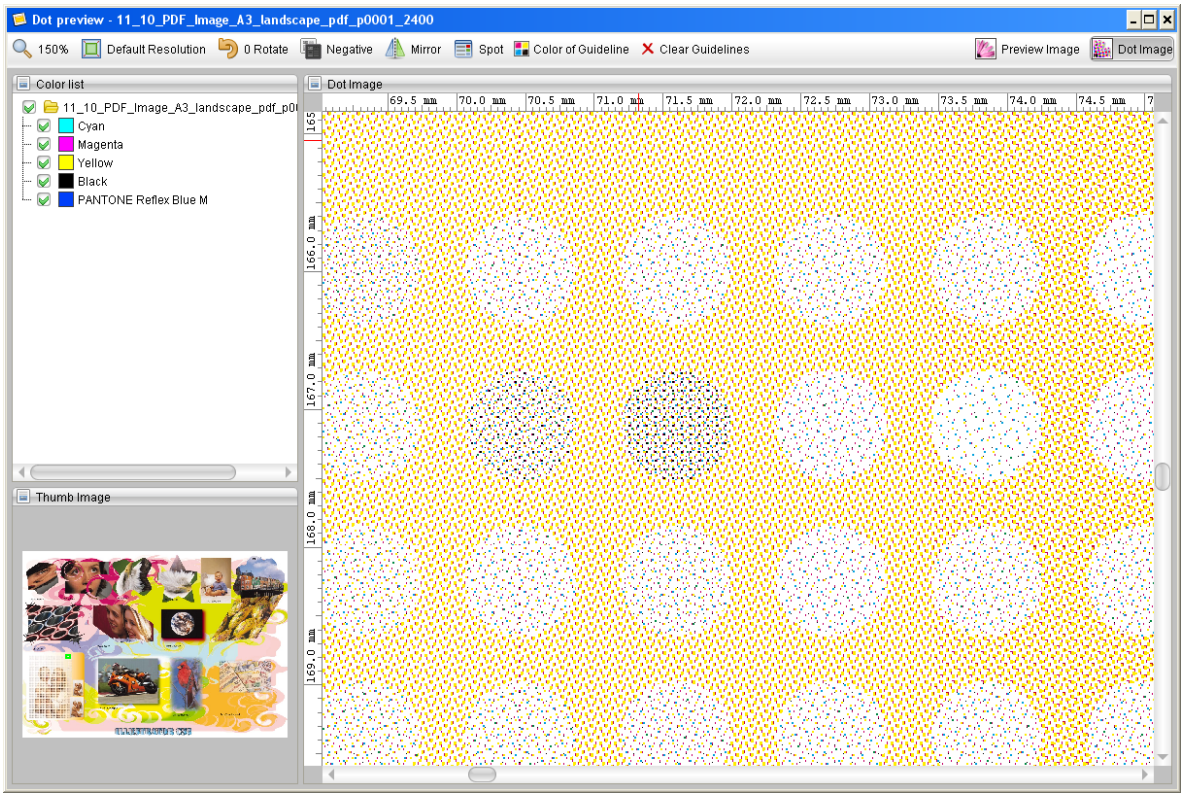


Figure 2-103

In the dot image mode, you can also use the toolbar icons to perform the operations mentioned above. Besides, you can also add guidelines for you to better navigate on the dot image.

Guideline: ElecRoc provides rulers at the left and top of the dot image. To add a guideline, hold down the left mouse button on the ruler, drag to proper place on the dot image and then release. You can customize the line color with the toolbar icon **Color of Guideline**, and use **Clear Guidelines** to delete all added guidelines.

3. Ink Histogram

ElecRoc enables you to generate an ink histogram for a specific press. If there is no available press prior to the generation, it will hint you to add. Determine the name, the ink funnel quantity, maximum ink key, and media size, and then click **OK**.

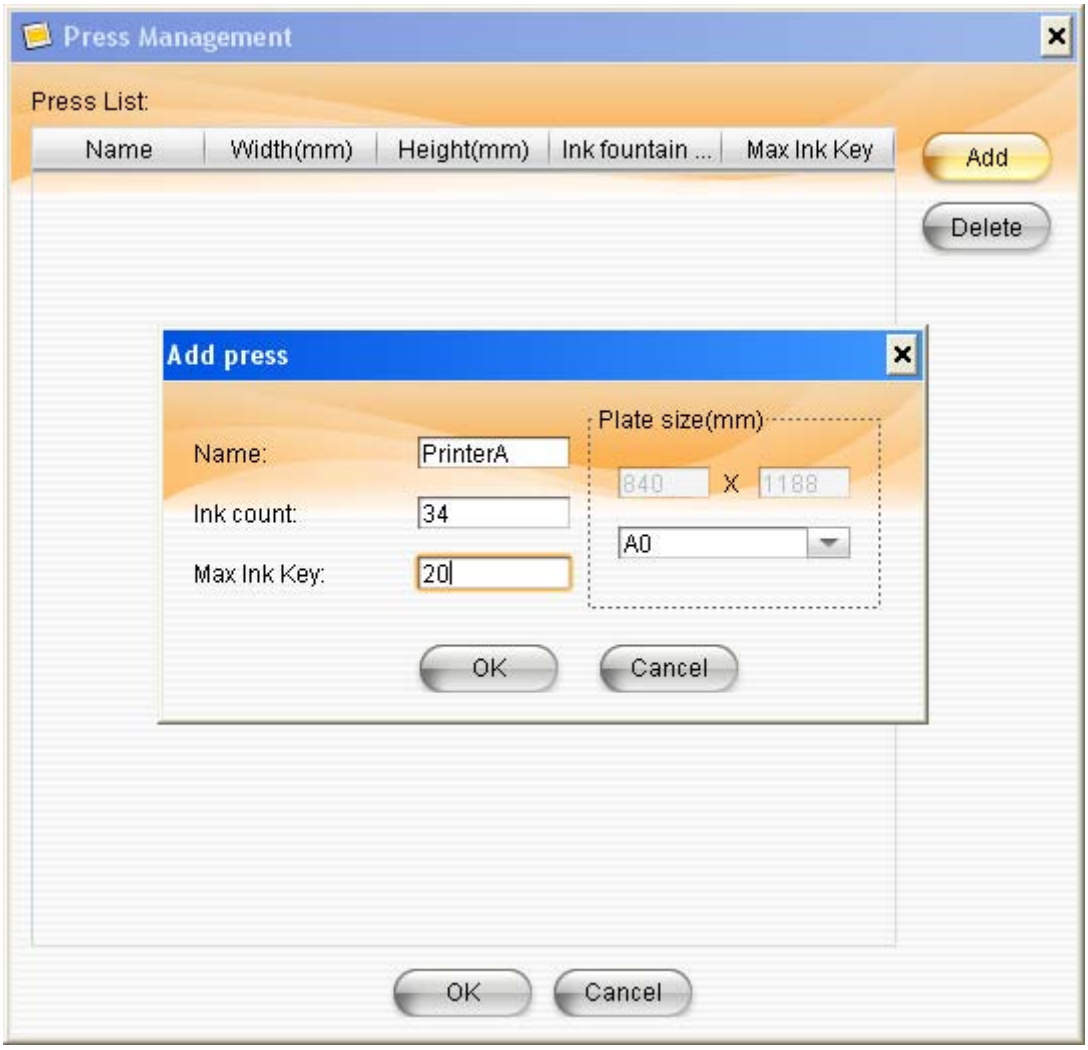


Figure 2-104

Choose a press printer and then you can generate the ink histogram, as shown in the below.

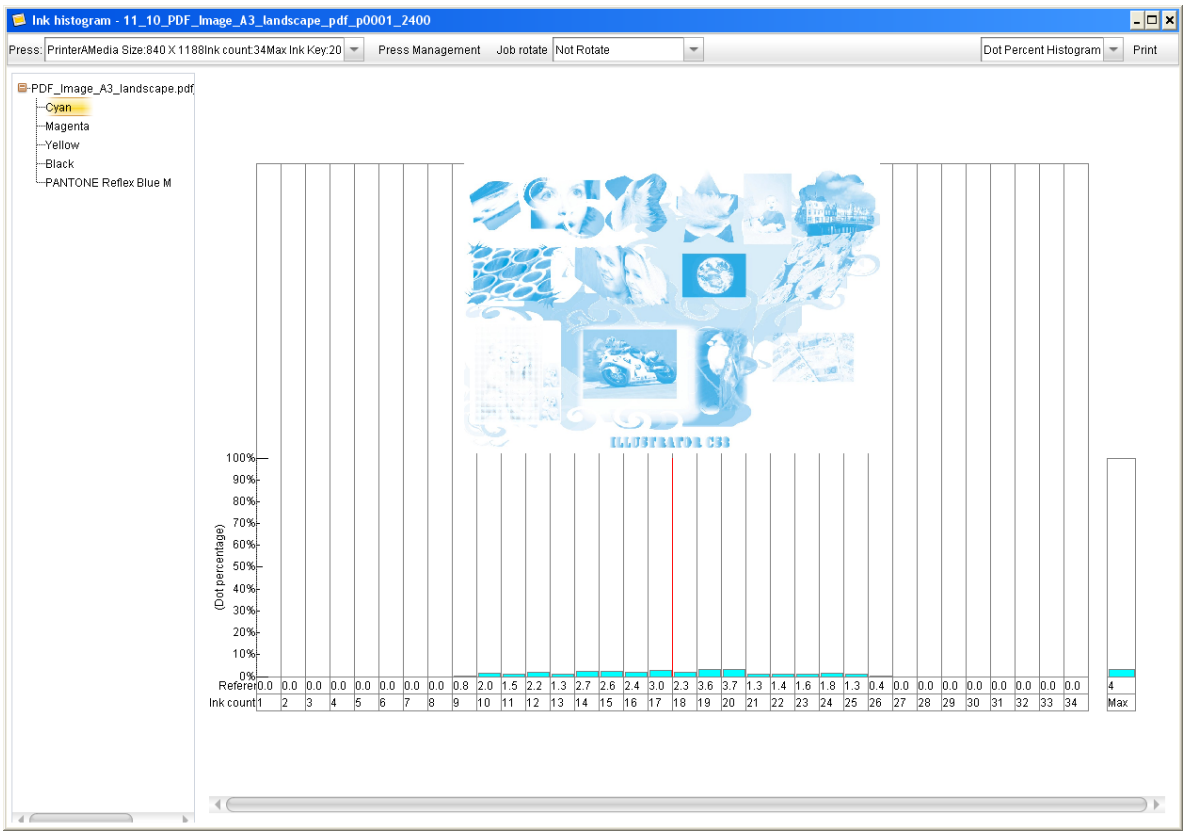


Figure 2-105

1) The Dot Percentage Histogram varies according to the printer's ink count and Max Ink Key. And it can be generated for the whole file or for a single separation as well. Please choose the separation from the separation list located at the upper-left corner and the figure above shows an example for that of the Cyan separation.

2) To change the display proportion, you can hold the right mouse button and drag on the dot percentage histogram.

3) With the options in the **Job rotate** dropdown list at the top of the window, you can rotate the bitmap, and see the change on the dot percentage histogram as the bitmap rotates.

4) The dropdown list at the upper-right corner of the window enables you to switch the view among dot percentage histogram, ink key map, and thumb histogram. The following figure is an example of the ink key map.

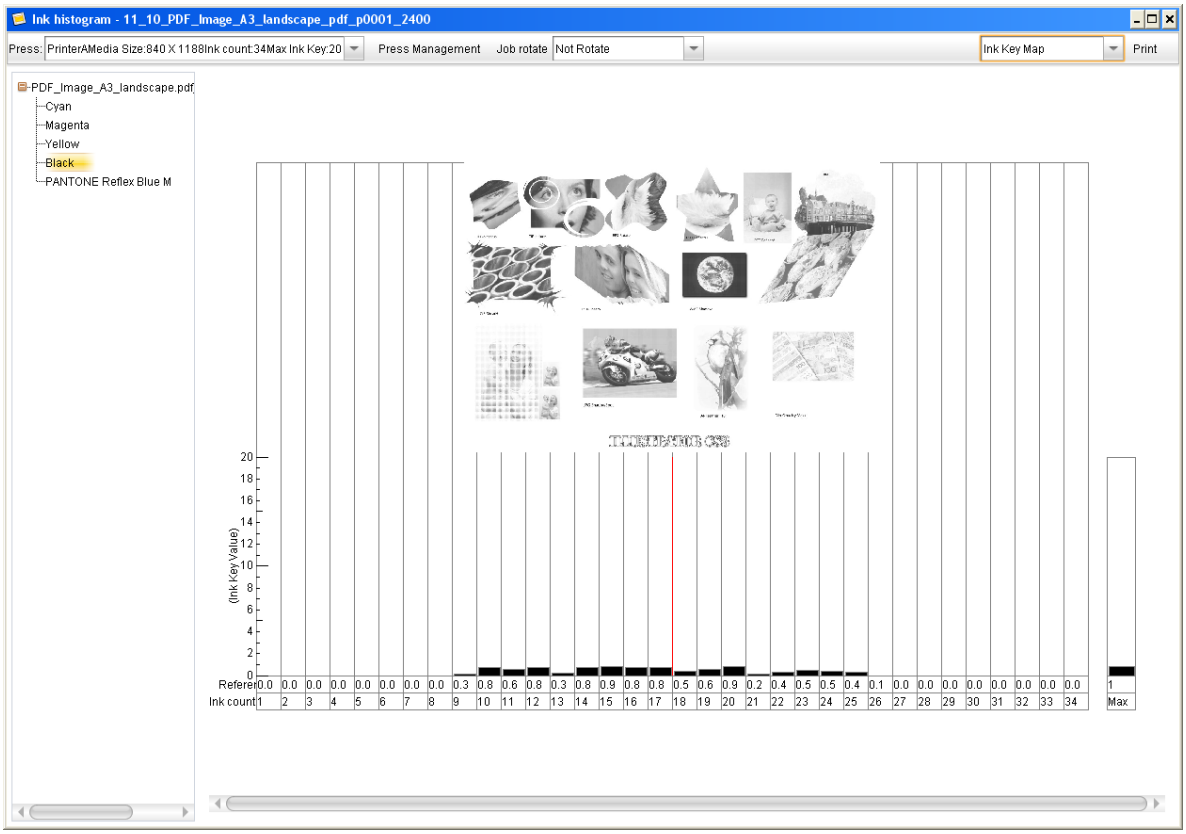


Figure 2-106

5) When you have generated the dot percentage histogram, or the ink key map, or the thumb histogram, you can click the **Print** button at the upper-right corner of the window, to print out the displayed diagram and data. Before the print, please specify in details the diagram type (dot percentage histogram, or ink key map, or thumb histogram), and the separations (it's best to choose the file name, if you choose only a separation, the pop-up dialog box will then only display that separation for you to choose). After you click the **Print** button, a dialog box appears, see the left figure below, asking you to choose the content to be printed.

Click **Confirm** to enter in the print setup window, see the right figure below. Here you can configure some of the commonly-used printing parameters, such as printer, copies, direction, paper size, color mode, and etc. Click **Print** after you have configured these parameters.

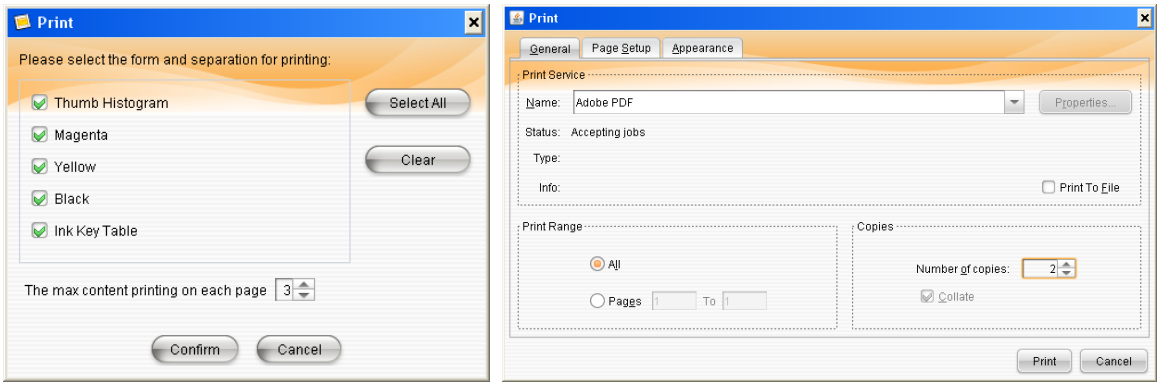


Figure 2-107

6) Moreover, you can click the button **Press Management** to add or delete a printer, or modify a printer's name, printable size, ink fountain quantity, and max ink key. Double-click each of the above mentioned items to turn it editable, and then re-enter a proper value.

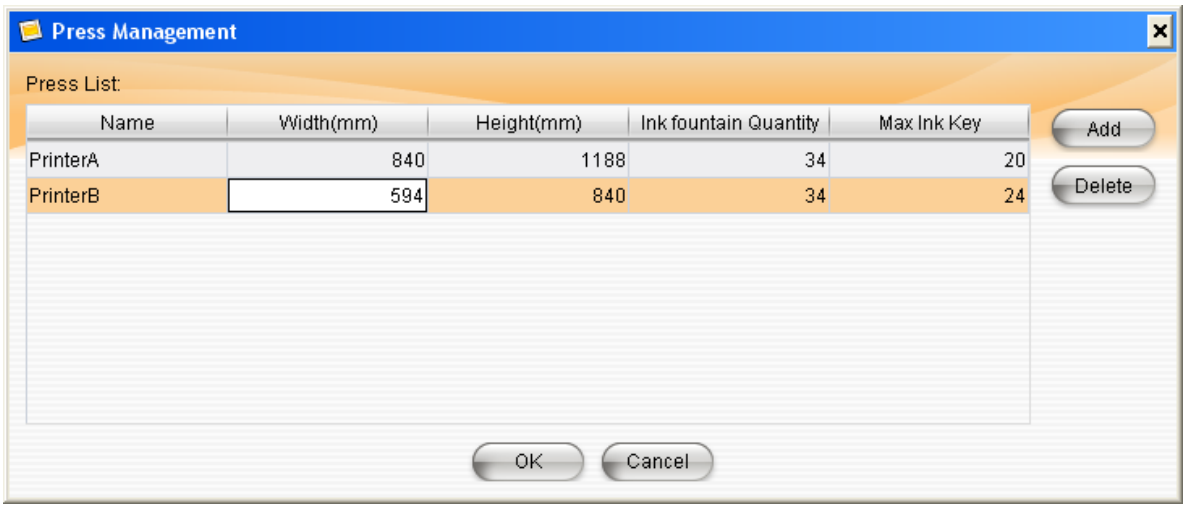


Figure 2-108

Chapter 4 Processor Parameter Setup

This chapter will introduce you to the parameter setup of the processors in ElecRoc. The introductions on Preflight, Trap, Imposer, Imposer, and Composer are NOT provided in this chapter, considering their rich features and paper length. Refer to chapters 5-8 for their parameter setup.

4.1 How to Configure

In ElecRoc workflow management system, a job workflow is completed by one processor singly or more than one processor together. Each processor processes files in a manner as a set of parameters define. Different parameter setups produce different results. How to efficiently and correctly define processor parameters is a key to use ElecRoc system.

1. Global and local parameters

In ElecRoc system, processor parameter setup can be defined at two places.

The one is in the module **Administrator** > **Processor Management**, as mentioned in Chapter 2. Here you can define globally applicable processor parameter setup, i.e. the setting is applied in the entire ElecRoc system, becoming the default parameter setting for processors in each of your newly-created jobs.

The other is in the job window, mentioned in Chapter 3. You can define locally applicable processor parameter setup, i.e. the setting is only applied in the current job when the node is NOT shared, having no influence on the setting of the processors of same type in current or any other job.

Irrespective of global or local, their functions are the same, and so are ways of configuring them. In this chapter, we take the global parameter setup as example.

2. Save setup

In any processor's parameter setup window, you can save your defined processor parameter setting by clicking the **Apply** button at the bottom of the window, so as to make it take effect and become up-to-date global or local setting.

3. Apply parameter template

For the user to apply various global or local parameter setups easily, ElecRoc introduces parameter template. A template is a combination of related parameter setting. For any processor, in the global parameter setup window, the user can save the current setting as a parameter template.

In this way, according to different environments and production demands, the user can establish multiple and different combinations of parameter setting for any processor, and save them as different templates. In practice, by loading the saved template, the user can quickly apply the corresponding setting, thus avoiding repetitive configurations of all the parameters, and gaining better efficiency.

All the template operations are implemented by way of the **Load Parameters** button. When this button is clicked, as in a global parameter setup window, a menu will appear, providing three menu items for you to load, save and delete a template.

1) Save as parameter template

Choose **Load Parameters** > **Save As** to open a dialog box. Input the template name and then click **OK**.

2) Load parameter template

You can load the saved templates or the original setting for use or modification. Click **Load Parameters** > **Load**, and then choose the template to be loaded from behind. After you load a template, you can click the **Save** button to save it as global or local parameter setup; and if you make some modifications, you can click **Load Parameters** > **Save As** and then choose the same template to save your modifications.

3) Delete parameter template

Click **Load Parameters** > **Delete**, and then choose the template to be deleted from behind.

Note: *In any processor's local parameter setup window, the **Load Parameters** button only enables the user to load a template, i.e. the global parameter setup. Available templates include your saved templates and default one. If the template is updated after you load, and you want the job node parameter setup to keep up with the updated template setup, please re-load the template.*

Now we introduce you in details to each processor's parameter setup.

4.2 PDF Generator

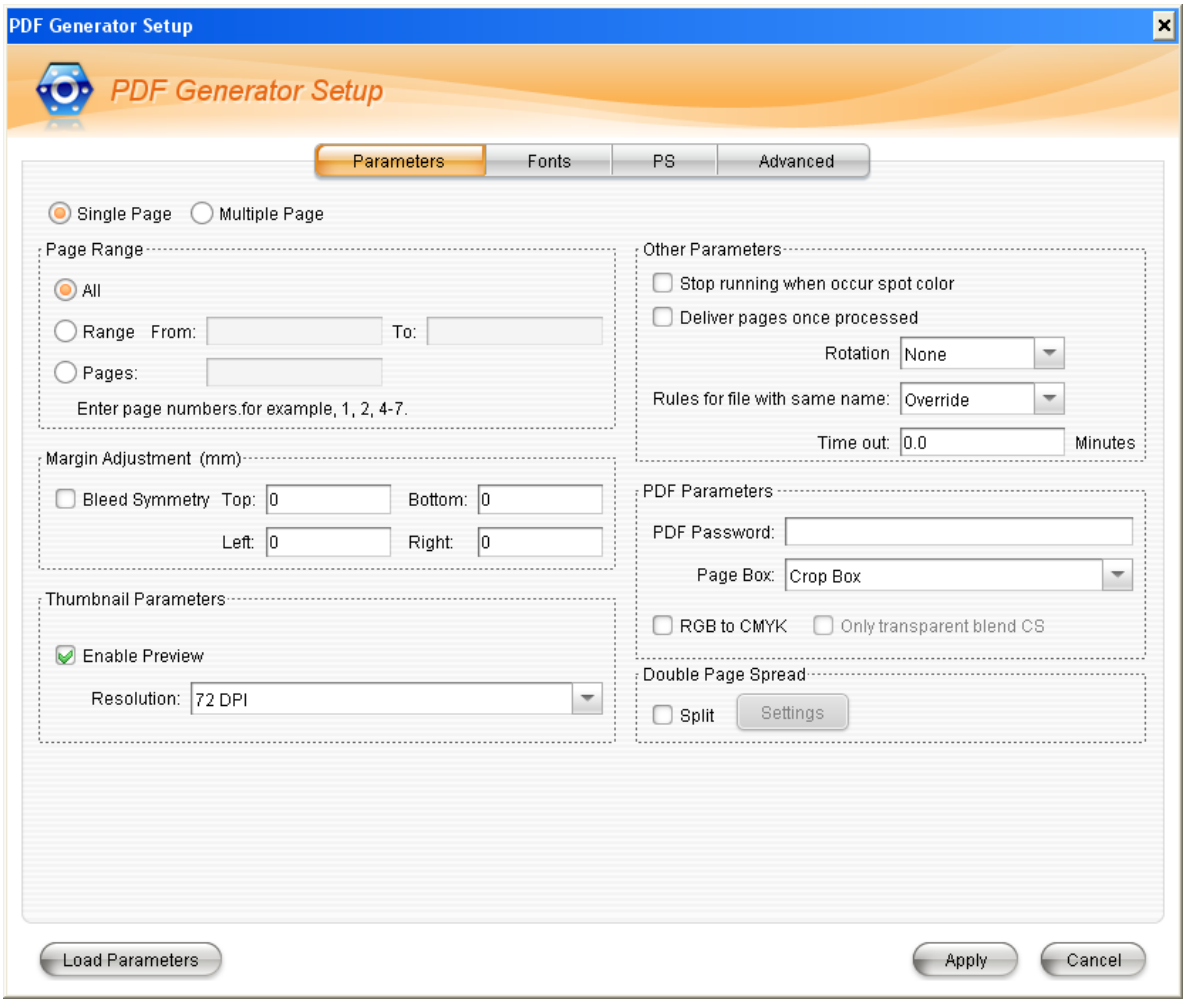


Figure 2-109

As the required processor node in ElecRoc workflow, and usually located at the beginning, PDF Generator converts source files of various types such as PS, EPS, PDF, TIFF, and PRN into PDF page files, a standard file type employed inside ElecRoc. During the conversion, PDF Generator can also perform font substitution if needed, and image compression. Most of the processors in ElecRoc accept only the PDF page files generated by PDF Generator.

The PDF Generator processor parameter setup window is shown as above, consisting of four tabs: **Parameters**, **Fonts**, **PS** and **Advanced**.

4.2.1 Parameters

1. Single Page/Multiple Page

These two options refer to the file shape and external form for the PDF Generator's output PDF pages (when the source file is composed of many pages).

In single page mode, each page is shown as a file, as shown in the real line box below, page files from a same source file are listed in the same rank. In simplified view (the toolbar icon is checked), a pair of brackets is employed to indicate the page number. In full view, a suffix _p000x is added at the end of the file name, meaning the page number, e.g. _p0001 means page 1, _p0002 means page 2. The suffix page number matches strictly that in the source file, even if you choose to output discontinuously only part of the pages. E.g. if you choose only to output the page 3 and page 6, then the suffixes become _p0003 and _p0006.

In multiple page mode, multiple pages are shown as a file, as shown in the dashed line box below, page files from a same source file are listed in two ranks: the first rank shows the multiple-page PDF file; by clicking the in front, you expand the second rank, showing the pages the file contains. To submit the multiple-page PDF file to other node in the job for process, you need to choose the whole file instead of certain page or pages.

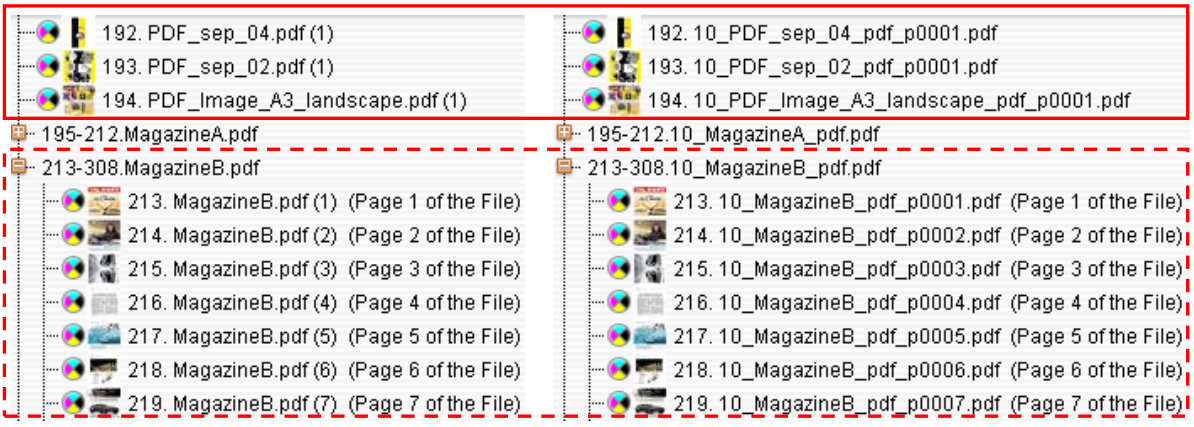


Figure 2-110

You can apply one mode all the time, or apply the two modes by turns, on a same PDF Generator node. E.g. you can choose the single-page mode to process one or batch of files, and then choose the multiple-page mode to process the next or batch of files.

Note: *When the process policy for the file with same name is set to override, if you apply only one mode for two files with same name, the latter overrides the former. But if you apply different modes for them, both of them appear in the file list. In the latter case, their thumbnail images for preview will be the same.*

2. Page Range

Specify the page range of the file to be processed. There are three options:

All: To process all pages of the file.

Range: To process a range of pages (continuously from one page to another). Here you can manually input the page numbers.

Pages: You can customize the pages that you want to process. The valid separators allowed in the **Pages** edit box include ",” and "-", which mean "and” and "to” respectively. For example, you may input "1, 2, 4-7”, which means to process page 1, page 2, and pages 4 to 7.

3. Margin Adjustment

PDF Generator enables you to change the file size by way of increasing or reducing the top, left, bottom and right page margins. Positive value adds margin and thus increases the file size, while negative value reduces margin and the file size.

Bleed Symmetry: With this option, pages are processed in such a way that in duplex printing, the front and back pages on each piece of paper will be symmetric, i.e. be registered. When checked, the left and right margin of the odd pages will be adjusted as per the **Left** and **Right** values specified here, while the left margin of the even pages are adjusted as per the **Right** value, the right margin as per the **Left** value.

4. Thumbnail Parameters

Choose any PDF page, double-click or right-click and choose **Preview**, you can display a thumbnail image to check the page content, or preview the process result.

Enable Preview: When checked, PDF Generator produces thumbnail image for preview.

Resolution: The resolution of the thumbnail image, 36, 72, 144 DPI.

5. Other Parameters

Stop running when occur spot color: If checked, ElecRoc issues warning and stops processing the file in case that the file contains spot colors. This feature can effectively notice you pay attention to the spot colors in the file, so as to avoid any spot color output error.

Deliver pages once processed: If checked, each page will be immediately delivered to the connected next node for process, once it has been generated by PDF Generator. If not, pages will be delivered at the same time till all pages from all files have been generated.

Rotation: To rotate pages. You can rotate pages 90, 180, 270 degrees anti-clockwise. The default setting is no rotation.

Rules for file with same name: You may submit a same file to a same PDF Generator more than once. If you choose **Override**, the PDF page generated at the earlier submission will be overridden by that at the later submission. If you choose **Add label**, an ascending numerical suffix will be added to the file name _V01, _V02 …

Time out: If the file submitted to PDF Generator cannot be processed within the time period specified here, ElecRoc stops the process after this time period, preventing single file exception from affecting the after files' processes. By default, it is set to 0, meaning no timeout setting.

6. PDF Parameters

PDF Password: If the submitted PDF file contains password, you must provide the password here so that ElecRoc can correctly process the file. The Adobe Acrobat allows

you to set two passwords in a PDF file: **Open Password** controls permission to open the file; and **Security Password** controls the permission to edit.

1) The PDF file contains no password: No password is required in **PDF Password** edit box.

2) It contains only **Open Password**: You must provide the correct **Open Password**.

3) It contains only **Security Password**: If the PDF file allows to be printed, you do NOT need to enter the password. If the PDF allows NOT to be printed, you must provide the correct **Security Password**.

4) It contains both **Open Password** and **Security Password**: If the PDF file allows to be printed, you need to provide only one password. If the PDF allows NOT to be printed, you must provide the correct **Security Password**.

Page Box: PDF Generator identifies the size determined by your specified page box as the page size of the new generated PDF page file. Page boxes in a PDF file may include **Media Box**, **Crop Box**, **Bleed Box**, **Trim Box** and **Art Box**. E.g. suppose there are two page boxes defined in the PDF page, Crop Box size is A4 (210x297mm), Bleed Box size is 200x287mm (bleed 5mm, so the size is smaller), if you choose Crop Box here, the page size of the generated PDF page would be 210x297mm, but if you choose Bleed Box, the page size changes to 200x287mm.

RGB to CMYK: By default, this option is unchecked. If your file contains transparent RGB objects, and their output result is not satisfactory, you can try this option to get a better transparent output result.

Only transparent blend CS: This option becomes activated when you have checked the **RGB to CMYK** option. Transparent blend CS refers to two cases, one is the page's blend color space is RGB, the other is the page contains transparent group object whose blend color space is RGB. If checked, the above *RGB to CMYK* process happens only to these two cases, while other transparent RGB objects are not processed.

7. Double Page Spread

This parameter is applied to the case when each page from your source file consists of two pages of content, see the upper-left figure in the below. When you enable this feature (check the option **Split**), PDF Generator will split each page from the source file into two pages, see the lower-left figure in the below. As shown in the right figure below, the setup window for this parameter can be opened if you click the **Settings** button.

Based on different binding positions and types, ElecRoc provides 6 splitting methods, with which you can get various page numberings. Please choose a proper method according to your actual needs. If you choose one from the right two methods, the first and last pages of the source file will not be split.

Bleed: After the splitting, a bleed as specified here will be added to the left or right side of the new page. The default bleed is 3 mm.

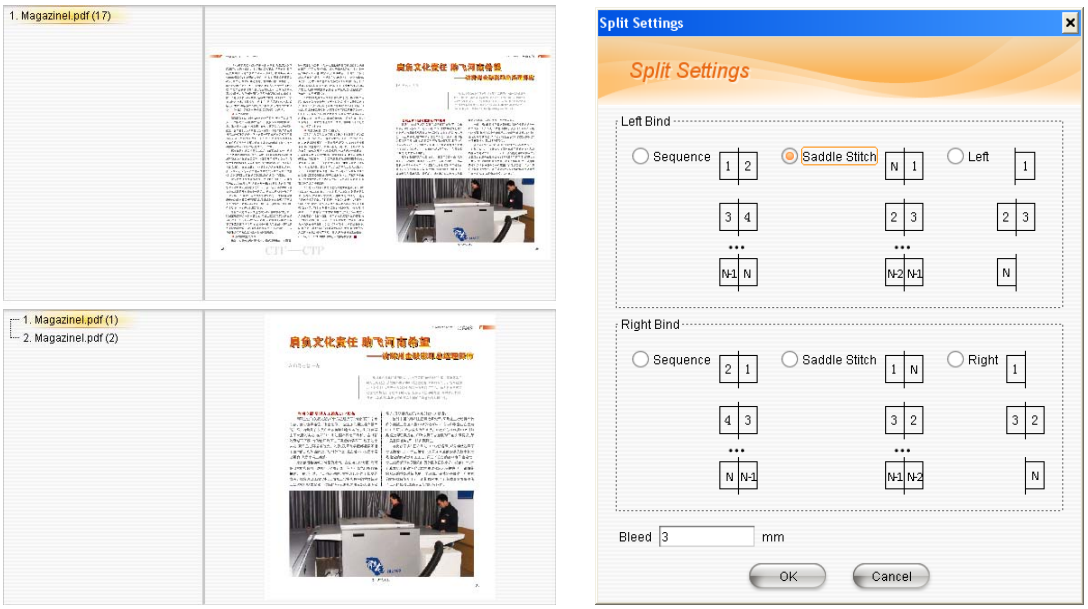


Figure 2-111

4.2.2 Fonts

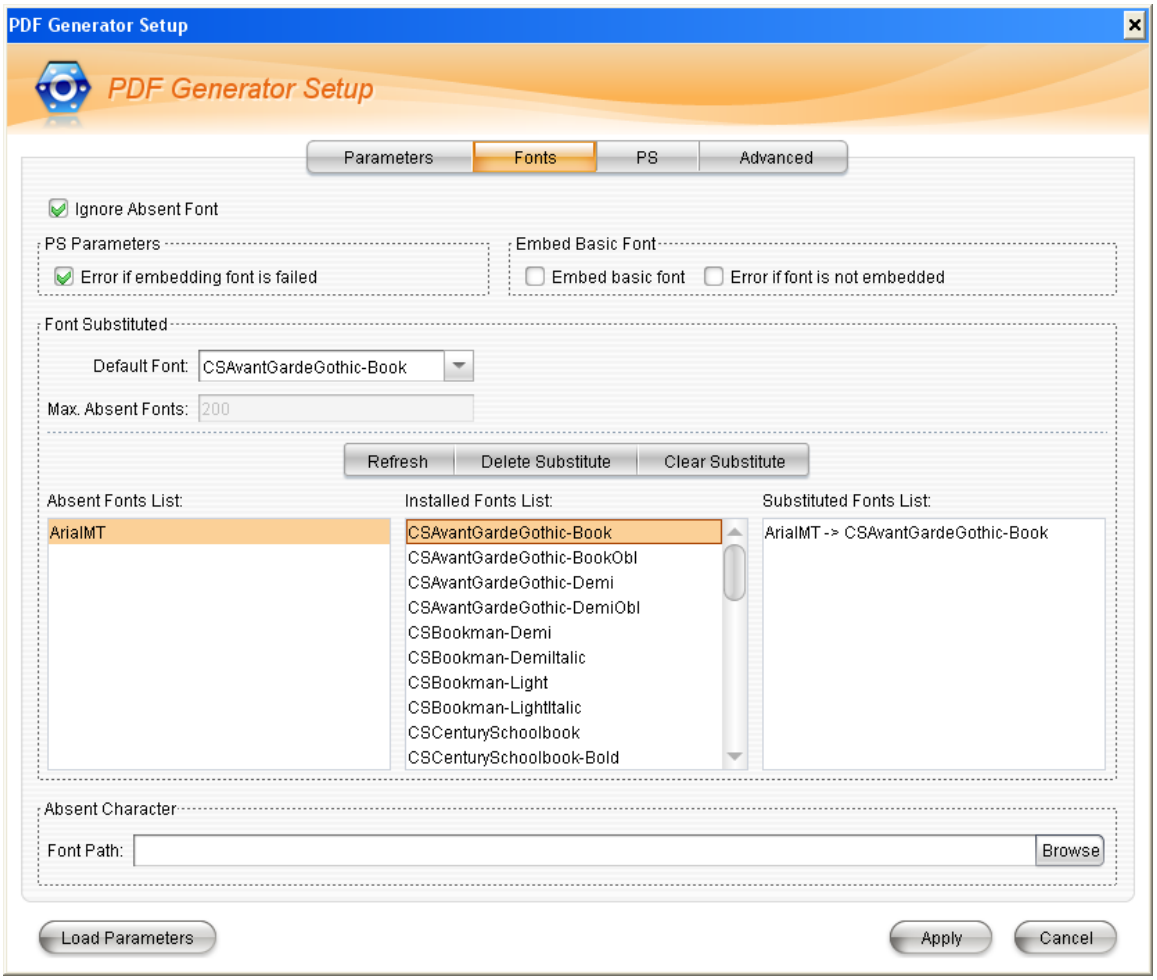


Figure 2-112

PDF Generator embeds the fonts used in the source file into the newly-generated PDF page file during its process. If the fonts used are embedded in the source file, or these fonts are already installed in your ElecRoc system, the embedding operation can run normally, and you do NOT need to make any configuration here.

But if the fonts used are NOT embedded in or provided with the source file, or these fonts are NOT yet installed in your ElecRoc system, i.e. these fonts are absent, in these cases, you must pay attention to the font setting as follows.

1. Ignore Absent Font

If checked, the generated PDF page file may miss the font used in the source file. But the missing font must be replaced by the default or any specified substitute font. If not, PDF Generator reminds you with error report when it finds a font missing.

2. PS Parameter

Error if embedding font is failed: A PS file itself may disable you to embed certain font. In this case, PDF Generator will still use the default font to substitute for the missing one, but the substitution may result in messy code. If checked, ElecRoc issues warning message and stops the process. If not, the PDF Generator process continues and issues the warning message in pink.

3. Embed Basic Font

ElecRoc builds in 35 basic fonts.

Embed basic font: If checked, in case that the source file uses a basic font, but doesn't embed it, PDF Generator will embed the absent basic font into the newly-generated PDF page file. If not, PDF Generator only embeds other absent fonts.

Error if font is not embedded: If checked, in case that the source file doesn't embed all its absent fonts, excluding the 35 basic fonts, ElecRoc will issue warning.

If you check both the two options above, ElecRoc issues warning even when the source file doesn't embed basic font it uses.

4. Font Substitution

Default Font: You can specify a font as the default substitute font from the Default Font dropdown list. When you check **Ignore Absent Font** but don't define any substitute font in **Substitute Fonts List**, PDF Generator uses this default font to substitute for absent fonts.

Max Absent Fonts: This option limits the quantity of the fonts in the absent fonts list. This list displays the absent fonts in the source file. The quantity of absent fonts increases as the process files increases. When the quantity reaches the limit specified here, ElecRoc will auto delete the older one in the list. In this way, the number of absent fonts in the list remains within the limit number. It is a global option, thus can be configured only in Administrative Tools.

Absent Fonts List: If PDF Generator finds an absent font in the source file during the process, it will display this font in the absent fonts list (click **Refresh** to manually refresh the list). You can also use the **Add Absentee**, **Delete Absentee** and **Clear Absentee** buttons to add, delete or clear fonts manually in the list. These operations can only be implemented in Administrative Tools.

Installed Fonts List: This list displays the fonts installed in ElecRoc. You can use them to substitute for the absent fonts.

Substituted Fonts List: This list is designed for you to define substitute relationships. Choose an absent font from the **Absent Fonts List**, and then choose an installed font from the **Installed Fonts List**, to build a substitute relationship. The relationship is then displayed in the **Substituted Fonts List**. Now, PDF Generator can use the corresponding substitute font to substitute for the absent font, and embed the substitute font into the generated PDF page file, during its process.

You can delete one or all substitute relationships by using the **Delete Substitute** and **Clear Substitute** buttons. A deletion of a font from the **Absent Fonts List** doesn't delete the involved substitute relationship in the **Substituted Fonts List**.

4.2.3 PS

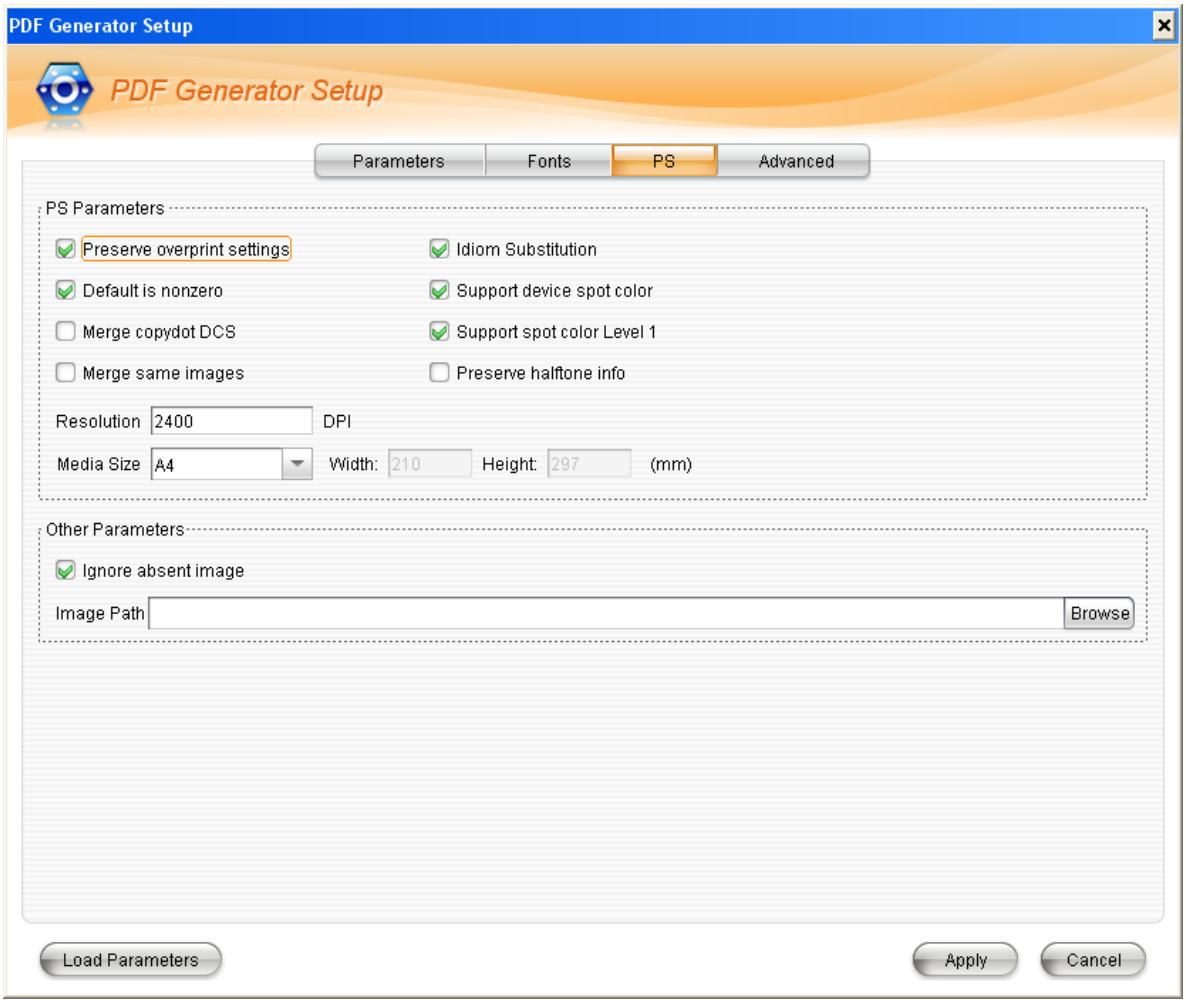


Figure 2-113

1. PS Parameters

Preserve overprint settings: If checked, ElecRoc uses the overprint settings defined in the source file. If not, the overprint settings will be removed.

Default is nonzero: This option is specially designed for inverted texts, such as that generated by Founder FIT. In case that the source file contains such text, please leave this checkbox blank.

Merge copydot DCS: If checked, PDF Generator can correctly process the overprinting

of DCS images. Check it only when DCS does not contain spot color and CMYK are complete.

Merge same images: When checked, if the submitted PS file contains more than one same image, PDF Generator ignores the repeated processes to the same images, so as to reduce the size of the temporarily-generated file. PDF Generator may fail if the temp file is too large. By default, this option is left blank, for concern that it may slow down the process speed. We suggest you to check it only in case that your PS file contains lots of same and large images.

Idiom Substitution: If checked, ElecRoc uses PostScript Level 3 smooth gradient description to replace the old smooth gradient description in PS. PostScript Level 3 employs new smooth gradient dictionary and operators to describe smooth gradient, greatly improving the speed and quality of generating smooth gradient, and supports more types of smooth gradient, for you to easily generate colorful smooth gradient graphics.

Support device spot color: If you want to output spot color as an independent color separation in backend, such as PDF Rasterizer, check this option. Otherwise, e.g. use CMYK to simulate the spot color, you may leave it unchecked. By default, it is checked.

Support spot color Level 1: If checked, ElecRoc can better support spot color gradient defined by front-end layout application.

Preserve halftone info: To preserve the halftone settings in the source file.

Resolution: For most PostScript files, higher resolution results in larger but higher quality PDF files, while lower resolution results in smaller but lower quality files. In general, you can use the default setting. In case that you want to output PDF files with specific printer, or emulate the resolution defined in the original PS file, or in case that page elements emerge or miss in some files after being processed, you can try to change the resolution to rectify. Note that the resolution cannot be over 6000 DPI.

Media Size: If the media size of your PS or EPS file is NOT defined, the generated PDF will be in the media size specified herein. You can choose a predefined standard size: **A0**, **A1**, **A2**, **A3**, and **A4**. You can also choose **Custom** to specify other values.

Note: *If the size you want to customize is close to one of the predefined sizes, you can first choose the predefined size, and then choose **Custom** to modify the values.*

2. Other Parameters

Ignore absent image: If checked, in case that the source file, e.g. PS file generated by Founder FIT without image information, misses image(s), ElecRoc issues warning but continues processing, so the generated PDF pages miss images too. If unchecked, ElecRoc reports error and stops processing.

Image Path: To specify the paths of the images referred in source file. You can manually input the path, or you can also click **Browse** to choose a path, optional paths need to be predefined at the Server. It supports more than one path, separated by semicolons. ElecRoc searches images according to the paths on a first-come first-served basis.

4.2.4 Advanced

PDF Generator compresses the images contained in the source file during its process. The size of the generated PDF page file can be obviously reduced if you choose proper compression modes and resolutions.

Note: *The default settings are suitable for commercial print, and are recommended if*

your PDF is just for commercial print. If your PDF is for remote proof or network transmission, you may modify the settings as needed.

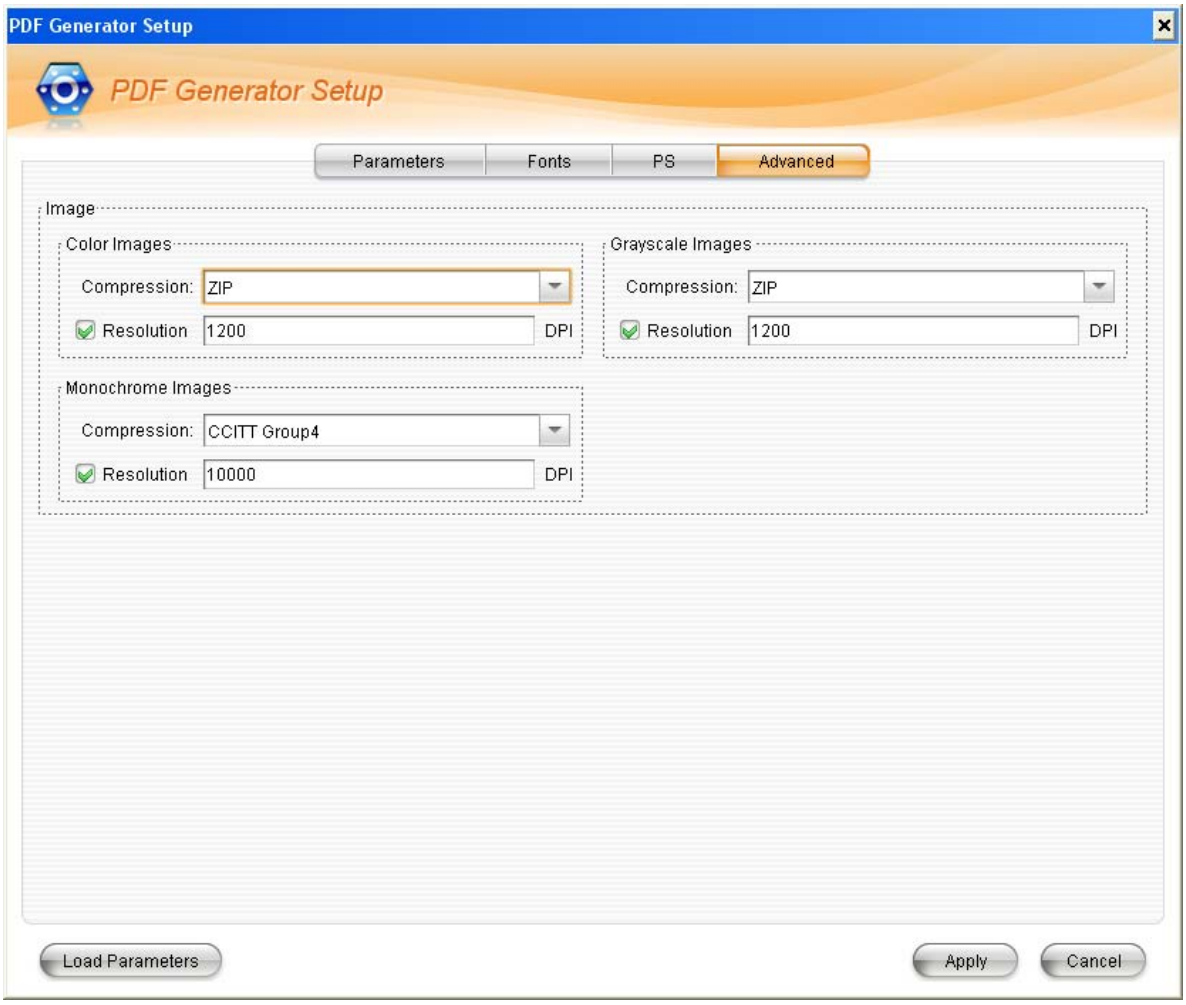


Figure 2-114

Image Types: Images are classified into three types here, Color images, Grayscale images, and Monochrome images.

Compression: There are five options. **None** means no compression. **Zip** is a lossless compression technique, supporting PDF and TIFF files, most suitable for images containing large single-color areas. It is the default compression mode for color and grayscale images. **JPEG** achieves high compression ratio and has a quite big influence on the images. The image quality is controlled by three options, High, Medium, and Low. **CCITT** is a series of lossless compression technologies for black and white images, available for PDF and PostScript files. CCITT is the French abbreviation for International Telegraph and Telekeyed Consultive Committee. **PackBits** is a fast, simple lossless compression scheme for run-length encoding of data. Apple introduced this format on Macintosh computer. It can be used in TIFF files.

Resolution: If the resolution of the file is bigger than the value specified here, PDF Generator will re-sampling the file at your specified resolution.

4.3 PDF Processors

Such processors accept only the PDF page files generated by PDF Generator, and output them in PDF file format, including:

Margin Adjustment	Page Clipper	PDF Tools	
Double Burn	PDF Merger	PDF CMS	EcoInk
Preflight	Trap	3rd Party Preflight	
Imposer	Composer	Ganging	

In this section, we introduce the processors except Preflight, Trap, Imposer, and Composer. In consideration of the paragraph length, we will introduce them separately in sections 4.5 and 4.6, and chapters 5 and 6.

4.3.1 Margin Adjustment

This processor enables you to adjust the margins of the PDF pages.

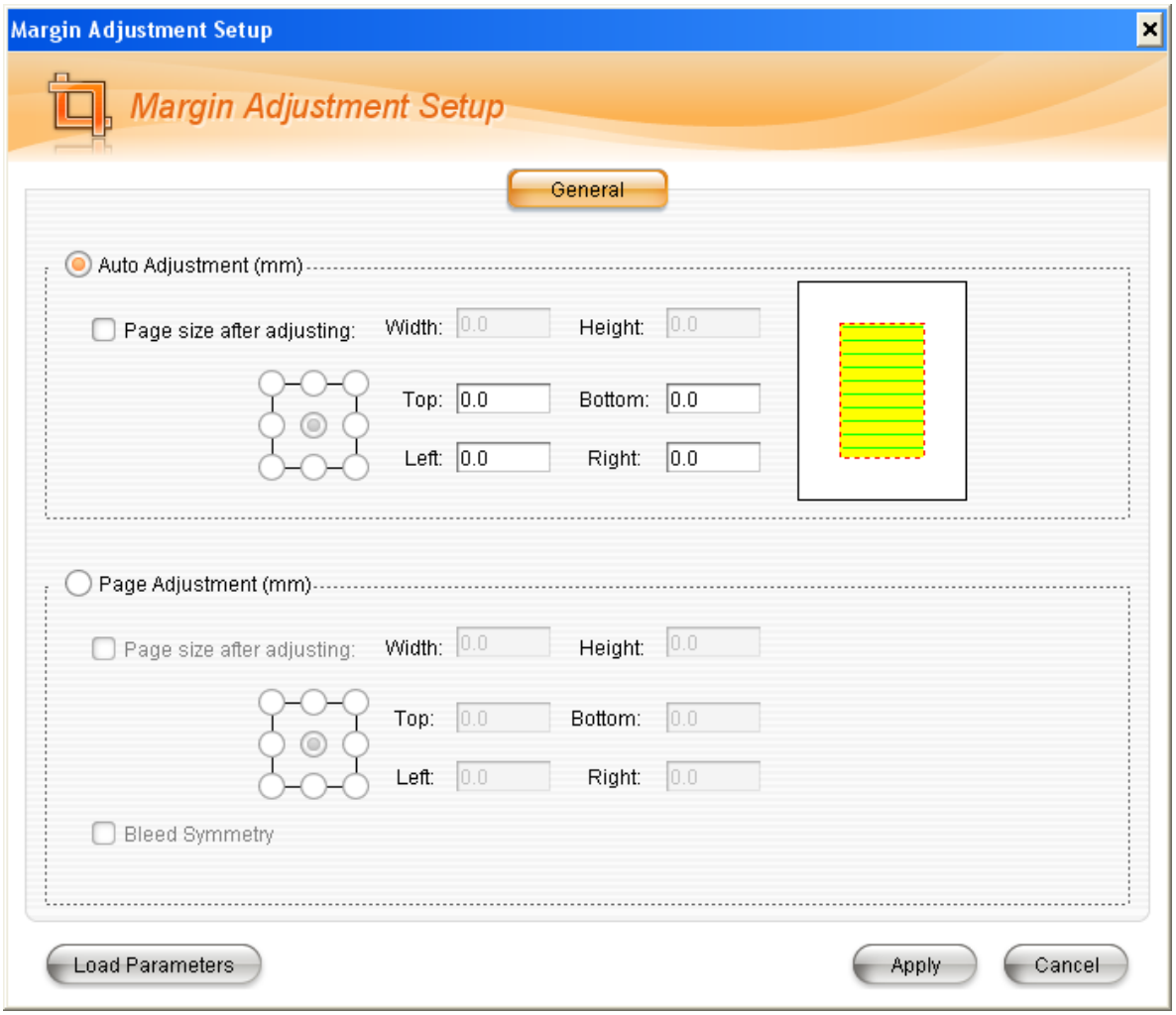


Figure 2-115

1. Auto Adjustment

When **Auto Adjustment** is checked, you can customize the top, bottom, left and right margin to be remained. In the thumbnail image displayed at the right, the yellow area indicates the artwork on the page, the white area indicates the original margin, and the red dashed lines represent the margin after adjustment.

Page size after adjusting: If checked, the processor can automatically increase or reduce the margin, making the final page size be the size specified here. The diagram containing nine tiny circles indicates positions for alignment before and after the adjustment. Take the upper-left circle being checked as example, i.e. align the upper-left corners of the pages and then increase or reduce the margin, in this case, the right and/or bottom margin of the page will be adjusted.

2. Page Adjustment

Choose **Page Adjustment** to activate the parameters below, meanwhile disabling the options in the **Auto Adjustment** area. Input the top, bottom, left and right margin to be increased in the corresponding edit boxes. The thumbnail image at the right shows the adjusted effect. The area enclosed by real lines represents the original size of the page, while the area enclosed by dashed lines represents the page size after the margin increase.

Page size after adjusting: Same as that in **Auto Adjustment**.

Bleed Symmetry: If checked, in duplex printing, the front and back pages on each piece of paper will be symmetric or registered, i.e. the left and right margin of the odd pages will be adjusted as per the **Left** and **Right** values specified here, while the left margin of the even pages are adjusted as per the **Right** value, the right margin as per the **Left** value.

4.3.2 Page Clipper

Using this processor, you can cut out the page content outside one or more defined crop boxes on the page. It helps you to get rid of the unneeded content on the page, and also enables you to split one page into several little ones.

In the job window, find out the **Page Clipper** icon from the left node list, and drag it into the job, then submit a PDF page file from a PDF processor such as PDF Generator to this node. After the submission, double-click the node to open the following window.

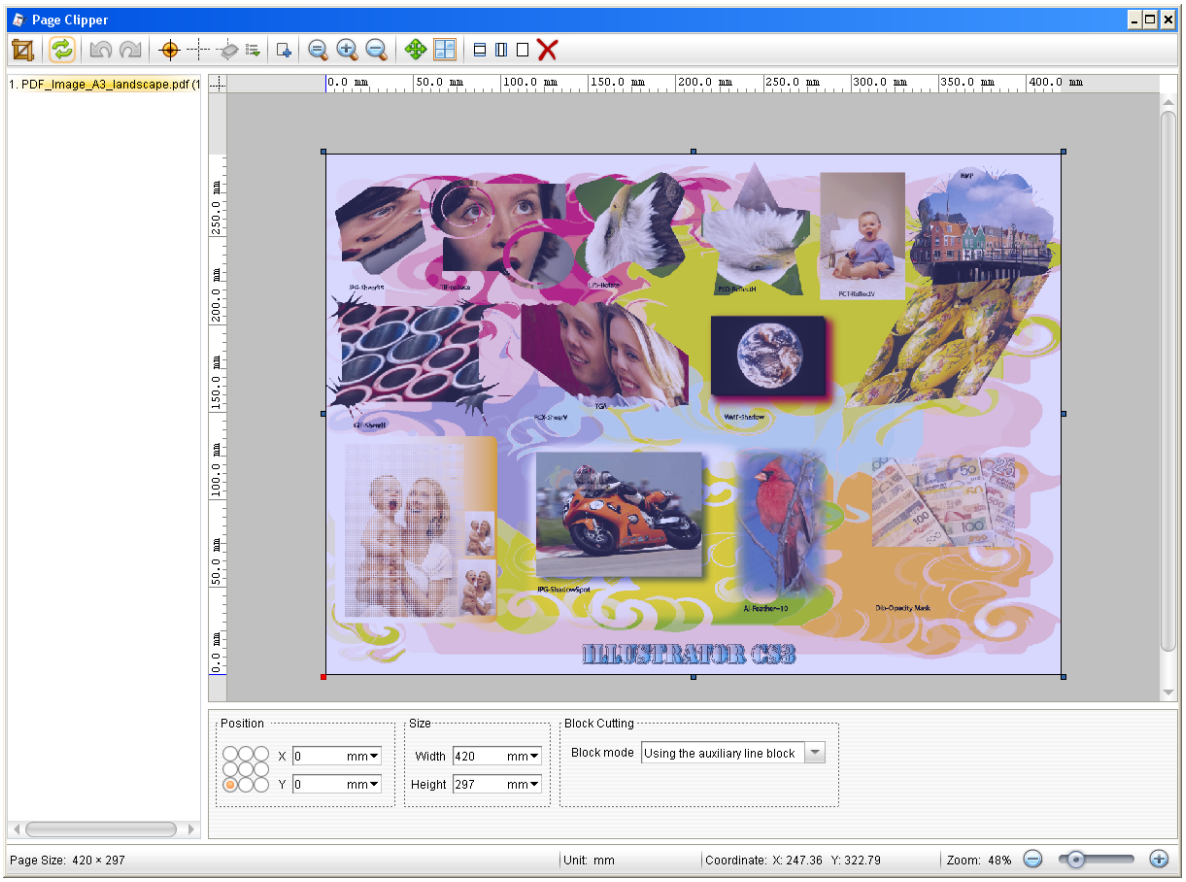


Figure 2-116

The window shows a toolbar at the top, which is grayed when you don't submit any page. The left lists all the submitted pages, as shown above, you can submit more than one page at the same time. The editing interface of the selected page is shown at the body of the window.

To clip a page, you need to define correctly one or more crop boxes. The content inside the boxes is remained while that outside of the boxes is removed at the time you clip. Now we go to the details on how to define a crop box.

1. Resize the crop box

You can define the size of the crop box in any of the following ways:

1. Hold down the left mouse button on the page and drag to form a dashed-line box. A crop box is generated once you release the mouse button. After you define a crop box, you can drag the arrows on the four sides or corners to freely adjust the size of the box.

2. Use the property panel at the bottom of the window to manually input the height and width of the crop box. Here you can accurately define the size. You can click the unit displayed in the height and width edit boxes to choose a preferred unit.

3. Use the three icons at the right of the toolbar.

The actual width of the page: Make the width of the crop box be the same as that of the page.

The actual height of the page: Make the height of the crop box be the same as that of the page.

The actual size of the page: Make the size of the crop box be the same as that of the page.

The default crop box covers the entire page when you enter in the **Page Clipper** window.

2. Position the crop box

You can define the position of the crop box in any of the following ways:

1. Use horizontal and vertical coordinates to position the crop box. On the property panel for the crop box, the nine-point diagram at the left represent nine positions on the crop box. The X and Y values are the horizontal and vertical coordinates of such a position in a coordinate system. E.g. we can check the lower-left point in the diagram and set the coordinates to (10, 10), which means that the coordinates of the lower-left corner of the crop box are (10, 10).

The default coordinate system originates at the lower-left corner of the page, with the positive X axis pointing to the right, while the positive y axis upward. If needed, you can change the origin to define another coordinate system. Choose the toolbar icon **Set custom coordinate system** (the whole page now is grayed, and two intersecting white lines appear and move along with the cursor), and move the intersecting lines to a proper position (press Ctrl or Alt meanwhile to choose one commonly-used system basing on the page or page element, i.e. when you move the axes to some specific positions on the page, you can see white coordinate system), and then click the mouse, to open the following dialog box.

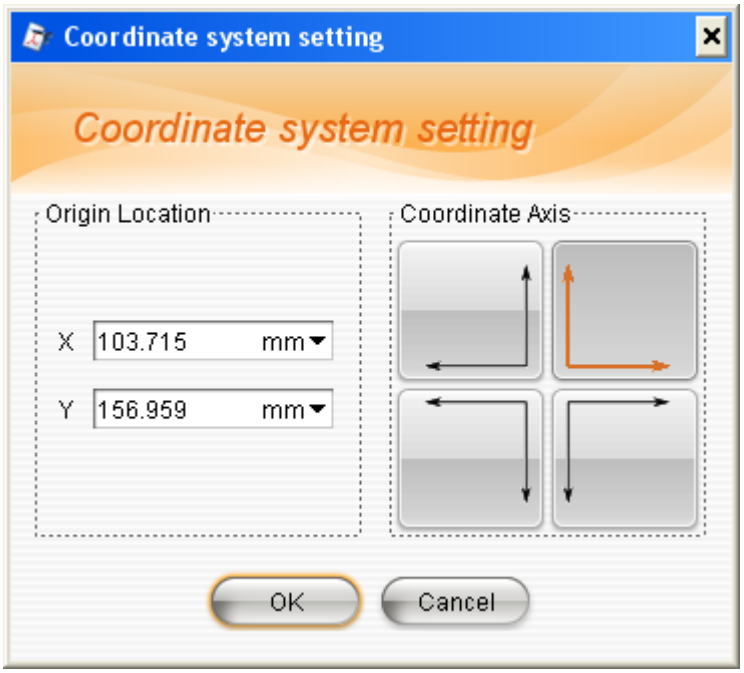


Figure 2-117

You can input exact values in the X, Y edit boxes, to precisely determine the position of the origin. And you can choose a preferred direction in the coordinate axis diagram aside.

2. Hold down the left mouse button to drag the crop box to any place as needed. If you adopt this way, you can add guide lines for easiness in operation.

Add a guide. Move the cursor to the rulers located at the top and left of the window, and once the cursor turns to an arrow, hold down the left mouse button and drag toward the page. Now you will see a white line appearing, drag this line to proper position and then

release the mouse button. And then in the pop-up dialog box, specify the position of the auxiliary line and click **OK**. The position here refers to the distance between the line and the page side. X refers to the distance off the top side and Y the left side. This dialog box can also be opened by clicking the toolbar icon.

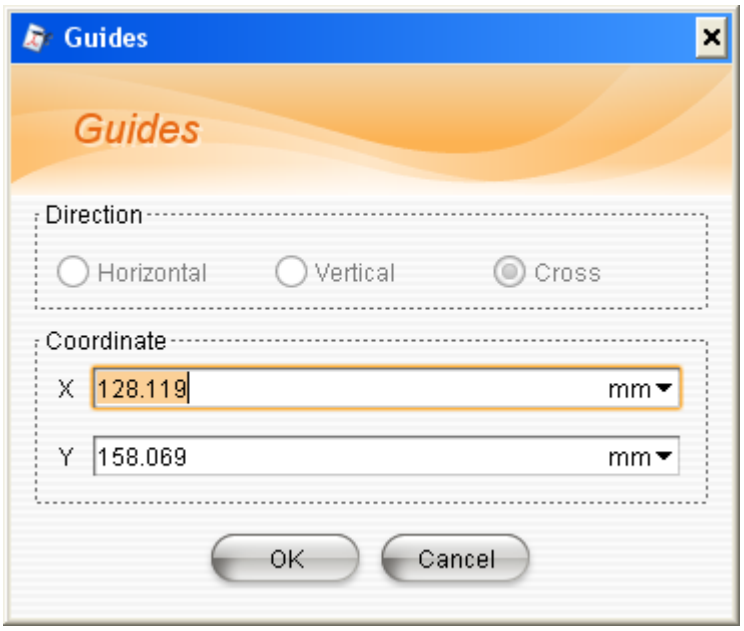


Figure 2-118

Lock guides. Click the toolbar icon, and then choose **Lock guides** from the dropdown list. A locked line can NOT be moved freely any more.

Capture guides. Choose **Capture guides** in the dropdown list. It aligns the crop box with the nearest line when you move the box.

Like **Capture guides**, you can also choose **Capture elements of the border** in the dropdown list, to align the crop box with the nearest page element box, such as the page box, when you move the crop box.

3. Use the toolbar icon. A dialog box appears when this icon is clicked. Input the distance to move leftward or rightward in the horizontal direction, or the distance to move upside or downside, and then click **OK**.

4. Use the toolbar icon to make the crop box be at the center of the page. After you click this icon, a dropdown list appears, providing three centering options, horizontal & vertical, horizontal, and vertical.

3. Color and Zoom

ElecRoc also provides features to help you define the size and position of the crop box with ease.

To change the color of the crop box, click the toolbar icon and choose **Trim Box Color** in the dropdown list. In the follow-up color setup dialog box, choose an appropriate color, and then click **OK**.

To zoom in or out the page, you can use the zoom icons, , , in the toolbar, or hold down the right mouse button and drag.

4. Define multiple crop boxes

As you drag the mouse on the page to create a crop box, if you press down the Ctrl key at the same time, or make the toolbar icon be checked, you can create more than one crop box one time.

The size and position of each crop box can be separately defined.

5. Crop to Blocks

This feature enables you to split a page. There are two manners to divide a page into blocks: by auxiliary line and by certain rows and columns, controlled by the **Block mode** parameter. If you choose the **Not partition** option, then you can define one or more independent crop boxes as the methods mentioned above.

Using the auxiliary line block: To add one or more horizontal or vertical auxiliary lines on the page. These lines can further split the crop boxes on the page into multiple rectangular blocks, each block then becoming a crop box. E.g. in practice, you may have imposed multiple middle-seam pages onto a page. With this feature, you can easily split these middle-seam pages, for use later in the composition.

Set the number of block ranks: when checked, you see new parameters in the below of the **Block mode** list. ElecRoc can split the crop boxes into multiple equal rectangles, each becoming a new crop box, as per the rows, columns and distance specified here.

6. Crop

Click the icon at the upper-left corner of the window after you define properly the quantity, the size and positions of the crop boxes. A new window now appears. Choose the blocks to be cropped, and then click **OK**. Each of the chosen blocks will then become a new page file.

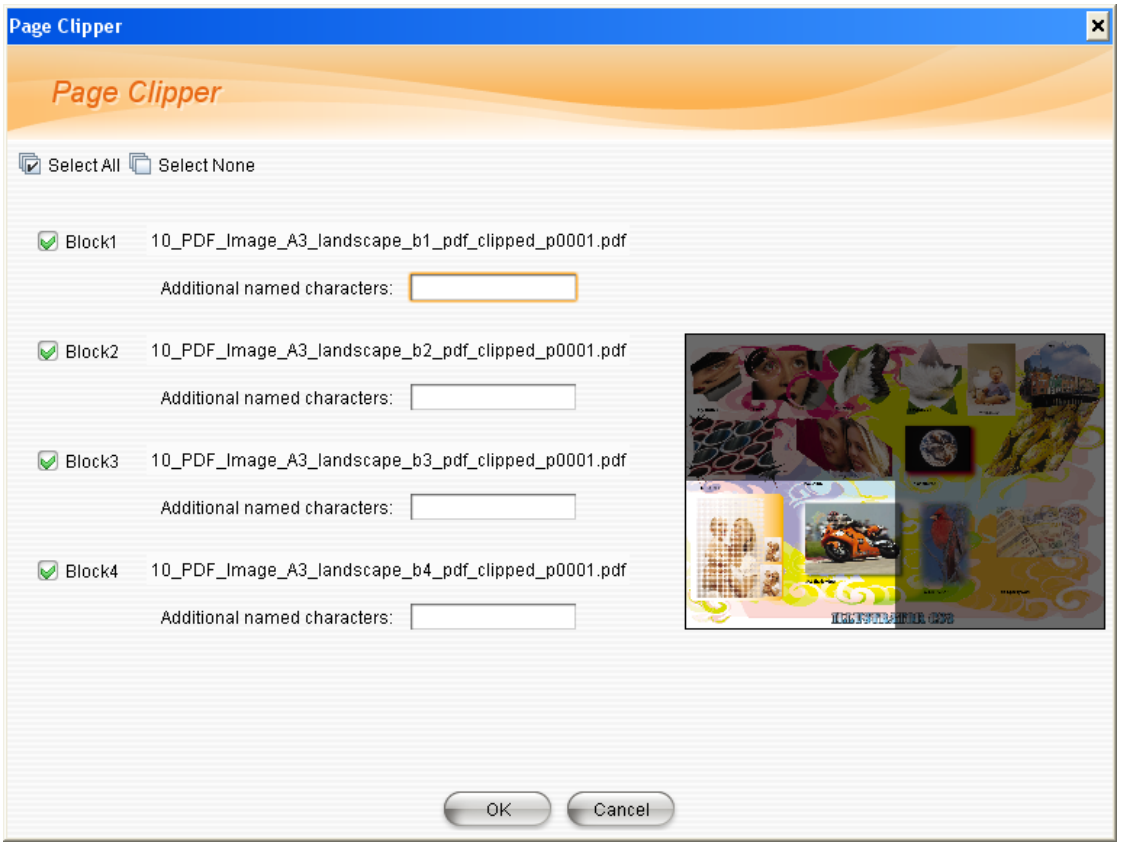


Figure 2-119

4.3.3 PDF Tools

The PDF Tools parameter setup window is shown as follows:

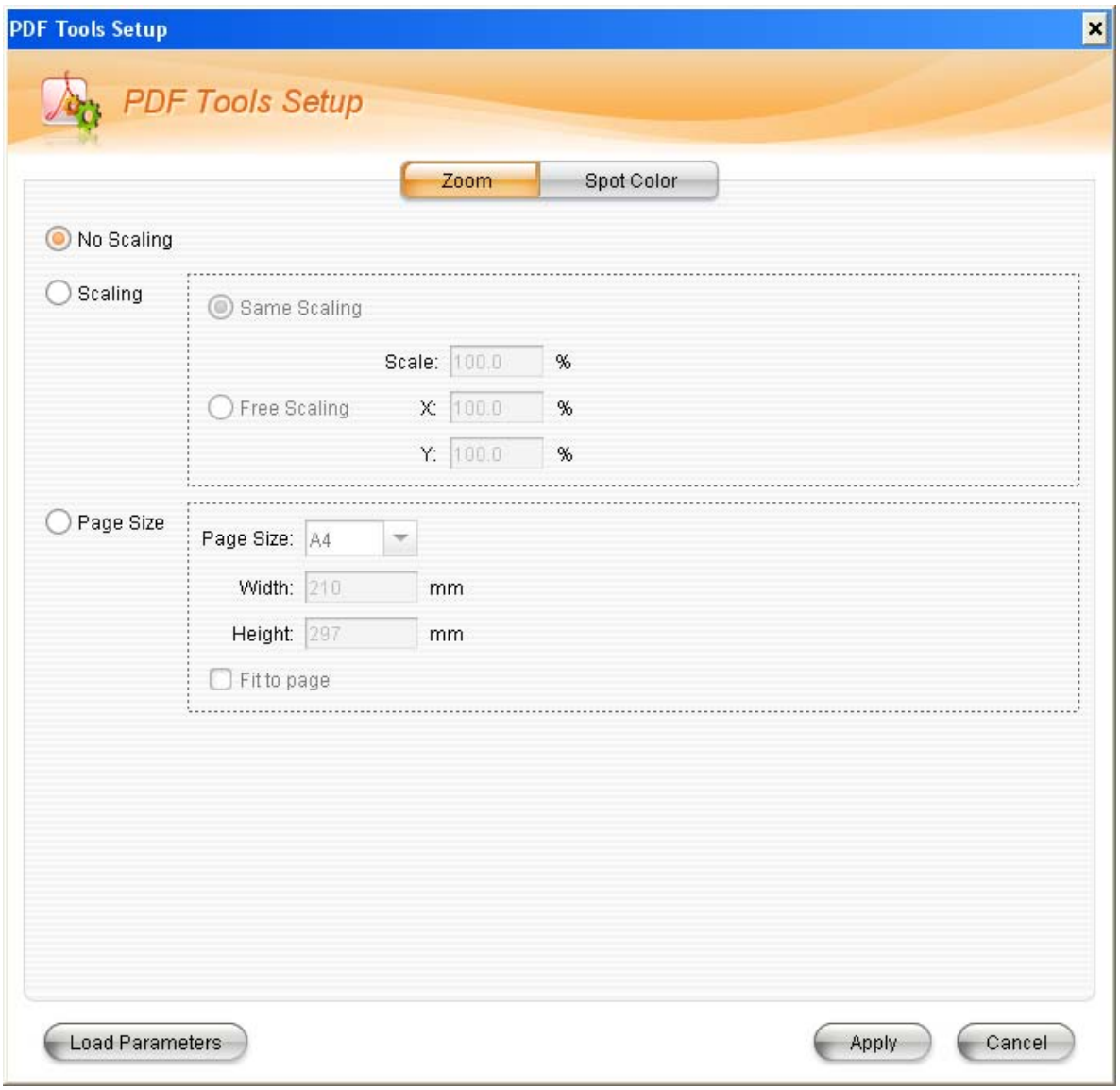


Figure 2-120

1. Zoom

This setting enables you to scale flexibly the size of the generated PDF page file.

No Scaling: If checked, the file size remains unchanged.

Scaling: If you choose **Same Scaling**, the file is scaled up or down to the input percentage in both horizontal and vertical directions. If you choose **Free Scaling**, you can then separately specify the horizontal and vertical scale percentages.

Page Size: This option enables the file to be scaled to a specified page size. You can choose a predefined size in the **Page size** list, or choose **Custom** to define a specific size.

Fit to page: This option enables the file to be scaled in the specified page size, with same

scale percentages in both **X** and **Y** directions.

2. Spot Color

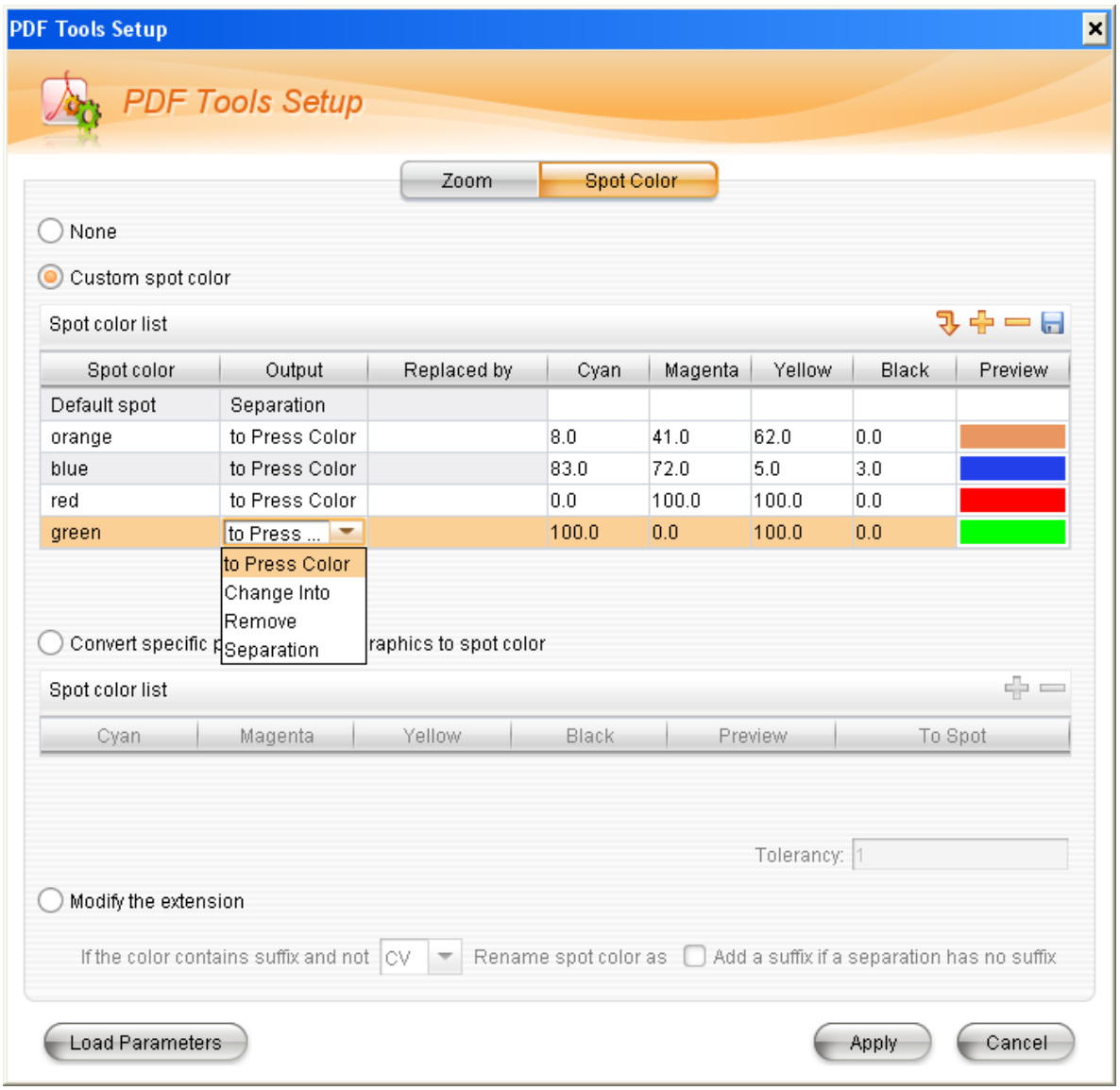


Figure 2-121

1) None

When the option **None** is selected, none of the following processing methods will be used to your spot colors.

The following three processing methods are mutually exclusive. You can choose only one of them.

2) Custom spot color

When the option **Custom spot color** is selected, the table below it takes effect, describing how your spot colors will be processed. Spot colors undefined in the table, if any, are processed as per the description for the item *Default spot*.

You can click the icon to add a spot color into the table. After the adding, please specify

its name, output manner, and corresponding color values, one by one. Unneeded spot color can be removed from the table by clicking the icon. You may click the icon to load spot color(s) from existing spot color tables, accessing the spot color names and CMFY values. The spot color in this table can be written back to your spot color table by clicking the icon. At the time you define the color values, please double-click the value to activate it into editable state.

There are four manners to output spot colors. **Separation** refers to output as a stand-alone separation, same as a process color. **to Press Color** refers to output by way of transferring the spot color onto press colors. **Change Into** refers to output the spot color with another spot color. In this case, you need to choose the *"another spot color"* in the ***Replaced by*** column. **Remove** refers to no output of the spot color.

Note: *At the time you define the spot color name, please note that the spot color names are NOT case-sensitive because of the operating system. Spot colors such as SPOT1 and spot1 will be taken as the same one.*

3) Convert specific process color in graphics to spot color

If selected, it converts the process colors defined here to spot colors. Please define the CMYK values at the left of the table, and then define the spot color at the right.

If it finds out graphics on the page whose color values equal to the definition here, it will then convert them into spot colors. The spot color will be named as per what you define at the right of the table. **Tolerancy** refers to tolerable deviation between the actual and defined color values. Its unit is percentage, the higher the value is, and the wider the scope of colors being converted will be.

4) Modify the extension

If the color contains suffix and not ___, Rename spot color as: When the option **Modify the extension** is selected, if the spot colors contains a suffix, but not the one specified here, it will rename the suffix as the one specified here. If you continue to check the option **Add a suffix if a separation has no suffix**, in case that the spot color has no suffix, it will automatically add a one.

4.3.4 Double Burn

Double Burn processor allows you to merge two PDF pages into one PDF page. Merging is necessary when different parts of a page are designed by different people; perhaps one designs graphic part, and another inputs text. Works from different designers need to be merged to complete a page design. Double Burn meets this need perfectly. The following diagram shows how it works.

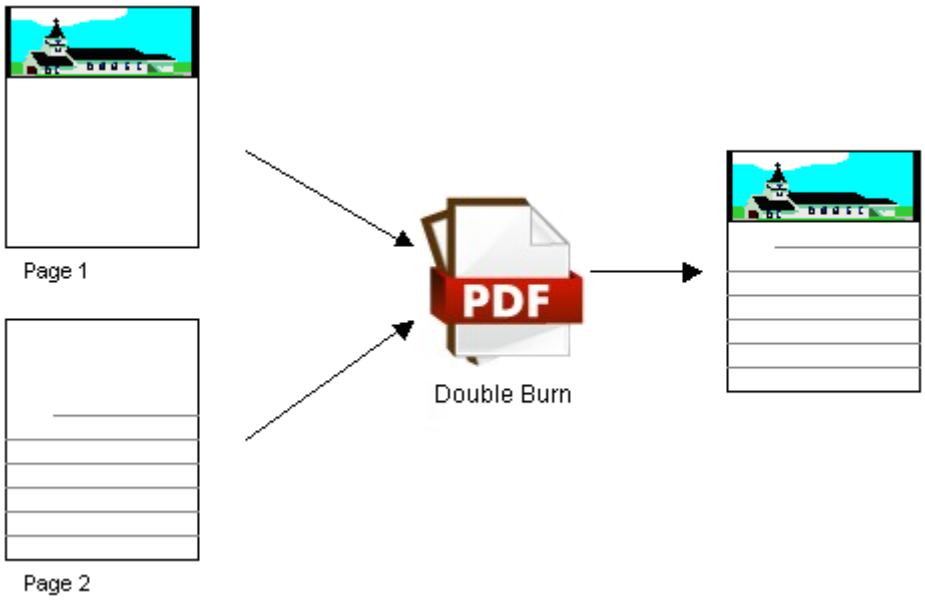


Figure 2-122

The Double Burn parameter setup window is displayed as follows:

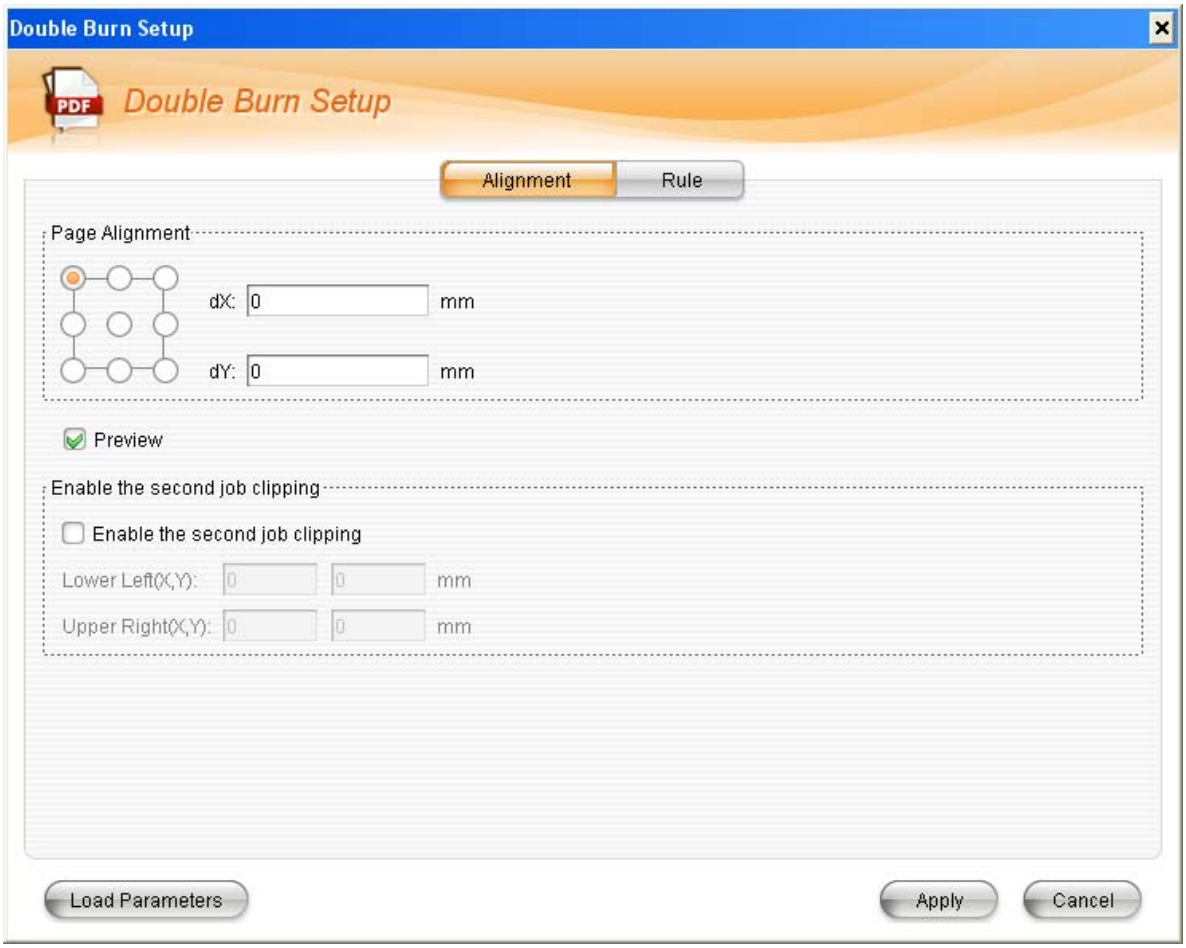


Figure 2-123

1. Alignment

Page Alignment: The diagram containing nine tiny points indicates positions for alignment during the mergence. E.g., if you check the upper-left point, it will align the upper-left corners of the two pages, and then merge them. X and Y refer to the horizontal and vertical spaces for the second page away the first page under the selected align mode.

Preview: If checked, the processor generates a thumbnail image for the merged page.

Enable the second job clipping: This option enables you to clip the second job. You can input in the **Lower Left** and **Upper Right** boxes separately the X and Y coordinates both originate at the lower-left corner of the page to define two points, which can then form a rectangle on the page. Double Burn cut off the content outside of the rectangle.

2. Rule

Parameters under this tab allow you to define two sets of merging rules.

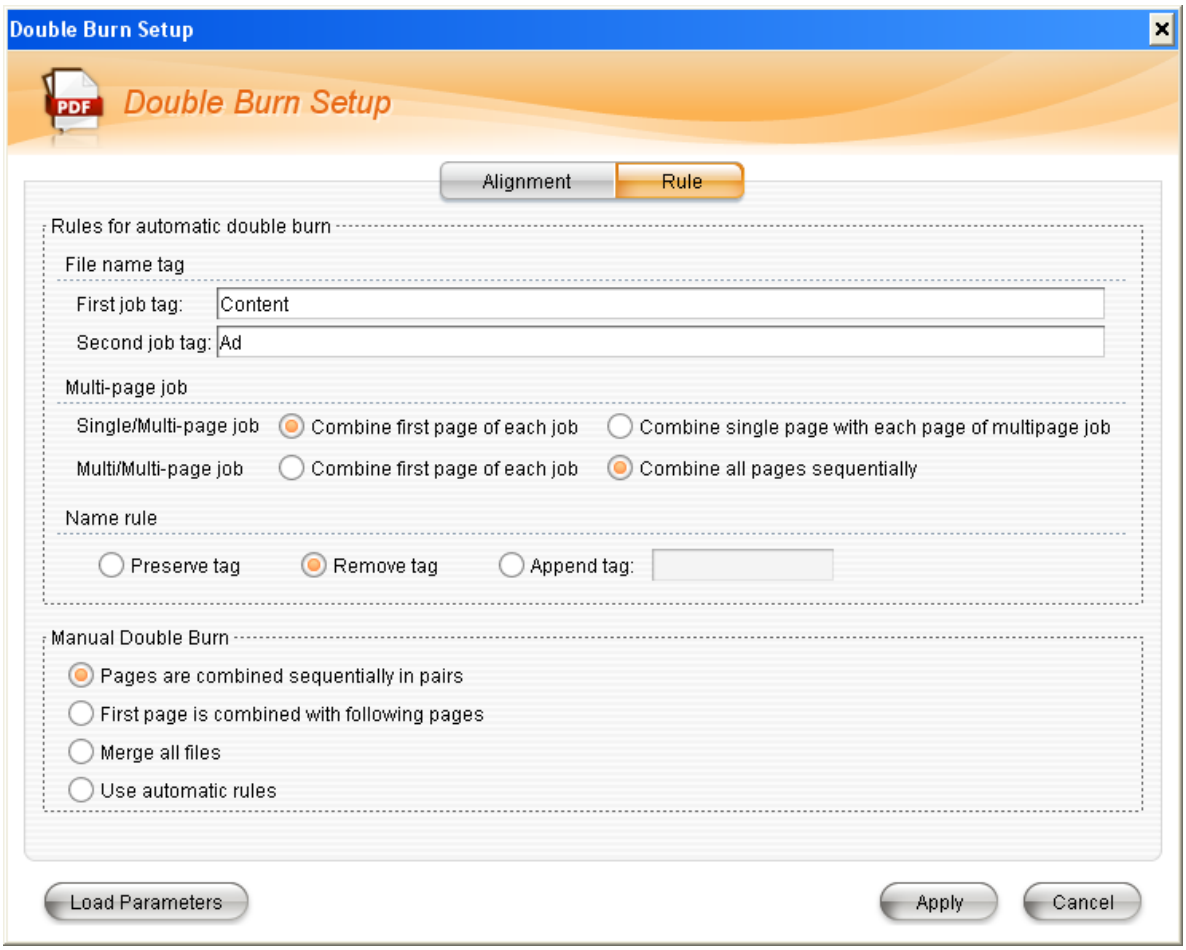


Figure 2-124

1) Rules for automatic double burn

- **File name tag**

It refers to the name of the file submitted to the Double Burn processor. ElecRoc uses the file name to determine if the file is applied to the automatic double burn process.

File name tag: If the names of the input files are in a standard style: Jobname_tag, Double Burn can automatically submit the input files for process. To realize automatic

combining, the Jobname part of the two files to be combined must be the same, while the tag part can be specified separately in the **First job tag** and **Second job tag** edit boxes. For example, the user can input A and B, two files like Sample_A and Sample_B can then be applicable for the auto process.

- **Multi-page job**

Parameters in this area allow the user to specify the combining rules when one or both of the two input files consist of multiple pages.

Single/**Multi-page job**: This option is applied to cases when one file contains only one page, and the other contains multiple pages. The **Combine first page of each job** option makes the processor to combine the first page of the first file with the first page of the second file.

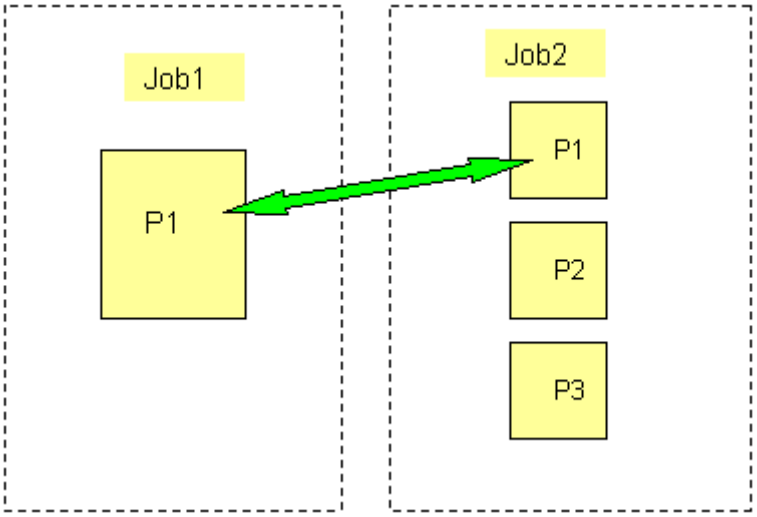


Figure 2-125

The **Combine single page with each page of multiple job** option makes the processor to combine the page of the first file with each page of the second file respectively.

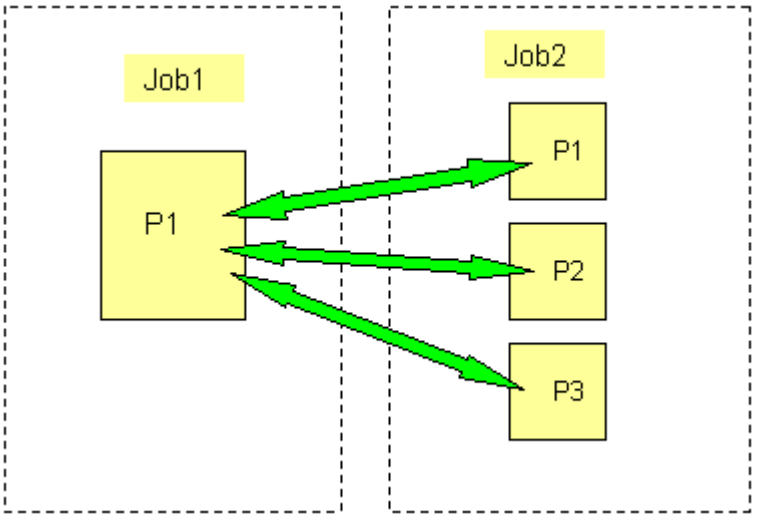


Figure 2-126

Multi/**Multi-page job**: This option is applied to cases when both files contain multiple

pages. The **Combine first page of each job** option makes Double Burn to combine only first pages of the two files.

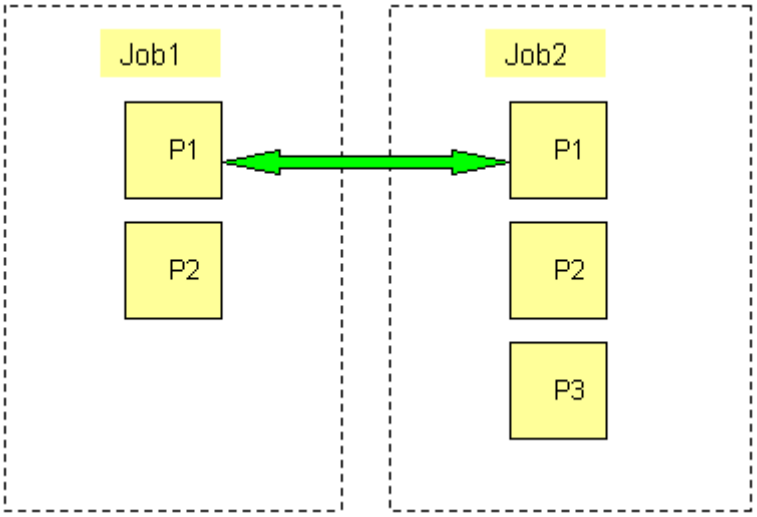


Figure 2-127

The **Combine all pages sequentially** option makes it to combine pages with the same page number, e.g. page 1st of the first file with page 1st of the second file, page 2nd of the first file with page 2nd of the second file, and so on.

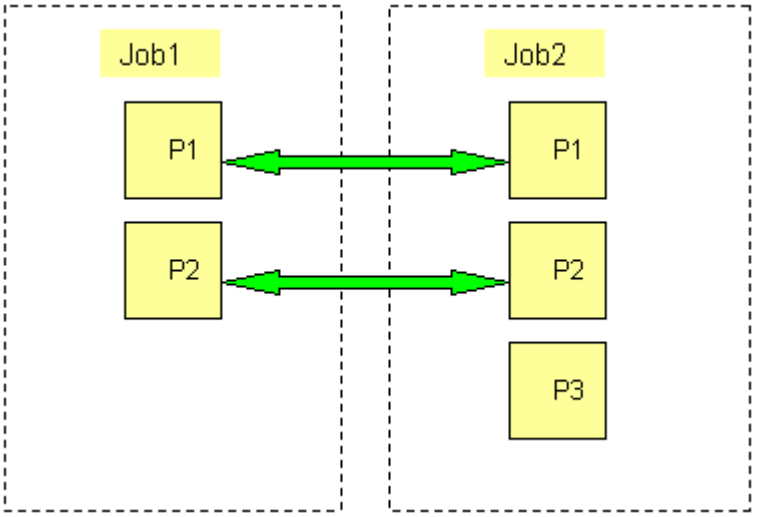


Figure 2-128

- **Name Rule**

If you choose **Preserve tag**, Double Burn preserves the tags of both the two input files in the name of the combined file. The two tags are connected with a separator "_". If you choose **Remove tag**, it removes the tags in the file name. And if you choose **Append tag**, it appends a specified tag in the file name. The specified tag and the file name are connected with separator "_" as well.

2) Manual double burn

There are four processing manners if you manually submit pages to Double Burn:

Pages are combined sequentially in pairs: This option makes the processor to combine pages sequentially in pairs, as shown in the below.

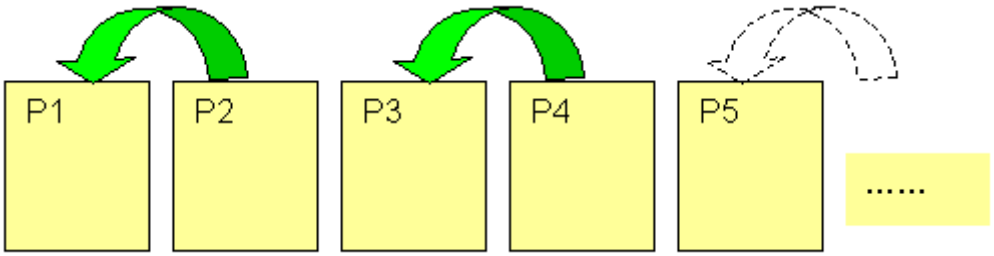


Figure 2-129

First page is combined with following pages: This option makes the first page be combined with the following pages, shown as follows.

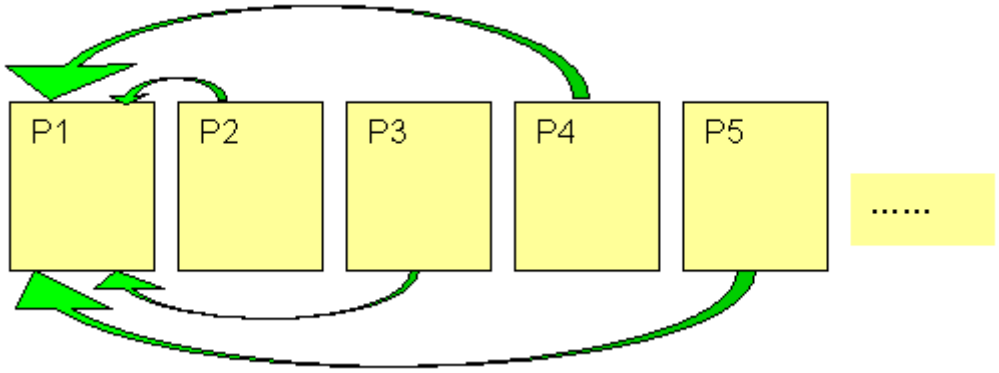


Figure 2-130

Merge all files: This option combines all the submitted pages into a single page. The file name is composed of the first two page names, separated by "_".

Use automatic rules: If checked, it applies the automatic combining rules to process the manually-submitted pages.

4.3.5 PDF Merger

ElecRoc provides PDF Merger for your convenience in long distance transmitting and proofing. With this processor, you can merge multiple PDF files into one PDF. The operation is very simple: you need only to submit more than one PDF files (separation files are not supported) to PDF Merger.

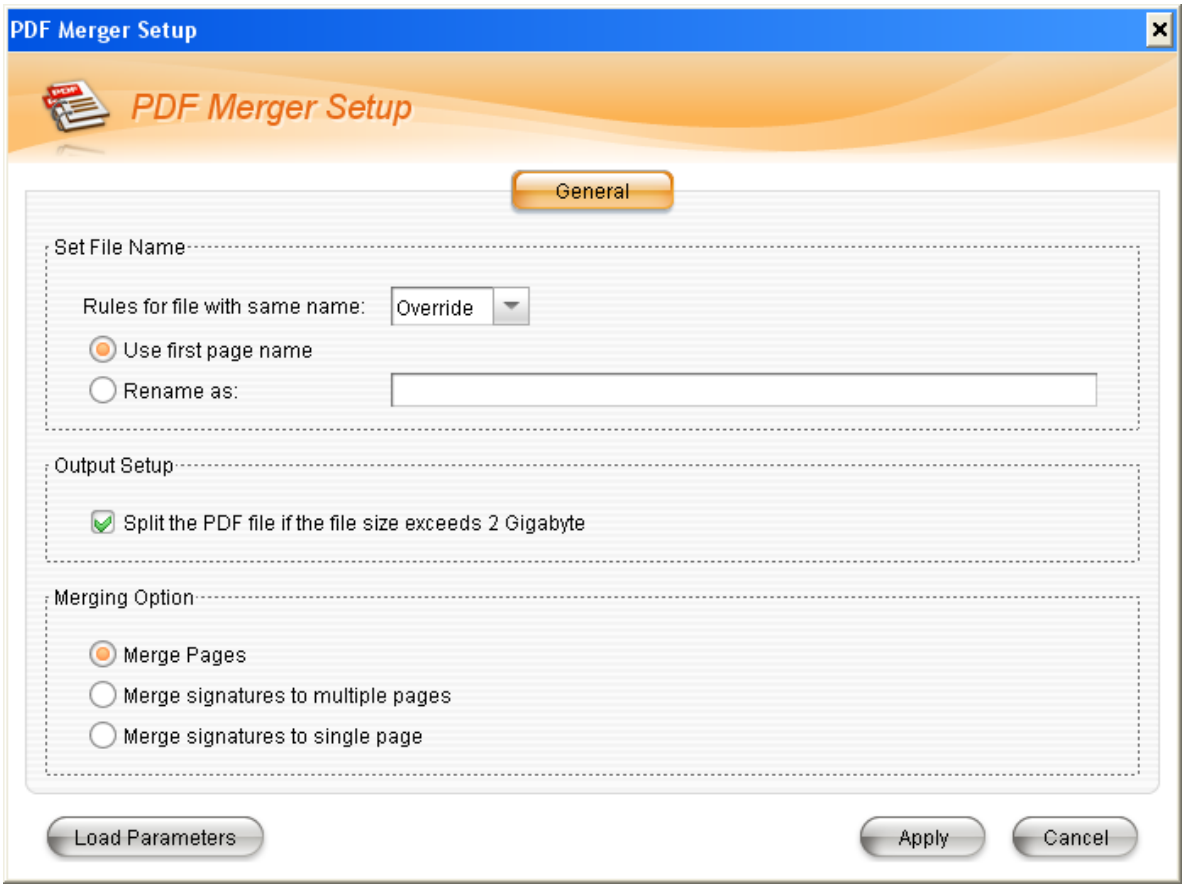


Figure 2-131

- **Set File Name**

Rules for file with same name: Irrespective of how the file is named after the mergence, if you choose **Override**, in case that it generates two files with same name in two different processes, the new file will override the old one. If you choose **Add Label**, it adds a suffix like _1, _2 … in the name of the new file.

Use first page name: This option uses the first page name as the output PDF file's name.

Rename as: If checked, you can input a name in the edit box, and make it as the name of the output file after the mergence.

- **Output Setup**

Split the PDF file if the file size exceeds 2 Gigabyte: If checked, in case that the file size after being merged exceeds 2 GB, ElecRoc will automatically split the file, making the exceeded part as a new file, so as to ensure that no new file is larger than 2 GB.

- **Merging Option**

Merge Pages: Merge the submitted pages into a single file.

Merge signatures to multiple pages: Merge each signature into a multipage PDF file.

Merge signatures to single page: Merge each signature into a single-page PDF file.

4.3.6 PDF CMS

This processor provides the color management capacity at the PDF page level. In job workflow, it can be deployed behind PDF Generator, Preflight, Trap, in front of Imposer, Rasterizer and etc. Its processor parameter setup window is shown as follows:

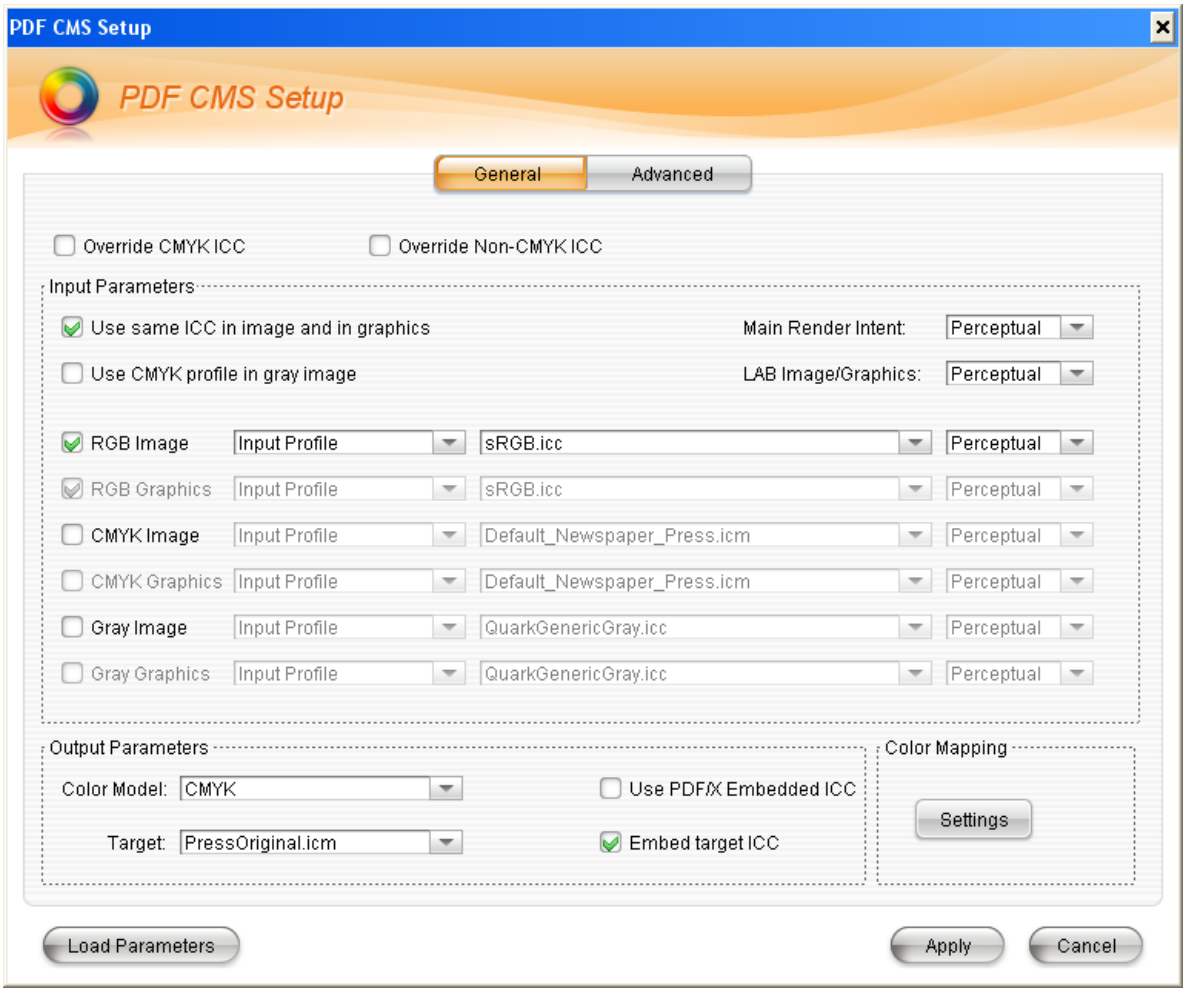


Figure 2-132

1. General Parameters

1) Override ICC

The input file may embed ICC color profiles. If you want to use the embedded ICC profiles to reproduce the colors of the page objects, keep the **Override CMYK ICC** and **Override Non-CMYK ICC** boxes empty. If you check these two boxes (both, or any of them), you can then use the profiles specified below by **Input Parameters**.

2) Input Parameters

Profiles: You can specify the input ICC profiles for 6 types of page objects, including RGB images/graphs, CMYK images/graphs, and Gray images/graphs. The input profiles for each type of page objects are further divided into two types: **Input Profile** and **Device Link**. ElecRoc not only provides some built-in profiles for you to use, but also supports you to import more other profiles into ElecRoc in the module **Resources** > **Profile Resource** > **ICC**.

If you check **Use same ICC in image and in graphics**, the input profiles for the images and graphs in same color mode will be the same. And if you check **Use CMYK profile in gray image**, the input profiles for Gray images and graphs will be the same as those for CMYK images and graphs.

Render Intent: The **Main Render Intent** parameter controls the render intents for the images and graphs in all color modes (RGB, CMYK, Gray and LAB). You can also separately define the render intent for each image or graph type. There are four optional intents: *Perceptual*, *Saturation*, *Relative* and *Absolute*.

3) Output Parameters

Color Model: ElecRoc CMS supports 4 output color modes, RGB, CMYK, Gray and HiFi.

Target: Here you can specify the target color profile.

Embed target ICC: If checked, ElecRoc will embed the ICC profile specified at the **Target** dropdown list, into the PDF file generated after the PDF CMS process.

Use PDF/X Embedded ICC: This option becomes available when the **Color Model** is set to CMYK. If checked, the output profiles embedded in PDF/X will be used with priority.

Plane Num: In HiFi output mode, you can further specify the number of the output planes. ElecRoc supports 5 planes (CMYKO, CMYKG, and CMYKB), 6 planes (CMYKOG, CMYKOB, and CMYKGB) and 7 planes (CMYKOGB).

4) Color Mapping

With the **Color Mapping** setting, you can define how to converse a specific color. Colors that are not specially specified here will still be conversed as per the input and output parameters specified above.

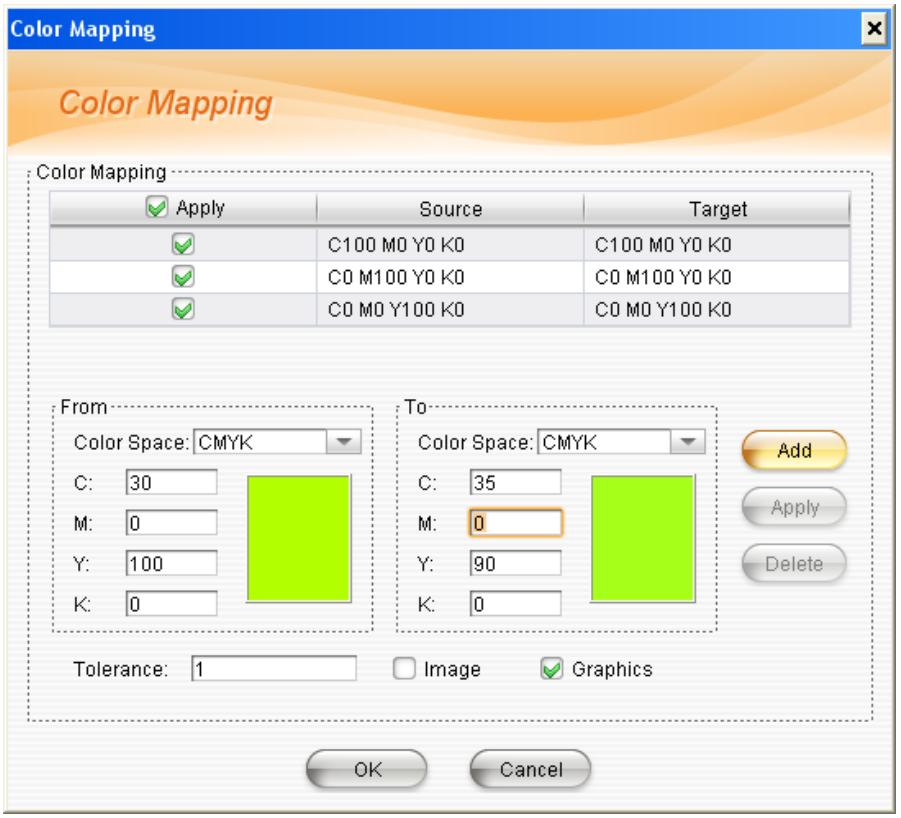


Figure 2-133

Input the source color to be conversed in the **From** area. You need to provide such information as the color space (RGB, CMYK, Gray or LAB) and the color value. Then input the target color value that would be after the conversion in the **To** area. The **Color Space** in the **To** area is determined by **Output Parameters** > **Color Model** under the **General** tab. And then click **Add** to append the mapping relation into the table above. A tick in front indicates the color will be conversed as specified here, while blank indicates not. If you check the **Apply** box, all the mapping setting takes effect.

If you want to change a mapping relation, choose it, edit the source and target colors and then click **Apply**. If you want to delete it, choose it and just click **Delete**.

Tolerance: Using this parameter you form a tolerance range (non-zero color value +- tolerance value). Colors within this range will all be conversed as specified here. E.g. if you specify specially the mapping relation for a CMYK source color (30 0 100 0), and the **Tolerance** is set to 2, then source colors (28~32 0 98~100 0) in the input file will all be conversed like the color (30 0 100 0).

Image/**Graphic**: These two options control if the color mapping settings are applied to the image or graph objects.

2. Advanced Parameters

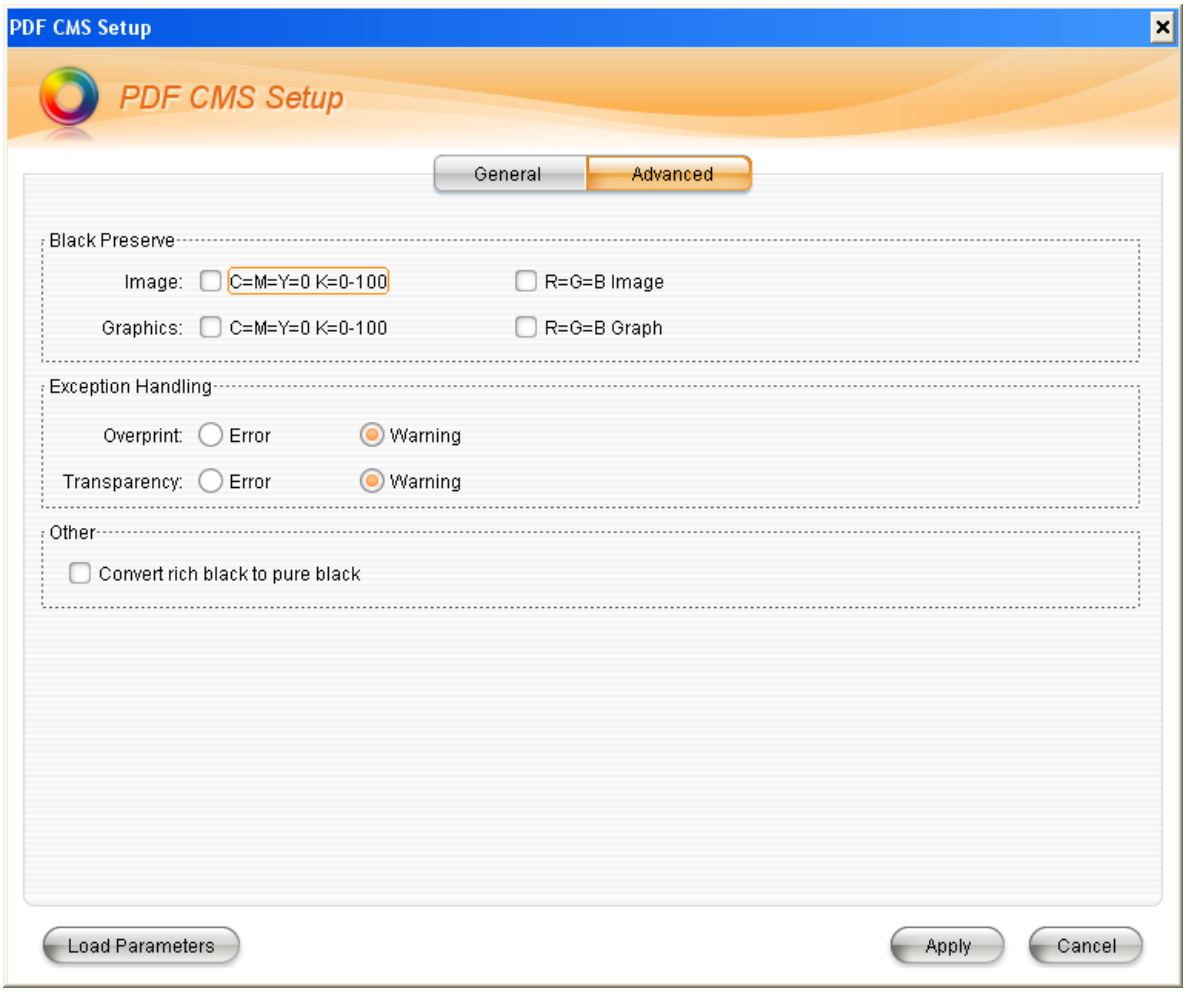


Figure 2-134

Black Preserve: Settings here are available only when the output color model is set to

CMYK. Colors of two black objects can be preserved, one is image or graph of C=M=Y=0 K=0~100, which will not be conversed, the other is image or graph of R=G=B, which will become C=M=Y=0 K=1-r after being conversed. The r refers to the R (or G, B) value in percentage.

Exception Handling: The overprint or/and transparent image elements contained in the input page, if any, would deviate or change after a color conversion. Thus a warning mechanism can timely arouse your attention. You can ask ElecRoc to issue error or warning in such cases.

Convert rich black to pure black: If checked, ElecRoc can convert the rich black objects (K=100, C, M, Y any value) in your file to pure black objects (K=100, CMY=0).

4.3.7 EcoInk

This processor is developed to meet the requirements for energy consumption reduction in print industry. It uses a lot of K to substitute for CMY, so as to reduce the ink consumption and lower the printing cost. Meanwhile, it applies color management technology to ensure the color stability and quality consistency, improving the gray tone and making the details and image contrast more obvious.

In ElecRoc workflow, it accepts PDF pages processed by PDF Generator, or signatures generated by Imposer or Composer, process and output them as PDF files. The output files can then be submitted to the Rasterizer node.

Before you define the processor parameters, you should create an EcoInk solution by **Resources** > **Profile Resource** > **EcoInk**. This solution takes a precise control of the color conversion and management, ink-saving range, ink-saving level, and whether to preserve pure colors.

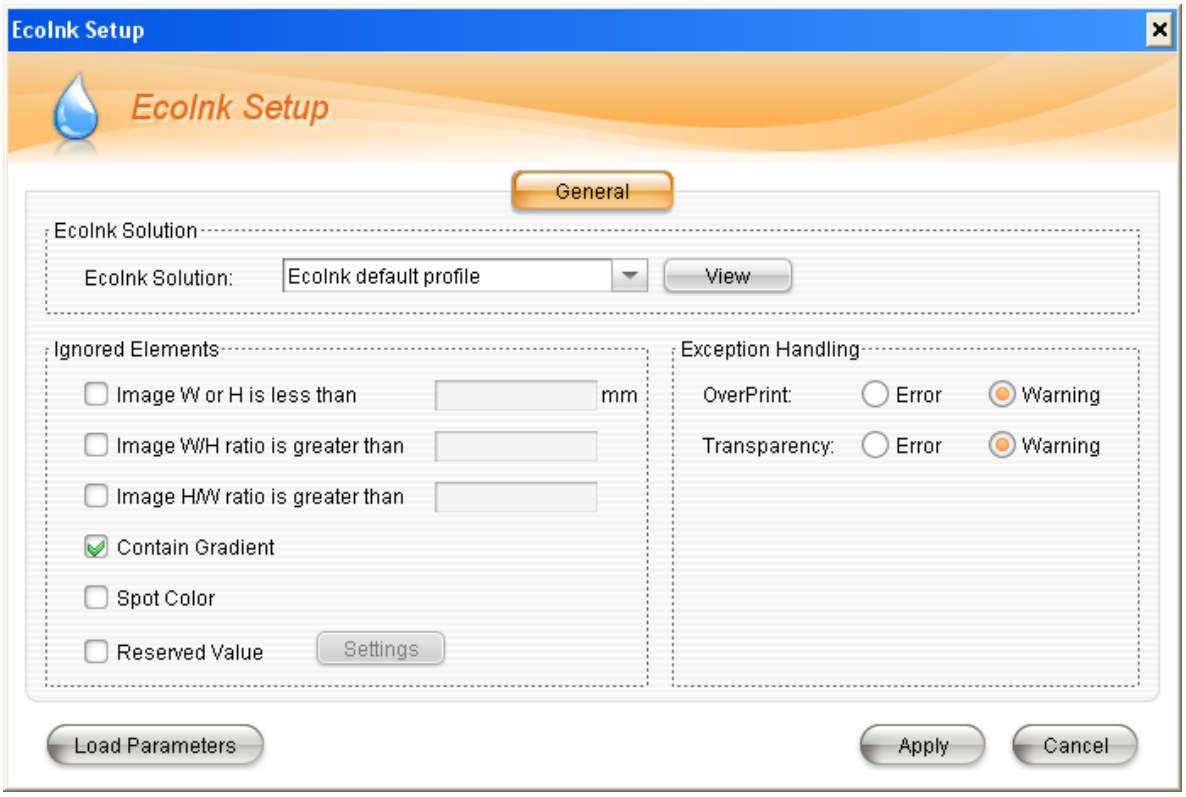


Figure 2-135

EcoInk Solution: It refers to the EcoInk solution created by **Resources** > **Profile Resource** > **EcoInk**. You can click **View** to learn the details on your selected solution.

Ignored Elements: EcoInk processor can selectively ignore certain image elements during the ink-saving process. Such elements include:

1) element whose width or height is less than a specified value;
2) element whose width/height ratio is greater than a specified value;
3) element whose height/width ratio is greater than a specified value;
4) element that contains gradient;
5) spot color; and
6) element with specific color value. The corresponding checkbox for the last one is **Reserved Value**. Check it and click **Settings**, and then you can define colors with specific color value.

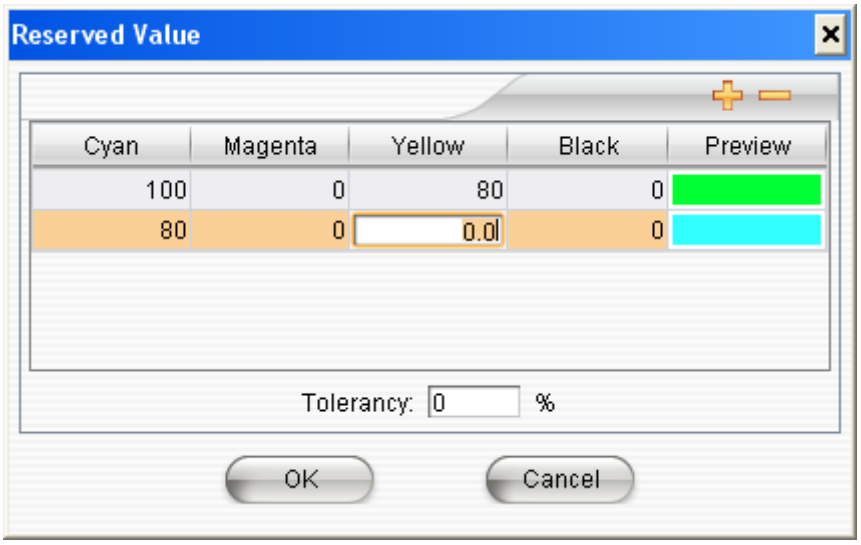


Figure 2-136

The **Tolerance** parameter in the follow-up color defining dialog box refers to the difference allowed between the actual and specified color values. E.g. suppose that the specified value here is C=a M=b Y=c K=d, and the *Tolerance* is set to x%, then colors of C= (a-ax%)~(a+ax%) M = (b-bx%) ~(b+bx%) Y=(c-cx%)~(c+cx%) K=(d-dx%)~(d+dx%) can all be ignored.

Exception Handling: The overprint or/and transparent image elements contained in the input page, if any, would deviate or change after the ink-saving process. A warning mechanism can timely arouse your attention and help avoiding possible errors. You can ask ElecRoc to issue error or warning in such cases.

4.3.8 3rd Party Preflight

ElecRoc enables you to use the third-party Enfocus' preflight module in ElecRoc workflow. The processor parameter setup window is shown as follows.

Note: *The installation of Enfocus PitStop on ElecRoc server is required. ElecRoc currently supports only the Server versions.*

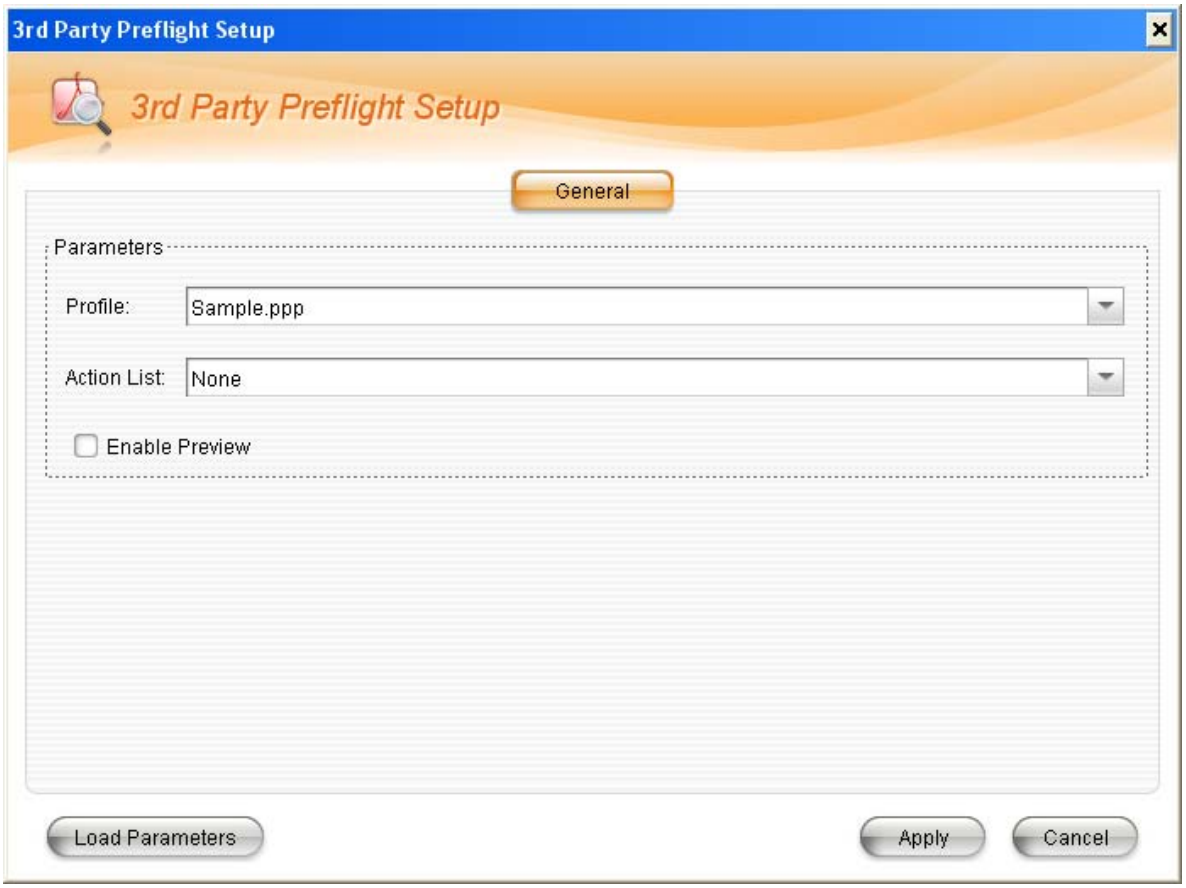


Figure 2-137

The **Profile** and **Action List** dropdown boxes provide all available preflight profiles and action list files in ElecRoc system, for you to choose. If you check **Enable Preview**, it generates a thumbnail image for the PDF file during the preflight process.

After the preflight process, choose the preflight node, then choose a processed file in the output file queue, right-click and choose **Preflight Report**, you can view the process result report about the file.

4.3.9 Ganging

The Ganging processor is mainly designed for use with the large-format output devices. It can automatically gang and output multiple small pages, which may be unsuitable for being processed by imposer, on one large sheet of page based on the media size, in an optimal layout, saving greatly the media and efficiency. With this processor, you can also tile a large page into multiple small pages.

Note: *This processor requires Adobe Acrobat version 8 or higher version being installed on your computer.*

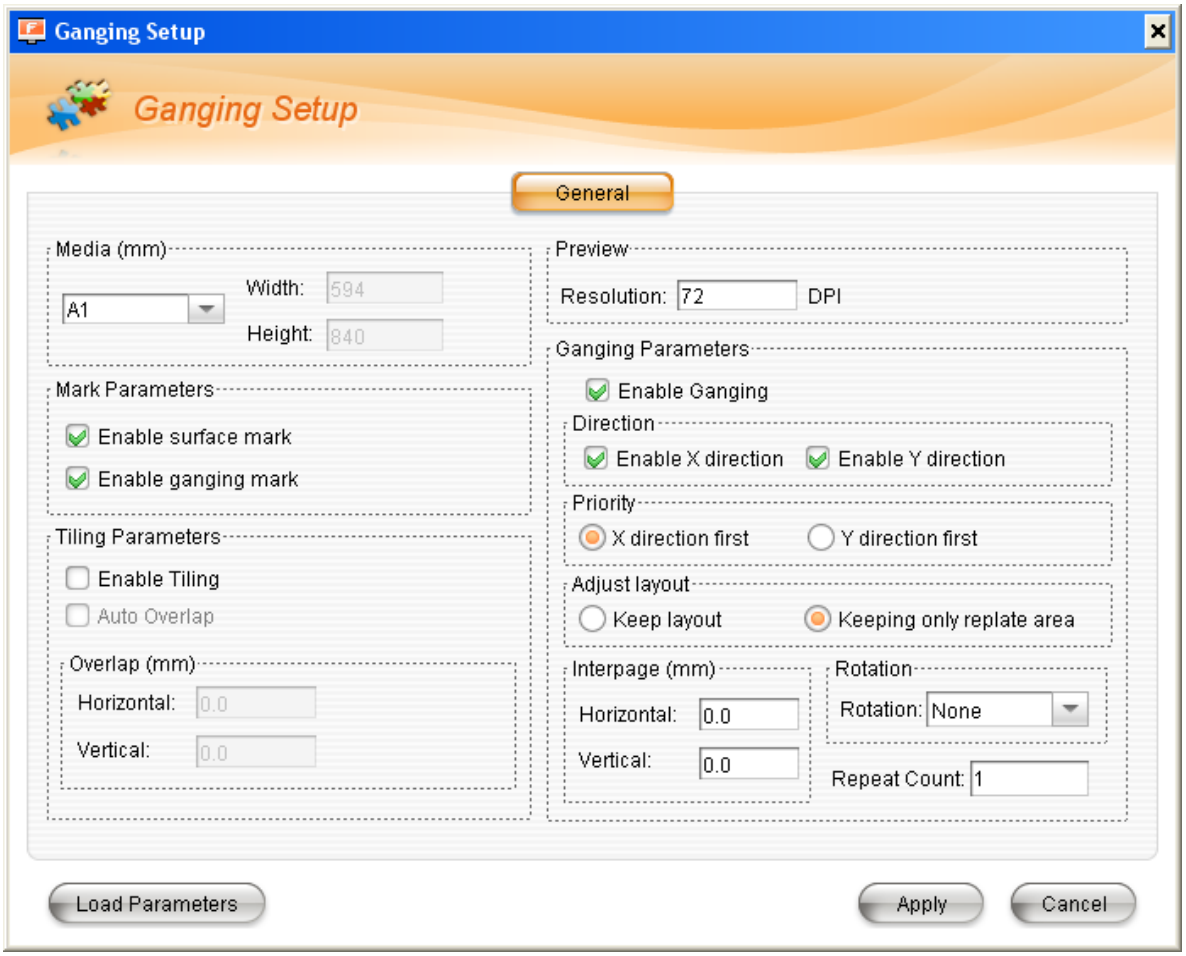


Figure 2-138

1. Media (mm)

The media sizes can be classified into two types: pre-defined and custom. You can choose a pre-defined option as needed, or choose **Custom** to define a specific size.

2. Mark Parameters

You can add marks in ganging. Mark size is fixed to 10.5 mm.

Enable surface mark: If checked, surface mark is added outside the surface.

Enable ganging mark: If checked, ganging mark is added outside the pages.

3. Tiling Parameters

Enable Tiling: If checked, it enables the auto tiling.

Auto Overlap: If checked, ElecRoc automatically controls the overlap width, ignoring the **Overlap** setting.

Overlap: When **Enable Tiling** is checked but **Auto Overlap** is unchecked, Ganging uses the values in the **Horizontal** and **Vertical** edit boxes as width and height of the overlapping area between two neighboring tiled pages.

4. Preview

Here you can specify a preview resolution, ranging from 18 to 72 DPI.

Hint: *In case that pages are very small while signature is very large, e.g. a bisect, you'd better set a lower resolution, otherwise, the preview speed may be slow on Mac client.*

5. Ganging Parameters

Enable Ganging: If checked, it enables the auto ganging.

Direction: Here you can determine whether to enable ganging in X, Y, or both directions.

Priority: Here you can control the priority of ganging direction.

Adjust layout: If you choose **Keep layout**, the signature size will base on the value specified by the parameter **Media**. And if you choose **Keeping only replate area**, ElecRoc will automatically trim away the blank area on the four sides of the signature, therefore the signature size may become smaller than the **Media** size.

Interpage: You can input in the **Horizontal** and **Vertical** edit boxes to specify the inter-page spacing in both horizontal and vertical directions.

Rotation: You can rotate the pages by choosing a suitable option.

Repeat Count: Repeat the submission of pages. For instance, if you submit 3 pages and set **Repeat Count** to 2, then you will actually submit 6 pages (3x2) for ganging.

4.4 Output Processors

Such processors accept the PDF pages or signatures processed by PDF processor, and output them on real media or as a finished electronic document, including:

PDF Export	PDF Rasterizer	1 Bit TIFF Export	8 Bit TIFF Export
Mono Printer	Color Printer	Pre-RIP Proof	Post-RIP Proof
Digital Printing	Inkjet Printing	Barcode	
Ink Save Report	Ink Control Export		

4.4.1 PDF Export

PDF Export processor allows you to export the PDF page files to a specified location.

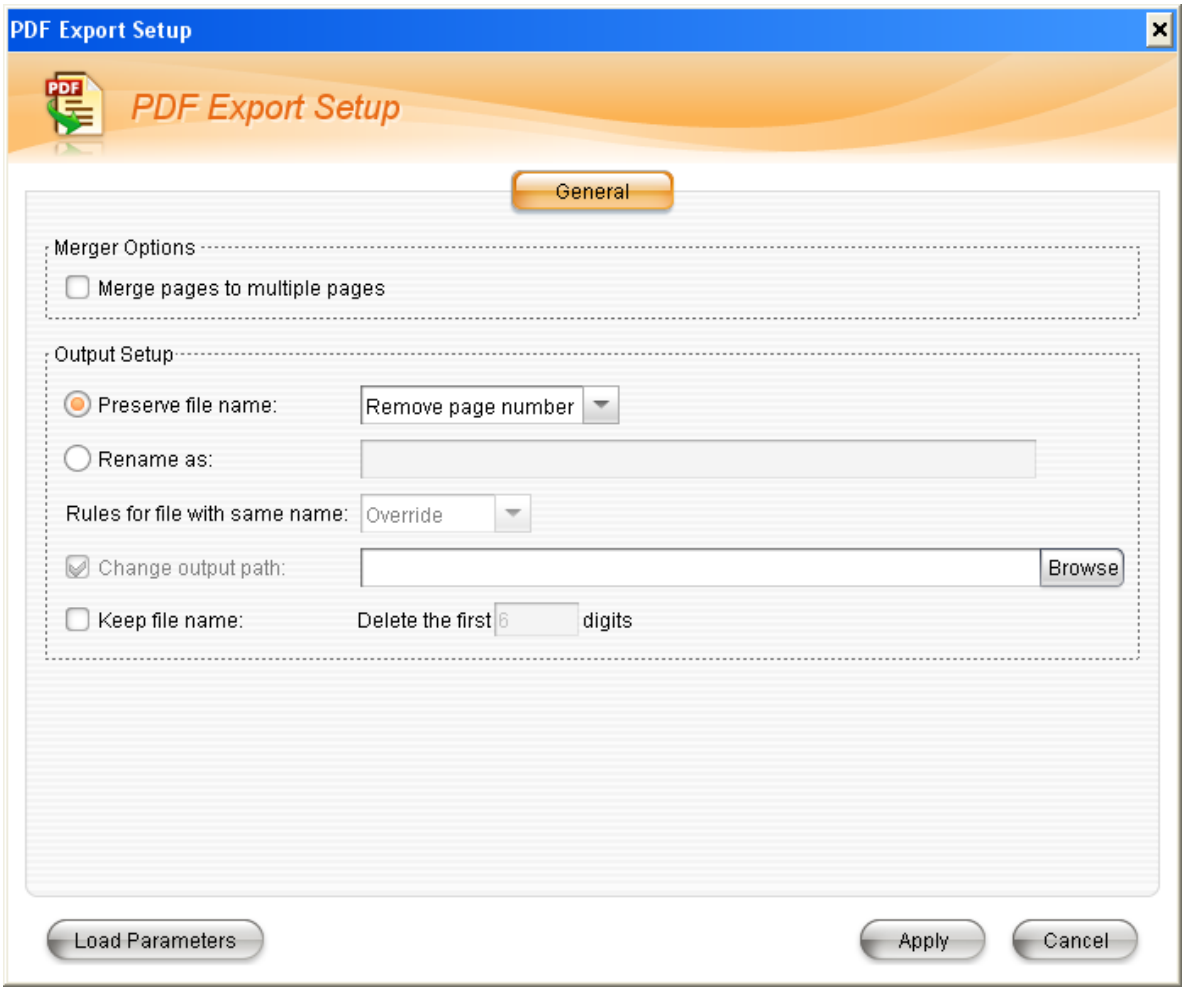


Figure 2-139

Preserve file name: If checked, the name of the PDF page file will be preserved during the export. If the source file submitted to PDF Generator contains more than one page, PDF Generator may produce more than one PDF page file, and include in their file names a page number. If you want to preserve this number in the file name, choose **Preserve page number** from the right dropdown list, otherwise, choose **Remove page number**.

Rename as: If checked, you can specify a name as the name of the exported file(s).

Rules for file with same name: There are two options. If you choose **Override**, in case that the exported file has the same name as an existing file in the output path, the new file will overwrite the old one. If you choose **Append Suffix**, in such case, it adds an ascending numeric suffix like _V01, _V02, _V03… to the name of the new file.

Change output path: Here you can specify the output path where the PDF pages will be exported. You can directly input the path in the edit box or click the **Browse** button to select an optional path. Optional output paths should be pre-defined from the Server.

Keep file name: If checked, ElecRoc will delete a specified digit number of node id and underline before the file name, and all the extensions behind the file name. The digit number can be specified, by default its value is 6. This is generally designed for the PDF file generated by PDF Merger. For example, if checked, and the digit number is set to 6, an input PDF file "13_10_sample_pdf_Merge" would be exported as "sample", if the digit number is set to 8, it would be exported as "mple".

4.4.2 PDF Rasterizer

This processor can convert PDF page files or signatures into bitmap files.

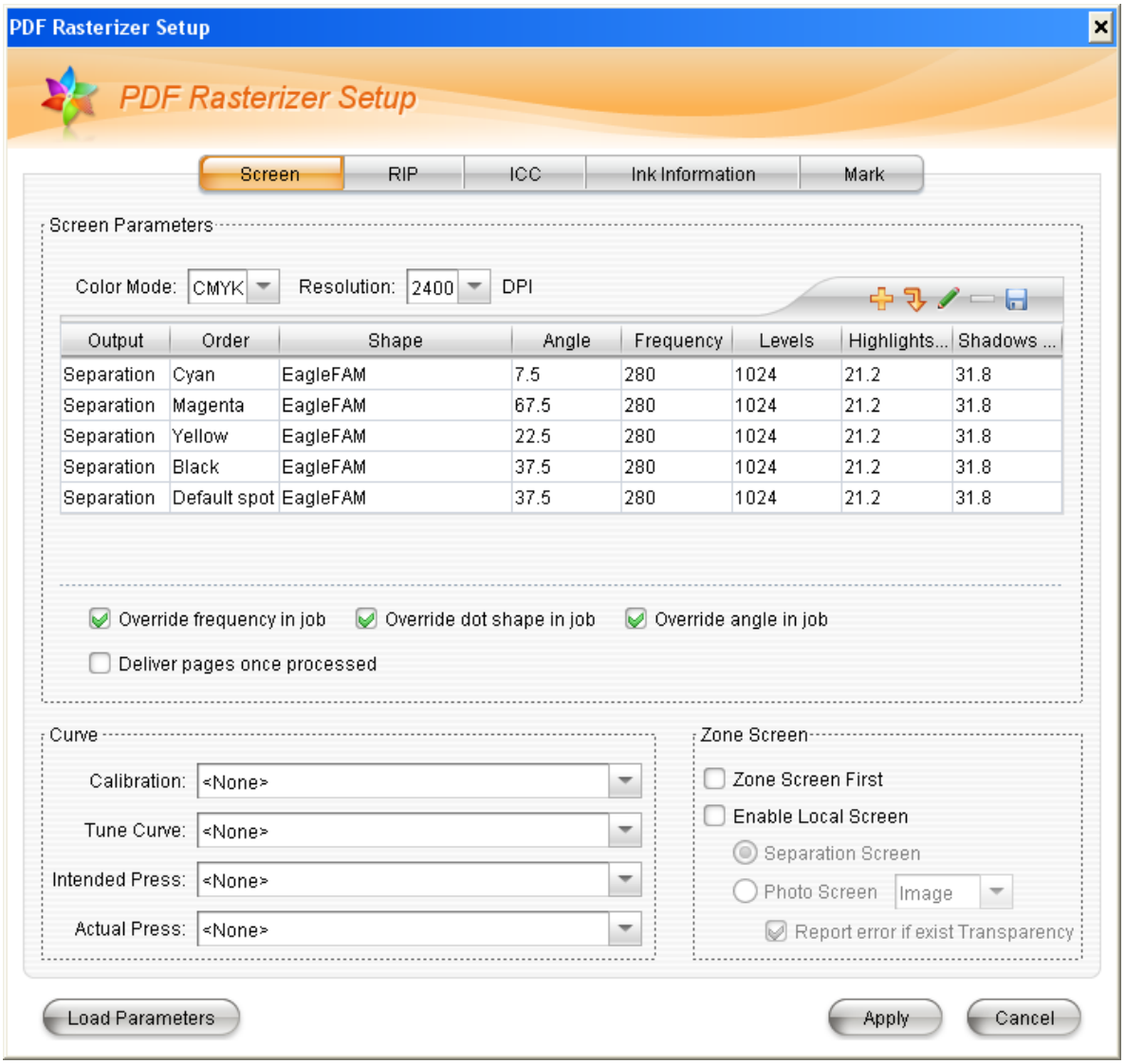


Figure 2-140

1. Screen

1) Screen Parameters

Color Mode: CMYK or Gray. By default, CMYK outputs the page and signature into Cyan, Magenta, Yellow and Black separations, while Gray outputs only a Gray separation. The separations are listed in the table below. The **Separation** and **Remove** options in the **Output** column control whether or not to output each separation.

Both modes support spot color output.

Resolution: The resolution of the bitmap file is specified here, ranging from 10~12000 dpi. You can manually input a value, or choose a commonly-used value ranging 1200~3657 from the dropdown list.

Shape: ElecRoc supports a wide range dot shapes. As shown in the table below, some are provided as standard shapes, and some are optional, available upon additional payment.

Category	Shapes	Standard	Optional
Traditional AM	Round	✓	
	Ellipse	✓	
	Rhombus	✓	
	Diamond	✓	
	Square	✓	
	Pure Round	✓	
	Sharp Ellipse	✓	
EagleAM	EagleAM_Round	✓	
	EagleAM_PureRound	✓	
FM	FounderFM	✓	
	EagleFM		✓
FAM	EagleFAM		✓
	EagleFAM-F		✓
Gravure	Gravure	✓	
	EagleAGS-Pincushion		✓
	EagleAGS-Hexagonal		✓
	EagleAGS-T Shape		✓
Flexo	Flexo Round 1		✓
	Flexo Round 2		✓

Table -11

Angle: Proper screen angles can effectively minimize the moirés occurred in full-color image printing. The default angle is specific to dot shape, e.g. the default C, M, Y, K angles for most dot shapes are 15°, 45°, 90° and 75°, but turn to 7.5°, 37.5°, 22.5° and 67.5° for EagleFAM. You can change the angle by inputting manually a new value or choosing simply one from the angle options.

Frequency: The number of lines per inch, sometimes also called density of dots, with the value ranging from 1 to 600 lpi. Higher value enables smaller dots and thus higher image quality, but may possibly results in dot enlargement. In practice, its value is closely relevant to the resolution, media and ink type. Frequency for the shape EagleFM is fixed to 5 optional levels.

Levels: The level of grayness, with the value ranging 1~35536, affected by resolution, frequency, and even the computer memory. Generally, the higher the level, the better the image detail is reproduced, especially the gradient. When you choose to use the Gravure or AGS shape, you can set it to 512, 1024 or even bigger, to make up the detail loss.

Dot size: This option appears when the shape FounderFM is selected. It controls the dot size, in the unit of micron. Its value range and default value are relevant to the resolution.

Shadows/Highlights dot size: These two options appear when you choose to use the shape EagleFM or EagleFAM. They separately control the dot size in shadow and highlight areas, in the unit of micron. Their value ranges and default values are relevant to the resolution and frequency.

Screening in Job: If the input file contains pre-defined screen setting, such as

frequency, shape, and angle, you may choose to apply these settings. To do so, uncheck **Override frequency in job**, **Override dot shape in job**, and **Override angle in job**. If you check all, or part, or any of them, you can override the corresponding screen setting in the input file, and instead, use the screen setting defined here.

Deliver pages once processed: If checked, bitmaps for each page will be immediately delivered to the connected next node for process, once they have been generated by PDF Rasterizer. If not, bitmaps will be delivered at the same time till all pages from all files have been processed.

2) Spot Color Output

- **Output modes for spot colors**

1) **Separation**: Output the spot color as an independent color separation, like the process color separation. In this case, you can separately define the screen shape, frequency, angle, level, and dot size for the spot color separation.

2) **to Press Color**: Dissolve and transfer the spot color onto process color separations, and output as per the screen setting defined for these process color separations. If you choose this mode, you need to click the icon at the upper-right to define definitely the cmyk value of the spot color.

3) **Change Into**: Replace one spot color with another, and output as per the mode chosen for the replacing one. Click the icon and then choose another spot color in the **Replaced by** column.

4) **Remove**: Remove the spot color, i.e. the spot color is not output.

Default output: The separation named **Default spot** is designed for you to define the default screen setting for all spot colors in the input file, i.e. if not defined specially, all spot colors will be output as per the output mode defined for this separation. The default mode for CMYK is **Separation**, and for Gray is **to Press Color**, i.e. the Gray. **Change Into** is not a default mode.

Note: *By reason of the operating system, the spot color name is NOT case sensitive. Two spot colors named like SPOT1 and spot1 may be considered as one same color.*

- **Add spot color**

You can separately define the output mode and screen setting for each spot color, in case that you don't want to output all the spot colors as defined for the **Default spot** separation. Click the icon to add a spot color separation. After this, you can define the color name, the output mode, the shape, angle, frequency, and even the cmyk value, one by one.

To delete an unneeded spot color separation, choose it and then click the icon.

- **Edit spot color**

When you choose the mode **to Press Color** or **Change Into**, you can click the icon to edit the C, M, Y, K value, or pick out the substitute spot color. Click this icon again to exit.

- **Import/save spot color**

You can click the icon to import spot colors from a spot color table, copying out the name and cmyk value. In reverse, you can click the icon to save the spot colors here into a spot color table.

3) Curve

Calibration: Calibration curve is used to calibrate the output device, so as to minimize

the inaccuracy of screening and ensure the output quality.

Tune Curve: This curve can tune the dots value of the separation, so as to rectify the color offset occurred.

Intended Press: If you have made compensation about dot gain, you can employ the dot gain curve to remove the compensation.

Actual Press: You can employ this curve to compensate the dot gain caused by printing.

You can create, edit, calibrate, import or export the four curves above at **Resources** > **Traditional Press**. The PDF Rasterizer curves there refer to the calibration curves, and press curves refer to the intended/actual press curves.

4) Zone Screen

In general, as specified by the **Screen Parameters**, the screen methods for all the separations and all the objects on separation are the same on the whole, i.e. except the screen angle, all separations and all objects on the separations will be screened with a same shape, frequency, and level. If you enable zone screen, you can then apply various screen settings to the separations, to the graphs, the images, or even single text, image, graph, shading object.

ElecRoc zone screen is classified into two types, the **Zone Screen** at the front end, and the **Local Screen** at the back end.

The front-end zone screen means to define separately the screen setting for single object on PDF page (text, image, graph, or shading), by using a dedicated Acrobat plug-in, before the PDF Rasterizer process. In this case, PDF Rasterizer screens corresponding objects according to the screen settings defined by the plug-in in front-end, as long as you check the option **Zone Screen First** here. Other page objects that you haven't used the plug-in to define screen settings are then screened as per the settings defined here. Refer to appendix C.4 Screen Plug-in for details.

The back-end local screen means to check the option **Enable Local Screen** here and then define separately various screen settings for the separations, or for the two kinds of objects, images or graphs, i.e. the **Separation Screen** and **Photo Screen** mentioned below.

- **Separation Screen**

Check **Separation Screen**. In this case, all separations, including the spot color separations, can be defined with various screen settings, i.e. except the screen angle, the shape, frequency, and level for each separation can be different from each other. Please define the settings over again at the **Screen Parameters** setup area. Note that, at the same screen node, the frequency, level and dot size for same shapes must be the same.

- **Photo Screen**

Check **Photo Screen**. In this case, ElecRoc classifies the page objects into two types, images and graphs. Please choose the object type from the dropdown list, and then define the screen setting for it at the **Screen Parameters** setup area. You can separately specify the parameters such as angle, shape, frequency, level, dot size, and screen curves as well. Other parameters in the setup window, such as color mode, resolution, output manner, separation name, spot color process manner, for the two kinds of objects, must be set to or kept with a same value.

Report error if exist Transparency: Images and graphs in transparent file are NOT supported here. ElecRoc issues error and stops screening when it encounters a transparent page, or signature containing transparent page. If you uncheck this option,

in this case, ElecRoc issues only warning message in pink in the information window, but continues the screening. Local screen becomes unavailable if the whole page is transparent, or such page exists in a signature.

Gradients are processed as images here.

2. RIP

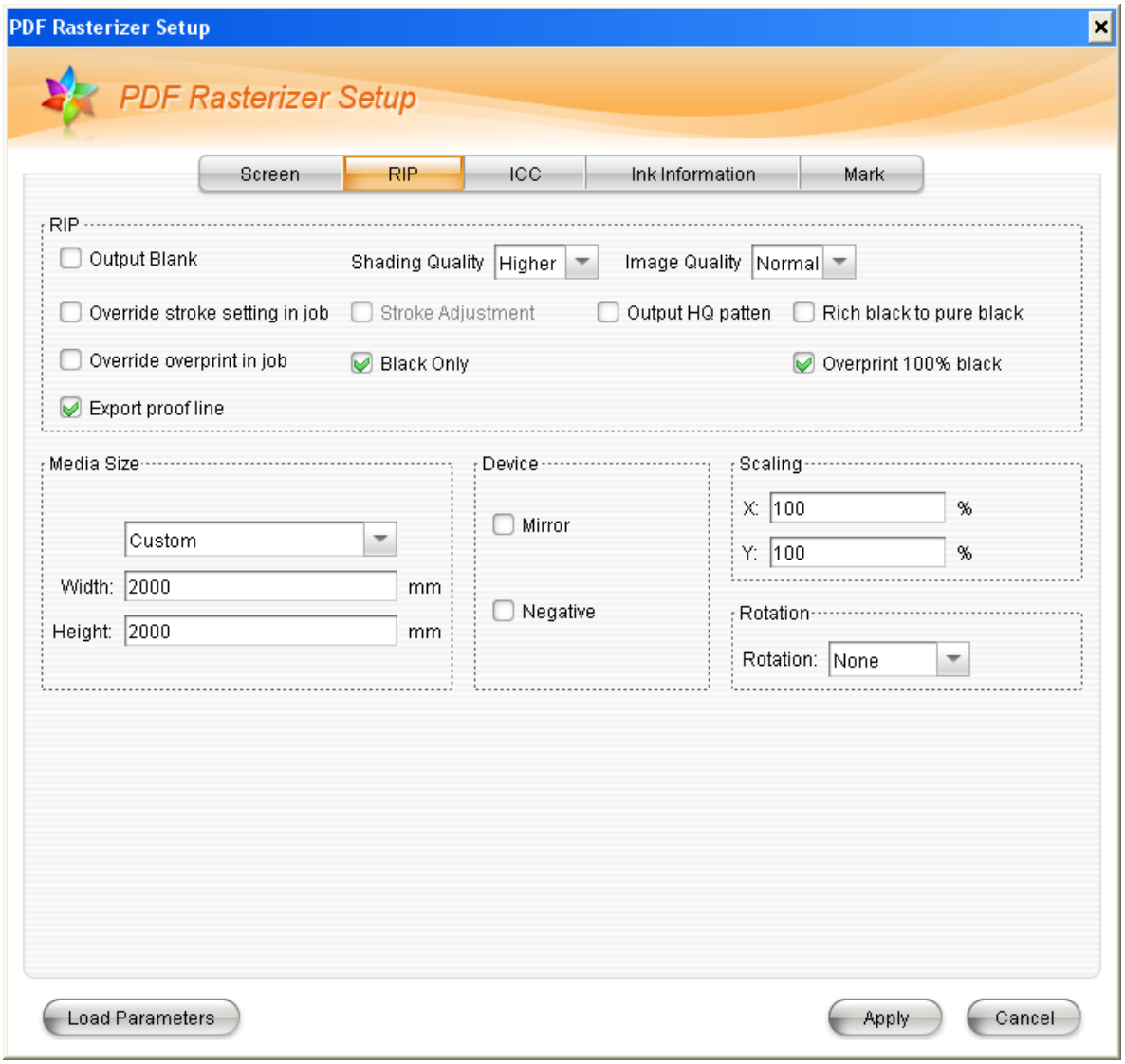


Figure 2-141

1) RIP

Output Blank: If checked, it will be permitted to output blank sheet.

Shading Quality: This option controls the quality level for the shading. Higher shading quality requires more processing time. If you want to perfectly reproduce the original shading effect, choose **Higher**. If the input files are large in size and quantity, or contain too many shading effects, it may take a lot of time in RIP process. In this case, you can choose **Normal** or **Fine** to save the process time.

Image Quality: It controls the level of image output quality. If you want to output with higher quality, choose **Fine**, but this may lower processing speed. The **Proof** option can

reduce the processing time, but may result in the loss of output quality. The default option is **Normal**, which is the intermediate option between **Fine** and **Proof**.

Override stroke setting in job: If checked, ElecRoc use a built-in stroke setting. If not, ElecRoc uses the setting defined in the input file.

Stroke Adjustment: If checked, in case that the file is output in a lower resolution, the position and lines of the table contained in the file can become smoother. If not, the lines may look a little coarse.

Output HQ pattern: This option controls whether or not to output the Pattern objects in the page with the highest quality. By default, it's unchecked, so that you can get comparably higher output speed.

Rich black to pure black: If checked, the rich black objects (K=100, C, M, Y any value) in your file will be output as pure black objects (K=100, CMY=0).

Override overprint in job: If not checked, ElecRoc uses the overprint setting defined in the file by front-end layout application. Whether the 100% black elements are overprinted or not is controlled by the **Black Only** option.

Overprint in RIP: If you check **Override overprint in job**, ElecRoc uses the overprint setting specified here instead of that defined in the file. The **Overprint** option allows you to print an element of one color over one of another color without removing, or knocking out, the material underneath. The **Black Only** option enables only the 100% black elements to be overprinted, it is the default option. The **Knockout** option enables all the separations to be knocked-out. White gaps may appear due to inaccurate alignment.

Overprint 100% black: This option appears only when the **Overprint in RIP** is set to **Black Only**. Being checked, overprint takes effect only on 100% black.

Export proof line: If checked, ElecRoc outputs proof line during the rasterizing process.

2) Media size

The dropdown list provides a wide range of pre-defined media size options. You can choose anyone as needed, or you can also choose **Custom** to define a specific size.

Note: *If the file size is larger than the media size here, ElecRoc will issue error. The media size is direction sensitive. Take A4 for example, ElecRoc regards 297mmx210mm and 210mmx297mm as different sizes.*

2) Device

Mirror: If checked, the printer produces a mirrored page.

Negative: If checked, the page printed by the printer is in negative.

3) Scaling

X and Y control separately the horizontal and vertical scaling percentages.

4) Rotation

You can rotate anticlockwise 90º, 180º, 270º. The default is no rotation. You can also choose **Auto**, enabling ElecRoc to rotate automatically.

3. ICC

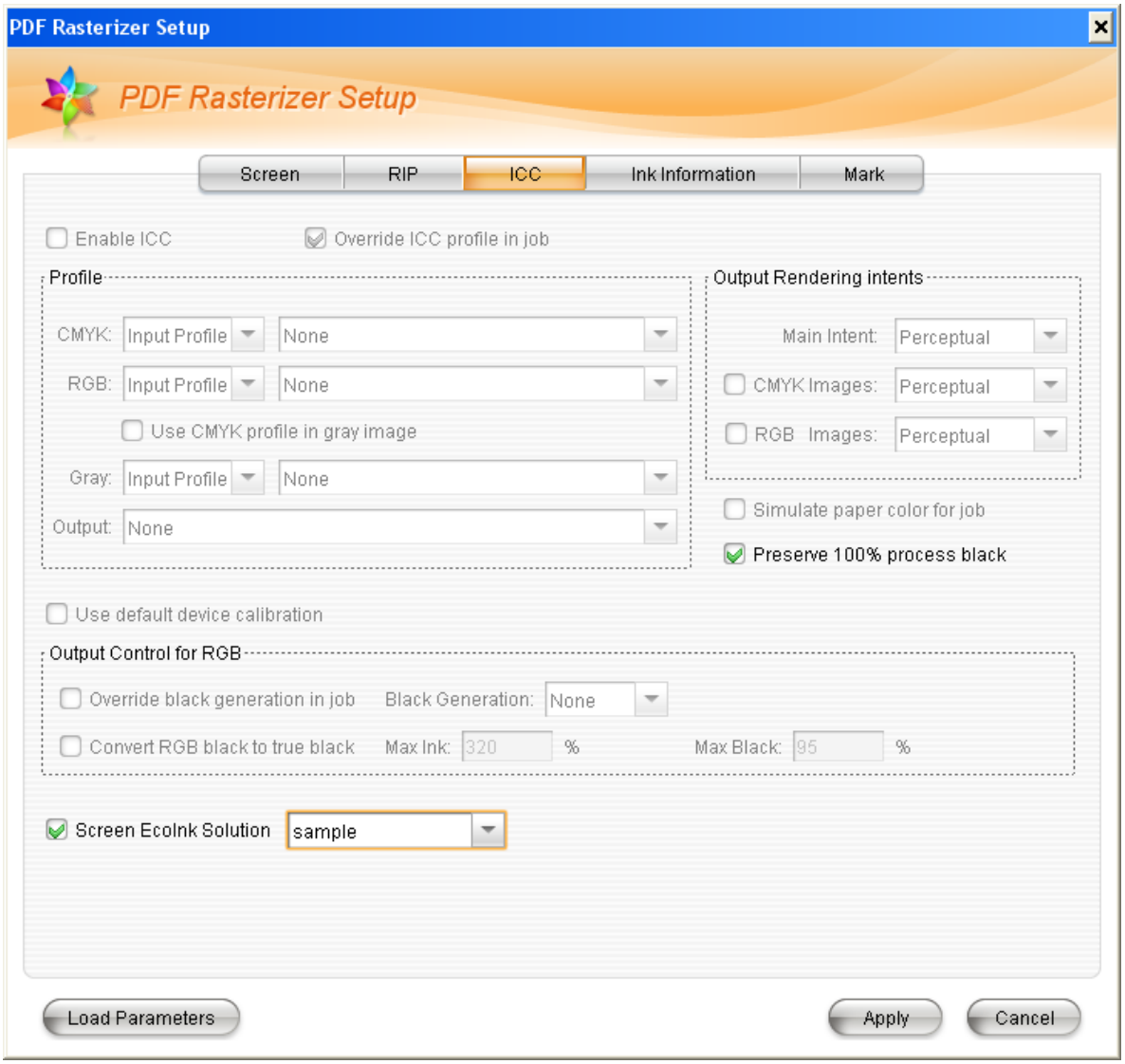


Figure 2-142

Override ICC profile in job: If checked, it overrides the color settings contained in the PDF file and uses the settings specified here. If not, ElecRoc searches in the PDF file for the color settings, mainly the ICC profile.

Enable ICC: By default, this option is unchecked. Therefore, parameters in the **Profile** and **Output Rendering intents** areas are all grayed. These parameters become available as long as you check **Enable ICC**.

Profile: Here you can specify the source ICC profiles in three color modes, and the output ICC profiles. The source profiles in each mode are further sorted to two types: Input Profile and Device Link. ElecRoc not only provides some built-in profiles for you to use, but also supports you to import more other profiles into ElecRoc by **Resources** > **Profile Resource** > **ICC**. If you check **Use CMYK profile in gray image**, the source profiles in Gray mode will be the same as those in CMYK mode.

Rendering intent: The **Main Intent** parameter controls the render intents for all the objects in the file. You can also separately define the render intent for CMYK and RGB images. There are four optional intents: Perceptual, Saturation, Relative and Absolute.

Preserve 100% process black: Check this option if you don't want the 100% black-only part of your input file to be converted to a CMYK equivalent color. This option is particularly relevant for black text because it avoids colored fringes.

Use default device calibration: If checked, it applies a built-in device calibration to the RGB objects. If not, it activates the **Output Control for RGB** parameters below for you to customize the RGB output settings. Note that, if you have specified a RGB source ICC profile in the **Profile** area above, all **Output Control for RGB** parameters will be disabled.

Black Generation: It is the process of creating the black channel and its effect on the color channels when performing a mode-change from RGB to CMYK. Available options include None, Light, Medium, Heavy, Maximum, and UCR, the latter the higher black amount. UCR, as the abbreviation of Under Color Removal, can replace a lot of CMY with K.

Override black generation in job: The input file may contain pre-defined black generation setting. If you check this option, ElecRoc uses the **Black Generation** setting specified here instead of that pre-defined in the input file.

Convert RGB black to true black: Some applications especially Microsoft Word, use RGB colors for everything, including solid black. ElecRoc converts such blacks into CMYK color of (0 0 0 100), if you check this option.

Max Ink: The maximum amount of all four CMYK colors that are generated in the conversion process. Colors specified as black are not affected by this parameter.

Max Black: The maximum amount of black ink that is generated by the color conversion process. Colors specified as black are not affected by this parameter.

Screen EcoInk Solution: If checked, you can apply an EcoInk solution. EcoInk solution will then disable the above ICC settings.

4. Ink Information

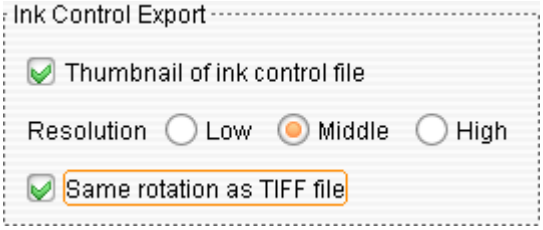


Figure 2-143

After the screen process, if you want to submit the generated bitmap file to Ink Control node for a further process, you need to enable the settings here.

Thumbnail of ink control file: If checked, it generates one thumbnail image specially designed for the ink control process. The Ink Control Export processor can then base on this thumbnail image to generate standard CIP3/CIP4 ink file. If not, ElecRoc issues error when you submit the rasterized bitmap file to Ink Control Export node.

Resolution: The resolution level of the generated thumbnail image.

Same rotation as Tiff file: If checked, the generated thumbnail is rotated with the tiff file, i.e. rotated as defined by the **Rotation** parameter under the **RIP** tab.

5. Mark

The settings here are the same as those described in section 4.4.5 Mono Printer.

4.4.3 1-Bit TIFF Export

This processor enables you to export the Tiff files generated by Rasterizer processor.

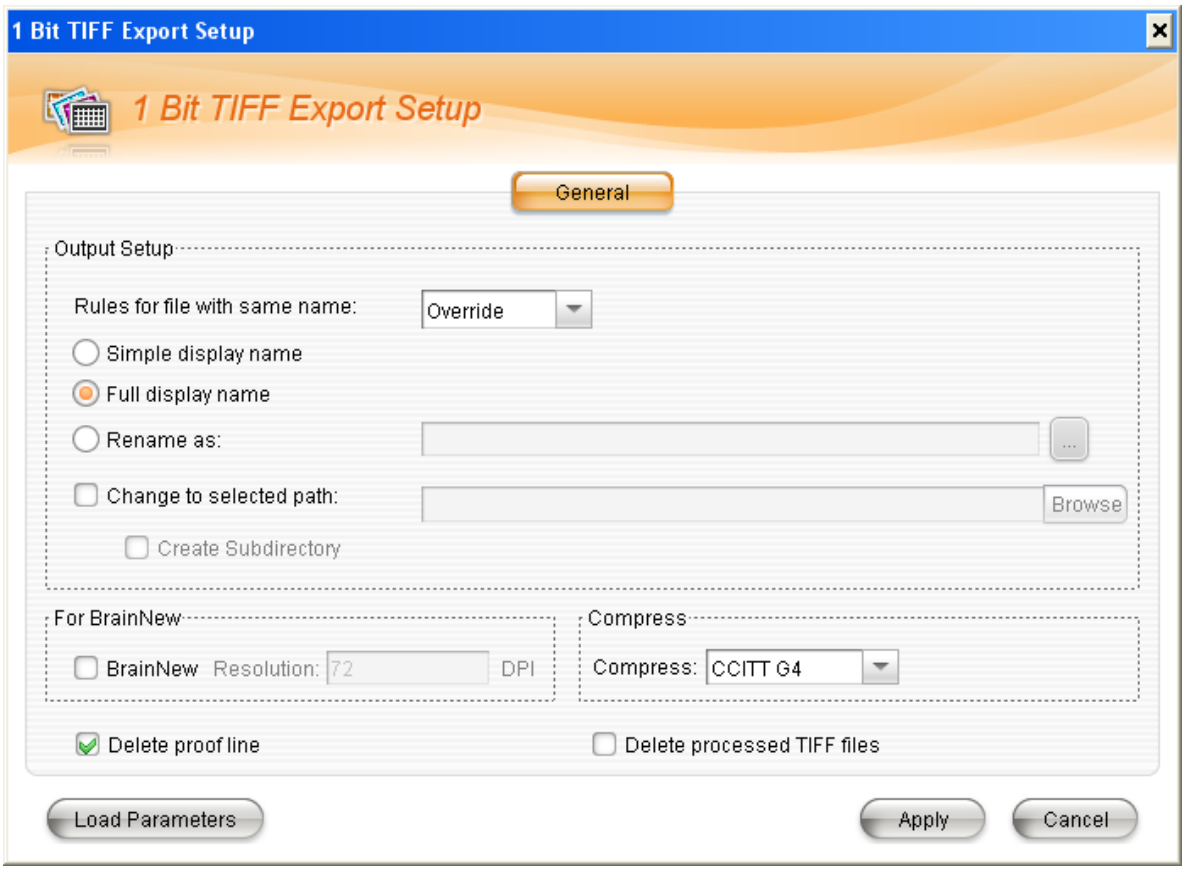


Figure 2-144

1. Output Setup

Rules for files with same name: When you export the Tiff files to specified location, in case that there are files with same name already existing in the specified location, ElecRoc provides you with two methods to deal with: the one is to override existing the files; the other is to append suffix, i.e. to add a "_X" suffix behind the new files, the "X" refers to an integer number increased sequentially.

Simple display name: If checked, the exported till files are named based on the simplified display name of the input file.

Full display name: If checked, the exported till files are named based on the full display name of the input file.

Rename as: If checked, you can input a name in the right edit box as the file name. You can also click the button to choose if the new name contains such elements as job name, node ID, bitmap file name, color name, abbreviated color name, and resolution.

Change to selected path: If checked, you can specify the location the Tiff files to be exported. You can input the path in the right edit box, or click to choose one.

Create Subdirectory: If checked, it generates a subdirectory named with the job name under the output directory, and exports the till files under this subdirectory.

2. For BrainNew

If checked, the exported Tiff files can be applied to the BrainNew application.

3. Compress

Available compression options: CCITT, PackBits and LZW.

CCITT: CCITT is a series of lossless compression technologies for black and white images, supported in PDF and PostScript language file formats. CCITT is the French abbreviation for International Telegraph and Telekeyed Consultive Committee.

PackBits: PackBits is very effective for reducing the size of bitmap files which contain large areas of solid color.

LZW: LZW compression is the compression of a file into a smaller file using a table-based lookup algorithm invented by Abraham Lempel, Jacob Ziv, and Terry Welch. Two commonly-used file formats in which LZW compression is used are the GIF image format served from Web sites and the TIFF image format. LZW compression is also suitable for compressing text files.

4. Others

Delete proof line: To delete the proof line in the Tiff files.

Delete processed Tiff files: If checked, the input files submitted to 1 Bit TIFF Export will be removed when they have been processed. Otherwise, they will be kept under the node as input resources.

4.4.4 8-Bit TIFF Export

This processor can generate 8 bit Tiff files based on the PDF files, such as those generated by PDF Generator, and export the generated 8 bit Tiff files as you specify.

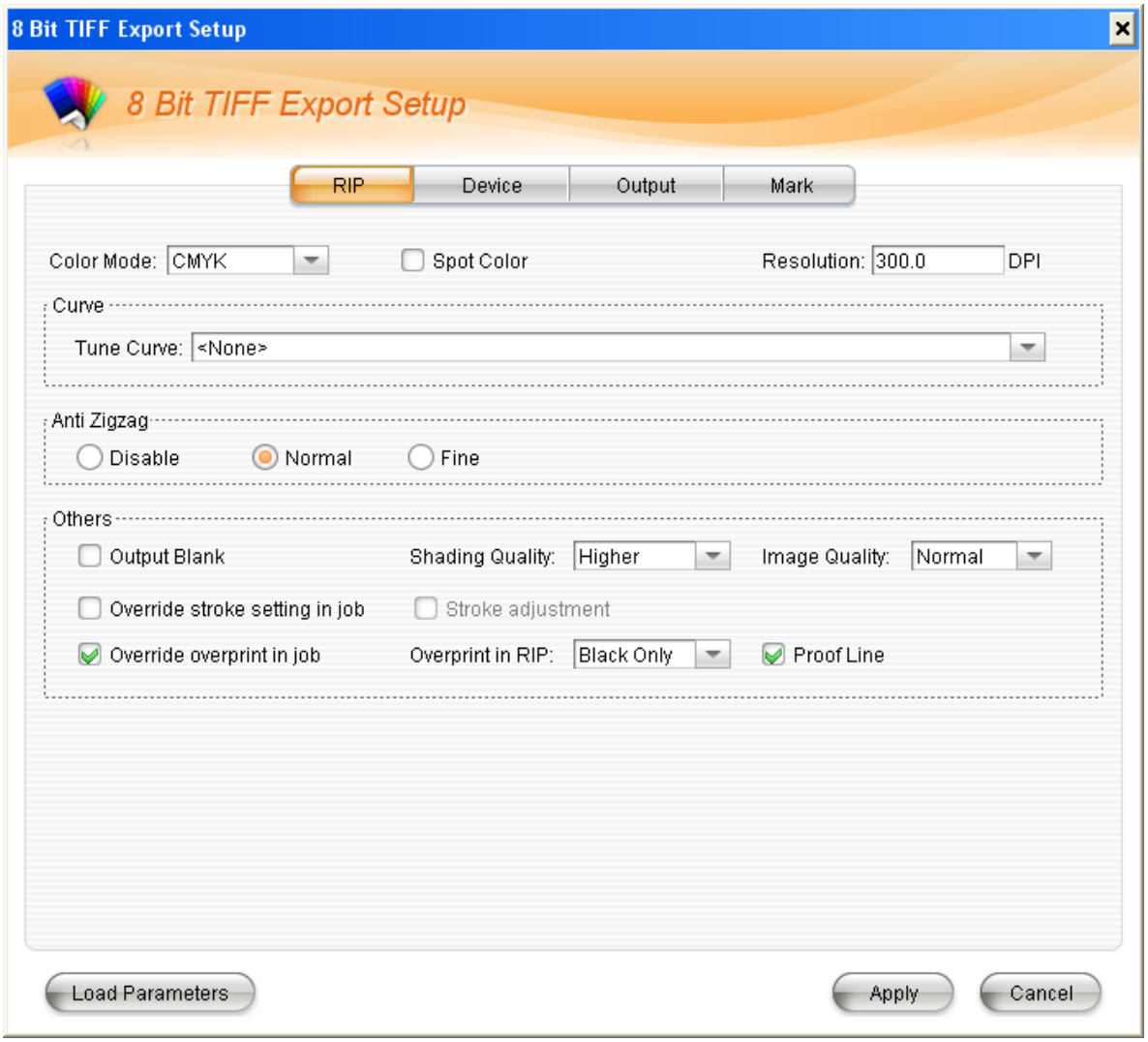


Figure 2-145

Most of the parameters under the **RIP**, **Device** and **Mark** tabs are the same with those mentioned in the previous two sections, except the peculiar Anti Zigzag parameter.

Anti Zigzag: This parameter is under the **RIP** tab. Anti-zigzag uses intermediate colors or grayscale tones to visually smooth boundaries between different colors, most useful for low or medium resolution output. Among the three options, **Disable** means no anti-zigzag, **Fine** provides more smoothing than **Normal**, but requires more time.

Under the **Output** tab, you can specify the following parameters.

Preserve file name: If checked, the output file will be named mainly with the name of the input file, i.e. the input file name will be preserved. If you submit more than one file or submit a same file more than once, the newer exported one will override the older one.

Rename as: If checked, please type a name into the edit box. The exported file will be named as you type. In case that you submit more than one file or submit a same file more than once, there would remain only the last exported file under the output file path.

Rules for file with same name: This option becomes activated when you have chosen **Rename as**. If you choose **Override**, in case that you submit a same file more than once, the newer exported one will override the older one. If you choose **Append Suffix**, in the

same case, it will add additionally an ascending numeric suffix like _p0001, _ p0002, _ p0003… to the new exported files.

Change output path: Here you can specify the output path where the Tiff files will be exported. If the output path is not specified here, the files will be exported to the shared folder Output_FrameBmp on the server.

4.4.5 Mono Printer

The mono printer parameter setup window is shown as follows:

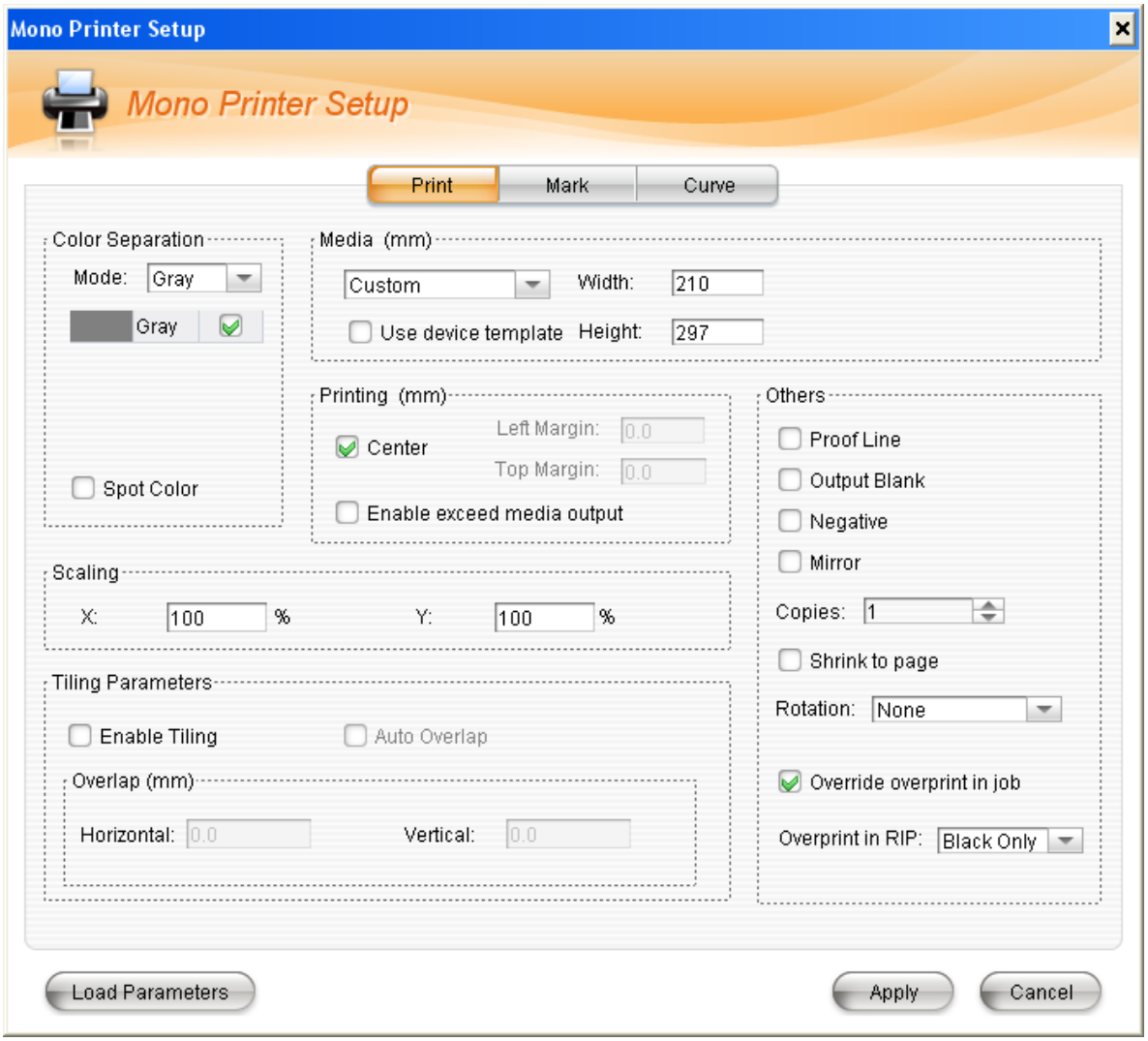


Figure 2-146

1. Print

1) Color Separation

Mode: There are two color modes: Gray and CMYK. Gray is the default option, can generate gray separation. CMYK separates colors in CMYK, i.e. Cyan, Magenta, Yellow and Black. The color separation table below lists all the separations under your selected color mode. The checkbox in front of each separation controls if the separation will be printed or not. And you can drag any color to change the order in the list.

Spot Color: As for a composite file containing spot colors, when this option is selected, ElecRoc will generate spot color separations to output them; otherwise, it converts spot colors into Gray or CMYK separations to output.

Note: *The printer resolution is the same as that defined in the printer's **Printing Preferences** from the **Printers and Faxes** window of your operating system. You must stop the processor in ElecRoc before you change the resolution.*

2) Media

The **Media** dropdown list provides a wide range of pre-defined media size options. You can choose anyone as needed, or you can also choose **Custom** to define a specific size.

If you have used the Console to create a device parameter template, you can see a **Use device template** option here. And if you check this option, you can then see the templates available in the **Media** dropdown list. Choose a template to apply its defined media size and device parameters.

It's best to create a device parameter template with the Console, or to choose **Start** > **Printers and Faxes** in your operating system, to define the media size.

3) Printing

Center: If checked, the file will be printed in the center of the media. And the left and top margin cannot be edited.

Left Margin: If the box Center is not checked, you can input the value of left margin.

Top Margin: If the box Center is not checked, you can input the value of top margin.

Enable exceed media output: In some cases, the output page may exceed the media size. If checked, such page will be printed out. If not, such page will not be printed.

4) Scaling

X and **Y** allow you to specify the scaling percentage in both X and Y directions. Value 100 means that the output page size is the true page size. If you enter 80 for X and Y, the page will zoom in 80% of the original size from the axes of X and Y. If you enter 200 for X and Y, the original page will be doubled. The default value is 100.

5) Tiling Parameters

Enable Tiling: If checked, in case that the page size is larger than the media size, ElecRoc can split the page into multiple smaller pages to output. But this capability is auto disabled if you check **Enable exceed media output**.

Overlap: You can input in the **Horizontal** and **Vertical** edit boxes to specify the overlap width of tiles.

Auto Overlap: If checked, ElecRoc automatically determines the overlap width, ignoring the **Overlap** settings.

6) Others

Proof Line: If checked, it prints out the proof line.

Output Blank: If checked, it can output blank sheet.

Negative: If checked, the page printed by the printer is in negative.

Mirror: If checked, the printer produces a mirrored page.

Copies: The quantity of copies you want to print out, ranging from 1 to 255.

Density: The density of ink, 1~255. This option is specific to printer models, i.e. not all printers support this feature.

Shrink to page: If checked, ElecRoc adjusts the output content to fit the page. In this mode, **Scaling** and **Rotation** are disabled. The content is located in the center of the page.

Note: *If the original page size is smaller than the media size, the page size will remain unchanged.*

Rotation: If the page cannot be printed on the media in the normal orientation, you can try to change the output orientation. You can rotate the page anticlockwise 90, 180, 270 degrees. The default setting is no rotation.

Override overprint in job: If not checked, ElecRoc uses the overprint setting defined in the file by front-end layout application. Whether the 100% black elements are overprinted or not is controlled by the **Black Only** option.

Overprint in RIP: If you check **Override overprint in job**, ElecRoc uses the overprint setting specified here instead of that defined in the file. The **Overprint** option allows you to print an element of one color over one of another color without removing, or knocking out, the material underneath. The **Black Only** option enables only the 100% black elements to be overprinted, it is the default option. The **Knockout** option enables all the separations to be knocked-out. White gaps may appear due to inaccurate alignment.

2. Mark

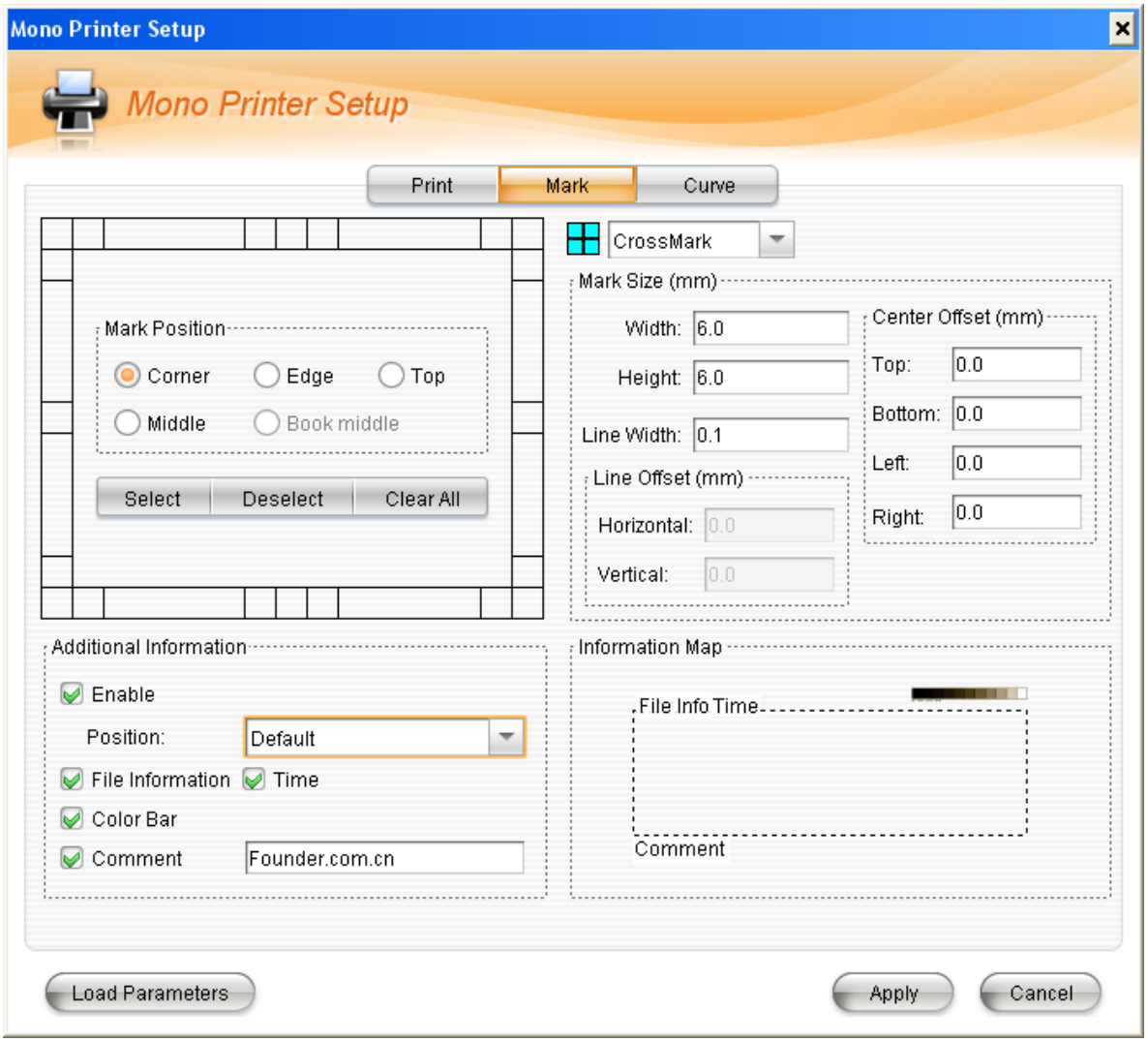


Figure 2-147

1) Standard Mark

Options in this area enable you to add standard marks including registration marks, trim marks, folding marks, etc. onto a page.

Mark Type: ElecRoc supports 15 different types of marks, including Cross Mark, Solid Circle, Internal Cutline, External Cutline, Folding Line, Book Spine, Anti Cross, Rect Mark, Square Mark, Circle Mark, L Cross, U Cross, Corner Mark, Hollow Circle and T-shape.



Figure 2-148

Mark Position: The standard marks can be positioned at the following positions on the page: the **Corner** refers to the four corners of the page; the **Edge** refers to four positions close to the four corners on the left and right sides; the **Top** refers to four positions close to the four corners on the top and bottom sides; the **Middle** refers to the middle of the four sides; and the **Book middle** refers to four positions close to the middles of the top and bottom sides. Click **Select** to add the selected mark on the selected positions, while click **Deselect** to discard the added mark, and you can click **Clear All** to remove all marks.

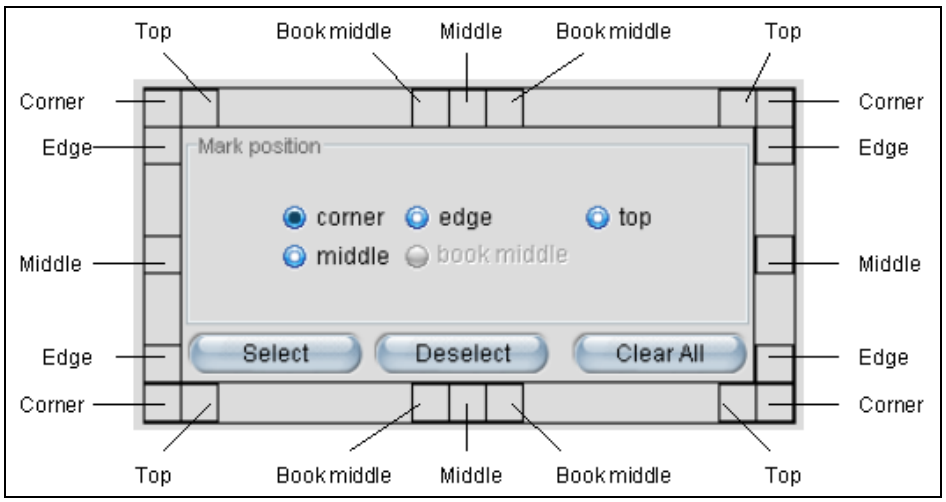


Figure 2-149

Mark Size: Here you can specify the size of mark and the thickness of the mark line.

Center Offset: Distance from the mark to the top, bottom, left or right edge of the page.

Line Offset: The horizontal and vertical distance between cut lines. This option is only available for Internal CutLine or External CutLine.

2) Additional Information

Additional information include comments, color bar, file information, current time, and etc. Using the **Additional Information** parameters, you can not only control whether to output such information, but also specify its font and position on the page.

Enable: When checked, it activates the parameters in the below.

Position: The additional information can be output at different positions of the page, **Top**, **Bottom**, **Left** or **Right**. Keep the **Default** position, if not specially needed.

File Information: If checked, it adds the file path outside the page content.

Time: If checked, it adds the current time outside the page content.

Color Bar: If checked, it adds process step wedges outside the page content.

Comment: If you check it, you can input a string of comment here, and this comment will then be output at the bottom or side of the page.

Information Map: Located at the right of the **Additional Information** parameters, this area displays a thumbnail image of the defined information in real time.

3. Curve

The curve setting is only effective for ink jets.

Use Curve (Only for ink jet): If checked, you can choose a Gray tune curve from the dropdown list for color adjustment.

4.4.6 Color Printer

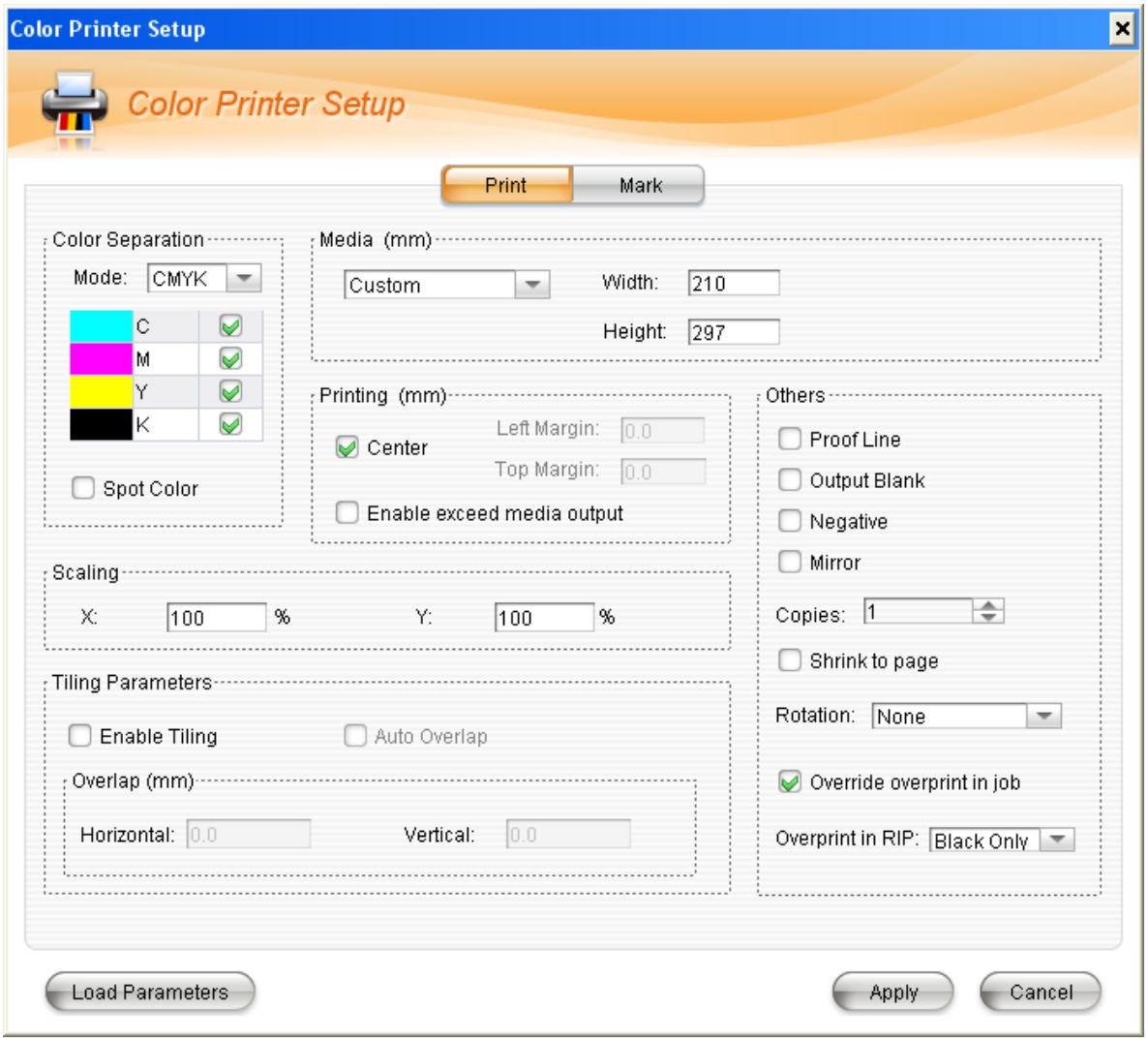


Figure 2-150

The color printer processor parameter setup window looks basically the same as that of the mono printer. For details, refer to the introductions in the previous section.

Note that the default settings for some parameters may be different, e.g. the default option for **Color Separation** > **Mode** under the **Print** tab is CMYK, and some parameters may be not available. Moreover, we recommend you to define the media size at the **Printers and Faxes** window in your operating system.

4.4.7 Pre-RIP Proof

Pre-RIP proof, also called PDF proof, is applied to proof PDF files output by PDF Generator or other PDF processors. The Pre-RIP Proof parameter setup window is shown as follows:

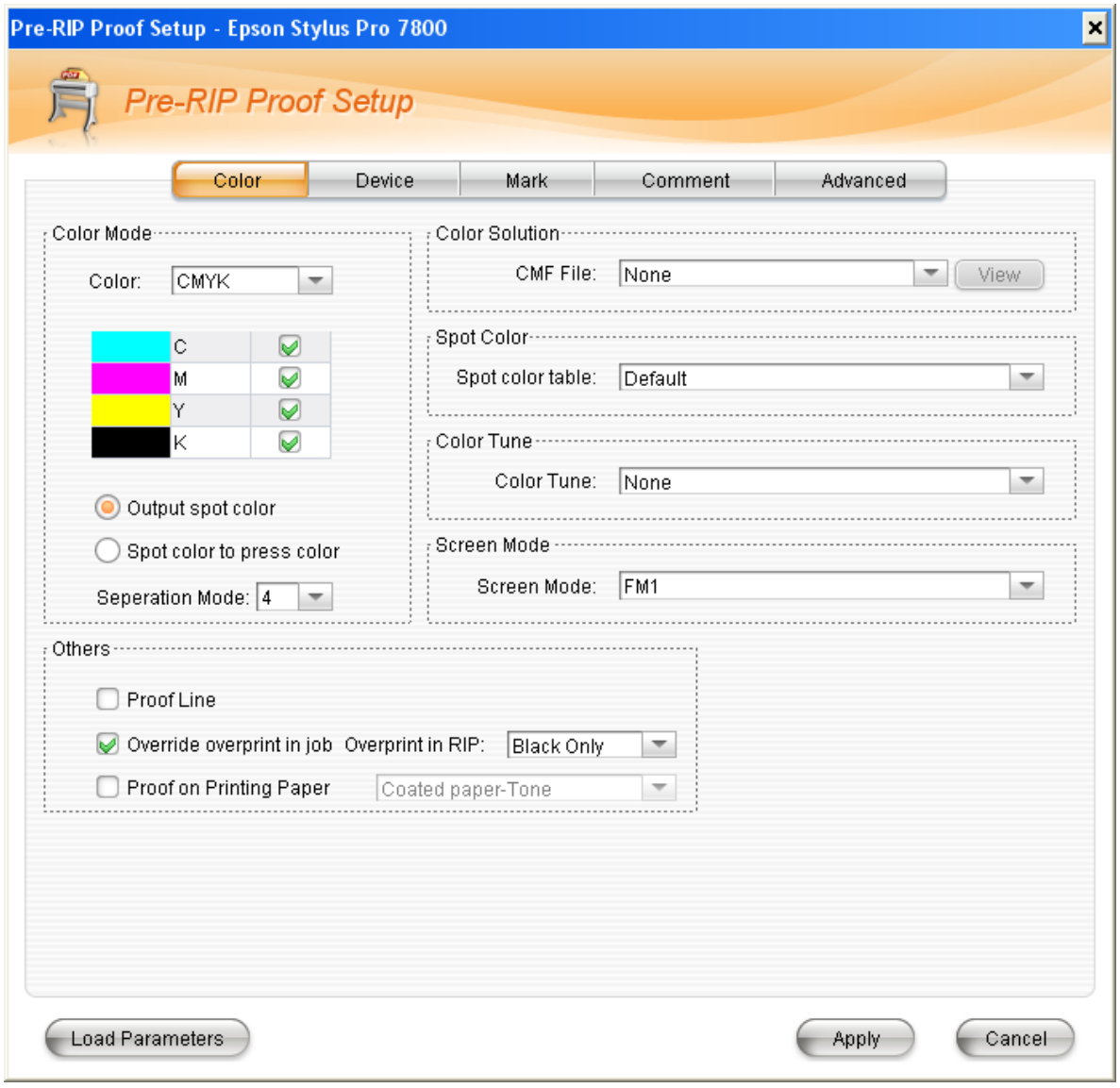


Figure 2-151

1. Color

1) Color Mode

Color: CMYK color mode is supported. It separates colors in four separations, Cyan, Magenta, Yellow and Black. The color separation table below lists all the separations. The checkbox in front of each separation controls if the separation will be printed or not. And you can drag any color to change the order in the separation list.

Output Spot Color: As for a composite file containing spot colors, if checked, ElecRoc generates spot color separations to output them.

Spot color to press color: This option and the above option are mutually exclusive. If checked, it converts spot colors into CMYK separations to output.

Separation Mode: It refers to the separation mode supported by proof device. You can choose an option as needed.

2) Color Solution

This dropdown list provides color solutions for you to choose. Many of them are built-in solutions designed for color management in various proof environments. You can simply choose such a solution, or launch the color calibration tool to create a new solution.

Details on your selected color solution, including resolution, separation mode, ink type, and etc., can be viewed in the window **Resources** > **Digital Proof** > **CMF Correction**. This data will automatically override the corresponding parameter setting in the setup window and make them appear in gray, after you have chosen a solution.

3) Spot Color Table

In order to achieve accurate spot color output, we generally define how to output spot colors in the CMF solution file. If your CMF file doesn't contain such definition, you can define it in the spot color table. And if your spot color table still doesn't contain it, ElecRoc will output spot colors as per the definition in the file itself.

Spot color table: This dropdown list provides all available spot color tables in ElecRoc system, including both the system-defined and user-defined ones, which can be added or edited in **Resources** > **Profile Resource** > **Spot Color Table**.

4) Color Tune

This dropdown list provides all the color tune curves available in your ElecRoc system, which can be edited or created in **Resources** > **Digital Proof** > **Color Tune**. You can choose any of them as needed to adjust the CMYK colors.

5) Screen Mode

Optional screen modes include FM1, FM2, FM3, and Fast Screen. FM1 or FM3 are suitable for pre-RIP proof. With FM3, colors would be comparably darker, and richer as to the color levels. Fast Screen, as the name implies, is applied for quick proof. The Default is FM1. Screen mode will be grayed when you choose color solution.

6) Others

Proof Line: If checked, it prints out proof line.

Override overprint in job: If not checked, ElecRoc uses the overprint setting defined in the file by front-end layout application. Whether the 100% black elements are overprinted or not is controlled by the **Black Only** option.

Overprint in RIP: If you check **Override overprint in job**, ElecRoc uses the overprint setting specified here instead of that defined in the file. The **Overprint** option allows you to print an element of one color over one of another color without removing, or knocking out, the material underneath. The **Black Only** option enables only the 100% black elements to be overprinted, it is the default option. The **Knockout** option enables all the separations to be knocked-out. White gaps may appear due to inaccurate alignment.

Proof on Printing Paper: If checked, you can use printing paper, instead of the paper specific to digital proof, to do your digital proof. When checked, please re-choose a color solution suitable for coated proof from the **CMF File** dropdown box. Other settings are the same as normal digital proof. By using coated proof, you can lower your proof cost significantly without sacrificing the color quality.

2. Device

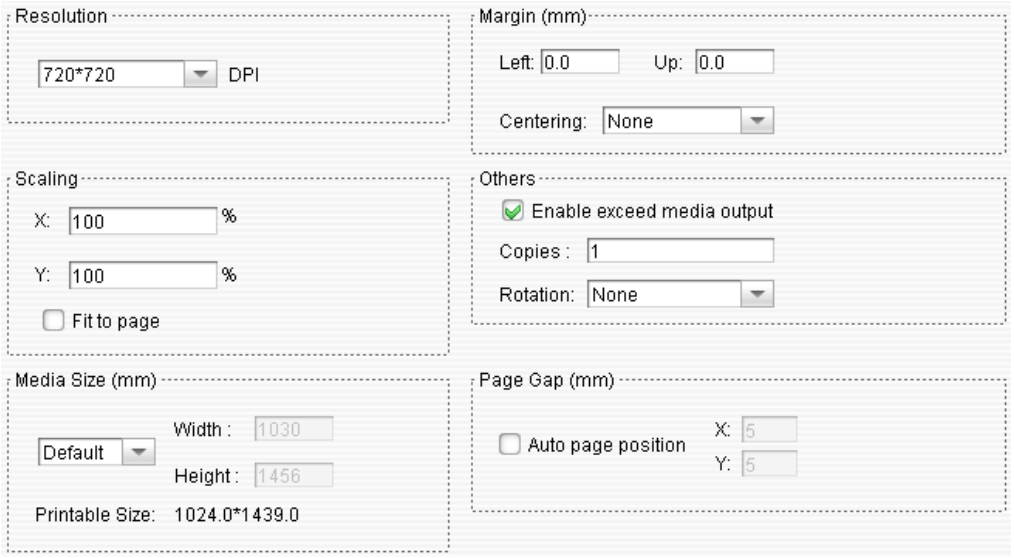


Figure 2-152

1) Resolution

The output resolution of the proof device. Options vary as the connected device differs.

2) Scaling

Scale X and Y allow you to specify the scaling percentage in both X and Y directions.

3) Media Size

This dropdown list provides a wide range of pre-defined media options. You can choose any one as needed. And it provides also the **Custom** option for you to define a specific media size.

Printable Size: It refers to the size of the actually printable area on the output media.

4) Margin

Left/Up: The margin is the blank space bordering the printed area on a page. You can specify the left and up margin when the **Centering** option is disabled.

Centering: If the media is single page paper, you can choose **Center** to position the page content at the center of the paper; or you can choose **Horizontal** to print the content at the center of the left or right edge of the paper. If the media is roll paper, **Horizontal** is recommended, but you can also choose **Center**. In the latter case, after a file has been printed, the next print would not start on a new page, but in the blank area below the printed file on the same page.

5) Others

Enable exceed media output: If checked, the output of jobs that exceed the media size will be allowed.

Copies: The number of copies to be output.

Rotation: If the page cannot be printed on the media in the normal orientation, you can try to change the output orientation. You can rotate the page anticlockwise 90, 180, 270 degrees. The default setting is no rotation. If you choose **Auto Rotate**, ElecRoc can automatically determine whether and how to rotate.

6) Page Gap

Auto page position: If the page size is much smaller than the output paper, such pages can be automatically positioned on the output paper in a paper-saving layout. Once this option is checked, you can define the space between the individual ganged pages.

Note: *This function is available only in case that the job is being copied.*

3. Mark

Refer to related introduction on the mark in section 4.4.5 Mono Printer.

4. Comment

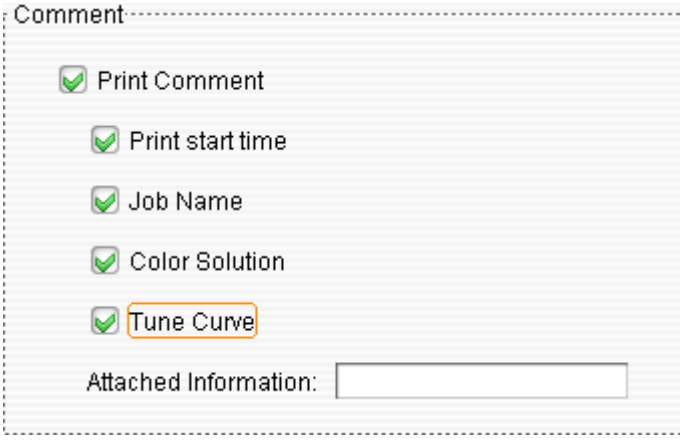


Figure 2-153

Print Comment: If checked, it outputs the comment defined herein at the lower-left corner on the paper. You can design the comment as needed, e.g. the comment can contain the print start time, job name, color tune curve, and so on. If unchecked, options below are all grayed.

Print start time: If checked, it outputs the time when the print is started.

Job Name: If checked, it outputs the file name on the paper.

Color Solution: If checked, it outputs the name of the applied color solution.

Tune Curve: If checked, it outputs the path of the applied color tune curve.

Attached Information: If checked, it can output additional information apart from that specified above. To add such information, input it in the edit box at the right.

5. Advanced

The advanced parameters vary as the proof device differs. Here we take parameters for some commonly-used devices as example. Note that some parameters may differ even to a same device family from a same vendor.

1) For Epson proof device

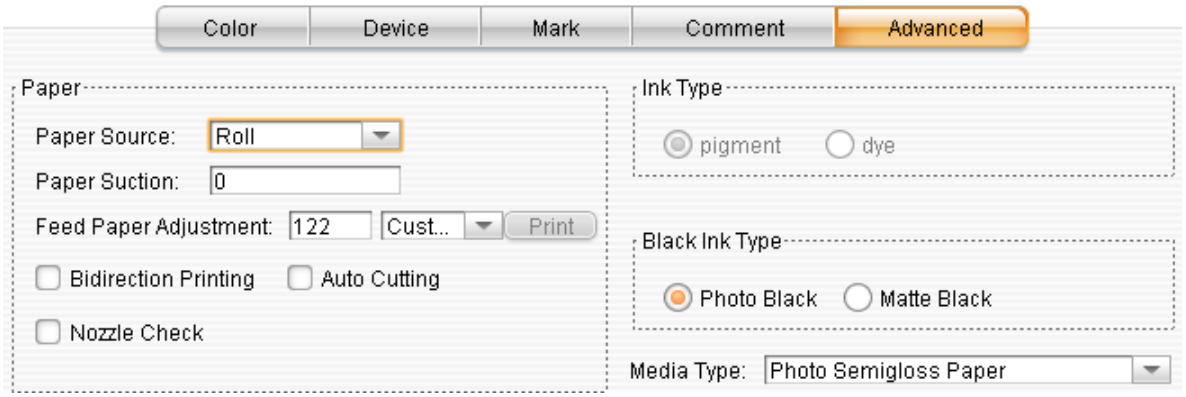


Figure 2-154

Paper Source: The mode for feeding paper: Roll or Sheet.

Paper Suction: The intensity for paper suction, your input value should vary according to the type and thickness of the output paper.

Feed Paper Adjustment: This option controls the speed of feeding paper, so as to avoid irregular lines in the horizontal direction appearing in print.

Bidirection Printing: If checked, the printer head prints when moving in both directions, so as to get a higher printing speed. In general, this option is not recommended, because it may result in quality degradation.

Auto Cutting: If checked, printer will automatically cut the paper after print.

Nozzle Check: If checked, printer outputs a built-in image pattern. By observation, you can find out if the nozzle is clogged.

Ink Type: The type of the ink, pigment or dye.

Black Ink Type: The type of the black ink, photok or mattek.

Media Type: The type of the output media, such as Plain Paper, Glossy Paper and Semi-glossy Paper.

2) For HP proof device

Print Mode: Options include 8 Pass Bidir, 8 Pass Unidir, and 12 Pass Unidir.

3) For Canon proof device

For Canon devices such as iPF 810, advanced parameters are shown as follows. You can configure the ink type, paper source, print quality, auto cut, and etc.

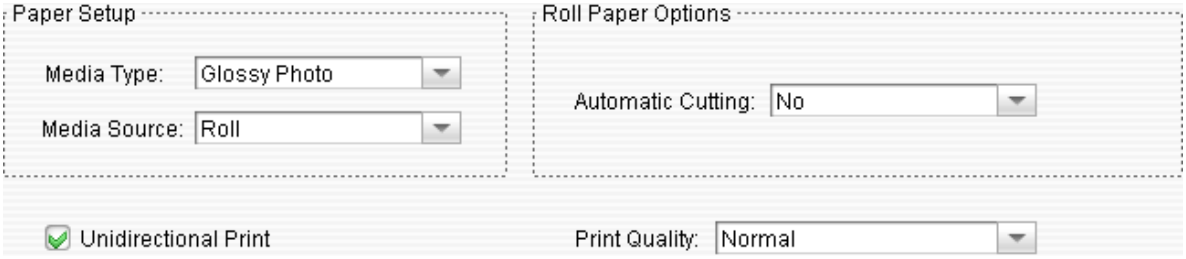


Figure 2-155

4.4.8 Post-RIP Proof

Post-RIP proof, also called dot proof, is applied to proof TIFF files generated by PDF Rasterizer.

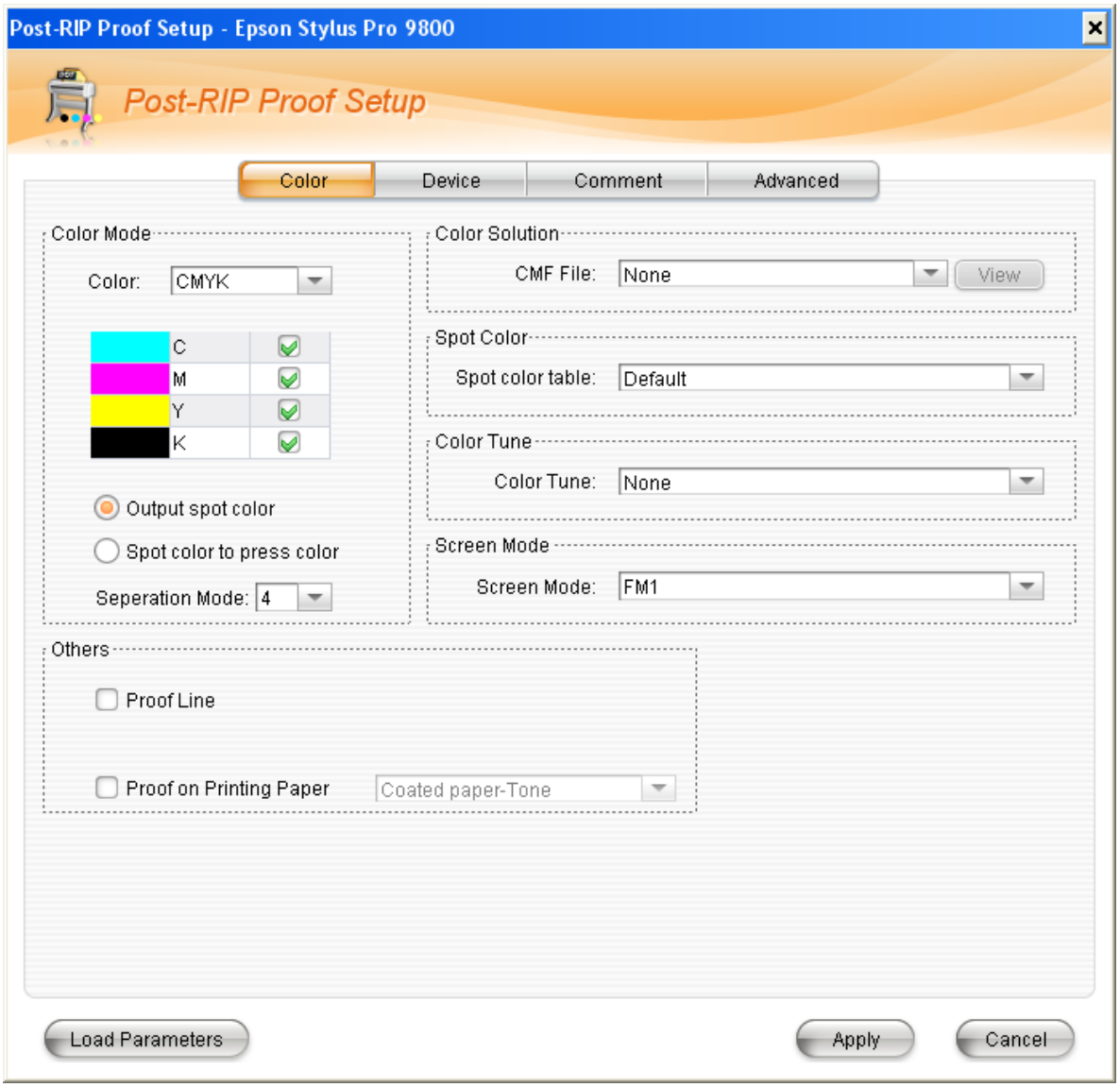


Figure 2-156

ElecRoc post-RIP proof supports you to use a wide range of ink-jet proof devices from Epson, Hp and Cannon, and the laser proof devices as well. It also supports the Winprint mode. In this case, it's no longer restricted by the device models, which means that you can use any printer installed in your operating system to proof (choose the Winprint mode and a proper printer when you install the proof processor). Moreover, post-RIP proof provides the quick proof capacity.

As to the parameters, the **Color**, **Comment** and **Advanced** setting is basically the same as pre-RIP proof. Refer to section 4.4.7 for details. The **Screen Mode** for post-RIP is generally recommended as FM2 or FM3. FM2 is subject to produce redder colors, while FM3 enables richer color levels. The Default is FM2.

The device related setup for post-RIP proof is also basically the same with that for

pre-RIP proof, except for the following parameters:

Smooth Mode: Used to clear off moiré, options include smooth1, smooth2, smooth3, and smooth4. By default, it is set to smooth1. From smooth1 to smooth4, more close to smooth4, moiré problems may be avoided more easily; more close to smooth1, the dot shape may be kept much better.

Descreening: Used to clear off the unacceptable moiré patterns appeared on some separations, if any. It can reduce moiré patterns, but may result in some loss in dot shape at the same time. In practice, when moiré patterns appear, we recommend the user to use Smooth Mode parameter to clear off at first; and then use this parameter in case that the Smooth Mode option cannot clear off completely moiré patterns on some separation.

4.4.9 Digital Printing

ElecRoc supports a wide range of digital printing devices from various device vendors:

Category	Vendor and device models
Bizhub series	Konica Minolta bizhub PRO1200 (white & black) Konica Minolta bizhub PRO1051 (white & black) Konica Minolta bizhub PRO1052 (white & black) Konica Minolta bizhub PRO951 (white & black)
Founder C7000 series	Bizhub FZC6000 (color) Bizhub FZC7000 (color) Bizhub FZC8000 (color)
Océ VP 110/120/135	Océ VarioPrint 110 (white & black) Océ VarioPrint 120 (white & black) Océ VarioPrint 135 (white & black)
Océ VP 2110	Océ VarioPrint 2110 (white & black) Océ VarioPrint 6250 (white & black)
HP Indigo	HP Indigo 5600 (color) HP Indigo 7600 (color) HP Indigo 3050 (color) HP Indigo 3500 (color) HP Indigo 3550 (color) HP Indigo 5500 (color) HP Indigo 10000 (color)

1. Bizhub series

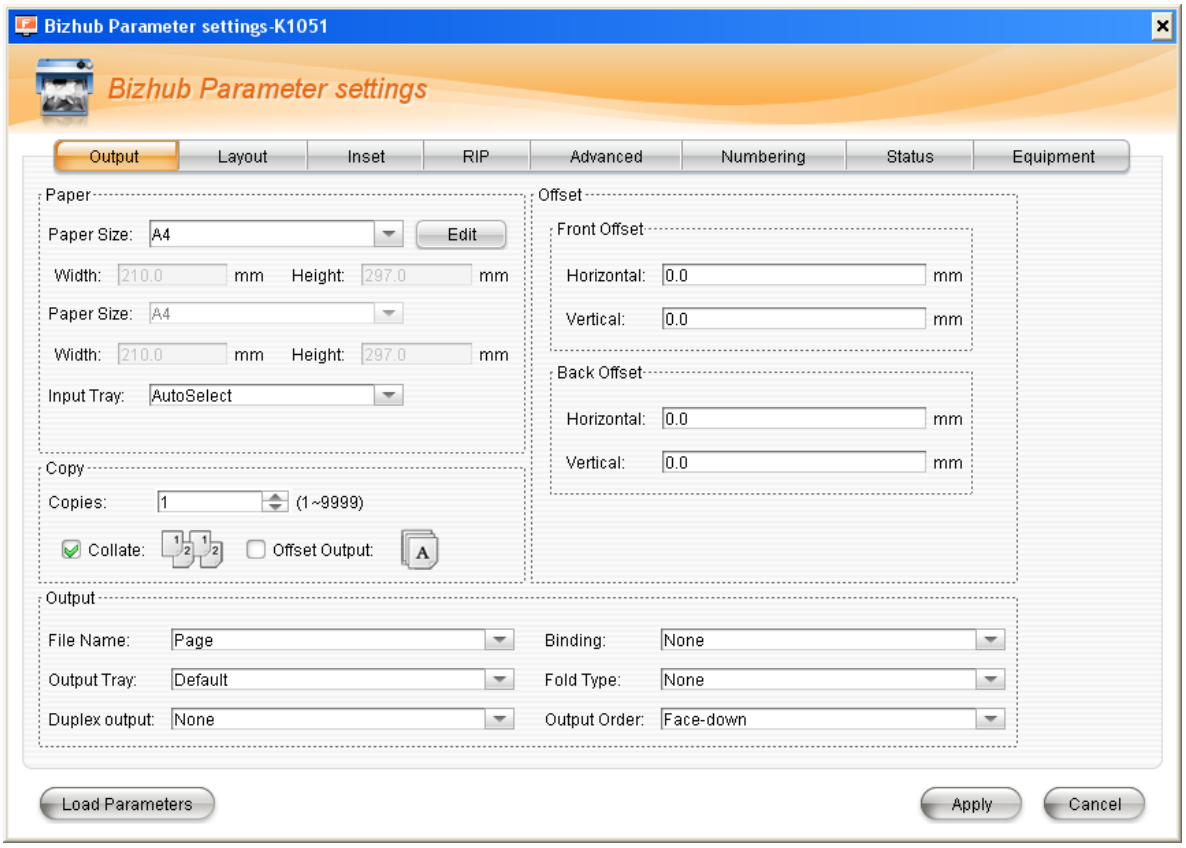


Figure 2-157

1) Output

Paper Size: the size of the paper. Options include A3, B4, A4, B5, A5, and Custom. The detailed width and height values of your selected option will be displayed then in the below. If needed, you can choose Custom to activate the **Width** and **Height** edit boxes and manually specify the width and height of your paper.

Edit: Click this button if you want to add, edit, or delete the size options. You can define the printable width and height, whose default values are the same to the paper width and height.

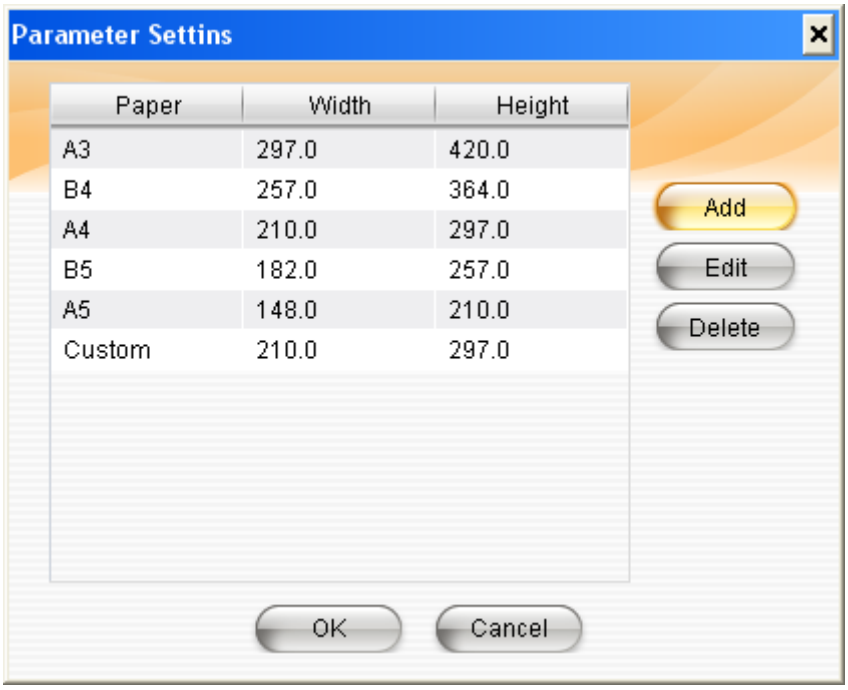


Figure 2-158

Input Tray: The paper feeding unit on your printing device. Options include Auto Select, Tray1, Tray2, Tray3, and Byhands. The default option is Auto Select, which means to let ElecRoc automatically select a suitable input tray according to your specified paper size.

Note: *The actual options for the input tray parameter may differ from above if you are using additional hardware part such as finisher or high capacity input tray. For example, if you have used the high capacity input tray PF-702, the options here will be "Auto Select, Tray1, Tray2, Tray3, Tray4, and Tray5".*

Copies: The number of copies to be output. The default value is 1. A value of bigger than one enables output of multiple copies. The value range is 1-9999.

Collate: An output method for outputting multiple copies. If checked, ElecRoc first outputs a complete copy, and then outputs the next copy. If not, ElecRoc will first output all the 1st pages, and then all the 2nd pages, and then all the 3rd… till all the rest pages.

Offset Output: You can further check this option when you have enabled **Collate**. If checked, there will be an offset between two copies at the output tray, so that you can easily distinguish and take away each copy. If not checked, all copies will be placed at the same position on the output tray.

File Name: This parameter controls the name of the output file. It can be named with the page name, or with the job name, the default option is **Page**.

Output Tray: It refers to the paper outputting unit on your printing device. Please specify the output tray in case that your device has more than one output tray. Options include Main Tray, Subsidiary Tray, and Default. The Default means to let ElecRoc automatically choose an output tray.

Duplex output: This parameter controls whether or not to print on both the front and back sides of the paper. **None** means not printing on both sides, **Long Edge** means turning a page along its long edge when printing on the back side, and **Short Edge** means turning a page along its short edge when printing on the back side.

Binding: The actual options for this parameter are determined by the additional hardware part you are using, for example, if you have used the finisher FS-521, the options here will be “None, Top Left, Top Right, 2 At Left, 2 At Right, and 2 At Top.” None means not binding.

Fold Type: The actual options for this parameter are determined by the additional hardware part you are using, for example, if you have used the finisher SD-506, the options here will be “None, Center-Fold, Saddle stitch, Saddle stitch and Trim, Three-Fold.” None means not folding.

Output Order: Face down or face up.

Front Offset: refers to the relative position between the content on the front page and the printable area on the paper. The horizontal and vertical edit boxes control the offset values in the two directions. Value range is -500.0~500.0 mm.

Back Offset: refers to the relative position between the content on the back page and the printable area on the paper. The horizontal and vertical edit boxes control the offset values in the two directions. Value range is -500.0~500.0 mm.

Please note that, in horizontal, the right is the positive direction, in vertical, the below is positive. Improper value may result in unwanted trimming of page content.

2) Layout

With this module, you can take the full advantages of the folding and binding capabilities provided by the printing device, to automatically calculate and generate signatures, based on the layout settings, the page size, and the paper size, and then output them as various types of booklets or folds. It doesn't require you to go through the Imposer or Composer process, nor to create any imposing template, providing great ease and efficiency.

Layout: Check this box to enable the layout module. It supports two folding and ganging types, booklet and stack stitch. As two mutually exclusive options, they have different operating interfaces, but in whatever type, each signature can contain only two pages.

- **Booklet**

Booklet is a widely used business type in digital folding. The setup interface is as follows.

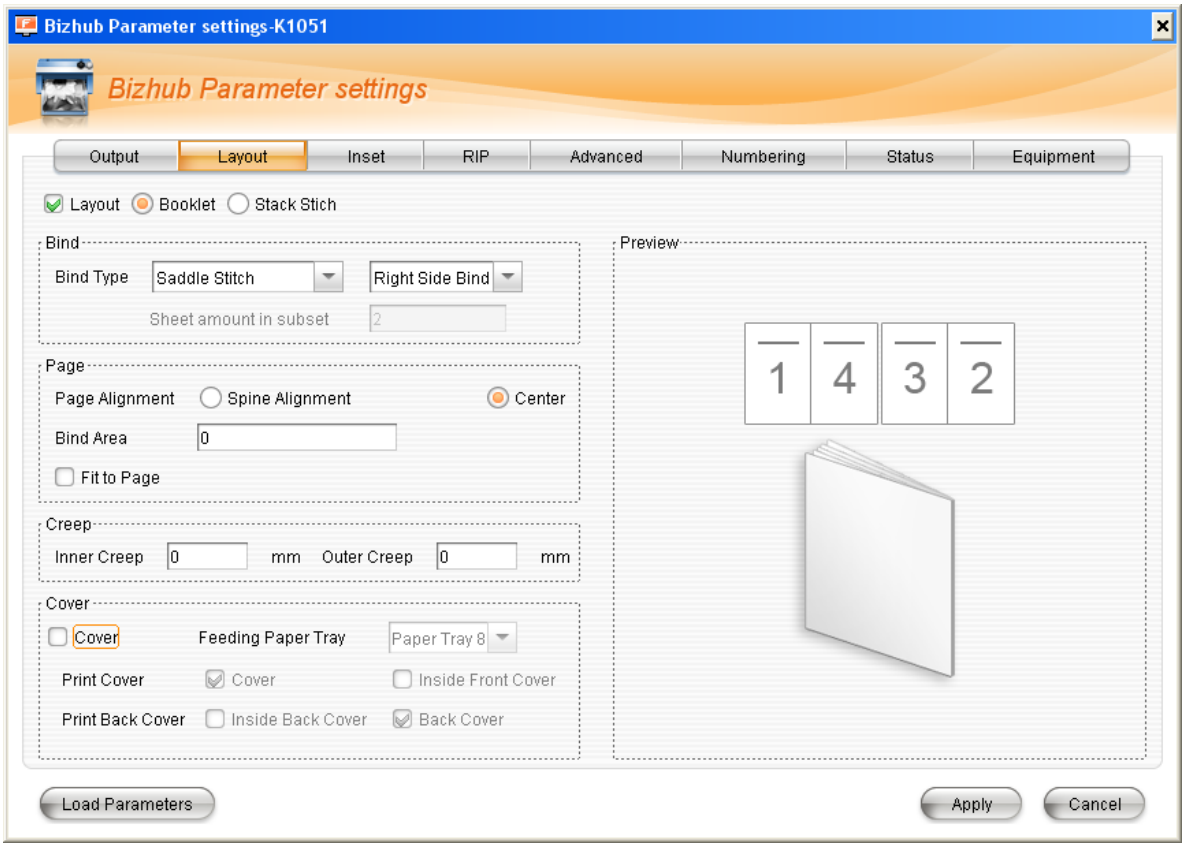


Figure 2-159

Bind Type: Supports three commonly-used binding types: Saddle Stitch, Nested saddle stitch, and Perfect Bound. If you choose **Saddle Stitch**, you can further configure the **Cover** parameters in the below, and if you choose **Nested saddle stitch**, you can further specify the **Sheet amount in subset** parameter.

Binding position: Supports binding at right side, left side or top side. The **Preview** area at the right can show the schematic diagram for these three positions in real time.

Sheet amount in subset: This parameter is applied to **Nested saddle stitch**, a binding type that can nest one saddle stitch booklet on top of another saddle stitch booklet, so as to produce a bigger booklet. This parameter controls the number of sheets for each small booklet. The default value is 2, indicating that each small booklet can contain 4 (single sided, 2x2) or 8 (double-sided, 2x2x2) pages.

Page Alignment: Pages can be aligned with the spine, or centered. The spine refers to the folding line at the center of the paper sheet. If you choose **Spine Alignment**, pages will be aligned with the spine, see the left figure in the below. If you choose **Center**, each sheet of paper will be divided into two equal areas, and each page will then be placed at the center of that area, see the middle figure in the below.

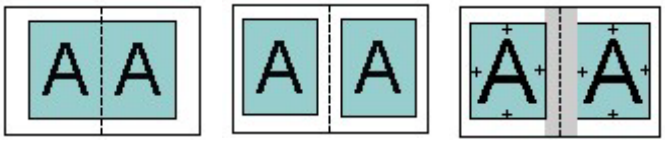


Figure 2-160

Bind Area: To reserve a blank area for binding, as per the width specified here. See the right figure above.

Fit to Page: If checked, ElecRoc automatically scales down the page size according to the paper size, on the premise of remaining the aspect ratio, so as to output all of the page content. If not checked, pages are output in original page size, and if the page size exceeds half of the paper size, the excess may be lost in output.

Creep: Applied to Saddle Stitch and Nested saddle stitch. As to thick paper, or booklet containing too many pages, when signatures are folded, the image area of the inside pages may move slightly. To compensate the movement of image area and thus ensure all pages are in alignment, you need to set up creep parameters.

Cover: Applied to Saddle Stitch. It means to take out a piece of paper from a different input tray and use it as the cover of your booklet. Therefore, if checked, please first choose an input tray from **Feeding Paper Tray** dropdown list, and then further decide whether or not to print content on the cover. On the cover you can print at most 4 pages, the front covers (inside and outside) and the back covers (inside and outside). When all 4 are selected, the options Cover, Inside Front Cover, Inside Back Cover, and Back Cover respectively refer to the 1st, 2nd, 2nd to last, and the last page in the pages you submit. When the option Cover is not selected, but Inside Front Cover is selected, Inside Front Cover refers to the 1st page; and when the option Back Cover is not selected, but Inside Back Cover is selected, Inside Back Cover refers to the last page.

- **Stack Stitch**

Stack stitch refers to generate and output signatures according to the page sequence as shown in the following figure, and after the printing, cut the signature stack along the middle line into two halves, and then pile one half above another, and then stitch to finished goods.

In this type, you can specify the page space, and if needed, you can check the **Fit to Page** option. It means to automatically scale down the page size according to the paper size, on the premise of remaining the aspect ratio, so as to output all of the page content. If not checked, pages are output in original page size, and if the page size exceeds half of the paper size, the excess may be lost in output.

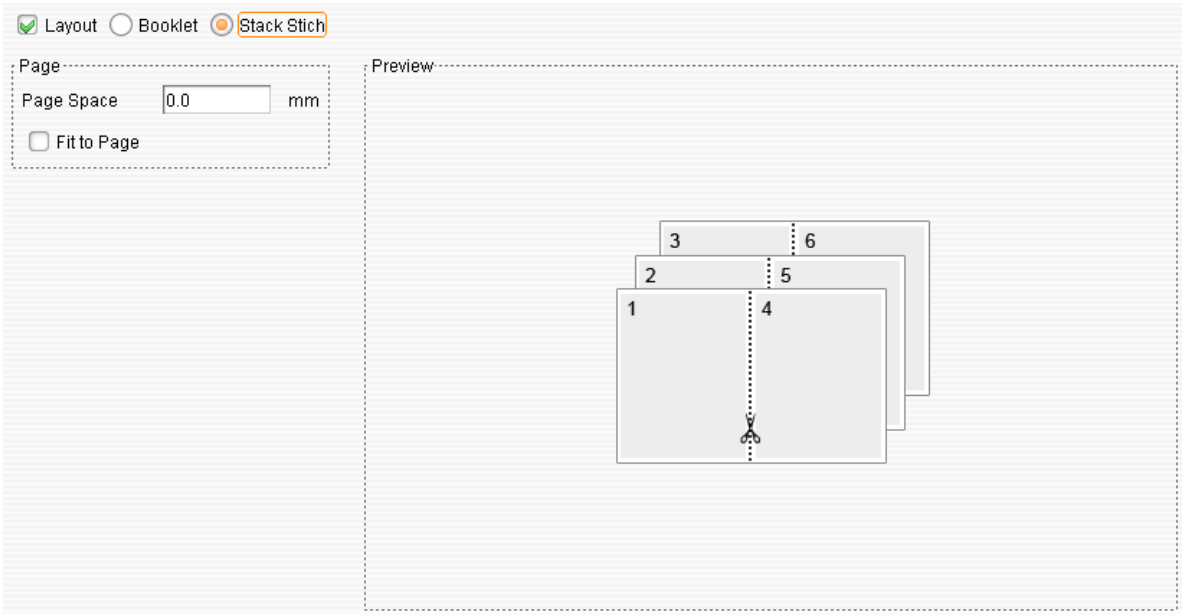


Figure 2-161

3) Insert

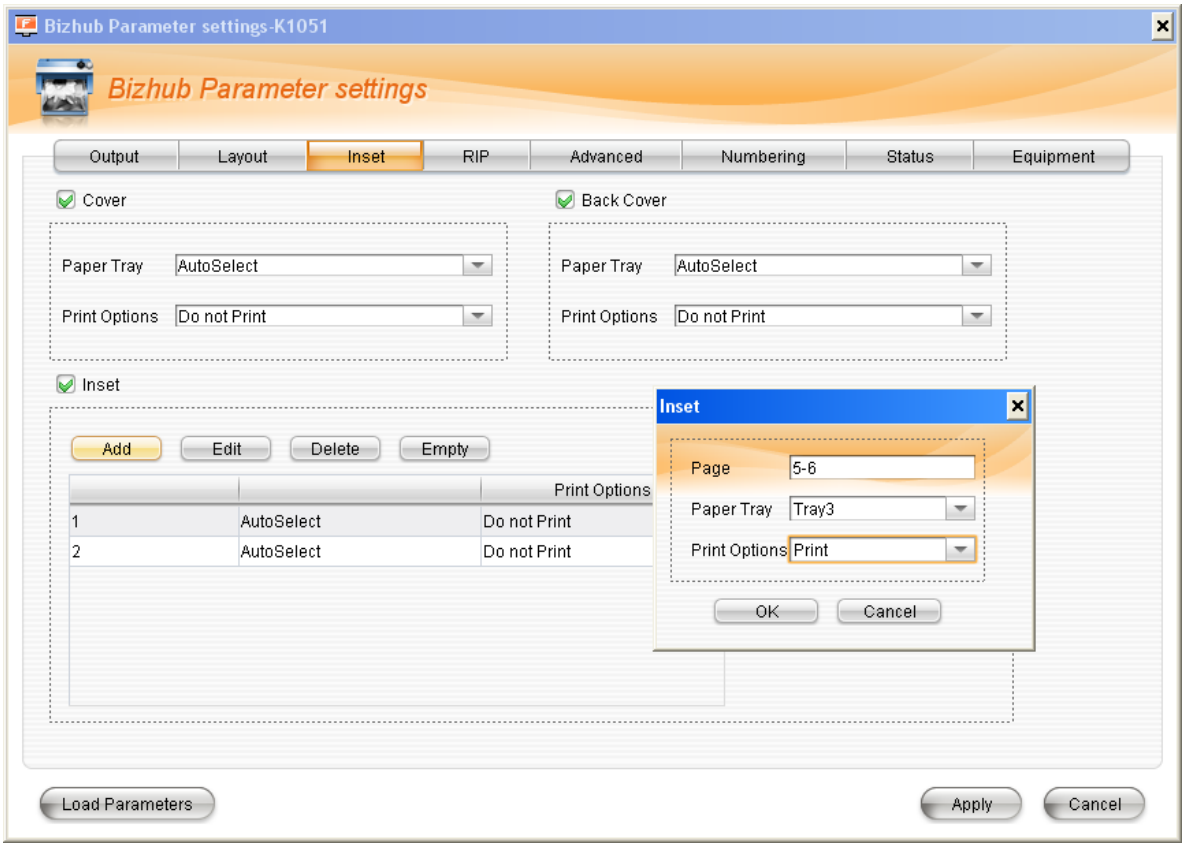


Figure 2-162

Parameters here are used to control whether or not to pick up paper from specified input tray, so as to print the front cover, the back cover, or the inset.

- **Cover**

Cover: It refers to the 1st page in the pages you submit. If checked, you can separately specify the input tray for the cover and control whether or not to print out the cover.

Paper Tray: the feeding paper tray for the front cover.

Note: *The actual options for this parameter are determined by the additional hardware part you are using, for example, if you have used the high capacity input tray PF-702, the options here will be "Tray1, Tray2, Tray3, Tray4, Tray5."*

Print Options: Controls whether or not to print the front cover.

- **Back Cover**

It refers to the last page in the pages you submit. Settings are similar to the front cover.

- **Inset**

Inset: If checked, you can separately specify the input tray for the insets and control whether or not to print out them.

Add: Click this button to add an inset specification.

The format for pages is like "1,3-6,9", no blank space, supporting half-width comma and joint mark as the separator in case that multiple pages need to be specified. The parameters **Paper Tray** and **Print Options** are same to those for the cover and back cover.

The inset setting can be edited, deleted or emptied.

4) RIP

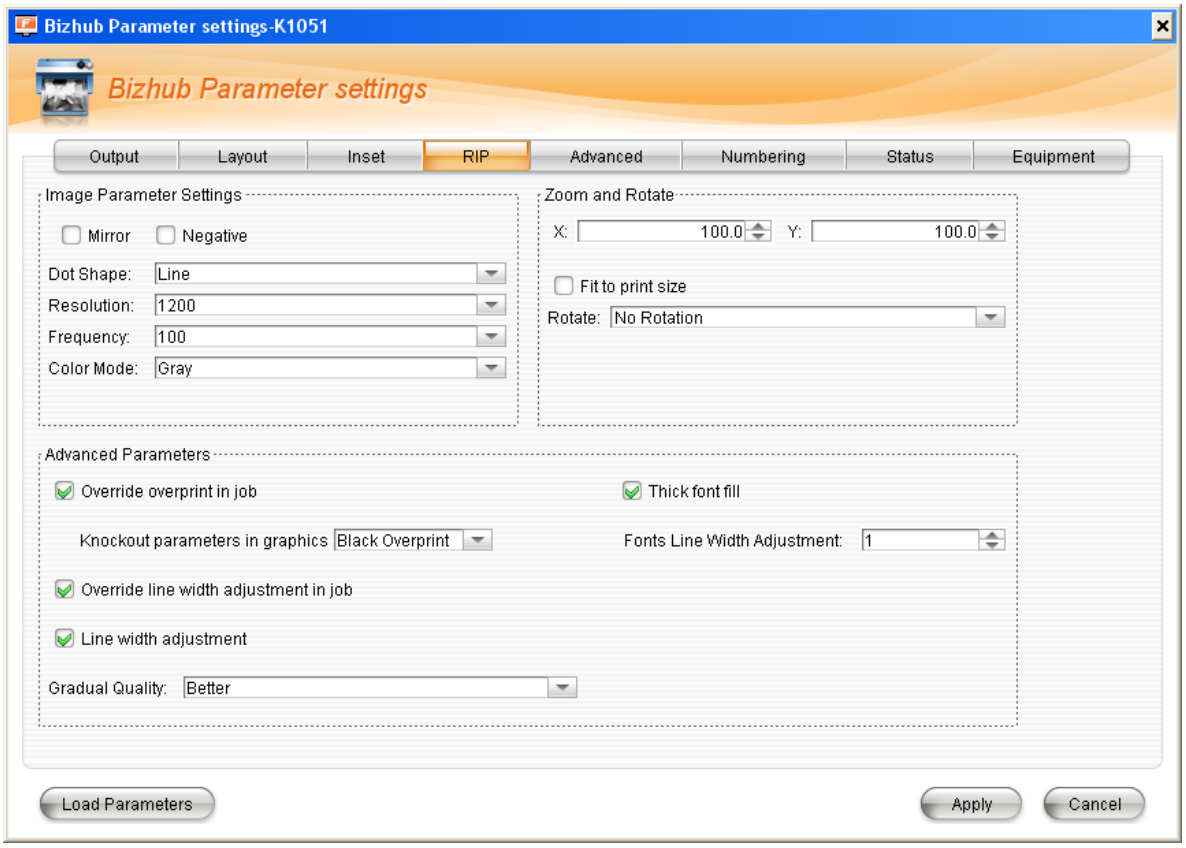


Figure 2-163

- **Image Parameter Settings**

Mirror: If checked, the printer produces a mirrored page.

Negative: If checked, the page printed by the printer is in negative.

Dot Shape: ElecRoc supports a wide range dot shapes, including Round, Ellipse, Rhombus, Diamond, Square, Pure Round, Sharp Ellipse, Line, and Founder FM.

Resolution: The resolution is set to 1200.

Frequency: The number of lines per inch, sometimes also called density of dots. Higher value enables smaller dots and thus higher image quality, but may possibly results in dot enlargement. Options include 87, 100, 133, 150, 175, and 200.

Color Mode: For black and white digital printers, it is fixed to Gray.

- **Zoom and Rotate**

X, **Y**: control separately the horizontal and vertical scaling percentages. This value ranges from 1.0 to 1000.0, and can be input manually, or given by clicking the triangle icon aside. The X and Y values can be different with each other. The default values are 100.0, meaning no scaling.

Fit to print size: If checked, the X and Y edit boxes will be grayed. ElecRoc will then automatically calculate the scaling percentages according to the printable size.

Rotate: You can rotate anticlockwise 90º, 180º, 270º. The default is no rotation. You can

also choose Auto, enabling ElecRoc to rotate automatically.

- **Advanced Parameters**

Override overprint in job: If not checked, ElecRoc uses the overprint setting defined in the file by front-end layout application. Whether the 100% black elements are overprinted or not is controlled by the **Black Overprint** option.

Knockout parameters in graphics: If you check **Override overprint in job**, ElecRoc uses the overprint setting specified here instead of that defined in the file. The **Overprint** option allows you to print an element of one color over one of another color without removing, or knocking out, the material underneath. The **Black Overprint** option enables only the 100% black elements to be overprinted, it is the default option. The **Knockout** option enables all the separations to be knocked-out. White gaps may appear due to inaccurate alignment.

Override line width adjustment in job: If checked, ElecRoc use a built-in line width setting. If not, ElecRoc uses the setting defined in the input file.

Line width adjustment: If checked, in case that the file is output in a lower resolution, the position and lines of the table contained in the file can become smoother. If not, the lines may look a little coarse.

Gradual Quality: It controls the level of gradient quality. Higher gradient quality requires more processing time. If you want to perfectly reproduce the original gradient effect, choose **Fine**. If the input files are large in size and quantity, or contain too many shading effects, it may take a lot of time in RIP process. In this case, you can choose **Normal** or **Better** to save the process time.

Thick font fill: If checked, the plain texts in you file such as TrueType and CID texts will be thickened. If not checked, they remain the regular face.

Fonts Line Width Adjustment: This parameter becomes activated when you have checked the option **Thick font fill**. It refers to the line width of font when texts are thickened. The default value is 1, if it doesn't produce the thick effect as you want, you can increase this value. The value range is 1-100.

5) Advanced

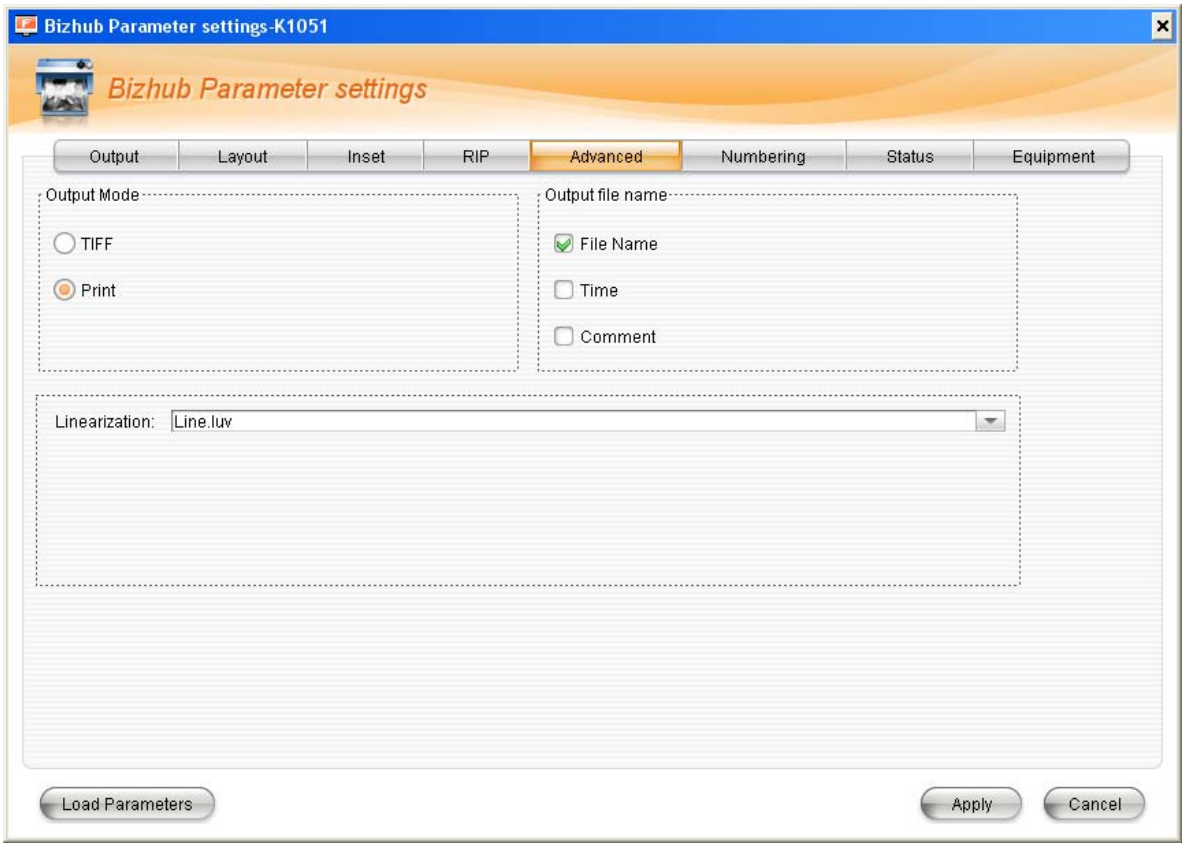


Figure 2-164

- **Output Mode**

There are two output modes, and they are mutually exclusive.

TIFF: To output your submitted file as tiff file. The store path for the tiff file is the directory \Jobs*JobNumber*\tiffs on your ElecRoc server. Users with access rights can go there to obtain or view the tiff file.

Print: To send the file to the digital printer, printing on the paper.

- **Output file name**

It refers to the name of the output file. It can be composed of any or any combination of the three name parts, file name, time, and comment. If you check **Comment**, you will then activate an edit box, in which you can input any text as part of the file name.

- **Linearization**

Linearization: ElecRoc supports you to adjust the white & black digital printer's gradient output effect, for example, if the output result of the shallow part looks too light, or even invisible, you can use a linearization curve to increase the output amount for that part. The curve is applied to multiple device models from Konica Minolta and Océ.

The linearization curves can be created, edited, imported or exported under the module **Resources** > **Digital Press** > **Linear Curve**.

6) Numbering

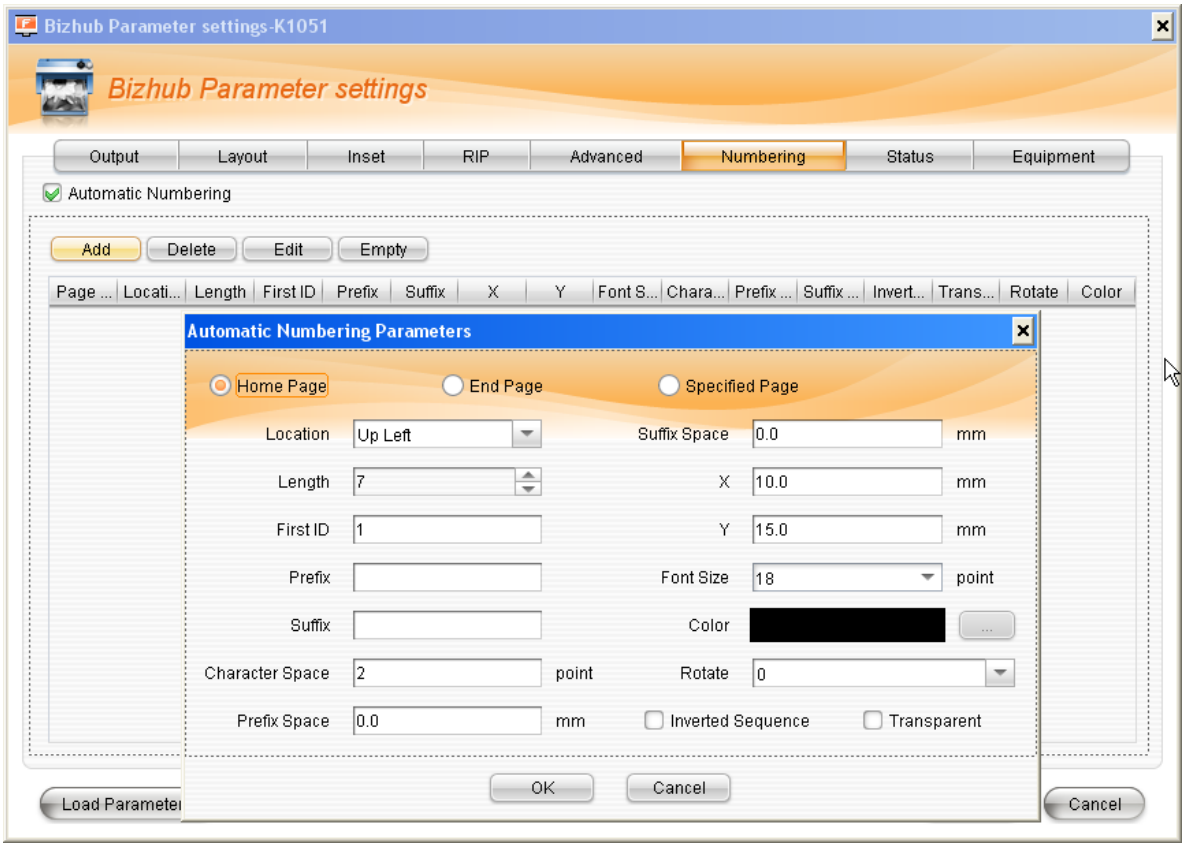


Figure 2-165

Targeting at each copy of your file, the automatic numbering can output a string of number for each copy (on one specified page). By default, this function is not enabled. If needed, please check **Automatic Numbering** to enable.

Click **Add** to define the string of number. (Multiple and different strings of number are allowed for each copy, and numbering setting can be edited, deleted or emptied.) The numbering parameters include:

Home Page: If checked, the defined number will be output on the 1st page of each copy.

End Page: If checked, the defined number will be output on the last page of each copy.

Specified Page: If checked, the defined number will be output on the specified page of each copy. If you check this option, please input the page number in the edit box aside.

Note: *The three options above are mutually exclusive. But note that, ElecRoc supports you to define multiple strings of number for each copy. Therefore, you can continue to click the **Add** button, to configure more settings, achieving the effect of printing string of number on homepage, end page and specified page at same time, or of printing multiple strings of number at different positions on a same page.*

Location: The specific position for the number on the page. It can be output at the upper-left, the upper-right, lower-left, or lower-right of the page.

Length: The number of digits, 1~10.

First ID: It refers to the starting number, and can be any value.

Prefix: An arbitrary input string of character that will be placed as a constant in front of the number.

Suffix: An arbitrary input string of character that will be placed as a constant behind the number.

Character Space: The spacing distance between every two characters in the string of number. The string of number here includes the variable numeral, the prefix, and the suffix.

Prefix Space: The spacing distance between the prefix and the variable numeral.

Suffix Space: The spacing distance between the suffix and the variable numeral.

X: Refers to the X coordinate with the origin at the upper-left corner of the page. It controls the distance between the number and the left edge of the page in the horizontal direction.

Y: Refers to the Y coordinate with the origin at the upper-left corner of the page. It controls the distance between the number and the top edge of the page in the vertical direction.

Font Size: Commonly-used size options include 12, 18, 24, 36, 48, 60, and 72. If needed, you can manually input any other size.

Color: Controlled by the parameter **RIP** > **Color Mode**. A click on the color block switches to another color if the color mode is set to double color, and opens the color setup dialog if the mode is set to color.

Rotate: The number can be rotated 0, 90, 180, or 270 degrees.

Inverted Sequence: For example, suppose we will output 3 numbers, in normal sequence they are 001, 002, 003, and if inverted, they would be 003, 002, and 001.

Transparent: If checked, the page content underneath will be shown and output.

7) Status

A click on the button **Refresh Status** can refresh the status for the input tray, the paper size, maximum capacity, and the current paper amount.

8) Equipment

If you have used optional equipment, please choose here the one you are using. The operation of configuring this parameter can be performed only when you open the processor parameter setup window from the module **Administrator** > **Processor Management**. If you open it in the job window, you can only view the configuration.

Finisher: supports the finishers FS-521 and SD-506. The option FS-521+SD-506 indicates that you are using both the two finishers. None means not using any finisher.

High capacity input tray: supports the high capacity input tray PF-702 and PF-703. The option PF-702+PF-703 indicates that you are using both the two input trays. None means not using any high capacity input tray.

2. FZC7000 series

The majority of the parameters under the tabs **Output**, **Layout**, **RIP**, **Inset**, **Numbering**, and **Equipment**, are the same or similar to the Bizhub introduced previously. Please refer to the related introduction above.

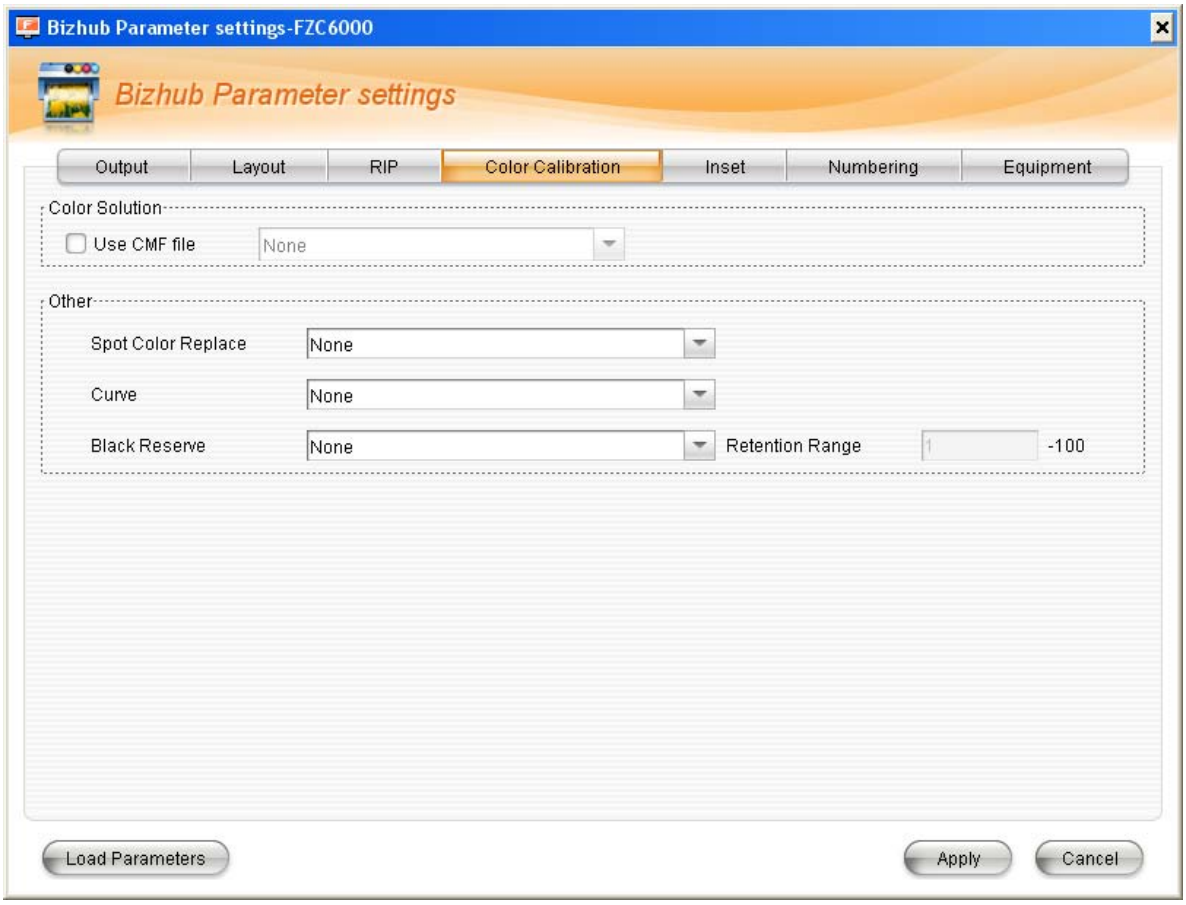


Figure 2-166

Use CMF file: The CMF file is the core to implement color management, ensure color consistency cross various output devices or locations, and improve the output quality and preciseness. If checked, you may see many various CMF files in the dropdown list aside, including not only the system built-in files, but also your defined ones. User-defined CMF files can be imported into ElecRoc system under the module **Resources** > **Digital Press** > **CMF Correction**.

Spot Color Replace: In order to precisely output spot colors, we usually define the spot colors in CMF file. If we haven't defined them in CMF file, we can define them in spot color table; and if we haven't defined them in spot color table, they will be output as per the values pre-defined in the source file. The dropdown list aside contains all the tables in your ElecRoc system, both the system built-in and user-defined ones. User-defined table and its spot colors can be created or edited under the module **Resources** > **Profile Resource** > **Spot Color Table**.

Curve: The dropdown list aside provides all the color tune curves in your ElecRoc system, for you to adjust the CMYK process colors. These curves can be created or edited under the module **Resources** > **Digital Press** > **Color Tune**.

3. Océ VP 110/120/135

The majority of its parameters are also the same or similar to the Bizhub introduced previously. Please note that the value options for some parameters vary according to the device model.

4. Océ VP 2110

The majority of its parameters are also the same or similar to the Bizhub introduced previously. Please note that the value options for some parameters vary according to the device model.

5. HP Indigo

The majority of its parameters are also the same or similar to the Bizhub introduced previously. Please note that the value options for some parameters vary according to the device model.

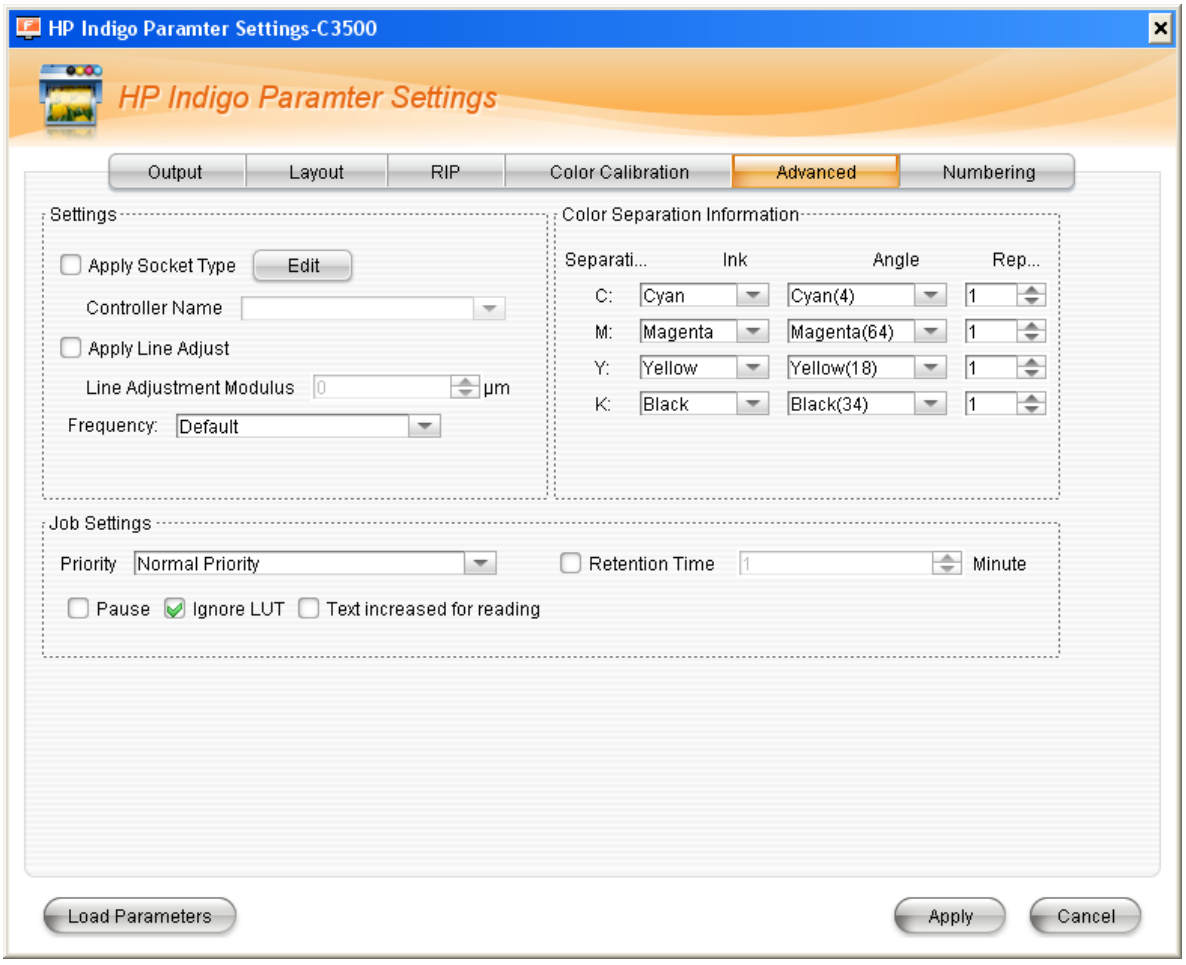


Figure 2-167

Apply Socket Type: This option enables ElecRoc to transmit the generated .jlt file to Indigo device. The .jlt file is located under the root directory of the disk partition where your ElecRoc system is installed.

The **Controller Name** dropdown list becomes activated when you have checked this option. Please choose the Indigo controller where the .jlt file will be sent. Options in this list can be configured by clicking the **Edit** button. In the pop-up dialog box, you can add, edit or delete a controller setting, each setting including the controller name and IP address.

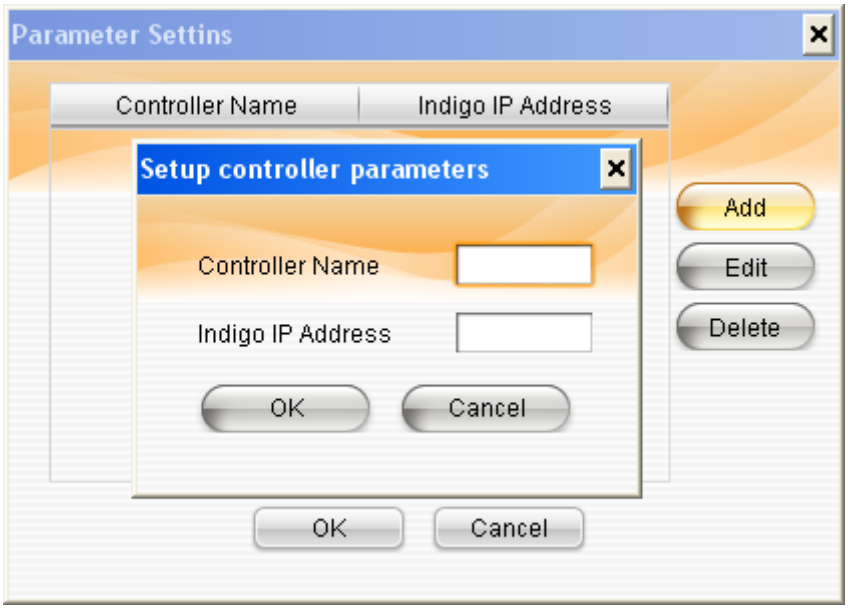


Figure 2-168

Other parameters under the **Advanced** tab are usually configured on the device console. If specially needed, you can also configure them here.

4.4.10 Inkjet Printing

ElecRoc supports Founder's own inkjet printing devices.

The majority of its parameters are also the same or similar to the Bizhub introduced previously. Please note that the value options for some parameters vary according to the device model.

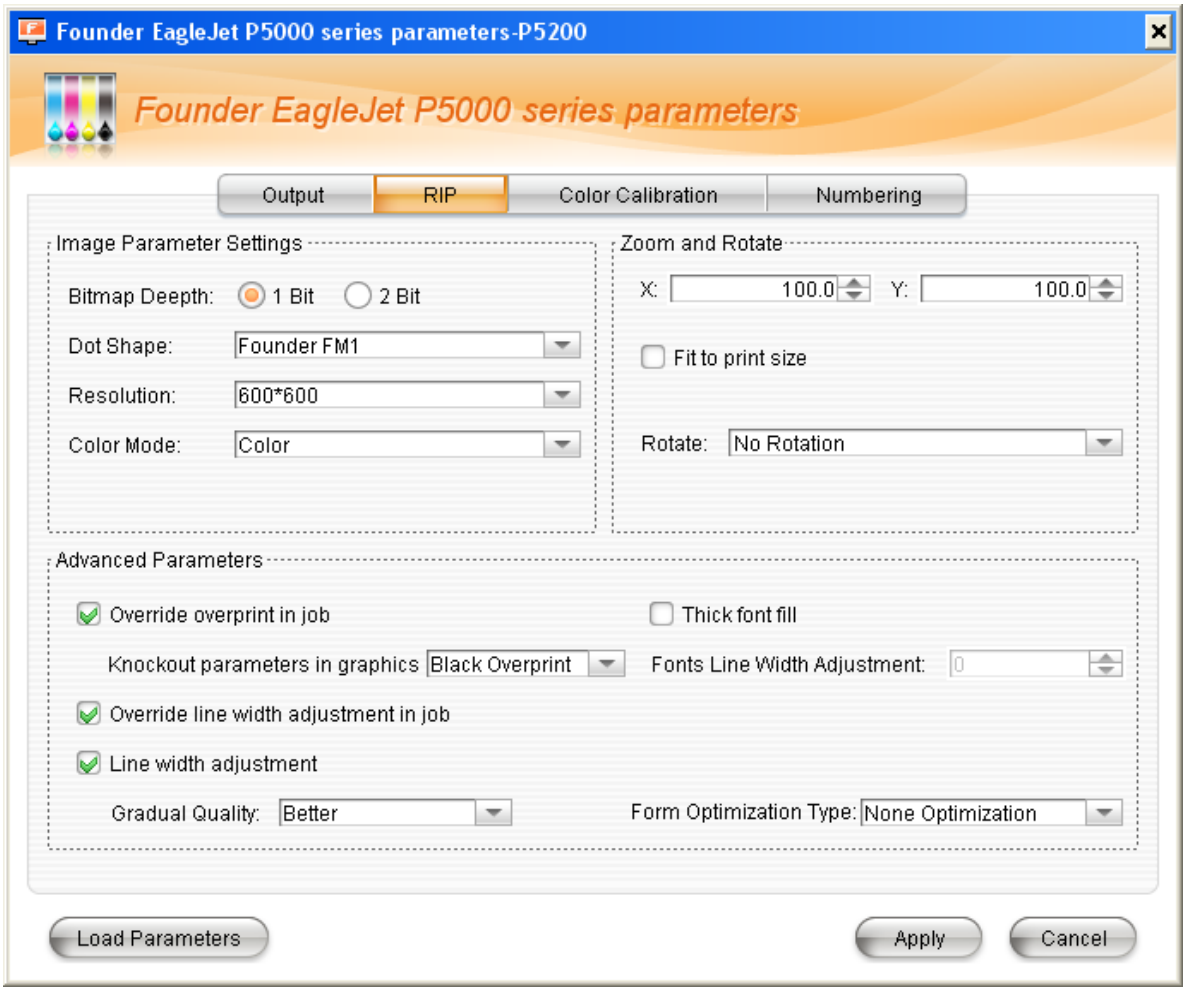


Figure 2-169

Bitmap Depth: It refers to the bit width of the output bitmap. When you define this parameter, please take combined account of your business demand, media quality, and the device's hardware configuration. The option **1 Bit** enables quick screen speed and bitmaps of granular looking, while **2 Bit** comparably slows the screen speed but produces smooth-looking bitmaps, suitable to output files that require high output quality, and thus this option requires higher device configuration.

Dot Shape: When bitmap depth is set to 1 bit, you can use Founder FM1 or Founder FM2. These two types can bring out different screen results. If the bitmaps produced with the default dot shape show some shortcomings in details, such as shadings, smoothness at image edges or corners, you can try another dot shape. When bitmap depth is set to 2 bit, the dot shape is Founder FM.

Resolution: 600x360, 600x600, 600x960, 600x1200, 1200x1200.

Color Mode: Color, Double, Gray. The default option is Color. Double refers to magenta and black.

4.4.11 Barcode

This processor can add the Code 39 barcode onto your PDF page. Code 39 is a barcode widely-used in commodity source tracing and logistics tracking. As shown in the following figure, the output result is usually a barcode and a corresponding string of numbers,

located at the left or right side of the page. The data contains 8 digits, among which the first 4 digits are usually the user code or department code.

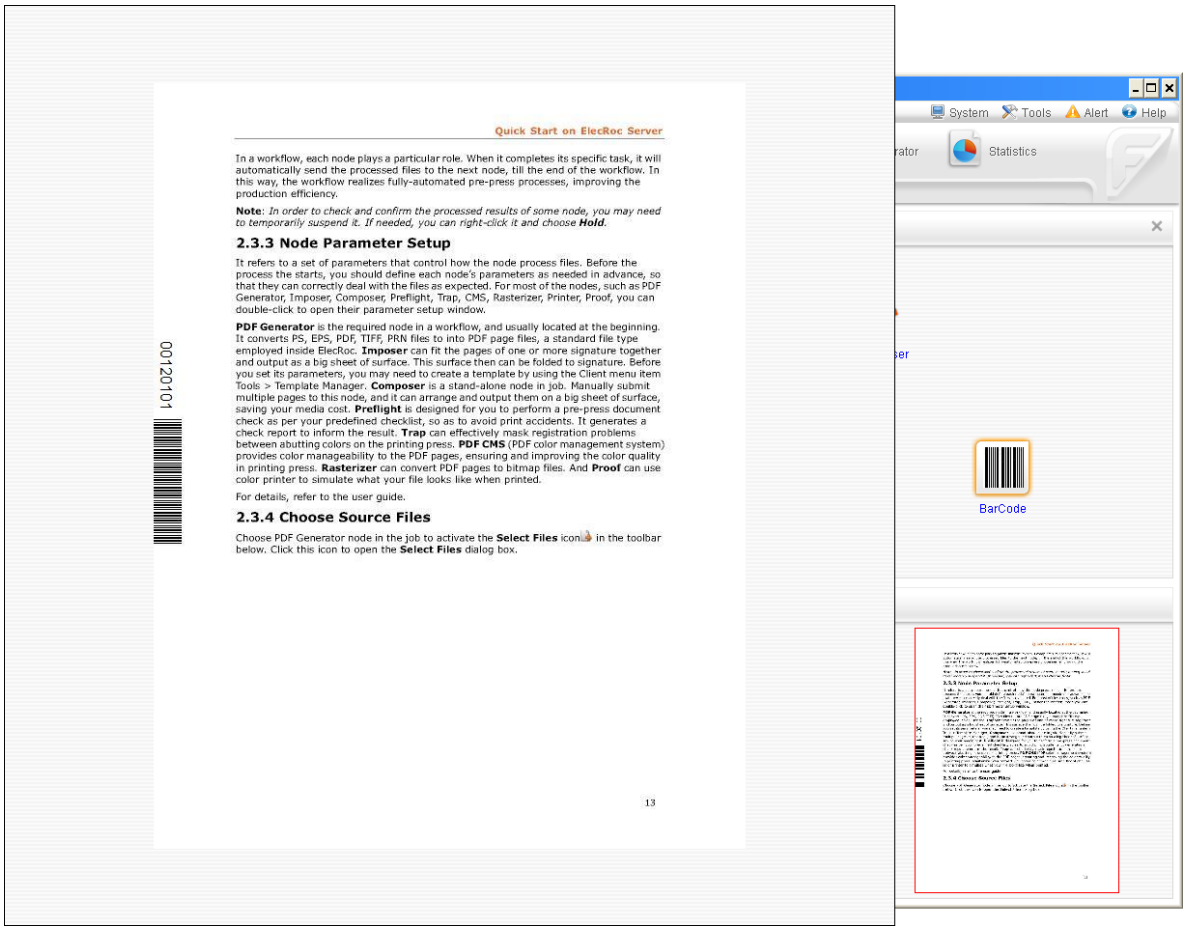


Figure 2-170

The Barcode node can appear as a stand-alone or a connected node in your job, accepting PDF page files and enabling you to preview the output result immediately after the process.

Its process parameter setup window is as follows.

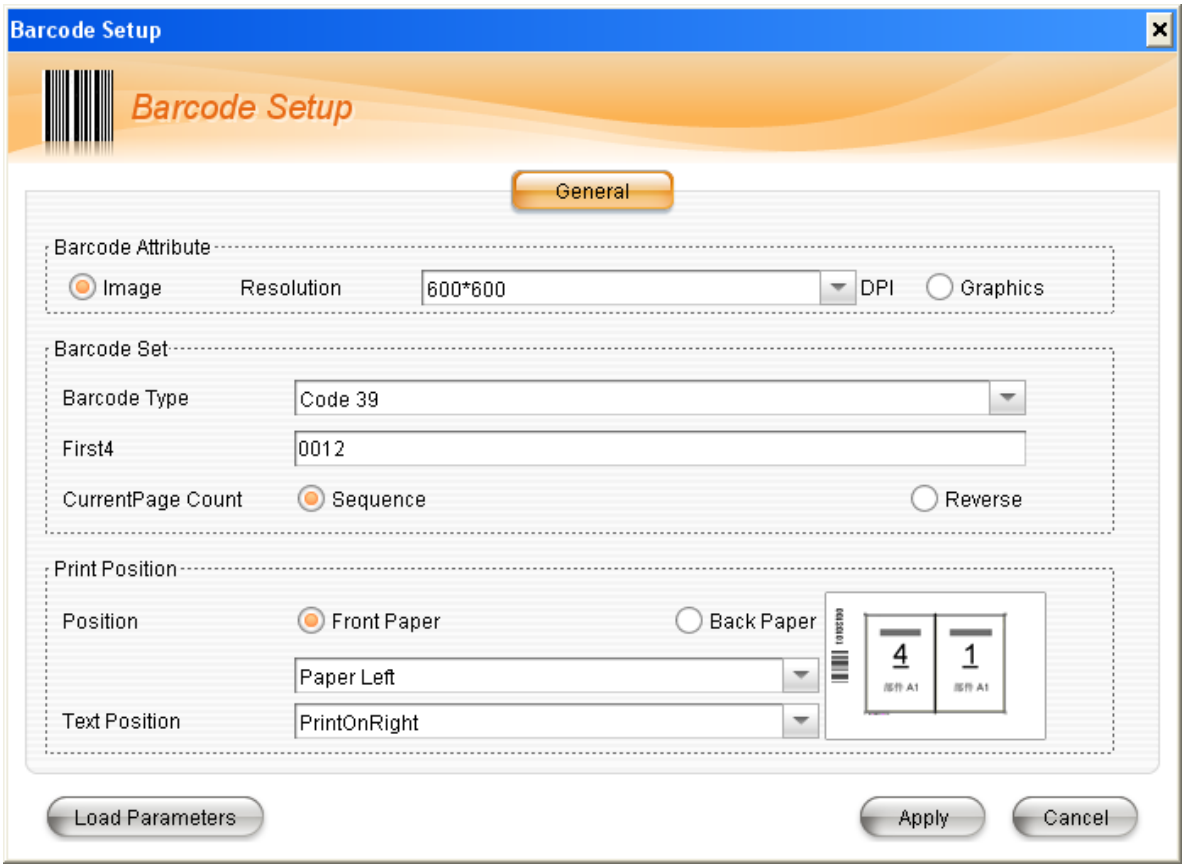


Figure 2-171

Barcode Attribute: The barcode can exist in any of the two formats: an image (supporting two resolution options, 600x600 and 1200x1200); or a graphic (to become a vector graphic).

Barcode Type: Currently supports only Code 39.

First 4: The barcode data consists of 8 digits. The first 4 digits can be specified here. Valid characters include upper case letter, number, and special symbols (-.$/+%). The last 4 digits are variable: the 5th and 6th digits are current page number, the 7th and 8th are total page number. Considering that each piece of paper contains front and back sides, both the two page numbers need to be divided by 2. For example, suppose that you submit 16 pages at a time, the total page number is then 8, the 1st and 2nd pages are considered as the 1st page, while the 3rd and 4th pages as the 2nd page.

Note: *The total page number refers to the total PDF pages you submit one time, not the total pages your source file contains. There are only 2 digits for the page number, therefore, if the page number exceeds 100 (i.e. actually 200 pages), ElecRoc will issue error report.*

Sequence, **Reverse**: **Sequence** indicates that the actual value at the 5th and 6th digits will increase one by one; while **Reverse** indicates that the value will decrease.

Print Position: **Front Paper** indicates that the barcode will be output on the front side of the paper, i.e. on the odd pages; **Back Paper** indicates that the barcode will be output on the back side of the paper, i.e. on the even pages.

The dropdown list in the below enables you to specify the left or right position on the page, i.e. right side or left side on the paper.

Text Position: If you choose **No Print**, the corresponding number will NOT be output together with the barcode; please choose **Print On Left** or **Print On Right** to output the number and the barcode together.

4.4.12 Ink Control Export

This processor generates industry-standard CIP3 and CIP4 ink files, based on the ink control thumbnail image generated during the Rasterizer process. The CIP ink file can help press worker to reduce the press cycle and minimize the production waste.

In ElecRoc workflow, it accepts only the tiff files generated by the screen node, usually the screened signatures. The screening option **Ink Information** > **Thumbnail of ink control file** must have been enabled during the screen process. After the process, it outputs the ink file under your specified output directory, but doesn't display the file in the job window.

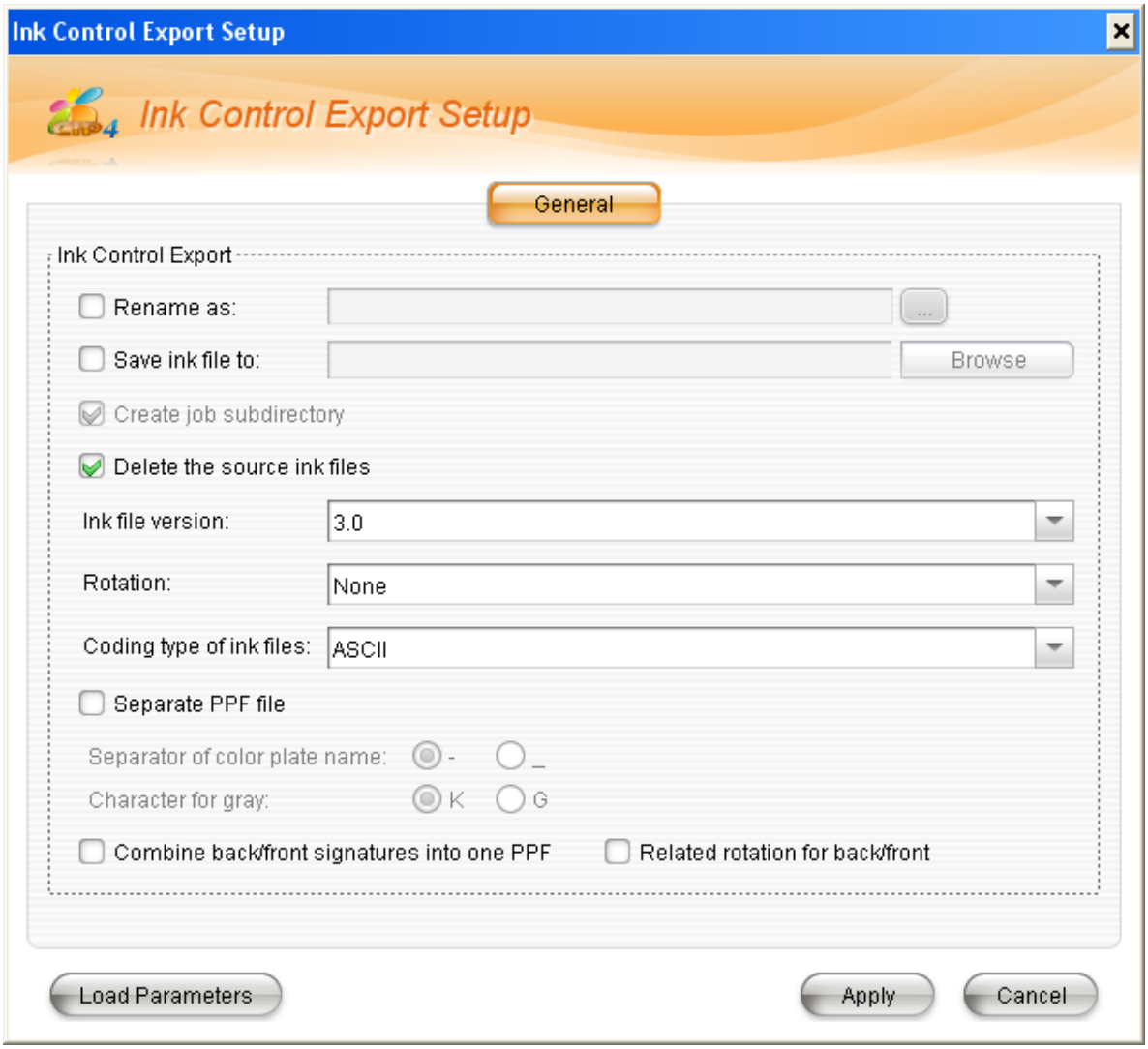


Figure 2-172

Rename as: You can check this option to specify the name of the generated ink file.

Save ink file to: This setting enables you to customize the output directory for the CIP3/CIP4 ink file. If not checked, the generated ink file will appear under the default

directory \\server name\InkFile\. If checked, you can then customize the output directory, by manually inputting, such as \\server name\Upload\, or by clicking **Browse** to choose one from optional directories. Here you can specify more than one directory separated by the symbol "|", i.e. you can make the ink file appear under multiple directories.

Create job subdirectory: If checked, ElecRoc creates a subdirectory under the output directory, named with the job name, and then generates the ink file under this subdirectory. If not, it generates the file directly under the output directory.

Delete the source ink files: If checked, the source files for generating ink files will be deleted from ElecRoc system after the process. If not, these files will remain inside ElecRoc, and in this case, you can run again to generate the ink file.

Ink file version: Ink files in versions below 3.0 are in the .cip format, while in version 3.0 are in the .ppf format.

Rotation: If checked, you can customize the rotate angle of the ink file.

Coding type of ink files: Binary or ASCII.

Separate PPF file: This setting becomes available when you set the **Version** to 3.0. If checked, it divides one PPF ink file into several files, each file corresponding to a specific separation. E.g. if the input file contains 4 separations, CMYK, it would then generate 4 PPF files, separately describing the ink setting for the C, M, Y and K separations.

Separator of color plate name: After the separation, characters like C, M, Y, K may appear at the end of the PPF file name, representing the separation. A separator may also exist in front of this suffix, and it may be "-" or "_", and can be specified here. Sample of PPF file name: 12_10_11_Calibration_Test_pdf_p0001_2540_C.ppf

Character for gray: A character at the end of the PPF file name, representing the Gray separation, and it can be K or G.

Combine back/front signatures into one PPF: If checked, in case that the input files are pairs of back and front signatures, it generates one ink file to describe the ink setting of one pair of signatures. If not, it generates two ink files, one describing the front side, the other for the back side.

Related rotation for back/front: If checked, the rotate directions for both the front and back sides of the ink file will be related. The front side is rotated according to the **Rotation** setting, while the back side is rotated by the same degree but in an opposite direction. For instance, if **Rotation** is set to 90 Rotate, the front side will be rotated clockwise by 90 degree, while the back side will be rotated anticlockwise by 90 degree.

4.5 Preflight

4.5.1 Use Preflight

Preflight is Founder's self-developed preflight processing module, providing an optimal choice for you to use preflight in ElecRoc. Specially designed for pre-press PDF inspection, Founder preflight functions the same as that the third-party preflight does, i.e. to verify or check the PDF pages according to your defined checklist, and then generate a preflight report, so as to avoid any possible print accident.

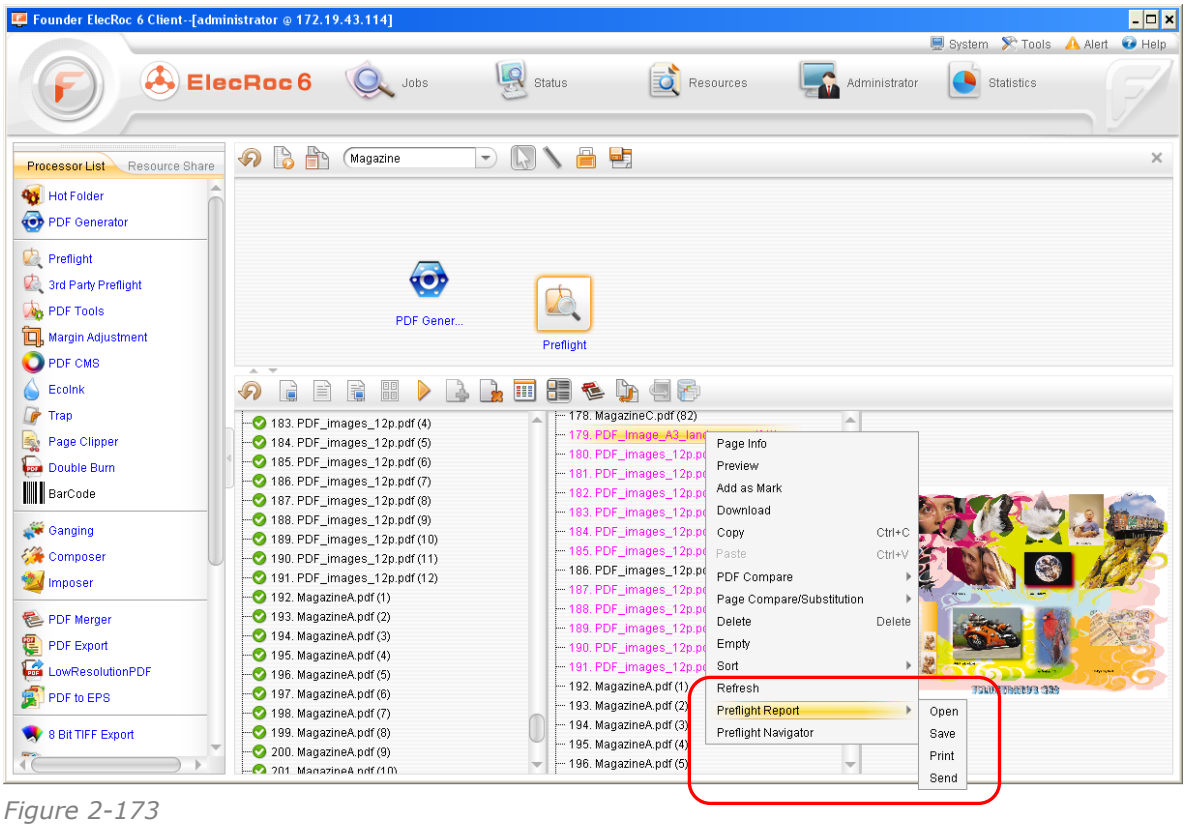


Figure 2-173

Each job may contain more than one Preflight node, and the preflight checklists for these nodes may be different from each other. In the job, you can make this node connected with other node, or make it stand-alone. If connected, it can form an automated preflight workflow, with PDF Generator and other processor node, and accept automatically the output files from the prior node in the workflow, regardless of single-page or multiple-page files. If it exists as a stand-alone node, you need to manually submit the pages for the inspection.

A job information window pops up during the preflight process, enabling you to monitor and control the process progress and relevant process information. The preflight processing speed has been optimized for general customer requirements. But the actual speed is specific to the page content. It may be slower for some special pages that contain transparent objects, large image patterns, complex paths, and etc.

After the preflight process, you may see pink and/or red page files in the output file queue. The page appears in pink if its preflight report contains Warn message, and in red if the report contains Error message. The red pages will not be automatically submitted to the next connected node in the workflow.

E.g. we can define such an entry in the preflight checklist, *Page size is A4*, and set the action to *Error*. After the preflight inspection, if the page size is exactly A4, i.e. just like the entry describes, the preflight report will then contain this result, labeling it as *Error*, and show this page in red in the output file queue. If the page size is not A4, NOT as the entry describes, the report will NOT mention this, and the page will then appear in black in the output file queue.

Please view the detailed result in the preflight report. It is an html report. If you want to open the report, choose a page (the file instead of the page in case of multiple-page mode) in the output file queue, then right-click and choose **Preflight Report** > **Open**. The other items **Save**, **Print** and **Send** are used to save, print and send out the report.

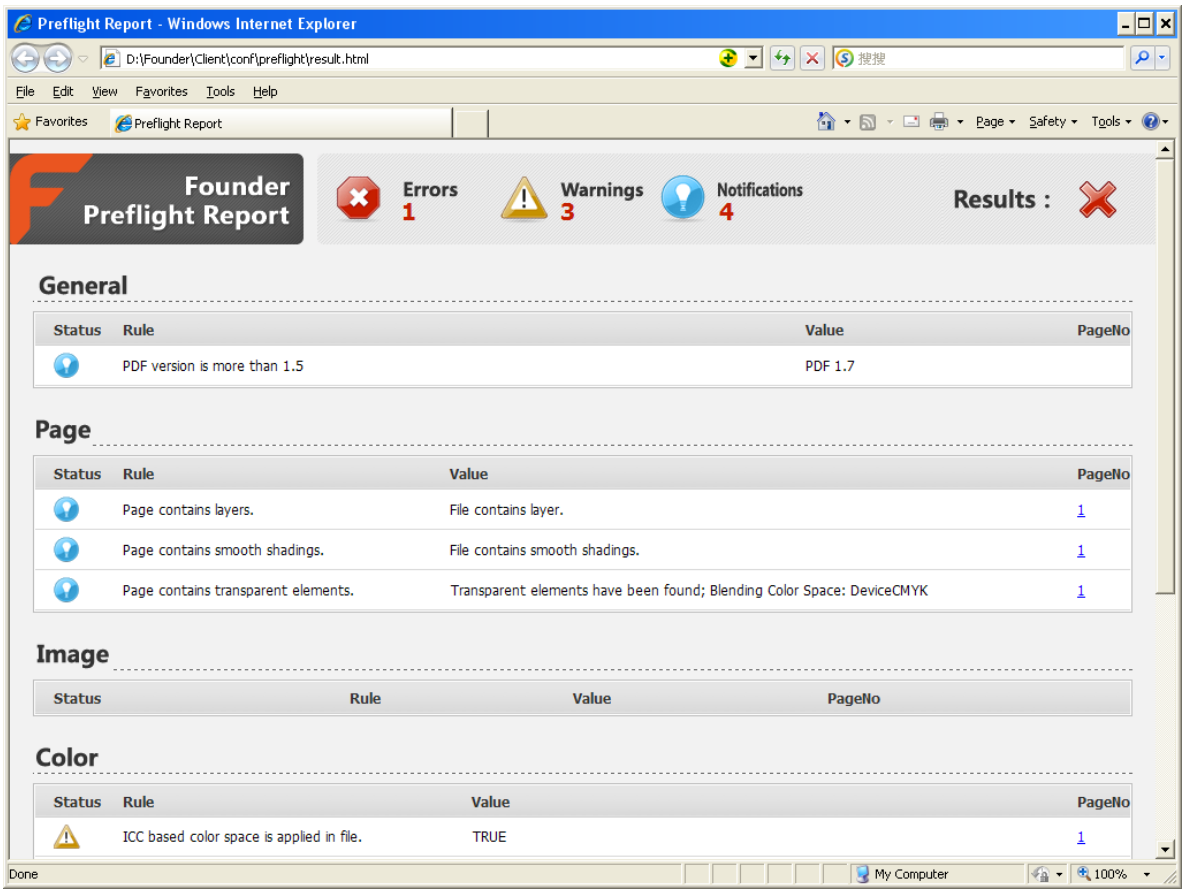


Figure 2-174

The top shows a sum of the inspection result, i.e. the quantity of the *Errors*, *Warnings* and *Notifications*. Below this, it displays the check entries and the result returned, one by one, and page by page. The result is information about the page objects that meet the description of the check entries.

Click the page number at the right, and you can open the file in Acrobat and use the preflight plug-in to position these objects.

Right-click a checked page (any page in case of multiple-page mode) and choose **Preflight Navigator**, and you can then open the file in Acrobat, so that you can position the objects with *Error*, *Warning* or *Notification* in the file, by using the Acrobat preflight plug-in. The plug-in must be installed beforehand.

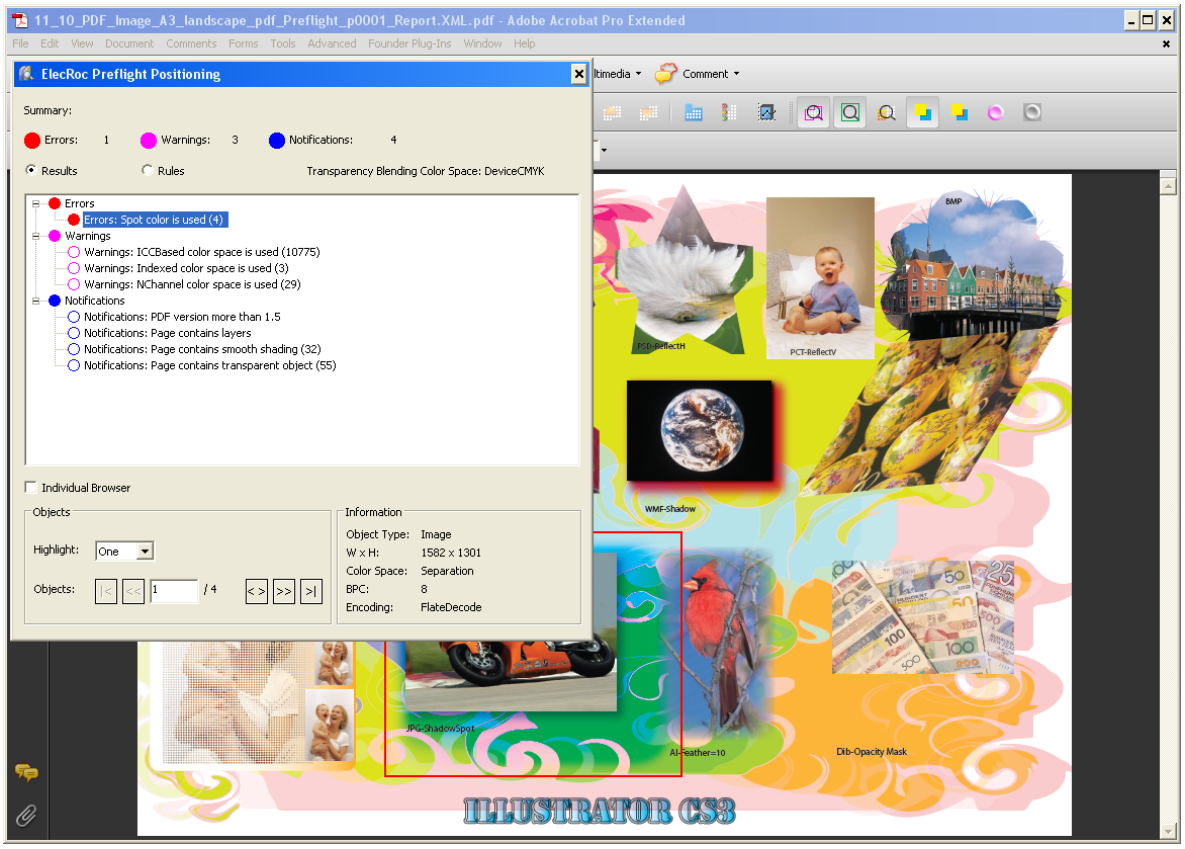


Figure 2-175

By choosing from the Acrobat main menu **Founder Plug-Ins** > **ElecRoc Preflight** > **Positioning**, you open a floating panel on the Acrobat window. Expand the types of *Errors*, *Warnings* or *Notifications*, and double-click one of them, and you can see one of the objects in that type on the page, labeled by a solid or dashed line rectangle box. The detailed information about the object is then displayed at the lower-right of the panel, including size, color space, color, and etc. Click the buttons << or >> to switch among the objects of same type.

For more information, refer to Appendix C.2 *Preflight Plug-in*.

4.5.2 Preflight Checklist

1. Define a Checklist

The setup interface for you to define a checklist is shown as follows:

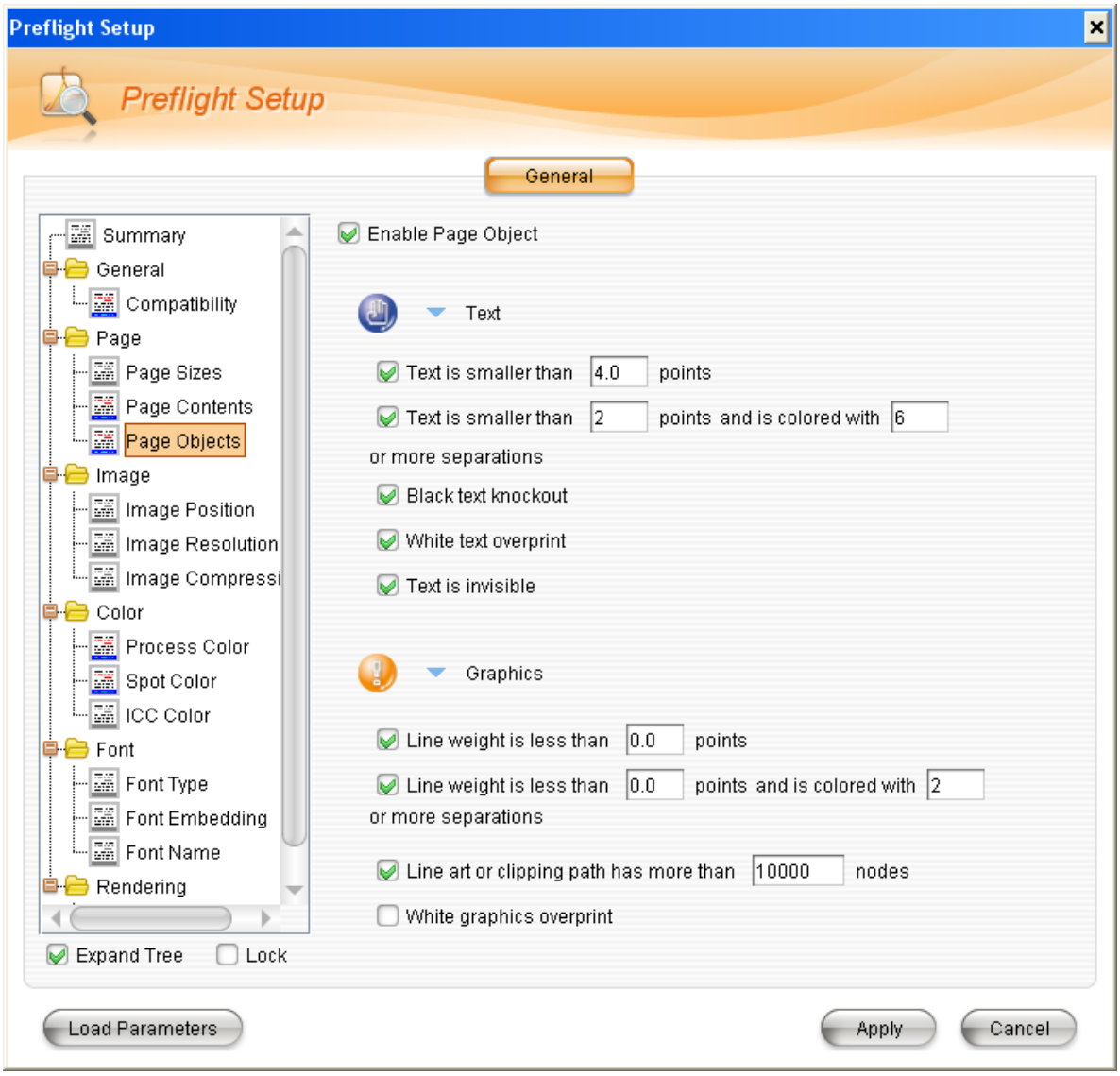


Figure 2-176

The preflight check entries, i.e. the preflight parameters, are sorted into 6 catalogs, General, Page, Image, Color, Font and Rendering, totaling 14 categories. The left are catalogs and categories, the right are the items (or entries) contained in a category.

Action types: There is always an action in front of each check entry, and this action may be Ignore, Notify, Warn, or Error. Ignore means no preflight inspection, while the other three means to be inspected. These three actions are a classification to the messages generated after the inspection, as identifiers to show the degree of importance. E.g. you can enable the entry under the category Page Sizes "Page size is A4", and set the action to Warn. After the inspection, if the page size is indeed A4, the report returns a result message labeled as Warn, but if the page size is NOT A4, the report returns no message.

Action choosing: The four actions pop up automatically once you place the cursor on top of the action icon. You can then choose anyone as needed. You can also click the triangle besides the action icon to get the actions.

Parameter lock-up: Tick the **Lock** option at the lower-left corner to lock up all the

parameter setting, so as to prevent any casual modification.

Expand the catalog tree: Tick the **Expand Tree** option to expand all the catalogs and categories at the left, and un-tick it to fold them. If you want to manually unfold certain catalog, please click the little icon in front or double-click the catalog. Choose any inferior category to show the check entries it contains at the right.

Activate a parameter: To enable and define each category of parameters, you need to first tick the **Enable xxx** option at the top, or double-click the category at the left. By default, most of such options are disabled, the parameters underneath are all in gray, and corresponding entries will not be checked.

Auto memory: ElecRoc can remember the latest parameter setting in the setup window. The setting remains the same if you re-tick the **Enable xxx** option.

Parameter look-over: Click the category **Summary** at the top of the catalog tree to view your defined checklist. By default, all the catalogs are folded. You can click the little icon in front or double-click the catalog to expand the entries it may contain.

2. Preflight Check Entries

1) General

The general items for a preflight inspection. The current version supports temporarily only the compatibility inspection, i.e. to check the version and format of your PDF file.

- **Compatibility**



Figure 2-177

PDF version: This entry is to check the version number of your PDF file. The condition options in the dropdown list include *less than*, *less than or equal to*, *equal to*, *more than or equal to*, *more than*, and *not equal to*. The versions include PDF 1.2, 1.3, 1.4, 1.5, 1.6 and 1.7.

PDF/X compatibility: To check if your PDF/X is in the specified format. Formats include PDF/X-1:2001, PDF/X-1a:2001, PDF/X-1a:2003, PDF/X-2:2003, PDF/X-3:2002, PDF/X-3:2003, and PDF/X-4.

Document: To check if your PDF document is ASCII or Binary.

2) Page

To check the properties of a PDF page.

- **Page Size**

To check if the page size is the same as the specified.



Figure 2-178

Page Size: There are two conditions, **is** and **is not**. The size dropdown list provides standard size options, including A0 (840x1188mm), A1 (594x840mm), A2 (420x594mm), A3 (297x420mm), A4 (210x297mm), A5 (149x210mm), Legal (216x356mm) and Letter (216x279mm). Choose anyone as needed, or you can also choose **Custom** to specify any other size.

Tolerance: A deviation between actual size and specified size is allowed. It supports both positive and negative values, but always uses the absolute value of your input value. The tolerance is effective to both the width and length values.

Page Box: You need to specify a proper page box if the page size is defined based on certain page box. A PDF page may contain more than one page box, such as Crop box, Media Box, Art Box, Trim Box and Bleed Box.

- **Page Contents**

To check if the PDF page contains content such as layers, shadings, patterns.

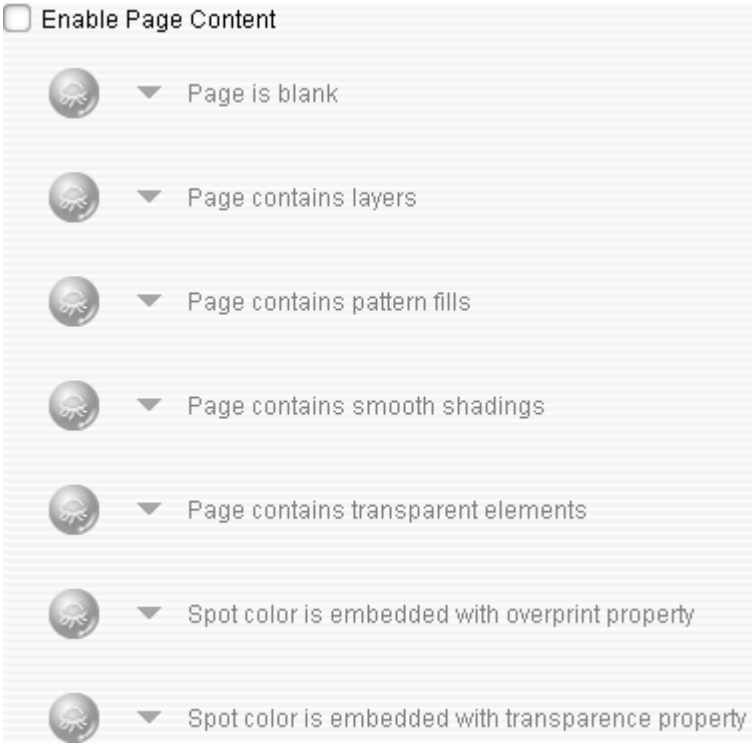


Figure 2-179

Page is blank: To check if your PDF page is a blank page.

Page contains layers: To check if your PDF page contains layers.

Page contains pattern fills: To check if your PDF page contains pattern fills.

Page contains smooth shadings: To check if your PDF page contains smooth shadings.

Page contains transparent elements: To check if your PDF page contains transparent elements.

Spot color is embedded with overprint property: To check if your PDF page contains spot colors that are embedded with overprint property. The overprint setting embedded for spot color may be lost during the spot color's conversion toward CMYK or Gray.

Spot color is embedded with transparence property: To check if your PDF page contains spot colors that are embedded with transparence property. The transparence setting for spot color may cause unexpected problem during the rasterizing process.

- **Page Objects**

To check the text and line objects on your PDF page, learning such information as the font size, the line width, and if the text is knock-out.

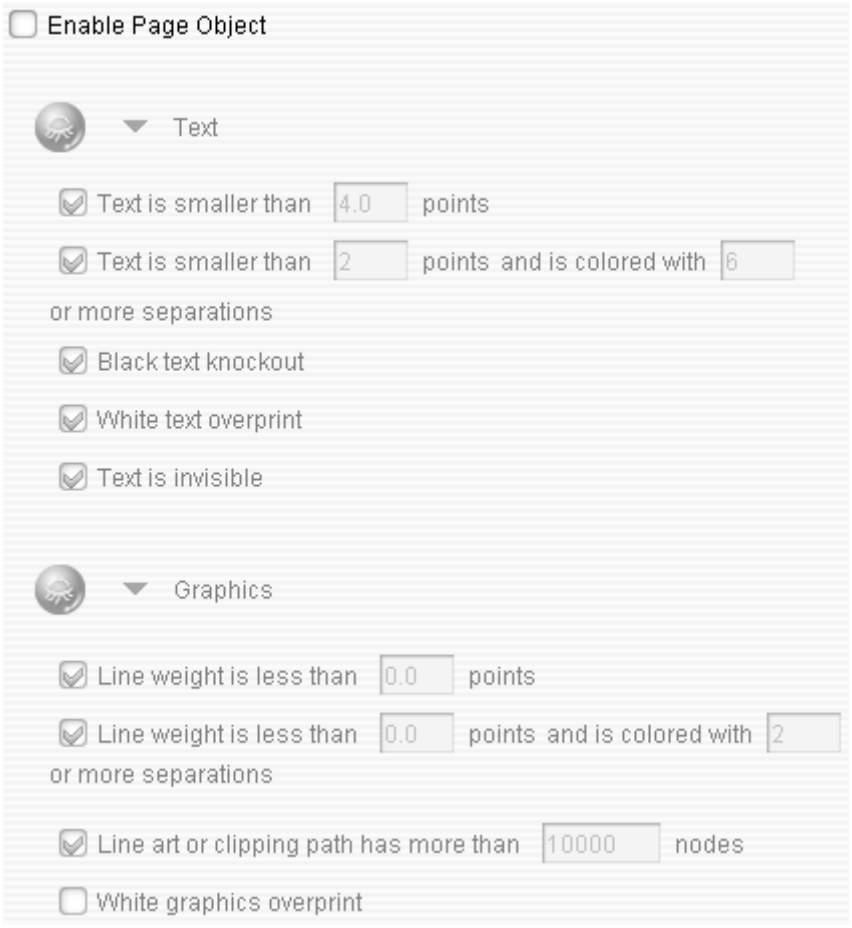


Figure 2-180

Text is smaller than _ points: To check if your PDF page contains any text object that is smaller than the points specified here.

Text is smaller than _ points and is colored with _ or more separations: To check if your PDF page contains any text object that is smaller than the specified points and is colored with specified or more separations.

Black text knockout: To check if your PDF page contains any text object that is knocked out.

White text overprint: To check if your PDF page contains any text object that is overprinted.

Text is invisible: To check if your PDF page contains any text object that is invisible.

Line weight is less than _ points: To check if your PDF page contains any line object whose line weight is less than the points specified here.

Line weight is less than _ points and is colored with _ or more separations: To check if your PDF page contains any line object whose line weight is less than specified points and is colored with specified or more separations.

Line art or clipping path has more than _ nodes: To check if the nodes of the line art or clipping path on your PDF page are more than the specified number here. The preflight report returns the actual node number, if it's bigger than specified.

White graphics overprint: To check if your PDF page contains any white graphic object that is overprinted.

3) Image

To check the images on your PDF page.

- **Image Position**

To check the positions of the images, learning that if they are rotated, scaled, and etc.



Figure 2-181

Image is rotated over an angle that is not a multiple of 90: To check if your PDF page contains any image that is not rotated by an angle of a multiple of 90. The preflight report returns such image and its basic information, if any. The basic information includes width and height, bit per component, color space, coordinates, and etc.

Image is flipped: To check if your PDF page contains any image that is flipped or mirrored. The preflight report returns such image and its basic information, if any.

Image is skewed: To check if your PDF page contains any image that is skewed. The preflight report returns such image and its basic information, if any.

Image is scaled non-proportionally with scale difference _ %: To check if your

PDF page contains any image that is scaled non-proportionally and the difference between the horizontal and vertical scale proportions is bigger than your specified percentage here. The preflight report returns such image and its basic information, if any.

- **Image Resolution**

To check the resolutions of various types of images. In case that the horizontal and vertical resolutions of an image are different, as long as one of them meets the condition specified here, the preflight report returns corresponding message.



Figure 2-182

Resolution of color or grayscale image is below _ dpi: To check if your PDF page contains any color or grayscale image whose resolution is below your specified dpi value.

Resolution of color or grayscale image is above _ dpi: To check if your PDF page contains any color or grayscale image whose resolution is above your specified dpi value.

Resolution of black and white image is below _ dpi: To check if your PDF page contains any black and white image whose resolution is below your specified dpi value.

Resolution of black and white image is above _ dpi: To check if your PDF page contains any black and white image whose resolution is above your specified dpi value.

Image use 16 bits per channel: To check if your PDF page contains any image that uses 16 bits per channel.

- **Image Compression**

To check the compression modes of various types of images.

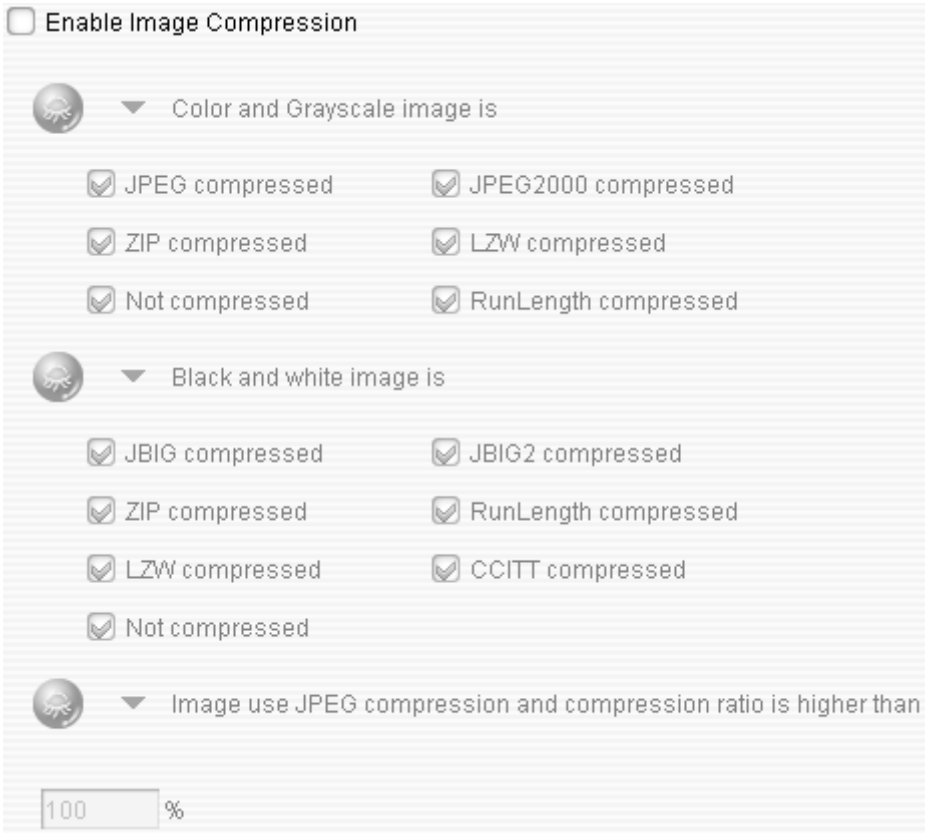


Figure 2-183

Color and Grayscale image is: To check if your PDF page contains any color or grayscale image that is compressed in one of the following selected compression modes, including JPEG, JPEG2000, ZIP, LZW and Run Length. If you select **Not compressed**, the preflight report returns even the image that is not compressed.

Black and white image is: To check if your PDF page contains any black and white image that is compressed in one of the following selected compression modes.

Image use JPEG compression and compression ratio is higher than _ %: To check if your PDF page contains any image that is compressed in the JPEG mode and the compression ratio is higher than the percentage specified here. The ratio is the file size after compression to that before compression. The lower the value is, the bigger the compression will be, vice versa. The value ranges 0-100%.

4) Color

To check the color setting of your PDF page.

- **Process Color**

Mainly to check the color spaces applied in your PDF page.



Figure 2-184

RGB is used: To check if the RGB color space is used in your PDF page.

Calibrated Gray or Calibrated RGB is used: To check if the Calibrated Gray or Calibrated RGB color space is used in your PDF page.

Lab color is used: To check if the Lab color space is used in your PDF page.

ICC based color is used: To check if the ICC based color space is used in your PDF page.

Indexed color is used: To check if the Indexed color space is used in your PDF page.

N channel color space is used: To check if the N channel color space is used in your PDF page.

Ink coverage is higher than _ %: To check if your PDF page contains any CMYK graph whose total ink coverage is higher than the percentage specified here. The value ranges 0-400%.

- **Spot Color**

To check the spot color setting in your PDF page.

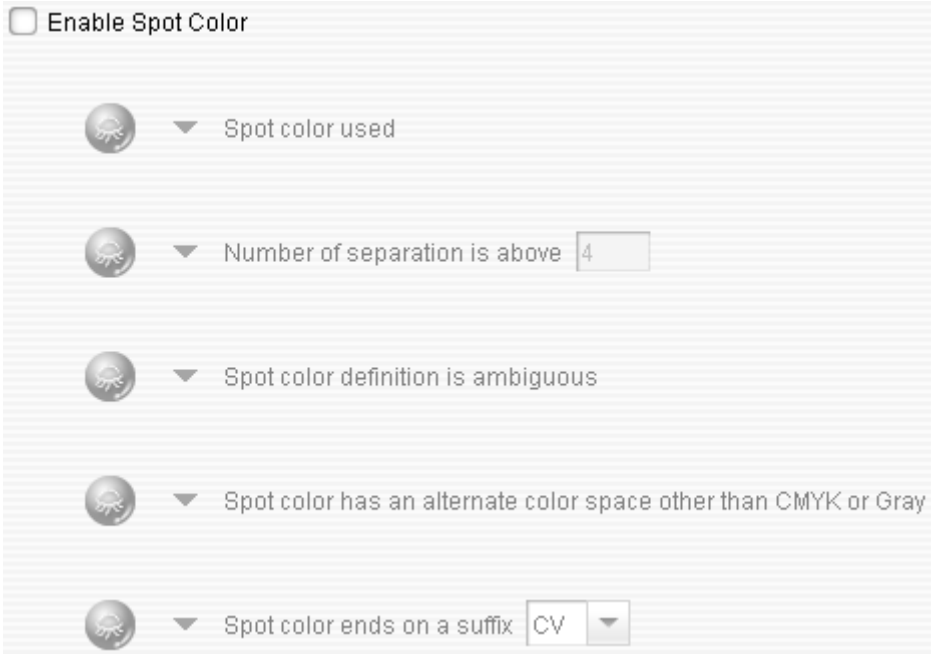


Figure 2-185

Spot color used: To check if your PDF page contains any spot color.

Number of separation is above _: To check if the number of separations in your PDF page is above the number specified here.

Spot color definition is ambiguous: To check if there is any ambiguous spot color definition in your PDF page, such as the case that two spot colors have the same name but different color values.

Spot color has an alternate color space other than CMYK or Gray: To check if your PDF page contains any spot color that has an alternate color space other than CMYK or Gray, such as RGB.

Spot color ends on a suffix _: To check if your PDF page contains any spot color that ends on a suffix specified here. If you enable this entry, you need to choose a suffix in the dropdown list, including CV, CVC, CU, CVS, CVP, C, U, and M.

- **ICC Color**

To check the ICC setting in your PDF page.



Figure 2-186

Text or line art _ tagged with ICC: To check if there is any text or line-art object is tagged with ICC profile in your PDF page.

Image _ tagged with ICC: To check if there is any image object is tagged with ICC profile in your PDF page.

5) Font

- **Font Type**

To check the font types used in your PDF page, no matter if they are embedded or not, or if they are subset embedded or not. There are five entries, each of them representing a font type, TrueType, Type1, Type3, Double byte, and Multiple Master.



Figure 2-187

- **Font Embedding**

To check if there is any font NOT embedded in your PDF page, and if the embedded font is subset.



Figure 2-188

Font is not embedded: To check if your PDF page contains any font that is NOT embedded.

Ignore 14 standard PDF fonts: By default, this option is ticked. The 14 standard PDF fonts are Times-Roman, Times-Bold, Times-Italic, Times-BoldItalic, Courier, Courier-Bold, Courier-Oblique, Courier-BoldOblique, Helvetica, Helvetica-Bold Helvetica-Oblique, Helvetica-BoldOblique Symbol, and ZapfDingbats. In general, they are NOT necessarily to be embedded in the PDF document, for the PDF maker like Acrobat can provide these fonts.

Embedded font is subset: To check if the embedded font in your PDF page is subset.

- **Font Name**

To check if your PDF page uses one or more specific fonts.



Figure 2-189

To perform this check, tick the **Check if the font name is** option, then choose an action and input the font name in the corresponding edit box. You can specify at most 8 font names.

6) Rendering

- **Rendering**

To check if your PDF page contains halftone, transfer curve, UCR, BG, and rendering intent. To further deepen the check to specific page objects, most of the check entries contain a dropdown list, which provide three options **Image**, **Line and Text**, and **All**. **All** refers to the sum of **Image** and **Line and Text** objects. Please pay attention to the setting of this dropdown list.

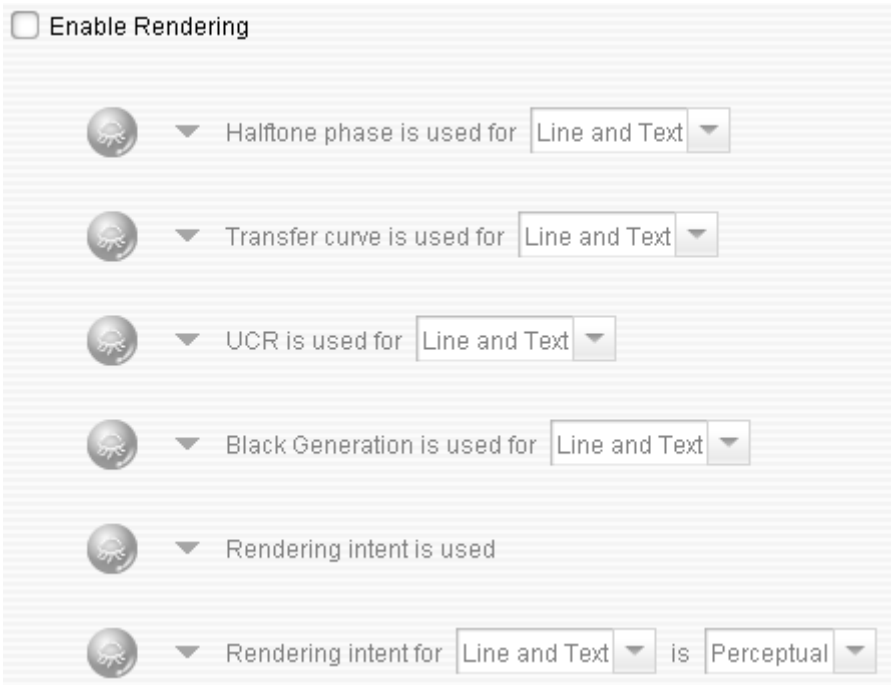


Figure 2-190

Halftone phase is used for _: To check if your PDF page contains any user-defined halftone screen setting, i.e. user-defined frequency, angle, and shape. In case that the source file of your PDF page is a PS file, to perform such a check, you need to select **Preserve halftone info** in PDF Generator setup, otherwise, the halftone information in the file may be removed by PDF Generator.

Transfer curve is used for _: To check if your PDF page contains any transfer curve. This curve is generally used for minimizing the dot enlargement, may be applied to only specific page objects, such as images, or lines and texts.

UCR is used for _: To check if your PDF page contains any UCR information. UCR is named Under Color Removal. It uses K to replace lot of C, M, Y inks, reducing ink consumption.

Black Generation is used for _: To check if your PDF page contains any BG information. BG is named Black Generation, a process of black generation during the image transfer from RGB to CMYK.

Rendering intent is used: To check if your PDF page uses any rendering intent.

Rendering intent for _ is _: To check the detailed rendering intents for various types of objects.

4.6 Trap

4.6.1 Overview

Founder's Trap is designed to meet the practical needs for trap process from customers and the market, enhancing ElecRoc's trap process capability.

Trap can be a stand-alone ElecRoc processor that may be installed on the server or any other connected LAN computer. In workflow, Trap can be connected with other node, or exists as a stand-alone node. If connected, it can stay behind PDF Generator, Preflight, PDF CMS, or before Imposer, PDF Export, or PDF Rasterizer, to form an automated trap process workflow.

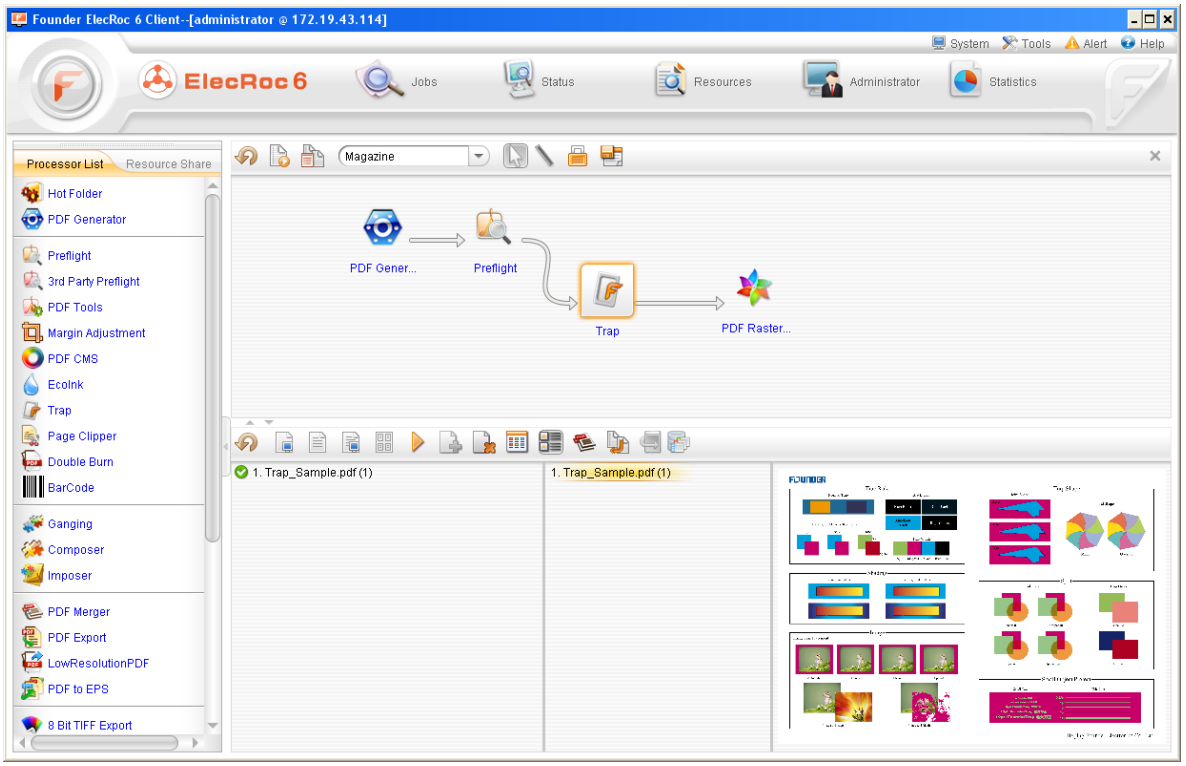


Figure 2-191

There are two file queues, input and output, under the Trap node. After the process, you can see the trapped PDF files in the output queue. The result can be viewed through high resolution thumbnail image, by way of quick preview in the job window, or in an independent preview window. Moreover, as to the files in the output queue, you can choose right-click menu item **Download** to open the output file in Acrobat, checking the result with the trap plug-in, which is provided with ElecRoc and can be integrated into Acrobat.

4.6.2 Trap Basics

Trapping is a prepress technique. It consists of creating small overlaps between abutting colors, spread or choked, in order to mask registration problems on the printing press later on in the graphical production. As shown in the below, the images contain two colors, the light and dark grays. The left image represents the original design; the middle represents misregistration, small gaps showing up as a result of inaccuracies; the right

shows trapping effect, overlaps being created to fill up the gaps by way of spreading or choking the two colors.



Figure 2-192

- **Definitions**

Trapping objects refer to the image, graph, bitmap, text, line, shading objects in different colors on the PDF page. The trapping happens at the edges or joints between two abutting objects. The overlapping area formed by spreading or choking objects are trapping area, or trapping placement.

- **Trapping Types**

Trappings are generally sorted into normal and black trappings. Both of them are applied to all page objects, including the images and small objects mentioned later on in the image trapping and small object protection.

Normal trapping: It refers to the trapping in general sense, apart from the black trapping.

Black trapping: Black trapping is special for black objects. If the density for the black separation is comparatively high, the trapping area should spread underneath the black, i.e. the black remains unchanged, while the other colors are spread or choked. On the contrary, if the black is spread or choked, it will cover other colors and make them nearly invisible. To avoid such case, a special rule is thus applied to the black objects.

- **Difference of the Two Types**

1) Normal trapping is object-level trapping, happening between the two abutting objects, and not limited to specific separation of the objects. Black trapping is separation-level trapping, happening between the black separation and other separation of the black object, or between the black separation of the black object and the non-black separation of the abutting object.

2) Trapping placement of normal trapping is controlled by **Sliding Trap Limit**, and all the separations of the object may be spread or choked. The trapping area of black trapping spreads wholly underneath the black separation, i.e. the non-black separations are spread or choked, the **Sliding Trap Limit** value doesn't work.

Sample: The image below contains two abutting objects, one is the yellow square of Y100, and the other is the black circle of C60 K100. The right is the result after separation.

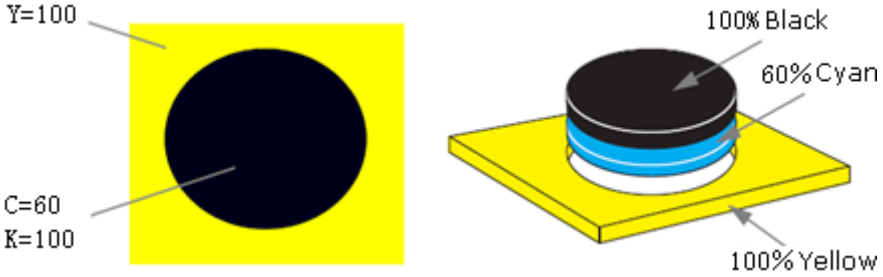


Figure 2-193

If normal trapping happens between the yellow square and the black circle, the C, Y separations of the black circle and the Y separation of the yellow square may all be spread. Part of the trapping area may be under the black circle; while part may be over the yellow square (specific placement can be controlled by parameters).

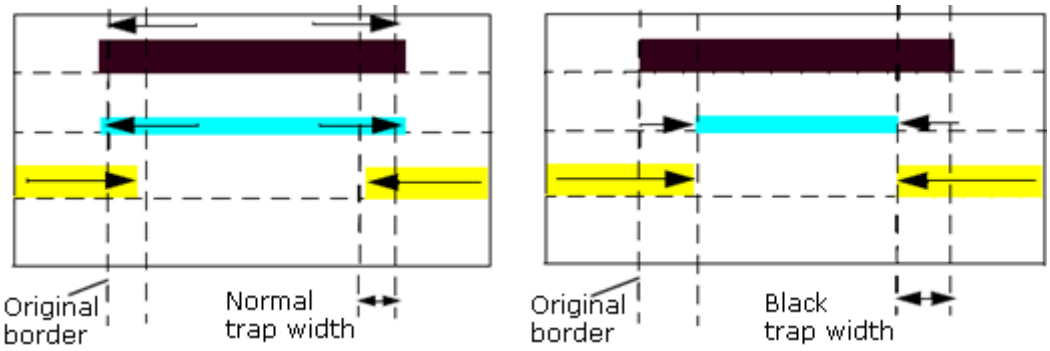


Figure 2-194

If the black circle is considered as a black object, and thus the black trapping happens between the yellow square and the black circle, the K separation of the black circle will then keep unchanged, the non-black separations, including the C of black circle and the Y of the yellow square, are spread or choked underneath the K separation.

3) The trapping width of black trapping is generally bigger than that of normal trapping (usually multiplied with a factor of 1.5 or 2).

- **Normal trapping Condition**

As the prerequisites for an occurrence of normal trapping between two abutting objects, on the one hand, there must be enough color difference between the two objects, controlled by Trap parameter **Ink Settings** > **Step Limit**, the higher the value, the less the objects qualified to be trapped; on the other hand, the common density of the two objects must be within a certain range, less than the specified **Trap Rules** > **Common Density Limit**, the higher the value, the more the qualified objects be.

- **Black trapping Condition**

The **Black Color Limit** and **Black Density Limit** parameters under the **Trap Rules** tab control the range of the objects for black trapping. The higher the two values are, the less the qualified objects would be. Black trapping is applied to opaque spot color objects, but that whether it is also applied to normal spot colors is controlled by the two parameters.

- **Trapping Placement**

Black trapping: The trapping area locates between its own black separation and other separations of the black object, or between the black separation of the black object and non-black separations of its abutting object. The area spreads entirely under the black separation, in other words, the non-black separations are spread or choked.

Normal trapping: The trapping area always spreads from the lighter to the darker colors. Most or all of the area locates under the darker objects, the detailed placement being controlled by the parameter **Sliding Trap Limit**. The effect is most obvious when it happens to a shading object, for that each location in the shading has a distinct color value, producing a continuous change from darker to lighter colors, or from lighter to darker, and thus the trapping placement changes subsequently.

1. When **Sliding Trap Limit** is 0%:



Figure 2-195

2. When **Sliding Trap Limit** is 100%:



Figure 2-196

3. When **Sliding Trap Limit** turns to 70%:

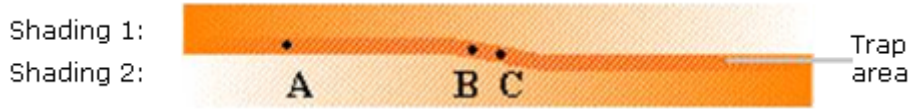


Figure 2-197

- **Trapping Width**

The width of the trapping area is controlled by Founder trap parameter **Geometry** > **Trap Width**. **Normal** controls the normal trapping width while **Black** controls that for black trapping.

Take the following factors into consideration when you specify the trapping width: 1) the black trapping width is usually bigger than normal trapping (1.5~2 times); 2) obviously affected by paper quality, generally speaking, the normal trapping width for offset /coated paper is 0.1~0.3 pt, offset /offset paper is 0.3~0.8 pt, rotary offset/newspaper 0.4~0.8 pt, flexo-printing 0.7~5 pt, and etc; 3) the screen lines per inch also affects, usually 0.5~2 times of the line width, e.g. if the line width is 0.48 pt in 150 lpi, the trapping width can then be set to 0.24~0.96 pt; 4) for higher printing quality, the width should be set to the strict minimum.

Note: *In order to highlight the effect of each parameter, the sample figures in this manual are generated with comparatively higher trapping width, which may be evidently different from the result in actual production.*

- **Trapping Color**

Normal trapping: The color of the trapping area is controlled by Founder trap parameter **Ink Settings** > **Color Scaling**. The higher the values are, the deeper the color will be.

Black trapping: It is a simple color addition of the black separation and the non-black separations.

4.6.3 Trap Parameter Setup

1. How to Configure

Double-click the Trap item in **Administrator** > **Processor Management**, or double-click the Trap node in job window, to open the Trap parameter setup window.

Like any other ElecRoc processor, Trap also supports parameter template. To create a template, choose **Administrator** > **Processor Management** > **Trap** to open the parameter setup window, configure the parameters as needed, and then choose **Load Parameters** > **Save As** at the lower-left corner of the window.

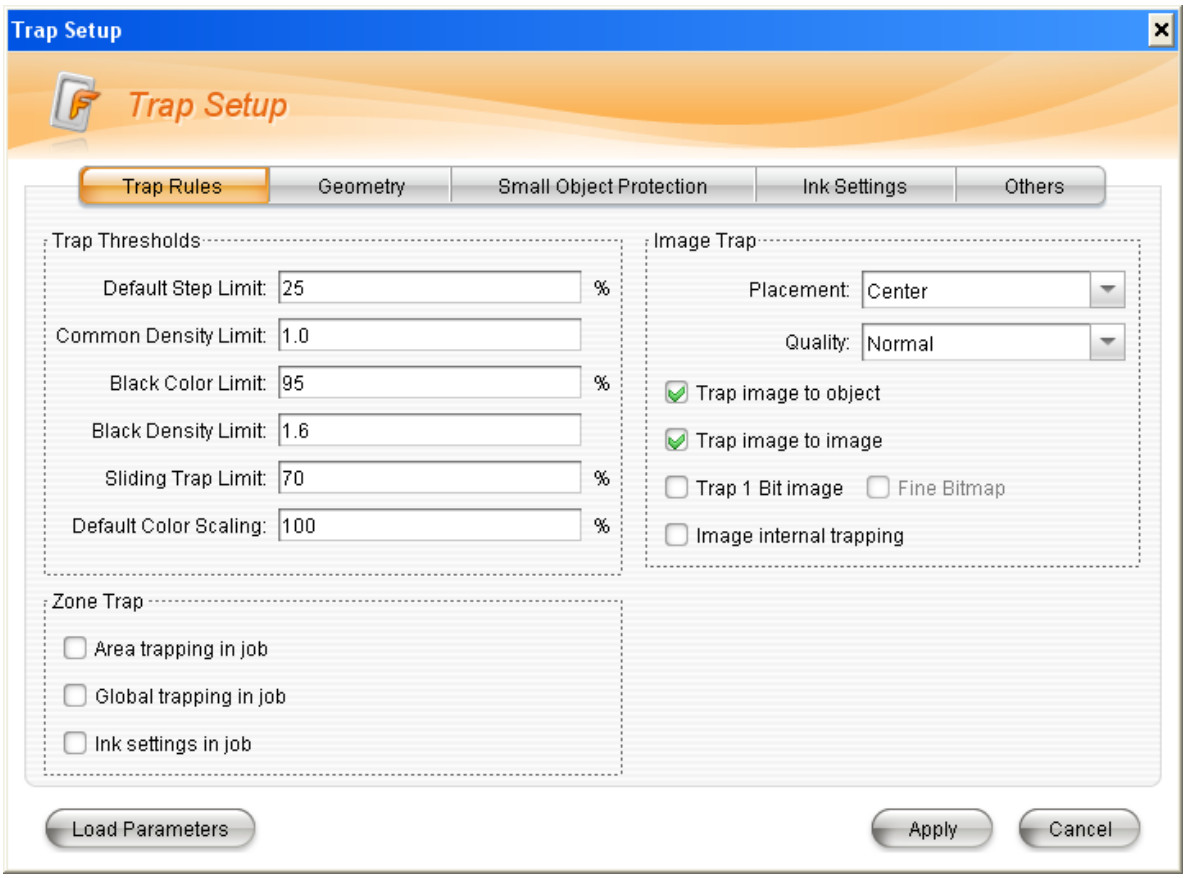


Figure 2-198

2. Trap Parameters

1) Trap Rules

Parameters under this tab are mainly in three groups, Trap Thresholds, Image Trapping, and Zone Trap. They make rules for the normal, black and image trappings in terms of the trapping condition, trapping placement, default trapping colors, and control if to enable the predefined zone trap setting in job.

- **Trap Thresholds**

These thresholds or limits are used to judge if a trapping happens, the trapping placement and the default trapping color.

Default Step Limit: The step limit is one of the factors in determining if a normal trapping happens. The normal trapping happens between two abutting objects only when their relative color differences on at least two separations are no less than the corresponding step limits. The **Default Step Limit** here only defines a default step limit for each newly-added color separation. ElecRoc finally uses the step limits under the **Ink Settings** tab to perform the trapping process.

Common Density Limit: This is one of the factors in determining if a trapping happens. The normal trapping happens only when the common density of two abutting objects is no more than the limit specified here. And this limit is also applied to black trapping.

Black Color Limit: One of the factors affecting if a black trapping happens. To be viewed as the black object qualified for black trapping, the percentage in black color separation of the object must be no less than the value specified here.

Black Density Limit: Also one of the factors affecting if a black trapping happens. To be viewed as the qualified black object, the neutral density of the object must be no less than the value specified here. The object that meets both the requirements of **Black Color Limit** and **Black Density Limit** will be viewed as black object, and a black trapping can then happen to it.

Sliding Trap Limit: This parameter controls the trapping placement. Its value ranges from 0 to 100%. It doesn't work on the black trapping, or when the trapping placement between image and graph is set to Center, Choke or Spread.

Default Color Scaling: It is the default value for the **Color Scaling** parameter whenever you create a new separation under the **Ink Settings** tab. The color scaling controls the color in the trapping area when a normal trapping happens between two abutting objects.

- **Image Trap**

Placement: This parameter controls the trapping placement when trapping happens between an image and another abutting object. Here the image may be a 1-, 8- or 16-bit image; another object may be an image, a graph or a text object. Therefore, this parameter works on the **Trap image to object** and **Trap image to image**, mentioned follow-up, but the **Trap 1 bit image** is NOT affected in most cases. That whether an image and its abutting object are qualified for a normal or black trapping, is determined by rules mentioned previously. When qualified, whether a trapping happens is yet controlled by the three checkboxes, **Trap image to object**, **Trap image to image** and **Trap 1-bit image**.

1) **Automatic**. The image is viewed as a normal object, and trapped as per normal or black trapping rules, but the trapping placement is calculated based on the colors at the image edge, spread from lighter to deeper colors, unrelated to **Sliding Trap Limit**.

2) **Center**. This option is applied to most of the image trappings. The trapping always happens at the middle between the image and its abutting object, unrelated to the objects' densities and color values.

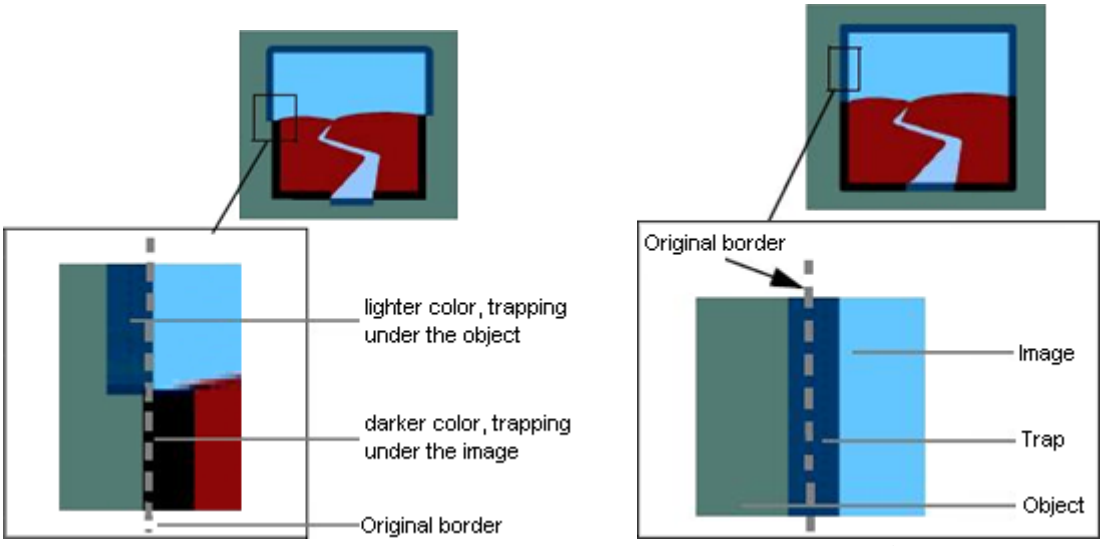


Figure 2-199

3) **Choke**. For the trap between image and graph, the trapping area is based on the image, and choked inside the image; for that between image and image, the area is

based on the top image, and choked inside the top image.

4) **Spread**. For the trap between image and graph, the trapping area is based on the image, and spread outside the image; for that between image and image, the area is based on the top image, and spread outside the top image.

Note: *Irrespective of what option is enabled, if the black trapping conditions are met, then the trapping happens as per the black trapping rule, i.e. other separation is spread or choked under the black separation. The black trapping is prior to normal trapping.*

Quality: The quality of image trapping falls into three levels, normal, higher and best. **Normal** easily produces large trapping area, while **Best** enables higher color preciseness.

Trap image to object: Controls if a trapping happens between an image and a graph or text object, when the trapping conditions are met.

Trap image to image: Controls if a trapping happens between two images, when the trapping conditions are met.

Trap 1-bit image: Controls if a trapping happens between a 1-bit image and an abutting object, when the trapping conditions are met. Here, the abutting object may be an image, a graph, a text or a 1-bit image; and the 1-bit image is an object different from image, graph and text, because its color is NOT limited only to black or white, each of its pixels is either colored or colorless, the colored pixels are colored with the same color, the colorless pixels can reveal other object underneath, if any.

1) When trapping happens between 1-bit image and other image, the trapping placement is controlled by **Image Trap** > **Placement**. If the placement is set to center, or spread, or automatic, the other image is spread; if the placement is set to choke, the 1-bit image is spread. The following figure shows that the 1-bit image is spread.

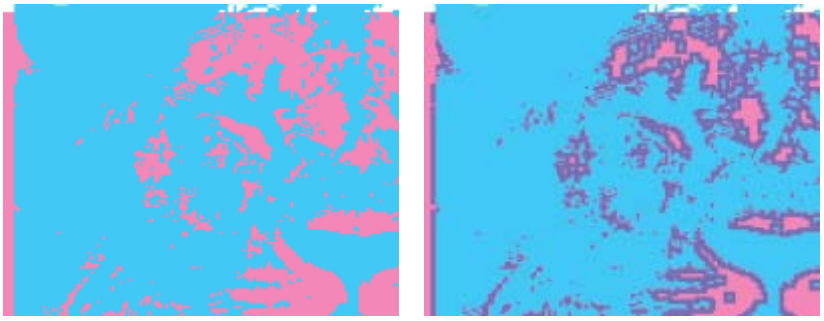


Figure 2-200

2) When trapping happens between 1-bit image and a graph, or a text, or a 1-bit image, the trapping placement is always under the deeper object, similar to the case when the **Sliding Trap Limit** is set to 100%.

1-bit image and a graph:

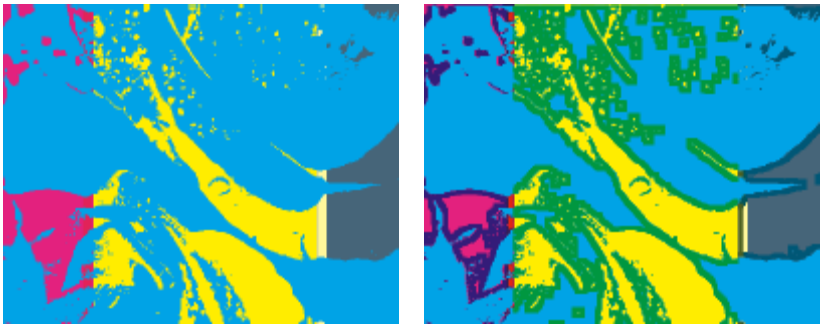


Figure 2-201

1-bit image and text:



Figure 2-202

Two 1-bit images:



Figure 2-203

Fine Bitmap: It becomes available when the **Trap 1 Bit image** option is selected. If checked, it can enhance the preciseness of the 1 bit image trapping, especially that at the common boundary of multiple overlapping 1 bit images. This option may increase the trap processing time.

Image internal trapping: This option is recommended for vector images or images with edges in sharply transitional colors (like cartoons). If checked, the trapping happens inside the darker edge, to keep better visual effect.

- **Zone Trap**

Before you use ElecRoc, you may use a front-side application, such as Founder's ElecRoc trapping plug-in that can be integrated in Acrobat, to predefine trap settings in the source file. In this case, you can check the options here to enable the predefined trap settings. For details on ElecRoc trap plug-in, refer to Appendix C.3 in Part 4.

Area trapping in job: You may use a front-side application to specify some areas on each page of the source file, and define various trapping settings for them. Check this option if you want to enable such area trapping settings.

Global trapping in job: Check this option if you want to use the global trap settings predefined in the source file, if any. The global trap settings are applied to the entire page, not overriding the area trap settings defined separately.

Ink settings in job: If checked, the ink settings predefined in the source file, including the colors, densities and types, will be used.

By default, the three options above are all unchecked.

2) Geometry



Figure 2-204

- **Trap Width**

It refers to the width of the overlaps when trapping happens between two abutting objects.

Normal: The width for normal trapping.

Black: The width for black trapping, i.e. the width that other separation is spread or choked under the black separation.

Unit: The unit of trapping width, mm, inch, or point.

- **Trap Shape**

Here you can define the geometric shapes of the two ends and joints in trapping areas.

End: This controls the shape of the ends in trapping area. If you choose **Miter**, the end is tailored into miters; if you choose **Overlap**, the end is still the overlap, like the rest of the trapping area. See the following figures, the middle color refers to the trapping area.



Figure 2-205

Joint: This parameter controls the shape of the joint.



Figure 2-206

Bevel: A triangle is tailored off at the joint to form a bevel.

Round: To round the joint with a circle that uses the trap width as the radius and abuts upon the two outer edges of the cross overlaps.

Miter: Two identical isosceles triangles are tailored off at the joint.

3) Small Object Protection

When trapping happens to small objects, including small texts and thin lines, these objects may easily become thinner and smaller, producing a visual effect deviated from the expectation. In this case, you can properly reduce the trap width to protect them.



Figure 2-207

- **Small Text**

Settings here aim to reduce the trap width when trapping happens to the texts whose sizes are no more than the specified size.

Size Limit: If the texts qualified for normal or black trapping are smaller or equal to the specified font size here, they will be considered as small objects, and thus their trap widths will then be reduced according to the percentage defined by **Trap Width Scaling**. The value range is 0.0~100.0, in the unit of Pt. The default is 6 Pt. 0 represents no protection.

Trap Width Scaling: Here you can define the percentage to scale down the trap width. The value range is 0.0~100.0 in the unit of %. 0 represents no trapping to small texts.

- **Thin Line**

Similar to small texts, settings here can reduce the trap width when trapping happens to the lines whose widths are no more than the specified value.

Size Limit: If the lines qualified for normal or black trapping are thinner or equal to the specified width here, they will be considered as small objects, and thus their trap widths will then be reduced according to the percentage defined by **Trap Width Scaling**. The value range is 0.0~100.0, in the unit of Pt. The default is 0 Pt, representing no protection.

Trap Width Scaling: Here you can define the percentage to scale down the trap width. The value range is 0.0~100.0 in the unit of %. 0 represents no trapping to small lines.

4) Ink Settings

Options under this tab are mainly designed for you to define the ink information used in trap process. Correct ink information, including the color, density, ink type, step limit, and color scaling, plays an important role in determining the trap condition, type, placement, width and the color.

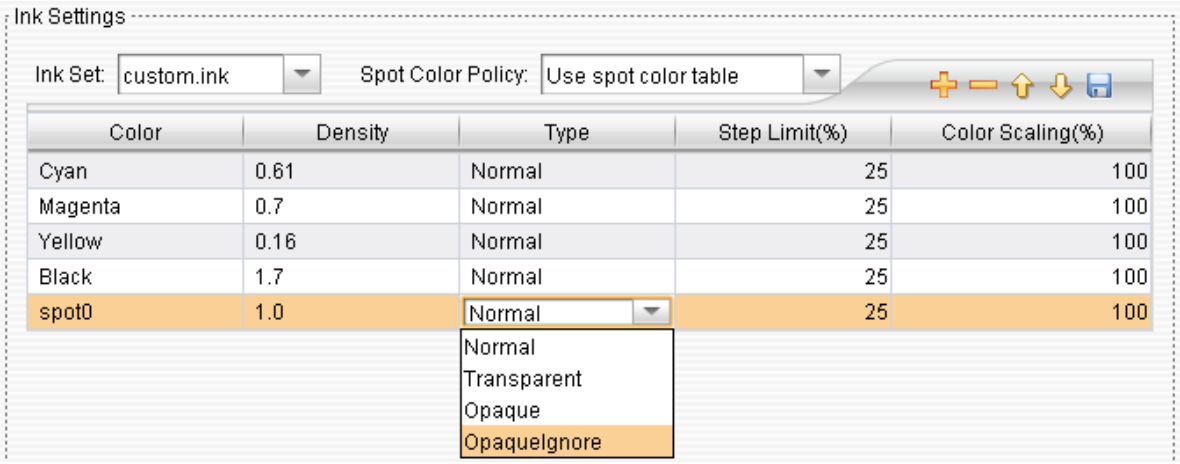


Figure 2-208

- **Ink Settings**

Color: Input the color separations in the file into the table, and define their ink properties. Cyan, Magenta, Yellow and Black are four basic separations, and thus can NOT be deleted or renamed. If the file contains spot color, you can click the icon at the upper-right of the table to add a spot color separation. By default, the **Color** name of the new separation is *spot* plus a number suffix; the **Density** is 1; the **Type** is normal; the **Step Limit** and **Color Scaling** values are initialized according to the **Default Step Limit** and **Default Color Scaling** values under the **Trap Rules** tab. After you add a separation, you can re-define its properties as needed, or click the icon to delete it, if unneeded.

Hint: *You can use the right-click menu item **Page Info** to view what spot colors your PDF page contains.*

Density: It refers to the density of the ink, with a valid range of 0-10, and a precision of three decimal places. The densities defined here will be applied in the calculations that are involved in determining the trap condition and trap placement.

Type: The ink types for CMYK are the same Normal, and can NOT be changed. But for spot color inks, there are four optional types.

1) **Normal**: also called semi-transparent, in which a spot color is considered as a special process color that has similar trap properties as CMYK colors. The objects output with the normal ink will either override or be override by other ink.

As shown in the below, the red circle is a spot color object located on top of two squares. The relation between the circle and the squares is overprint in the left diagram and knock-out in the right.

If the red circle is output with normal ink, at the left, i.e. when the relation is overprint, the trapping doesn't happen between the circle and the squares, but happens between the two squares (specifically the joint under the circle); at the right, when the relation is knock-out, the trapping happens between it and the two squares.

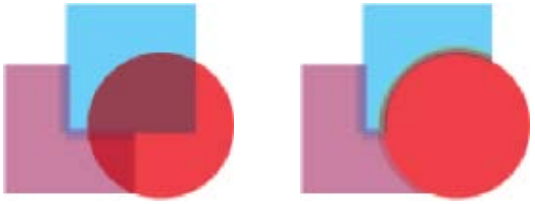


Figure 2-209

2) **Transparent**: No trapping happens between the transparent ink and any other ink, but the non-transparent ink objects underneath can be trapped. Polish oil is an example of transparent ink. As shown below, the trapping doesn't happen between the circle and the squares in both cases, but in the left case, it happens between the two squares underneath.



Figure 2-210

3) **Opaque**: The trapping happens at the edge of the opaque ink object, but doesn't happen yet between the objects underneath. Black is actually an opaque ink. The black trapping rule is applied between the opaque object and other ink object.

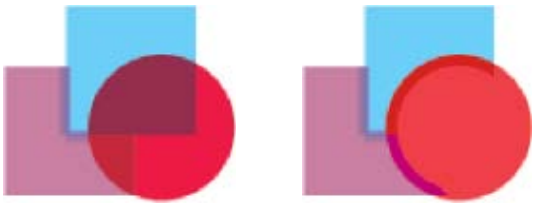


Figure 2-211

4) **Opaque Ignore**: The trapping never happens between this ink and any other ink, and never between the abutting objects underneath. This type of inks is mostly found in special art processes like gold and silver.



Figure 2-212

Step Limit: It is one of the factors that determine if a trapping happens between two abutting objects. ElecRoc uses this value to calculate if the color difference between two abutting object in one separation is big enough for a trapping. The default value whenever you add a spot color separation comes from the **Default Step Limit** parameter under the **Trap Rules** tab. If the default value doesn't meet your actual need, you can change it as follows, click the value in the table to activate an edit box, then input the actual value and press Enter. You can input the value by typing, or by copying/pasting, or by clicking the up/down buttons aside. Moreover, you can also change the value by right-clicking the separation and choosing **Change Step Limit to**. Values for all the separations may be different from each other, if needed.

Color Scaling: This parameter controls the trap color in the trapping area when a normal trapping happens between two abutting objects. The **Default Color Scaling** parameter under the **Trap Rules** tab determines the default value for each newly-added spot color separation. The method to change this value is the same as that for Step Limit, by way of clicking to activate an edit box, or by using the right-click menu item **Change color scaling to**. Values for all the separations may be different.

- **Trap Sequence**

If you have defined opaque inks in the table, you can then use the icons and at the upper-right to change their positions in the table, so as to adjust their trapping sequence. If a trapping happens between two abutting opaque inks in the table, the ink at the bottom side keeps unmoved, the trapping happens to the ink at the top side.

For example, provided that you want to use two opaque inks, the gold and silver, to output two abutting objects, if the gold is output first, and the trapping happens to the silver ink, then you need to position the gold ink below the silver in the table, vice versa.

- **Trap Profile**

The introduction to trap profile aims to simplify your work on configuring the ink settings.

This file records information on the separations and the corresponding ink densities and types. You can save the ink setting information in current table as a trapping ink profile into ElecRoc system, for public use by all the Client users. To do this, click the icon at the upper-right of the table to open a dialog box, input the file name and then click **OK**.

Note: *The trapping profiles in your ElecRoc system can be managed centrally in **Resources** > **Profile Resource** > **Trap**. Operations like creating, editing, importing, exporting are all supported. The spot color related information on your PDF page can also be saved as a trapping profile under the PDF Generator node. Moreover, you can check the **Ink settings in job** option under the **Trap Rules** tab to use the pre-defined ink information in the file.*

To load a trapping profile, please simply choose the one you want to use from the **Ink Set** dropdown list. Note that the **Step Limit** and **Color Scaling** values will turn to their default values after you load an ink profile.

- **Auto Spot Color Policy**

It's recommended that you manually define all the ink information on the spot color separations, including the ink densities, the types, the step limits, the color scaling, and the sequence, to ensure the quality and preciseness of spot color traps.

However, at the same time, ElecRoc also provides you with an auto process mechanism. This mechanism can automatically detect the spot colors in the file, calculate their ink densities according to the spot color values and the CMYK ink densities, determine if a trapping happens based on the calculated densities, the default types and step limits, and then trap if qualified. The normal trapping is performed using the default color scaling value in this case.

The **Spot Color Policy** parameter controls how to auto process the spot colors from the file, in case that these colors are not defined yet in the ink setting table.

Use spot color table: If chosen, ElecRoc automatically calculates the ink densities of the undefined spot colors, and then determines if a trapping goes based on the calculated densities, the default types and step limits, and finally performs the trapping if qualified. The spot colors defined already in the ink table are processed as predefined.

Use spot color in jobs: ElecRoc automatically calculates the ink densities of all the spot

colors, and then determines if a trapping goes and performs the trapping if qualified. The predefined ink settings in the table become ineffective.

No trapping for spot color: ElecRoc performs no trapping at all to the spot colors undefined in the ink table.

Note: *When automatically detecting the spot colors, in case that the color name contains unidentified characters, ElecRoc will make a proper character substitution.*

5) Others



Figure 2-213

Time Out: If the trap process time for a file exceeds the value specified here, ElecRoc will automatically stop the process. This setting stops only the overtime files, i.e. the process on the follow-up file continues as usual if the current file is stopped. The unit is minute, and one decimal place is allowed. The default value is 0, indicating no time out setting.

Enable Preview: If checked, a thumbnail image will be generated after the trap process, with the purpose for you to preview the trap result.

4.7 Hot Folder

A hot folder refers to a specially specified folder over network or in your local computer. ElecRoc can automatically identify files in this folder, and submit them to PDF Generator for process. Once such a folder has been specified, you can submit files to ElecRoc system by simply putting files into the folder. It not only provides a flexible, easy and fast way to submit files, but also improves greatly the working efficiency.

To configure a hot folder, perform as follows:

1. Create a shared folder on any PC in the local area network where ElecRoc is located.

2. Open the **General Settings** window on ElecRoc Server, and then add the folder path under the **Input Directory** tab.

3. Start up ElecRoc Client, open or create a job and add the Hot Folder node, then right-click it to open the parameter setup window.

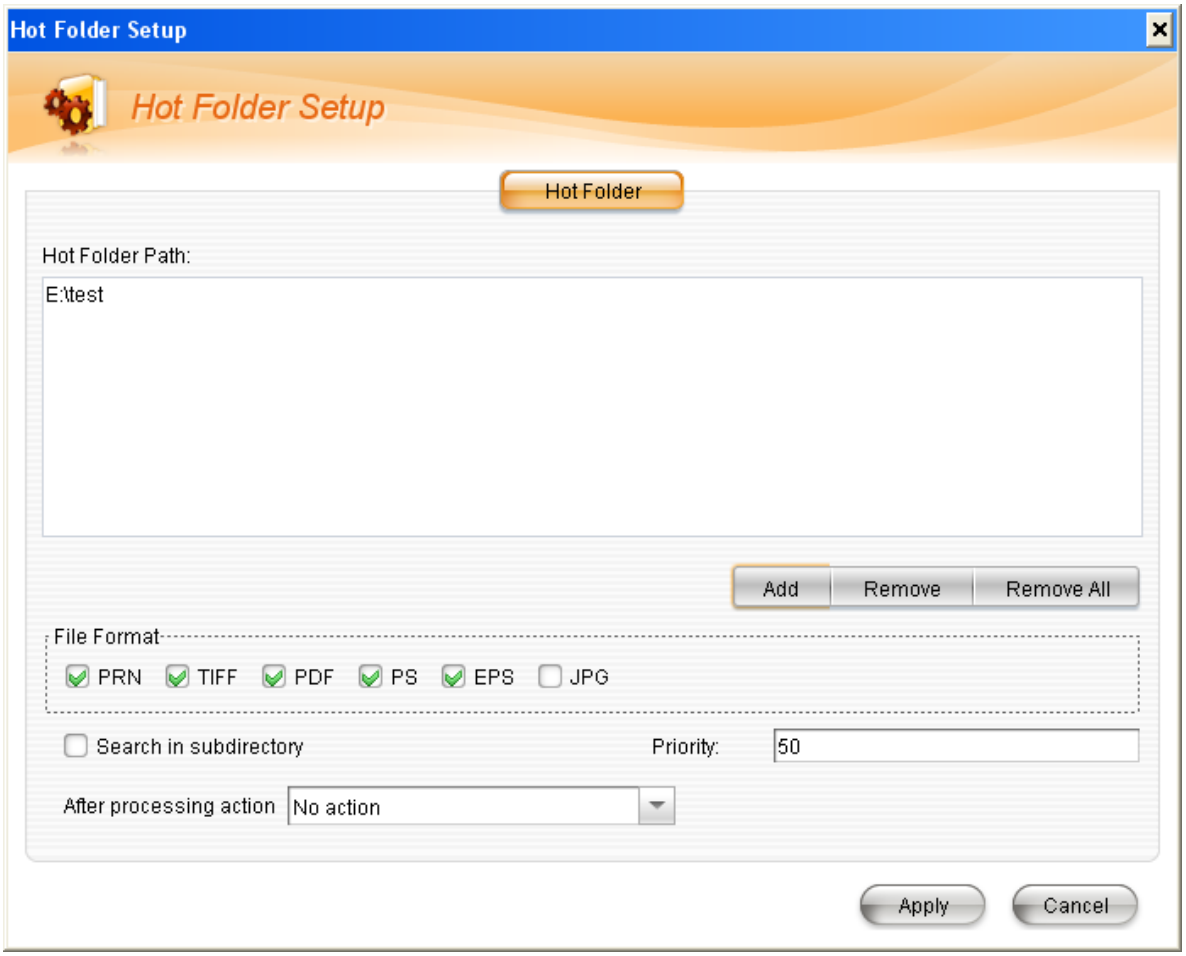


Figure 2-214

Please configure the parameters as needed.

Hot Folder Path: Click **Add** to open a **Select Hot Folder** dialog box and choose a directory as the path of the hot folder. The dialog box lists all the source file directories configured from ElecRoc Server. Don't choose the directory that has already been chosen as the hot folder for other job. Click **Remove** to delete unneeded path, while **Remove All** to delete all the added paths, if needed.

File Format: The hot folder can detect and submit files in such formats as: PRN, TIFF, PDF, PS, and EPS. Check the formats you want the hot folder to detect and submit.

Search in subdirectory: If checked, the subdirectories in the hot folder, if any, will also be searched for source files to be submitted.

Priority: The default process priority for the source files entering into ElecRoc workflow by way of the hot folder.

4. Return to the job window after the configuration. Add the PDF Generator node behind the hot folder and make them connected.

By default, the Hot Folder is held. Right-click it and choose **Resume** to run it. When being running, the node becomes green. Now you can copy the source files into this folder to process them.

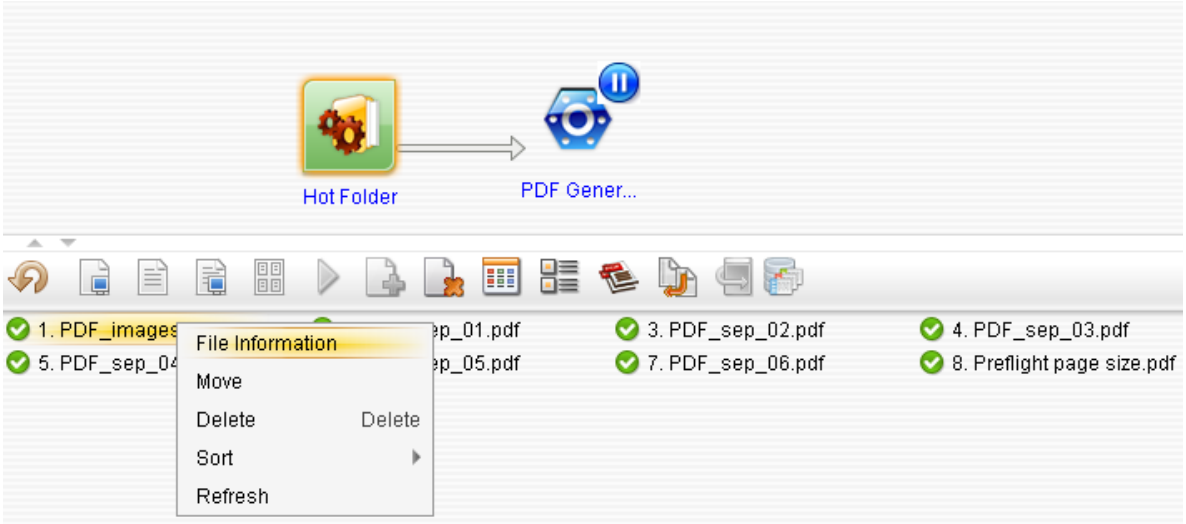


Figure 2-215

If you choose the node, you can see all the source files detected and submitted by the hot folder in the job window. And if you are authorized to modify the hot folder, you can also delete or move these source files with right-click menu items.

Chapter 5 Imposer

5.1 Imposer Parameter Setup

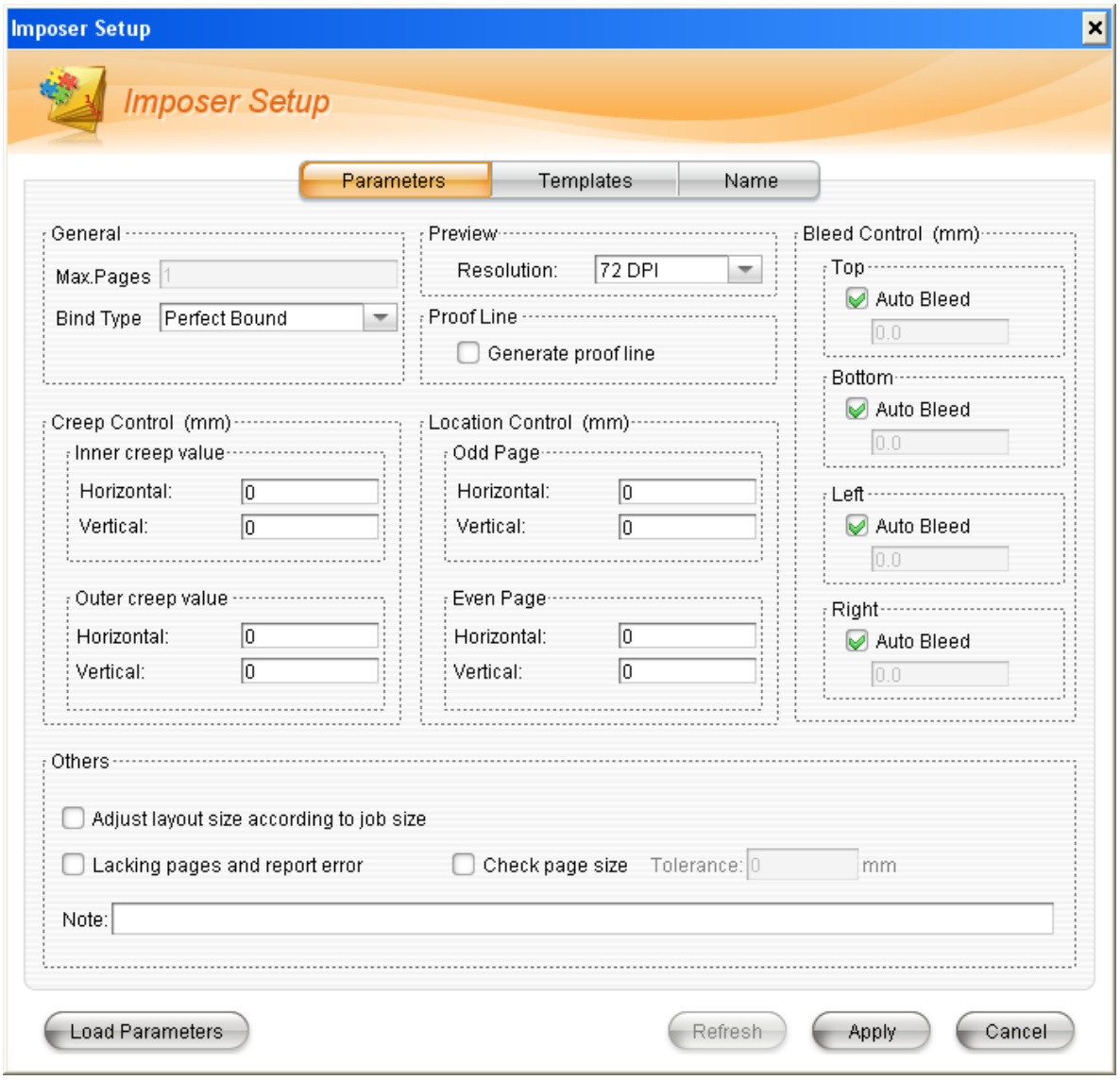


Figure 2-216

The imposer parameter setup window opened in job window is shown as above. Note that the **Templates** tab will disappear if this window is opened from **Administrator** > **Processor Management** > **Imposer**.

5.1.1 Parameters

1. General

Max. Pages: It refers to the total amount of pages in all imposer templates you are using in current node (under the **Templates** tab you can specify the templates to be used). The value is unavailable for manual modification; ElecRoc automatically sums up

and displays it.

Bind Type: Six binding types are available, Perfect Bound, Saddle Stitch, Inflexed Stitch, Nested saddle stitch, Cut and stack, Cut stack and saddle stitch.

2. Preview

Resolution: You can set the resolution of the signature preview. The resolution value has three options: 36 DPI, 72 DPI and 144 DPI. We recommend 36 DPI on Mac client and 72 DPI on PC client. If the signature is too large, it is recommended lowering the resolution.

3. Proof Line

Generate proof line: If checked, the proof line will be printed on the signature. After the print, you can then fold the signature along the proof line.

4. Creep Control

When signatures are folded, the image area of the inside pages may move slightly. To compensate the movement of image area, you need to set up creep parameters. In a Saddle Stitch job, the creep value takes effect between signatures.

Inner creep value: You can set the creep value of each page. Specify a positive **Horizontal** or **Vertical** number to move the image area toward the binding; specify a negative one to move the image area away from the binding.

Outer creep value: It refers to the initial movement of the image areas on all the pages. Specify a positive **Horizontal** or **Vertical** number to move the image area away from the binding; specify a negative one to move the image area towards the binding.

5. Location Control

You can move the PDF pages horizontally or vertically in a page of imposition template.

Odd Page: The **Horizontal** and **Vertical** control separately the horizontal and vertical movements of odd pages. If the value you entered is positive, the page moves rightward or upward. If the value is negative, the page moves leftward or downward.

Even Page: The **Horizontal** and **Vertical** control separately the horizontal and vertical movements of even pages. If the value is positive, the page moves rightward or upward. If the value is negative, the page moves leftward or downward.

6. Bleed Control

This setting restricts the area within which bleeds are printed beyond the trim edge of the sheet or page.

Top/**Bottom**/**Left**/**Right**: They control the bleed margins beyond the four edges. The bleeds can be output automatically or as per your specified values.

Auto Bleed: If checked, only the bleed margin within gutter of a page will be output.

7. Others

Lacking pages and report error: When it remains unchecked, ElecRoc allows the imposer to automatically add blank page(s) to signature, if needed. Related operation message is reported in pink in the job's process information. You can check this option to disable the auto-addition. The number of the pages submitted to Imposer must be integral times of that in the imposition template, otherwise, ElecRoc issues a warning message and interrupts the process.

Adjust layout size according to job size: If checked, you can submit pages whose page sizes are different from that defined in the template layout.

For example, suppose the page size defined in template's layout is A4, and in this case you can submit pages in size of A4+ or A4-. After the submission, ElecRoc will impose the pages according to the layout's attributes, such as page number, page sequence, and page space, and in this case, ElecRoc won't enlarge or reduce the size of the actual pages, and won't cut the page content either.

Check page size: To check up the size of the pages you have submitted to the Imposer. If found the size is different from that defined in the template, it issues a report and stops the imposing process. When checked, you can further set a tolerance value.

Note: *If you have inserted a comment mark of ($JOB) in the template, please input the detailed comment here.*

5.1.2 Templates

Parameters under this tab are designed mainly for you to choose the template(s) to be used by the current imposer node.

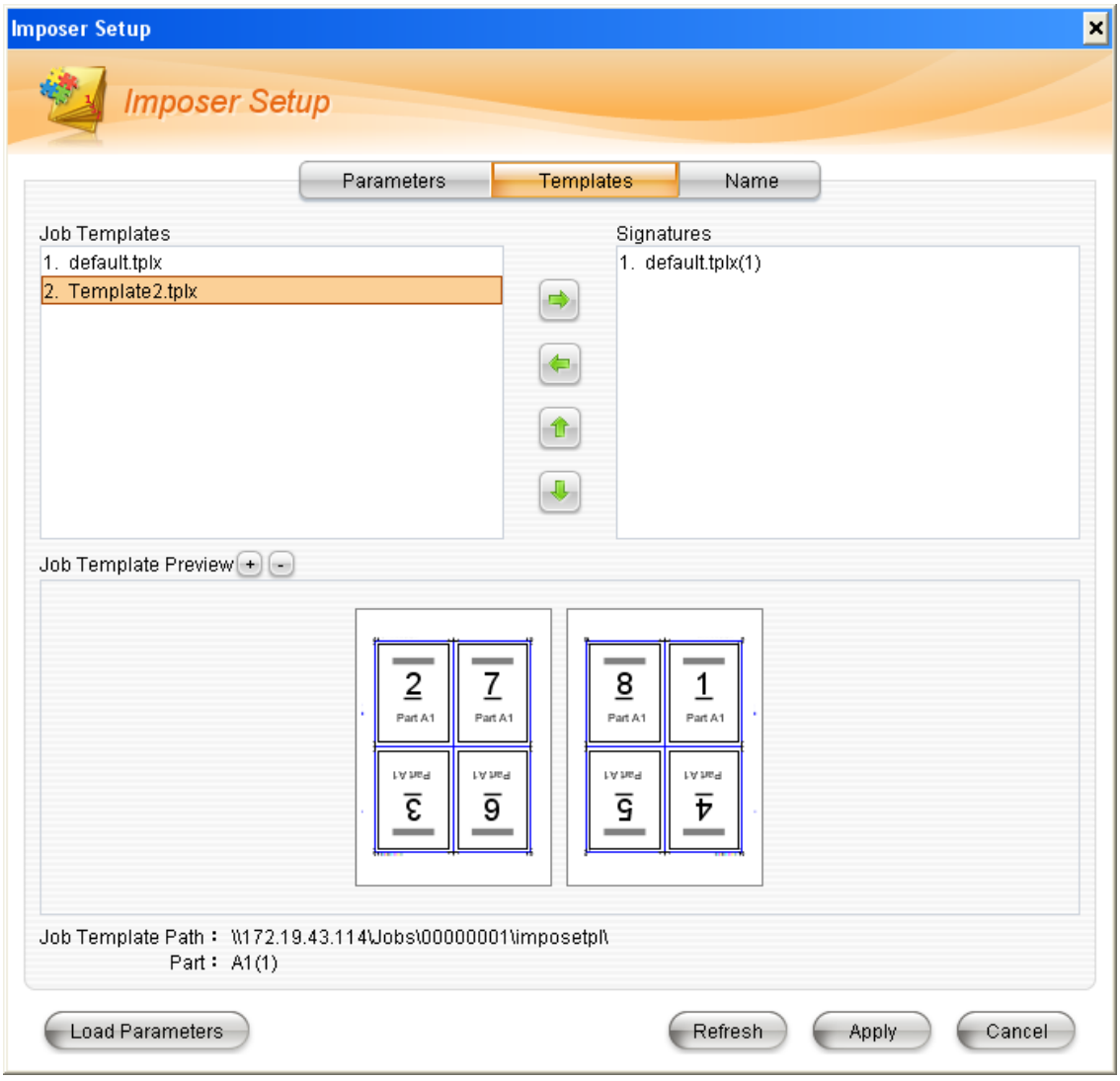


Figure 2-217

1. Job Templates

This list shows the imposition templates available for the current job. They may come from the module **Resources** > **Imposer Template** > **Imposer**, or may be the ones temporarily created.

- **Choose a template**

You can choose one or more templates from ElecRoc system. Right-click anywhere in the list area, and then choose **Select**.

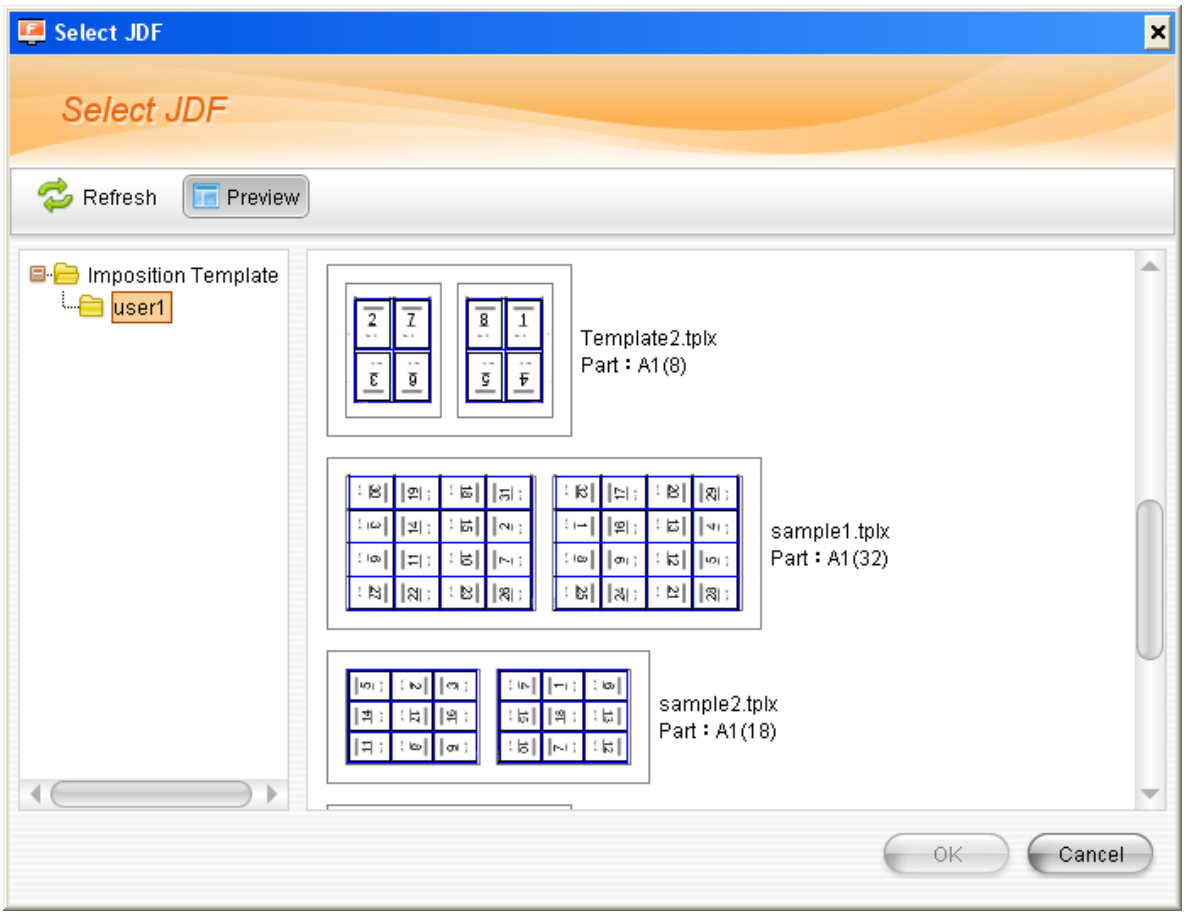


Figure 2-218

This dialog box lists all the templates under the current user, choose as needed.

- **Create a template**

You can launch the ElecRoc Imposer program to create an imposition template for temporary use in current job, by choosing the right-click menu item **New**. For details, refer to section 5.2 *Create Imposer Template*.

Or you can also choose the right-click menu item **New JDF** to create a Preps template.

- **Edit a template**

You can launch the ElecRoc imposer program to temporarily edit a chosen template in the list. If the template comes from the template management module, the edition here doesn't change the original template in the management module. Double-click the template or right-click and choose **Edit** to open the editing window.

- **More right-click operations**

With the right-click menu in the list area, you can also perform the following operations.

Delete: To delete the chosen template(s) from the list.

Select All: To select all the templates in the list.

Refresh: To refresh the list. E.g. you can click it if you want to immediately see the new template after you have created it.

Sort: To sort the templates by the name or by the time created.

- **Preview a template**

When you choose a template in the list, you will see its thumbnail image for preview in the bottom area of the window. You can zoom in and out the image by clicking / , or by dragging the right mouse button.

Job Template Path: The location of the job templates (i.e. the templates in the list) in your ElecRoc system.

Part: Here displays the part(s) and total pages in all templates in the **Signatures** list.

2. Signatures

This list shows the imposition templates to be used by the current imposer node and the times they will be used.

The right-click menu items and parameter related to this list include:

Delete: To delete the chosen template(s) in the list.

Empty: To remove all the templates in the list.

Refresh: To refresh the list.

3. Configure Template(s)

From the **Job Templates** list, choose the template(s) you want to use at the current imposer node, and then click , to open the following dialog box. Enter the times you want to repeat the selected template(s) and click **OK**, to add the selected template(s) to the **Signatures** list.

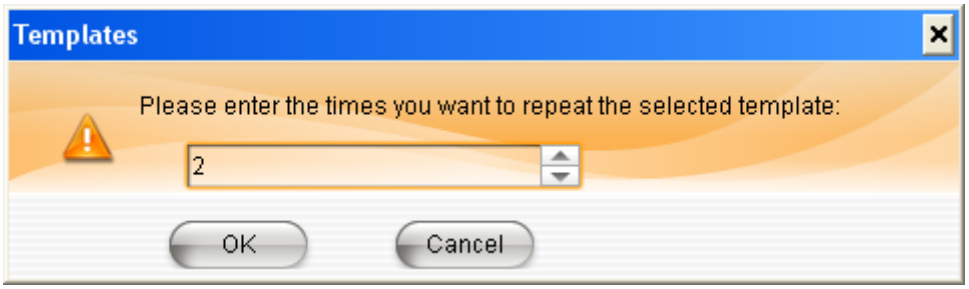


Figure 2-219

Note: *If you want to move multiple templates at once, just press the Ctrl key and select the templates one by one. And then click the right-headed arrow .*

Times of repetition: The times you want to use the current template(s) to repeat the imposition. This number is shown in brackets behind the template in the **Signatures** list. For example, suppose the current template consists of 4 pages, but we need to submit and process 8 pages. If we repeat only once, then only 4 pages can be imposed, while the rest 4 cannot. But if we repeat twice, then all the 8 pages can be imposed at one time.

With the button, you can delete a chosen template from the list; can move a template upward in the list, and move a template downward. In case that the list contains more than one template, ElecRoc uses them in sequence to impose your submitted pages.

5.1.3 Name

Here you can customize the naming rule for the signatures generated in the imposition.



Figure 2-220

Enable: If checked, the naming rule defined here is used; otherwise, ElecRoc uses a default rule.

Name: Here you can specify the fields contained in the signature name, including job name, node ID, file name, surface name, date, signature and sheet ID. The surface name, date and signature ID can be customized.

A sample name is shown below the setting.

Note: *Do not define same naming rule for the various imposer nodes in the same job.*

5.2 Create Imposer Template

5.2.1 Quick Start

This section brings you briefly to the usage of the imposer program.

1. Start the Program

Do any of the two operations as follows:

- Right-click the Imposer node in your job and choose **Template Manager**;
- Double-click the Imposer node in your job to open its parameter setup window, and then switch to the **Templates** tab, right-click in the **Job Templates** list area and choose **New**.

Note: *In the second way, once started, the program displays a **New Template** dialog box. You may specify the parameters and click **OK** (refer to the next sections for details) to create a template, or click **Cancel** to enter into the main interface of the program.*

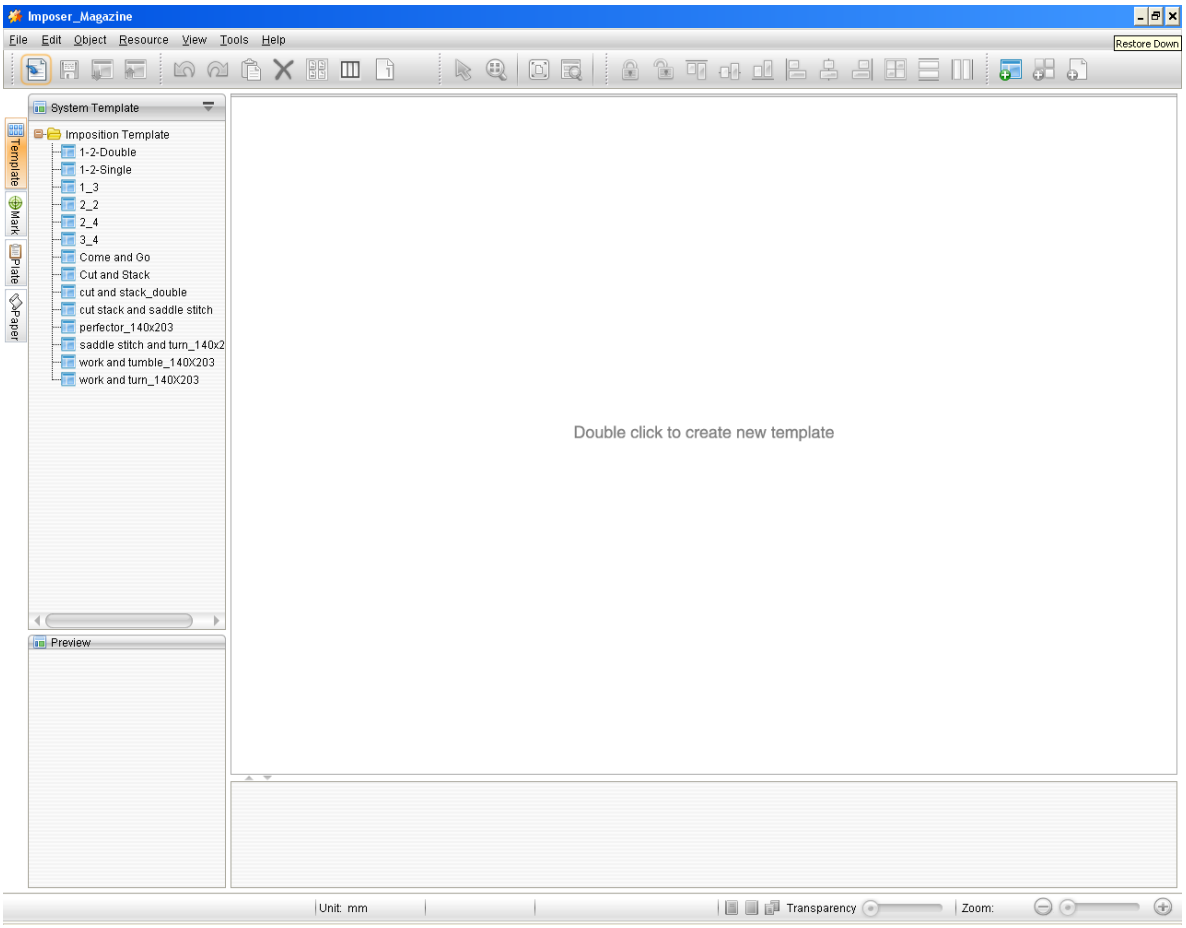


Figure 2-221

2. Create Template

1. The **New Template** window is shown as follows. You can click the toolbar icon **New Template** to open it when you have entered in the program window.

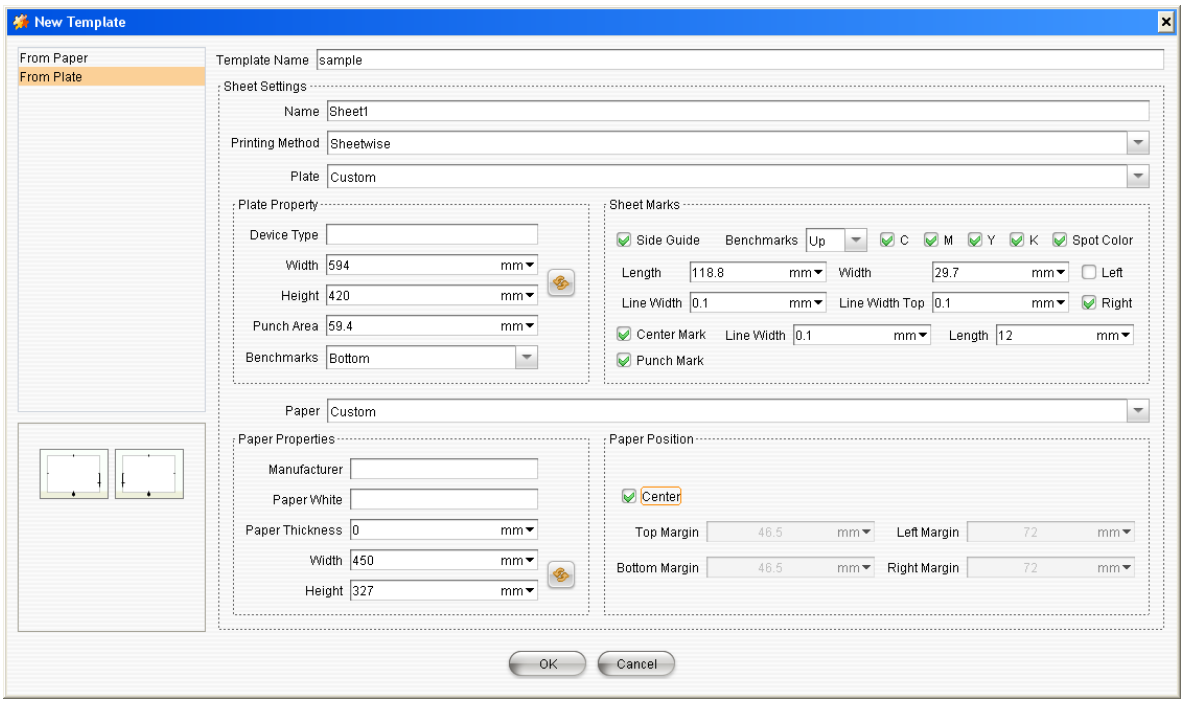


Figure 2-222

2. Input the template name in the **Template Name** edit box.

3. Define a sheet.

1) Input the sheet name in the **Sheet Settings\Name** edit box.

2) Choose one from the two options **From Paper** and **From Plate**, located at the upper-left corner. Here we take **From Plate** as example, i.e. to create a sheet based on a plate. Such sheet can contain punch area, punch marks, center marks, and side guide marks.

3) Choose a method from the **Printing Method** dropdown list.

4) Specify the sheet size from the **Plate** dropdown list. You can customize this size.

5) Specify the paper size from the **Paper** dropdown list. Here you can also customize the size. The paper size is usually less than the plate size.

4. Click **OK**.

Note: *If you want your template to contain more than one sheet, you can choose the main menu item **Resource** > **New Sheet** to add another. The setup window for the new sheet is similar with that in the new template setup window.*

The new template and the sheet appear in the program window.

Now you can add sheet objects, including layout, pages, and marks, to the sheet.

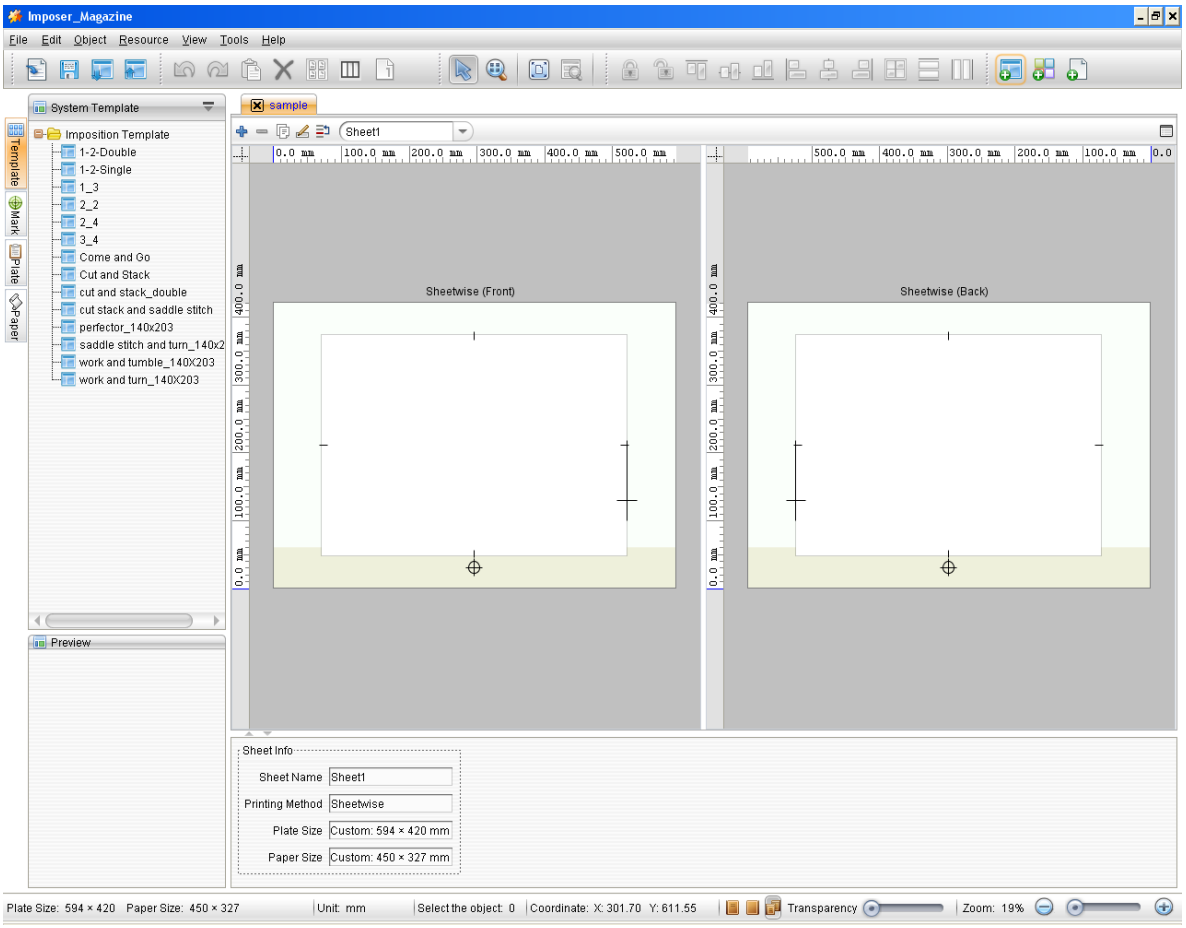


Figure 2-223

Note: *Some panes and panels on the program window are allowed to be hided or adjusted, so that there can be more space for specific pane or panel. As shown in the above figure, you can click the tab* ***Template*** *at the left, to hide the template pane, so that you can get more space for the sheet editing area.*

3. Add Layout

Click the toolbar icon **New Layout**.

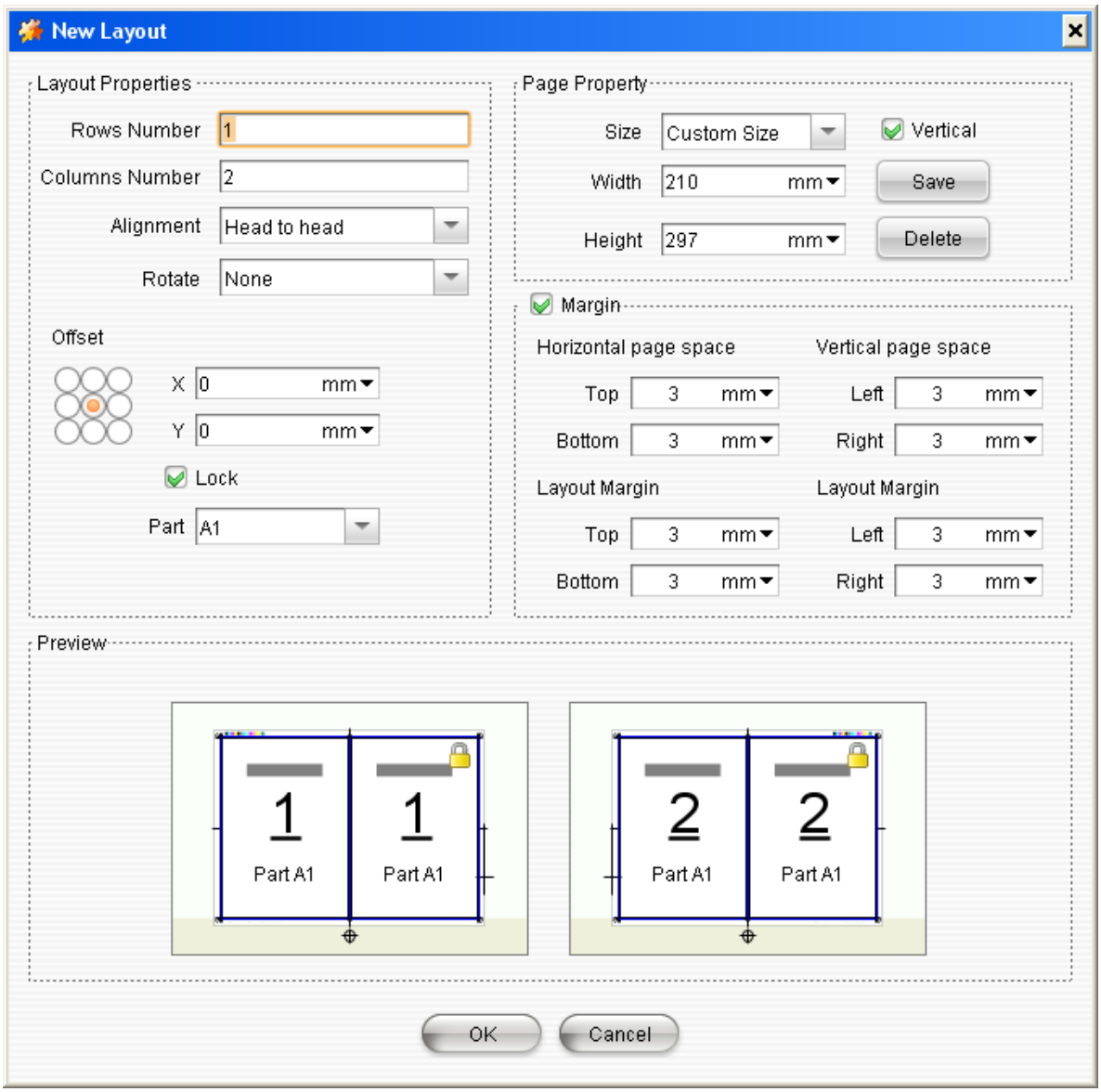


Figure 2-224

1. Specify the page size and direction in the **Page Property** area.

2. Specify the rows and columns of the pages, and the alignment mode in the **Layout Properties** area.

3. Other parameters, if needed, can also be configured, such as the margins.

4. Click **OK**.

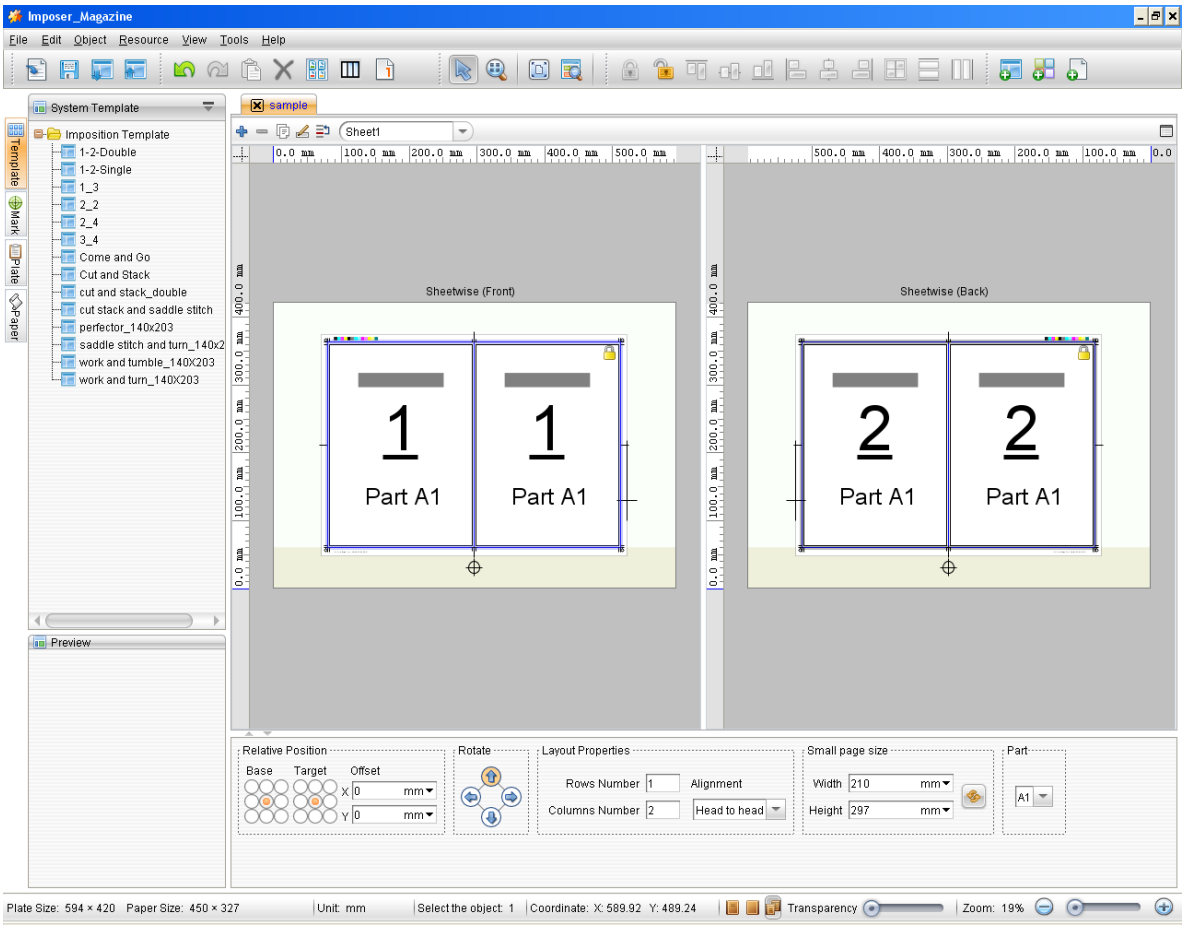


Figure 2-225

After you have added a layout into the sheet, you may need to define some properties for the layout and the pages contained in the layout, especially the page number.

By default, page number for all the front sides is set to 1 and that for all the back sides is set to 2. You have two ways to re-define the page number. 1) Choose a page, and then in the property panel located at the bottom of the window, re-set the number in the **Content** > **Front/Back** edit boxes. Or 2) choose the icon in the toolbar, to obtain a **Set page number** dialog box, with the cursor turning to.

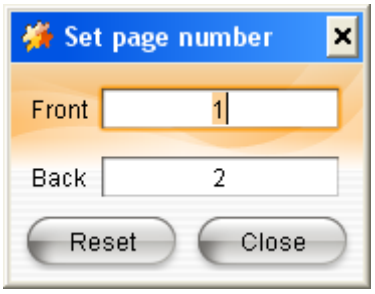


Figure 2-226

The **Front** and **Back** edit boxes display numbers for the front and back page sides. Click the page you want to number, the displayed front and back number will be assigned to your clicked page. By default, the two numbers in the **Set page number** dialog box increase in succession as you click on the pages. If you don't want to use the successive number, you can manually input anyone else.

Note: *If you press down the Shift button at the same time, the page number for the pages on each side will be set to the same.*

4. Add Pages

You can also add blank pages to the sheet, instead of a layout.

1. Click the toolbar icon **New blank page**.

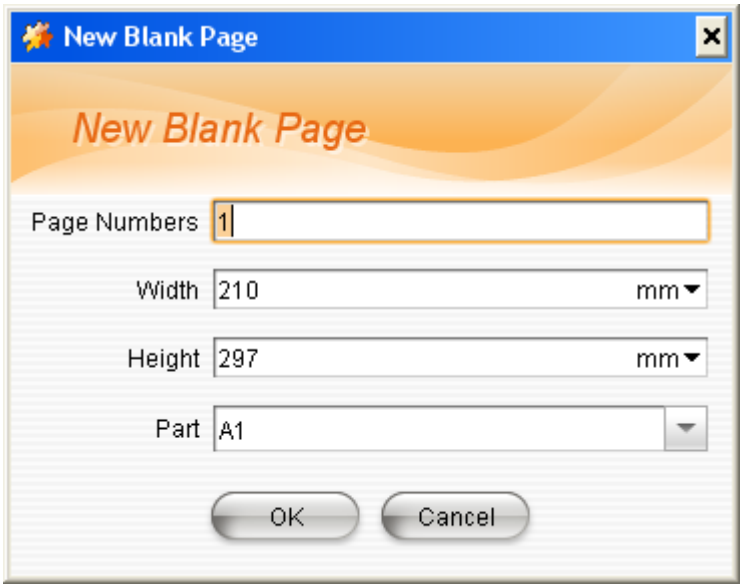


Figure 2-227

2. Input the number of pages, the width and height of each page, and then click **OK**.

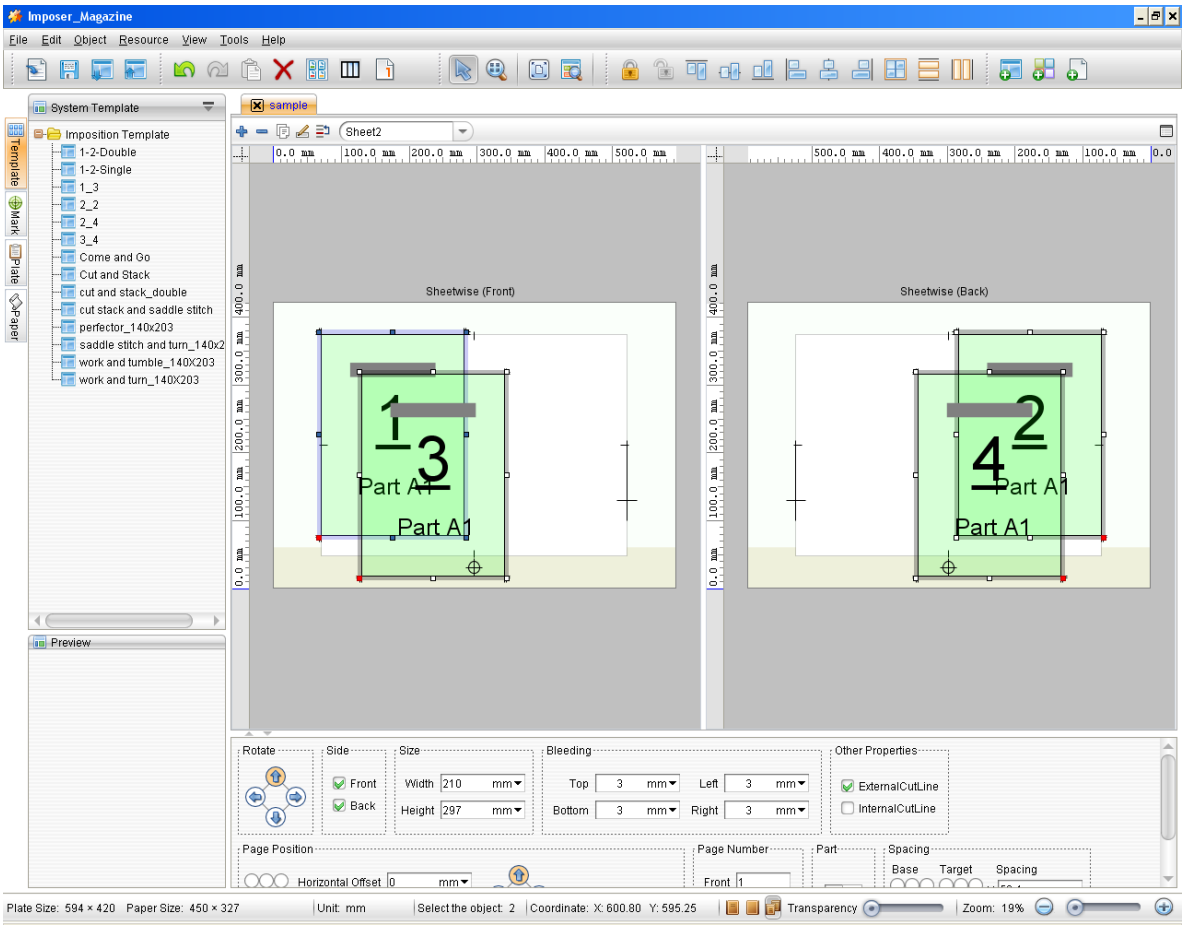


Figure 2-228

Drag the pages to proper positions, and if needed, configure other properties. Properties for each page can be configured by way of the property panel at the bottom of the window, and more operations can also be performed, such as alignment, rotation, layer adjustment and etc, with help of the toolbar icons. Please refer to section 5.2.5 for details.

5. Add Marks

Choose the **Mark** tab at the left of the program window, and then choose a mark, drag it to proper position on the sheet. Mark properties, including position, direction, line width, line length, block size, can be re-defined, if needed.

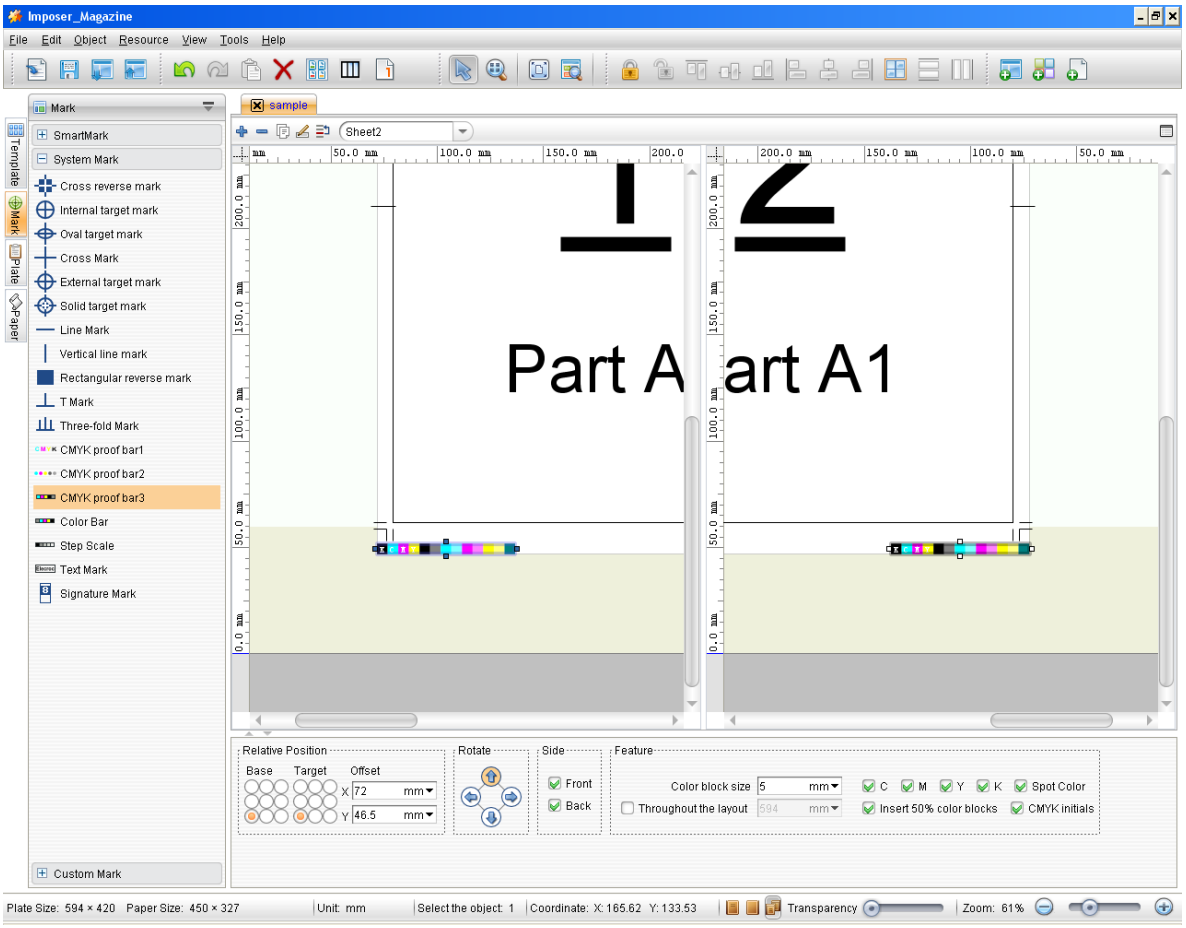


Figure 2-229

6. Submit & Upload Template

Click the toolbar icon **Submit Template**. Confirm the name of your template, and then click **OK**. In this way, you can submit it to the current job.

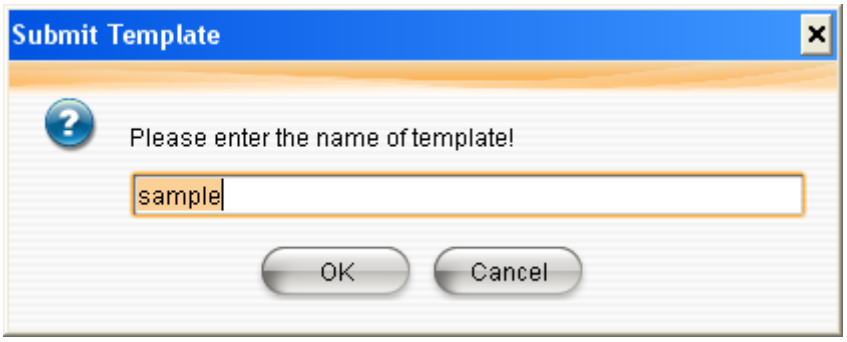


Figure 2-230

ElecRoc pops up message to inform that the template is submitted successfully. Close the message and switch to the job window, open again Imposer's parameter setup window, then you can see the submitted template under the **Templates** tab.

You can also click the toolbar icon **Upload Template** to upload the template into ElecRoc, for public use by all other jobs.

5.2.2 Create Template

All the template-related operations and functions in this program include:

1. Template Directory

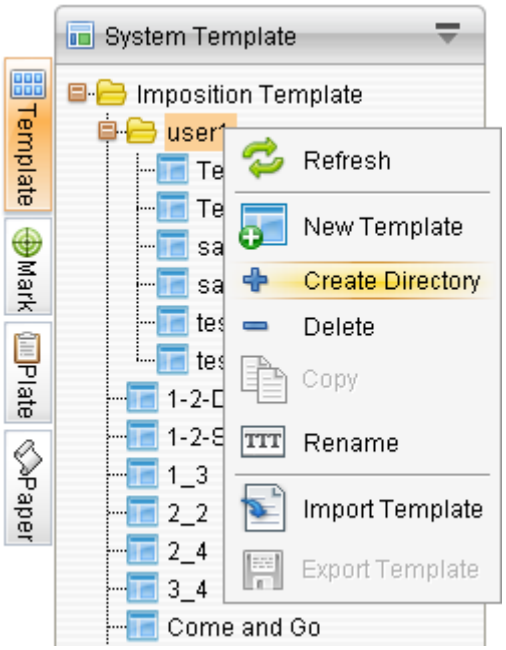


Figure 2-231

A pane is expanded when you click the tab **Template** at the left. It shows all the templates available in your ElecRoc system, i.e. those you have uploaded for public use. The *Imposition Template* directory is a dedicated directory designed for classification and management of the imposition templates. It is the root directory, under which you can store straight your templates, or you can also create a sub-directory underneath.

To create a directory, first, choose an existing directory, e.g. the root directory, as the superior directory, then, click the **Preference** icon or right-click, and choose **Create Directory**, and then, input the directory name, and click **OK**.

With the right-click menu items or items from the **Preference** menu, you can delete, rename, or import templates into, any sub-directory.

Right-click menu items are also available for the templates within the template directories. With them, template-related operations can be performed.

2. Create New Template

You can create a new template by way of:

- Click the toolbar icon;
- Right-click on the **Template** pane or the top blank part of the template editing area and choose **New Template**;
- Open the **Preference** menu and choose **New Template**;
- Choose from the main menu **Resource** > **New Template**.

3. Open/Close Template

If you want to open one of the templates inside the template directory at the left of the

program window, just double-click the template to open it in the right editing area.

If you want to open an outside template, please click the toolbar icon, or choose from the main menu **File** > **Open**, and then find out your template from the pop-up dialog box and open it.

More than one template can be opened in the editing area. When a template is opened, a tab named with the template name will appear at the top of the editing area.

You can click the icon in front of the tab, or double-click the tab, or right-click on blank area and choose **Close**, **Close Other**, **Close All**, to close the opened template(s).

4. Edit Template

You need to perform a series of editing operations, such as configuring sheet properties or creating more sheets, configuring layout, adding pages, and adding marks.

1) Configure and add sheet

The sheet properties, including the plate and paper size and other properties can be re-defined on the property panel once you choose the sheet. Besides, you can create more than one sheet for your template. For details about sheet, refer to section 5.2.3.

2) Add layout

The layout is a group of blank pages orderly-arranged in a specific layout. You can add a layout into each sheet. For details on how to create and configure a layout, refer to section 5.2.4.

3) Add pages

You can add blank page separately instead of adding layout. Refer to section 5.2.5 for details.

4) Add marks

To add a mark, choose a mark under the **Mark** tab at the left of the program window, and then drag it to the sheet. After you have added a mark, you can re-define its properties on the property panel. For more details, refer to section 5.2.6.

5. Save Template

Click the toolbar icon, or choose from the main menu **File** > **Save**, to save the template with your specified name and destination. In this way, you will not lose the template even if you exit the program, the job, or ElecRoc Client.

Click the toolbar icon, or choose from the main menu **File** > **Save as**, and you can save the current template with another name and destination.

If you close the program without saving your template, ElecRoc will pop up message suggesting you to save it.

6. Submit Template

After you have finished the creating of the template, you can submit it to the current job. Click the toolbar icon, or choose from the main menu **File** > **Submit** to open the **Submit Template** dialog box. Confirm the template name and then click **OK**.

7. Upload Template

If you click the toolbar icon, or choose from the main menu **File** > **Upload**, you can upload the currently-opened template into ElecRoc, for public use by all other jobs.

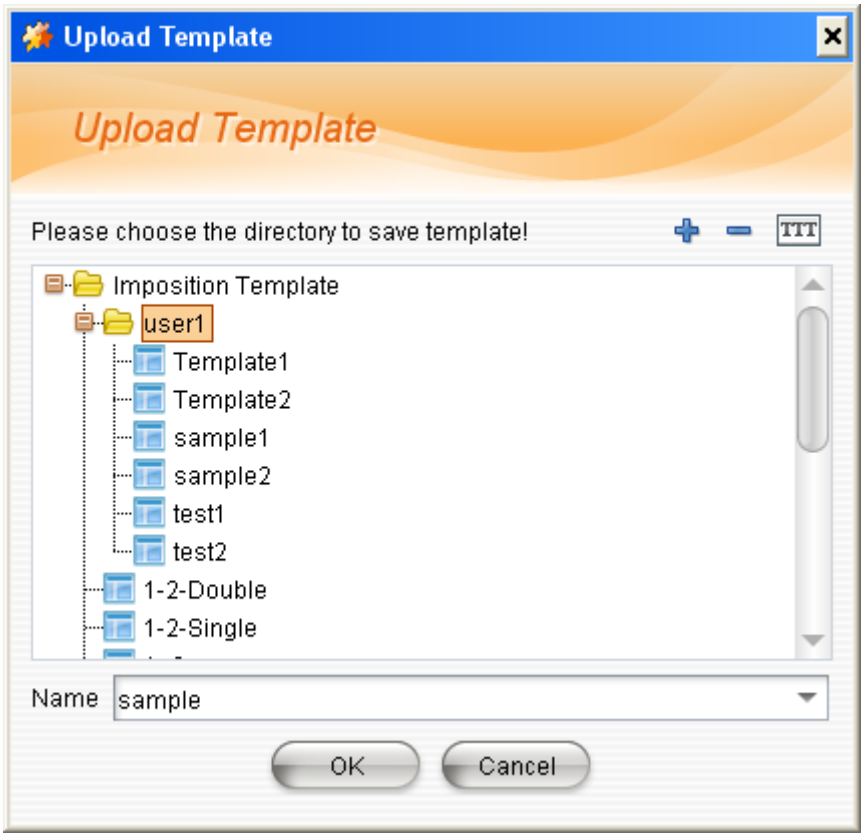


Figure 2-232

The dialog box lists all the templates existing in the ElecRoc system, saved under the dedicated directory named *Imposition Template* and its sub-directories.

Choose the directory or a sub-directory and specify the name, and then click **OK** to upload. If needed, you can use the icons , , to create a new sub-directory, delete an unneeded one, or rename.

8. Export, Import, Copy, Delete

Choose a template or directory under the **Template** tab, and then right-click to open a short-cut menu. By using the items herein, you can export, import, copy, delete and clear template.

Export a template: Export the template from ElecRoc to specified destination.

Import a template: Import a template into ElecRoc.

Copy a template: Copy the selected template to form a new one.

Delete template: Delete the selected template(s).

The above menu items can also be gained by clicking the **Preference** icon at the upper-right of the template list.

5.2.3 Create Sheet

A template is composed of one or more sheets, on which you can then add objects such as layout, page, and mark.

1. Create New Sheet

By way of the **New Sheet** setup window, you can create a new sheet for your current template.

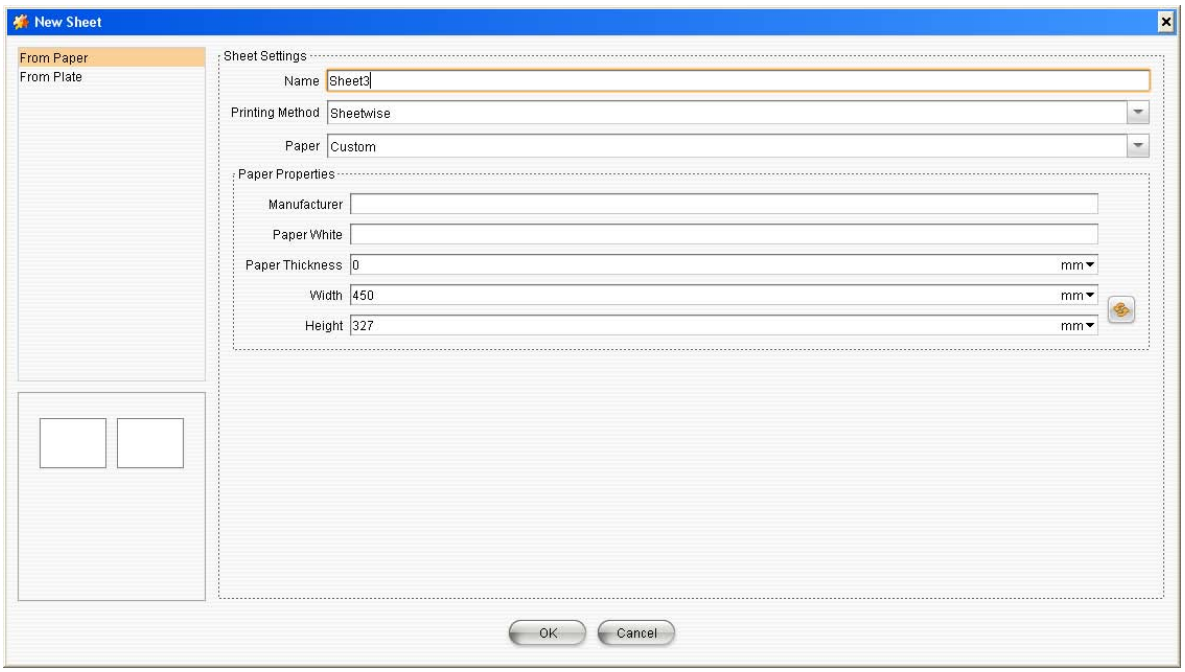


Figure 2-233

This window can be opened by any of the following methods:

- Every time when you create a new template; the setup window for your new template contains the setup parameters for a new sheet;
- Click the toolbar icon;
- Choose from the main menu **Resource** > **New Sheet**;
- At the top of the template editing area, click the toolbar icon.

1) From Paper

As shown above, choose **From Paper** at the upper-left corner of the window. In this case, you will create a sheet based on a paper defined by the **Paper** parameters.

Choose a paper from the **Paper** dropdown list in the **New Sheet** window. This list provides a variety of optional papers. The paper properties, including manufacturer, color of paper white, paper thickness, width and height, are displayed in the below once you have chosen a paper, but not editable, you can switch to the **Paper** tab (at the left of the program window) to modify the paper properties, if needed.

If the optional papers do not meet your actual need, you can choose **Custom**, and then input specific paper size in the then activated **Width** and **Height** boxes. You can click the button to exchange the width and height. **Manufacturer**, **Paper White**, and **Paper Thickness** are optional parameters, in which you can input related descriptions.

2) From Plate

Your sheet can directly base on the plate, i.e. you can make the sheet size equal the plate size, and on the sheet, reserve a punch area, add the punch marks, center marks, and the side guide. In the **New Sheet** window, choose **From Plate** at the upper-left corner.

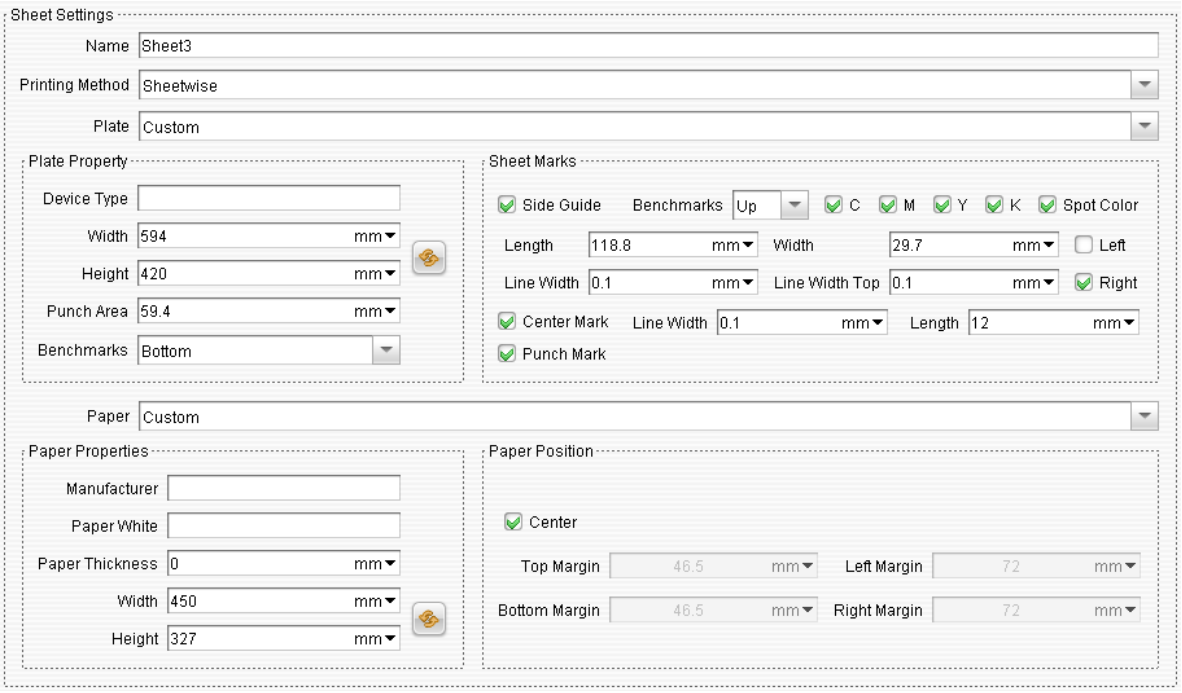


Figure 2-234

Parameters then can be divided into two parts, **Plate Property** and **Paper Properties**. You need to specify a plate by way of the **Plate Property** parameters, at this moment, the **Paper** can be viewed as the area available for the imposing on the plate.

In the editing window, the largest area (in a light gray background, by default) represents the sheet based on the **Plate Property** settings. It consists of a punch area, the punch marks, the center marks, the side guide, and the paper. The default background color for the punch area is slightly darker than that for the sheet. The blank area without any default background color is defined by the **Paper Properties** parameters, representing the area available for the imposing, and usually smaller than the plate. The background colors for the plate, punch area, and the paper can all be customized.

The plate and paper properties include:

- **Plate properties**

Plate: Choose a plate type from the **Plate** dropdown list. This list provides some commonly-used plate sizes. The plate properties, including device type, width, height, punch area, side guide, center marks, punch marks, are displayed in the below once you have chosen a plate, but not editable, you can switch to the **Plate** tab (at the left of the program window) to re-define the plate properties.

If there is no suitable plate for your demand, you can choose **Custom**, to activate the **Plate Property** and **Plate Marks** parameters, including:

Device Type: Optional, here you can input any related descriptive information.

Width, **Height**: Here you can input specific plate size. The button enables you to exchange the width and height.

Punch Area: If you need to punch in the later-on plate making, you can reserve a special area on the sheet for the punching. This parameter controls the width of the punch area. Its position is determined by the **Benchmarks** parameter below, it may be at the left,

right, top or bottom side of the plate. If you don't need the punch area, you can set the value to 0.

Punch Mark: ElecRoc adds a punch mark at the center of the punch area.

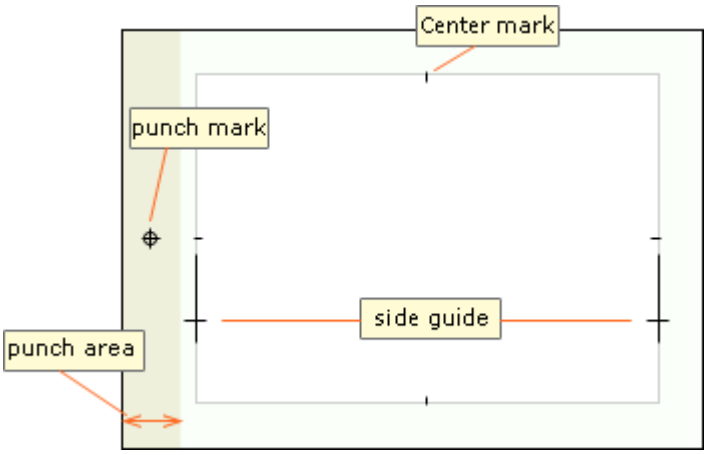
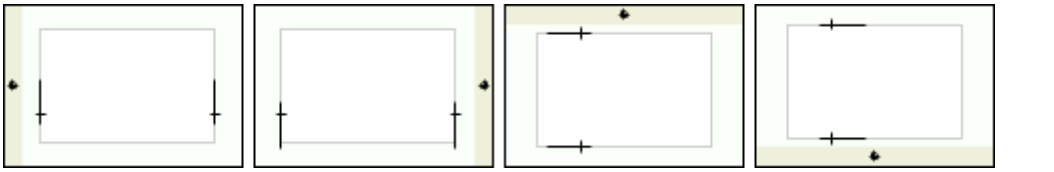


Figure 2-235

Center mark: If checked, ElecRoc adds a kind of line marks at the center of the four paper sides. Here you can also define the line width and length for this mark.

Side Guide: If checked, it adds a mark as onto the sheet, for the side guide on the printing press to precisely position the paper. Note that this setting may be of no effect in case that the press model does not install the side guide. Checking it, you can further define the length, width, line width, position of the mark, the sheet side(s) on which it appear, and the separations on which it will be output. The **Left** and **Right** boxes control which side(s) of the sheet it appears on. The separation options include **C**, **M**, **Y**, **K** and **Spot Color**. E.g. if you do not want the mark to appear on the spot color separation, you can let the **Spot Color** box unchecked.

Benchmarks: It controls the position of the side guide mark. There are four options: top, bottom, left, and right, as shown in the below. In the caption such as left/top, the former refers to the position of the punch area, the latter the position of the side guide mark.



left/ top right/ bottom up/ left bottom/ right

Figure 2-236

- **Paper properties**

The **Paper** and **Paper Properties** settings are the same as that mentioned in the section on how to create a sheet based on a paper.

Paper Position: It refers to the paper's position on the plate. The default position is centering, i.e. the top and bottom margins are equal, and the left and right margins are equal, too. In this case, the four margins are calculated automatically by ElecRoc based on the plate and paper sizes. If you uncheck the **Center** box, you can activate the four margin edit boxes, in which you can input custom values. Note that, the sum of the top and bottom margins, as well as that of the left and right margins, limited by the plate and paper sizes, are fixed. Therefore, if the top margin is changed, the bottom margin will

change accordingly, so do the left and right margins.

3) Printing Method

By way of the **Printing Method** dropdown list in the **New Sheet** window, you can create sheets that support various printing methods. Five printing methods are supported: single-sided, sheetwise, work and turn, work and tumble, and perfector.

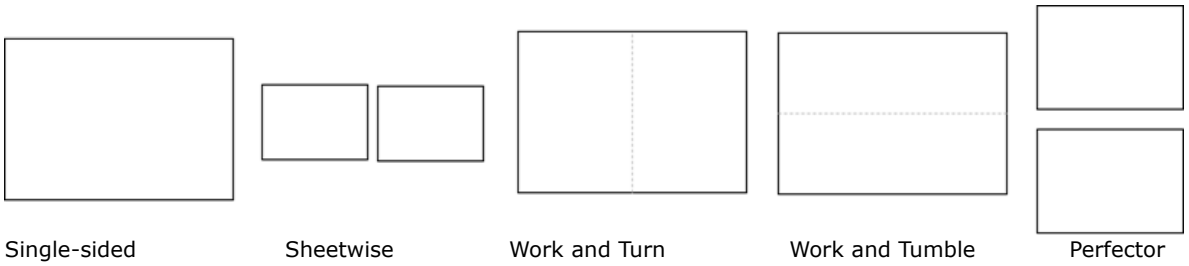


Figure 2-237

2. Re-define Sheet

After you have created a sheet, you can choose the sheet in the template editing area to display its properties on the property panel located at the bottom of the window. Through these parameters, you can redefine the properties of the sheet.

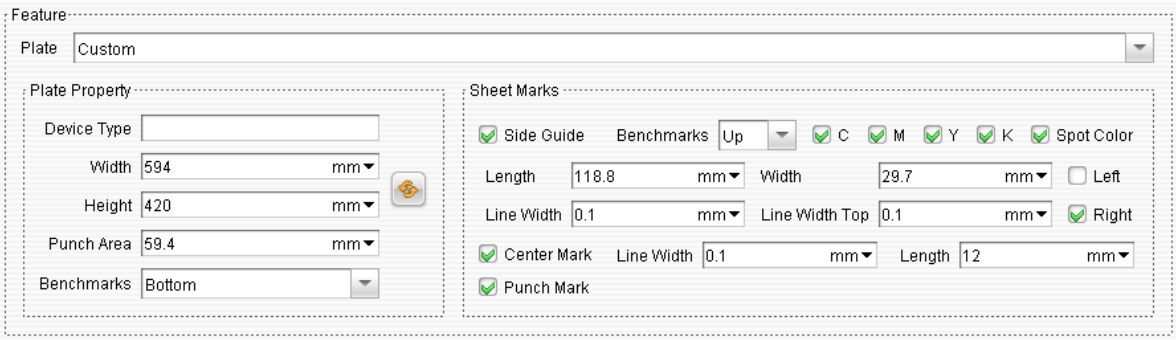


Figure 2-238

If the sheet is based on a paper, it displays only the paper properties. If the sheet is based on a plate, it displays paper properties when you choose the paper, while plate the properties when you choose the plate. The property parameters are the same as those in the **New Sheet** window.

3. Sheet Management

Mainly with the icons located at the upper-left corner of the editing area, you can perform sheet related operations as follows:

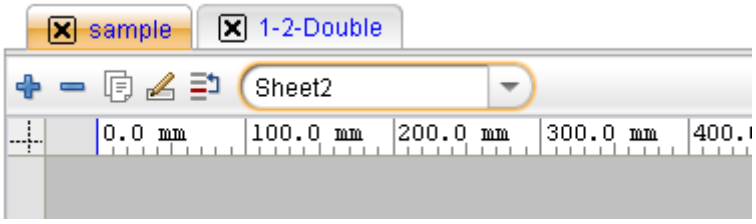


Figure 2-239

Switch sheet: A template can contain more than one sheet, but only one sheet can be opened and edited each time in the editing area. You can choose from the sheet list to

switch from one sheet to another.

New sheet: By clicking the icon, you can add a new sheet.

Delete sheet: By clicking the icon, you can delete the currently-edited sheet.

Copy sheet: Click the icon, and you can copy the current sheet. A dialog box then appears for you to input the name of the new sheet. Input the name and then click **OK**.

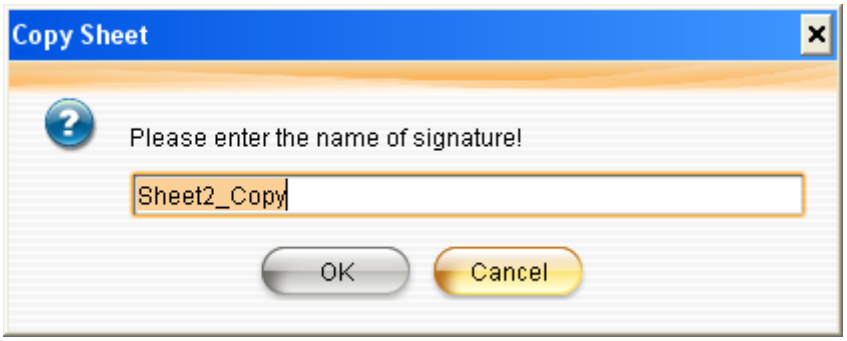


Figure 2-240

Edit sheet: Click the icon to open a dialog box, see the left figure below, in which you can re-define the name and the printing method of the current sheet. For example, you can change the printing method from sheetwise to perfector.

Adjust sheet order: Click the icon to open a dialog box, see the right figure below, in which you can adjust the sheet order in the template. Please choose the sheet, and then click the button at the right to make the adjustment.

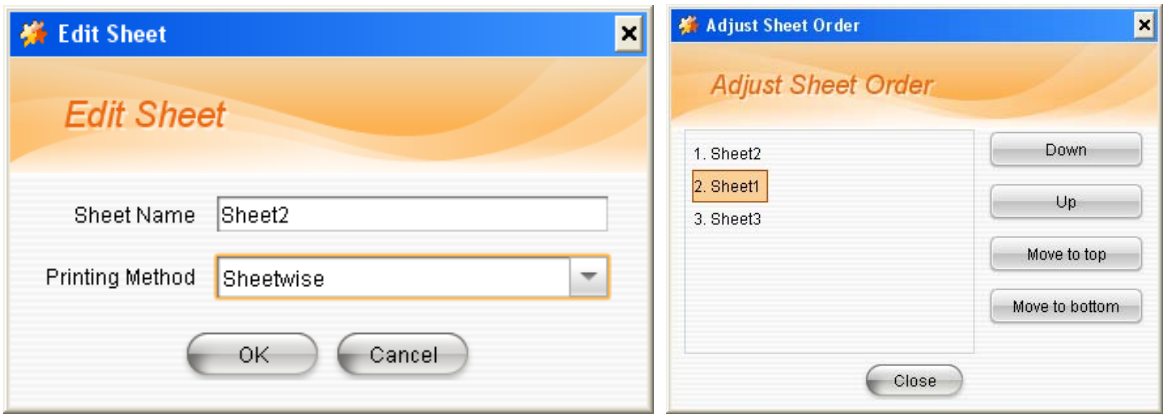


Figure 2-241

5.2.4 Create Layout

To create a layout in your sheet, do as follow: click the toolbar icon, or choose from the main menu **Resource** > **New Layout**, to open the following setup window, define the parameters as needed, and then click **OK**.

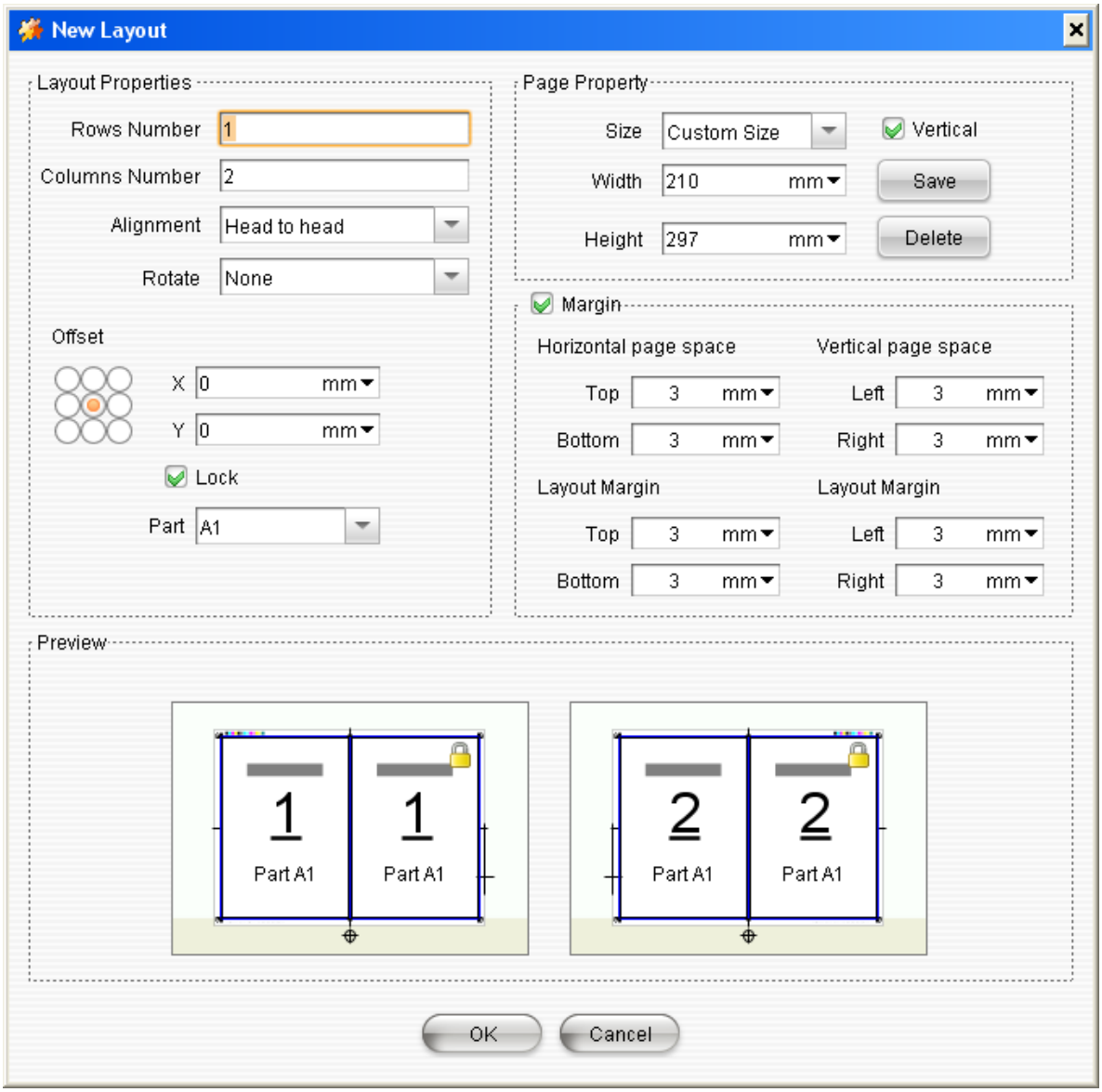


Figure 2-242

1. Create New Layout

1) Layout Properties

Rows Number: The rows number of the pages in the layout on the front side. That on the back side is the same, if the sheet contains the back side.

Columns Number: The columns number of the pages in the layout on the front side. That on the back side is the same, if any.

E.g. you can set to 3 rows and 2 columns, which indicates that the layout would contain 3×2=6 pages on the front side, i.e. 3 rows of pages and each row contains 2, or 2 columns of pages and each column contains 3. If the sheet has the back side, it contains 6 pages as well on the back.

Alignment: Available in 4 most popular page alignment modes, up, down, head to head, and foot to foot.

Rotate: To rotate the page and page content. Options include 0°, 90°, 180°, and 270° counter-clockwise.

Offset: This setting controls the layout position on the sheet. By default it is at the center. When you use the nine-point diagram to choose other position, you can use the X and Y to define the horizontal and vertical offsets related to the anchor point.

Lock: If checked, the layout's position on the sheet will be locked. A locked layout cannot be deleted or dragged in any direction on the sheet. And a symbol will appear at the upper-right corner of a locked layout.

Part: Part is a form to classify the pages, so as to meet some special needs. For example, when you want to impose pages from two different books on a same sheet, you can name the pages from one book as part A1, and name the pages from the other book as part A2. If you don't have such need, please keep the default option A1.

2) Page Properties

The properties include the page size and the orientation. The **Size** dropdown list provides some commonly-used standard sizes for you to choose from. You can also choose **Custom** to specify any other page size.

Save, **Delete**: By clicking **Save**, you can save a custom size as an option into the size dropdown list for repetitive uses. The saved size option is named with your customized width and height values, e.g. 400.0mm_300.0mm. By clicking **Delete**, you can remove a saved size option from the dropdown list.

3) Margin

Page space: The space between two pages, as shown in the below by the area enclosed by red dashed lines, available in two directions, horizontal and vertical.

The top space horizontally is shown as **a1**, i.e. the distance from the middle of the horizontal page space to the upper page. The bottom space horizontally is shown as **a2**, i.e. the distance from the middle of the horizontal page space to the lower page.

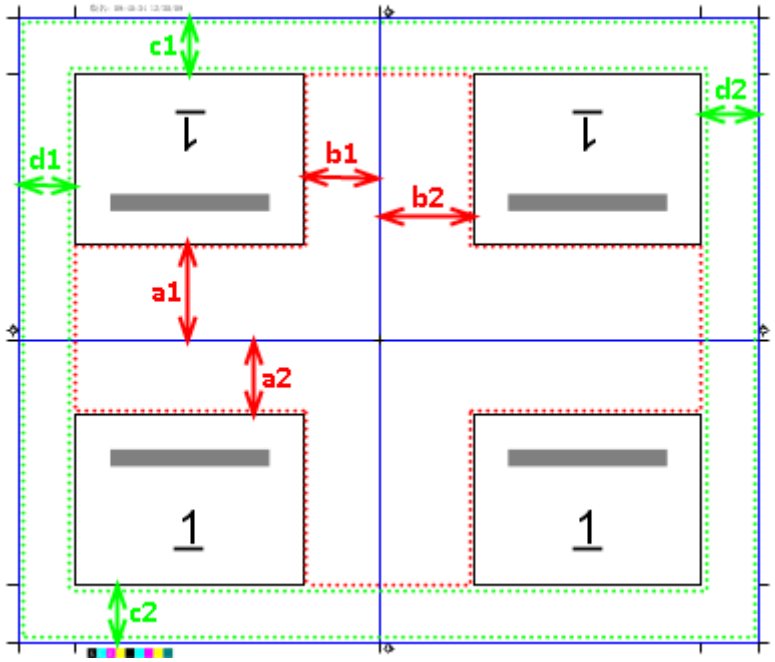


Figure 2-243

The left space vertically is shown as **b1**, i.e. the distance from the middle of the horizontal page space to the leftward page. The right space vertically is shown as **b2**, i.e. the distance from the middle of the horizontal page space to the rightward page.

Layout margin: The blank space bordering the layout on the sheet, as shown by the area enclosed by green dashed lines.

The top margin is shown as **c1**, i.e. the distance between the top side and the page. The bottom margin is shown as **c2**, i.e. the distance between the bottom side and the page. The left margin is shown as **d1**, i.e. the distance between the left side and the page. The right margin is shown as **d2**, i.e. the distance between the right side and the page.

4) Preview

At the bottom of the **New Layout** window shows a thumbnail image of the layout. If you press down the mouse button on the thumbnail, you will get a zoomed-in thumbnail image floating on the window, as shown in the below. At this moment, you can drag the mouse to zoom in any other position on the layout.

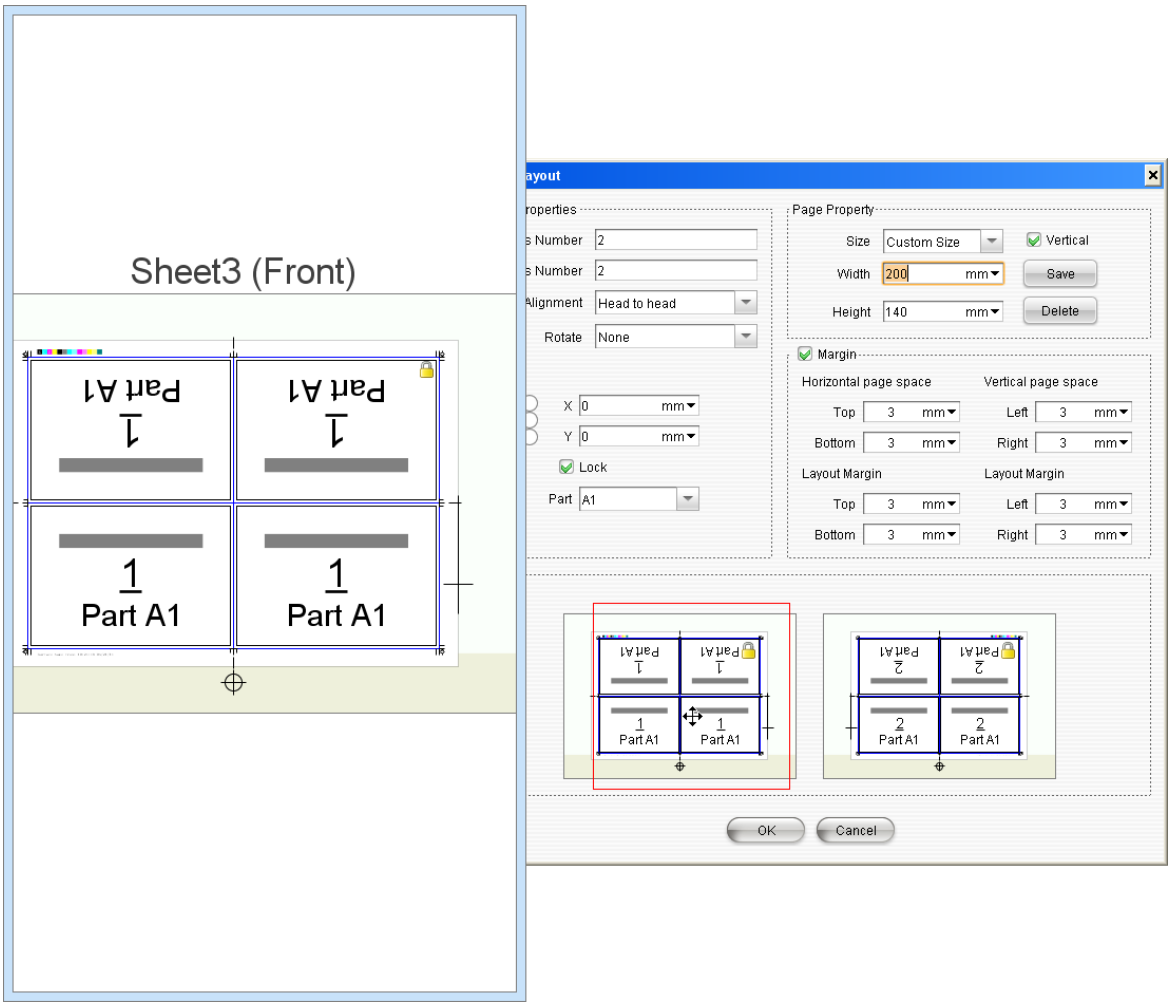


Figure 2-244

5) Default Layout Marks

You may see some marks on the layout when you zoom in the thumbnail image. These marks are automatically added by ElecRoc, and they may include cutline marks, fold marks, cross marks, registration marks, CMYK marks, text marks, and other marks.

Choose from the main menu **Edit** > **Preference** > **Mark Parameter** to configure what marks by default will be added when you create a layout.

Only the black: If checked, the default marks will be displayed and output only on the black separation.

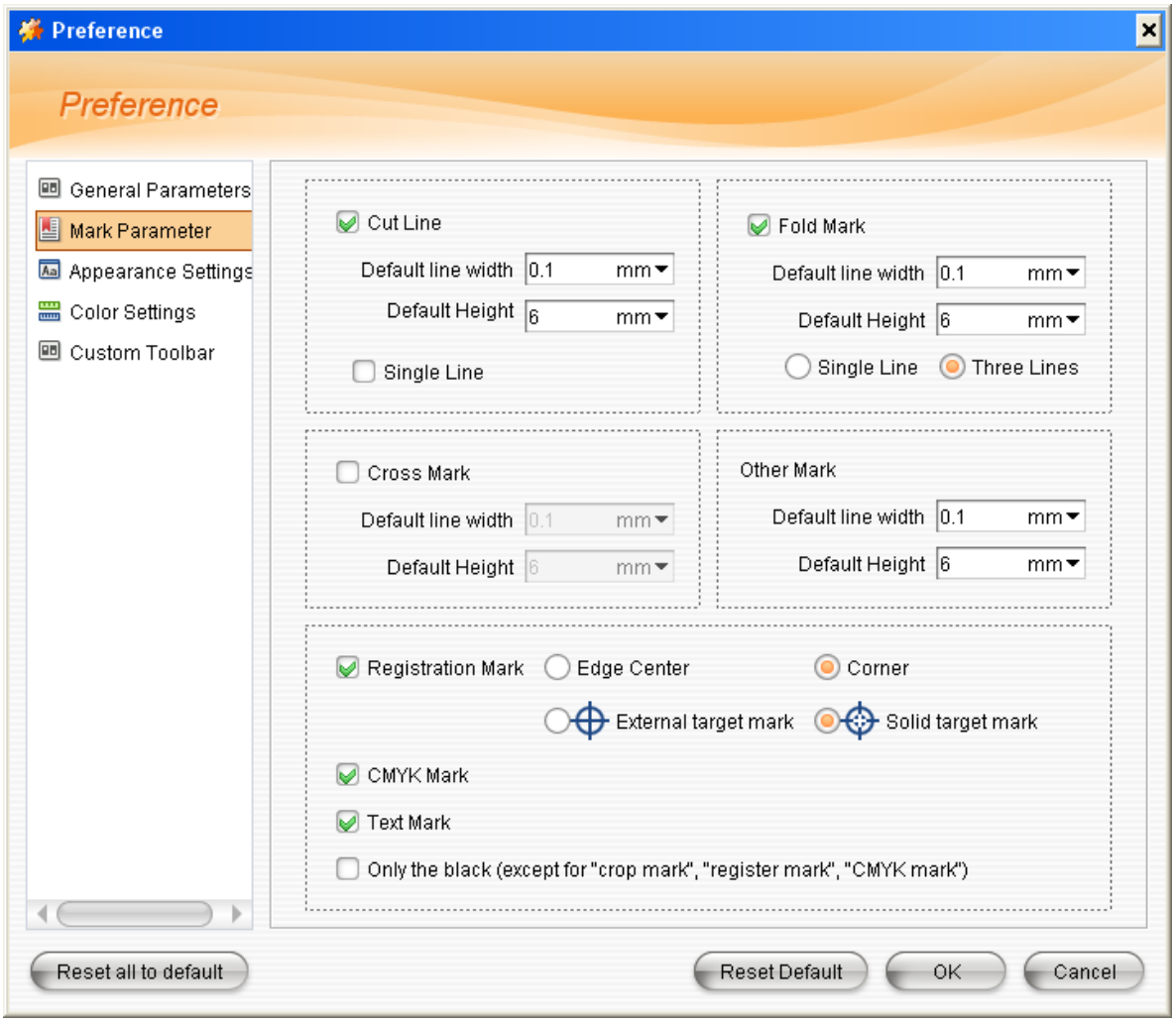


Figure 2-245

2. Layout Positioning

Prior to this operation, you need to select the layout at first. How to select a layout?

When the layout is not locked: move the cursor over any border of the layout, wait till it turns to ✥ and then click the mouse. Or press down the left mouse button at any blank area on the plate, then drag to form a rectangle, ensuring the rectangle cover at least one page, and then release the mouse button.

When the layout is locked: press down the left mouse button at any blank area on the plate, then drag to form a rectangle, ensuring the rectangle cover at least one page, and then release the mouse button.

The layout position can be defined in any of the following ways:

- Use mouse to drag freely;
- Enable the capturing capacity;

- Configure parameters on the property panel;
- Use the moving/nudging capacity.

1) Drag Layout

As the simplest way, you can directly choose the layout and then drag and move it freely on the sheet. When you move the layout in this way, you can refer to the rulers or the pop-up coordinates at the lower-left corner to determine the adequate position.

2) Capture Layout

You may notice that while the layout is being moved, it may automatically be captured to some specific positions, such as the plate borders and the grid lines. ElecRoc provides the capacity to capture the layout to auxiliary tools or other positions, so that you can position the layout on the sheet more easily and precisely.

- **Capture to plate and paper**

When the object approaches to the borders of the plate or the paper, or the middle lines, it will be aligned with them closely and automatically.

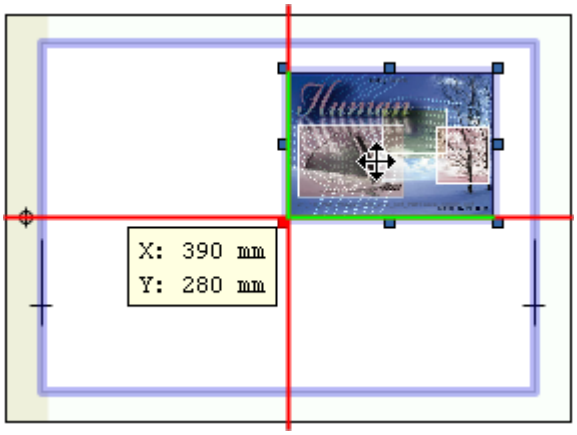


Figure 2-246

- **Capture to grid**

Choose in the main menu **Tools** > **Show Grid**, to show the grid on the sheet, and meanwhile, choose in the main menu **Tools** > **Capture Grid**. Now, when you move the layout close to the grid lines, you will see two crossed register lines in red on the sheet, and the layout will be automatically captured to the exact position where the grid line is.

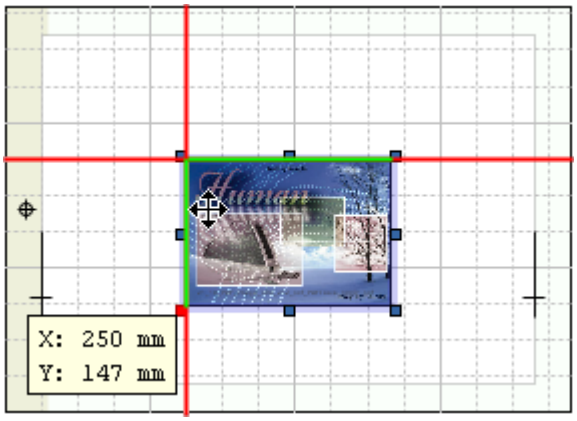


Figure 2-247

The space between any two grid cells can be defined by way of the main menu **Tools** > **Grid Spacing**. And the color of the grid lines can also be defined by way of the main menu **Edit** > **Preference** > **Color Settings**.

- **Capture to guides**

You can add horizontal or vertical guiding lines to the sheet. When the layout approaches to the line, it will be automatically captured to the position where the line is. As the grid lines do, the guiding lines bring ease in layout positioning.

1. **Show guides**. Choose from the main menu **Tools** > **Show Guides**.

2. **Add guides**. Place the cursor over the ruler, then press down the left mouse button and drag toward the sheet editing area, and then release the mouse button at proper place. A setup dialog box appears. Input the precise coordinates, and then click **OK**.

If you click the dashed cross at the upper-left of the sheet editing area (at the left of the horizontal ruler, and the top of the vertical ruler), and then press down the mouse and drag to the editing area, you can add two cross guides at the same time.

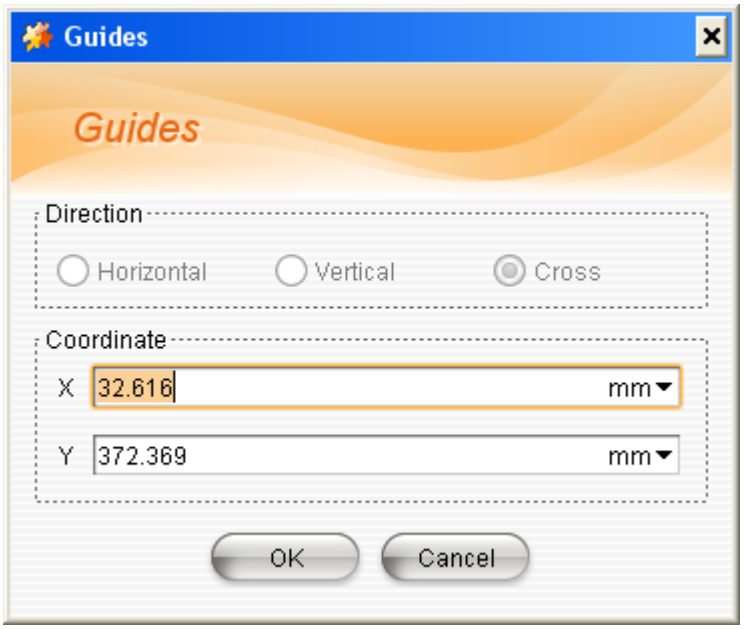


Figure 2-248

3. **Capture to the guides**. Choose from the main menu **Tools** > **Capture Guides**. When you drag the layout and make any edge of it approach to a guide line, the layout will be automatically captured to the position where the guide line is located.

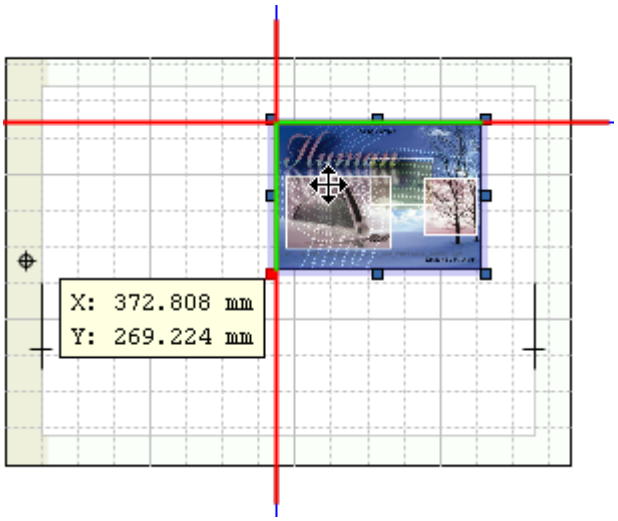


Figure 2-249

- **Capture to other positions**

You can also capture the layout to other layouts, pages or marks. Such capacity is enabled if you check items **Capture page and other layout elements** and **Capture Mark**, under the main menu **Tools**.

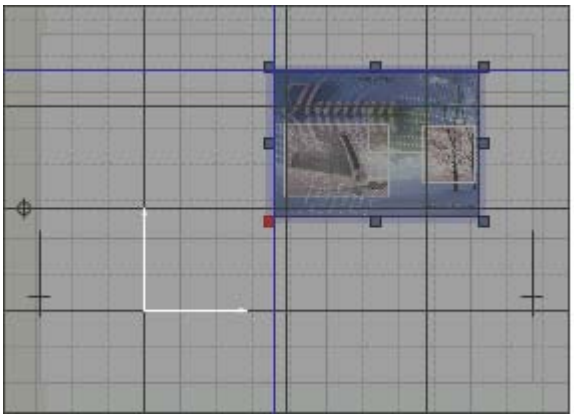
3) Position Coordinates

You can use the coordinates to precisely define the layout position.

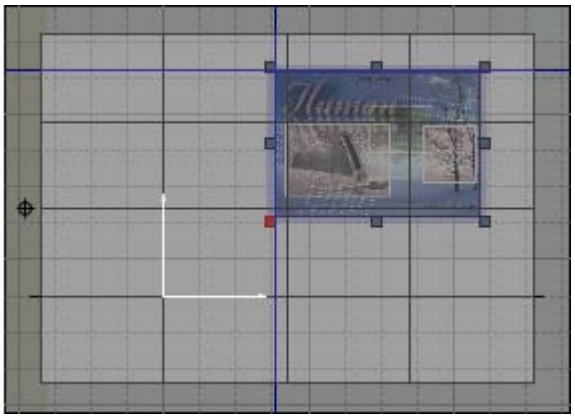
- **Define the coordinate system**

The default coordinate system is originated at the lower-left corner of the sheet. In practice, you can choose another origin to re-build the coordinate system. Click the toolbar icon. The editing area then becomes entirely grayed. Move the cursor on the sheet, and you will see two cross lines, their crossing is the origin of the new system.

If you press down the Ctrl or Alt key meanwhile, you can choose to use one of the commonly-used coordinate systems built on the plate or plate element.



Press down Ctrl



Press down Alt

Figure 2-250

If you don't press down the Ctrl or Alt key, when you move the cursor alone to proper position and click the left mouse button, you will open a setup dialog box. The **Origin Location** refers to the coordinates of the new origin on the default coordinate system. **Coordinate Axis** refers to the directions of the X and Y axes.

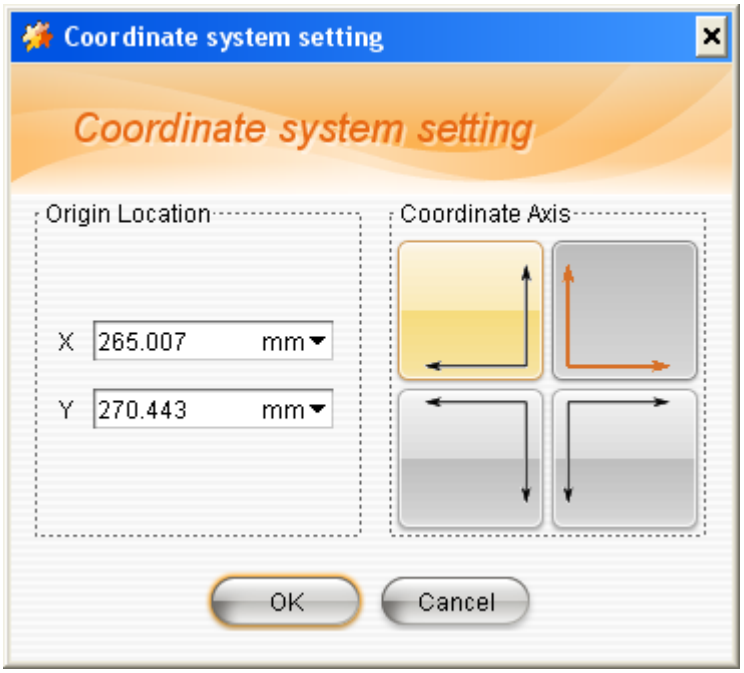


Figure 2-251

- **Define the coordinates**

The position parameter on the property panel controls the exact position of your layout on the sheet.

Nine anchor points: They represent nine anchor points on the layout. Except the central point, the rest eight points are all located on the borders. Your chosen point is displayed in red on the layout. The X and Y are just the coordinates of this anchor point on the coordinate system.

4) Move/Nudge Layout

- **Move the layout**

To move a layout (if locked, the layout cannot be moved), you can choose the layout and then click the toolbar icon or choose from the main menu **Edit** > **Move**, to open a setup dialog box. Input the distance you want to move in the horizontal and vertical directions, and then click **OK**. You can input negative values.

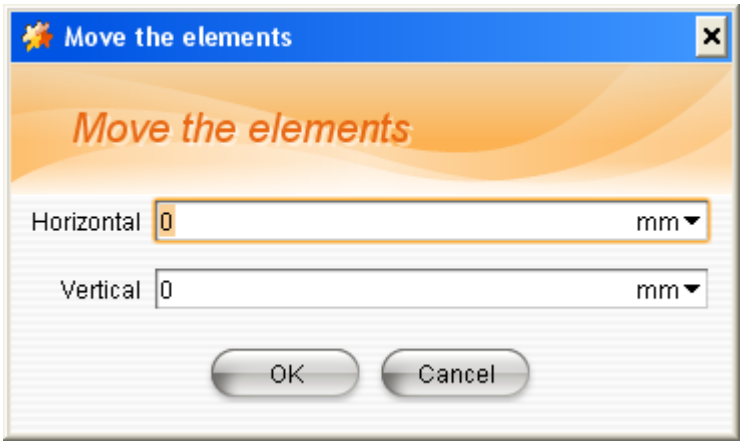


Figure 2-252

- **Nudge the layout**

Choose the layout and then press the arrow keys to nudge the layout. When you click the key once, you move the layout one time. The layout is moved in the direction indicated by the arrow key, at a distance specified by the main menu **Edit** > **Preference** > **Appearance Settings** > **Offset Step**.

5) Lock/Unlock

After you have determined the layout position, you can lock it, so as to prevent it from being unintentionally moved. You can lock a layout in any of the following ways:

- Click the toolbar icon ;
- Right-click and choose **Lock**;
- Choose from the main menu **Object** > **Lock**;
- Use shortcut keys Ctrl + L.

Being locked, a symbol appears at the upper-right corner of the layout. The icon, the menu item, and the shortcut keys used for unlocking the layout are: , **Unlock** and Ctrl + Shift + L.

3. Layout Properties

Layout properties here mainly refer to the parameters shown on the property panel when the layout is selected. Through these parameters, you can view and re-define the layout properties.

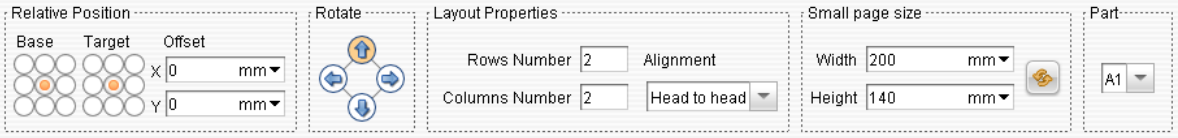


Figure 2-253

1) Rotate

You can choose any of the following methods to rotate the layout.

- On the property panel, choose the **Rotate** arrows , , or , your chosen arrow is then shown in highlight;
- Choose the icons , or in the toolbar;
- Choose from the main menu **Object** > **Rotate** > **Rotate 180**, or **Rotate 90 degree(Clockwise)**, or **Rotate 90 degree(Counterclockwise)**;
- Use shortcut keys, press down Alt, and meanwhile press an arrow key.

2) Layout Properties

Properties include the number of rows, the number of columns, and the alignment mode. They are the same as those in the *New Layout* setup window. Here, if needed, you can re-define them on the property panel.

3) Small page size

The size of each small page in the layout. Here, if needed, you can also re-define it on the property panel.

4. Page Properties

Some properties for the pages in a layout can also be defined after you have created the

layout, mainly by way of the parameters on the property panel as well.

- **Define page number**

Choose a page and expand the **Content** tab on the property panel, and then input the page numbers in the **Front** and **Back** edit boxes.

Click the toolbar icon, or choose from the main menu **Edit** > **Set page number** to open a setup dialog box. Input the page numbers for both the front and back sides, and then click on a page to apply the input numbers to the page. The numbers in the dialog box will increase incrementally after the clicking.

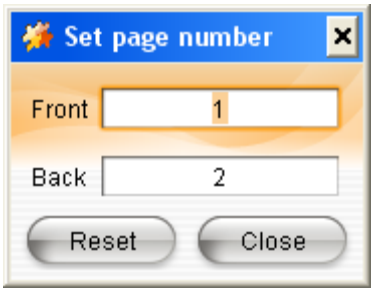


Figure 2-254

- **Add cutline marks**

If you check **External Cutline** or/and **Internal Cutline** under the **Template** tab on the property panel, you can add cutline marks to the four page corners.

- **Configure content properties**

Properties of the page content are controlled by the parameters under the **Content** tab on the property panel. They include the offset, rotation, and the locking of the front and back sides. Refer to related introductions in section 8.5 for details.

5. Other Objects

Here mainly refer to the marks and page space on the layout.

- **Mark**

1) You can add cutline marks to the page.

2) Choose one added mark, default mark or cutline mark, on the layout, and then you can view and re-define its properties on the property panel, including line width, length, whether it is present on the front or back sides, whether it is present only on the black separation, and whether it is shown.

- **Space**

Also called margins, include the horizontal and vertical page space between pages, and the space between the page and layout borders. When being chosen, its properties, such as left margin and right margin, are shown on the property panel as well. Through them, you can re-define the space size.

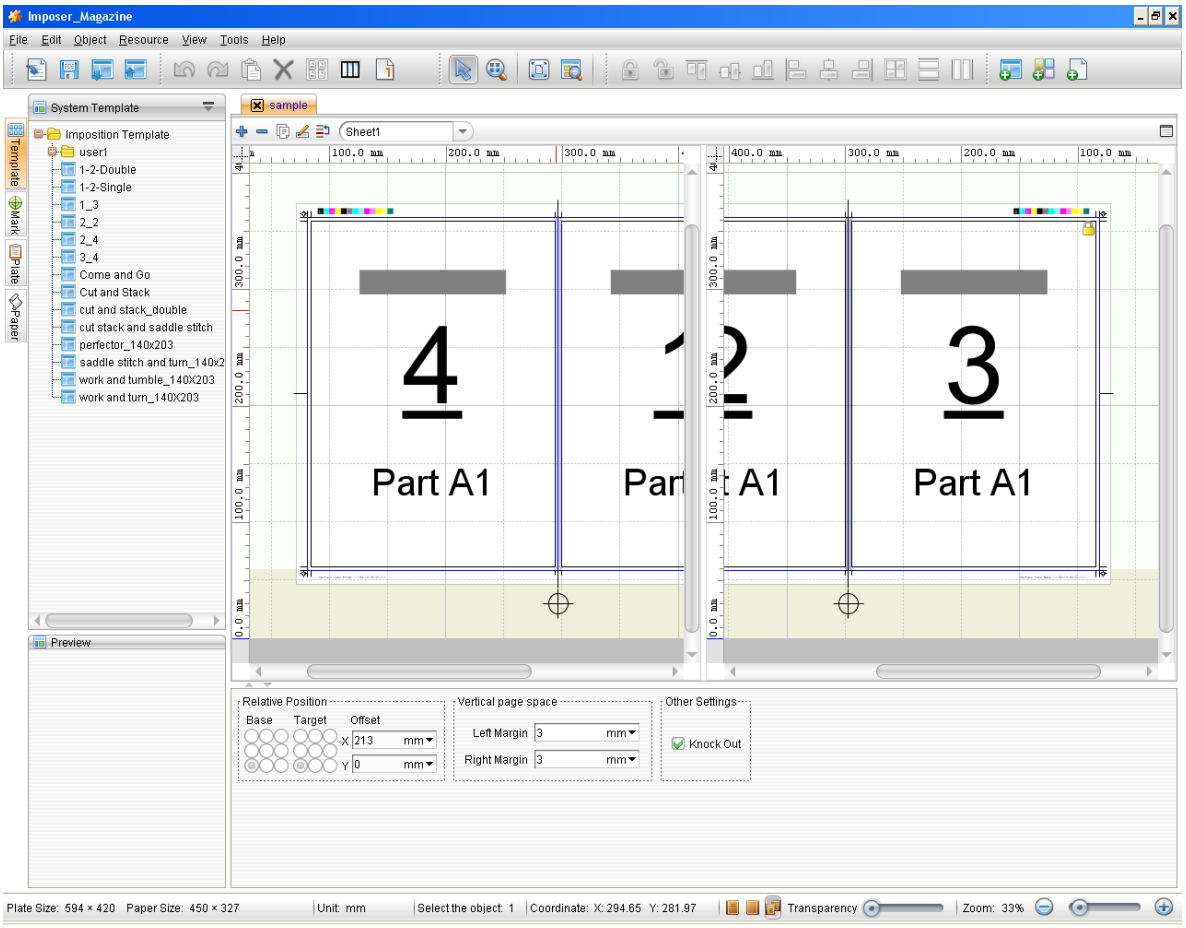


Figure 2-255

- **Other layout-related operations**

1) Use the toolbar icons, or corresponding commands from the main menu or right-click menu, to perform such operations to the layout as cutting, copying, pasting, deleting, moving, centering, rotating, and locking.

2) As one object, when being selected together with other sheet objects, the layout can be in alignment with them, by way of the toolbar icons, or corresponding menu items.

3) Click the toolbar icons, or corresponding menu items, to adjust the sequence of the layout as a layer related to other layers.

For details about these operations, refer to related introductions in section 5.2.7.

6. Origami

In determining the page sequence numbering that corresponds to an imposition pattern, a paper folding dummy is usually used: fold a piece of paper according to the correct imposition pattern, and write down the page numbers after you complete the folding, and then determine the page number for each page of the template as per the page number written on the folded paper.

Origami is a powerful and easy-to-use electronic folding system, designed to replace the manual folding. With Origami's virtual paper, folding is done on computer screen. When the electronic folding is completed, the page numbering for the imposition template is

also completed - Origami automatically determines page sequence numbering and page orientation. Origami's "virtual paper" can be folded (with the **Fold** tool), cut (with the **Cut** tool) and combined (with the **Combine** tool).

1. Before you use the Origami tool, please ensure that there is a layout in your template. The layout determines the sheet size, page size, page number, page orientation, and page space. The toolbar icon and menu item for the Origami tool would NOT be activated in case that you have NOT created a layout in your template.

2. Click the toolbar icon, or choose the main menu item **Edit** > **Origami**, to enter in the following dialog. It will list all the layouts existing in the current template.

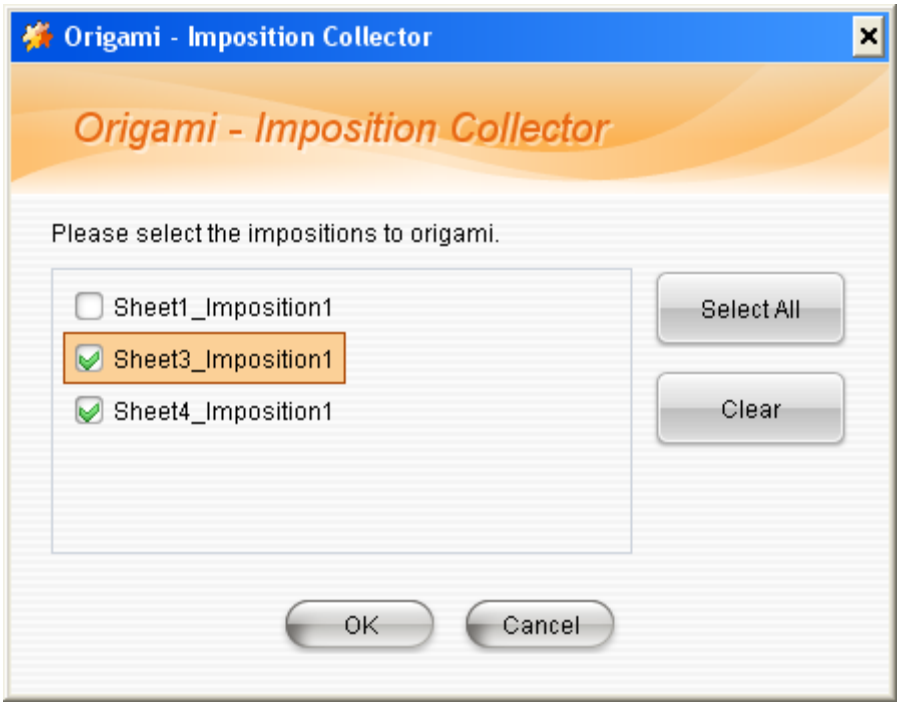


Figure 2-256

3. Tick the layouts you want to fold, and then click **OK**.

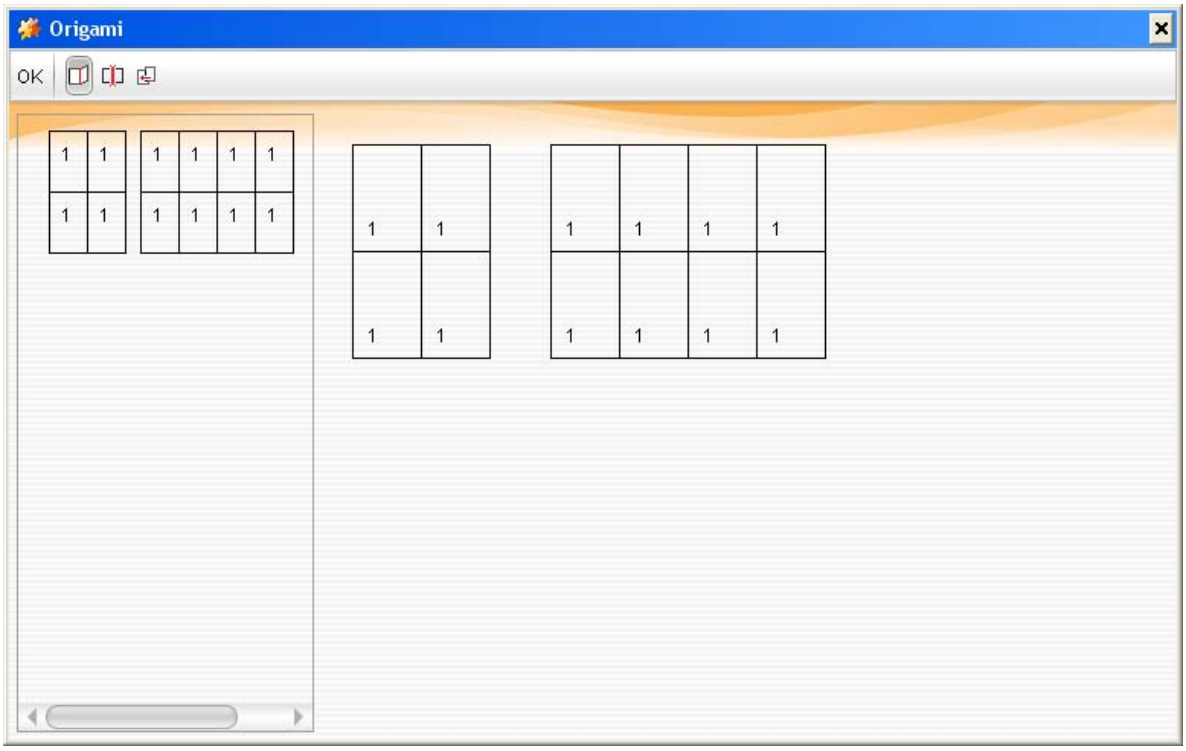


Figure 2-257

The left pane of the window is designed to record all the actions you have carried out. Each time when you complete one folding, you will then see a diagram appearing in this area, illustrating the action you have just done. If, at any time, you wish to return to a previous action, double-click the diagram representing that action in this pane, and you will instantly back to the point prior to that action. The right pane of the window holds the "Virtual Paper" and this is where you perform the folding, cutting and combining actions.

4. You can use three tools during the folding process, to achieve flexibly various folding results. They appear at the upper-left of the window. Starting at left, the tools are: (Fold), (Cut), and (Combine). Their usages are as follows:

1. The Fold tool

Choose the icon. Use it when you want to fold the sheet.

1) As shown in figure (1) below, decide the position of the fold line. Click on the border line between pages, and if a folding at that position is available, the line turns to red.

Note: *The bottom line of the paper is also an acceptable fold line, which allows you to turn the paper front side back. The number labeled on each page of the paper represents the number of paper layers.*

2) As shown in figure (2) below, decide the folding direction. Hold down the Ctrl or Shift key, and then move the cursor onto either side of the fold line. Holding down the Ctrl key means to fold towards you, and holding down the Shift key means to fold away from you. Therefore, horizontally, you can fold towards the left or right side; vertically, you can fold towards the up or down side.

3) Click the mouse button to complete one folding, as shown in figure (3). (4), (5), (6) shows a further vertical folding.

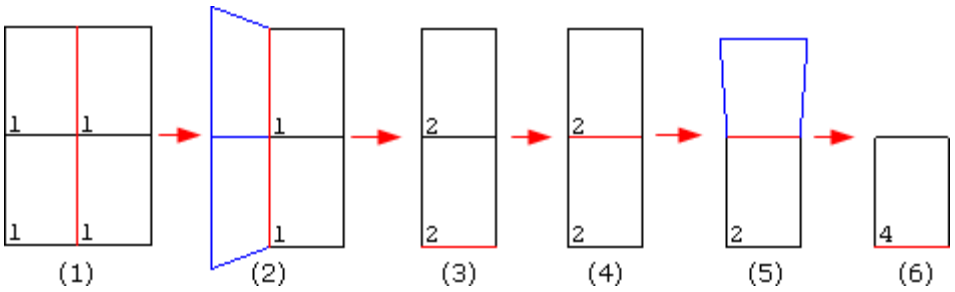


Figure 2-258

2. The Cut tool

Cutting can be used when you want to divide one signature into two small ones.

Choose the icon and click on the fold line between pages, and if a cutting at that position is available, the line turns to red, as shown in figure (1). Hold down the Shift or Ctrl key (at this moment the two keys function the same), and then move the cursor onto the right or upper side of the fold line (the right side when the fold line is vertical, and the upper side when the fold line is horizontal), as shown in figure (2). And then click the mouse button to cut the layout into two (3).

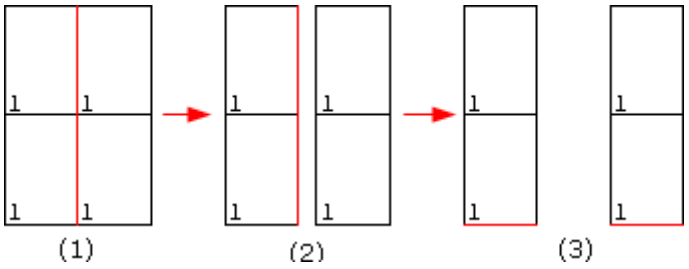


Figure 2-259

3. The Combine tool

The **Combine** tool can be used to move one signature on top of another signature.

Choose the icon. Drag one layout on top of another layout, and then drop it, the two layouts will then be combined (if you do not drop a layout "on top" of another section, it will spring back to its original position). The new combined layout can continue to be edited (i.e., folded, cut, or combined).

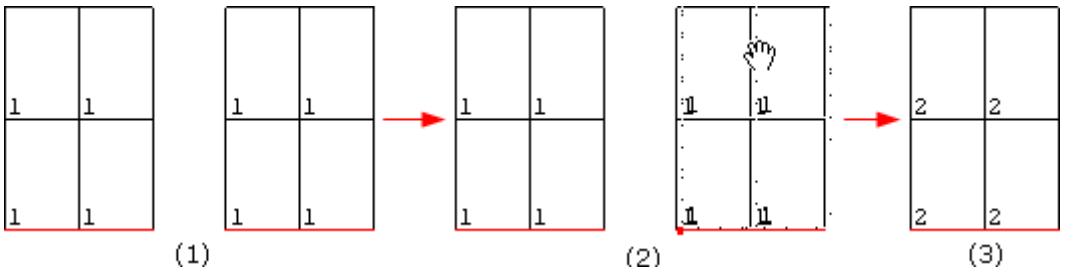


Figure 2-260

After the folding, cutting or combining, click **OK** and return to the imposer window. Now you can notice that the page numbers have been automatically specified.

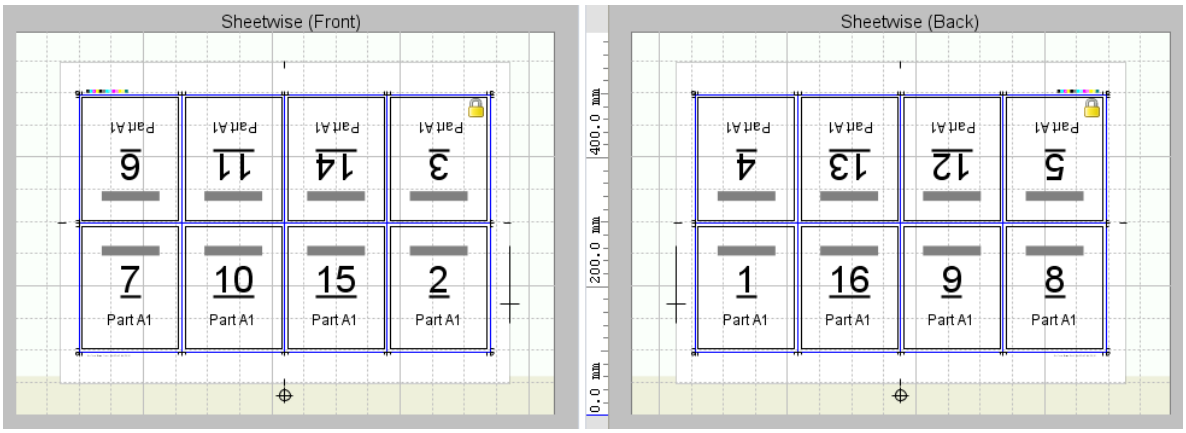


Figure 2-261

5.2.5 Add Page

1. Add Blank Page

You can also add blank pages to the sheet, instead of a layout. Click the toolbar icon, or choose from the main menu **Resource** > **New blank page** to open the following dialog. Input the page numbers, the width and height of each page, and then click **OK**.

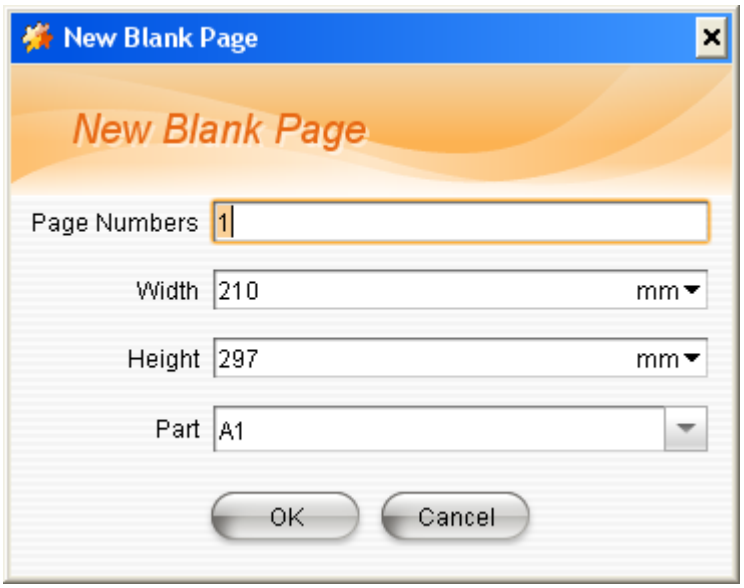


Figure 2-262

2. Page Properties

The property panel located below the template editing area can show the properties of a page when you choose this page. The two tabs divide properties into two groups, **Template** and **Content**.

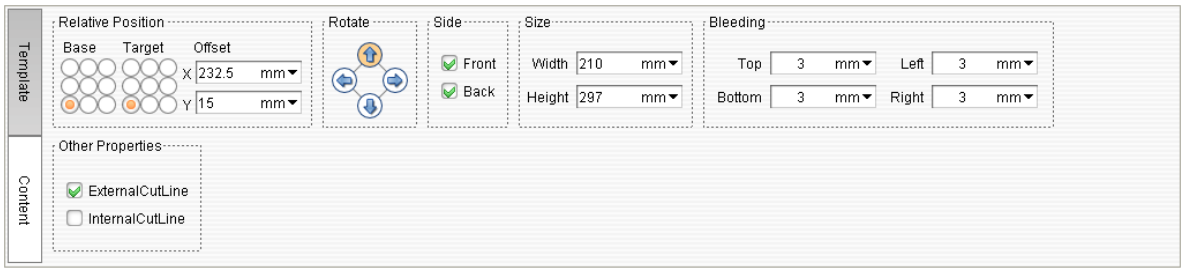


Figure 2-263

1) Template Page

Template page is a kind of pages used for modeling. It does not contain any real content, but it does define the position of the page on the sheet, the space size of the page on the sheet, the rotating direction, whether it contains the front and/or back side, the bleeding size, whether it contains cutline marks, and the position and scaling for the content it will contain, and etc.

Parameters about the template page are displayed under the **Template** tab on the property panel. With them and other methods like toolbar icons or menu items, you can define page properties such as position, orientation, size, bleeding, and etc.

2) Position

Here you can use the coordinates to precisely define the page position.

Besides this, you can also use other methods to position your page as you position your layout, for details, refer to section 5.2.4.

3) Rotate

You can choose any of the following methods to rotate the template page.

- Under the **Template** tab on the property panel, choose the **Rotate** arrows, , , or , your chosen arrow is then shown in highlight;
- Choose the icons, or in the toolbar;
- Choose from the main menu **Object** > **Rotate** > **Rotate 180**, or **Rotate 90 (Clockwise)**, or **Rotate 90 (Counterclockwise)**;
- Use shortcut keys, press down Alt, and meanwhile press an arrow key.

By default, the rotating direction of the page content is the same as that of the template page. But you may also specify a different content direction. To do so, switch to the **Content** tab, and choose a different **Rotate** arrow.

4) Front and Back

When the printing method is set to **Sheetwise**, or **Work and Turn**, or **Work and Tumble**, or **Perfector**, and you add a page or mark onto the sheet or onto any side of the sheet, by default, both the **Front** and **Back** boxes on the property panel will be checked, and a relevant blank page or mark will appear on the opposite or reverse side. Its properties such as size, position and direction are the same as the added page or mark or keep relevance with each other.

You can uncheck any of the two boxes to delete the page or mark on the converse side.

5) Size

The size of the template page may be not equal to the size of the page content. If the content size is smaller than the page size, and meanwhile the content is not scaled, then

part of the content may be cut off after the output. If the content size is larger than the page size, and still the content is not scaled, then there would be much space around the content.

By default, the size of the template page is equal to that of the page content. If needed, you may also modify the size of the template page.

- Choose the page and move the cursor to any anchor point on the page border, turning the cursor to an arrow like ↔, and then press down the left mouse button and drag it. In this way, you can adjust the page size freely;
- Under the **Template** tab on the property panel, input proper **Size** values.

6) Bleeding

The **Bleeding** parameter controls the size of the bleed box of the template page.

1) Show bleed box: Choose from the main menu **View** > **Show bleeding box**.

2) Color of the bleed box: The main menu **Edit** > **Preference** > **Color Settings** > **Bleeding Box**.

3) Default bleeding: The main menu **Edit** > **Preference** > **General Parameters** > **Default Bleeding**.

7) Cut Line

It includes external cutline and internal cutline. If checked, ElecRoc will add corresponding cut line marks at the four corners of the page. The default line width and length of the marks are determined by main menu **Edit** > **Preference** > **Mark Parameter** > **Cut Line**. After you have added this mark, you can change the line width and length from the property panel, if needed.

3. Page Content

You can also configure the properties of the page content, mainly through the parameters under the **Content** tab on the property panel.

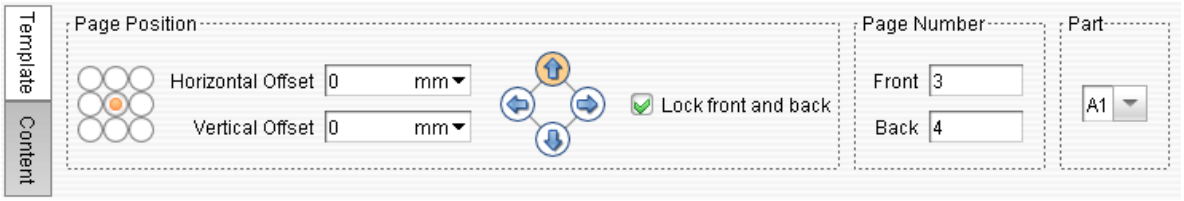


Figure 2-264

1) Page Position

It refers to the position of the page content on the page size defined by the template page. The default position is at the center of the page. You can choose other position from the nine-point diagram, and the then activated **Horizontal Offset** and **Vertical Offset** edit boxes enable you to input appropriate offset values.

Lock front and back: In case that the printing method is set to a method other than **Single-sided**, this option can then control the positional relevance between the contents on the front and back sides. E.g. in **Sheetwise** printing, if the content on the front side moves leftward, then the content on the back side will automatically move rightward, with same offset value, vice versa.

2) Rotate

You can control the direction of the page content on the template page through the four

arrows.

3) Page Number

If you specify the page number for the pages on your sheet, then when you manually submit multiple pages for imposition, ElecRoc can correctly put the pages to the right template pages one by one, according to the page number.

5.2.6 Add Mark

You can add a wide range of marks to the sheet.

1. Mark Type

The marks that can be added to the sheet include:

1) Plate marks. On the sheet based on the plate, you can add punch marks and the side guide marks such as. For details, refer to *From Plate* in section 5.2.3.

2) Cutline marks. You can add the cutline marks such as to the four corners of any page on the sheet. Refer to *Cut Line* in section 5.2.5 for details.

3) Default layout marks. Whenever you create a layout, by default ElecRoc will automatically add some marks, including cut lines (e.g.), fold marks (or), cross marks, registration marks (or), CMYK marks (e.g.), and text marks (e.g.Surface name:Surface_11_1 Front 15:58:16). For details, refer to *Default Layout Marks* in section 5.2.4 and *Mark Parameter* in section 5.2.8.

4) Smart marks. It's a kind of dynamic mark that can move smartly along with other sheet object. The cutline marks, the most of the static marks, and the custom marks, can be added as smart marks into your sheet. Their positions on the sheet are based on and associated with specific sheet object, such as plate, paper, page, and layout. Once these base objects move, they move as well. In this way, you do NOT need to re-set the marks in cases that the pages or layout on the sheet are to be changed. This provides great convenience for you to create imposer template.

5) System Static marks. The main difference from the smart marks is that this kind of marks is static, and will NOT move along with other sheet object. ElecRoc provides 18 built-in marks available for you to manually add to the sheet. They include cross reverse mark, internal target mark, oval target mark, cross mark, external target mark, line mark, vertical line mark, solid target mark, rectangular reverse mark, T mark, three-fold mark, CMYK proof bar (three ones , and), color bar, step scale, text mark, and signature mark.

6) Custom marks. You can add custom marks into ElecRoc system, for use in imposition. For details on how to add custom marks into ElecRoc, refer to section 5.2.8 *Define Marks*.

2. Smart Marks

As shown in the following figure, the bar mark located at the lower-left corner of each page is a smart mark. It will always appear at the lower-left corner of each page, whenever you move the layout, or modify the number of pages, or change the page size, or even the page space.

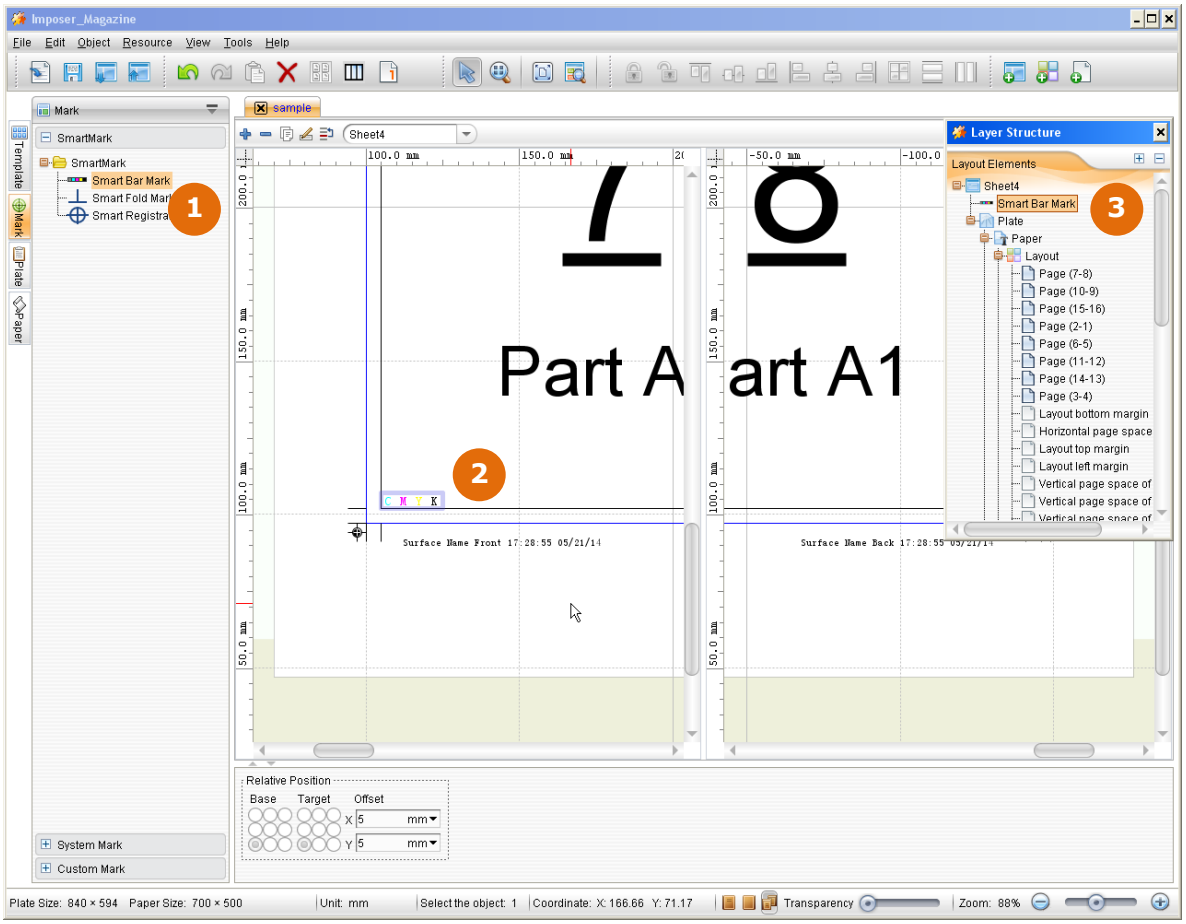


Figure 2-265

Method to add smart mark: as shown above, ①, at the left of the window, expand **Mark** > **Smart Mark** and define smart mark here; ②, choose the defined smart mark, drag it into the sheet; at this point you have finished the adding operation; ③, for convenience to choose the added smart mark for further operation, you can open the **Layer Structure** panel (from main menu **View** > **Layer Structure**) to choose the mark.

1) Mark Directory

In order to improve the usability and efficiency, ElecRoc enables you to create smart mark template and manage the templates by way of directory. As the default directory and the root directory, the directory *Smart Mark* can be used straight to store your smart marks. And if needed, you can create sub-directory under it: choose *Smart Mark*, right-click and then choose **Create Directory**. User-defined sub-directory can be deleted or renamed via right-click menu items, if needed.

2) Define Smart Mark

The mark setting defined here is sort of a parameter template for your smart mark, aiming to provide easiness for repetitive use.

Choose a directory, right-click and choose **New**, and then choose a mark type. The mark's property setup window then appears. Define each of the parameters, and then click **Save** to save the setting under your chosen directory. If you click **Save and apply**, you can not only save the setting, but also add the mark into the current sheet.

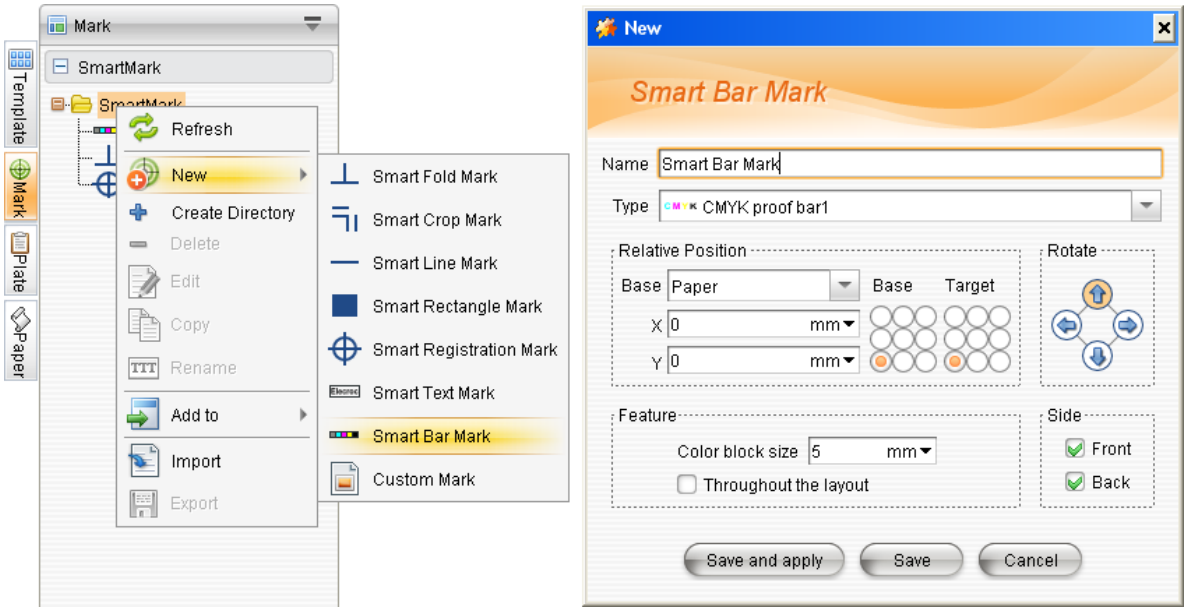


Figure 2-266

Here we introduce only the property parameters specific to the smart marks. As to other parameters, please refer to the next 4th section "Mark Properties".

Name: The name for the mark property setting.

Type: The specific mark type, for example, the bar mark contains 5 specific types.

The position of the smart mark is dynamic and associated. It's a relative position, and thus needs to be defined by way of some reference variables.

Base: Please choose a sheet object or sheet location from the **Base** dropdown list, only on which you can further define the exact position for the mark. The base could be plate, paper, imposition, imposition bleed, page, page bleed, gutters, and margin. For example, if you choose the page as base, the smart mark will then appear at certain position on each page; if you choose imposition, the smart mark will then appear at certain position on the layout. The bleed in page bleed or imposition bleed means to use the bleed box of the page or imposition as the base.

Base diagram: The base position is further divided into 9 smaller points, top, bottom, left, right, center, upper-left, lower-left, upper-right, and lower-right. The smart mark will be located at one point of them.

Target diagram: The selected base point can be further divided into 9 directions. The following figure shows a smart rectangle mark's positions when the base is page and the base point is lower-left, but the target direction is respectively set to lower-left, bottom, and lower-right.

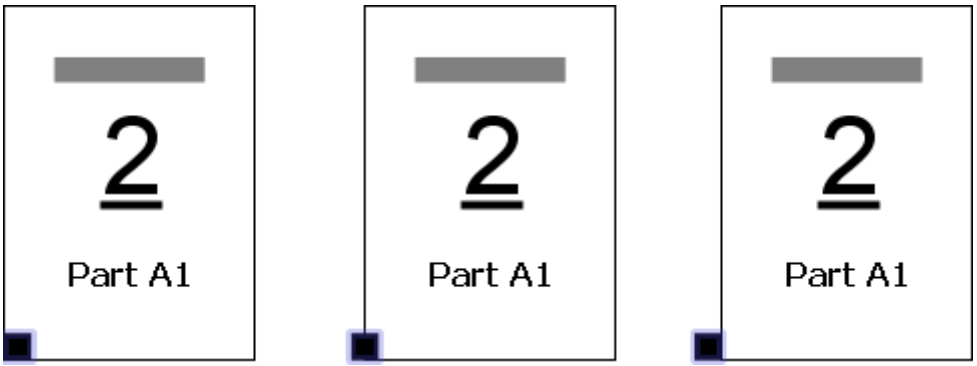


Figure 2-267

X, **Y**: When you have defined the exact position by way of the above three parameters, you can still make the mark move horizontally and vertically by way of the X and Y edit boxes, if needed. A positive X value means to move towards the right, while a positive Y value means to move upwards. Negative values mean to move in reverse directions.

3) Add

You can add a smart mark if you click the button **Save and apply** in the mark's property setup window.

You can also add the smart mark after you have defined the mark, by choosing the mark and then dragging it to any place on the sheet.

By using right-click menu items, you can also add smart mark after you have defined the mark: choose the mark, right-click and choose **Add to**. The sub-option **current sheet** means to add the mark into current sheet, while the sub-option **all sheets** means to add the mark into all the sheets of the current template.

4) Edit, Delete

To edit an added smart mark: we recommend you to open the **Layer Structure** panel when you are using the smart marks, see the figure ① in the below. This panel lists all the smart marks that have been added onto the sheet. Choose a mark, right-click and choose **Edit**, to open its property setup window. Re-define the parameters and then click **Save**.

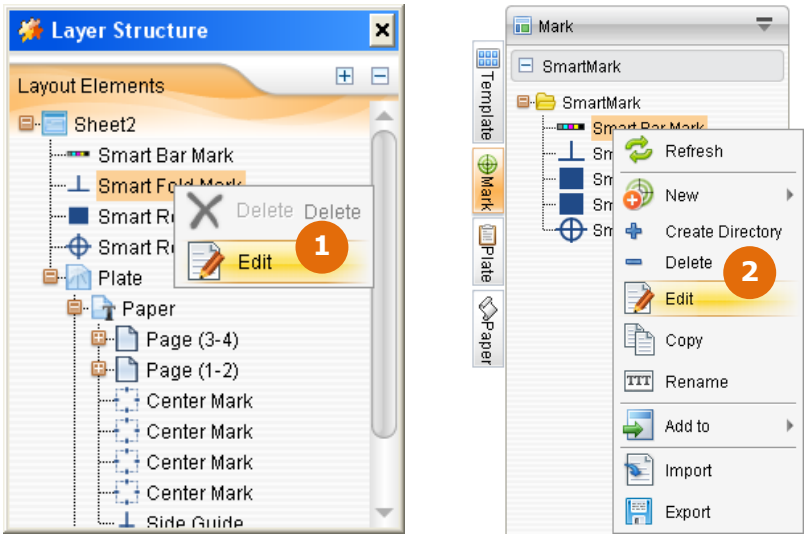


Figure 2-268

To edit a smart mark parameter template: at the location as shown in above figure ② you can also edit the smart marks, by way of right-click menu items. In this way, you can re-define the properties of the mark template, for repetitive use.

Delete a mark: The right-click menu item **Delete** enables you to delete an unneeded smart mark. The already-added smart mark on your sheet can also be deleted by using the **Delete** key on your keyboard.

5) Import, Export, Copy

ElecRoc supports you to import and export the smart mark templates. This operation can be completed with the right-click menu items.

3. System and Custom Marks

The way to add the static and custom marks is as follows. Click the toolbar icon , or check the **Mark** tab at the left of the program window to expand the optional static or custom marks. Then choose one mark and then directly drag it to the right sheet editing area, and release the mouse at proper position.

Note: *The custom marks are from PDF pages, thus are in two types, composite and pre-separation. ElecRoc does not support you to combine these two types of marks onto one same sheet.*

4. Mark Properties

You can define the mark properties through the parameters on the property panel. But the properties for various marks are different. E.g. the property panel for the mark is shown as follows.



Figure 2-269

While that for the CMYK proof bar 3 turns to:

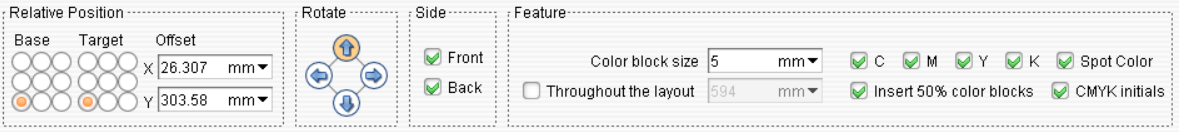


Figure 2-270

The property parameters for the static mark include:

- **Position**

It refers to the position of the mark on the sheet coordinate system.

- **Rotate**

The orientation of the mark on the sheet.

- **Front, Back**

They control if the mark appears on the front side, or the back side, or both sides.

- **Line width, Line height**

The line width and height of the mark. The default line width and height can be defined from the main menu **Edit** > **Preference** > **Mark Parameter** > **Other Mark**.

- **Color**

This parameter is available only for the line marks, and step scale mark. Optional colors include black (cmyk or mono), cyan, magenta, yellow, red, green, and blue. Besides, you can also use custom color.

Customize mark color: If you choose **Custom**, you can customize a color in CMYK mode.

- **Only on black**

This option is available for such marks as, , , , , , , and . If checked, the mark will be displayed and output only on the black separation.

- **Bar mark features**

The following parameters are specific to the CMYK proof bars and color bars.

Color block size: Each color bar is composed of multiple same-sized square blocks. This parameter controls just the side length of such blocks. In this way, it controls the size of the whole color bar.

Throughout the layout: If checked, the bar is repeated backwards throughout the layout, starting from the place where the bar is located.

Spot Color: If checked, it adds the spot color block(s) at the end of the color bar. The spot colors are those contained in the current sheet.

Insert 50% color blocks: This option is available only for the CMYK proof bar 3. If checked, it adds the 50% K, C, M and Y blocks, and if the **Spot Color** option is checked at the same time, it also adds 50% spot color block(s).

- **Text mark features**

Width, **Height**: The text size is controlled by **Height**. After you have defined the height, you should define a width big enough to wholly display the text.

Comments: You can randomly input any text, or you can also add variables such as surface name, time and date, which separately refer to the name of the current sheet, the current time, and the current date.

Surface: Two options, *Front/Back* and *A/B*, are available for you to indicate the front plate and back plate. Choose the style you prefer. Take the option *Front/Back* as example, if the **Comments** parameter has contained the variable **Surface**, at the time being output, the comments appearing on the front side of the your sheet will then contain the text *Front*, while the back side contains the text *Back*.

Font: Font for the comments, Song Typeface, Boldface, Tahoma, Batang, or MingLiu. And if needed, you can check **Bold** to make the comments boldfaced.

Swap: If checked, the text *Front/Back* or *A/B* in the mark will be swapped each other.

Sheet ID: The ID of the sheet. You can customize the first ID, and control if to number in sequence algorithm. When the **Comments** parameter has contained the variable **Sheet ID**, at the time being output, the comments appearing on the sheet will then contain the ID defined here.

Binding > **Signature ID**: If checked, when the **Comments** parameter contains the variable *Signature ID*, the ID will be bound with the signature specified in the dropdown list below.

Vertical text: the characters are arranged vertically.

- **Signature mark features**

To avoid error in assembling, a square mark is added between the first page and the last page on a signature. Signature mark can be added on both the saddle-stitched and perfect-bound signatures. In saddle-stitched signatures, the signature mark is located in the header. In perfect-bound signatures, the mark is located in the binding side of the outer signature; while in the inner signature, the mark is located in the header.



Figure 2-271

First ID: The ID of the first signature mark. For example, if the First ID is 3, the mark will be added to the height of the third mark, and the signature ID is 3.

Step: The step between signature marks.

Group: You can set certain signature marks as a group; groups are divided by a space of a signature mark's height. This helps to avoid signature missing from happening, and to calculate the total signature number in an imposition process.

Use sequence algorithm: If checked, all the signature marks on the sheet are numbered in a sequence. If not checked, they are numbered separated on each signature.

Shape: The shape of the signature mark may be rectangle or circle.

Color: The signature mark is displayed and output in the color specified here.

Negative: The signature mark is composed of a number and a background. If checked, the number is white, while the background is colored.

Positive: If checked, the number is colored, the background turns white.

Range: The range within which the signature mark is allowed to creep.

Up: The signature mark creeps upward. If you check **Horizontal**, the signature mark creeps leftward.

Down: The signature mark creeps downward. If you check **Horizontal**, the signature mark creeps rightward.

Reflex: When the creep of the signature mark reaches the limit, the mark will reflex.

Inner Reflex: Here you can input the step of inner reflex. When the creep reaches the step limit, the creep will creep to the opposite direction. The beginning position is decided by the **Step** minors 1. This setting cannot be used together with **Group** and/or **Reflex**.

Vertical: The signature mark creeps vertically.

Horizontal: The signature mark creeps horizontally.

Example: **Height** of the signature mark is 5, the **Range** is 75, and **Inn Reflex** is 5 steps, the output of the signature mark is shown as follows:

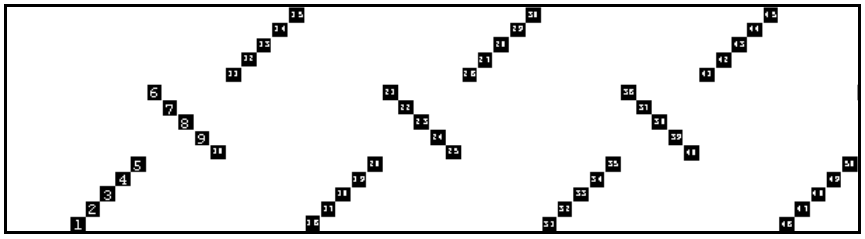


Figure 2-272

Comments: You can add some comments in the signature mark. If needed, input the comments in the text box.

Show Number: It controls whether to show the number in signature mark.

5.2.7 Sheet Object Operations

The objects on the layout include layouts, pages and marks. ElecRoc provides you with some functions or enables you to perform some operations to them after you have added them into the sheet.

1. Layer Structure

You need to be quite clear about the up and down relations in case that two or more layouts (or pages/marks) are overlapping each other. ElecRoc views each layout (or page/mark) as a unique layer. And the upper layer always overlaps the lower one. By default, ElecRoc judges if a layer is old or new by the time it is created, the newer layer always overlaps the older one, i.e. the newer layer is in the upper, the older one is in the lower. This sequence can be customized.

The layer sequence and classification can be viewed in the **Layer Structure** pane. Choose from the main menu **View** > **Layer Structure** to display this pane.

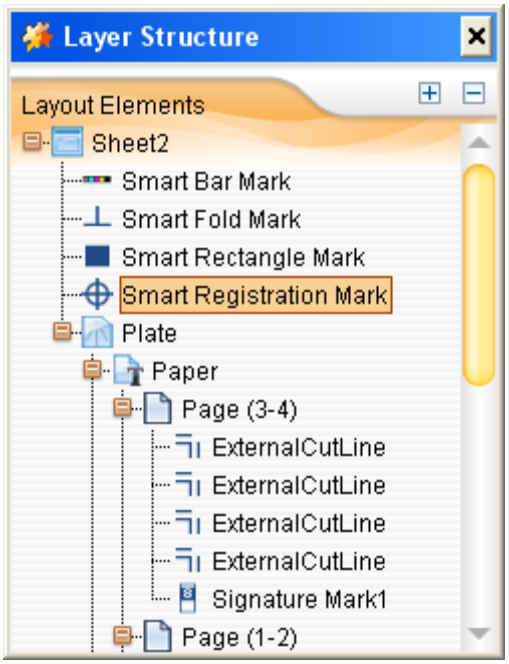


Figure 2-273

To change the layer position in the sequence, choose the sheet object, and then do any of the following:

- Click the toolbar icons , , , ;
- Choose from the main menu **Object** > **Arrangement** > **Bring to front**, or **Send to back**, or **Bring forward**, or **Send backward**.

2. Efficient step & repeat

Copy repeatedly one single page so as to produce multiple pages arranged according to certain sequence and page space.

Click the toolbar icon , or choose from the main menu **Edit** > **Efficient step and repeat**, to get a floating setup dialog box, with the cursor turning to .

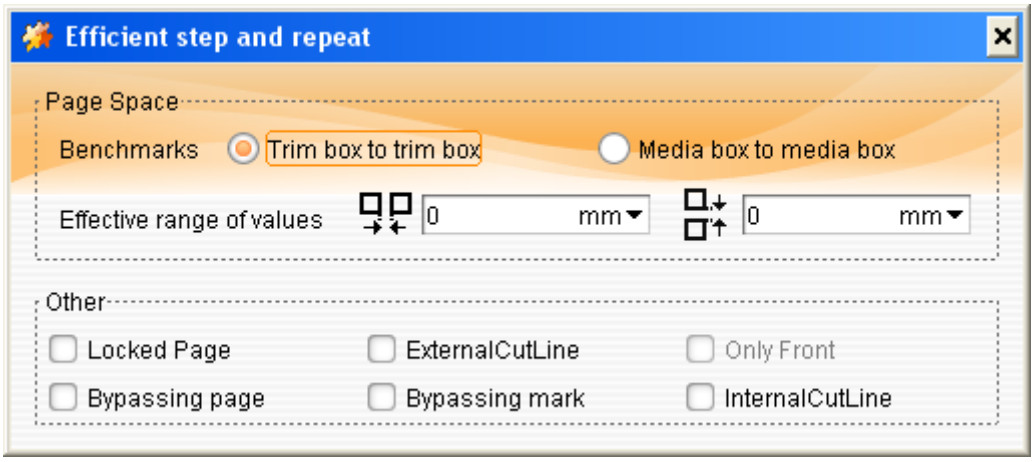


Figure 2-274

And then, choose the page, press down the left mouse button and drag it on the sheet. You will then see new pages being formed on the sheet around the base page. Release the mouse when it has produced the number of pages you want to produce.

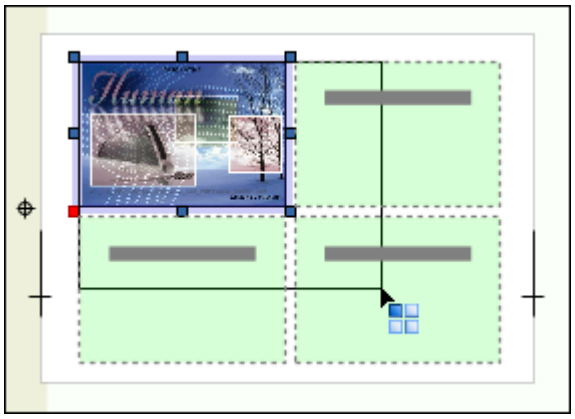


Figure 2-275

Parameters related include:

Benchmarks: **Trim box to trim box** refers to use the distance between the trim boxes of the two pages as the page space, while **Media box to media box** refers to that between the media boxes of the two pages.

Space: The page space between any two pages in the horizontal and vertical directions.

Locked Page: To lock the base and new pages after the step and repeat.

External/Internal CutLine: To include cutline marks on all the new pages after the step and repeat.

Only Front: The cutline marks only appear on the pages in the front side of the sheet.

Bypassing page: To bypass the existing page on the sheet. I.e. at the place where an existing page is located, it does not produce any new page.

Bypassing mark: To bypass the existing mark on the sheet.

3. Smart step & repeat

Choose from the main menu **Edit** > **Smart Step and Repeat**, and you will open a setup window as shown in the below, so as to perform a smart step & repeat operation.

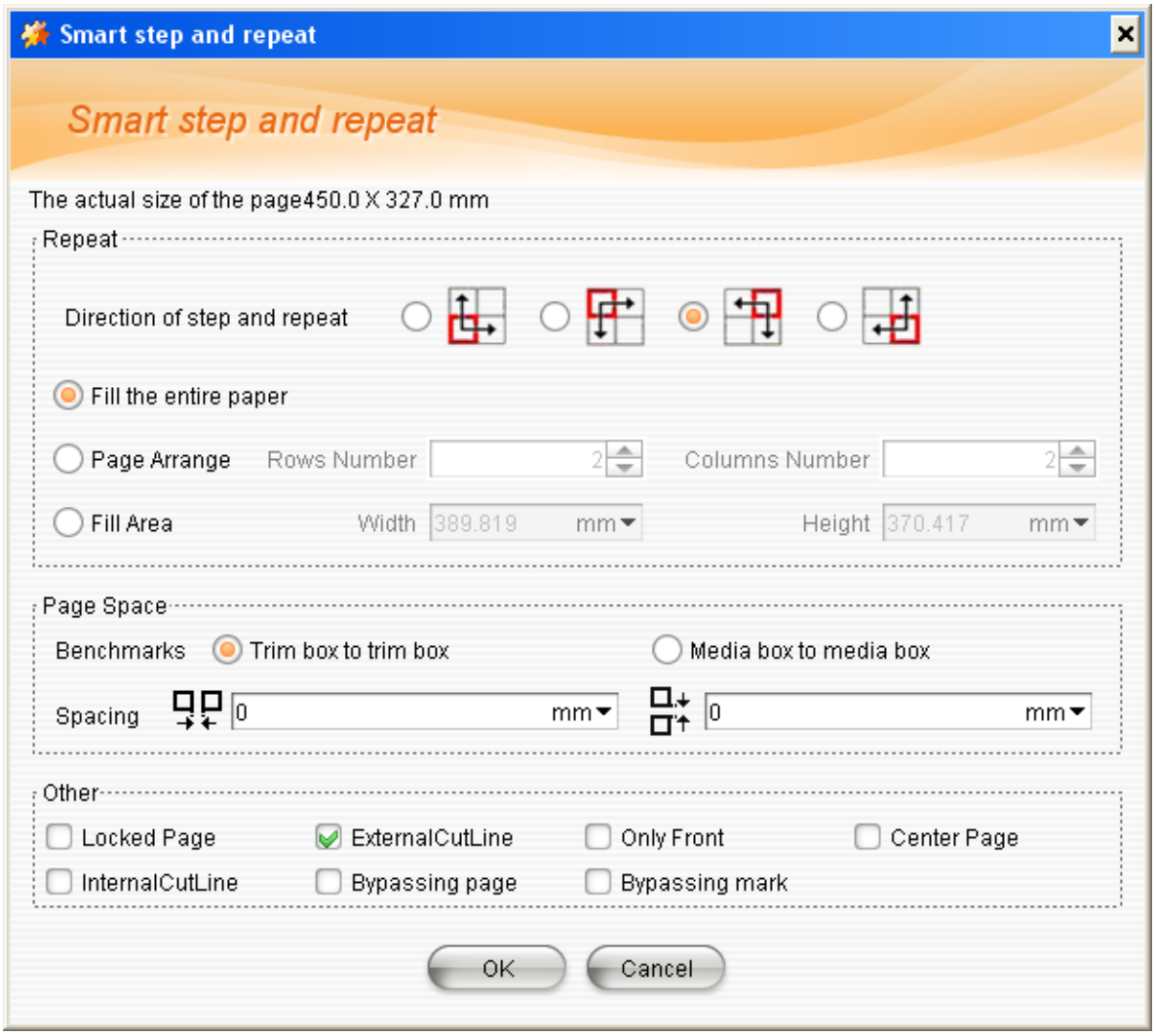


Figure 2-276

More options become available, compared to the rapid step & repeat setup window.

Direction of step and repeat: Starting from one corner, step and repeat toward the opposite corner. Thus there are 4 directions. By default, ElecRoc can automatically choose a proper direction, but if needed, you can choose any other direction.

Fill the entire paper: To generate multiple pages till they fill the entire paper.

Page Arrange: To generate a specified number of pages in both the horizontal and vertical directions, as defined here.

Fill Area: To generate multiple pages till they fill the area as specified here.

Center Page: To center the base page and generated pages on the sheet.

4. Alignment

After you have added multiple layout objects into the sheet, you may need to align them.

1) Selection of multiple objects

To choose or select more than one sheet object at one time, you can do any of the following:

- Press down the Ctrl key at the same time;
- Press down the left mouse button on any blank area inside or outside the sheet, and then drag it in any direction to form a rectangle. In this way you can choose all the pages inside the rectangle.

After you have chosen multiple objects, you can perform not only the alignment, but also the operations like moving, cutting, copying/pasting, deleting, rotating, and configuring the bleed, the size, and etc.

2) Align objects

You can align objects in any of the following ways:

- Click the toolbar icons , , , , , , ;
- Choose the menu items corresponding to the above icons: **Object** > **Alignment** > **Vertical align top**/ **Vertical align center**/ **Vertical align bottom**/ **Horizontal align left**/ **Horizontal align center**/ **Horizontal align right**, and **Object** > **Center** > **Horizontal and vertical**/ **Horizontal**/ **Vertical**.

The default benchmark is the firstly selected object, but this can be re-defined manually. After you have chosen multiple objects, click one of them once again to make it the benchmark object. The anchor points on the benchmark object are shown in dark, while those on the rest objects are in white.

5. Cut, Copy, Paste, Paste Hold, Delete

Among them, *Paste Hold* refers to an operation in which the original object and the copied one will be in a same location after the pasting, producing an visually overlapping effect. These operations can be performed in one of the following ways:

- Choose the object and then click the toolbar icons , , , ;
- Right-click and choose **Cut**, **Copy**, **Paste**, **Paste Hold**, **Delete**;
- Choose from the main menu **Edit** > **Cut**/ **Copy**/ **Paste**/ **Paste Hold**/ **Delete**;
- Shortcut keys. Cut: Ctrl+X; Copy: Ctrl+C; Paste: Ctrl+V; Paste Hold: Ctrl+Shift+V; Delete: Delete.

5.2.8 More Features

For more flexibility and convenience, and higher efficiency, ElecRoc imposer also provides you with the following functions and features.

1. About User Interface

1) The Program Window

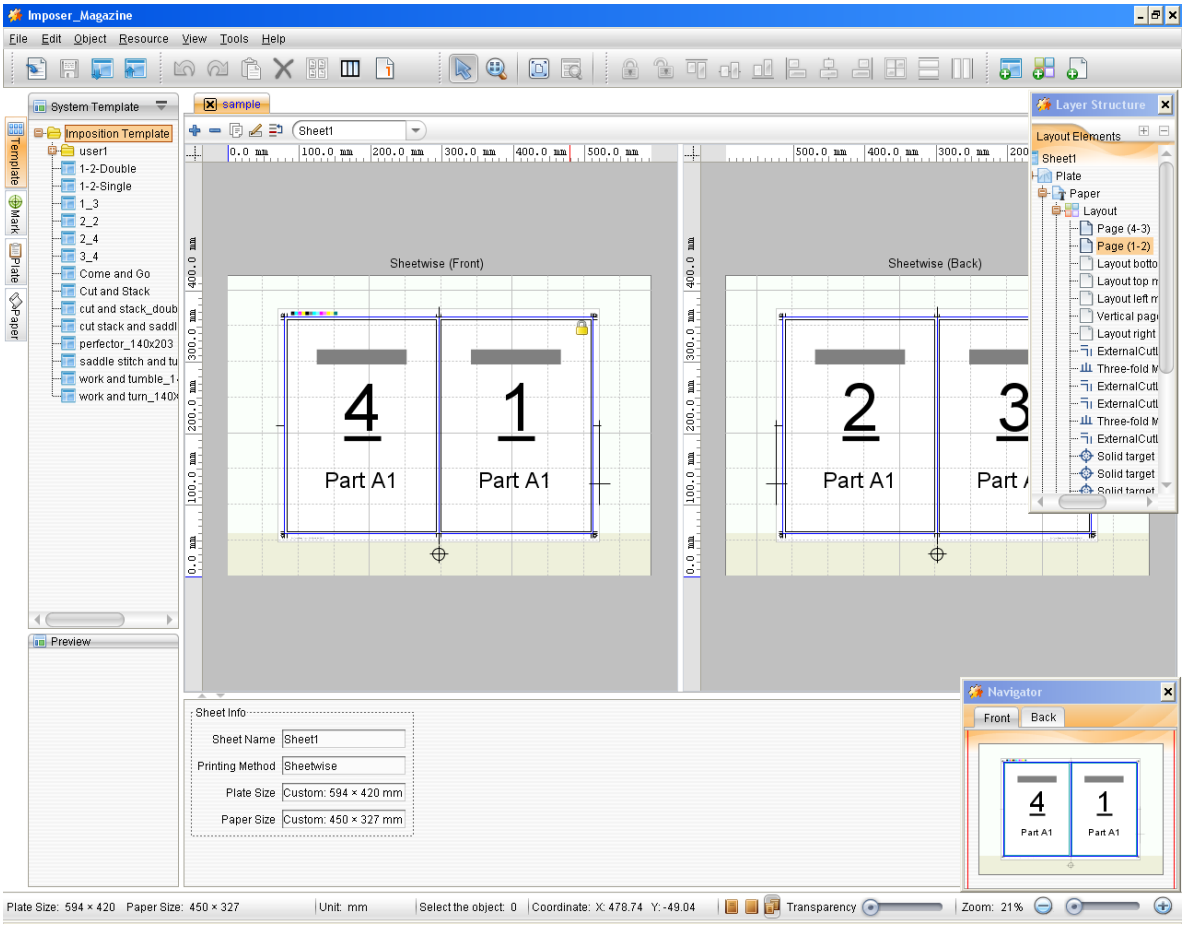


Figure 2-277

In full view mode, as shown above, the program window consists of the following parts:

Main menu: Provides operational commands for you to use.

Toolbar: Consists of multiple icons or buttons that can substitute for some commonly-used commands, for you to quickly perform the operations.

The resource management pane: The pane located at the left of the window is designed for you to manage the related resources, such as templates, plates, paper, and marks. They are grouped into four tabs, each with a unique operating interface.

The template editing area: The body of the program window is an area special for you to edit your template.

Property panel: Lists the property parameters of your selected sheet or selected object on the sheet for you to configure.

Layer Structure pane: a floating pane, displayed after selection, listing the layer

structure of current sheet. In layer structure, each sheet object is considered as a layer.

Navigator pane: a floating pane, displayed after selection, showing the thumbnail image of the current sheet for you to navigate.

Status bar: Displays the plate size, paper size, unit, number of the selected objects, and the cursor position. In addition, it contains two buttons at the rightmost, which can be used to control the display of the front and/or back sides and the display percentage.

You can use the mouse dragging to adjust the sizes of the resource management pane, the template editing area, and the property panel. But when you re-open the program window, their sizes restore to a default setting. When you have expanded any tab of the resource management pane, you can hide the tab and the pane by clicking the tab once again. The property panel can be displayed or hidden by clicking the buttons ▲/▼. The template editing area can hold more than one opened template, each one with a tab locating on the top, named with the template name. You can click these tabs to easily switch between them.

2) Toolbar icons

- **the position of the icons in the toolbar**

The icons in the toolbar are classified into several groups, separated by the symbol ⋮. Press down the left mouse button at the blank area between the icons within a group, then drag forward or backward and drop at any other ⋮, you can move the group of icons to the place where you drop the mouse button.

- **Show/hide toolbar icons**

Choose from the main menu **Edit** > **Preference**, and then choose **Custom Toolbar** from the pop-up window.

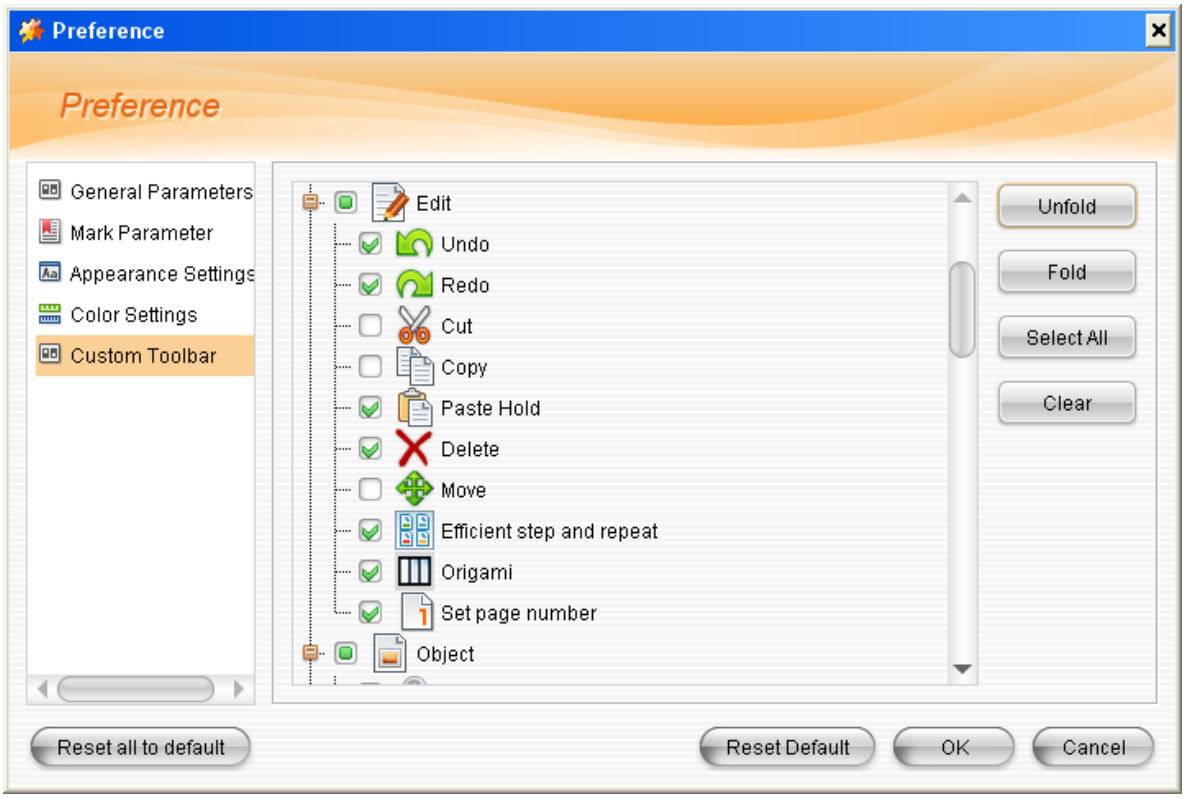


Figure 2-278

The window lists all the toolbar icons that can be displayed and used and how they are grouped. Expand each group of icons. A tick✓ in front indicates to show, while a cross× in front indicates to hide. If needed, you can cross the icons that are less used or not used.

For your convenience, ElecRoc provides buttons such as **Unfold**, **Fold**, **Select All**, **Clear**, **Reset Default** and **Reset all to default**. By default, all the icons are shown in the toolbar.

- **The toolbar right-click menu**

You can right-click on the blank area in the toolbar to get a shortcut menu, and then use the options to control if to show or hide a whole group of icons. If you check **Lock Toolbars**, then you cannot move the groups of icons. The **Custom** option enables you to separately control if to show or hide each of the icons.

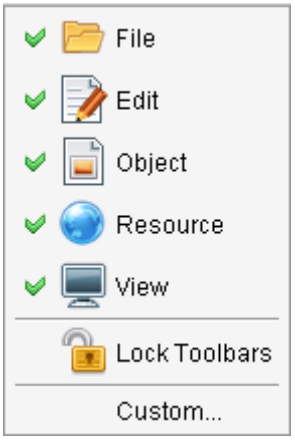
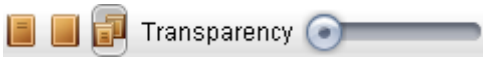


Figure 2-279

3) Display of the front and back sides

The controller 

at the bottom of the program window controls the display of the front and back sides on the editing area. If you choose  or , only one side (front or back) is displayed, and if you choose , both sides are displayed.

Transparency: This option is applied to the sheet that contain both the front and back sides. It refers to the transparency of the front side on the back side, or that of the back side on the front side.

4) Display proportion

The sheet display proportion can be adjusted in the following ways:

1) Use the **Zoom** tool . Choose this toolbar icon. The cursor turns to  after you choose.

- Press down the left mouse button and drag the mouse, to form a rectangle in dashed-line on the sheet. The content inside the rectangle will be zoomed in on the editing area in the possibly biggest proportion.
- Scroll up and down with the mouse wheel;

2) Use the toolbar icons , , ,  and . The icon  zooms in, the icon  zooms out, and each click on these two icons zooms in/out in a fixed scaling factor, which can be defined with the **Preference** parameter **Appearance Settings** > **Zoom Step**. The icon  zooms to display the whole sheet in fitting proportion, and the icon  zooms to

display the currently-selected object in fitting proportion. The object may be the sheet, the layout, a page, or a mark. The icon zooms to a specified display proportion. Click it, and you can choose from the optional proportions, such as 2:1, 1:1, 1:2, or you can choose **Custom** to specify other proportion.

ElecRoc also provides menu commands corresponding to the above icons, under the **View** menu.

3) Press down the Ctrl key and meanwhile scroll the mouse wheel to-and-fro to zoom in and out the view. The cursor turns to if you press down the Alt key. At this time, you can zoom in and out the view as you do with the **Zoom** tool.

4) Use the zoom controller at the lower-rightmost of the program window "Zoom: 61% ". Here you can not only know the current zoom proportion, but also can click the icons and to zoom out and in incrementally (5% each click), or adjust the sliding bar to zoom in and out.

5) Sheet Navigation

For your convenience to browse the sheet when the view has been zoomed in, i.e. only part of the sheet content is displayed in the editing area, ElecRoc provides you with the following 4 optional capacities.

- Use the mouse wheel to scroll the sheet up and down;
- Drag the horizontal or vertical scroll bar;
- Choose the toolbar icon, and then you can press down the left mouse button to drag the sheet freely;
- Make use of the Navigator pane.

Choose from the main menu **View** > **Navigator** to display the **Navigator** pane.

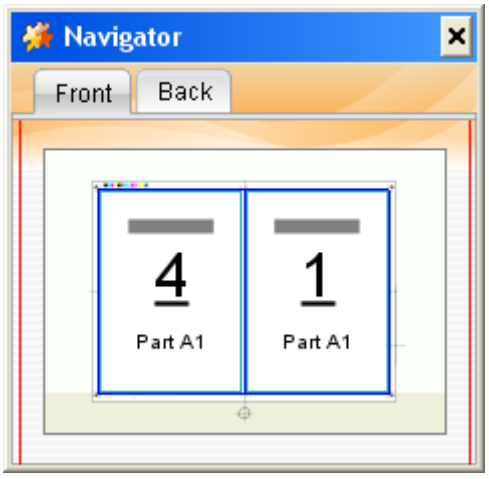


Figure 2-280

In this area, ElecRoc displays the thumbnail images of the front and back sides of the sheet. When the zoom proportion increases to a certain extent, you will see a red rectangle box on the thumbnail image (the bigger the proportion, the smaller the box would be). The content inside the box are just the zoomed-in content in the editing area. Therefore, if you move the red box by clicking anywhere outside it on the thumbnail image, or if you drag and drop the box directly, you can subsequently change the content currently displayed in the editing area. In this way, by clicking or dragging on the thumbnail image, you can easily zoom in and browse the sheet in the editing area.

6) Layer Structure

ElecRoc introduces the concept of the layer. Each object on the sheet is considered by default as a unique layer. From the **Layer Structure** pane, you can adjust the sequence of the layers, to correctly deal with some issues come from the case when the objects overlap each other.

7) Layout Object

ElecRoc provides such commands under the **View** menu as **Display Page**, **Display Part**, **Show Marks**, **Show bleeding box**, **Show trim box**, and **Show layout box**, for you to control whether to show the layout object or element including page number, part, mark, bleed box, trim box, and layout box. by default, all of them are shown on the window.

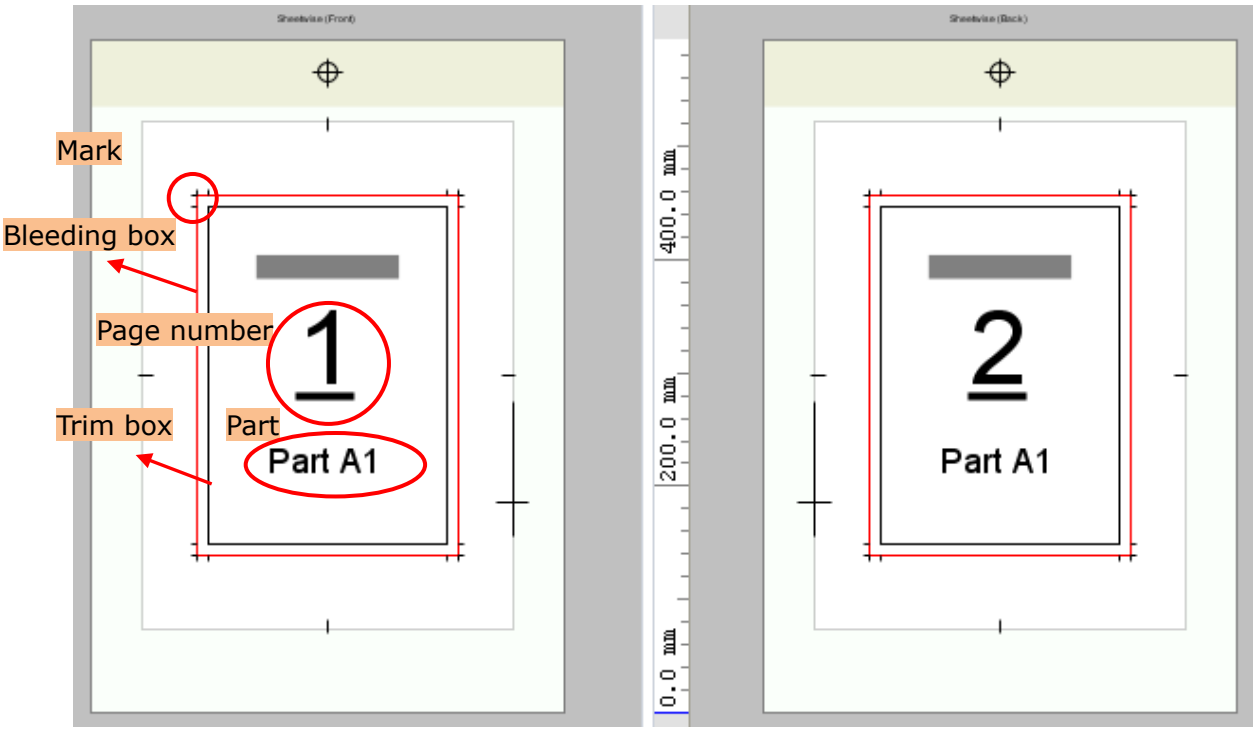


Figure 2-281

8) Other Display

By using the commands **Simple View** and **Operator View** under the **View** menu, you can hide the property panel and the resource management pane from the program window, and by using the commands **Show Guides** and **Show Grid** under the **Tools** menu, you can control whether to show or hide the guide or grid on the window.

2. Define Papers

You can create or define the paper options that are available for selection in creating a sheet.

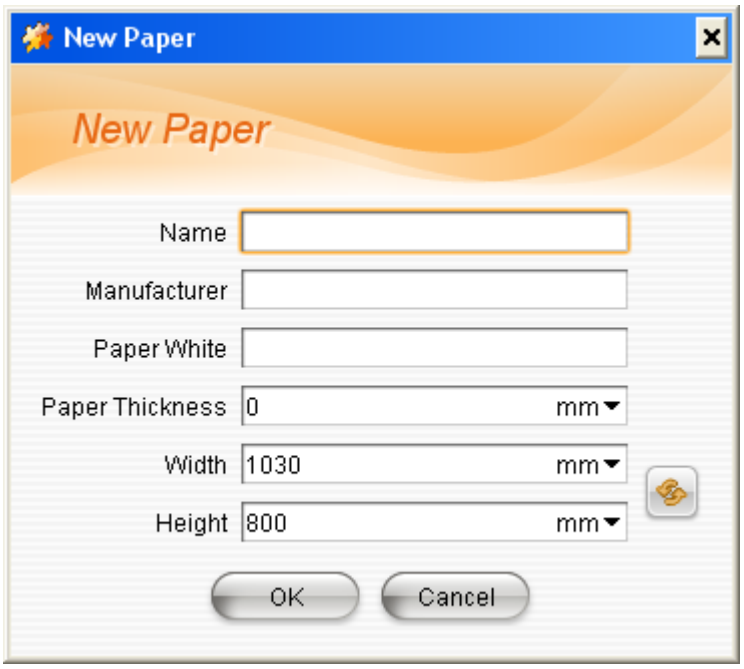


Figure 2-282

The operations related to defining a paper are all performed under the **Paper** tab. By using the commands from the right-click menu or the **Preference** menu, you can finish such common operations as creating, editing, copying and deleting.

As shown in the above figure, each paper has six properties, among which the **Name**, **Height** and **Width** are compulsory. The button enables you to exchange the width and height. The **Manufacturer**, **Paper White**, and **Paper Thickness** are optional properties. If needed, you can input related descriptions.

Now that you have defined the papers, you can quickly define the sheet size and save the time to set the paper properties, by choosing the pre-defined paper options from the **Paper** dropdown list, at the time when you open the **New Sheet** window to create a sheet, or expand the property panel to edit the sheet.

3. Define Plates

The purpose, method of operation, and the application of the plates, are basically similar to the papers mentioned above. The difference lies in that you need to define more properties as to the plates.

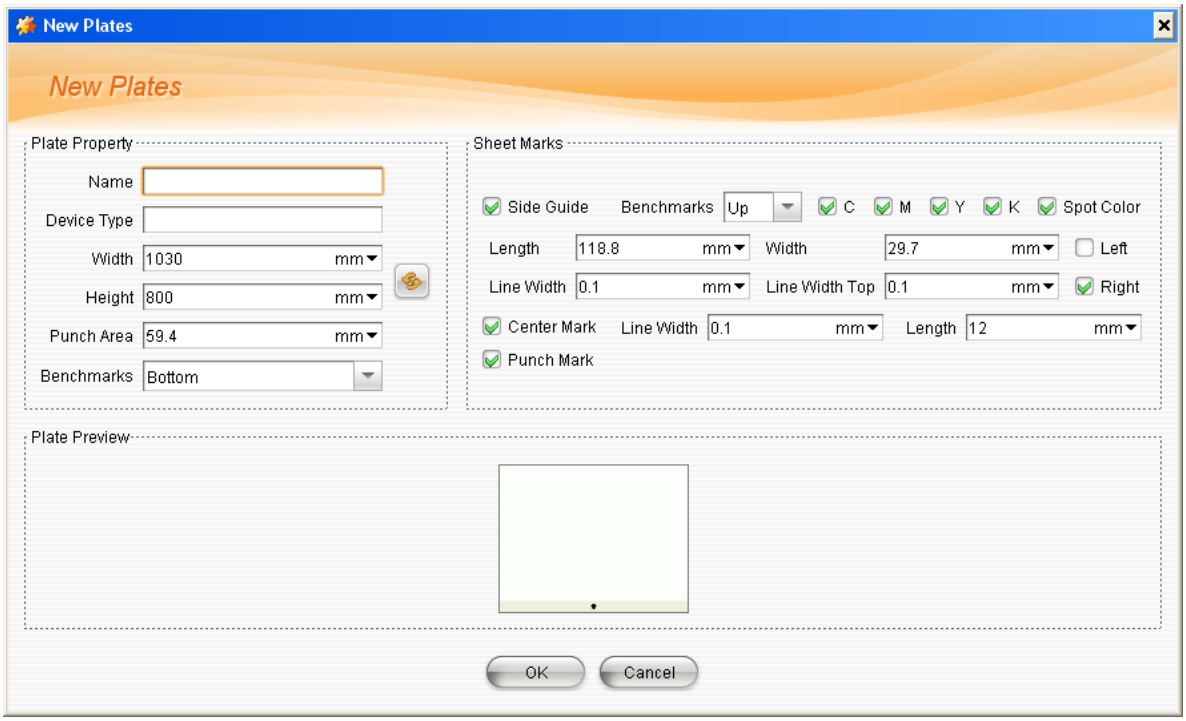


Figure 2-283

- **Punch area**

If you need to punch in the later-on plate making, you can reserve an area on the sheet special for the punching. **Punch Area** controls the width of the punch area. Its position is determined by the **Benchmarks** parameter, it may be at the left, right, top or bottom side of the plate. If you don't need this area, you can set the value to 0.

- **Punch marks**

ElecRoc can add a punch mark ⊕ at the center of the punch area.

- **Side guide marks**

ElecRoc can add the marks such as ⊣ onto the sheet, for the side guide on the printing press to position the paper, in case the press model installs the side guide.

Checking it, you can further define the length, width, line width, position of the mark, the sheet side(s) on which it appear, and the separations on which it will be output. The **Left** and **Right** boxes control which side(s) of the sheet it appears on. The separation options include **C**, **M**, **Y**, **K** and **Spot Color**. E.g. if you do not want the mark to appear on the spot color separation, you can let the **Spot Color** box unchecked. The **Benchmarks** box provides four options, representing the mark position, shown as follows.

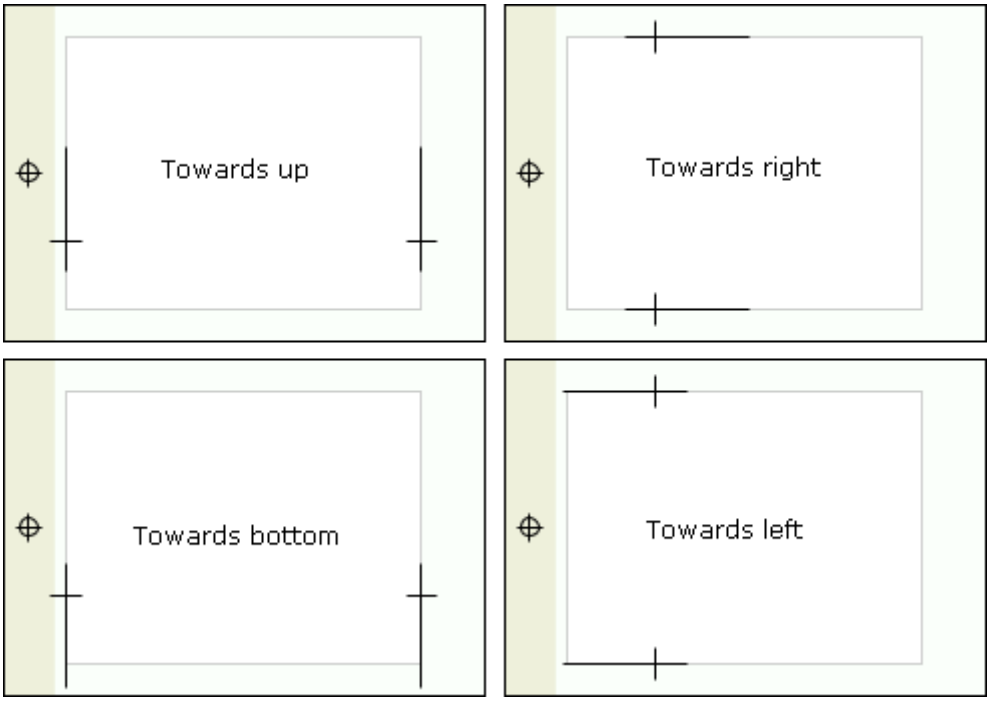


Figure 2-284

- **Center marks**

A line mark appears at the center of the four sides on the paper, if checked.

- **Other parameter**

Device Type: Optional property. You can input related description here.

4. Define Marks

Marks here refer to the user-defined marks. Steps for adding custom marks into ElecRoc are as follows:

1. Use third-party software to make the mark, and save it as a file that can be supported by ElecRoc, e.g. PDF, PS, TIFF, PRN, and etc.

2. Enter in ElecRoc's job window and submit the mark file to PDF Generator. After the process is completed, choose the generated PDF page, right-click and choose **Add as Mark**.

Note: *After PDF Generator's process, the mark file can be further processed by nodes like PDF Tools and Page Clipper. Under such node or when the toolbar icon is selected, you can still use the right-click menu item **Add as Mark** to perform the operation.*

3. Input the name of the custom mark, and then click **OK**.

4. Return to the program window. Expand the **Custom mark** list under the **Mark** tab, right-click and choose **Refresh**, and then you will see the newly-added mark.

5. Auxiliary Tools

We mentioned previously how to position pages by help of the auxiliary tools. There are two auxiliary tools, grid and guide.

1) Grid

- **Show the grid**

When you have enabled the menu item **Tools** > **Show Grid**, you can see regularly spaced horizontal and vertical dashed lines on the sheet, forming a multitude of equal squares. Meanwhile if you have enabled another menu item **Tools** > **Capture Grid**, then when you move a sheet object close to any grid line, you can see two crossed red lines appearing and the object being captured to the place where the grid line is located. If you don't want to use the grid as a reference for positioning, please disable the two menu items above.

- **Define the grid spacing**

Choose from the main menu **Tools** > **Grid Spacing**. The grid is composed of many identical squares. The spacing actually refers to the side length of such square. The value by default is 50 mm, with a range from 10~1000 mm.

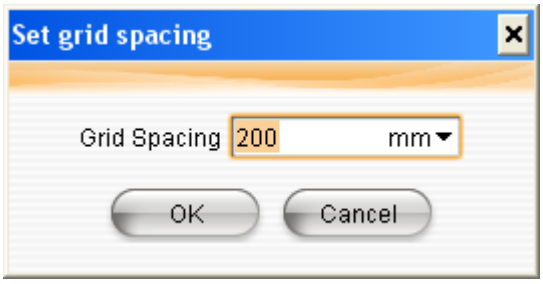


Figure 2-285

2) Guide

- **Show the guide**

Choose from the main menu **Tools** > **Show Guides**. The display color of the guide lines can be defined from the main menu **Edit** > **Preference** > **Color Settings**.

- **Capture to the guide**

Choose from the main menu **Tools** > **Capture Guides**. When you drag a sheet object close to a guide line, ElecRoc will automatically capture the object to the place where the guide line is located.

- **Track the guide**

Choose from the main menu **Tools** > **Track Guides**. In this case, if you move the guide line, you will move the objects captured to the guide line at the same time.

- **Add a guide**

1. Do any of the following:

  - Double-click anywhere on the horizontal or vertical ruler;
  - Place the cursor on the ruler, and then press down the left mouse button and drag towards the sheet editing area;
  - Click the toolbar icon ;
  - Choose from the main menu **Tools** > **Add Guides**.

2. The **Add Guides** dialog box appears. Choose the direction, horizontal or vertical, and input the exact coordinate, and then click **OK**.

- **Move a guide**

Place the cursor on the guide line, the cursor then turning to an arrow-like shape, such as , and then press down the left mouse button and drag the mouse. In this way you can move the guide line anywhere easily. If you press the **Ctrl** key meanwhile, you can

move the guide line to one of the commonly-used positions on the sheet. You can also double-click the guide line to re-locate it.

- **Lock the guides**

Choose from the main menu **Tools** > **Lock Guides**. The locked guide line can no longer be moved randomly. To unlock, please cancel the selection of this menu item.

- **Delete/Clear guides**

You can delete a guide line by simply dragging it outside of the sheet editing area. Or if needed, you can also click the toolbar icon to clear all the guide lines.

6. Resource Explorer

ElecRoc enables you to export such resources as papers, plates, templates and smart marks out of ElecRoc system by way of the resource explorer.

Choose from the main menu **Resource** > **Explorer** to open the operating interface. The left of the window lists the four resource categories, paper, plate, template and smart mark, and at the right it shows all the resources of a selected category.

Check the resources you want to export, and then click **Export**. And in the follow-up dialog box, specify the name and destination for your exported resources.

You can also click the **Import** button in the explorer to import paper, plate and template resources into ElecRoc system.

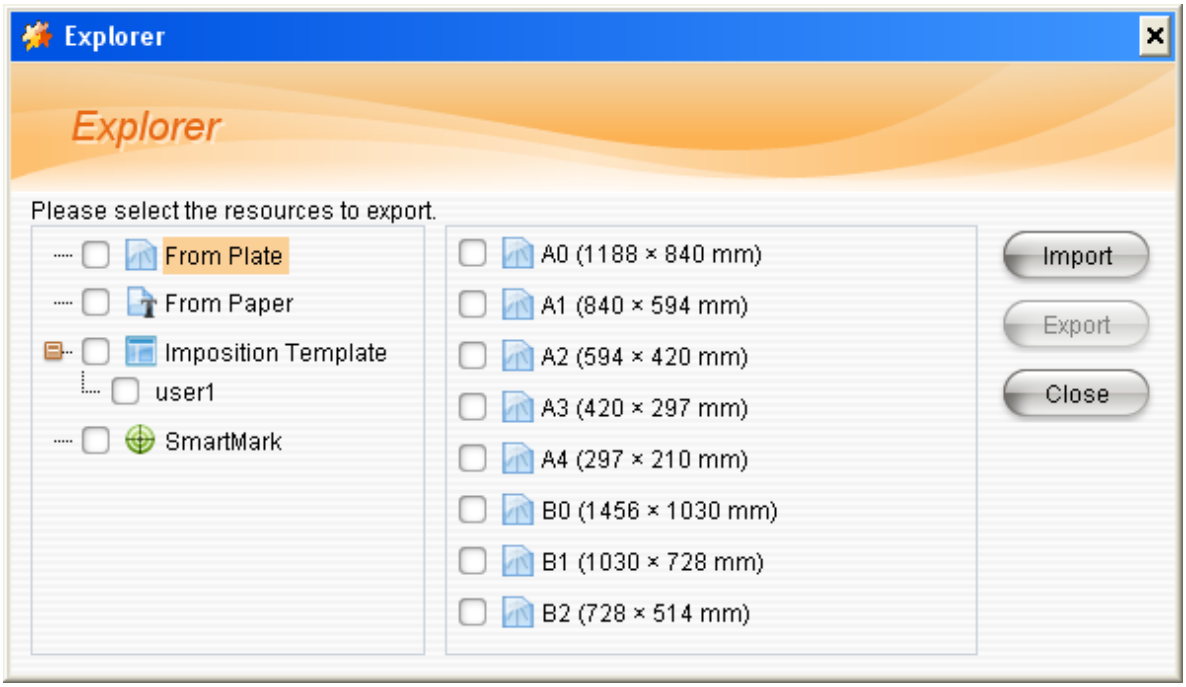


Figure 2-286

7. Preference

Here refers to the parameters that can be defined according to your preference. Choose from the main menu **Edit** > **Preference** to enter in the setup interface, which contains five group of parameters.

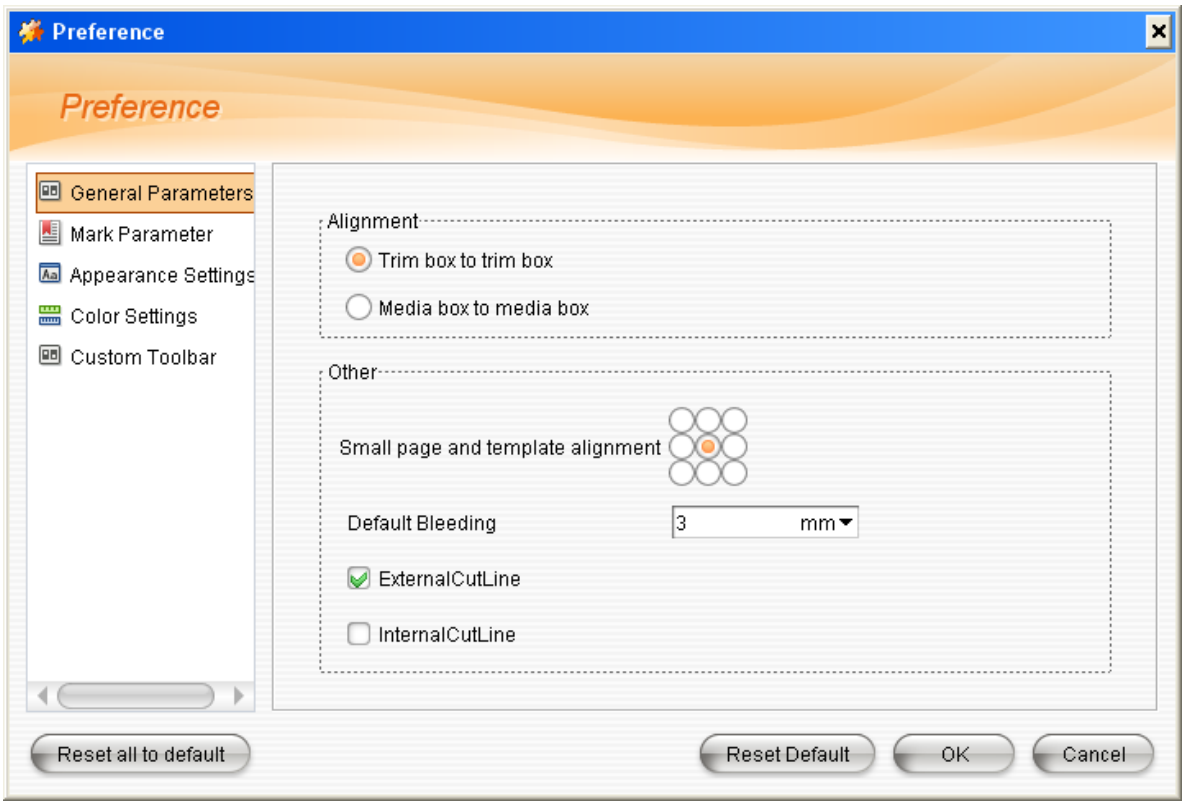


Figure 2-287

1) General Parameter

- **Alignment**

It refers to the benchmark for the page alignment. Pages can be aligned with each other based on the trim box or the media box.

- **Other**

Small page and template alignment: It controls the default position of the page content on the template page, i.e. the default positioning setting under the **Content** tab of the property panel, when you choose a layout or page.

Default Bleeding: The default bleeding setting of the page on the sheet.

External/Internal CutLine: Controls if by default the **External/Internal CutLine** options are enabled for each newly-added page, not available to layout page. If checked, when you add a page to the sheet, the property parameter **Template** > **External /Internal CutLine** for the page will be checked by default. The default setup of the **External/Internal CutLine** options for the layout page is controlled by the parameter **Preference** > **Mark Parameter** > **Cut Line**.

2) Mark Parameter

Here you can define the default marks that would be added automatically when you create a layout. These marks include:

Category	sample	Location
Cut Line		the four corners of the layout
Fold mark	Single line , three lines	middle points on the four sides of

		the layout
Cross mark		Center of the layout
Registration mark	External target mark, solid target mark	middle points on the four sides of the layout, or the four corners
CMYK mark		the top of the layout
Text mark	Surface name:Surface_10_1 Front	the bottom of the layout

Table -12

Under the **Mark Parameter** tab, you can control if the above marks are automatically added when you create a new layout. A tick✓ means to add the corresponding mark. Moreover, you can define the default line width, height, and the specific type.

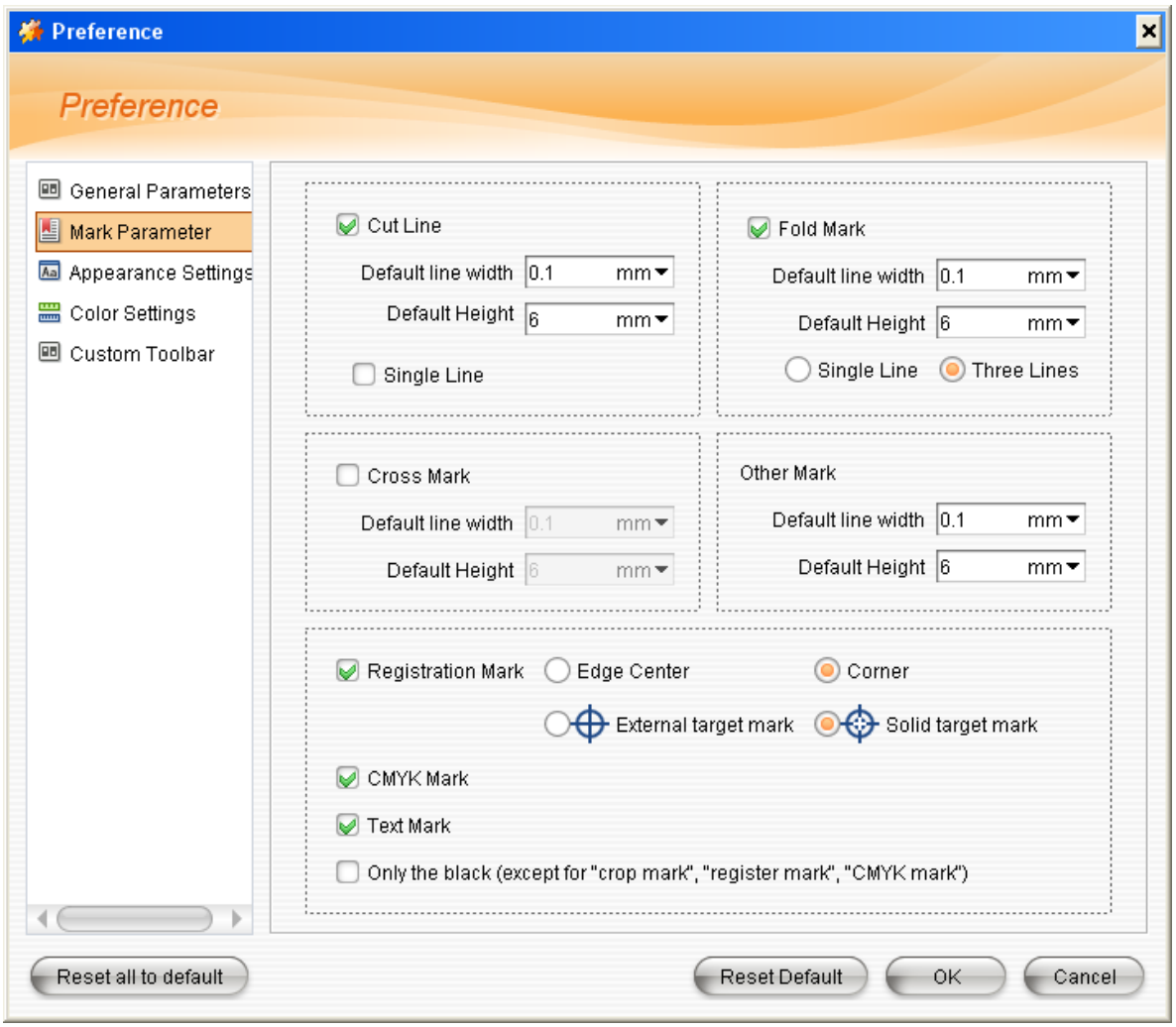


Figure 2-288

Other Mark: They are the marks you manually add to the sheet. Here you can define the default line width and height for such mark.

Only the black: If checked, the default marks above will be displayed and output only on the black separation.

3) Appearance Settings

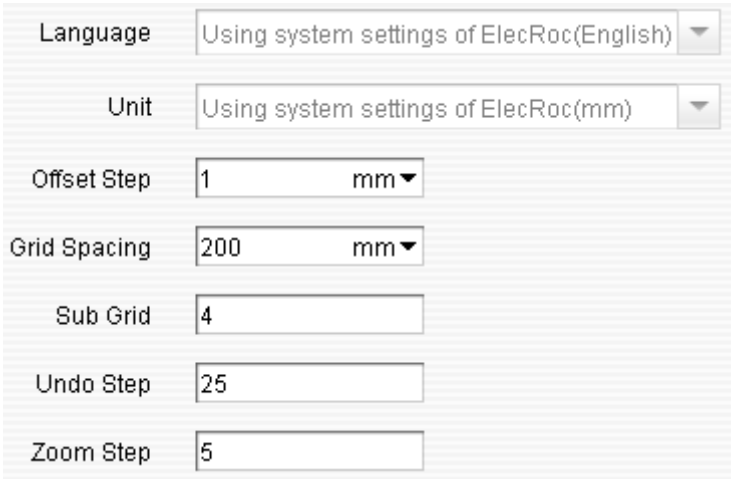


Figure 2-289

Offset Step: The moving distance of each nudge when you use the arrow keys (←、↑、↓、→) to nudge the selected object on the sheet.

Grid Spacing: The spacing between any two grid lines.

Sub Grid: After you have redefined the grid by using the main menu item **Tools** > **Grid Spacing**, you can use this parameter to further form a sub grid in each square of the old grid. The parameter here controls the number of the sub squares in horizontal (or vertical) direction.

Undo Step: The times to perform the Undo operations.

Zoom Step: The scaling factor for each click on the toolbar icons, , or on the zoom controls at the lower-right corner of the window. The default value is 5%.

4) Color Settings

You can define the display color of many objects, including the page's bleeding box and trim box, guides, grid, workspace background, plate, punch area, and paper.

In the **Preference** > **Color Settings** window, if you want to change the display color for some object, click the color block corresponding to the object to open a color setup dialog box. In this dialog box, you can choose a new color from samples or in the HSB or RGB mode. The preview area at the bottom of the dialog box displays the display effects.

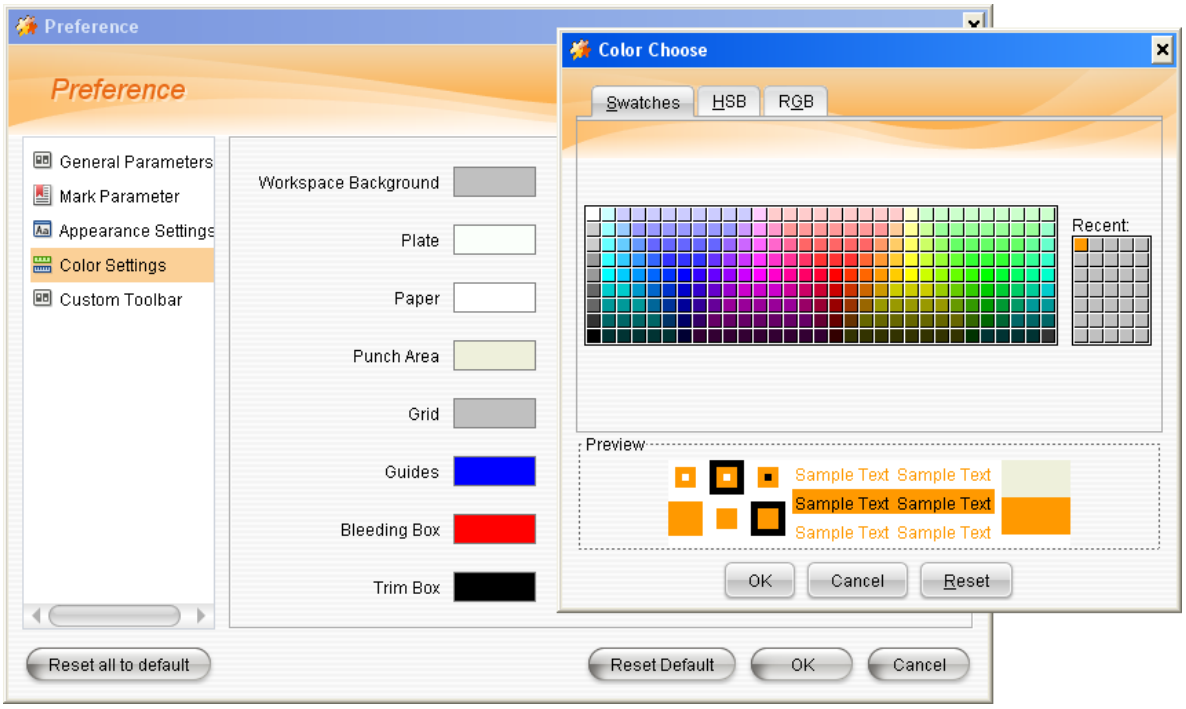


Figure 2-290

5) Toolbar

Settings here control what toolbar icons are shown in the program window. For details, refer to section 5.2.8.

5.3 Terms

Before we move to the detailed capabilities, we provide you with some referential terms or concepts related to imposition.

1. **Signature**. Refers to the sheet on which pages are arranged in special orders.
2. **Bind Margin**. Refers to the edge where the folded press product is bound.
3. **Cut Edge**. Refers to the edge where the product is trimmed.
4. **Flat Stitched Registration**. There are two folding methods: one is folding the first two signatures separately, and pile the folded signatures together. The other is piling the first two signatures, and folds the two signatures together.

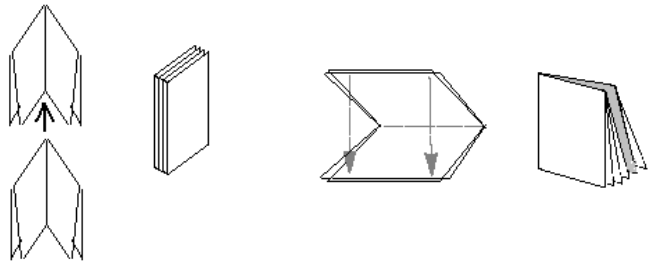


Figure 2-291

The relative information about page number in the template will not be loaded to job. System requires you to assign page numbers again. You only need to assign the page

numbers of the first two signatures. System will generate the other page numbers.

5. **Come-and-Go**. After printing, folding, binding and cutting, two identical products will be generated from one signature. See the following figure at the left.



Figure 2-292

6. **Cut-and-Stack**. The Cut-and-Stack is used primarily for jobs printed on on-demand output devices to produce different parts of a job simultaneously. The sheets are cut and one side is stacked on the other for a complete book. See the above figure at the right.

7. **Tiling**. If the press sheet is larger than the device's media size, TPL Editor divides the press sheet into tiles that can be stripped together.

8. **Signature Collation Mark**. The marks added on a signature to avoid errors in assembling.

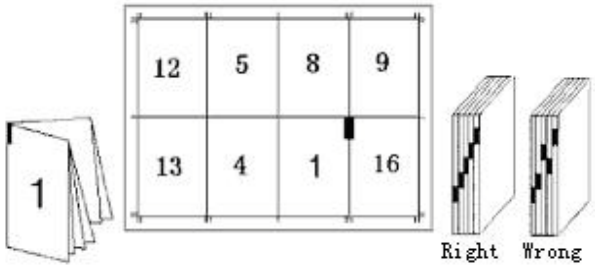


Figure 2-293

Chapter 6 Composer

Composer is an effective use of independent pages, composing several different small jobs on a single press sheet, and optimizing the use of film or media, with an aim to lower cost and improve the efficiency.

6.1 Quick Start

This section introduces you briefly to the usage of the Composer module.

6.1.1 Preparation

As an independent processor node in job or workflow, Composer always stands alone, disconnected with any other node fore-and-aft. It accepts files processed after the node such as PDF Generator, Margin Adjustment, PDF Merger, and PDF Tools. Before you start, you need to manually submit the pages to the node.

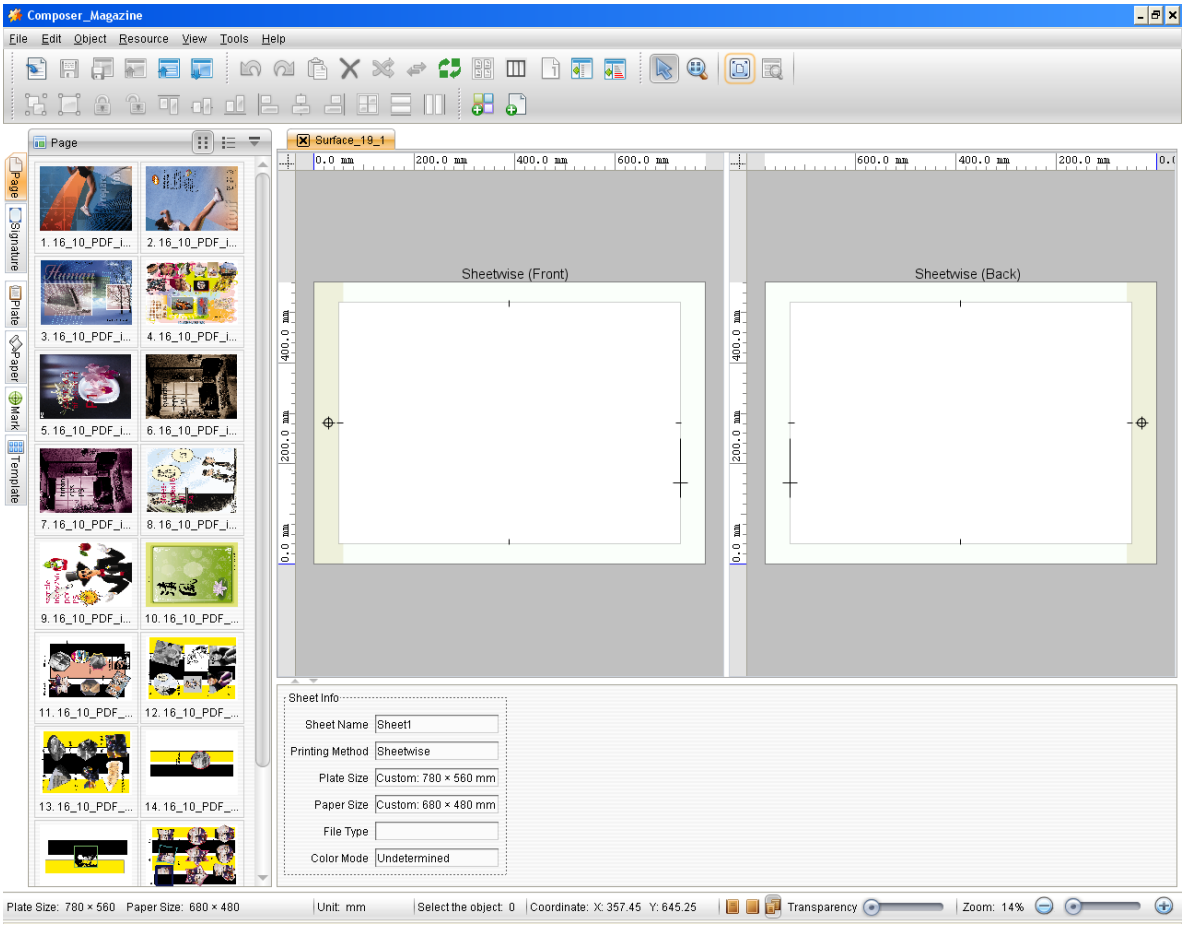


Figure 2-294

Steps to get readiness:

1. Open or create a job.

2. Add the nodes, ensuring that the job contains at least a PDF Generator and Composer node.

3. Choose source files, and submit them to PDF Generator.

4. Choose the page files that the PDF Generator has generated, and manually drag them to the Composer node as input files.

In case that you need to choose the input files from the nodes other than PDF Generator, e.g. Margin Adjustment, switch to these nodes and choose from their output file queues. Or you can also check the toolbar icon **Pages**, then choose from the listed page files.

After you submit the input pages, ElecRoc will automatically open the composer window (also can be opened by double-clicking the Composer node). The input pages you submitted are listed under the **Page** tab at the left of the window. By default, they are displayed in thumbnails. You can click the icon at the upper-right of the thumbnails to change to the list view.

6.1.2 Create Signature

The steps are as follows:

1. Double-click the blank area at the right of the window, or choose from the main menu **File** > **New Signature**, to open the **New Signature** window.

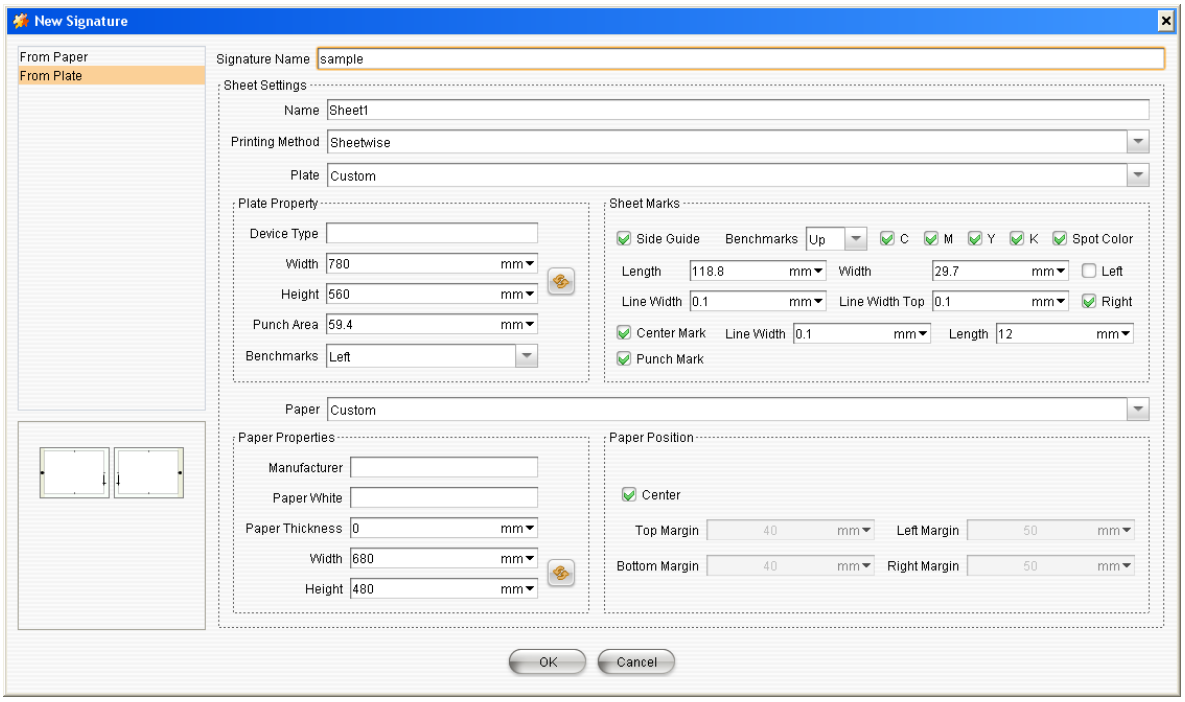


Figure 2-295

2. Input signature name in the **Signature Name** edit box.

3. Define a sheet.

1) Choose an option from the two options **From Paper** and **From Plate**, located at the upper-left corner. Here we take **From Plate** as example, i.e. to create a sheet based on a plate. Such sheet can contain punch area, punch marks, center marks, and side guide marks.

2) Choose a method from the **Printing Method** dropdown list.

3) Specify the sheet size from the **Plate** dropdown list. You can customize this size.

4) Specify the paper size from the **Paper** dropdown list. Here you can also customize the size. The paper size is usually less than the plate size.

4. Click **OK**.

The new signature then appears in the ganging window.

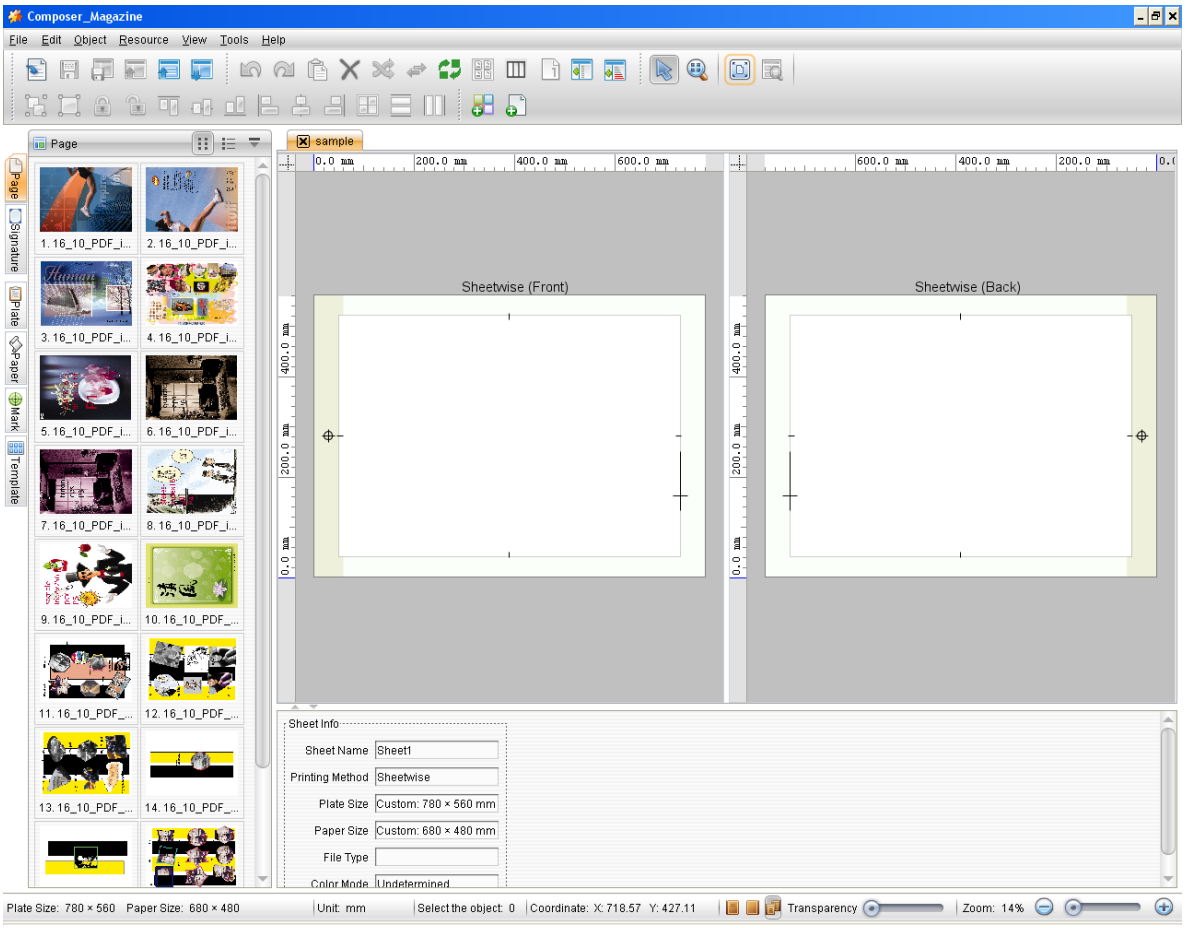


Figure 2-296

6.1.3 Add Pages

Switch to the **Page** tab, choose the pages to be ganged (with Ctrl or Shift key you can choose more than one page one time), and then press down the left mouse button, drag them to the blank area on the sheet.

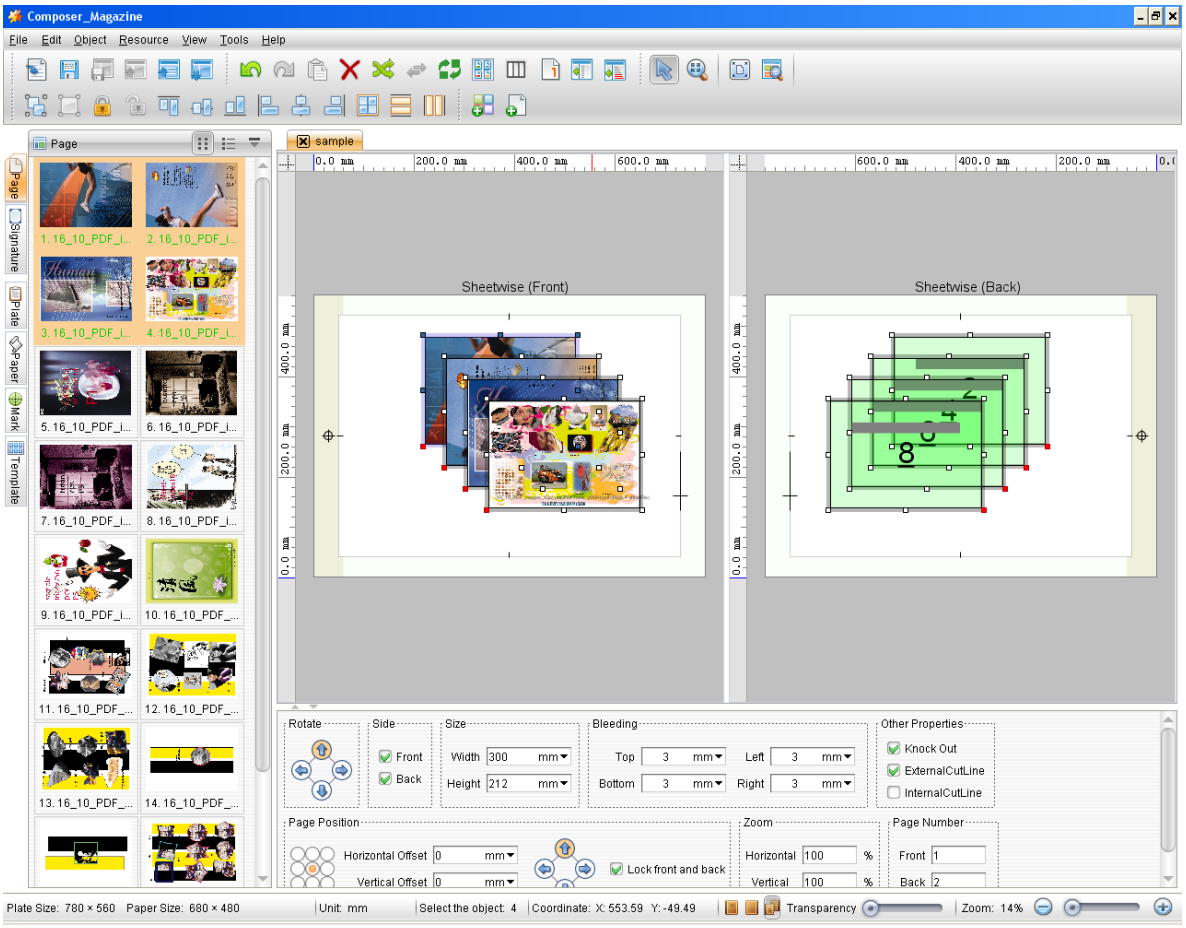


Figure 2-297

In the default ganging mode, i.e. manual ganging, after having been added to the sheet, the pages may scatter, or even overlap with each other. In such case, you may need to perform some ganging operations as follows:

1. Page positioning

Choose one or more pages (click in any blank area on the sheet to cancel the selection), and drag them to proper location and then release the mouse button. In this way, you can re-position the pages quickly.

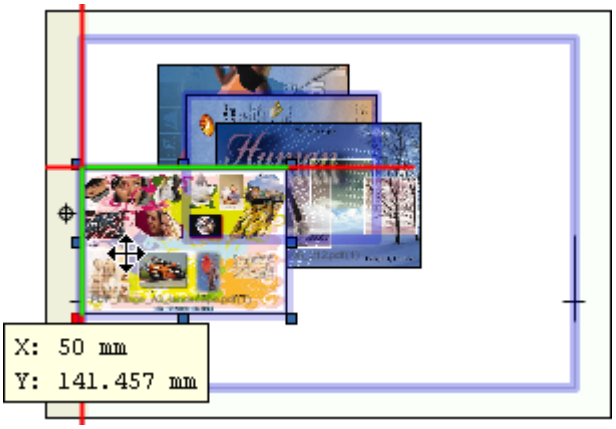


Figure 2-298

Note: *When moving the pages, ElecRoc can capture the pages to the borders of the plate and paper, i.e. when the pages approach the plate or paper border, they will be captured automatically to the border. If you don't need this capacity, you can disable it by un-checking the menu item* ***Tools*** *>* ***Capture plate and paper****.*

The page position can also be defined with the coordinates in the property panel, located at the bottom of the window.

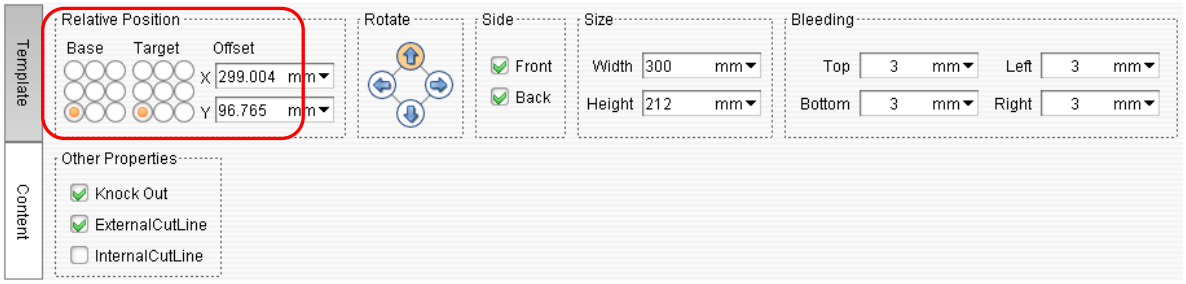


Figure 2-299

2. Rotate the pages

In the property panel, as shown in the above figure, by using the icons, , , or by choosing from the main menu **Object** > **Rotate**, you can rotate the pages.

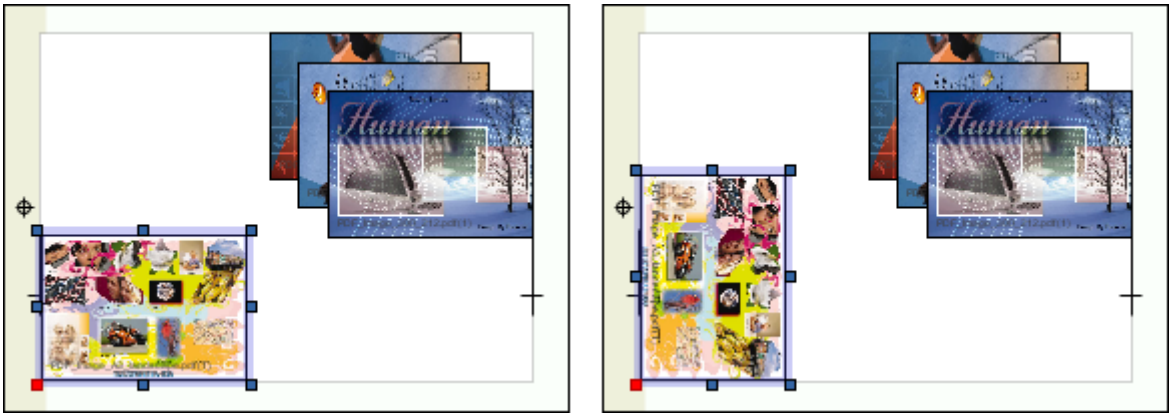


Figure 2-300

3. Align the pages

If you want to align the pages, you can press down the Ctrl key to choose multiple pages, and then click the toolbar icons, , , , , , or .

By default, the pages are aligned with the first chosen page, but you can also specify other reference page with which the pages are aligned. When you have chosen multiple pages, click one of them once again to make it the new reference page. The anchor points on its borders then turn dark cyan.



Figure 2-301

Note: *After you have aligned multiple pages with one page, you can further use the toolbar icon to team them into a group. And then, you can also use the toolbar icon to center the group on the sheet.*

4. Configure properties of page content

Choose a single page, and then choose the **Content** tab on the property panel. Here you can configure the properties related to the page content.

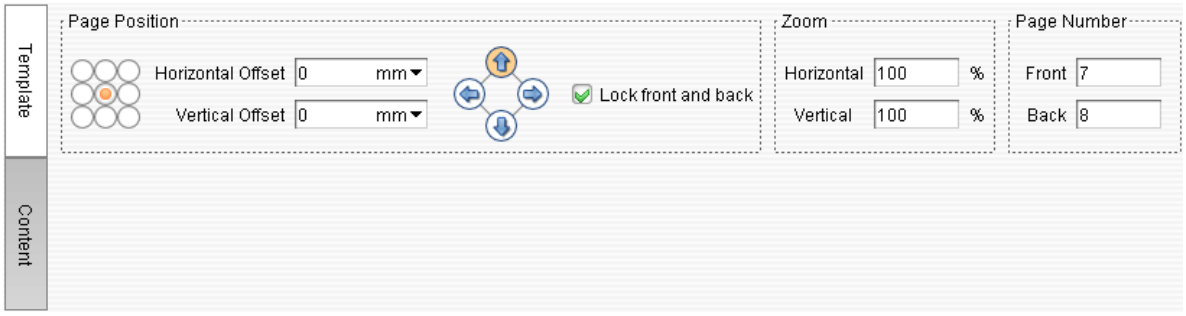


Figure 2-302

1) Position the content on the page. You can change the position through the nine-point diagram. By default it is centered, i.e. if the page size reduces, the edges of the content may be cut off; if the page size increases, blank spaces may be added to the edges.



Figure 2-303

2) Rotate the content. By default, the content is rotated along with the page, as shown in the middle. By clicking the four rotation icons under the **Content** tab, you can separately control the orientation of the content, which may be different from that of the page, as shown at the right.



Figure 2-304

3) Scale the content. You can input the scaling percentages in the **Horizontal** and **Vertical** boxes, or click the toolbar icon to open an independent setup window.



Figure 2-305

6.1.4 Add Marks

Choose the **Mark** tab at the left of the composer window (if your monitor resolution is not big enough, click the symbol below the **Paper** tab to find out the **Mark** tab), and then choose a mark, drag it to proper position on the sheet.

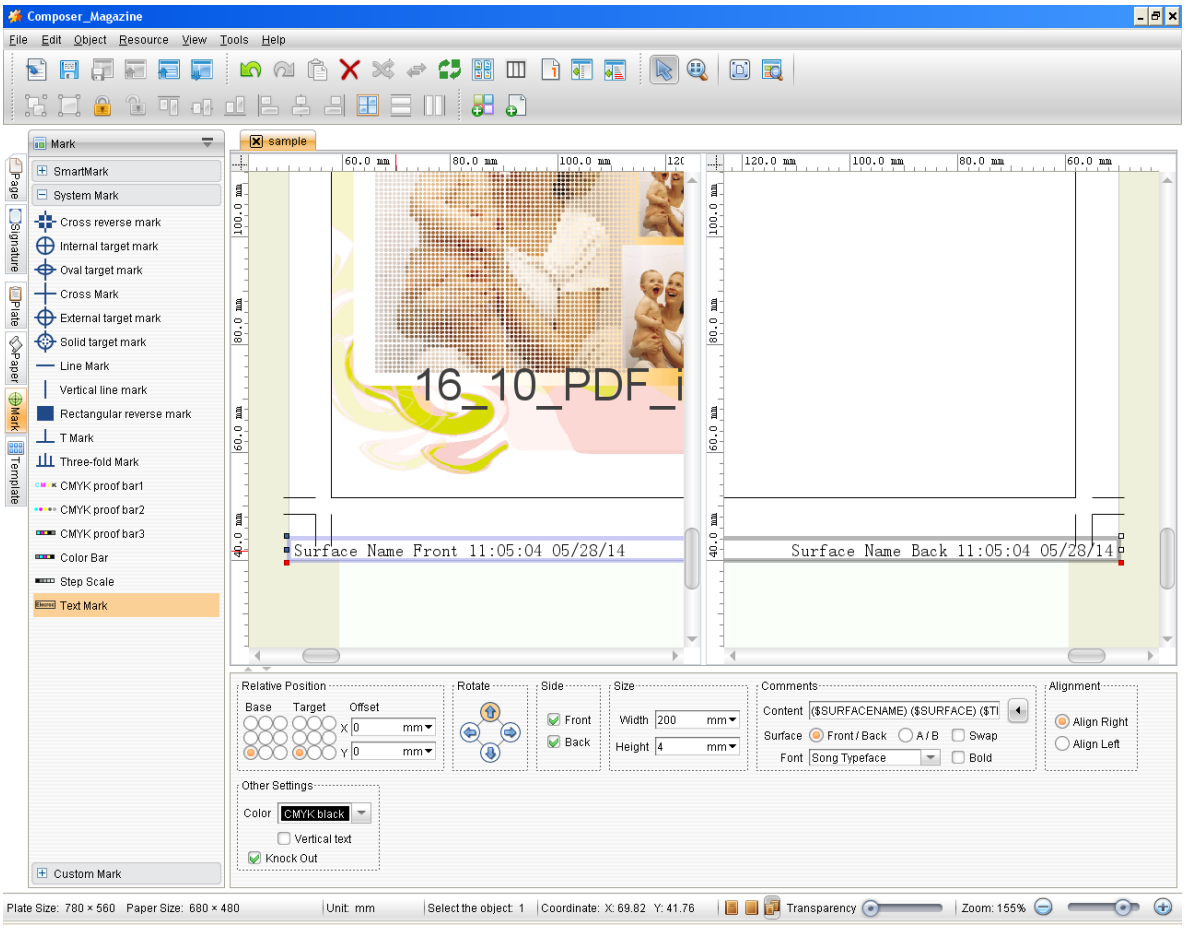


Figure 2-306

Mark properties, including position, direction, line width, line length, block size, can be re-defined through the parameters on the property panel.

6.1.5 Ganging on Back Side

When your sheet is composed of both the front and back sides, if you add a page or mark to any side, both the **Front** and **Back** boxes under the **Template** tab of the property panel will be checked, and in this case, a relevant blank page or mark will be created on the reverse side. Therefore, after the ganging on the front side is done, an identical ganging consisting of blank pages and marks will appear on the back side.

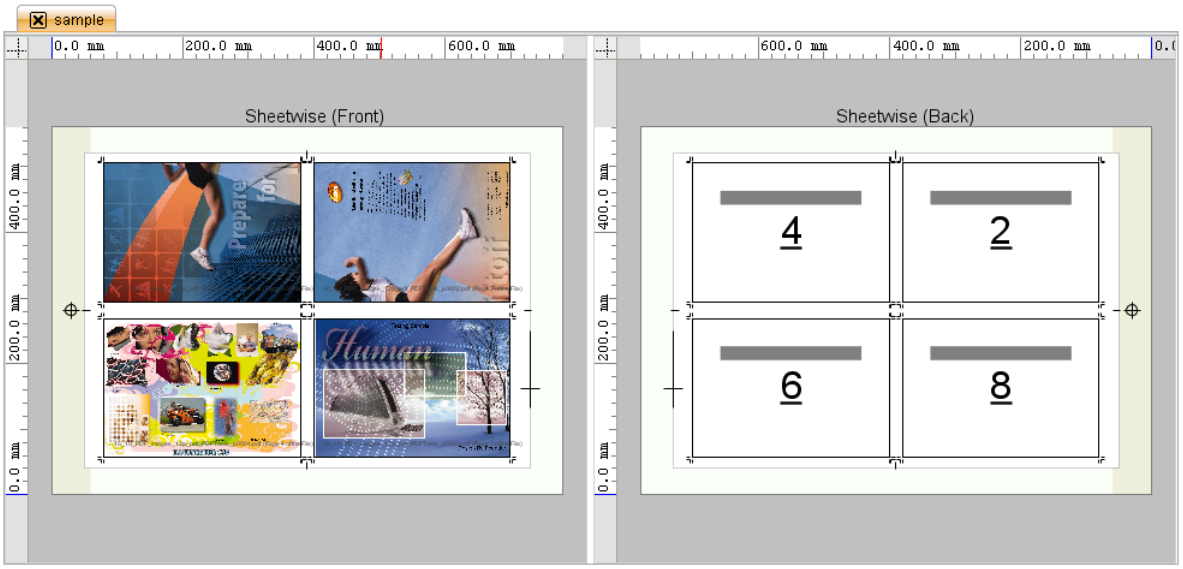


Figure 2-307

Switch to the **Page** tab, and drag other pages to these blank pages one by one.

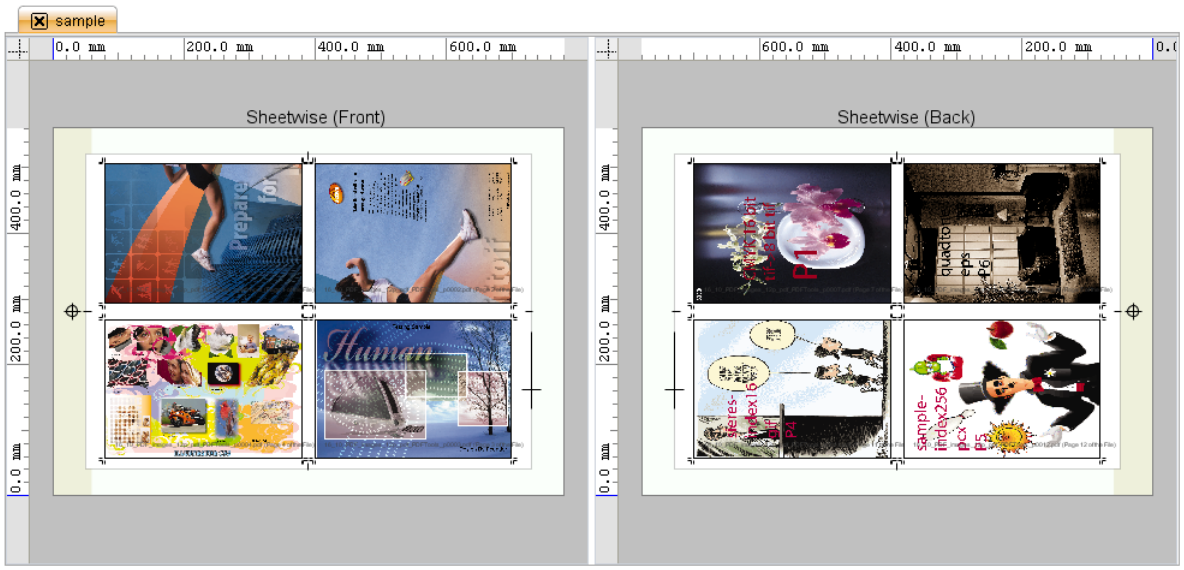


Figure 2-308

By this way, you can greatly improve the ganging efficiency on the back side. You can disable this relevance by un-checking the **Back** boxes of all the front-side pages or marks. In this case, there would be no relevant blank page or mark appears on the back side.

6.1.6 Submit Signature

Click the toolbar icon to open the following dialog box. Check the signature sheet(s) you want to submit, and then click **OK**.

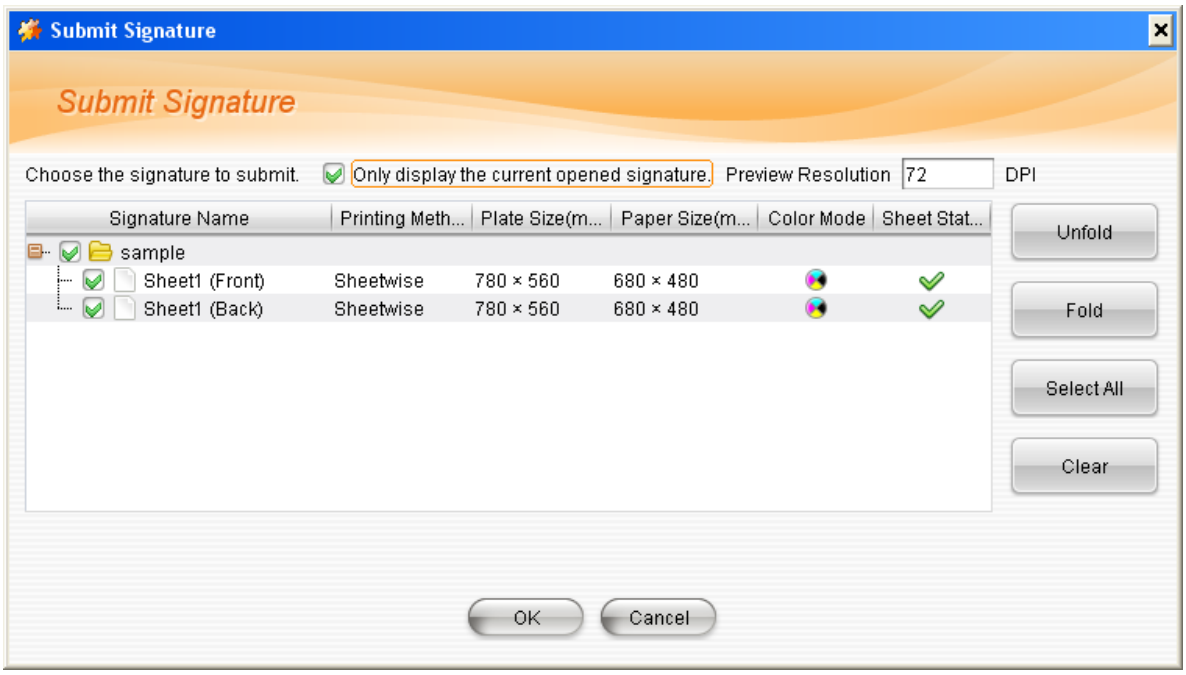


Figure 2-309

ElecRoc pops up message to inform that the operation is successfully. Close the message and switch to the job window, then you can see the generated surface(s) in the output file queue under the Composer node.

The ganged surface(s) can then be sent for further process by nodes like mono or color printer, pre-RIP Proof, Rasterizer (then can be further sent to post-RIP proof, 1 Bit TIFF Export), PDF Merger (merged file can be further processed as standard PDF file by PDF Export), and etc.

6.2 Create Signature

6.2.1 About Signature

A pane on the ganging window is designed for you to view, manage, or perform other related operations to the signatures. It can be expanded when you click the **Signature** tab at the left edge of the window.

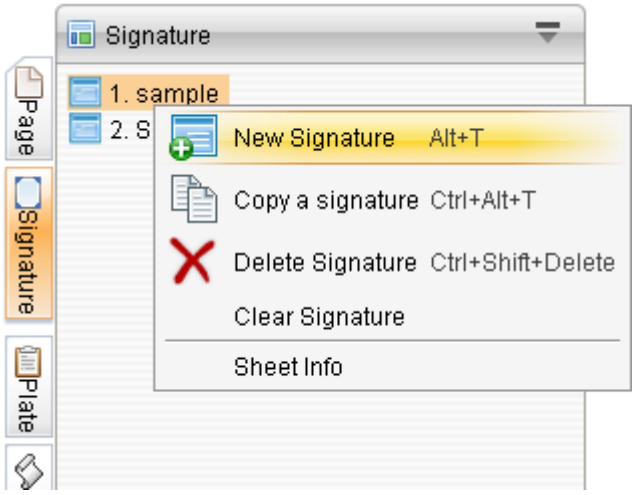


Figure 2-310

Here shows all the signatures you have created. The signature-related operations can be performed with the right-click menu items, or the menu items popped-up when the icon is clicked. Take the item **Sheet Info** as example, if you choose it, you will then open an independent window, learning the information such as printing method, plate size, paper size, file type, color mode, and so on.

6.2.2 Create New Signature

You can create a new signature by way of:

- Choose from the main menu **File** > **New Signature**;
- Use the key combination Alt + T;
- Click the toolbar icon ;
- Right-click on the **Signature** pane or the top blank part of the signature editing area and choose **New Signature**;
- Open the **Preference** menu and choose **New Signature**;
- When no signature or template is opened in the composer window, double-click the signature editing area;
- If you have already opened a signature or template, right-click the blank area above the signature editing area and choose **New Signature**. If you double-click at this moment, you can create a signature based on the latest signature settings.

6.2.3 Signature Properties

The setup window for creating a new signature is as shown in the below, most of the parameters are about the signature's property.

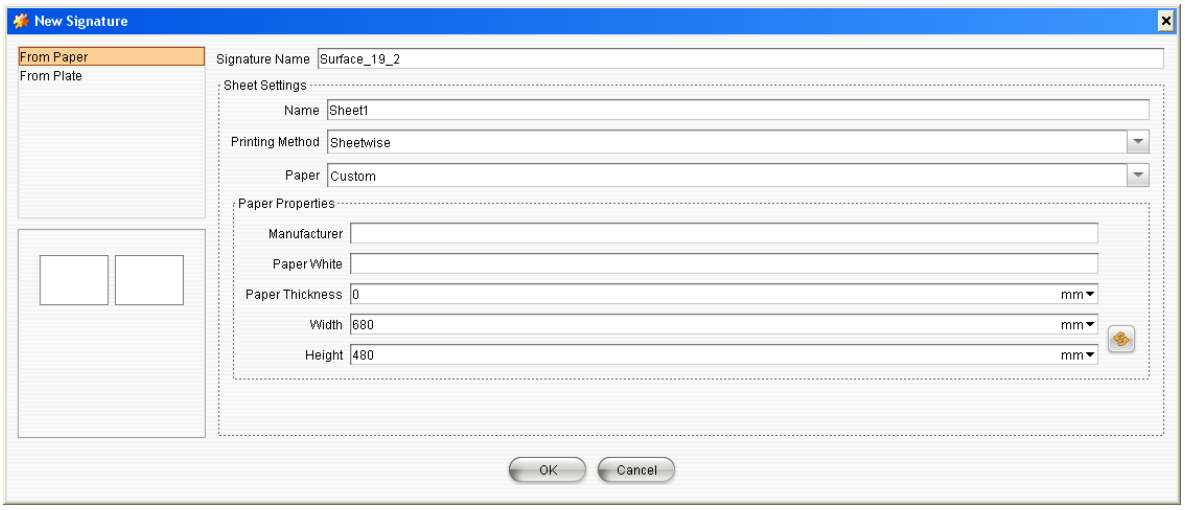


Figure 2-311

1. From Paper

From Paper means that the sheet is in the general sense, usually output on the paper. As shown above, choose **From Paper** at the upper-left corner of the window. In this case, you will create a signature based on a paper defined by the **Paper** parameters, i.e. the width and height of the paper become the width and height of the signature. Such signature appears as follows in the ganging window and the job's surface preview window.

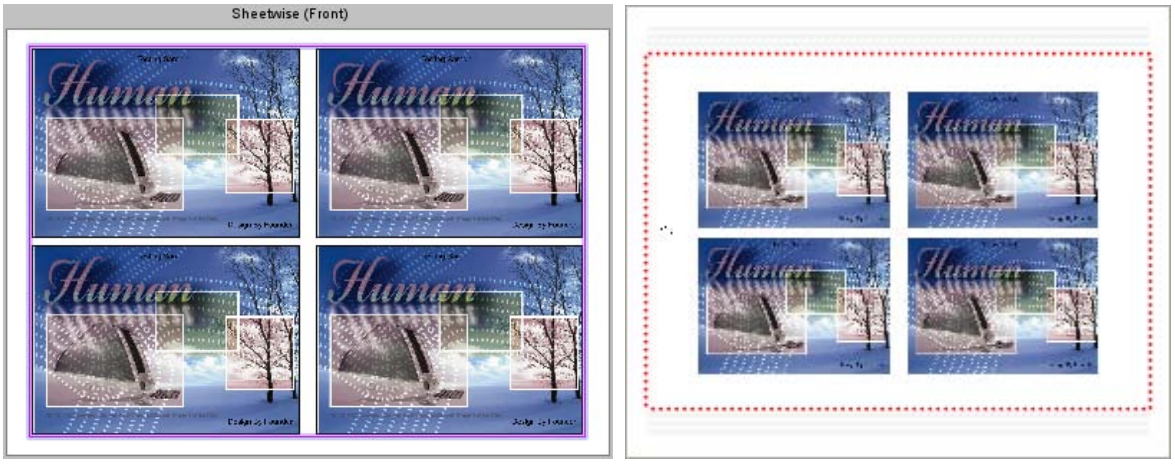


Figure 2-312

Choose a paper type from the **Paper** dropdown list in the **New Signature** window. This list provides a variety of optional papers. The paper properties, including manufacturer, color of paper white, paper thickness, width and height, are displayed in the below once you have chosen a paper, but not editable, you can switch to the **Paper** tab (at the left of the composer window) to modify the paper properties, if needed.

If the optional papers do not meet your actual need, you can choose the option **Custom**, and then input specific paper size in the then activated **Width** and **Height** boxes. You can click the button to exchange the width and height. **Manufacturer**, **Paper White** and **Paper Thickness** are optional parameters, with which you can input related descriptive information, if needed.

2. From Plate

Your signature can directly base on the plate, i.e. you can make the sheet size equal the plate size, and on the sheet, reserve a punch area, add the punch marks, center marks, the side guide marks. In the **New Signature** window, choose **From Plate** at the upper-left corner.

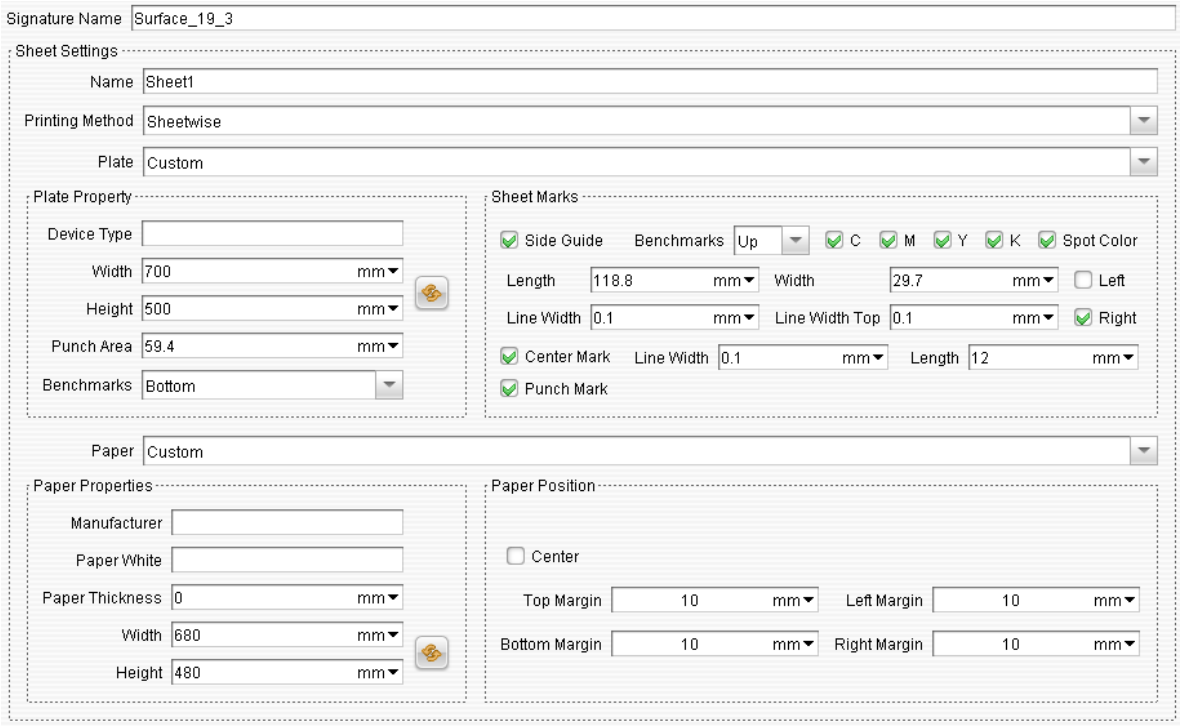


Figure 2-313

Parameters then can be divided into two parts, **Plate Property** and **Paper Properties**. You need to specify a plate by way of the **Plate Property** parameters, at this moment, the **Paper** can be viewed as the area available for the ganging on the plate. Such signature appears as follows in the composer window and the job's preview window.

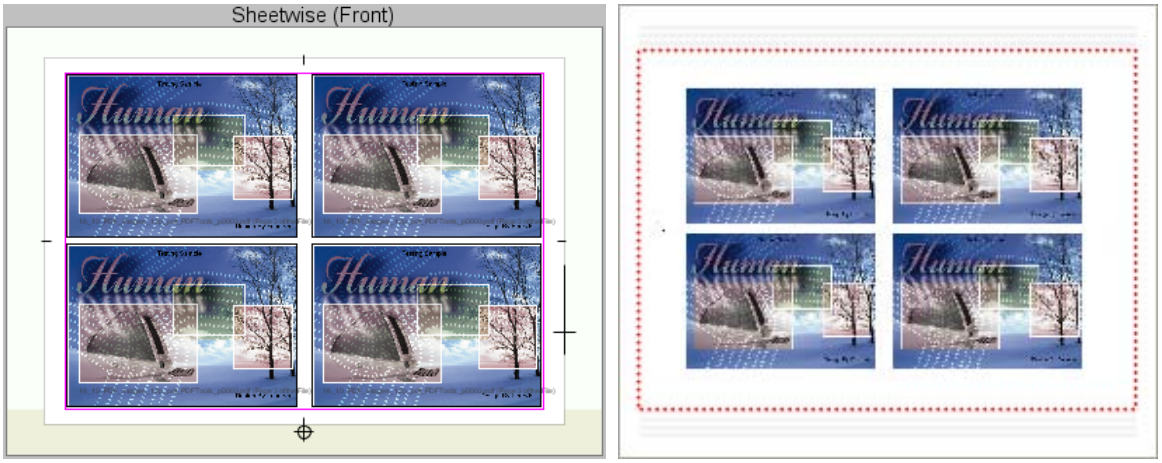


Figure 2-314

In the composer window, the largest area (in a light gray background, by default) represents the signature based on the **Plate Property** settings. It consists of a punch area, the punch marks, the center marks, the side guide marks, and the paper. The default background color for the punch area is slightly darker than that for the signature. The blank area without any default background color is defined by the **Paper Properties**

parameters, representing the area available for the ganging, and usually smaller than the plate. The background colors for the plate, punch area, and the paper can all be customized. The background colors are displayed in the composer window, only for ease in the ganging operations; they will not be output on the finally generated signature.

The plate and paper properties include:

- **Plate properties**

Plate: Choose a plate type from the **Plate** dropdown list. This list provides some commonly-used plate sizes. The plate properties, including device type, width, height, punch area, side guide, punch and center marks, are displayed in the below once you have chosen a plate, but not editable, you can switch to the **Plate** tab (at the left of the composer window) to re-define the plate properties, if needed.

If there is no suitable plate for your demand, you can choose **Custom**, to activate the **Plate Property** and **Sheet Marks** parameters, including:

Device Type: Optional, here you can input any related descriptive information.

Width, **Height**: Here you can input specific plate size. The button enables you to exchange the width and height.

Punch Area: If you need to punch in the later-on plate making, you can reserve a special area on the sheet for the punching. This parameter controls the width of the punch area. Its position is determined by the **Benchmarks** parameter in the below, it may be at the left, right, top or bottom side of the plate. If you don't need the punch area, you can set the value to 0.

Punch Mark: ElecRoc adds a punch mark at the center of the punch area.

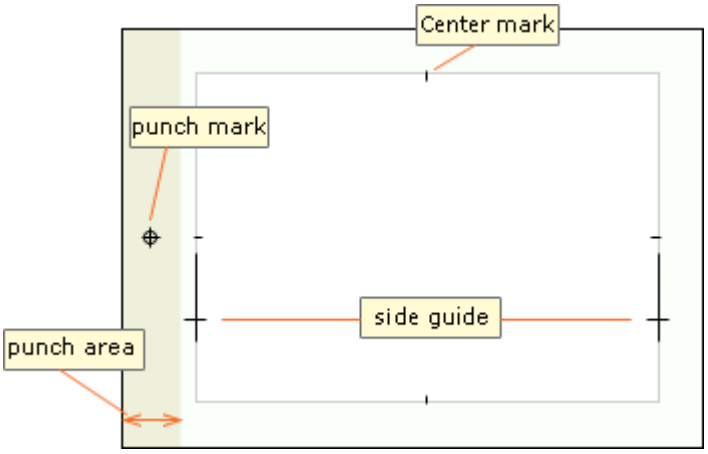


Figure 2-315

Center mark: If checked, ElecRoc adds a kind of line marks at the center of the four paper sides. Here you can also define the line width and length for this mark.

Side Guide: If checked, it adds a mark as onto the sheet, for the side guide on the printing press to precisely position the paper. Note that this setting may be of no effect in case that the press model does not install the side guide. Checking it, you can further define the length, width, line width, position of the mark, the sheet side(s) on which it appear, and the separations on which it will be output. The **Left** and **Right** boxes control which side(s) of the sheet it appears on. The separation options include **C**, **M**, **Y**, **K** and **Spot Color**. E.g. if you do not want the mark to appear on the spot color separation, you can let the **Spot Color** box unchecked.

Benchmarks: It controls the position of the side guide mark. There are four options: top, bottom, left, and right, as shown in the below. In the caption such as left/top, the former refers to the position of the punch area, the latter the position of the side guide mark.

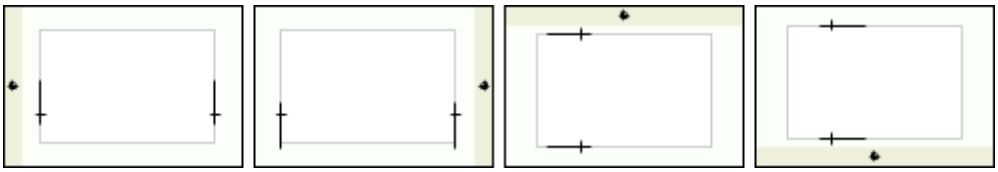


Figure 2-316

- **Paper properties**

The **Paper** and **Paper Properties** settings are the same as that mentioned in the above section on how to create a signature based on a paper.

Paper Position: It refers to the paper's position on the plate. The default position is centering, i.e. the top and bottom margins are equal, and the left and right margins are equal, too. In this case, the four margins are calculated automatically by ElecRoc based on the plate and paper sizes. If you uncheck the **Center** box, you can activate the four margin edit boxes, in which you can input custom values. Note that, the sum of the top and bottom margins, as well as that of the left and right margins, limited by the plate and paper sizes, are fixed. Therefore, if the top margin is changed, the bottom margin will change accordingly, so do the left and right margins.

3. Printing Method

By way of the **Printing Method** dropdown list in the **New Signature** window, you can create signatures that support various printing methods. Five printing methods are supported: single-sided, sheetwise, work and turn, work and tumble, and perfector.

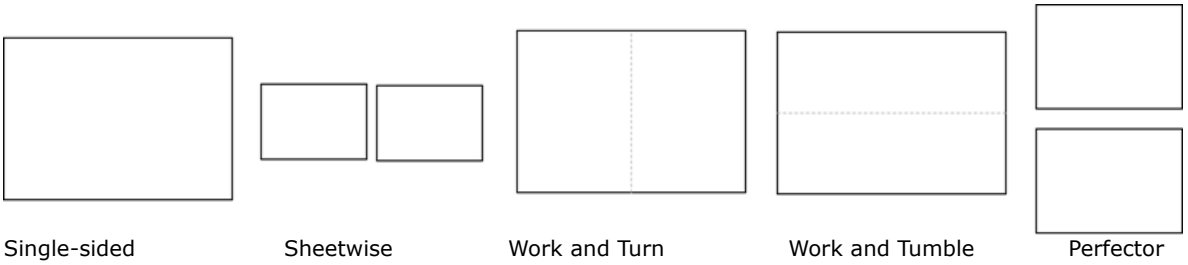


Figure 2-317

6.2.4 Signature Operations

The signature-relevant operations include:

1. Open/Close Signature

Under the **Signature** tab at the left of the window, you can double-click any of them to open it in the signature editing area. If you want to open an outside signature, please click the toolbar icon, or choose from the main menu **File** > **Open**, and then find out your signature from the pop-up dialog box and open it.

More than one signature can be opened in the editing area. When a signature is opened, a tab named with the signature name will appear at the top of the editing area. You can click the tabs to switch between the signatures.

You can click the icon in front of the tab, or double-click the tab, or right-click on blank area and choose **Close**, **Close Other**, **Close All**, to close the opened signature(s).

2. Edit Signature

You need to perform a series of editing operations, such as configuring signature properties, adding pages, adding layout, and adding marks.

1) Configure signature

The signature properties, including the plate and paper size and other properties can be re-defined on the property panel once you choose the signature.

2) Add pages and marks

Pages and marks are to be added onto the signature to form a surface. You can add pages and marks, configure their properties, perform operations such as alignment, rotation, zooming, so as to gang them exactly as you need.

3) Add layout and blank pages

The layout is a group of blank pages orderly-arranged in a specific layout. You can add a layout or separately blank pages into each signature, and then drag real pages onto the layout or blank pages to complete the ganging.

3. Save Signature

Click the toolbar icon, or choose from the main menu **File** > **Save**, to save the signature in current job. In this way, you will not lose the signature data even if you close the composer window, the job, or ElecRoc client.

Click the toolbar icon, or choose from the main menu **File** > **Save as**, and you can save the current signature with another name and destination.

If you close the composer window without saving your signature, ElecRoc will pop up message suggesting you to save it.

4. Submit Signature

After you have finished the ganging of the pages on your signature, you can submit the signature to the current job. Click the toolbar icon, or choose from the main menu **File** > **Submit Signature** to open the **Submit Signature** dialog box. Check the signatures you want to submit, and specify the signature preview resolution, and then click **OK**.

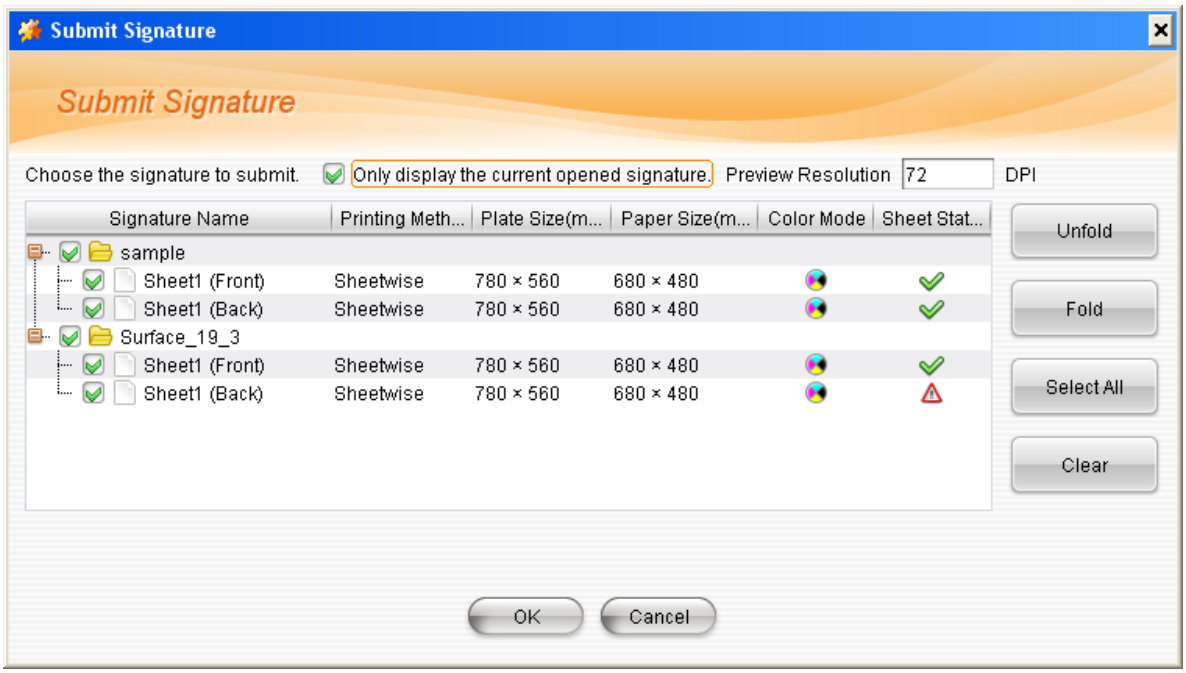


Figure 2-318

The dialog box lists all the signatures existing in the composer window, those checked by default are opened ones. If you check **Only display the current opened signature**, it lists only those that have been opened. The buttons **Select All** and **Clear** enable you to select or unselect all the signatures one time. The valid range for the preview resolution is 10~144 DPI. If you have enabled the settings through the main menu **Edit** > **Preference** > **General Parameters** > **Signature Checking**, it can examine the sheets and label the error ones. Details on the error, such as the surface is a blank, are displayed at the bottom of the dialog box when you choose an error sheet. ElecRoc supports you to submit blank signature sheets, but it will pop up message for you to confirm such submission in advance.

The submission starts once you click **OK**, and a progress bar then appears to show the progress. During the progress, you can click **Cancel** to stop the submission. It pops up message informing the result when the submission is completed.

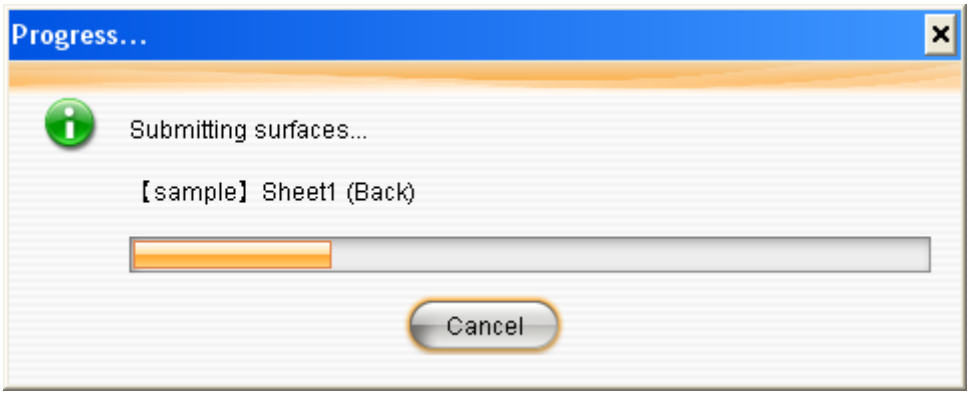


Figure 2-319

Switch to the job window, and you will then see the submitted surfaces in the output file queue under the **Composer** node.

5. Copy, Delete and Clear

Choose a signature under the **Signature** tab, and then right-click to open a short-cut menu. By using the items herein, you can copy, delete and clear signature.

Copy a signature: Copy the selected signature to form a new one.

Delete Signature: Delete the selected signature(s).

Clear Signature: Delete all the signatures under the tab.

The above menu items can also be gained by clicking the **Preference** icon at the upper-right of the signature list.

6.3 Add Pages

6.3.1 Ganging Modes

The interactive manual ganging is the main ganging mode, but in order to improve the ganging efficiency, ElecRoc provides also the automatic ganging. The two modes can be combined for use.

1. Manual Ganging

In this case, the **Manual Ganging** icon in the toolbar is checked. It is the default mode. Under this mode, you can make various interactive operations and configurations to the pages added on the sheet, such as positioning, rotation, and alignment.

2. Automatic Ganging

This mode automatically gangs the pages as per your specified page space and margin, so as to save your ganging time and improve the efficiency.



Figure 2-320

Check the toolbar icon or to gang pages automatically. The two icons represent two sub-modes, **re-ganging** and **additional ganging**. A setup window then appears when you check any of the two icons. In this window, you can specify the space between pages and the margin. Keep the window opened when you have specified the two settings, and then add pages to the sheet. The newly-added pages will then be automatically ganged as per the specified space and margin.

1) Re-ganging (check)

Each time when you add new pages, it always automatically gangs all the pages on the sheet. Under this mode, pages will be arranged towards the lower-left corner of the sheet

as close as possible. The setup window is shown as follows:

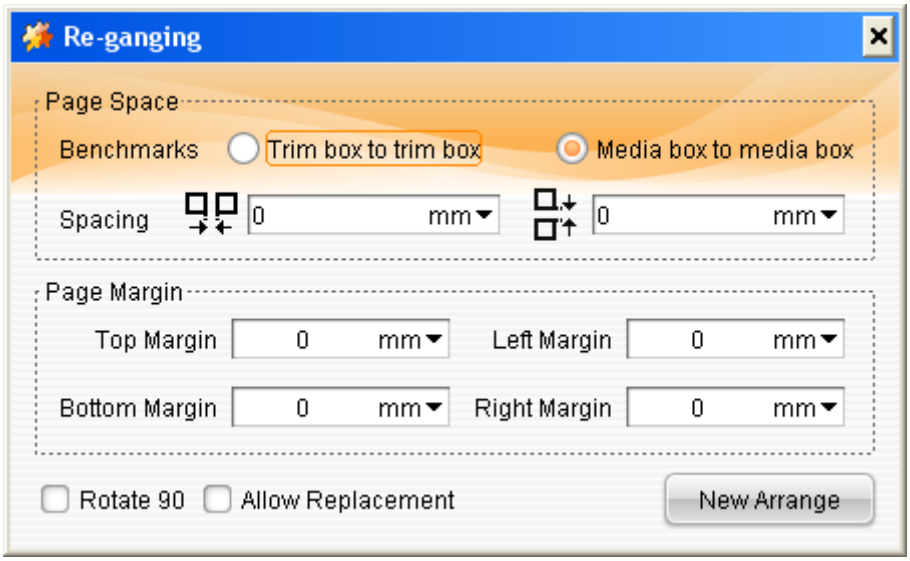


Figure 2-321

Page Space: It is the space between any two abutting pages in the horizontal and vertical directions. It may be the space between the trim boxes of the two pages, or that between the media boxes. The unit for the space can be mm, inch or point.

Page Margin: It is the margin between the page and the paper edge.

Rotate 90: If checked, newly-added pages will be rotated 90 degrees before the automatic ganging.

Allow Replacement: If checked, page replacement happens when you drag new pages onto the existing pages.

New Arrange: Arrange all pages on the sheet as per the specified space and margin.

2) Additional ganging (check)

Each time when you add new pages, it only automatically gangs the new pages, i.e. the existing pages on the sheet remain unchanged. The parameters are the same as those mentioned above.

E.g. suppose we need to gang an A4 page and an A3 page, each time we add only one page, and A4 is prior to A3. In the "re-ganging" mode, as shown at the left, ElecRoc re-calculate the positions of all the pages, even if A3 is added later, it may be placed in front of A4, at the lower-leftmost corner. In the "additional ganging" mode, as shown at the right, ElecRoc only arranges the newly-added pages each time, A3 is added later, so it is placed behind A4.

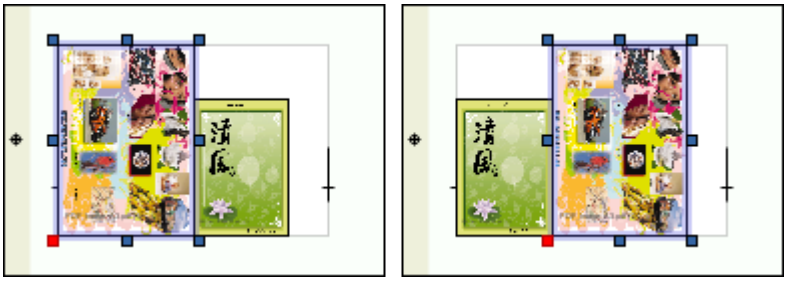


Figure 2-322

6.3.2 Add Pages

To add pages to the sheet, you need only to choose the pages at the left of the window, and then drag them to the sheet.

1. Page Sources

At the left of the ganging window, you can choose the pages to be ganged under the **Page** tab.

Here lists all the pages you have submitted to the Composer node. In case that you submit pages once again while the composer window is opened, please manually refresh so that you can see the newly-submitted pages under this tab in time.

By default, the pages are shown in form of the thumbnail images. You can click the icon at the upper-right of the pane to switch to the list view.

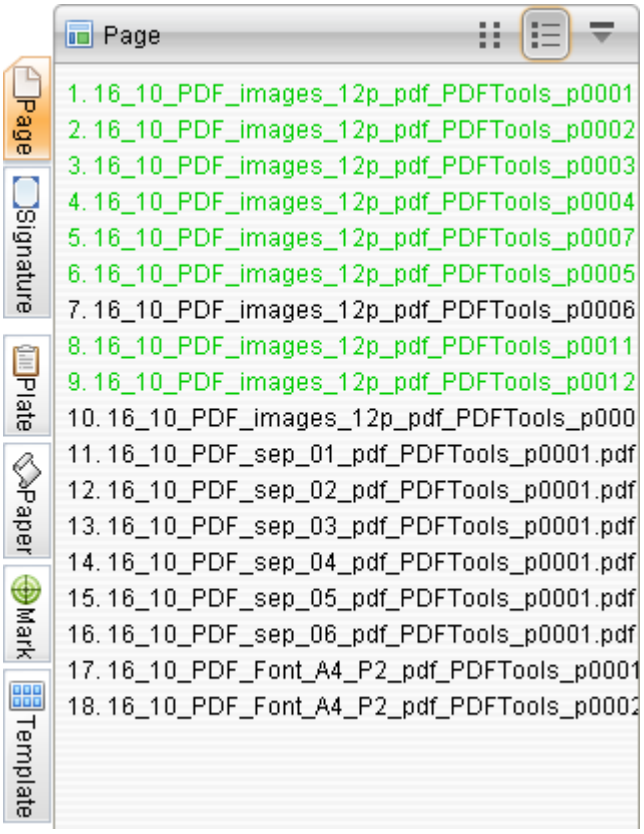


Figure 2-323

Note: *The composite and pre-separation pages cannot be ganged on a same sheet. Choose a page, right-click and choose **Page Info**, and you can then see if the page is a composite or a pre-separation one.*

2. Page Sequence

Under the manual or automatic ganging mode, if you choose multiple pages one time and drag them to the sheet, their default page numbers on the sheet are dependent on their sequence in the page list.

Methods to adjust the page sequence are as follows:

1) Under the list view, available under the **Page** tab:

- Click column head in the table to sort it in ascending/descending order;
- Choose one or more pages, and then click the icons/ to adjust;
- Choose one or more pages, and then use the commands **Up**, **Down**, **Move to top**, **Move to bottom**, and **Move to**, from the right-click menu or the **Preference** menu.

2) Under the thumbnail view, available under the **Page** tab:

- Choose one or more pages, and then click the icons/, or use the following commands from the right-click menu or the **Preference** menu.

Up: To move the selected page up one row in the table.

Down: To move the selected page down one row in the table.

Move to top: To move the selected page to the top row of the table.

Move to bottom: To move the selected page to the bottom row of the table.

Move to: To move the selected page to a specified row of the table.

Note: *The page sequence will be reset according to their sequence in the input file queue under the **Composer** node, when you reboot the composer window.*

3. Intelligent Page Selection

For your convenience to choose multiple pages one time for ganging, both the **Preference** menu and the right-click menu, under the **Page** tab, provide the following four commands.

Select All: To select all the pages in the page list one time.

Select odd page: To select all the odd pages in the page list one time.

Select even page: To select all the even pages in the page list one time.

Reverse Select: To select all the unselected pages in the page list one time.

4. Add Blank Page

ElecRoc supports you to add blank page to the sheet. Click the toolbar icon, or choose from the main menu **Resource** > **New blank page** to open the following dialog. Input the page numbers, the width and height of each page, and then click **OK**.

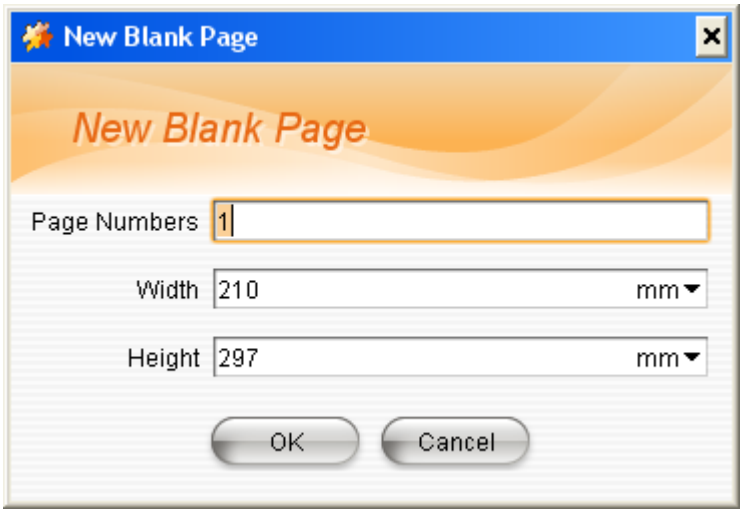


Figure 2-324

6.3.3 Page Positioning

The page position can be defined in any of the following ways:

- Use mouse to drag freely;
- Enable the capturing capacity;
- Configure parameters on the property panel;
- Use the moving/nudging capacity.

1. Drag Page

As the simplest way, you can directly choose the page and then drag and move it freely on the sheet. When you move the page in this way, you can refer to the rulers or the pop-up coordinates at the lower-left corner to determine the adequate position.

2. Capture Page

You may notice that while the page is being moved, it may automatically be captured to some specific positions, such as the plate borders and the grid lines. ElecRoc provides the capacity to capture the page to auxiliary tools or other positions, so that you can position the page on the sheet more easily and precisely.

1) Capture to plate and paper

When the object approaches to the borders of the plate or the paper, or the middle lines, it will be aligned with them closely and automatically.

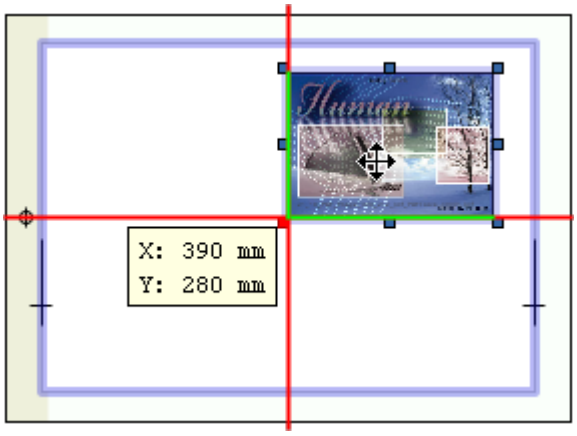


Figure 2-325

2) Capture to grid

Choose in the main menu **Tools** > **Show Grid**, to show the grid on the sheet, and meanwhile, choose in the main menu **Tools** > **Capture Grid**. Now, when you move the page close to the grid lines, you will see two crossed register lines in red on the sheet, and the page will be automatically captured to the exact position where the grid line is.

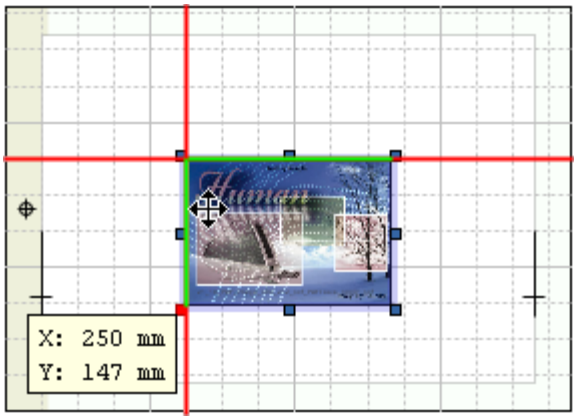


Figure 2-326

The space between any two grid cells can be defined by way of the main menu **Tools** > **Grid Spacing**. And the color of the grid lines can also be defined by way of the main menu **Edit** > **Preference** > **Color Settings**.

3) Capture to guides

You can add horizontal or vertical guiding lines to the sheet. When the page approaches to the line, it will be automatically captured to the position where the line is. As the grid lines do, the guiding lines bring ease in page positioning.

1. **Show guides**. Choose from the main menu **Tools** > **Show Guides**.

2. **Add guides**. Place the cursor over the ruler, and then press down the left mouse button and drag toward the sheet editing area, and then release the mouse button at proper place. A setup dialog box appears. Input the precise coordinates, and then click **OK**.

If you click the dashed cross at the upper-left of the sheet editing area (at the left of the horizontal ruler, and the top of the vertical ruler), and then press down the mouse and drag to the editing area, you can add two cross guides at the same time.

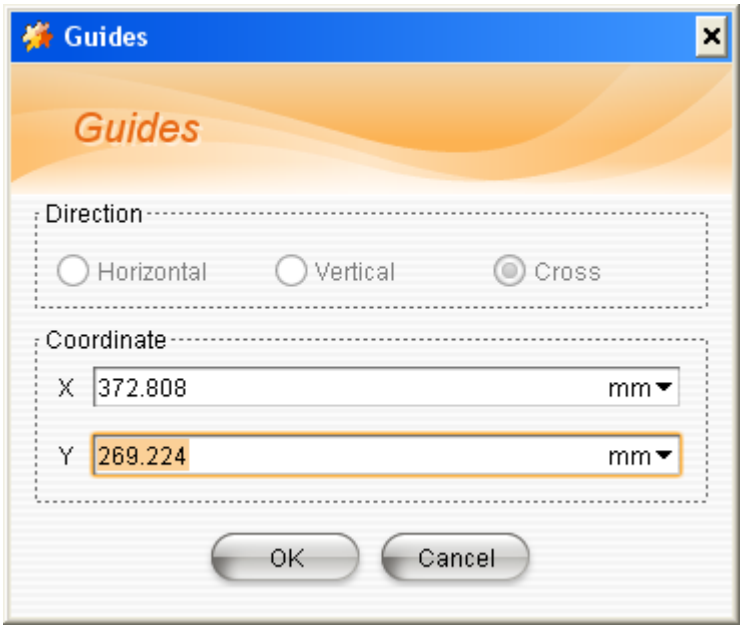


Figure 2-327

3. **Capture to the guides**. Choose from the main menu **Tools** > **Capture Guides**. When you drag the page and make any edge of it approach to a guide line, the page will be automatically captured to the position where the guide line is located.

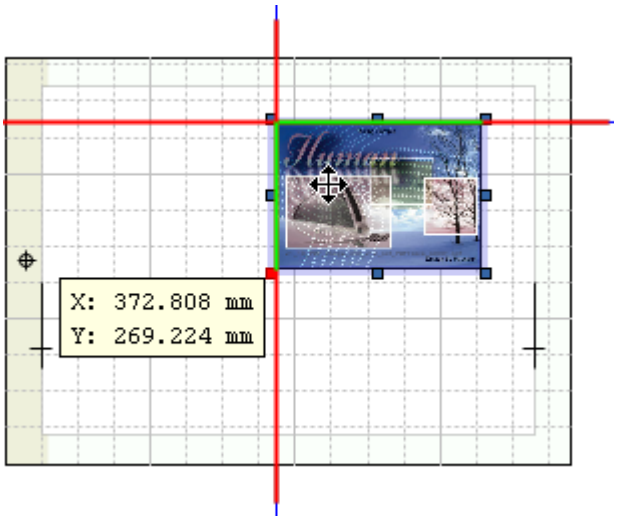


Figure 2-328

4) Capture to other positions

You can also capture the page to other pages or marks. Such capacity is enabled if you check items **Capture page and other layout elements** and **Capture Mark**, under the main menu **Tools**.

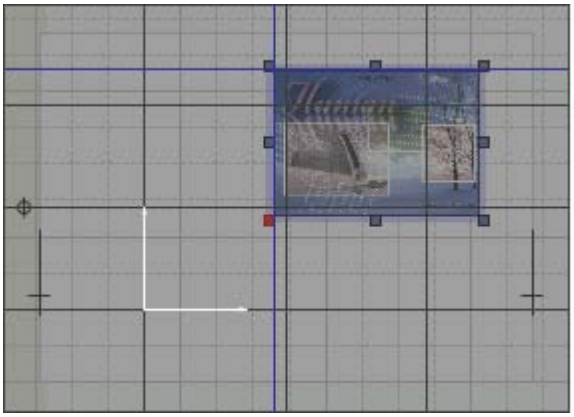
3. Position Coordinates

You can use the coordinates to precisely define the page position.

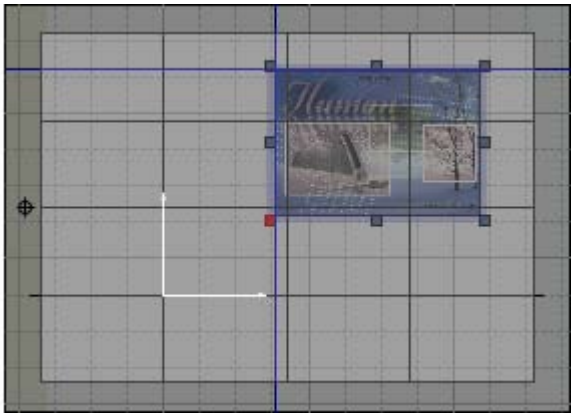
1) Define the coordinate system

The default coordinate system is originated at the lower-left corner of the sheet. In practice, you can choose another origin to re-build the coordinate system. Click the toolbar icon . The editing area then becomes entirely grayed. Move the cursor on the sheet, and you will see two cross lines, their crossing is the origin of the new system.

If you press down the Ctrl or Alt key meanwhile, you can choose to use one of the commonly-used coordinate systems built on the plate or plate element.



Press down Ctrl



Press down Alt

Figure 2-329

If you don't press down the Ctrl or Alt key, when you move the cursor alone to proper position and click the left mouse button, you will open a setup dialog box. The **Origin Location** refers to the coordinates of the new origin on the default coordinate system. **Coordinate Axis** refers to the directions of the X and Y axes.

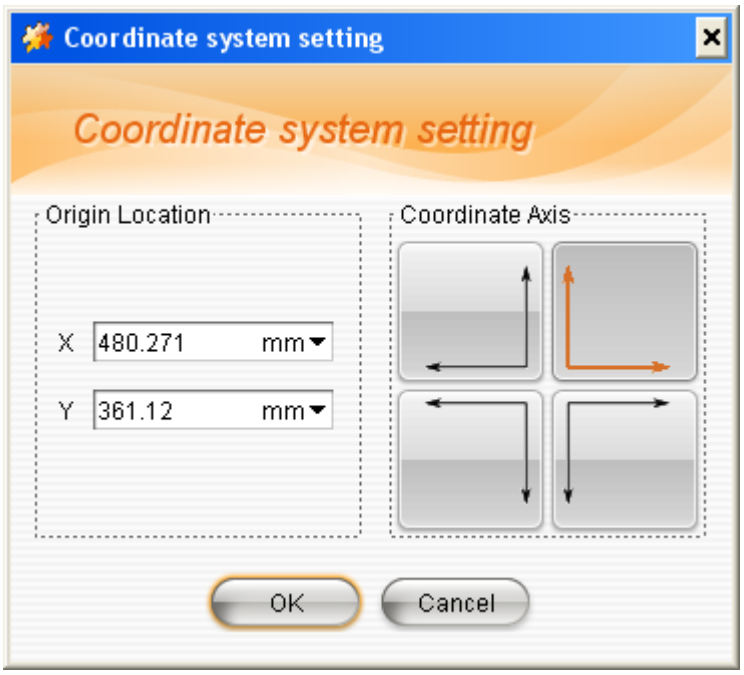


Figure 2-330

2) Define the coordinates

The **Position** parameter on the property panel controls the exact position of your page on the sheet. The coordinates define the position of actual page content, irrespective of whether it contains bleed or not.

Nine anchor points: They represent nine anchor points on the page. Except the central point, the rest eight points are all located on the borders. Your chosen point is displayed in red on the page. The X and Y are just the coordinates of this anchor point on the coordinate system.

4. Move/Nudge Page

1) Move the page

To move a page, you can choose the page and then click the toolbar icon or choose from the main menu **Edit** > **Move**, to open a setup dialog box. Input the distance you want to move in the horizontal and vertical directions, and then click **OK**. You can input negative values.

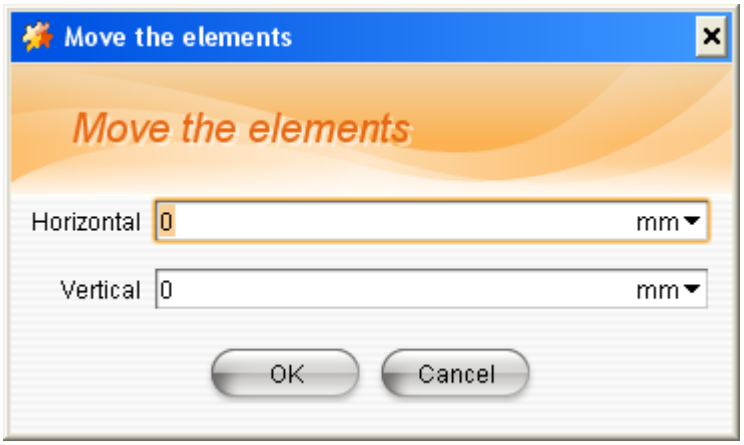


Figure 2-331

2) Nudge the page

Choose the page and then press the arrow keys to nudge the page. When you click the key once, you move the page one time. The page is moved in the direction indicated by the arrow key, at a distance specified by the main menu **Edit** > **Preference** > **Appearance Settings** > **Offset Step**.

5. Lock/Unlock

After you have determined the page position, you can lock it, so as to prevent it from being unintentionally moved. You can lock a page in any of the following ways:

- Click the toolbar icon ;
- Right-click and choose **Lock**;
- Choose from the main menu **Object** > **Lock**;
- Use shortcut keys Ctrl + L.

Being locked, a symbol appears at the upper-right corner of the page. The icon, the menu item, and the shortcut keys used for unlocking the page are , **Unlock** and Ctrl + Shift + L.

6.3.4 Page Properties

The property panel located below the sheet editing area can show the properties of a page when you choose this page. The two tabs divide properties into two groups, **Template** and **Content**.

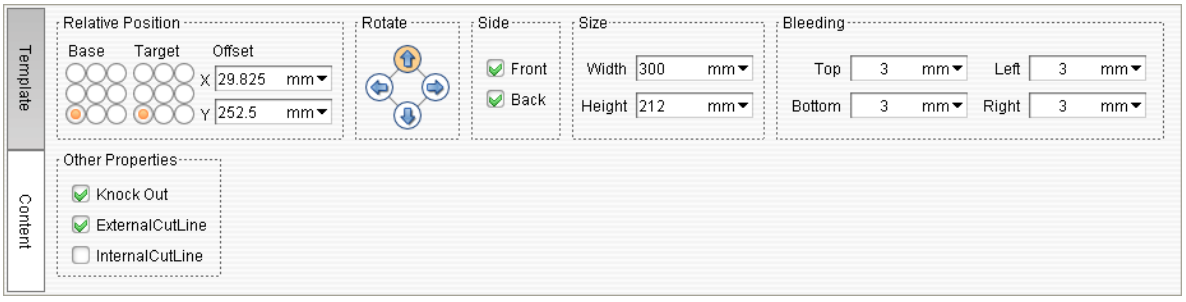


Figure 2-332

1. Template Page

Template page is a kind of pages used for modeling. It does not contain any real content,

but it does define the position of the page on the sheet, the space size of the page on the sheet, the rotating direction, whether it contains the front and/or back side, the bleeding size, whether it is knocked out, whether it contains cutline marks, and the position and scaling for the content it will contain, and the page number, and etc.

For your convenience to create ganging template, each time after you create a sheet and drag real pages into it, ElecRoc will automatically base on the properties like size and position of the real pages to generate corresponding template pages, so that you can extract a template from these pages easily, if needed. Therefore, by default, the properties of the template page are entirely the same as those of the real page.

2. Rotate

You can choose any of the following methods to rotate the template page.

- Under the **Template** tab on the property panel, choose the **Rotate** arrows, , or , your chosen arrow is then shown in highlight;
- Choose the icons, or in the toolbar;
- Choose from the main menu **Object** > **Rotate** > **Rotate 180**, or **Rotate 90 (Clockwise)**, or **Rotate 90 (Counterclockwise)**;
- Use shortcut keys, press down Alt, and meanwhile press an arrow key.

By default, the rotating direction of the page content is the same as that of the template page. But you may also specify a different content direction. To do so, switch to the **Content** tab, and choose a different **Rotate** arrow.

3. Front and Back

When the printing method is set to **Sheetwise**, or **Work and Turn**, or **Work and Tumble**, or **Perfector**, and you add a page or mark onto the sheet or onto any side of the sheet, by default, both the **Front** and **Back** boxes on the property panel will be checked, and a relevant blank page or mark will appear on the opposite or reverse side. Its properties such as size, position and direction are the same as the added page or mark or keep relevance with each other.

You can uncheck any of the two boxes to delete the page or mark on the converse side.

4. Size

The size of the template page may be not equal to the size of the page content. If the content size is smaller than the page size, and meanwhile the content is not scaled, then part of the content may be cut off after the output. If the content size is larger than the page size, and still the content is not scaled, then there would be much space around the content.

By default, the size of the template page is equal to that of the page content. If needed, you may also modify the size of the template page.

- Choose the page and move the cursor to any anchor point on the page border, turning the cursor to an arrow like↔, and then press down the left mouse button and drag it. In this way, you can adjust the page size freely;
- Under the **Template** tab on the property panel, input proper **Size** values.

5. Bleeding

The **Bleeding** parameter controls the size of the bleed box of the template page.

1) Show bleed box: Choose from the main menu **View** > **Show bleeding box**;

2) Color of the bleed box: The main menu **Edit** > **Preference** > **Color Settings** > **Bleeding Box**.

3) Default bleeding: The main menu **Edit** > **Preference** > **General Parameters** > **Default Bleeding**.

6. Cut Line

It includes external cutline and internal cutline. If checked, ElecRoc will add corresponding cut line marks at the four corners of the page. The default line width and length of the marks are determined by main menu **Edit** > **Preference** > **Mark Parameter** > **Cut Line**. After you have added this mark, you can change the line width and length from the property panel, if needed.

7. Knock out

If not checked, after the surface has been screened by PDF Rasterizer, at the overlapping area between two pages, the content from the lower page will be covered, as shown at the left. If checked, the content from the lower page will appear at the transparent overlapping areas.



Figure 2-333

6.3.5 Page Content

You can also configure the properties of the page content in the ganging, mainly through the parameters under the **Content** tab on the property panel.

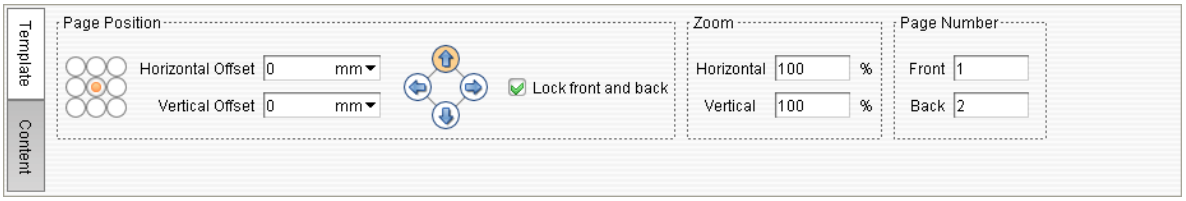


Figure 2-334

1. Page Position

It refers to the position of the page content on the page size defined by the template page. The default position is at the center of the page. You can choose other position from the nine-point diagram, and the then activated **Horizontal Offset** and **Vertical Offset** edit boxes enable you to input appropriate offset values.

Lock front and back: In case that the printing method is set to a method other than **Single-sided**, this option can then control the positional relevance between the contents on the front and back sides. E.g. in **Sheetwise**, if the content on the front side moves leftward, then the content on the back side will automatically move rightward, with same offset value, vice versa.

2. Rotate

You can control the direction of the page content on the template page through the four arrows.

3. Zoom

Here refers to the scaling ratio of the page content to its original size.

- Input the percentages in the **Horizontal** and **Vertical** edit boxes on the property panel;
- Click the toolbar icon ;
- Choose from the main menu **Object** > **Zoom**.

When you choose the latter two methods to scale the page content, you will open an independent setup window. In this window, you will not only see information on the page name and size, but also choose more flexible scaling options.

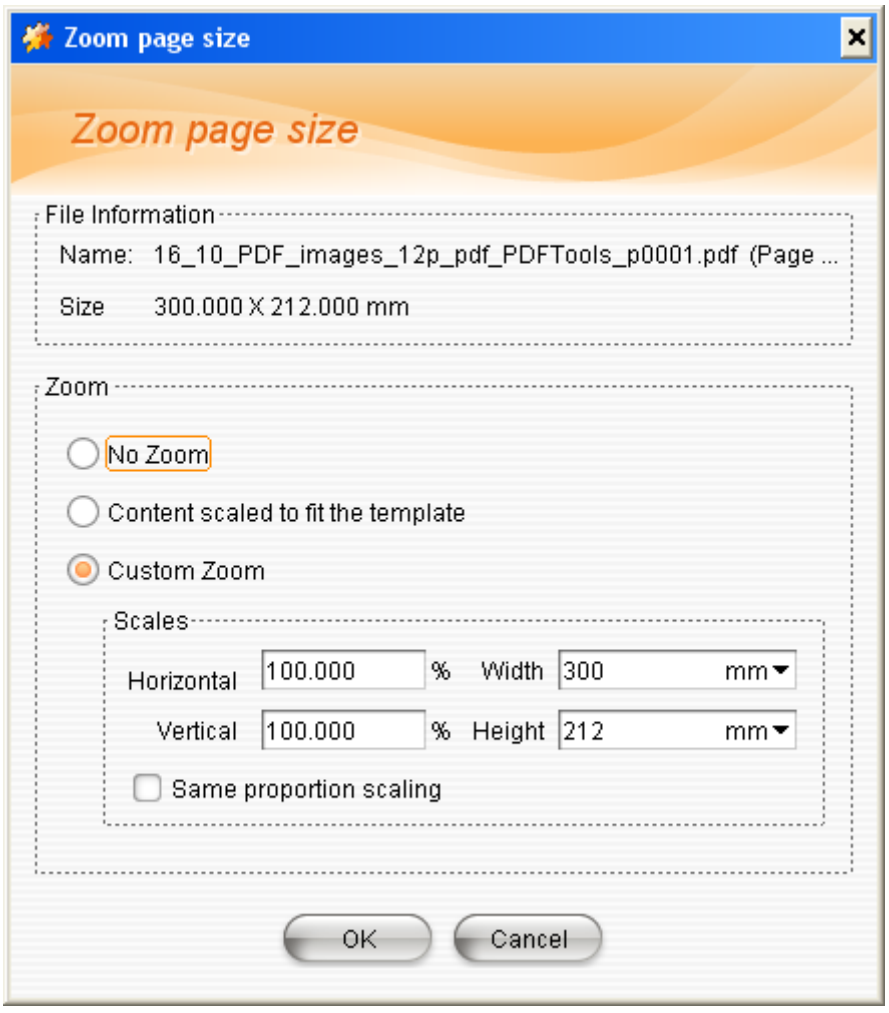


Figure 2-335

No Zoom: To cancel the scaling setting, i.e. to restore the content to its original size.

Content scaled to fit the template: To automatically scale the content according to the size of the template page, making the content fully fill in the page.

Custom Zoom: You can customize the scaling percentages in the horizontal and vertical

directions, or you can specify the width and height of the content after the scaling. If you check **Same proportion scaling**, the scaling percentages in the horizontal and vertical directions will remain the same.

4. Page Clipper

Choose a page and use any of the following methods to open the **Page Clipper** window.

- Click the toolbar icon;
- Choose from the main menu **Edit** > **Page Clipper**;
- Right-click and choose **Page Clipper**.

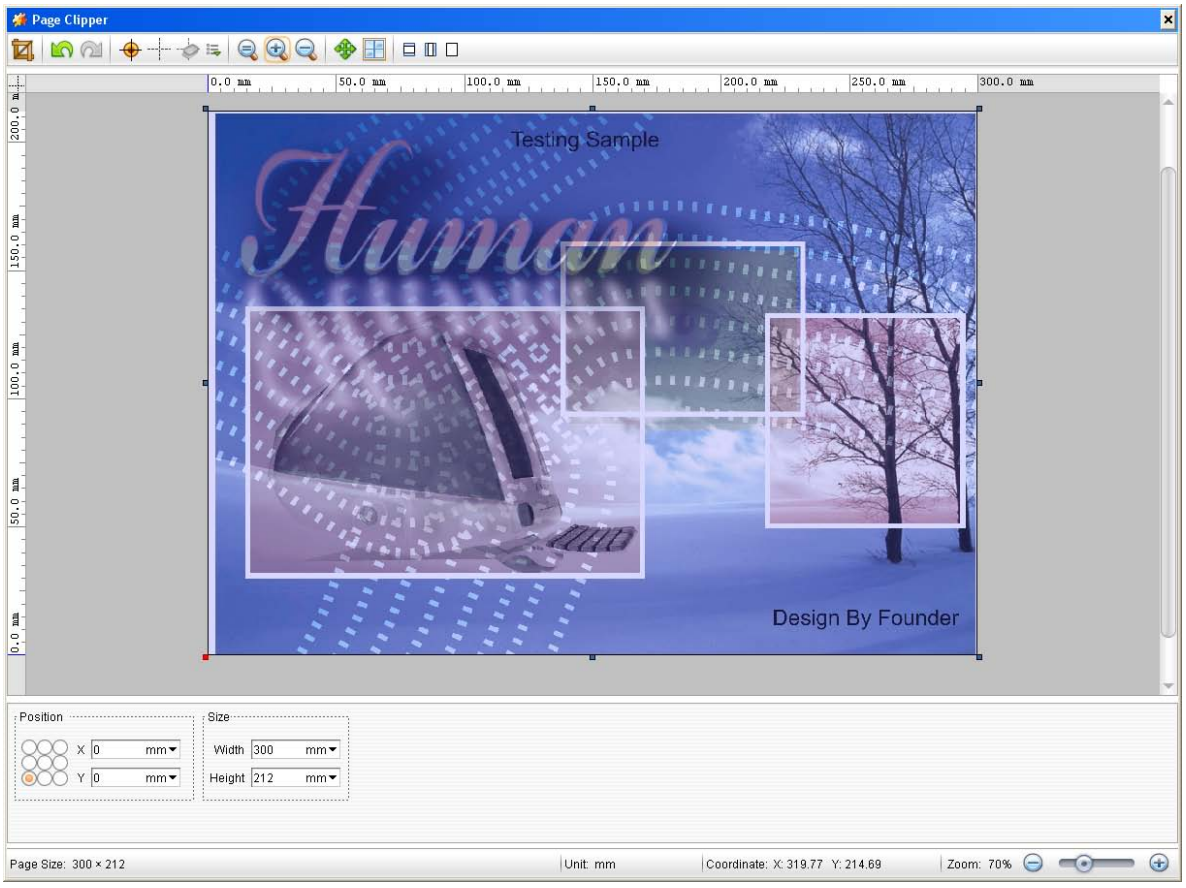


Figure 2-336

What you need to do is to define a suitable crop box. The page content outside of the crop box is cut off at last. To adjust the size and position of the crop box, you can freely drag the box or its anchor point, or you can also input the precise coordinates, width and height. The toolbar at the top also provides some control icons for you to define the position and size with ease.

Click the toolbar icon when you have defined a proper crop box. For more information, refer to the section 4.3.2 *Page Clipper*.

5. Front & Back Content Swap

ElecRoc supports you to swap the content between the front and back pages.

On the front or back side of the sheet, choose the page(s) and then click the toolbar icon, or choose the main menu **Edit** > **Front Back swap**, and then you can do the

content swapping.

6. Page Swap

ElecRoc supports you to swap the content between any two pages.

On the sheet, choose any two pages and then click the toolbar icon, or choose the main menu **Edit** > **Swap**, and then you can do the content swapping.

7. Manual Swap

ElecRoc supports you to manually swap the content between two pages.

Choose the toolbar icon, and then drag a page onto another page, and you will see the cursor turning to, release the mouse button and then you do the content swapping.

8. Fit Page

This function can re-set the page size according to the content size. It is usually applied to the case when the content size becomes different from that of the page.

To do so, choose the page and then click the toolbar icon or choose the main menu **Object** > **Fit**.

6.3.6 Page Operations

1. Layer Structure

You need to know about the up and down relations in case that two or more pages are overlapping each other. ElecRoc views each page as a unique layer. And the upper layer always overlaps the lower one. By default, ElecRoc judges if a layer is old or new by the time it is created, the newer layer always overlaps the older one, i.e. the newer layer is in the upper, the older one is in the lower. This sequence can be customized.

The layer sequence and classification can be viewed in the **Layer Structure** pane. Choose from the main menu **View** > **Layer Structure** to display this pane.

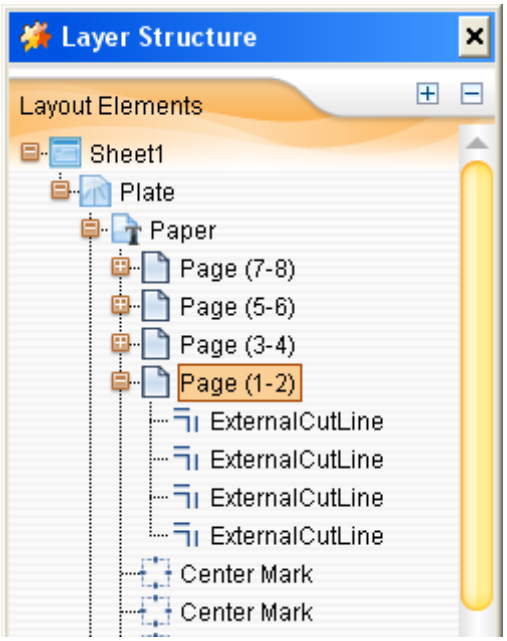


Figure 2-337

To change the layer position in the sequence, choose the page, and then do any of the following:

- Click the toolbar icons , , , ;
- Choose from the main menu **Object** > **Arrangement** > **Bring to front**, or **Send to back**, or **Bring forward**, or **Send backward**.

2. Efficient step & repeat

Copy repeatedly one single page so as to produce multiple pages arranged according to certain sequence and page space.

Click the toolbar icon , or choose from the main menu **Edit** > **Efficient step and repeat**, to get a floating setup dialog box, with the cursor turning to .

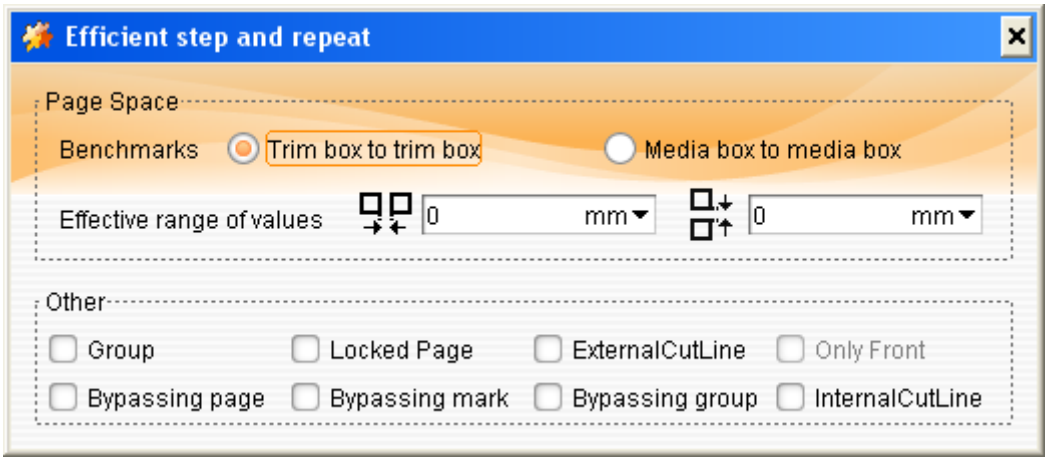


Figure 2-338

And then, choose the page, press down the left mouse button and drag it on the sheet. You will then see new pages being formed on the sheet around the base page. Release the mouse when it has produced the number of pages you want to produce.

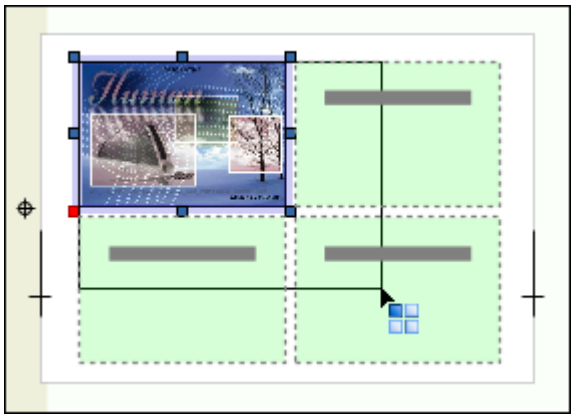


Figure 2-339

Parameters related include:

Benchmarks: **Trim box to trim box** refers to use the distance between the trim boxes of the two pages as the page space, while **Media box to media box** refers to that between the media boxes of the two pages.

Space: The page space between any two pages in the horizontal and vertical directions.

Group: To combine the base and new pages into a group after the step and repeat.

Locked Page: To lock the base and new pages after the step and repeat.

External/Internal CutLine: To include cutline marks on all the new pages after the step and repeat.

Only Front: The cutline marks only appear on the pages in the front side of the sheet.

Bypassing page: To bypass the existing page on the sheet. I.e. at the place where an existing page is located, it does not produce any new page.

Bypassing mark: To bypass the existing mark on the sheet.

Bypassing group: To bypass the existing group on the sheet.

3. Smart step & repeat

Choose from the main menu **Edit** > **Smart Step and Repeat**, and you will open a setup window as shown in the below, so as to perform a smart step & repeat operation.

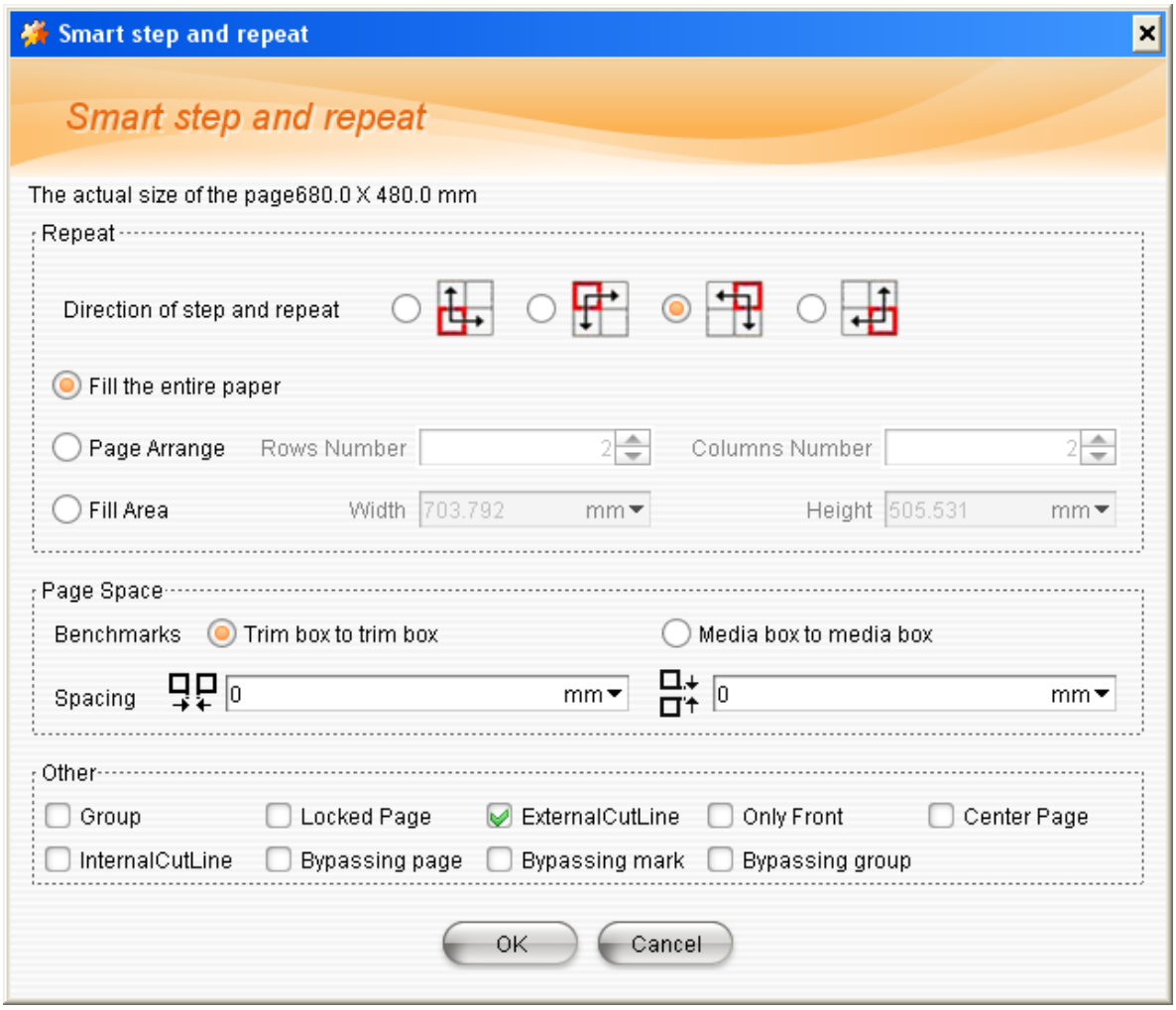


Figure 2-340

More options become available, compared to the rapid step & repeat setup window.

Direction of step and repeat: Starting from one corner, step and repeat toward the opposite corner. Thus there are 4 directions. By default, ElecRoc can automatically

choose a proper direction, but if needed, you can choose any other direction.

Fill the entire paper: To generate multiple pages till they fill the entire paper.

Page Arrange: To generate a specified number of pages in both the horizontal and vertical directions, as defined here.

Fill Area: To generate multiple pages till they fill the area as specified here.

Center Page: To center the base page and generated pages on the sheet.

4. Alignment

After you have added multiple pages into the sheet, you may need to align them.

1) Selection of multiple pages

To choose or select more than one page (or page object) at one time, you can do any of the following:

- Press down the Ctrl key at the same time;
- Press down the left mouse button on any blank area inside or outside the sheet, and then drag it in any direction to form a rectangle. In this way you can choose all the pages inside the rectangle.

After you have chosen multiple pages, you can perform not only the page alignment, but also the operations like moving, cutting, copying/pasting, deleting, rotating, and configuring the bleed, the size, and etc.

2) Align pages

You can align pages in any of the following ways:

- Click the toolbar icons, , , , , , ;
- Choose the menu items corresponding to the above icons: **Object** > **Alignment** > **Vertical align top**/ **Vertical align center**/ **Vertical align bottom**/ **Horizontal align left**/ **Horizontal align center**/ **Horizontal align right**, and **Object** > **Center** > **Horizontal and vertical**/ **Horizontal**/ **Vertical**.

The default benchmark is the firstly selected page, but this can be re-defined manually. After you have chosen multiple pages, click one of them once again to make it the benchmark page. The anchor points on the benchmark page are shown in dark, while those on the rest pages are in white.

The alignment is applied to all page objects, including pages, marks, and groups.

5. Grouping

You can combine multiple pages or marks as one group. The relative positions of the objects each other within the group are fixed, so that they can be ganged as a whole.

1. Choose the pages you want to group.

2. Click the toolbar icon, or choose from the main menu **Object** > **Group**.

To break the group, you can choose the group and then click the toolbar icon, or choose from the main menu **Object** > **Ungroup**.

6. Cut, Copy, Paste, Paste Hold, Delete, Delete Contents

ElecRoc supports some basic and commonly-used operations on the pages such as cutting, copying, pasting, and deleting. In fact, these operations are also applied to the

page groups and marks on the sheet. Besides, ElecRoc also supports two other operations on the pages, pasting hold and deleting content.

Paste Hold: The new page and the original one will be located at the same position after the pasting, visually overlapping each other.

Delete Contents: Delete the content of the page, making the page a blank one.

These operations can be performed in many ways:

- Choose the page and then click the toolbar icons , , , , ;
- Right-click and choose **Cut**, **Copy**, **Paste**, **Paste Hold**, **Delete**, **Delete Contents**;
- Choose from the main menu **Edit** > **Cut**/ **Copy**/ **Paste**/ **Paste Hold**/ **Delete**/ **Delete Contents**;
- Shortcut keys. Cut: Ctrl+X; Copy: Ctrl+C; Paste: Ctrl+Shift+V; Paste Hold: Ctrl+V; Delete: Delete; Delete Contents: Ctrl+Delete.

6.4 Add Marks

You can add a wide range of marks to the sheet.

6.4.1 Mark Type

The marks that can be added to the sheet include:

1) Plate marks. On the sheet based on the plate, you can add punch marks , the side guide marks such as , and center marks. For details, refer to *From Plate* in section 6.2.3.

2) Cutline marks. You can add the cutline marks such as  to the four corners of any page on the sheet. Refer to *Cut Line* in section 6.3.4 for details.

3) Default layout marks. Whenever you create an imposition, by default ElecRoc will automatically add some marks, including cut lines (e.g. ), fold marks (or ), cross marks , registration marks ( or ), CMYK marks (e.g.), and text marks (e.g. Surface name:Surface_11_1 Front 15:58:16). For details, refer to *Default Layout Marks* in section 6.5.3 and *Mark Parameter* in section 6.6.7.

4) Smart marks. It's a kind of dynamic mark that can move smartly along with other sheet object. The cutline marks, the most of the static marks, and the custom marks, can be added as smart marks into your sheet. Their positions on the sheet are based on and associated with specific sheet object, such as plate, paper, page, and layout. Once these base objects move, they move as well. In this way, you do NOT need to re-set the marks in cases that the pages on the sheet are to be changed. This provides great convenience for you to create imposer template.

5) Static marks. ElecRoc provides 17 built-in marks available for you to manually add to the sheet. They include cross reverse mark , internal target mark , oval target mark , cross mark , external target mark , line mark , vertical line mark , solid target mark , rectangular reverse mark , T mark , three-fold mark , CMYK proof bar (three ones ,  and), color bar , step scale , and text mark .

6) Custom marks. You can add custom marks into ElecRoc system, for use in ganging. For details on how to add custom marks into ElecRoc, refer to the section 6.6.4 *Define Marks*.

6.4.2 Smart Marks

As shown in the following figure, the bar mark located at the lower-left corner of each page is a smart mark. As an example, it will always appear at the lower-left corner of each page, whenever you move the layout, or modify the number of pages, or change the page size, or even the page space.

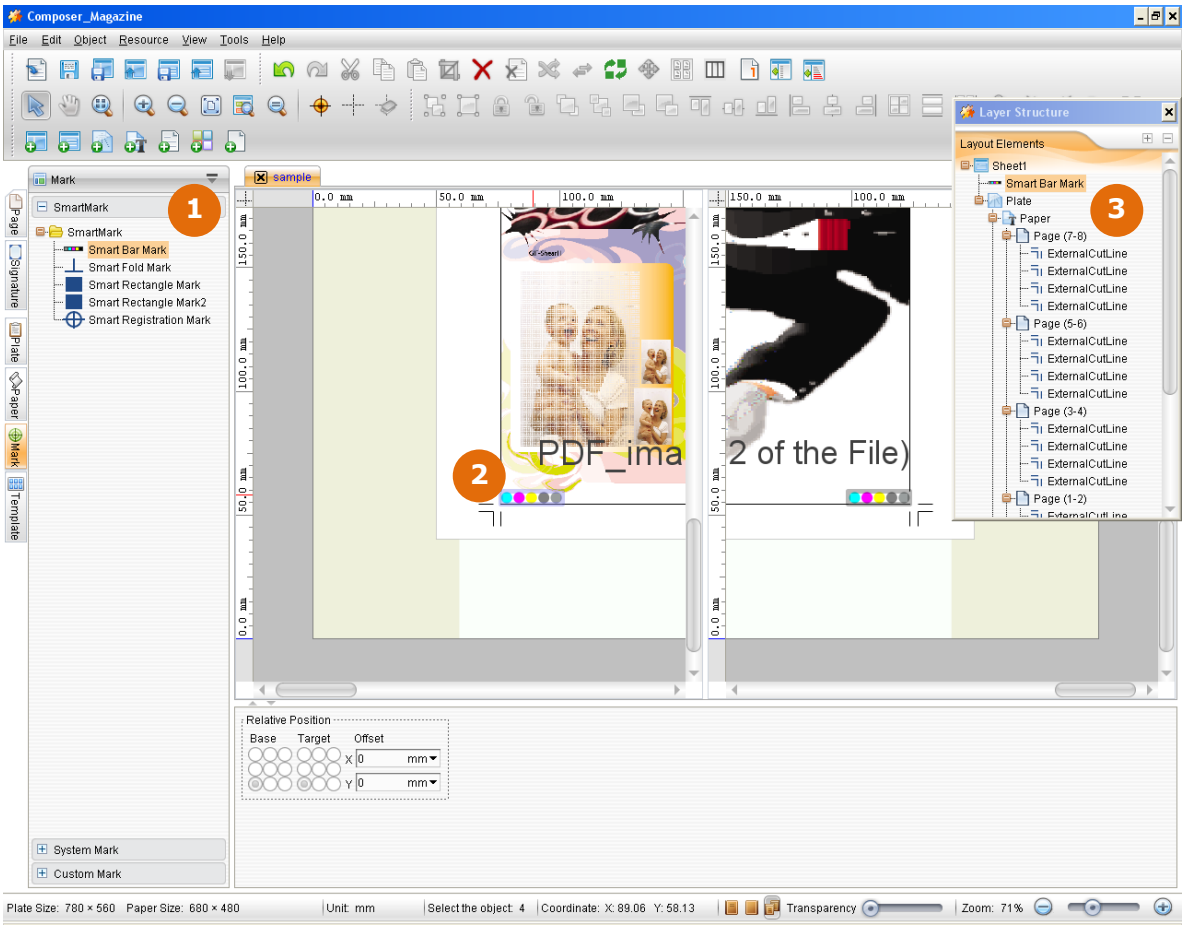


Figure 2-341

Method to add smart mark: as shown above, ①, at the left of the window, expand **Mark** > **Smart Mark** and define smart mark here; ②, choose the defined smart mark, drag it into the sheet; at this point you have finished the adding operation; ③, for convenience to choose the added smart mark for further operation, you can open the **Layer Structure** panel (from main menu **View** > **Layer Structure**) to choose the mark.

1. Mark Directory

In order to improve the usability and efficiency, ElecRoc enables you to create smart mark template and manage the templates by way of directory. As the default directory and the root directory, the directory *Smart Mark* can be used straight to store your smart marks. And if needed, you can create sub-directory under it: choose *Smart Mark*, right-click and then choose **Create Directory**. User-defined sub-directory can be deleted or renamed via right-click menu items, if needed.

2. Define Smart Mark

The mark setting defined here is sort of a parameter template for your smart mark, aiming to provide easiness for repetitive use.

Choose a directory, right-click and choose **New**, and then choose a mark type. The mark's property setup window then appears. Define each of the parameters, and then click **Save** to save the setting under your chosen directory. If you click **Save and apply**, you can not only save the setting, but also add the mark into the current sheet.

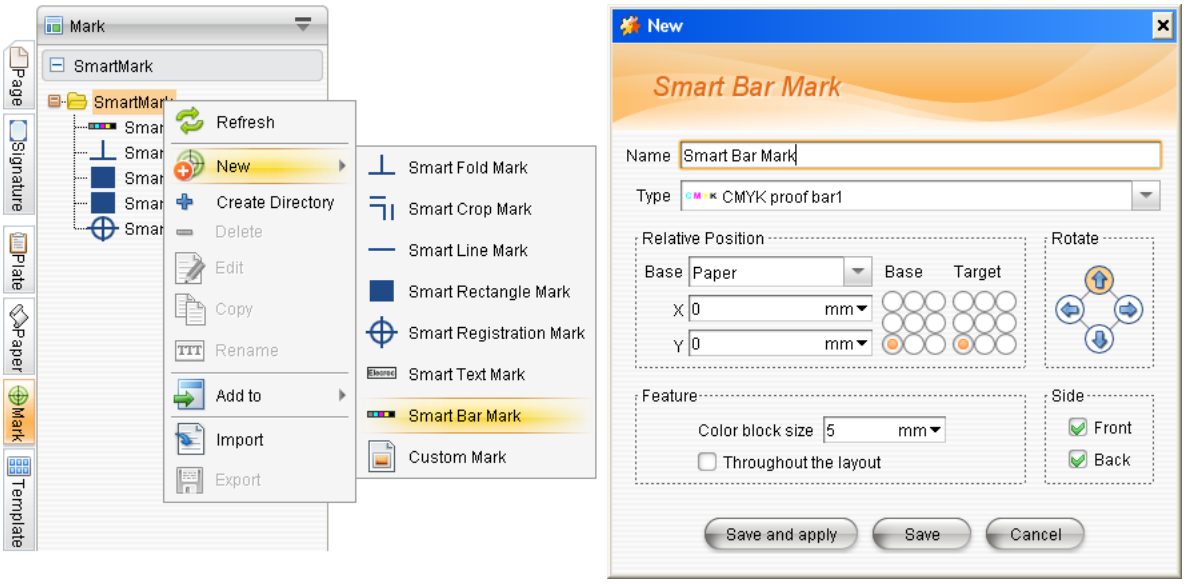


Figure 2-342

Here we introduce only the property parameters specific to the smart marks. As to other parameters, please refer to the section 6.4.4 "Mark Properties".

Name: The name for the mark property setting.

Type: The specific mark type, for example, the bar mark contains 5 specific types.

The position of the smart mark is dynamic and associated. It's a relative position, and thus needs to be defined by way of some reference variables.

Base: Please choose a sheet object or sheet location from the **Base** dropdown list, only on which you can further define the exact position for the mark. The base could be plate, paper, imposition, imposition bleed, page, page bleed, gutters, and margin. For example, if you choose the page as base, the smart mark will then appear at certain position on each page; if you choose imposition, the smart mark will then appear at certain position on the layout. The bleed in page bleed or imposition bleed means to use the bleed box of the page or imposition as the base.

Base diagram: The base position is further divided into 9 smaller points, top, bottom, left, right, center, upper-left, lower-left, upper-right, and lower-right. The smart mark will be located at one point of them.

Target diagram: The selected base point can be further divided into 9 directions. The following figure shows a smart rectangle mark's positions when the base is page and the base point is lower-left, but the target direction is respectively set to lower-left, bottom, and lower-right.

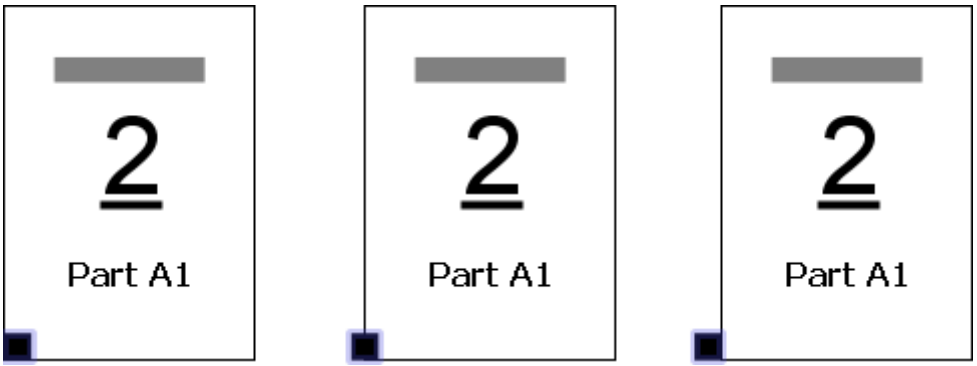


Figure 2-343

X, **Y**: When you have defined the exact position by way of the above three parameters, you can still make the mark move horizontally and vertically by way of the X and Y edit boxes, if needed. A positive X value means to move towards the right, while a positive Y value means to move upwards. Negative values mean to move in reverse directions.

3. Add

You can add a smart mark if you click the button **Save and apply** in the mark's property setup window.

You can also add the smart mark after you have defined the mark, by choosing the mark and then dragging it to any place on the sheet.

By using right-click menu items, you can also add smart mark after you have defined the mark: choose the mark, right-click and choose **Add to**. The sub-option **current sheet** means to add the mark into current sheet, while the sub-option **all sheets** means to add the mark into all the sheets of the current template.

4. Edit, Delete

To edit an added smart mark: we recommend you to open the **Layer Structure** panel when you are using the smart marks, see the figure ① in the below. This panel lists all the smart marks that have been added onto the sheet. Choose a mark, right-click and choose **Edit**, to open its property setup window. Re-define the parameters and then click **Save**.

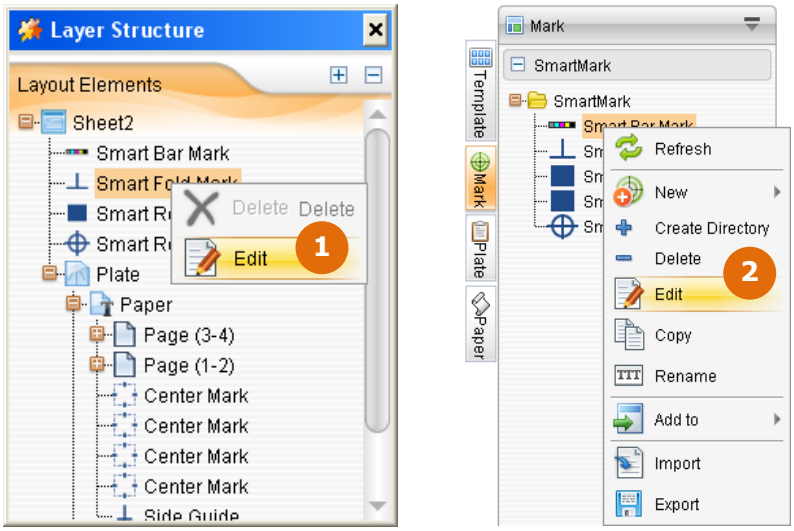


Figure 2-344

To edit a smart mark parameter template: at the location as shown in above figure ② you can also edit the smart marks, by way of right-click menu items. In this way, you can re-define the properties of the mark template, for repetitive use.

Delete a mark: The right-click menu item **Delete** enables you to delete an unneeded smart mark. The already-added smart mark on your sheet can also be deleted by using the **Delete** key on your keyboard.

5. Import, Export, Copy

ElecRoc supports you to import and export the smart mark templates. This operation can be completed with the right-click menu items.

6.4.3 System and Custom Marks

The way to add the static and custom marks is as follows. Click the toolbar icon , or check the **Mark** tab at the left of the composer window to expand the optional static or custom marks. Then choose one mark and then directly drag it to the right sheet editing area, and release the mouse at proper position.

Note: *The custom marks are from PDF pages, thus are in two types, composite and pre-separation. ElecRoc does not support you to combine these two types of marks onto one same sheet.*

6.4.4 Mark Properties

You can define the mark properties through the parameters on the property panel. But the properties for various marks are different. E.g. the property panel for the mark is shown as follows.



Figure 2-345

While that for the CMYK proof bar 3 turns to:

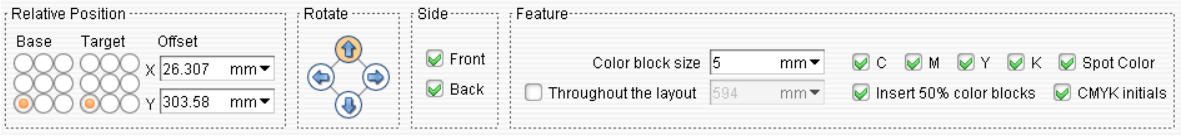


Figure 2-346

The property parameters for the static mark include:

- **Position**

It refers to the position of the mark on the sheet coordinate system.

- **Rotate**

The orientation of the mark on the sheet.

- **Front, Back**

They control if the mark appears on the front side, or the back side, or both sides.

- **Line width, Line height**

The line width and height of the mark. The default line width and height can be defined from the main menu **Edit** > **Preference** > **Mark Parameter** > **Other Mark**.

- **Color**

This parameter is available only for the line mark, vertical line mark, and step scale mark. Optional colors include black (cmyk or mono), cyan, magenta, yellow, red, green, and blue. Besides, you can also use custom color.

Customize mark color: If you choose **Custom**, you can customize a color in CMYK mode.

- **Only on black**

This option is available for such marks as , , , , , , , and . If checked, the mark will be displayed and output only on the black separation.

- **Bar mark features**

The following parameters are specific to the CMYK proof bars and color bars.

Color block size: Each color bar is composed of multiple same-sized square blocks. This parameter controls just the side length of such blocks. In this way, it controls the size of the whole color bar.

Throughout the layout: If checked, the bar is repeated backwards throughout the layout, starting from the place where the bar is located.

Spot Color: If checked, it adds the spot color block(s) at the end of the color bar. The spot colors are those contained in the current sheet.

Insert 50% color blocks: This option is available only for the CMYK proof bar 3. If checked, it adds the 50% K, C, M and Y blocks, and if the **Spot Color** option is checked at the same time, it also adds 50% spot color block(s).

- **Text mark features**

Width, **Height**: The text size is controlled by **Height**. After you have defined the height, you should define a width big enough to wholly display the text.

Comments: You can randomly input any text, or you can also add variables such as surface name, time and date, which separately refer to the name of the current sheet, the current time, and the current date.

Surface: Two options, *Front/Back* and *A/B*, are available for you to indicate the front plate and back plate. Choose the style you prefer. Take the option *Front/Back* as example, if the **Comments** parameter has contained the variable **Surface**, at the time being output, the comments appearing on the front side of the your sheet will then contain the text *Front*, while the back side contains the text *Back*.

Font: Font for the comments, Song Typeface, Boldface, Tahoma, Batang, or MingLiu. And if needed, you can check **Bold** to make the comments boldfaced.

Swap: If checked, the text *Front/Back* or *A/B* in the mark will be swapped each other.

Sheet ID: The ID of the sheet. You can customize the first ID, and control if to number in sequence algorithm. When the **Comments** parameter has contained the variable **Sheet ID**, at the time being output, the comments appearing on the sheet will then contain the ID defined here.

Binding > **Signature ID**: If checked, when the **Comments** parameter contains the variable *Signature ID*, the ID will be bound with the signature specified in the dropdown

list below.

Vertical text: If checked, the characters will be arranged vertically.

6.4.5 Edit Marks

The mark-related operations, such as moving, copying, pasting, deleting, grouping, are the same as those related to the page. For details, refer to the introductions above.

6.5 Use Ganging Template

You can gain powerful ganging and folding capacities approximate to the imposer.

6.5.1 Extract Template

You can extract the sheet setting, as well as the properties of the pages on the sheet, to form a ganging template, for repetitive uses. Click the toolbar icon, or choose from the main menu **File** > **Extract Template** to open the following setup dialog box. Choose a template directory and input the template name, and then click **OK**.

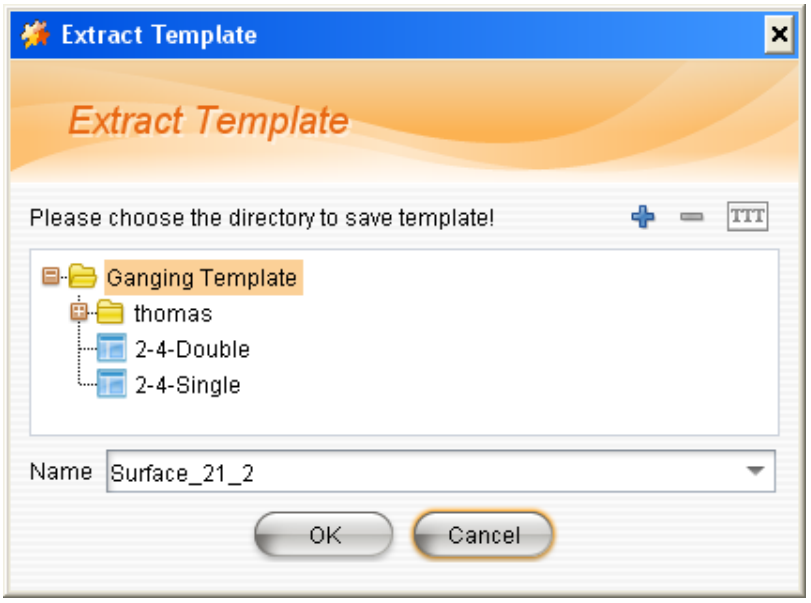


Figure 2-347

The icons, , , in the dialog box are used separately to create, delete and rename the template directory.

6.5.2 Create Template

Instead of extracting a template, you can separately create a new template, especially a one containing a layout, through a special user interface. Generally, you need to go through the following operations.

1. Choose Directory

This directory is designed for classification and management of the ganging templates. Choose the **Template** tab at the left of the ganging window to expand the directory structure. The **Ganging Template** is the root directory, under which you can directly store your ganging template.

ElecRoc supports you to create a directory. First, choose an existing directory, e.g. the root directory, as the superior directory of the new one. Then, click the **Preference** icon or right-click, and choose **Create Directory**. And then, input the directory name in the pop-up dialog box, and click **OK**.

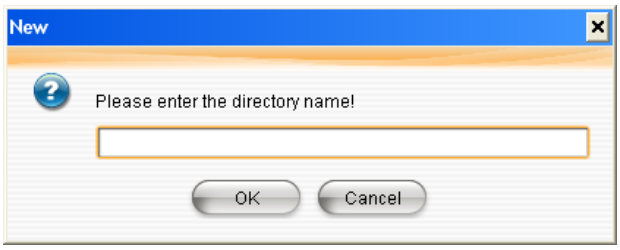


Figure 2-348

2. Create Template

Steps for creating a template are as follows:

1. Choose a template directory. As mentioned above, please choose one directory under the **Template** tab, and if needed, you can create a new one. The default is the root directory, i.e. the **Ganging Template**.

2. Do any of the following:

- Click the toolbar icon;
- Right-click and choose **New Template**;
- Open the **Preference** menu and choose **New Template**;
- Choose from the main menu **Resource** > **New Template**.

3. Now you will open the **New Template** window. This window is very similar to the **New Signature** window. Please define the template name, printing method, plate size, paper size, and other properties, and then click **OK**.

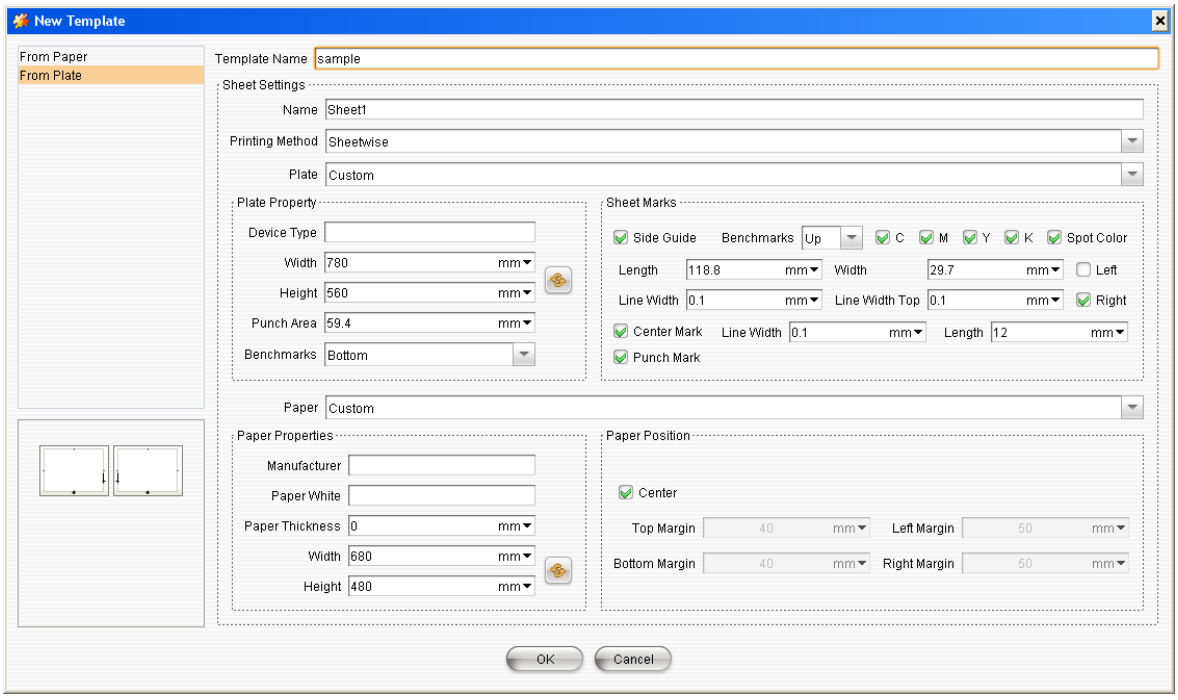


Figure 2-349

4. The newly-created template then appears in the ganging window.

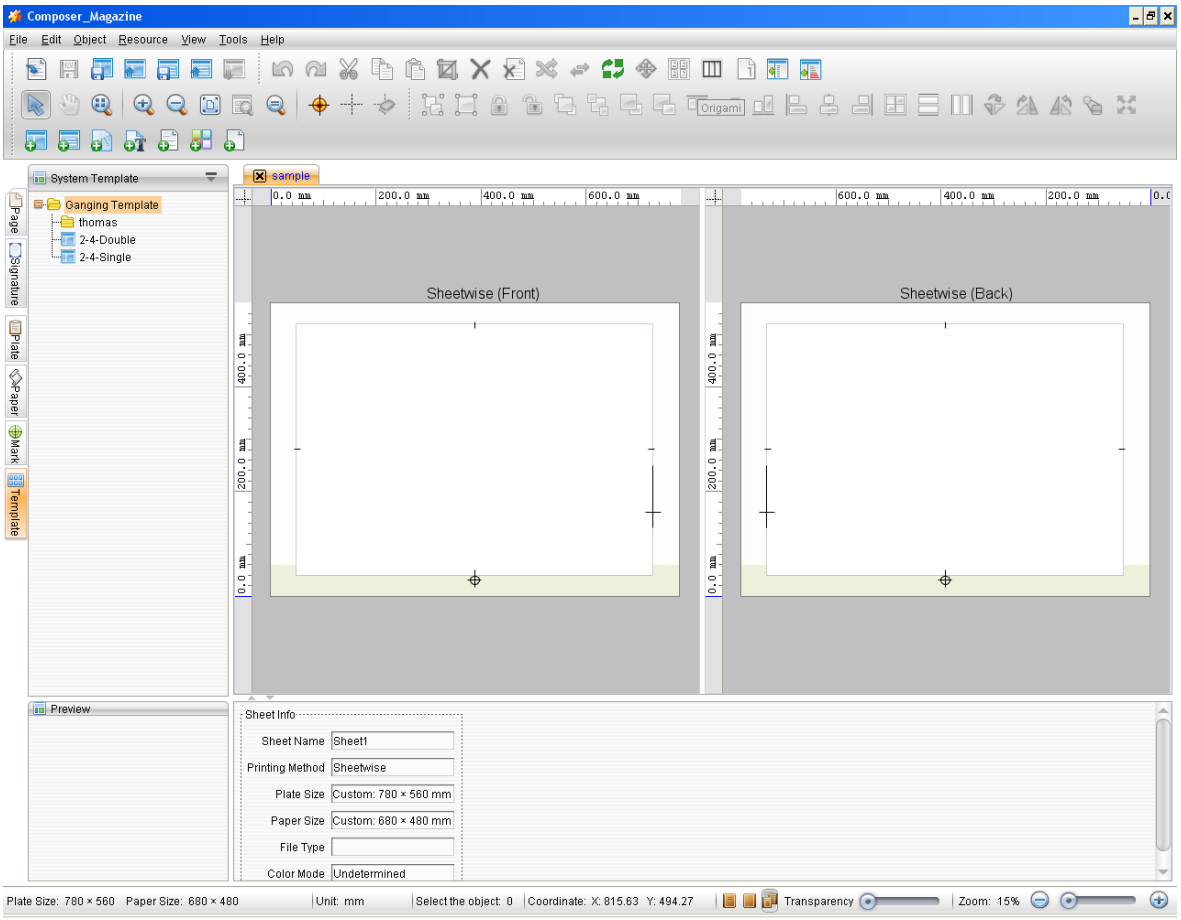


Figure 2-350

At the left, you see the name has been added to the template directory, while at the right ElecRoc spreads the editing interface.

3. Edit Template

It is basically a blank template after you have completed the above steps. Therefore, you may need to perform further a series of editing operations, such as configuring the sheet properties, creating a layout, adding pages, and adding marks.

1) Sheet properties

If your sheet is based on a plate, you can see the size and other properties of the plate on the property panel once you choose it, and you can re-define all of its properties.

Same as the plate, the size and other properties of the paper can also be re-defined.

2) Add a layout

The layout here refers to a group of pages orderly arranged in a specific layout. For details, refer to the section 6.5.3 *Create Layout*.

3) Add pages

Add blank page: Click the toolbar icon, or choose from the main menu **Resource** > **New blank page**.

From real pages: Choose pages to be ganged from the **Page** tab at the left of the ganging window, and then drag them to the sheet. You can base on these real pages to form the template pages.

For page-related operations and configuration of the page properties, refer to relevant introductions in section 6.4 *Add Pages*.

4) Add marks

To add a mark, choose a mark under the **Mark** tab at the left of the ganging window, and then drag it to the sheet. After you have added a mark, you can re-define its properties on the property panel.

4. Save Template

Click the toolbar icon , or choose from the main menu **File** > **Save**.

6.5.3 Create Layout

To create a layout in your template, do as follow: click the toolbar icon, or choose from the main menu **Resource** > **New Layout**, to open the following setup window, define the parameters as needed, and then click **OK**.

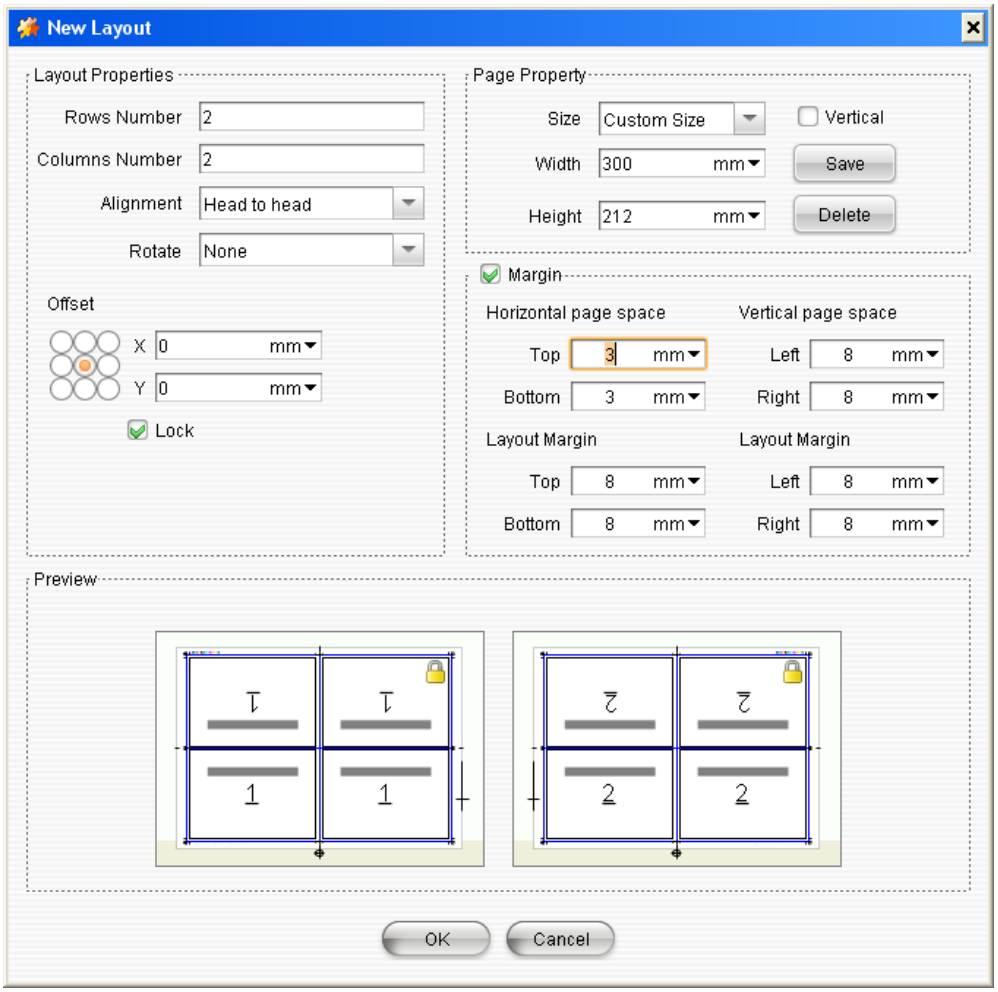


Figure 2-351

Note: *You can also directly create a layout on the sheet of your signature.*

1. Layout Properties

Rows Number: The rows number of the pages in the layout on the front side. That on the back side is the same, if the template contains the back side.

Columns Number: The columns number of the pages in the layout on the front side. That on the back side is the same, if any.

E.g. you can set to 3 rows and 2 columns, which indicates that the layout would contain 3×2=6 pages on the front side, i.e. 3 rows of pages and each row contains 2, or 2 columns of pages and each column contains 3. If the template has the back side, it contains 6 pages as well on the back.

Alignment: Available in 4 most popular page alignment modes, up, down, head to head, and foot to foot.

Rotate: To rotate the page and page content. Options include 0°, 90°, 180°, and 270° counter-clockwise.

Offset: This setting controls the layout position on the template sheet. By default it is at the center. When you use the nine-point diagram to choose other position, you can use the X and Y to define the horizontal and vertical offsets related to the anchor point.

Lock: If checked, the layout's position on the sheet will be locked. A locked layout cannot be deleted or dragged in any direction on the sheet. And a symbol will appear at the upper-right corner of a locked layout.

2. Page Properties

The properties include the page size and the orientation. The **Size** dropdown list provides some commonly-used standard sizes for you to choose from. You can also choose **Custom** to specify any other page size.

3. Margin

Page space: The space between two pages, as shown in the below by the area enclosed by red dashed lines, available in two directions, horizontal and vertical.

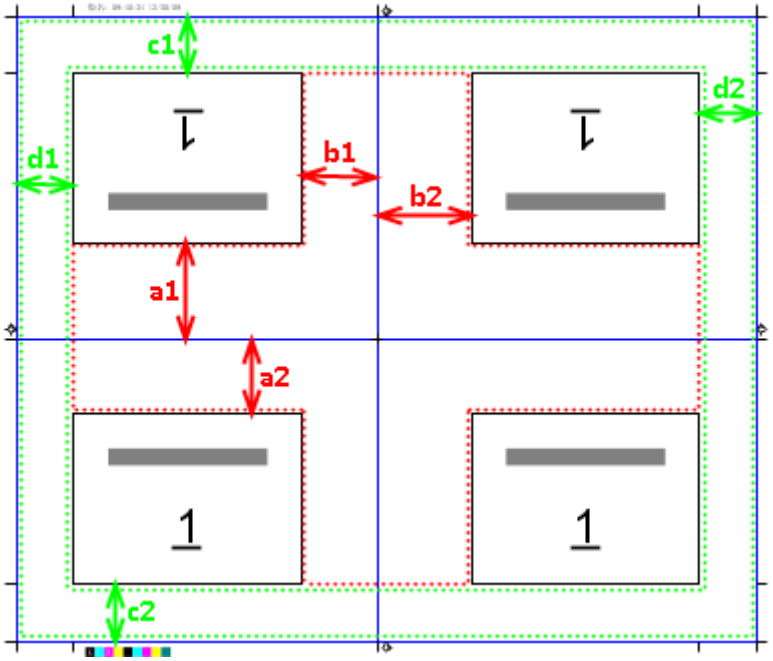


Figure 2-352

The top space horizontally is shown as **a1**, i.e. the distance from the middle of the horizontal page space to the upper page. The bottom space horizontally is shown as **a2**, i.e. the distance from the middle of the horizontal page space to the lower page.

The left space vertically is shown as **b1**, i.e. the distance from the middle of the horizontal page space to the leftward page. The right space vertically is shown as **b2**, i.e. the distance from the middle of the horizontal page space to the rightward page.

Layout margin: The blank space bordering the layout on the sheet, as shown by the area enclosed by green dashed lines.

The top margin is shown as **c1**, i.e. the distance between the top side and the page. The bottom margin is shown as **c2**, i.e. the distance between the bottom side and the page. The left margin is shown as **d1**, i.e. the distance between the left side and the page. The right margin is shown as **d2**, i.e. the distance between the right side and the page.

4. Preview

At the bottom of the **New Layout** window shows a thumbnail image of the layout. If you press down the mouse button on the thumbnail, you will get a zoomed-in thumbnail image floating on the window, as shown in the below. At this moment, you can drag the mouse to zoom in any other position on the layout.

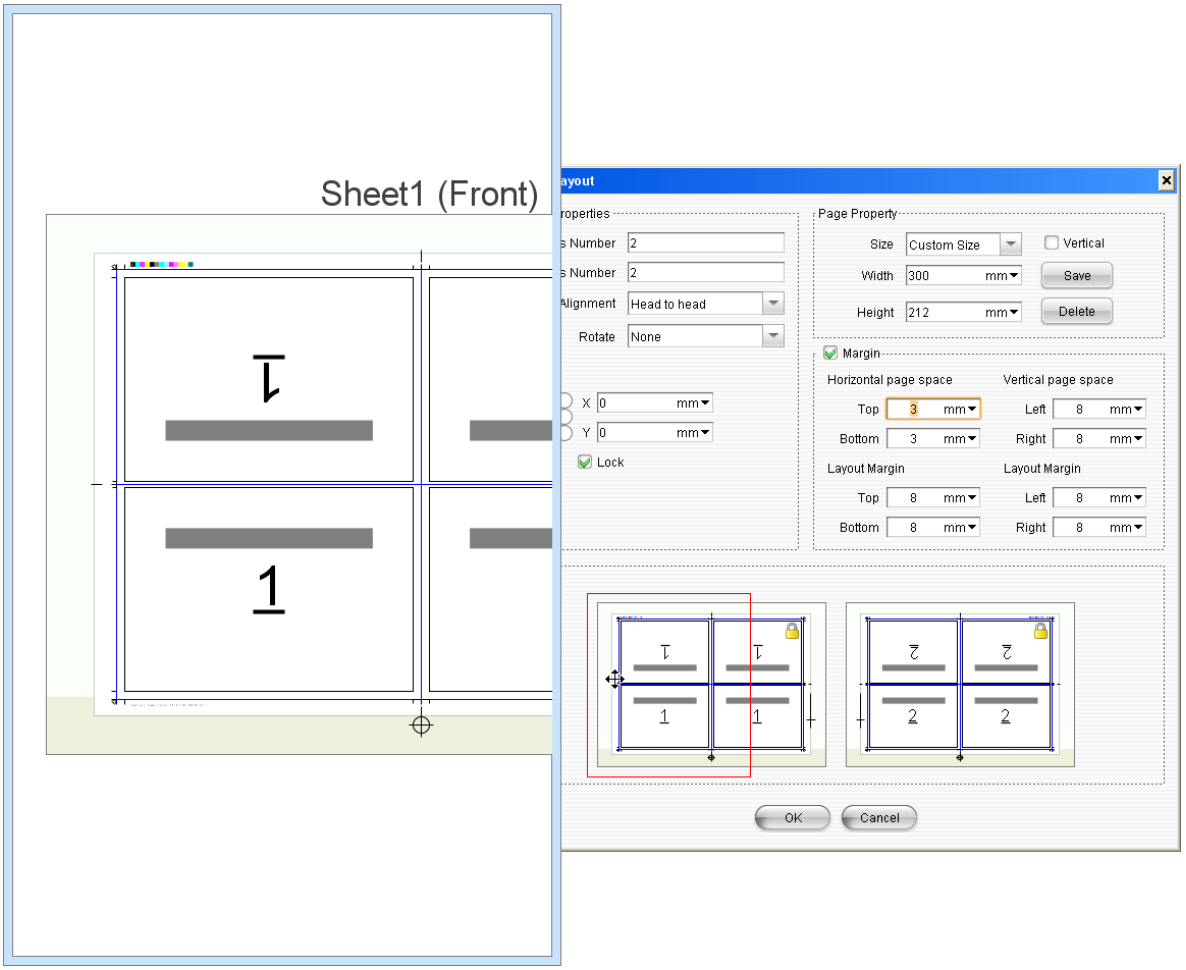


Figure 2-353

5. Default Layout Marks

You may see some marks on the layout when you zoom in the thumbnail image. These marks are automatically added by ElecRoc, and they may include cutline marks, fold marks, cross marks, registration marks, CMYK marks, text marks, and other marks.

Choose from the main menu **Edit** > **Preference** > **Mark Parameter** to configure what marks by default will be added when you create a layout.

Only the black: If checked, the default marks will be displayed and output only on the black separation.

6.5.4 Configure the Layout

After you have created the layout, you can continue to configure its properties.

1. Layout Properties

- **How to select a layout**

Move the cursor over any border of the layout, wait till it turns to and then click the mouse. Or press down the left mouse button at any blank area on the plate, then drag to form a rectangle, ensuring the rectangle cover at least one page, and then release the mouse button.

- **The property panel for a layout**

The property panel shows the layout-related properties once you have selected the layout. Through these parameters, you can view and re-define the layout properties.

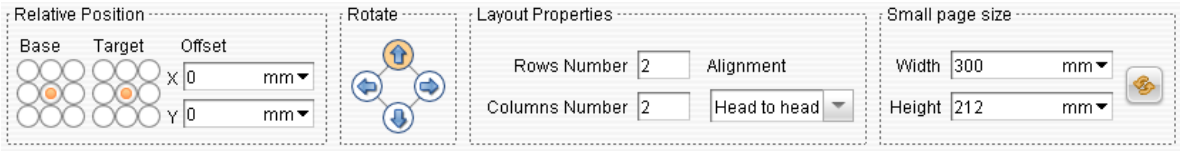


Figure 2-354

- **Layout-related operations**

1) Make use of the capturing capacities to change the layout position by drag-and-drop;

2) Use the toolbar icons, , , , , , , , , , , , or corresponding commands from the main menu or right-click menu, to perform such operations to the layout as cutting, copying, pasting, deleting, moving, centering, rotating, ungrouping, and locking.

Note that, it is no longer a layout after being ungrouped, and all its pages would then become independent from each other.

3) As one group object, when being selected together with other sheet objects, the layout can be in alignment with them, by way of the toolbar icons, , , , , , , or corresponding menu items.

4) Click the toolbar icons, , , , or corresponding menu items, to adjust the sequence of the layout as a layer related to other layers.

2. Page Properties

After you have created a layout, you can still re-define part of the page properties.

- **Define page number**

Choose a page and expand the **Content** tab on the property panel, and then input the page numbers in the **Front** and **Back** edit boxes.

Click the toolbar icon, or choose from the main menu **Edit** > **Set page number** to open a setup dialog box. Input the page numbers for both the front and back sides, and then click on some page to apply the input numbers to the page. The numbers in the dialog box will increase incrementally after the clicking.

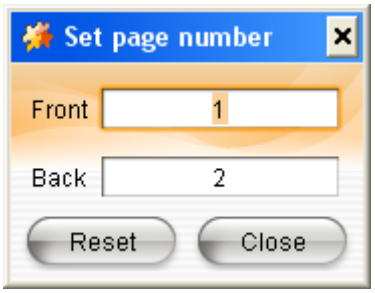


Figure 2-355

- **Configure content properties**

Properties of the page content are controlled by the parameters under the **Content** tab on the property panel. They include the offset, rotation, and the locking of the front and back sides. Refer to related introductions in section 6.4 for details.

3. Other Objects

Here mainly refer to the marks and page space.

- **Mark**

1) You can add cutline marks to the page.

2) Choose one added mark, default mark or cutline mark, on the layout, and then you can view and re-define its properties on the property panel, including line width, length, whether it is present on the front or back sides, whether it is present only on the black separation, and whether it is shown.

- **Space**

Also called margins, include the horizontal and vertical page space between pages, and the space between the page and layout borders. When being chosen, its properties, such as left margin and right margin, are shown on the property panel as well. Through them, you can re-define the space size.

6.5.5 Manage Templates

1. Template Directory

The directory is used for classification and management on the ganging templates. Choosing the **Template** tab, you expand the directory structure. The **Ganging Template** is the root directory.

Choose a directory, and then click the **Preference** icon or right-click to get a menu, in which you can obtain the directory-related operating commands.

- **Create a directory**

Choose **Create Directory**. In the pop-up dialog box, input the directory name, and then click **OK**, to create a new directory.

- **Directory management**

Delete a directory: Choose **Delete** and then click **OK** in the follow-up confirm dialog box.

Rename a directory: Choose **Rename** and then input the new name in the follow-up dialog box and click **OK**.

2. Copy, Delete, Rename template

After you have chosen one template, you can use the commands from the **Preference** menu or the right-click menu such as **Copy Template**, **Delete Template** and **Rename Template** to copy, delete and rename the chosen template.

3. Export/Import template

The right-click menu item **Export Template** enables you to export the currently-selected template out of ElecRoc, while the **Import Template** item enables you to import a template into ElecRoc, under the currently selected directory.

By using the Explorer (main menu **Resource** > **Explorer**), you can also export the ganging templates out of ElecRoc system to your specified location, or import outside ganging templates into ElecRoc system.

6.5.6 Apply the Template

The steps to apply a ganging template are as follows.

1. Open the template in the composer window. The templates are located under the **Template** tab, and can be opened by double-click.

2. Submit pages to the template.

Switch to the **Page** tab, choose multiple pages and drag them onto any blank page of the template, such as the no. 1 page. Release the mouse button, and then ElecRoc will automatically place your pages into the blank pages according to the page sequence under the **Page** tab and the page number defined in the template.

Therefore, please check up the page sequence under the **Page** tab before the ganging, and if needed, you can use the right-click menu items or the **Preference** menu items, such as **Up** and **Down**, to change the page sequence.

3. Submit signature.

6.6 More Features

For more flexibility and convenience, and higher efficiency, ElecRoc ganging also provides you with the following functions and features.

6.6.1 About the User Interface

1. The Composer Window

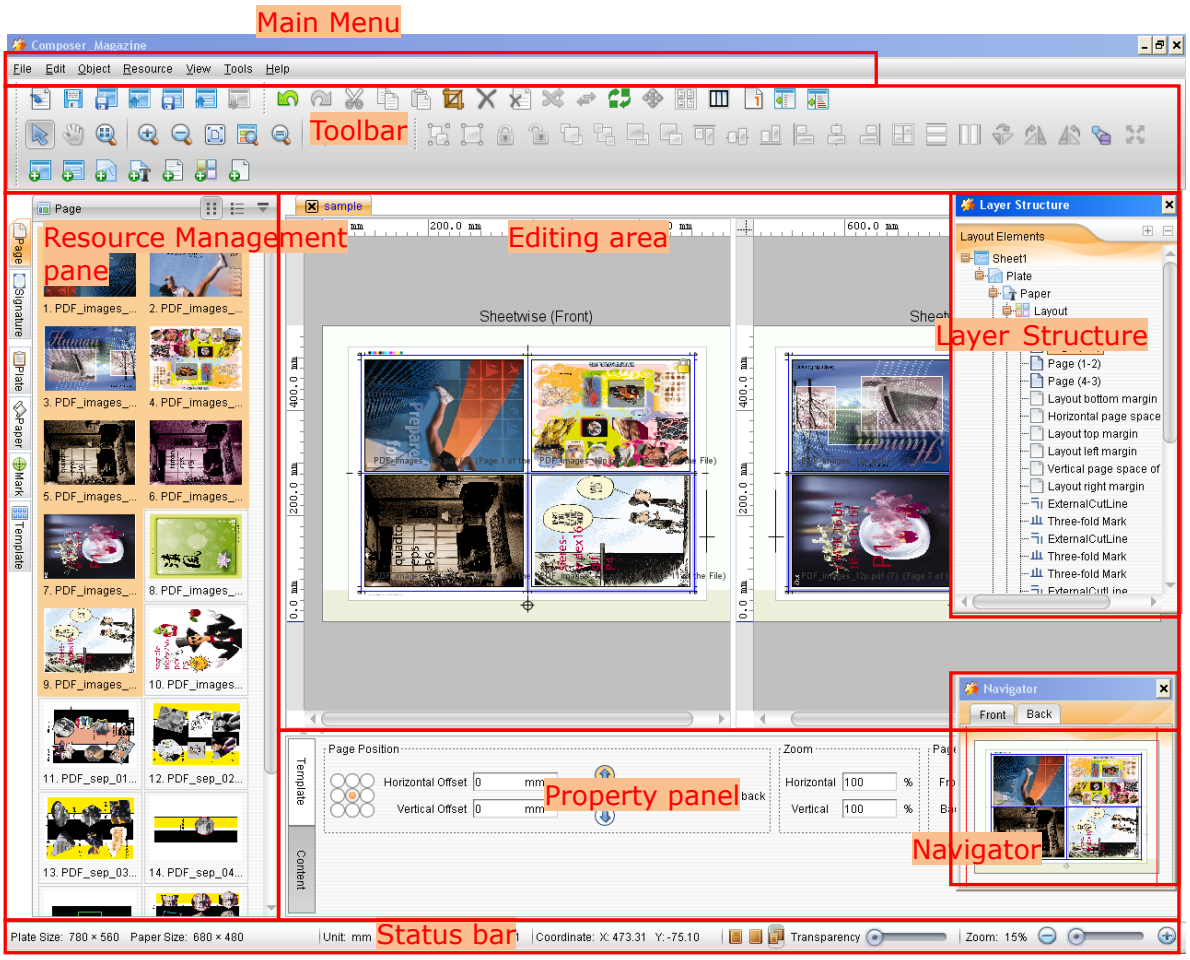


Figure 2-356

As shown above, the composer window is composed of the following parts:

Main menu: Provides operational commands related to the ganging for you to use.

Toolbar: Consists of multiple icons or buttons that can substitute for some commonly-used commands, for you to quickly perform the operations.

The resource management pane: The pane located at the left of the window is designed for you to manage the ganging-related resources, such as pages, signatures, templates and marks. They are grouped into eight tabs, each with a unique operating interface.

The editing area: The body of the ganging window is an area special for you to edit your signature and sheet, or perform various ganging operations.

Property panel: Lists the property parameters of your selected sheet or selected object on the sheet for you to configure.

Layer Structure pane: a floating pane, displayed after selection, listing the layer structure of current sheet. In layer structure, each sheet object is considered as a layer.

Navigator pane: a floating pane, displayed after selection, showing the thumbnail image of the current sheet for you to navigate.

Status bar: Displays the plate size, paper size, unit, number of the selected objects, and the cursor position. In addition, it contains two buttons at the rightmost, which can be used to control the display of the front and/or back sides and the display percentage.

You can use the mouse dragging to adjust the sizes of the resource management pane, the editing area, and the property panel. But when you re-open the ganging window, their sizes restore to a default setting. When you have expanded any tab of the resource management pane, you can hide the tab and the pane by clicking the tab once again. The property panel can be displayed or hidden by clicking the buttons▲/▼. The signature editing area can hold more than one opened signature or template, each one with a tab locating on the top, named with the signature or template name. You can click these tabs to easily switch between them.

2. Toolbar icons

- **the position of the icons in the toolbar**

The icons in the toolbar are classified into several groups, separated by the symbol⋮. Press down the left mouse button at the blank area between the icons within a group, then drag forward or backward and drop at any other⋮, you can move the group of icons to the place where you drop the mouse button.

- **Show/hide toolbar icons**

Choose from the main menu **Edit** > **Preference**, and then choose **Custom Toolbar** from the pop-up window.

The window lists all the toolbar icons that can be displayed and used and how they are grouped. Expand each group of icons. A tick✓ in front indicates to show, while a cross× in front indicates to hide. If needed, you can cross the icons that are less used or not used.

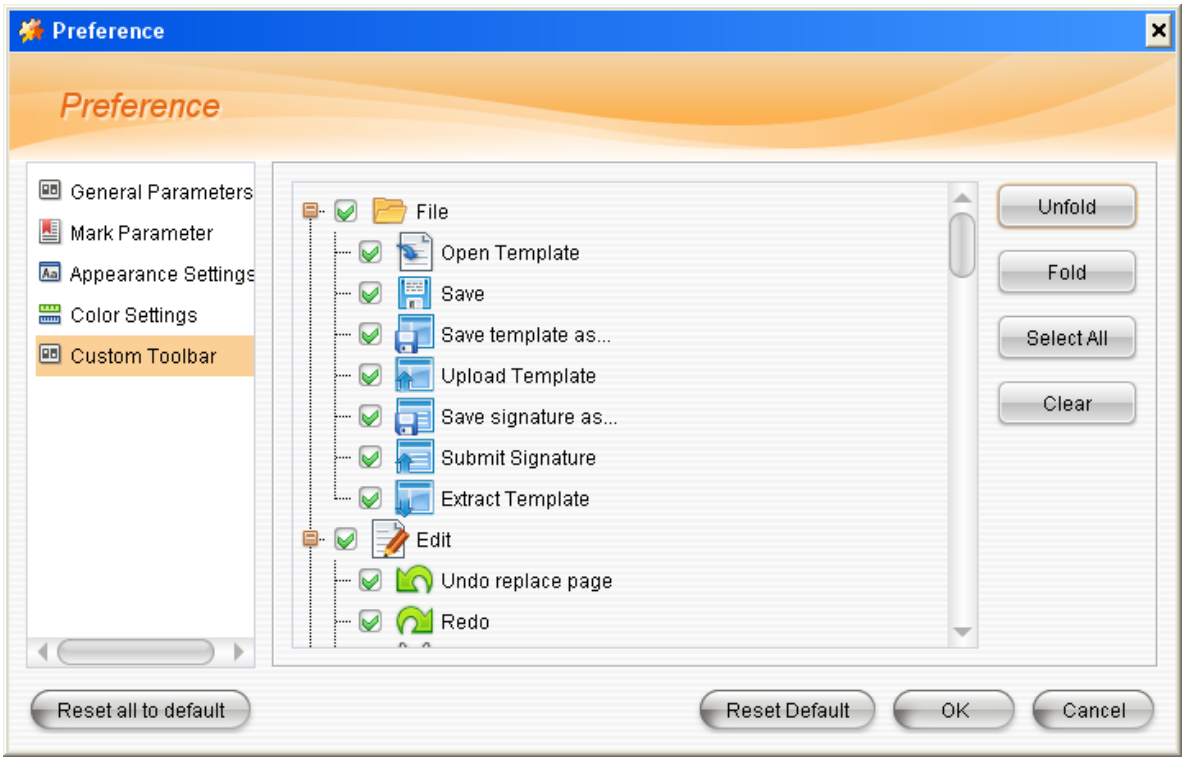


Figure 2-357

For your convenience, ElecRoc provides buttons such as **Unfold**, **Fold**, **Select All**, **Clear**, and **Reset Default**. By default, all the icons are shown in the toolbar.

- **The toolbar right-click menu**

You can right-click on the blank area in the toolbar to get a shortcut menu, and then use the options to control if to show or hide a whole group of icons. If you check **Lock Toolbars**, then you cannot move the groups of icons. The **Custom** option enables you to separately control if to show or hide each of the icons.

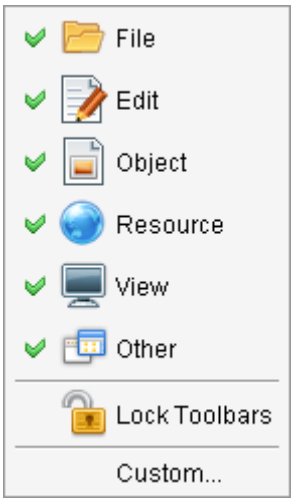


Figure 2-358

3. Display of the front and back sides

The controller 

at the bottom of the ganging window controls the display of the front and back sides on the editing area. If you choose  or , only one side (front or back) is displayed, and if you choose , both sides are displayed.

Transparency: This option is applied to the sheet that contain both the front and back sides. It refers to the transparency of the front side on the back side, or that of the back side on the front side.

4. Display proportion

The sheet display proportion can be adjusted in the following ways:

1) Use the **Zoom** tool . Choose this toolbar icon. The cursor turns to  after you choose.

- Press down the left mouse button and drag the mouse, to form a rectangle in dashed-line on the sheet. The content inside the rectangle will be zoomed in on the editing area in the possibly biggest proportion.
- Scroll up and down with the mouse wheel;

2) Use the toolbar icons , , ,  and . The icon  zooms in, the icon  zooms out, and each click on these two icons zooms in/out in a fixed scaling factor, which can be defined with the **Preference** parameter **Appearance Settings** > **Zoom Step**. The icon  zooms to display the whole sheet in fitting proportion, and the icon  zooms to display the currently-selected object in fitting proportion. The object may be the sheet, the layout, a page, or a mark. The icon  zooms to a specified display proportion. Click it, and you can choose from the optional proportions, such as 2:1, 1:1, 1:2, or you can choose **Custom** to specify other proportion.

ElecRoc also provides menu commands corresponding to the above icons, under the **View** menu.

3) Press down the Ctrl key and meanwhile scroll the mouse wheel to-and-fro to zoom in and out the view. The cursor turns to if you press down the Alt key. At this time, you can zoom in and out the view as you do with the **Zoom** tool.

4) Use the zoom controller at the lower-rightmost of the ganging window "Zoom: 61% ". Here you can not only know the current zoom proportion, but also can click the icons and to zoom out and in incrementally (5% each click), or adjust the sliding bar to zoom in and out.

5. Sheet Navigation

For your convenience to browse the sheet when the view has been zoomed in, i.e. only part of the sheet content is displayed in the editing area, ElecRoc provides you with the following 4 optional capacities.

- Use the mouse wheel to scroll the sheet up and down;
- Drag the horizontal or vertical scroll bar;
- Choose the toolbar icon, and then you can press down the left mouse button to drag the sheet freely;
- Make use of the Surface pane.

Choose from the main menu **View** > **Navigator** to display the Navigator pane.

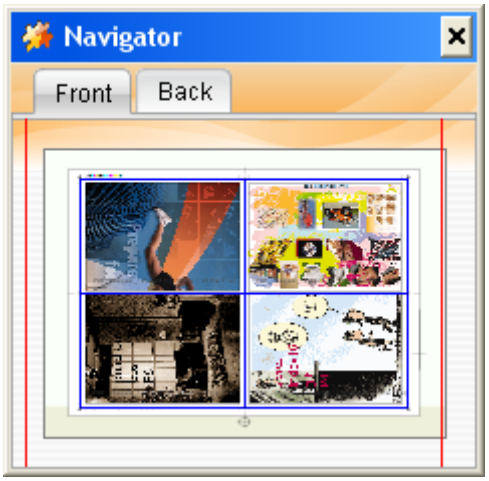


Figure 2-359

In this area, ElecRoc displays the thumbnail images of the front and back sides of the sheet. When the zoom proportion increases to a certain extent, you will see a red rectangle box on the thumbnail image (the bigger the proportion, the smaller the box would be). The content inside the box are just the zoomed-in content in the editing area. Therefore, if you move the red box by clicking anywhere outside it on the thumbnail image, or if you drag and drop the box directly, you can subsequently change the content currently displayed in the editing area. In this way, by clicking or dragging on the thumbnail image, you can easily zoom in and browse the sheet in the editing area.

6. Layer Structure

ElecRoc introduces the concept of the layer. Each object on the sheet is considered by default as a unique layer. From the Layer Structure pane, you can adjust the sequence of the layers, to correctly deal with some issues come from the case when the objects overlap each other.

7. Sheet Object

ElecRoc provides such commands under the **View** menu as **Show preview image, Show file name, Display Page, Show Marks, Show bleeding box**, **Show trim box**, and **Show layout box**, for you to control whether to show the sheet object or element including preview image, file name, page number, mark, bleed box, trim box, layout box, and etc. by default, all of them are shown on the ganging window.

8. Other Display

By using the commands **Simple View** and **Operator View** under the **View** menu, you can hide the property panel and the resource management pane from the program window, and by using the commands **Show Guides** and **Show Grid** under the **Tools** menu, you can control whether to show or hide the guide or grid on the window.

6.6.2 Define Papers

You can create or define the paper options that are available for selection in creating a sheet.

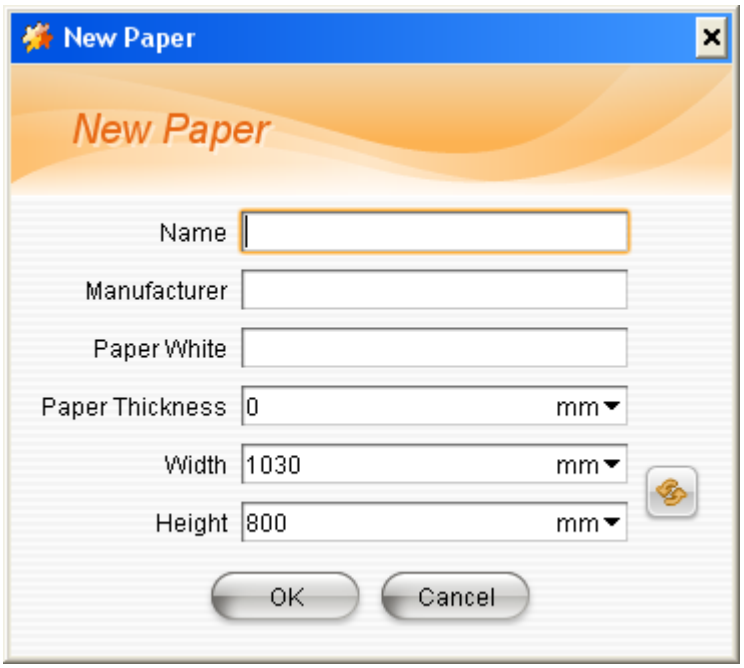


Figure 2-360

The operations related to defining a paper are all performed under the **Paper** tab. By using the commands from the right-click menu or the **Preference** menu, you can finish such common operations as creating, editing, copying, and deleting.

As shown in the above figure, each paper has six properties, among which the **Name**, **Height** and **Width** are compulsory. The button enables you to exchange the width and height. The **Manufacturer**, **Paper White**, and **Paper Thickness** are optional properties. If needed, you can input related descriptions.

Now that you have defined the papers, you can quickly define the sheet size and save the time to set the paper properties, by choosing the pre-defined paper options from the **Paper** dropdown list, at the time when you open the **New Signature** window to create a signature, or expand the property panel to edit the sheet.

6.6.3 Define Plates

The purpose, method of operation, and the application of the plates, are basically similar to the papers mentioned above. The difference lies in that you need to define more properties as to the plates.

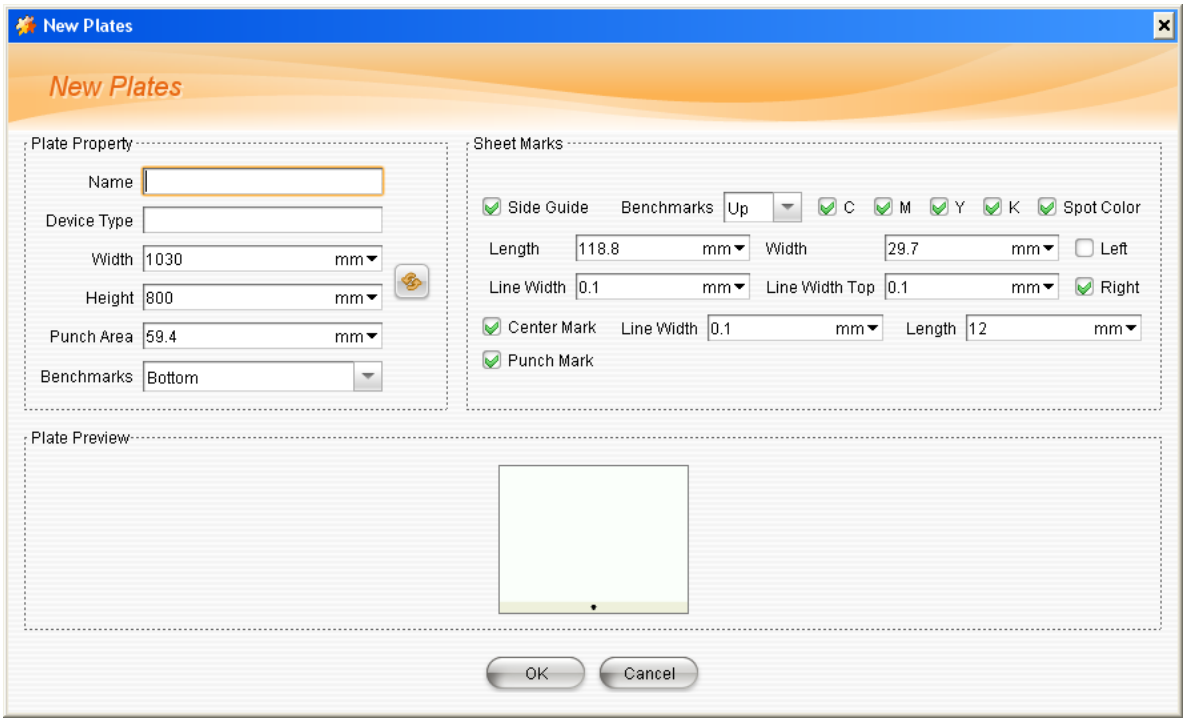


Figure 2-361

- **Punch area**

If you need to punch in the later-on plate making, you can reserve an area on the sheet special for the punching. **Punch Area** controls the width of the punch area. Its position is determined by the **Benchmarks** parameter, it may be at the left, right, top or bottom side of the plate. If you don't need this area, you can set the value to 0.

- **Punch marks**

ElecRoc can add a punch mark ⊕ at the center of the punch area.

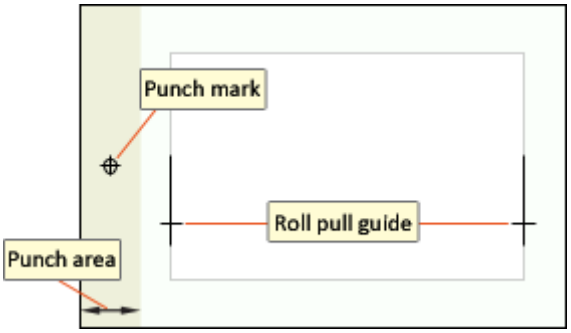


Figure 2-362

- **Side guide**

ElecRoc can add the marks such as —+ onto the sheet, for the side guide on the printing press to position the paper, in case the press model installs the side guide.

Checking it, you can further define the length, width, line width, position of the mark, the sheet side(s) on which it appear, and the separations on which it will be output. The **Left** and **Right** boxes control which side(s) of the sheet it appears on. The separation options include **C**, **M**, **Y**, **K** and **Spot Color**. E.g. if you do not want the mark to appear on the spot color separation, you can let the **Spot Color** box unchecked. The **Benchmarks** box provides four options, representing the mark position, shown as follows.

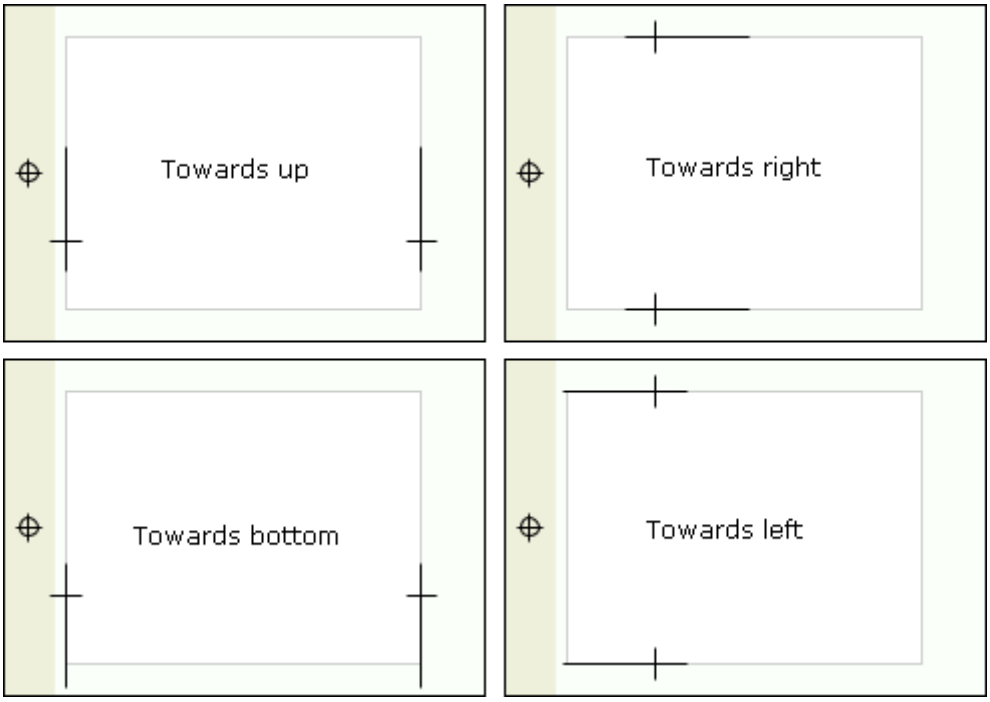


Figure 2-363

- **Center marks**

A line mark appears at the center of the four sides on the paper, if checked.

- **Other parameter**

Device Type: Optional property. You can input related description here.

6.6.4 Define Marks

Marks here refer to the user-defined marks. Steps for adding custom marks into ElecRoc are as follows:

1. Use third-party software to make the mark, and save it as a file that can be supported by ElecRoc, e.g. PDF, PS, TIFF, PRN, and etc.

2. Enter in ElecRoc's job window and submit the mark file to PDF Generator. After the process is completed, choose the generated PDF page, right-click and choose **Add as Mark**.

Note: *After PDF Generator's process, the mark file can be further processed by nodes like PDF Tools and Page Clipper. Under such node or when the toolbar icon* ***Pages*** *is selected, you can still use the right-click menu item* ***Add as Mark*** *to perform the operation.*

3. Input the name of the custom mark, and then click **OK**.

4. Return to the composer window. Expand the **Custom Mark** list under the **Mark** tab,

right-click and choose **Refresh**, and then you will see the newly-added mark.

6.6.5 Auxiliary Tools

We mentioned previously how to position pages by help of the auxiliary tools in section 6.3.3. There are two auxiliary tools for the ganging, grid and guide.

1. Grid

- **Show the grid**

When you have enabled the menu item **Tools** > **Show Grid**, you can see regularly spaced horizontal and vertical dashed lines on the sheet, forming a multitude of equal squares. Meanwhile if you have enabled another menu item **Tools** > **Capture Grid**, then when you move a sheet object close to any grid line, you can see two crossed red lines appearing and the object being captured to the place where the grid line is located. If you don't want to use the grid as a reference for positioning, please disable the two menu items above.

- **Define the grid spacing**

Choose from the main menu **Tools** > **Grid Spacing**. The grid is composed of many identical squares. The spacing actually refers to the side length of such square. The value by default is 50 mm, with a range from 10~1000 mm.

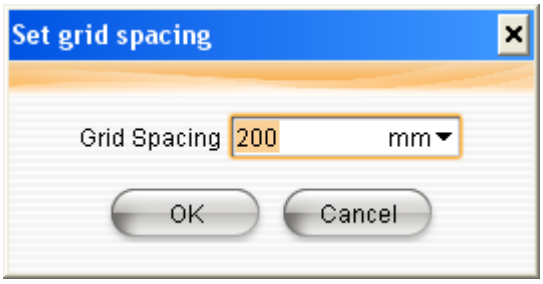


Figure 2-364

2. Guide

- **Show the guide**

Choose from the main menu **Tools** > **Show Guides**. The display color of the guide lines can be defined from the main menu **Edit** > **Preference** > **Color Settings**.

- **Capture to the guide**

Choose from the main menu **Tools** > **Capture Guides**. When you drag a sheet object close to a guide line, ElecRoc will automatically capture the object to the place where the guide line is located.

- **Track the guide**

Choose from the main menu **Tools** > **Track Guides**. In this case, if you move the guide line, you will move the objects captured to the guide line at the same time.

- **Add a guide**

1. Do any of the following:

   - Double-click anywhere on the horizontal or vertical ruler;
   - Place the cursor on the ruler, and then press down the left mouse button and drag towards the sheet editing area;

- Click the toolbar icon ;
- Choose from the main menu **Tools** > **Add Guides**.

2. The **Add Guides** dialog box appears. Choose the direction, horizontal or vertical, and input the exact coordinate, and then click **OK**.

- **Move a guide**

Place the cursor on the guide line, the cursor then turning to an arrow-like shape, such as , and then press down the left mouse button and drag the mouse. In this way you can move the guide line anywhere easily. If you press the **Ctrl** key meanwhile, you can move the guide line to one of the commonly-used positions on the sheet. You can also double-click the guide line to re-locate it.

- **Lock the guides**

Choose from the main menu **Tools** > **Lock Guides**. The locked guide line can no longer be moved randomly. To unlock, please cancel the selection of this menu item.

- **Delete/Clear guides**

You can delete a guide line by simply dragging it outside of the sheet editing area. Or if needed, you can also click the toolbar icon to clear all the guide lines.

6.6.6 Resource Explorer

ElecRoc enables you to export such resources as papers, plates, templates, and smart marks out of ElecRoc system by way of the resource explorer.

Choose from the main menu **Resource** > **Explorer** to open the operating interface. The left of the window lists the four resource categories, paper, plate, template, and smart mark, and at the right it shows all the resources of a selected category.

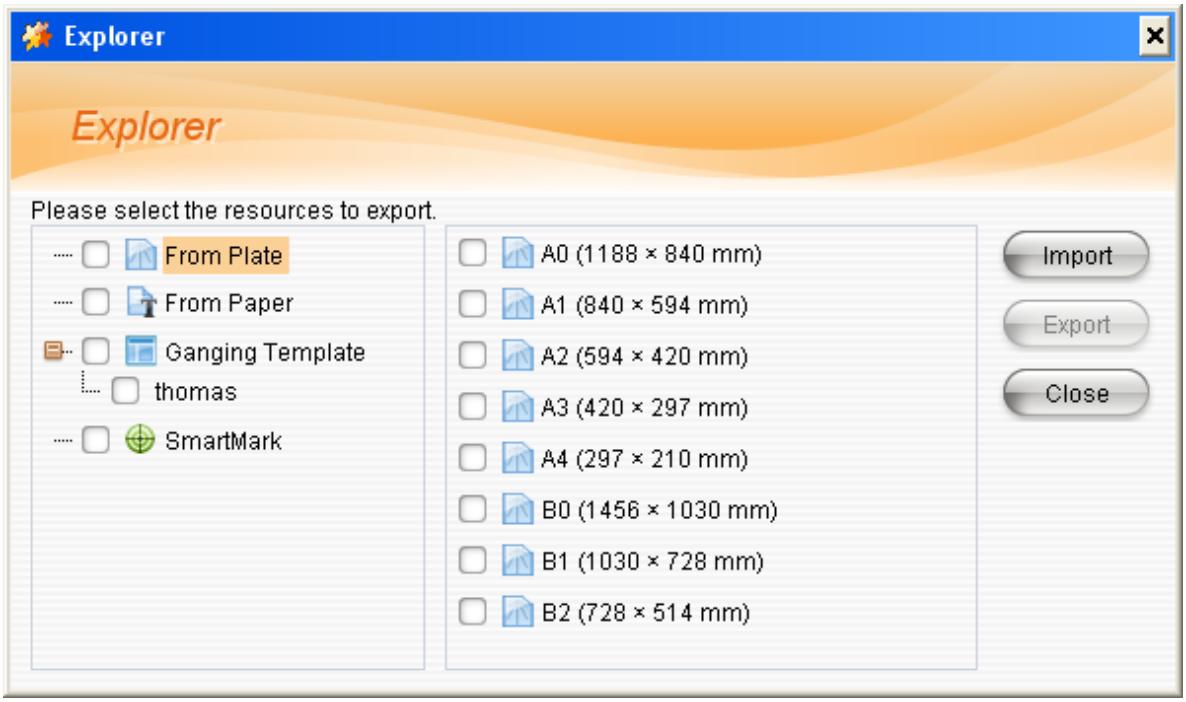


Figure 2-365

Check the resources you want to export, and then click **Export**. And in the follow-up

dialog box, specify the name and destination for your exported resources.

You can also click the **Import** button in the explorer to import paper, plate, template and smart mark resources into ElecRoc system.

6.6.7 Preference

Here refers to the ganging-related parameters that can be defined according to your preference. Choose from the main menu **Edit** > **Preference** to enter in the setup interface, which contains five group of parameters.

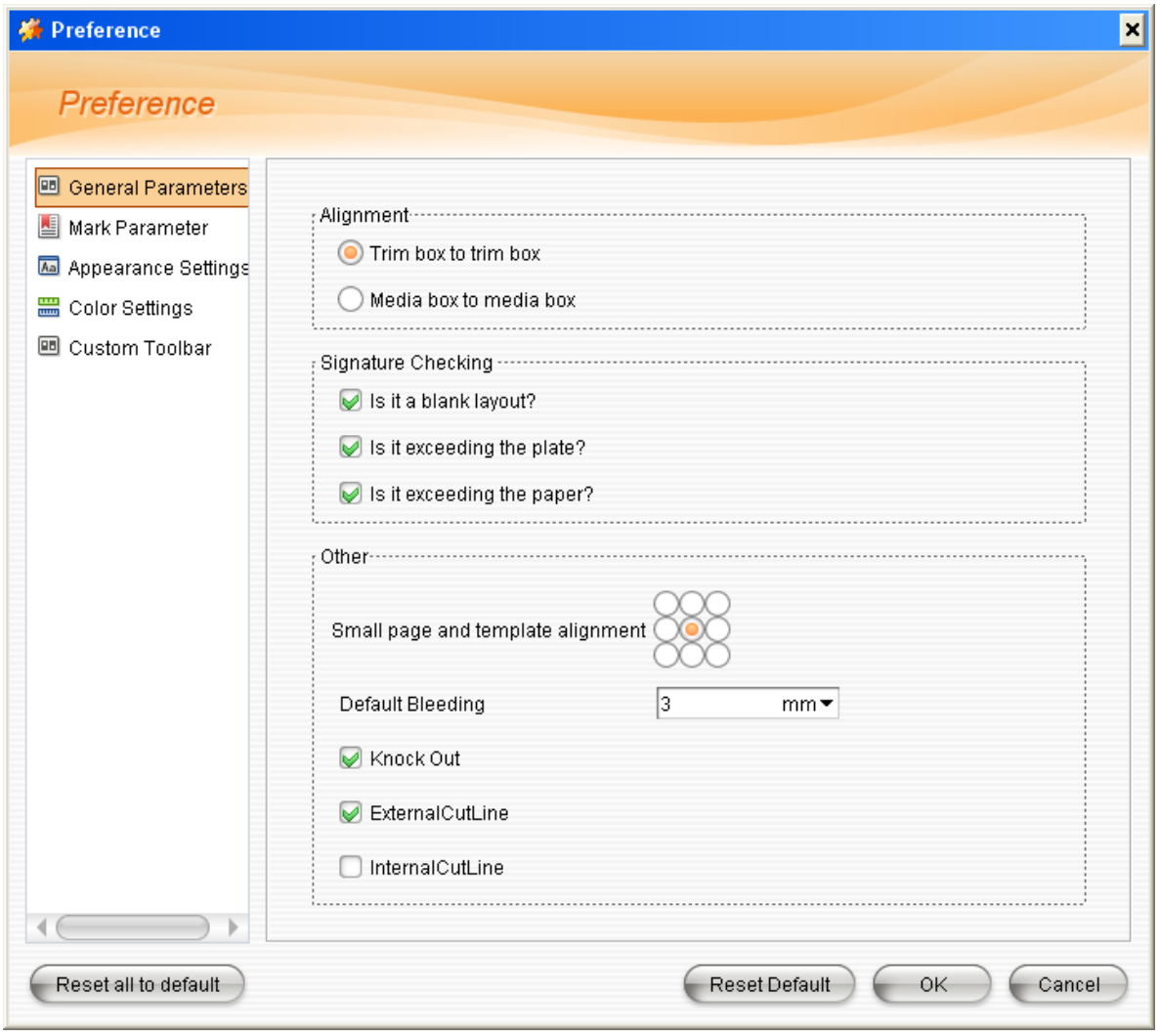


Figure 2-366

1. General Parameters

- **Alignment**

It refers to the benchmark for the page alignment. Pages can be aligned with each other based on the trim box or the media box.

- **Signature Checking**

ElecRoc enables you to check up the signature at the time you submit it to ElecRoc workflow, and if finding out error, it labels the error sheet in red, and shows detailed error

information once you choose the error sheet.

Settings here control the items to be checked, including is it a blank layout, is it exceeding the plate, and is it exceeding the paper.

- **Other**

Small page and template alignment: It controls the default position of the page content on the template page, i.e. the default positioning setting under the **Content** tab of the property panel, when you choose a page or template page.

Default Bleeding: The default bleeding setting of the page on the sheet.

Knock Out: Controls if the **Knock out** option is enabled by default for each newly-added page. If checked, when you add a page to the sheet, or when you add a layout to the template, the property parameter **Template** > **Knock out** for the page in the sheet or layout will be checked by default.

External/Internal CutLine: Controls if by default the **External/Internal CutLine** options are enabled for each newly-added page, not available to layout page. If checked, when you add a page to the sheet, the property parameter **Template** > **External /Internal CutLine** for the page will be checked by default. The default setup of the **External/Internal CutLine** options for the layout page is controlled by the parameter **Preference** > **Mark Parameter** > **Cut Line**.

2. Mark Parameter

Here you can define the default marks that would be added automatically when you create a layout. These marks include:

Category	sample	Location
Cut Line		the four corners of the layout
Fold mark	Single line , three lines 	middle points on the four sides of the layout
Cross mark		Center of the layout
Registration mark	External target mark  , solid target mark 	middle points on the four sides of the layout
CMYK mark		the top of the layout
Text mark	Surface name:Surface_10_1 Front	the bottom of the layout

Table -13

Under the **Mark Parameter** tab, you can control if the above marks are automatically added when you create a new layout. A tick✓ means to add the corresponding mark. Moreover, you can define the default line width, height, and the specific type.

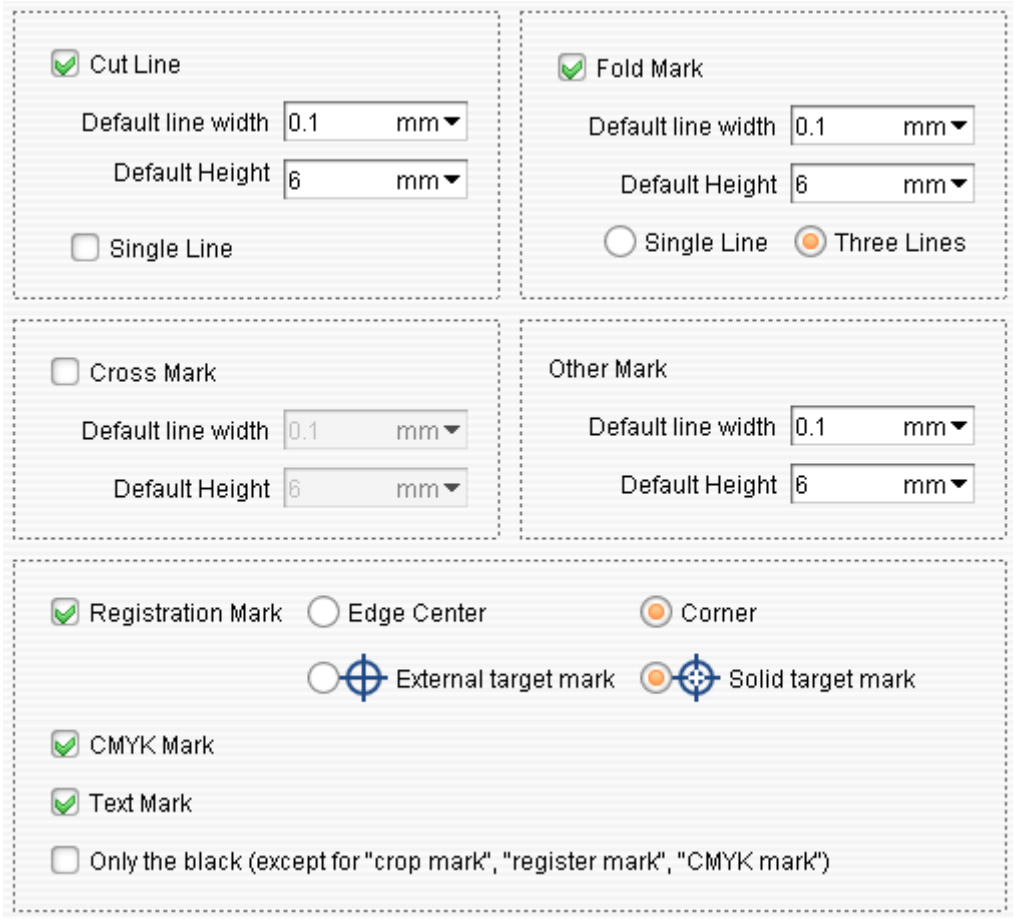


Figure 2-367

Other Mark: They are the marks you manually add to the sheet. Here you can define the default line width and height for such mark.

Only the black: If checked, the default marks above will be displayed and output only on the black separation.

3. Appearance Settings

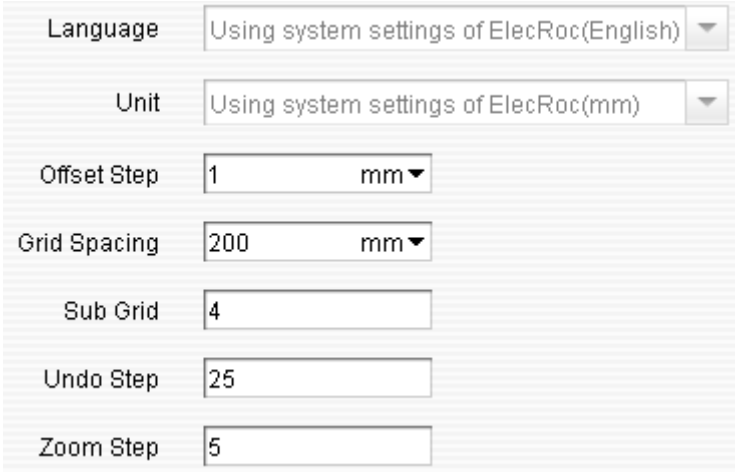


Figure 2-368

Offset Step: The moving distance of each nudge when you use the arrow keys (←、↑、↓、→) to nudge the selected object on the sheet.

Grid Spacing: The spacing between any two grid lines.

Sub Grid: After you have redefined the grid by using the main menu item **Tools** > **Grid Spacing**, you can use this parameter to further form a sub grid in each square of the old grid. The parameter here controls the number of the sub squares in horizontal (or vertical) direction.

Undo Step: The times to perform the Undo operations.

Zoom Step: The scaling factor for each click on the toolbar icons, , or on the zoom controls at the lower-right corner of the window. The default value is 5%.

4. Color Settings

You can define the display color of many objects, including the page's bleeding box and trim box, group object's border, guides, grid, workspace background, plate, punch area, and paper.

In the **Preference** > **Color Settings** window, if you want to change the display color for some object, click the color block corresponding to the object to open a color setup dialog box. In this dialog box, you can choose a new color from samples or in the HSB or RGB mode. The preview area at the bottom of the dialog box displays the display effects.

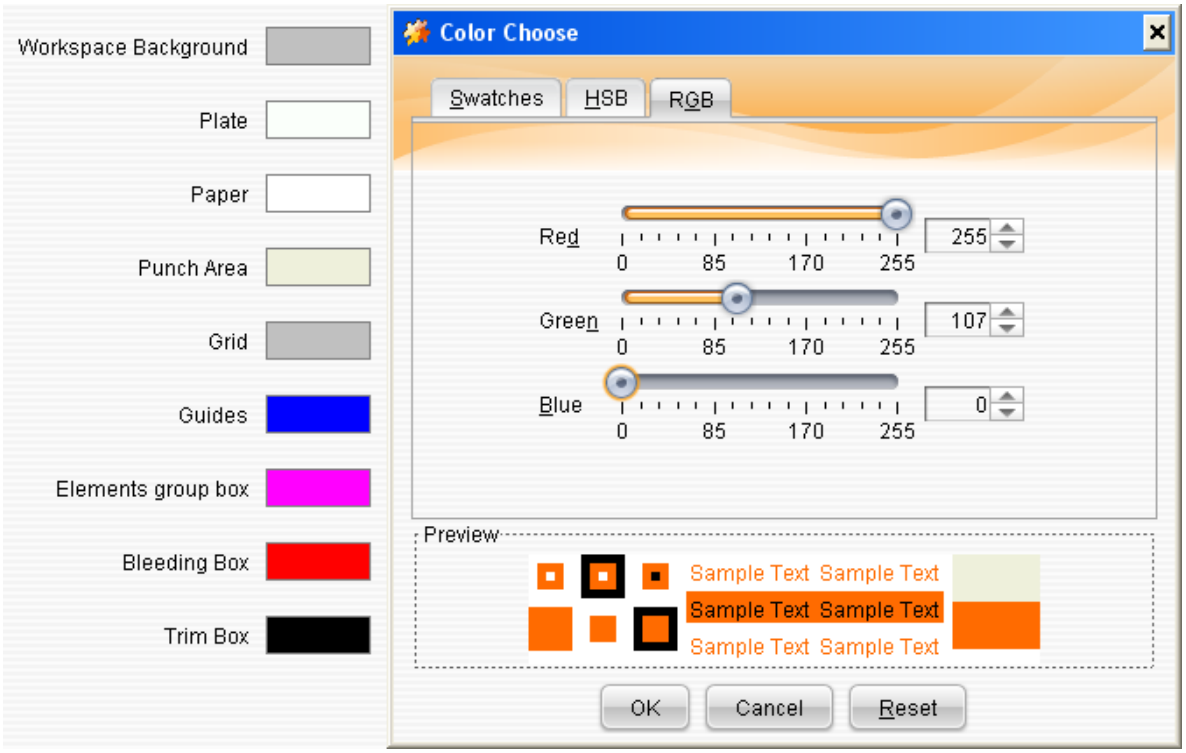


Figure 2-369

5. Custom Toolbar

Settings here control what toolbar icons are shown in the composer window. For details, refer to section 6.6.1.

Part 3 Appendixes

Appendix A: Working Principle of ElecRoc

In Founder ElecRoc, the objects that need to be processed include PS files, single page PDFs and signatures. The engine for processing these data objects is called Processor. Actually, the content we submitted to processor is a control file, which describes the data features of the objects. We call this control file Job Ticket. Therefore, processor is also called Job Ticket Processor (JTP).

Each job ticket processor will take certain processing on some or all the pages of a job. According to processing objects and functions, job ticket processors are divided into PDF Generator, Imposer, Printer, Proof and Output processors, and etc.

Besides job ticket processors, Founder ElecRoc has a control center. By using database with large capacity and high function, the control center provides a job ticket interpreting system, serves as the storage center and works with the controller efficiently. The workflow is handed down by job tickets. First job ticket interpreter obtains the workflow of a certain job by explaining job ticket files of this job, and then arranges the job to be processed to go through each job ticket processor.

The job ticket processors in Founder ElecRoc run in parallel with each other. Thus, the workflow can process multiple jobs or multiple files in a job at the same time. In this way, system is able to optimize the workload efficiently.

In Founder ElecRoc, it’s not necessary to install all processors in one server. Theoretically, the processors can run on any computer in the local area network. That means Founder ElecRoc is a distributed workflow management system.

Normally there are two methods to improve the performance of the system. One is to use a PC server or a workstation with advanced configuration; the other is to set up a distributed workflow system by adding more inexpensive computers.

The first way involves higher investment and puts greater demands on users. Computer with special parts running with advanced operating system is difficult to maintain and the users usually have to be specially trained.

The second way employs the distributed system, which enables cheaper computers to take important task. If a job has 100 pages, the processing time of one page on a common PC is one minute; while on a high-performance server it is 20 seconds. If you use three computers to generate dot matrix at the same time, the total time is about 33 minutes, closing to that on a high-performance server. However, the total price of these three computers is much lower. The advantage of the distributed system is distributing many time-taking operations to different computer and fulfilling the complicated work with cheaper hardware devices.

To make full use of the distributed system, Founder ElecRoc allows its inner processing module - RIP (contained in PDF Generator and each output processor) - to run many objects at the same time.

Appendix B: Open Formats of ElecRoc

Founder ElecRoc employed three open document formats: JDF, PDF and TIFF.

JDF is the acronym of Job Definition Format, which is published by CIP4 organization on April 10, 2001. JDF is a job description file based on XML. Different from other electronic format, JDF not only describes the parameters to be processed of a job, but also describes the workflow of a job. In another word, JDF is able to provide a whole set of controlling system for printing workflow without any additional support. Besides that, JDF has the ability of monitoring and tracking a job. Taking the advantage of JDF, Founder ElecRoc surpasses its competitors for its excellent workflow management capability.

JDF is a technical standard co-created by scores of the largest device and solution providers in printing industry. It is independent from any particular manufacturer and more and more manufacturers begin to take JDF as the standard for communicating with each other. The emergence of JDF connects the separate processes in previous printing industry seamlessly together. Founder ElecRoc is the first output workflow product that employs JDF in the world.

PDF has been widely accepted in the industry. Its smart and powerful description ability, especially the high compatibility and stability are recognized universally. However, when it comes to the application of PDF, the answers will be uncertain. Some people even regard PDF only as a file format in electronic publishing. The development of Founder ElecRoc once again proves that PDF is a very suitable page description format in both lower-level printing and the highest-level commercial printing industry. Besides the high quality, PDF also brings a brand new prepress working fashion. As PDF can be previewed immediately, a user no longer needs to check his work after proofing. He can convert his work into PDF, and check on the PDF. This greatly improves the efficiency of printing and publishing.

The final file submitted by Founder ElecRoc to output device is in TIFF format. The TIFF file is a dot matrix after rasterizing and can take exposure by any device drive. Founder ElecRoc recommends its option Founder EagleBlaster that drives various types of imagesetters and CTP. There is an interface between ElecRoc and EagleBlaster, transmitting information about the status of their devices and operations.

Appendix C: Acrobat Plug-Ins

ElecRoc provides three plug-ins designed to be used in Adobe Acrobat. With them, you can gain the preflight positioning, zone trap, and free screen capabilities.

C.1 Install Acrobat Plug-ins

The methods to install the plug-ins in PC and Mac are different.

C.1.1 For ElecRoc Client in Mac

1. Open the ElecRoc install DVD and enter into the install directory \Tools\Acrobat plug_ins\MAC\, find out and copy the folder *PFPosition.acroplugin* (for preflight plug-in), *ElecrocTrapPlugIn.acroplugin* (for trap plug-in), and/or *XScreenPI.acroplugin* (for screen plug-in), see① in the following figure.

2. Now open Adobe Acrobat's Plug-ins folder (for instance, right-click Adobe Acrobat Pro on the desktop and choose **Show Package Contents**, see②, and then in the follow-up window choose **Contents** > **Plug-ins**, see③), paste the folder(s) you have copied above.

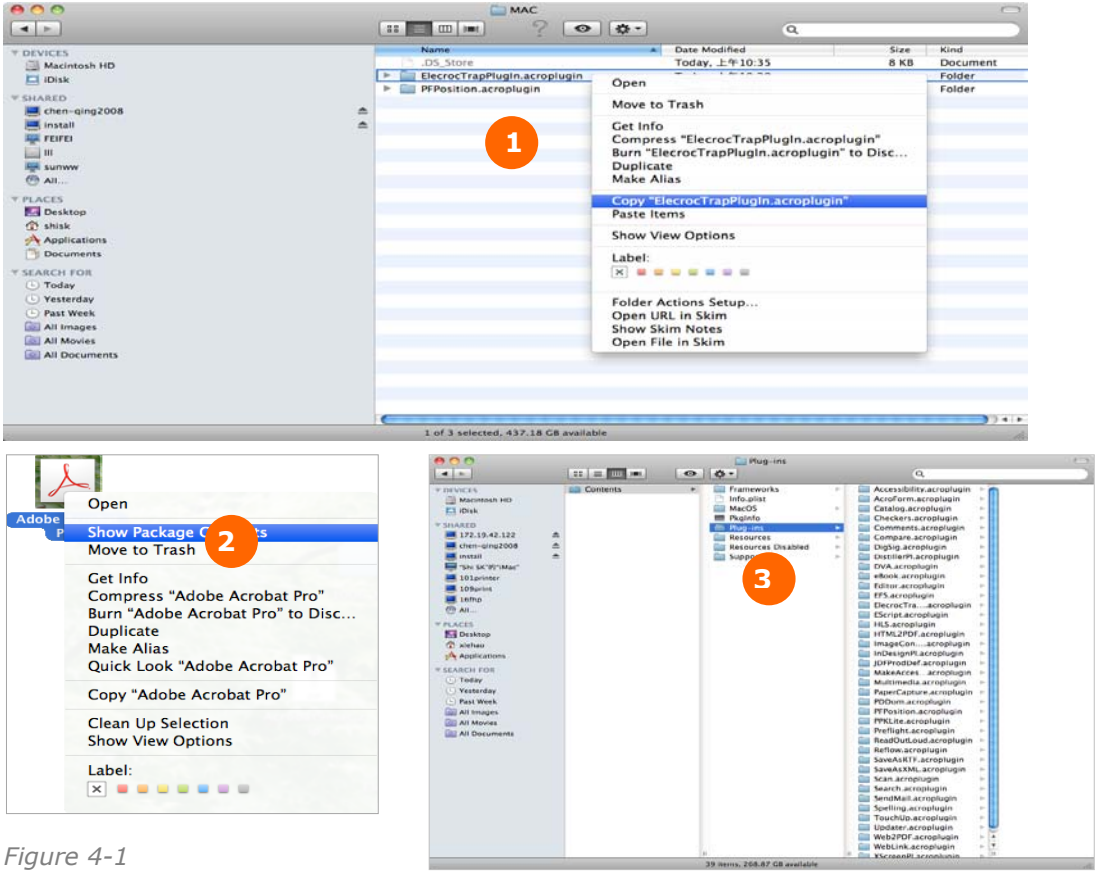


Figure 4-1

Note: *Please restart your Acrobat in case that you are running it during the installation.*

For the screen plug-in, after the installation, please open the file *config.ini* under the Acrobat directory *Plug-ins\XScreenPI.acroplugin\Elecroc*, and input the ElecRoc server name, the client login user name and password (if any) you login ElecRoc, behind "Server=", "UserName=" and "Password=".



Figure 4-2

C.1.2 For ElecRoc Client in PC

Run the install program AcrobatPluginSetup.exe under the install directory \Tools\Acrobat plug_ins\PC. During the installation, pay attention to:

1. At the time when you choose the destination location, make sure that the path at **Destination Folder** is the correct one for your Acrobat.

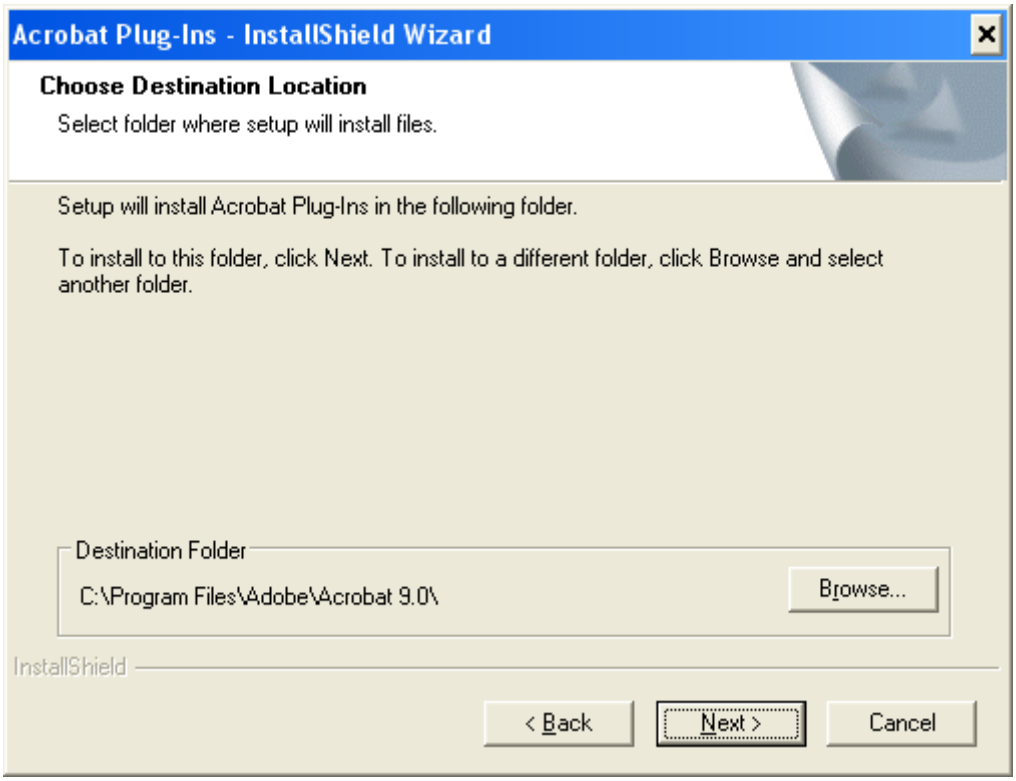


Figure 4-3

2. At the time when you choose the setup type, note that **Complete** means to install all the three plug-ins, while **Custom** indicates that you can customize the plug-ins to be installed.

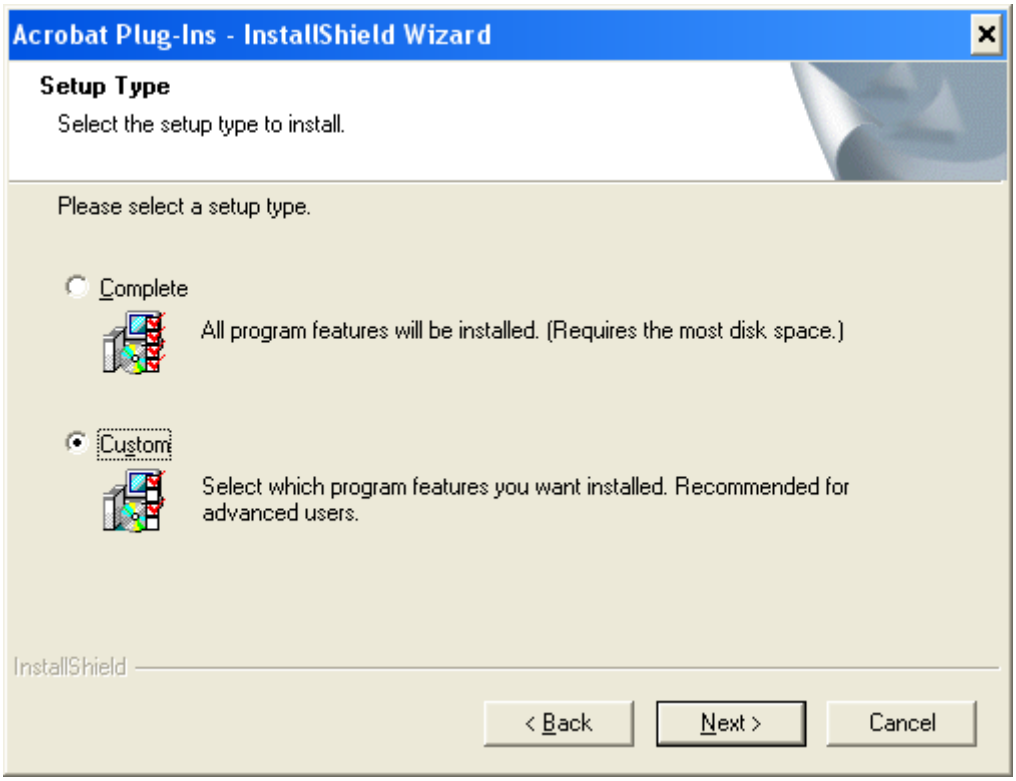


Figure 4-4

3. In case that you choose **Custom**, then you can choose what plug-in to be installed in the follow-up dialog box. The one(s) being ticked will be installed.

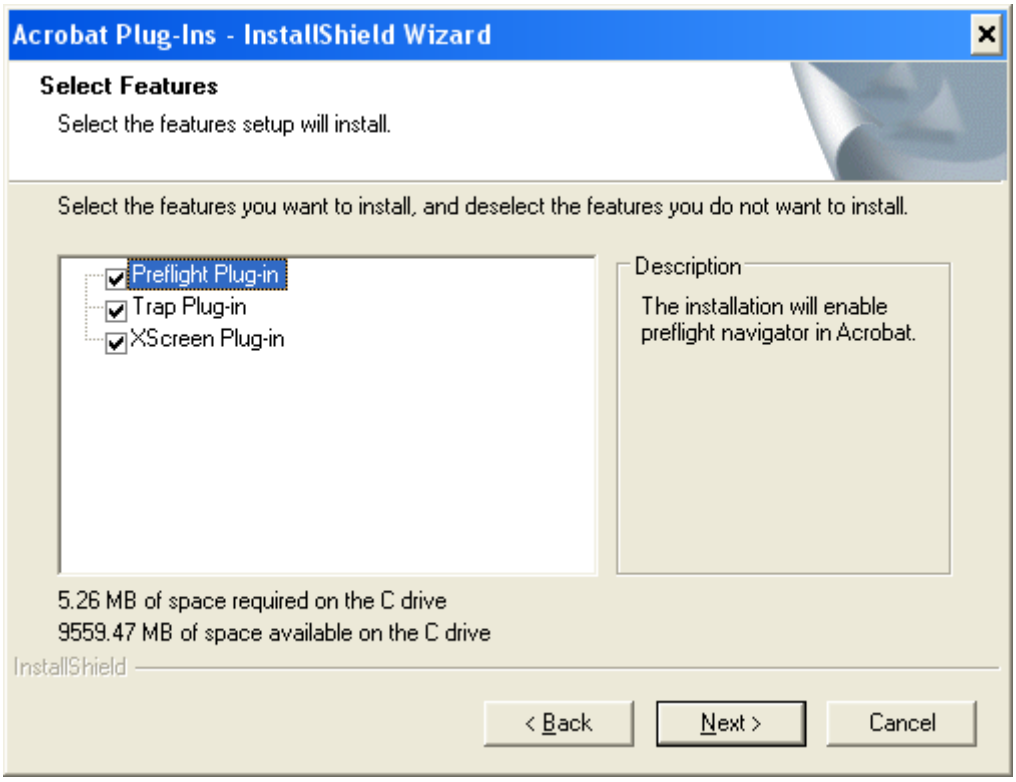


Figure 4-5

The other steps during the installation are very simple, please follow the instructions and click **Next** step by step to perform.

C.2 Preflight Plug-in

This plug-in requires that the version number of your Acrobat cannot be lower than 9. It provides the preflight positioning capability.

Note: *If your ElecRoc Client is running on Mac computer, before you use the preflight plug-in, please choose from the Client main menu* ***Tools*** *>* ***Preferences*** *>* ***Net Config****, to provide a user with whom you can access the ElecRoc server machine from the current MAC computer (refer to section 1.3.2 System Preferences in Part 2 for details). ElecRoc pops up a hint in case that you haven't made this configuration.*

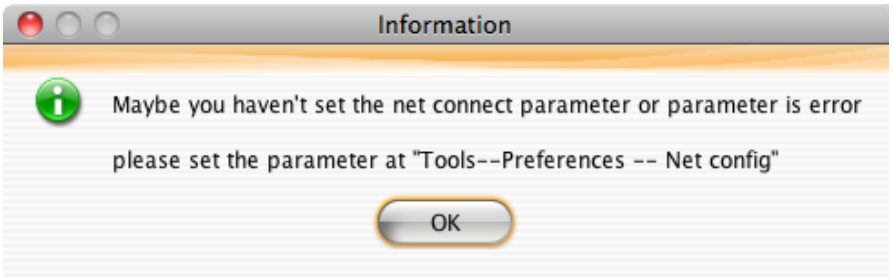


Figure 4-6

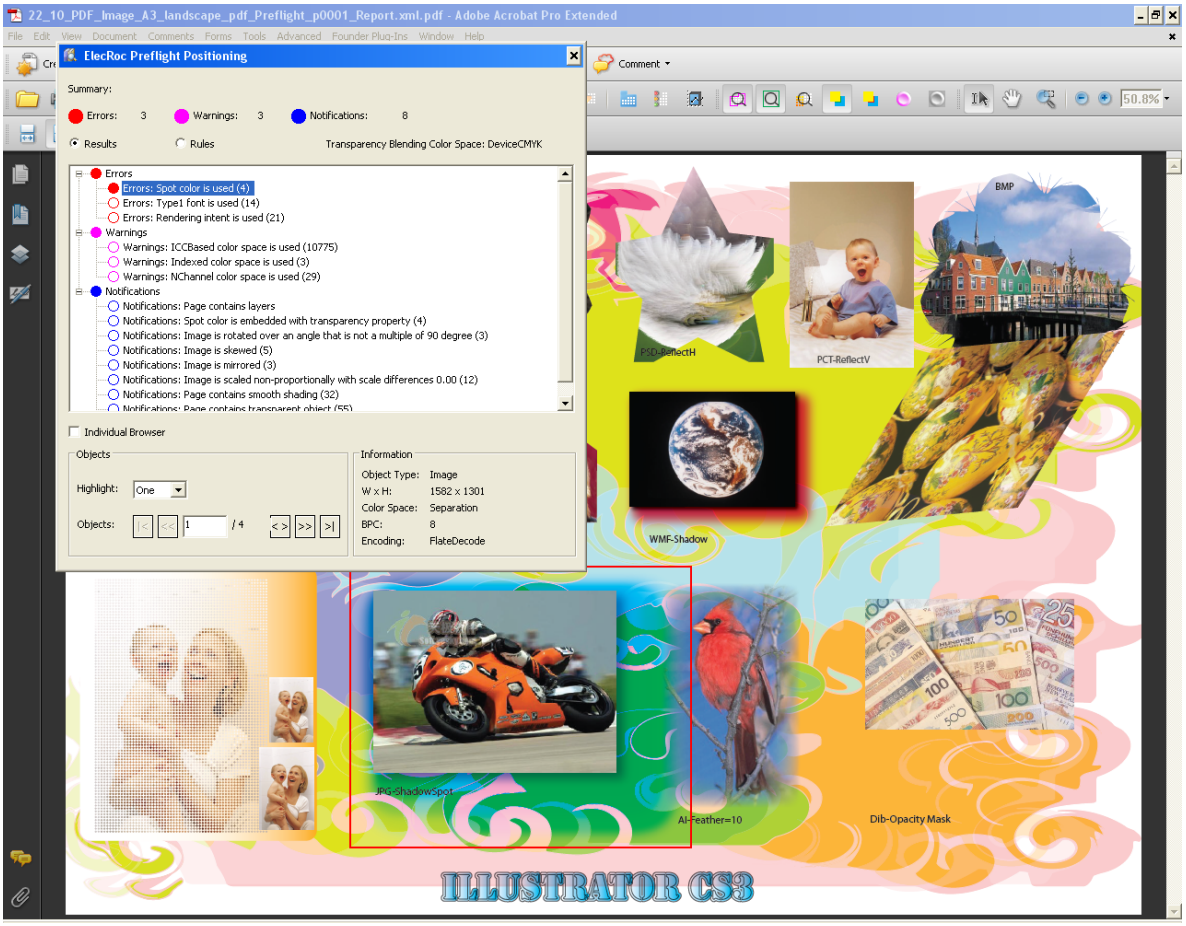


Figure 4-7

Under the Preflight node in the job workflow, after the preflight check, right-click a checked page (any page in case of multiple-page mode) and choose **Preflight Navigator**, to open the file in Acrobat. And then you can use the plug-in to locate the objects with Error, Warning or Notification in the file.

The user interface, a floating panel, is opened by default. You can also open it manually by choosing from the main menu **Founder Plug-Ins** > **ElecRoc Preflight** > **Positioning**. Another item under the same menu is **Settings**, designed for you to configure the language, the type and width of the lines constituting the rectangle that label the object. You can choose **Tools** > **Customize Toolbars** > **Advanced Editing Toolbar** to add these two items into the toolbar, which are shown as /.

C.2.1 Positioning

The **Positioning** panel is shown as follows. If you check the **Individual Browser** option, you can open one more panel named **Browser**.

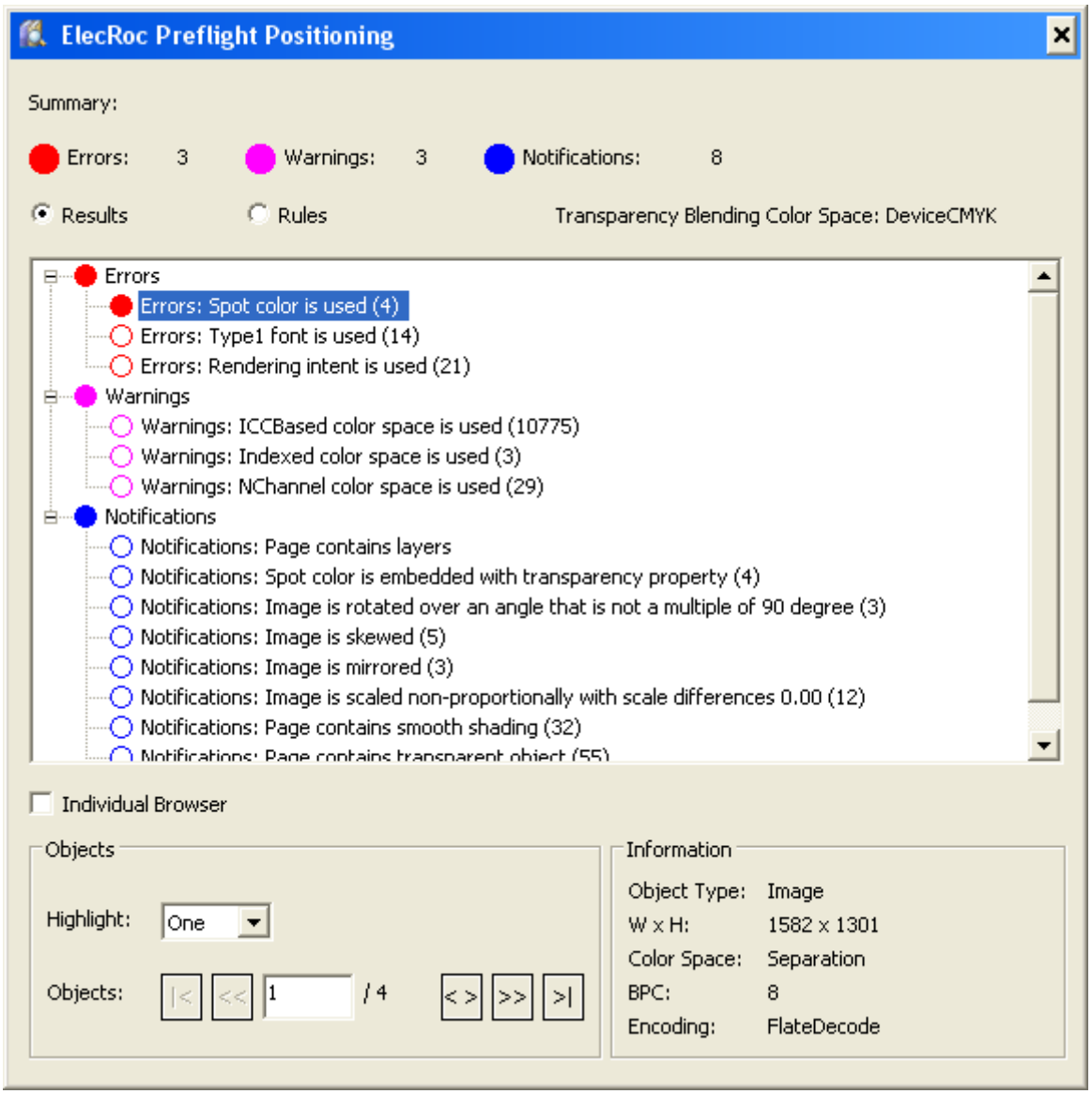


Figure 4-8

1. Show preflight results

The top of the positioning panel shows a summary of the preflight result. The result is classified into three types, Error, Warning, and Notification. The numbers behind them indicate the quantity of the corresponding objects in the file.

Check **Results**. The errors, warnings and notifications are then displayed in the below. They are further sorted by check entries, with a number behind showing the quantity of the objects returned for each check.

Double-click a check entry (the blank circle in front turns to solid). One or all the objects returned for that entry will then be highlighted on the page, in a rectangle of solid or dashed line. The colors of the line for error, warning and notification are separately red, pink and blue.

In the **Highlight** dropdown list, if you choose **One**, you highlight the objects for a same check entry one by one, and in this case, you can click the buttons |<, <<, <>, >>, >| in the below to switch among the objects. The button <> is used to locate a specified object that can be input in the edit box. If you choose **Page**, you highlight all the objects on one page each time, and at this moment, you can click the buttons |<, <<, <>, >>, >| in the below to switch among the pages in case that the check file is multiple-paged.

The **Information** area shows the detailed information about the highlighted object. It may include the object type, width and height, color space, bit per component (BPC), encoding, color value, and etc. specific to the object type.

The individual **Browser** panel contains an additional **Rules** setting area. Using the buttons |<, <<, <>, >>, >| in this area, you can switch among the entries.

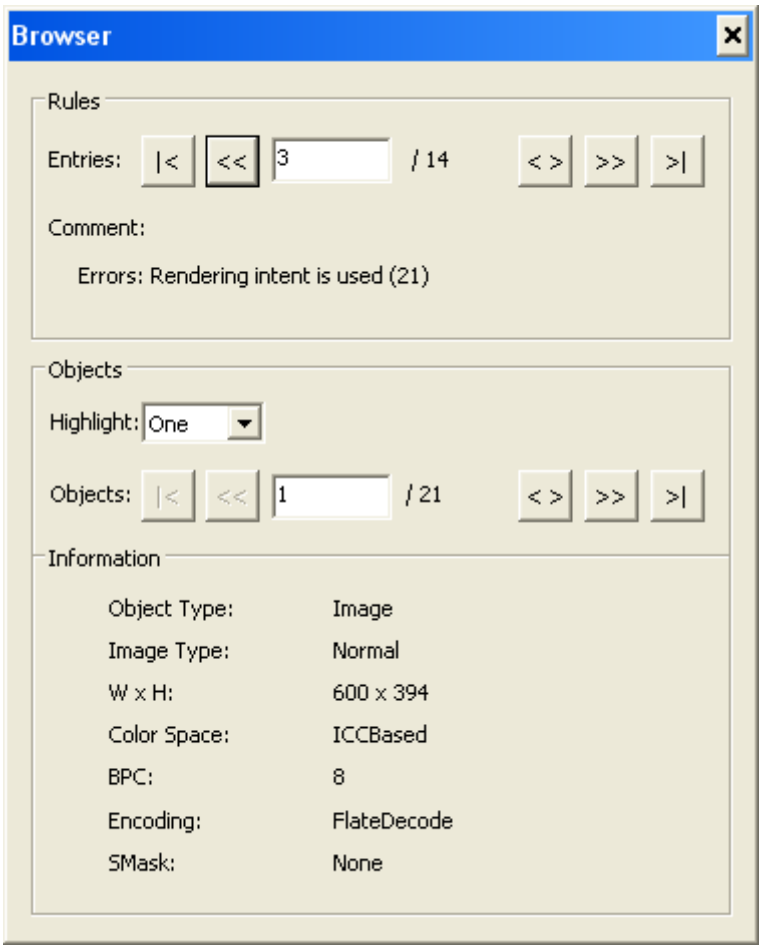


Figure 4-9

2. Show preflight rules

Check **Rules**. You can view the checklist defined for the current Preflight node.

C.2.2 Setting

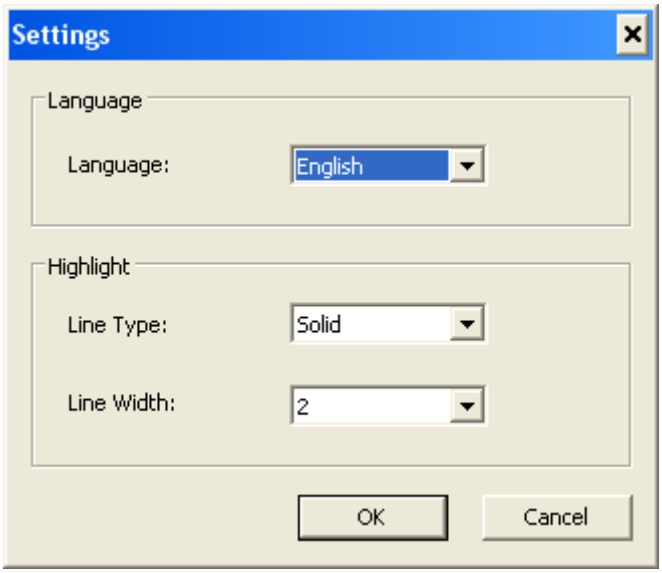


Figure 4-10

Language: English or Simplified Chinese.

Line Type: The lines constituting the rectangle that highlights the object may be one of the two types, dash or solid.

Line Width: Four levels of line width, 4 represents the thickest while 1 the thinnest.

The setting takes effect after you reboot the Acrobat.

C.3 Trap Plug-in

This plug-in is available for ElecRoc Client running on both Mac and PC platforms. It requires Adobe Acrobat 9 or higher version being installed on your client computer.

But note that, for use on Mac Client, please choose from the Client main menu **Tools** > **Preferences** > **Net Config** before you use it, so as to provide a user with whom you can access the ElecRoc server machine from the current MAC computer (refer to section 1.3.2 System Preferences in Part 2 for details).

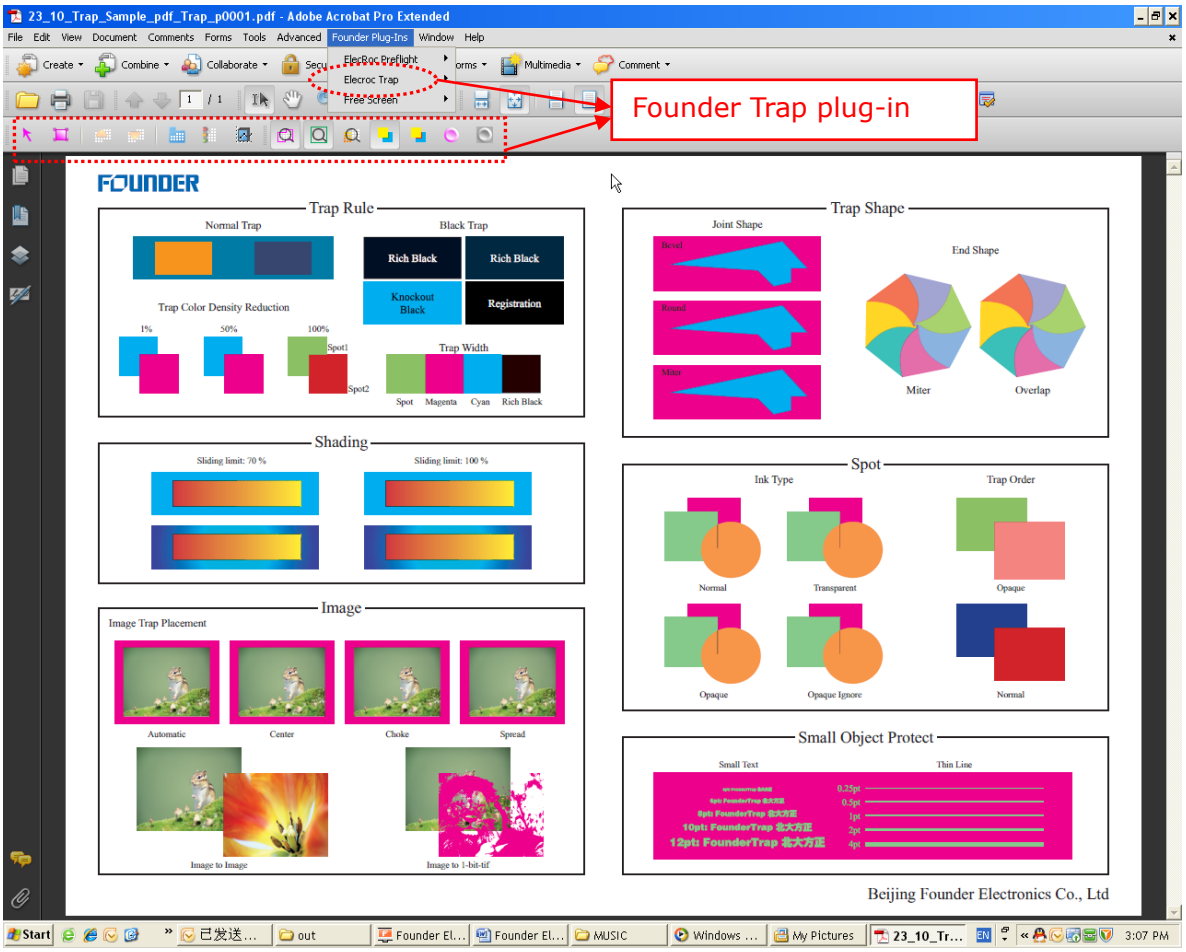


Figure 4-11

C.3.1 View Traps

You can use the plug-in to view the trap result produced by the Trap node. Open the output file by Trap (right-click the file in the output file queue and choose **Download** >

Open), and you can then use the two toolbar icons as follows to display the trap result, or expand the **Layers** panel and check **Founder Trapping Layer**.



Figure 4-12

View Traps: To display the trap result on the page, as the dark green areas shown in the above (middle).

View Trap Highlights: To highlight the trap result on the page, as the red areas shown in the above (right). The highlight color can be defined in the **Trap Preferences** window (**Founder Plug-Ins** > **ElecRoc Trap** > **Trap Preferences**).

C.3.2 Trap Zones

The *trap zone* here differs from the *trap area* in Chapter 6 of Part 2. The *trap area* refers to the specific location where the trapping happens, i.e. the overlapping area between two abutting trap objects. Here the *trap zone* refers to any section of the page area. You can define more than one zone on one page, and each zone may contain one or more color objects. The size of the zone can be customized freely, and the zones can overlap with each other.

The zone is designed for you to define a set of trap settings that are applied to all the page objects within the zone. In this way, you can specify a multitude of zones on one page with great flexibility and freedom, and define various trap settings as needed for them, so as to realize diverse trap effects.

The zones are in two types, the global zone refers to the whole page area, and the global trap setting, i.e. the setting defined for the global zone, is applied to all the objects on the page; a local zone refers to a section of the page area. In case that the global zone and local zones co-exist on a page, the global trap setting is then applied to the page objects outside the local zones.

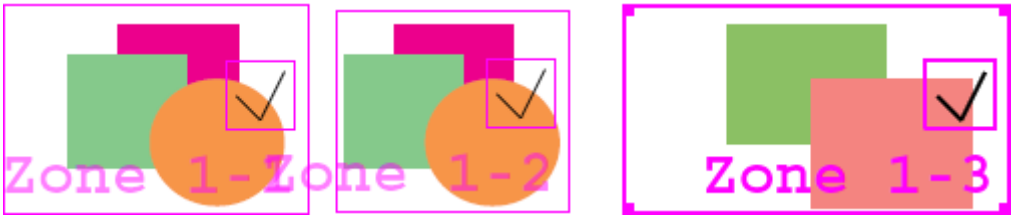


Figure 4-13

Note: *If you have define trap settings for the PDF file with a help of this plug-in, you need to properly configure the processor parameters **Area trapping in job**, **Global trapping in job** and **Ink settings in job**, when you submit the file to ElecRoc's Trap processor.*

1. Zone Tools

The ElecRoc Trap toolbar in Acrobat is shown as follows.



Figure 4-14

The zone tools include the **Rectangular Zone** tool and the **Pointer** tool. Their icons are located at the leftmost of the toolbar.

The **Rectangular Zone** tool is designed for you to add zones on the page. Check the icon. The cursor turns to. Then press down the left mouse button and drag the mouse in any direction, and you can draw a rectangular of any size on the PDF page. A zone is produced once you release the mouse button. The zones are named as Zone 1-1, Zone 1-2, Zone N-n…; N is page number, and n is the zone number on each page.

The **Pointer** tool is used to choose the zone(s) on the page, so that you can further perform such operations as re-positioning, size adjustment and property configuration. Check the icon, and then directly click on the zone. Being selected, the zone border turns bold in appearance.

Choose a zone, and you can then perform the following configurations or operations.

Position: By simply dragging the zone, you can move it to anyplace on the page.

Size: Place the cursor at any corner of the rectangular zone, turning it to an arrow e.g., and then press down the left mouse button and drag the mouse, and in this way you can enlarge or reduce the zone in any direction and in any size.

Delete: If you want to delete an unneeded zone, choose it and press the **Delete** key.

Enable Zone: Each zone contains a little box at its lower-right corner. By default, it is ticked, meaning that the trap setting defined for this zone is of effect. If you click it and turn it to a subtraction sign, the setting will then be disabled.

2. Zone Display

It is the following icons that control if and how the defined zones are displayed in Acrobat.

View Zones: To display all the local zones on the page.

View Global Trap Zones: To display the global zone on the page, if any.

View Zones Fill: To fill the local and global zones with a specific color. The fill color, and the transparency of the fill color, can be defined in the **Trap Preferences** window.

View All: To check all the three icons above, i.e. to display all the zones and trap result that can be displayed.

View None: To display none of the zones or trap result.

The commands corresponding to above icons are available under the **Founder Plug-Ins** > **ElecRoc Trap** menu.

3. Arrange Zones

In case that the zones overlap each other, the objects within the overlapping area are subject to the trap setting defined for the upmost zone.

Choose a zone, click the toolbar icon **Bring Forward** or **Send Backward**, and you can adjust the zone's up-and-down relation in case of overlapping with other zone.

4. Manage Zones

Choose the toolbar icon **Trap Spotting Zones** to enter in the zone manage window.

The left column lists all the page numbers of the current PDF file, and the zone quantity that each of the pages contains. The number in blankets represents the zone quantity. **All** shows the sum of the zones from all the file pages. The quantity remains empty if no zone exists on one page.

The right column lists all the zones contained in a selected page. A tick in front indicates that the zone is enabled. This sign disappears if you disable the zone.

Delete: To delete your selected zone(s).

Disable/**Enable**: To disable or enable your selected zone(s).

Add Global: To add the global zone.

Go To: To locate the selected zone on the page.

/: To change the zone's up-and-down location.

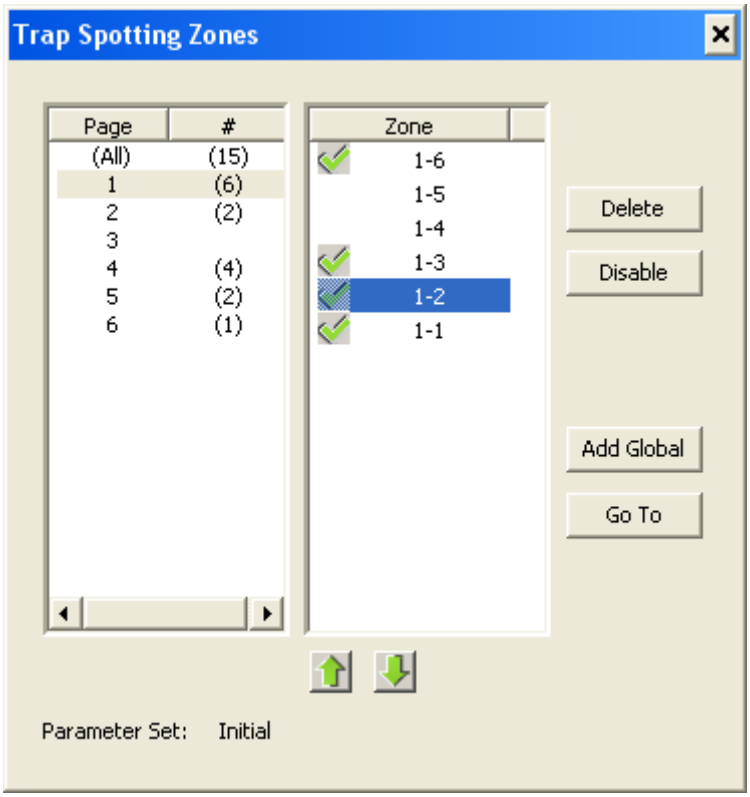


Figure 4-15

C.3.3 Trap Setting

Choose a zone and then click the toolbar icon **Trap Settings**. In the follow-up window, you can configure the trap setting applied to the zone.

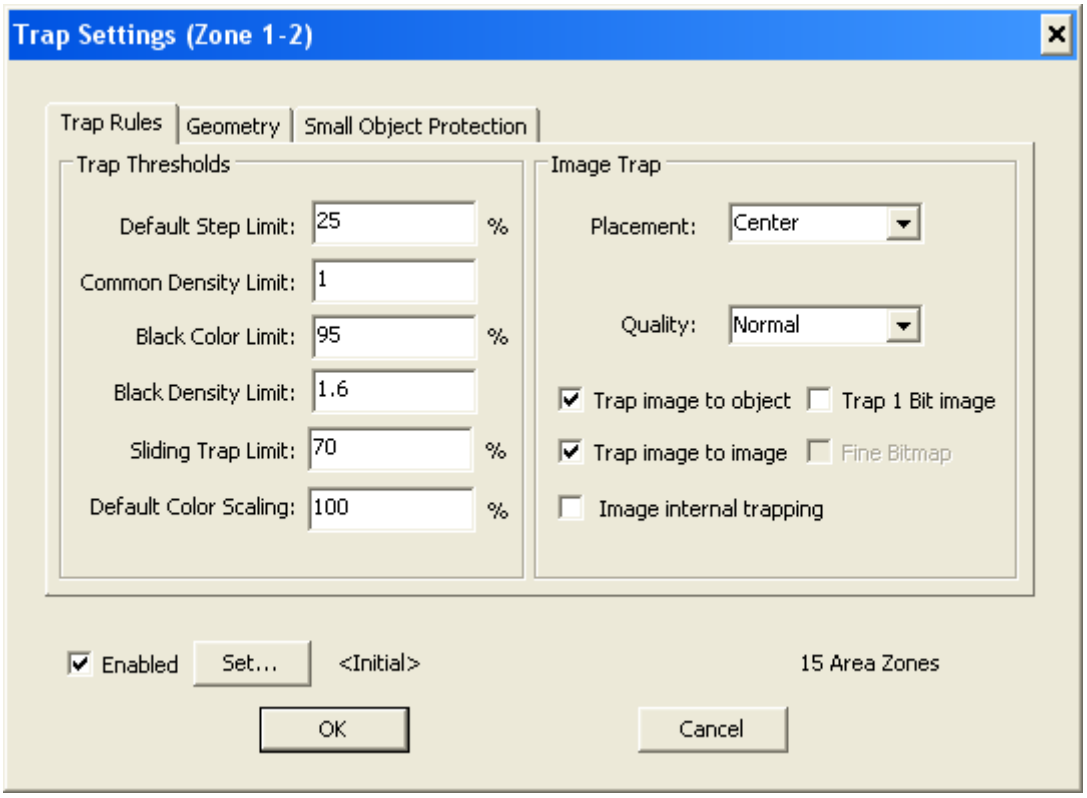


Figure 4-16

The parameters in this window have been introduced previously in Chapter 6 of Part 2. The settings for all the zones may be different from each other. The **Enable** option controls if to enable the setting defined for current zone.

Click the **Set...** button to activate a dropdown menu, which provides three commands.

Open: To open a parameter template.

Save: To save the current trap setting as a parameter template for repeated use.

Revert: To return to the factory setting.

C.3.4 Trap Preferences

From the Acrobat main menu, choose **Founder Plug-Ins** > **ElecRoc Trap** > **Trap Preferences**.

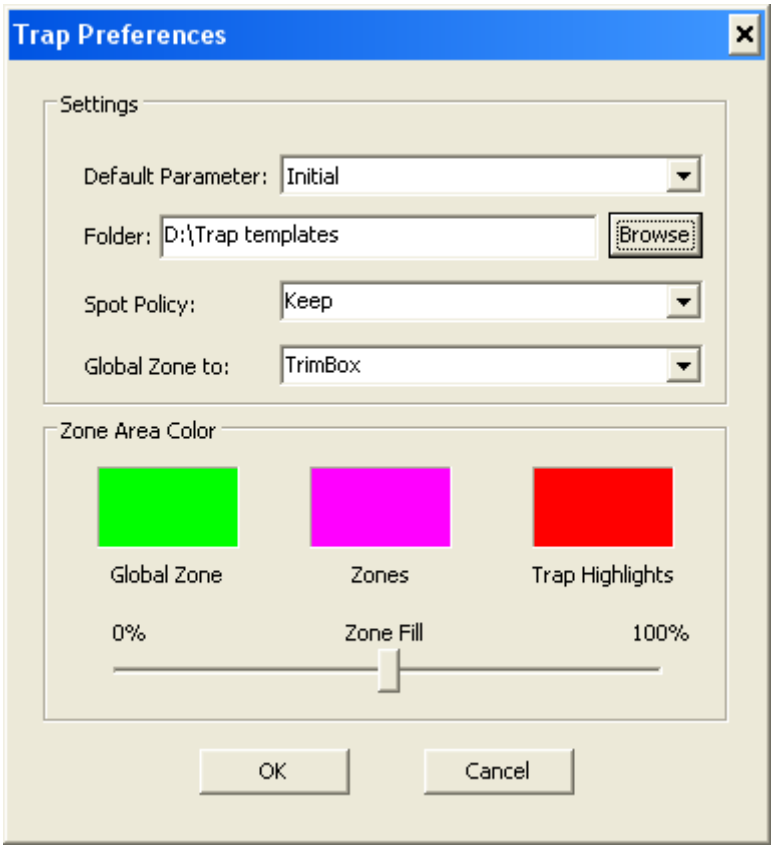


Figure 4-17

Default Parameter: The default trap setting for each newly-added zone. The default is the factory setting named as Initial. It supports you to use the templates saved at the time you configure the zone trap settings. Specify first the directory where the templates are located in the **Folder** box, and then choose the template you want to use from the **Default Parameter** dropdown list.

Spot Policy: Choose **Keep** to maintain the spot colors. If you choose **Remove**, the spot colors in the file would not be included in the **Ink Settings** window.

Global Zone to: To what boundary of the page the global zone spreads, Trim Box, Media Box, Crop Box, Art Box or Bleed Box.

Zone Area Color: Here you can define the colors filled in the global and local zones, and the color filled when the trap result is highlighted. Colors hare are all for the display purpose only. Click a color block to open the color setup dialog box, from which you can change the color. **Zone Fill** refers to the transparency of the fill color that can be adjusted by way of the sliding button.

C.3.5 Ink Settings

Click the toolbar icon to open the **Ink Settings** window.

This window lists the color separations in your file, and if you set the **Spot Policy** to **Keep**, it lists the spot colors as well, if any. It also lists the ink densities and ink types. Types of the four process colors are not editable, but those of the spot colors can be changed. The spot color ink densities are calculated based on the spot color values and the CMYK densities. You can change the densities and types as needed, and after that, it saves the settings as an ink profile named as *default*.

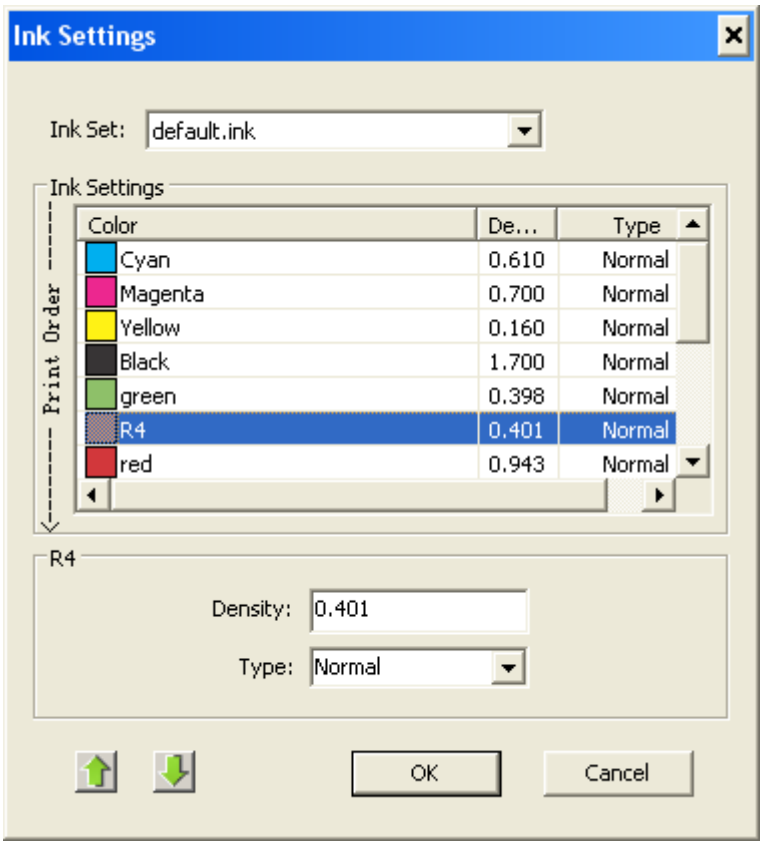


Figure 4-18

Settings here can be applied into job workflow if you enable ElecRoc Trap processor's parameter **Ink settings in job**.

C.4 Screen Plug-in

Zone screening is developed to enhance Founder ElecRoc's local screen capability. It enables the screening towards particular objects in the file, including texts, images, graphs, and shadings. This feature is provided as a plug-in that can be integrated into Adobe Acrobat version 8 or 9, available for both the Windows and Mac platforms.

C.4.1 Use Zone screening

The method to use the plug-in in ElecRoc workflow is as follows.

1. Double-click the PDF Rasterizer node in job workflow to open the parameter setup window. Check the option **Zone Screen First** under the **Screen** tab.

2. From the output file queue under the PDF processor (before Imposer, Composer, and PDF Rasterizer, such as PDF Generator, PDF Tools), use the right-click menu item **Download** > **Open** to open up the PDF page file in Adobe Acrobat.

3. Use the plug-in to define screen settings for the particular objects in the file. For details, refer to the next section.

4. Save and close the PDF file.

5. Now you can submit the PDF file to the Imposer and PDF Rasterizer nodes. The PDF Rasterizer will screen the file as per the screen settings made by the Acrobat plug-in.

Note: *As to the objects in the file that you haven't defined screen settings with the plug-in, ElecRoc will screen as per the screen settings made to the PDF Rasterizer node.*

C.4.2 Use the Plug-in

1. Choose Objects

The object refers to any object of the four object types contained in the file: text, image, graph, or shading. To choose one or more objects from the file, you need to use any of the two icons (/) in the toolbar.

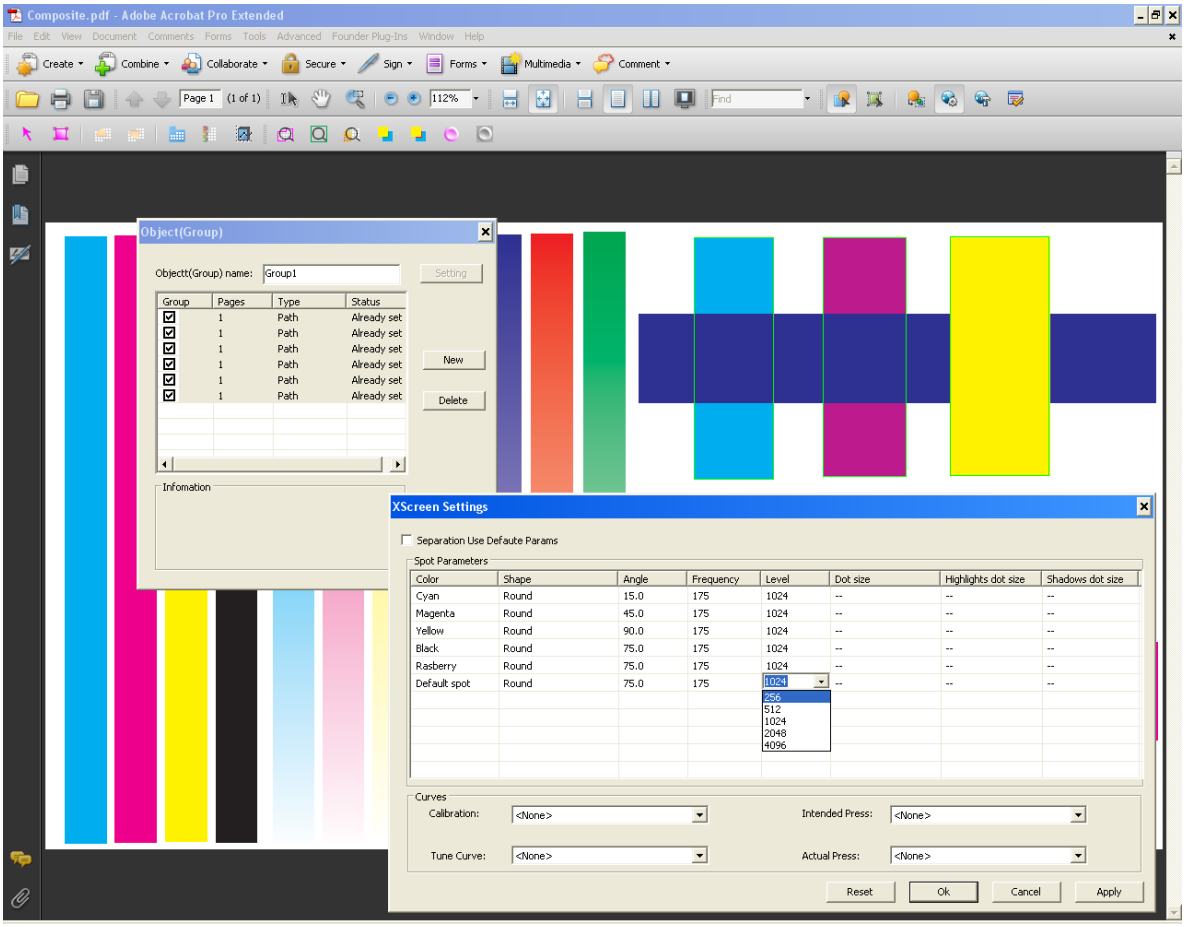


Figure 4-19

: Check it, and you can choose an object by way of a simple click on it with your left mouse button. If you want to choose more than one object, use the *Ctrl* or *Shift* key.

: When checked, it enables you to choose the object(s) within a rectangle area. You can hold down the left mouse button on the file page and move freely to form the rectangle. You can also use the *Ctrl* or *Shift* key in this case to choose more objects.

Note: *The toolbar can be displayed or hidden with the right-click menu item* ***Founder Free Screening*** *in the toolbar blank area.*

The objects being chosen are highlighted with a border, whose line color, line shape and width can be customized by way of the **Preference** parameters.

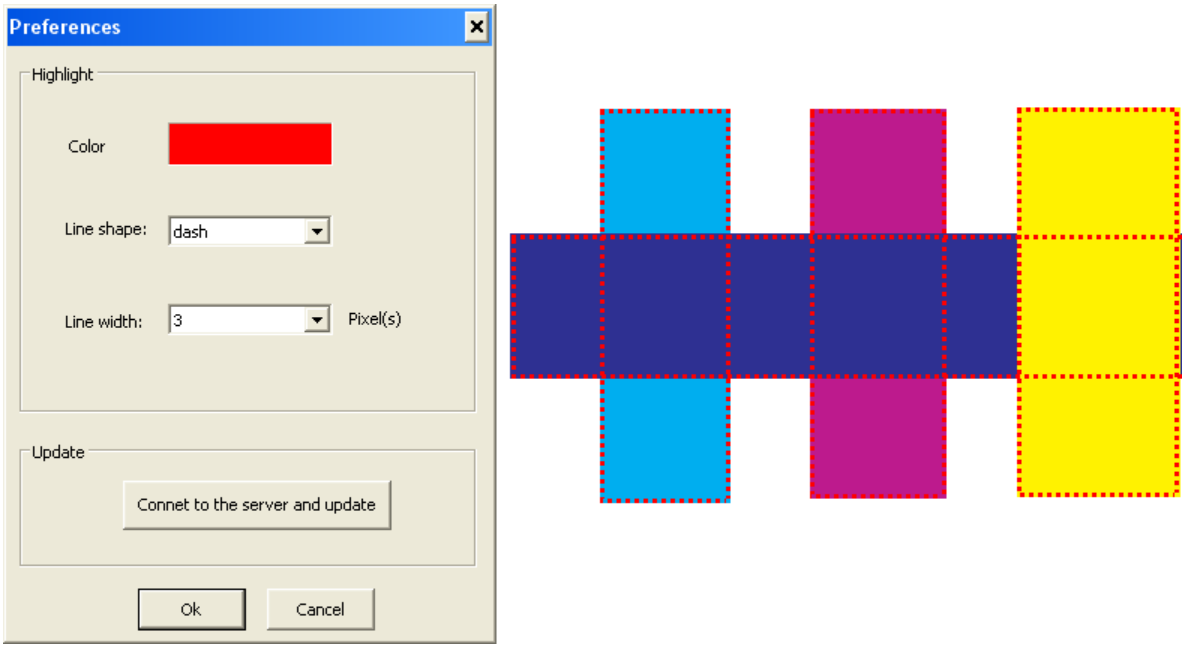


Figure 4-20

You can learn the information about your chosen objects by right-clicking and choosing **Properties**. The pop-up window can then show the object-related information including the path's fill & stroke color spaces and colors, the shading's color space and type, the text's fill & stroke color spaces, colors, font name, font type, and the image's width, height, bits per channel, color space, and etc.

If you choose an object from the object list, the plug-in will highlight it on the page for your reference.

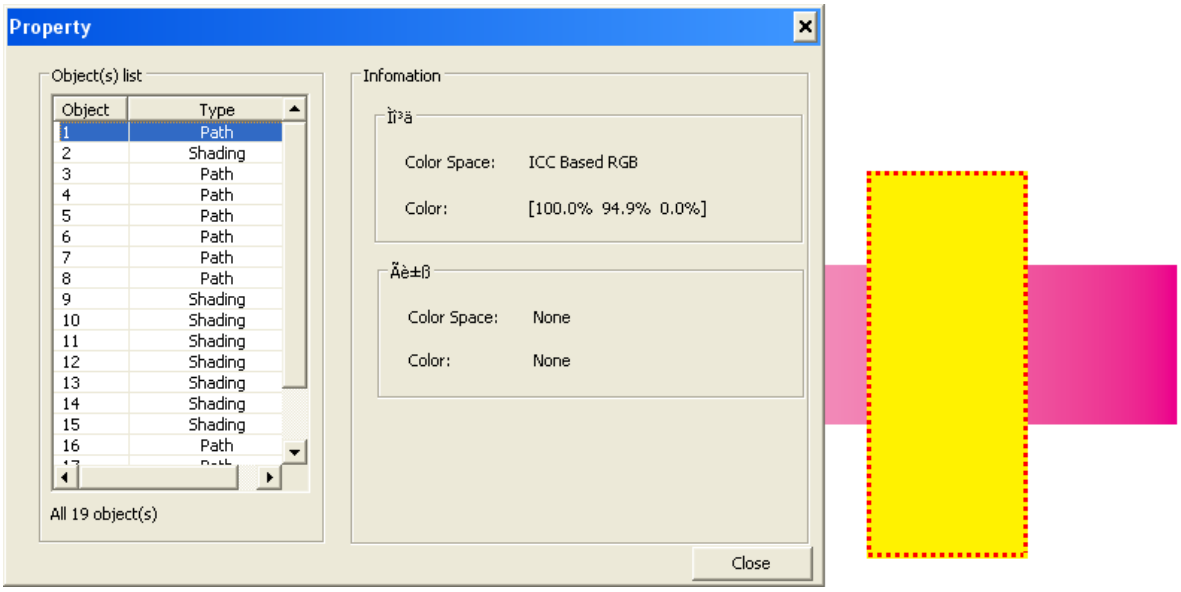


Figure 4-21

Note: *For multiple-paged file that has same object repeatedly appearing on some of the pages, if you zoom out to show these pages, and then choose one object, the same objects on other pages will be highlighted as well. And in this case, if you define screen settings for one object, the settings take effect on the same objects on other pages, too.*

And when you open multiple files that contain a same object, if you choose one object in a file, the same objects in other files will also be highlighted.

2. Define screen setting for object(s)

To define the screen setting for your chosen object(s), perform as follows:

1. Click the toolbar icon or choose the right-click menu item **New Object or Group Setting** after you have chosen one or more objects on the page.

A dialog box shown as follows appears.

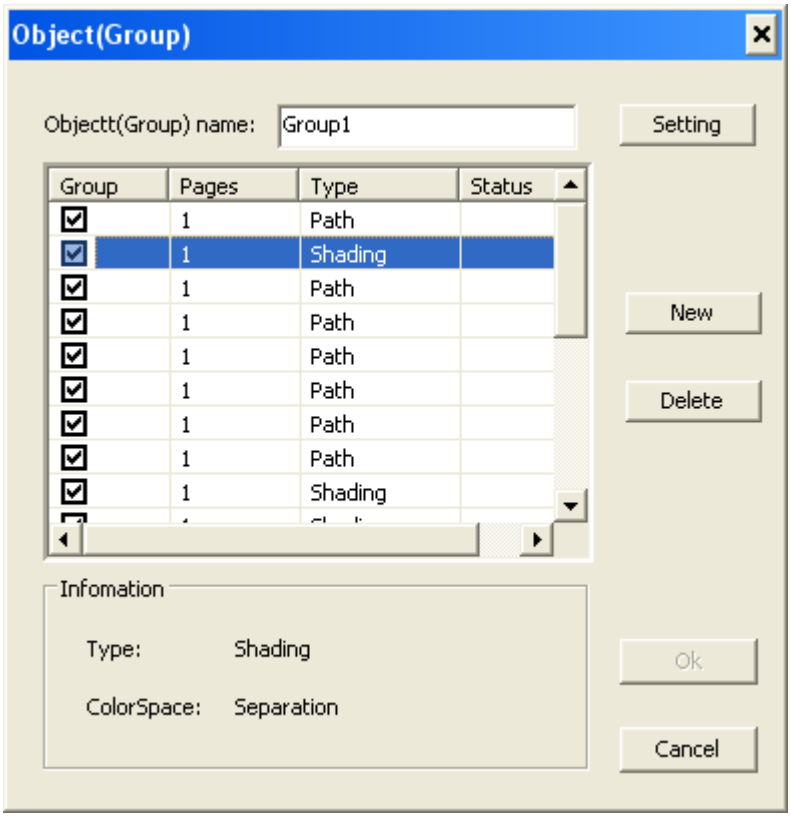


Figure 4-22

The main body of the dialog box is a table. It lists all the objects you have chosen before you open the dialog box. From the list, you see which page the objects come from, their types, and their status. In case that an object has been defined the screen setting, its status would be labeled as *Modified*. And the bottom of the dialog box can show more information about the object, as long as you choose it in the list.

2. Tick the object(s), give an identity name, and then click **Setting**.

You can tick at one time not only one object, but also a group of objects. By default, all the undefined objects are ticked. The initial identity name, if you have chosen only one object before you open the above dialog box, appears as *Object1*, *Object2*, and *Object3* … and if you have chosen a group of objects, appears as *Group1*, *Group2*, and *Group3* …. However, as to this name, you can replace it with anyone else if you want.

3. Now the screen parameter setup window pops up.

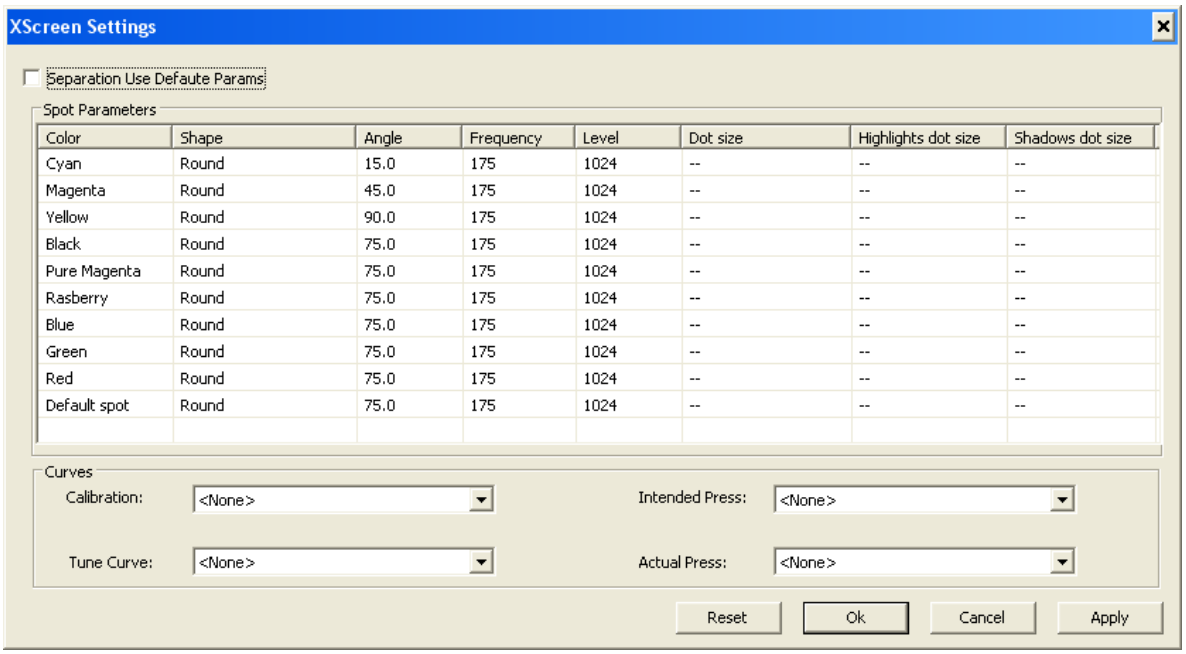


Figure 4-23

Please define the screen parameters and specify proper curves, as you do in defining the PDF Rasterizer's screen setting. The options in the four **Curve** dropdown lists are from ElecRoc server database, and can be updated manually with the button **Connect to the server and update** in the **Preference** window (by clicking the toolbar icon).

Separation Use Default Params: If checked, spot colors contained in currently-chosen objects will be screened as you define for the "*Default spot*" color in the table below. And in this case, the spot colors (if any) are not displayed in the table. If not checked, the table displays the spot colors (if any) for you to separately define their screen settings.

To save the screen settings you have made, click **Apply** or **OK**.

Buttons at the bottom function as:

ReSet: To reset all the screen settings to the factory settings.

OK: To save the screen settings you made, and close the setup window.

Cancel: To cancel your screen settings, and close the window.

Apply: To save your screen settings.

4. If you need, you can choose part of the objects from the list and then click **New** to create a new object group, and then define the screen settings for this group of objects.

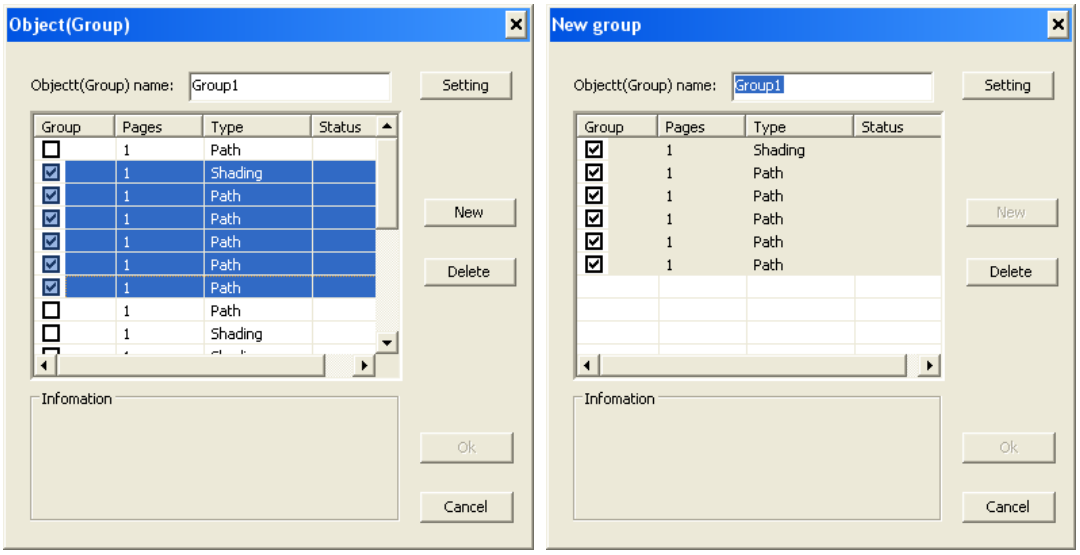


Figure 4-24

5. Click **OK** to save your settings and exit.

3. Add object to group

Click the toolbar icon or choose the right-click menu item **Add to Group** after you have chosen one or more objects on the page.



Figure 4-25

Choose a group and then click **OK**. The screen settings defined already for the group will then take effect on your currently-chosen objects.

Before you click **OK**, you can click **View** to see the detailed screen settings that have been defined for the group.

4. Screen Manager

You can modify or delete the defined screen settings for the objects or group objects, and edit what objects belong to a group.

Click the toolbar icon, or choose from the menu **Founder Plug-Ins** > **Free Screen** > **Screen Manager**.

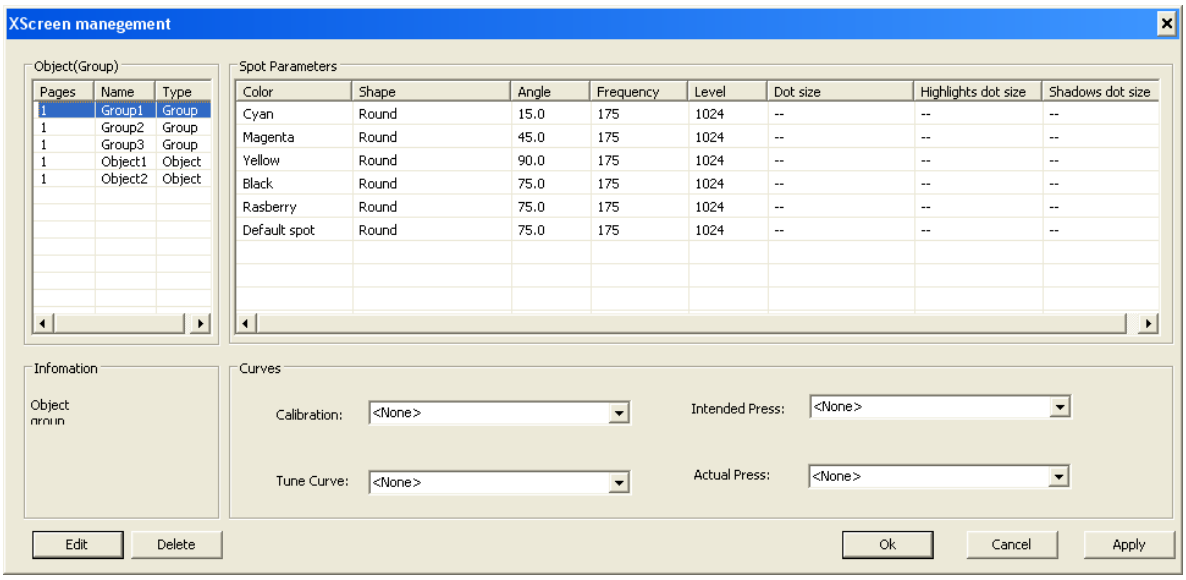


Figure 4-26

To modify the screen settings for an object or group, choose the object or group from the left table, and then make changes as needed in the parameter setup area at the right. After this, click **Apply** or **OK** to save the modification.

To delete the screen settings for an object or group, choose the object or group, and then click **Delete**.

Click **Edit** when you have chosen a group in the left table.

You can rename the group in the **Group name** edit box. The table below lists all the objects that are belonging to the group. If needed, you can choose some of them, and then click the **Delete** button to delete them out of the group.

If you choose some of the objects and then click **New Group**, you can create a new group. The **Inherits** option controls if the screen settings for the new group inherit that for the current group. If checked, they keep the same; if not checked, the default factory screen settings are then applied to the new object group.

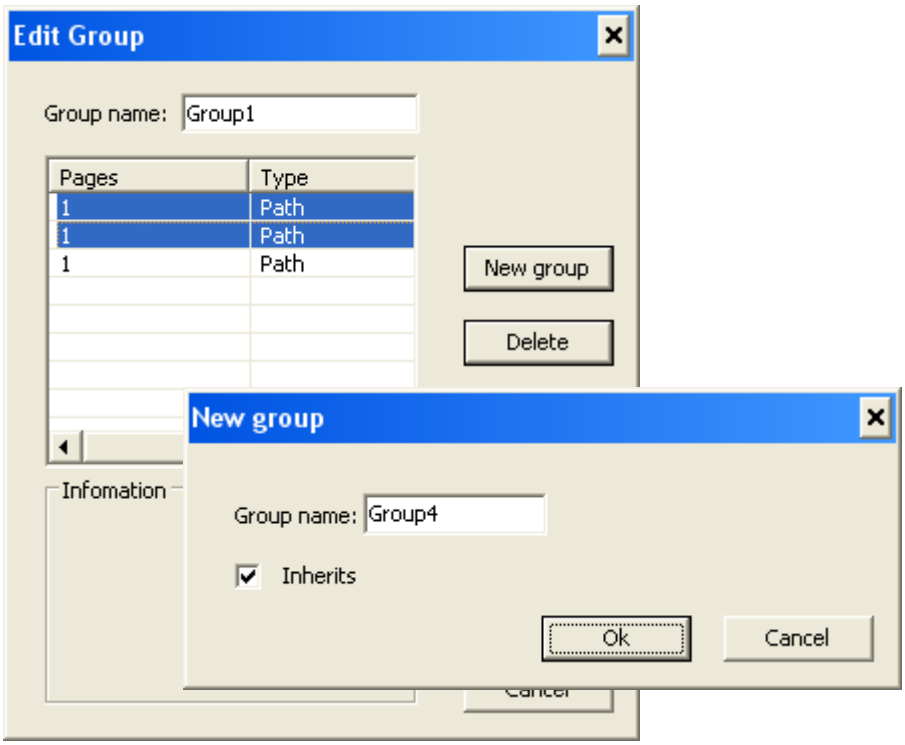


Figure 4-27

5. Preference

Click the toolbar icon, or choose from the menu **Founder Plug-Ins** > **Free Screen** > **Screen Preferences**.

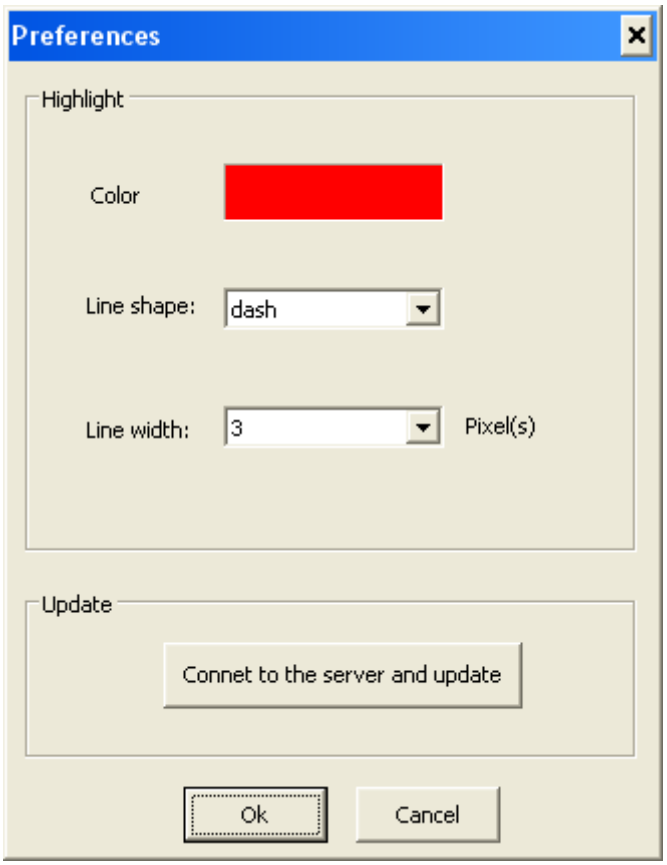


Figure 4-28

Here you can define the properties of the border that is used for highlighting your chosen object(s) on the page.

The properties include line color, line shape, and line width. Click the color thumbnail to open a color palette, from which you can choose or customize another color. The line shape can be solid or dashed, and the width can be 1~6 pixels.

Connect to the server and update: By clicking this button, you can manually retrieve the latest screen-related data from ElecRoc server, mainly i.e. the available curve options.

Appendix D: Tools and Options

D.1 1 Bit Tiff to PDF

Using the 1 Bit Tiff to PDF tool, you can convert multiple 1 bit tiff files representing the various separations of a same page file, into a single PDF file.

D.1.1 Install the tool

The 1 Bit Tiff to PDF tool is delivered for use together with Founder ElecRoc system. But as a standalone program, you need to perform a separate and manual installation, on a computer in the LAN where you have deployed ElecRoc system.

Recommended configuration: Pentium 4, 1 GB of RAM, 20 GB free disk space, 15'' color monitor, CD-ROM drive, network connectivity.

Operating system: Windows XP, Windows Server 2003

Follow the steps below to install (on Windows XP as example).

1. Double-click the file **setup.exe** to run the install program. The install program starts collecting system related information, and after this, it displays the welcome window.

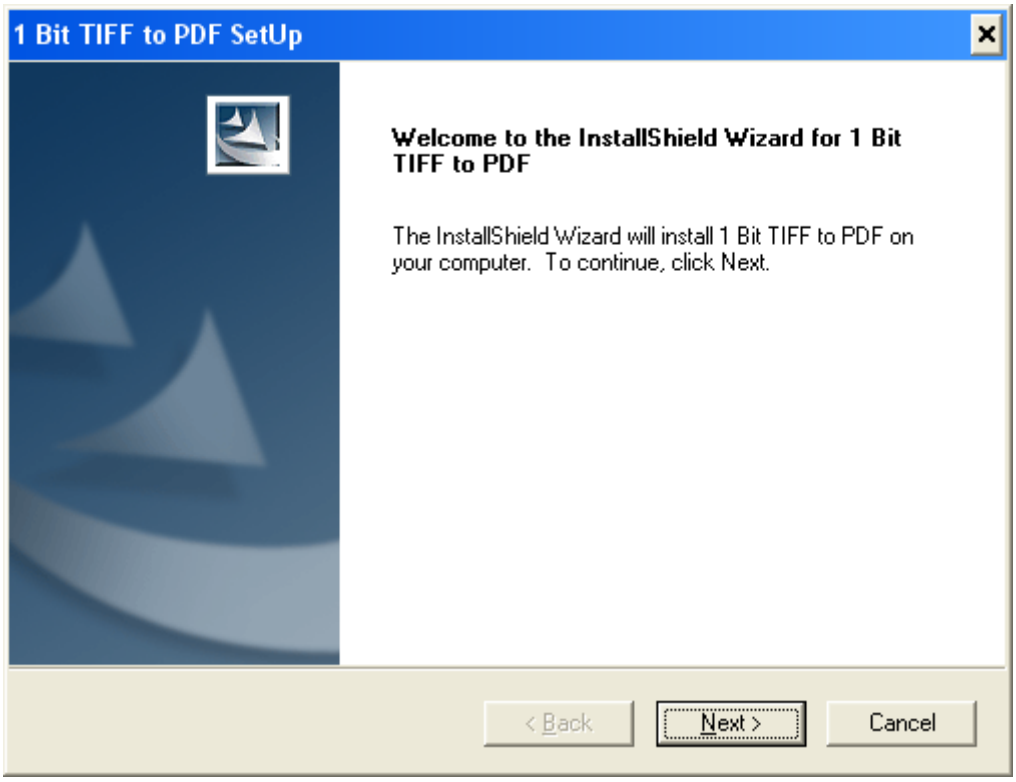


Figure 4-29

2. Click **Next**. The install program shows the license agreement. Accept the terms and click **Next** to continue.

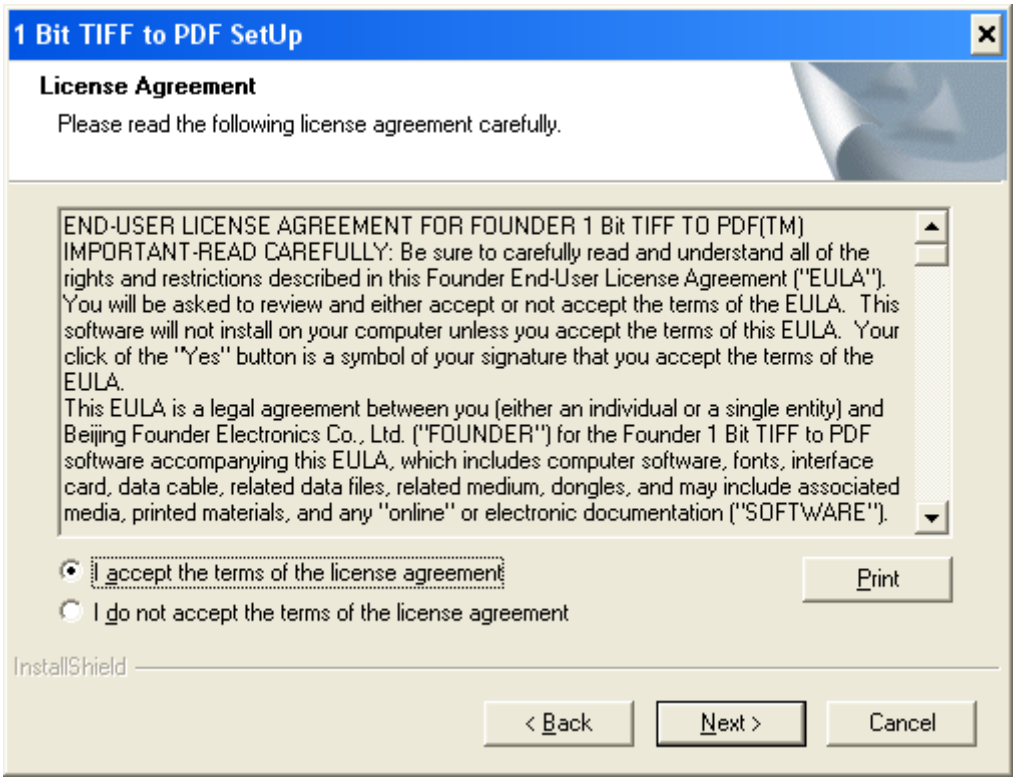


Figure 4-30

3. Input the user name and company name, and click **Next**.

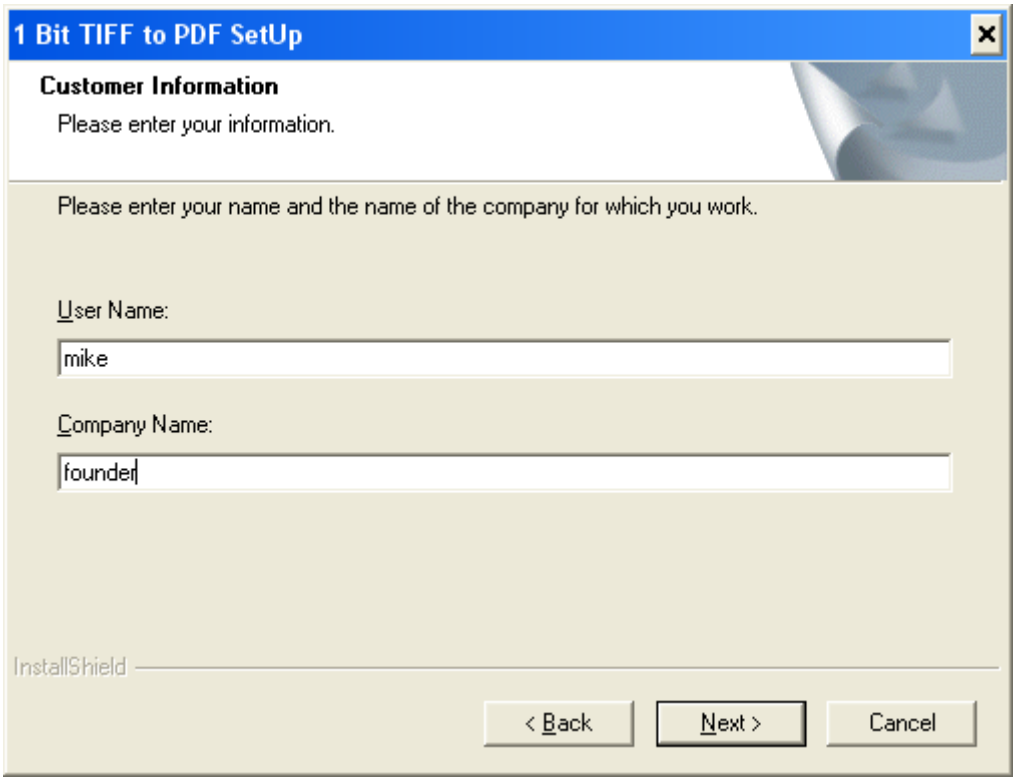


Figure 4-31

4. The install program prompts you to specify a destination. You can use the default folder,

or specify another with the **Change** button. And then, click **Next**.

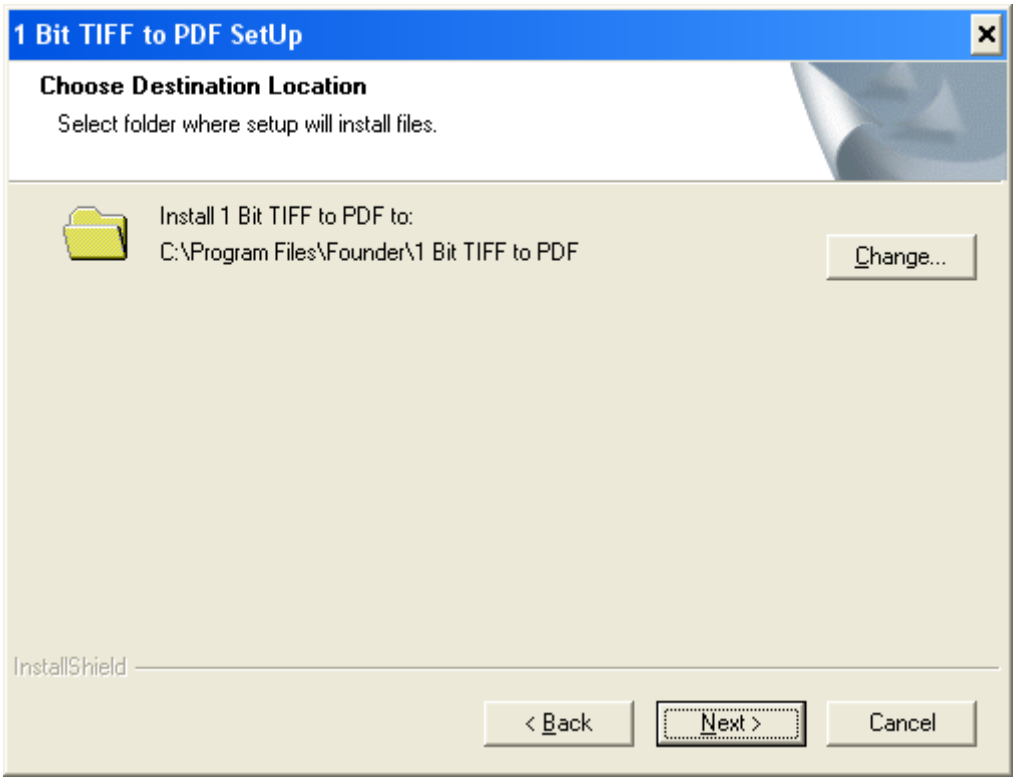


Figure 4-32

5. Choose **ElecRoc 6** and then click **Next**.

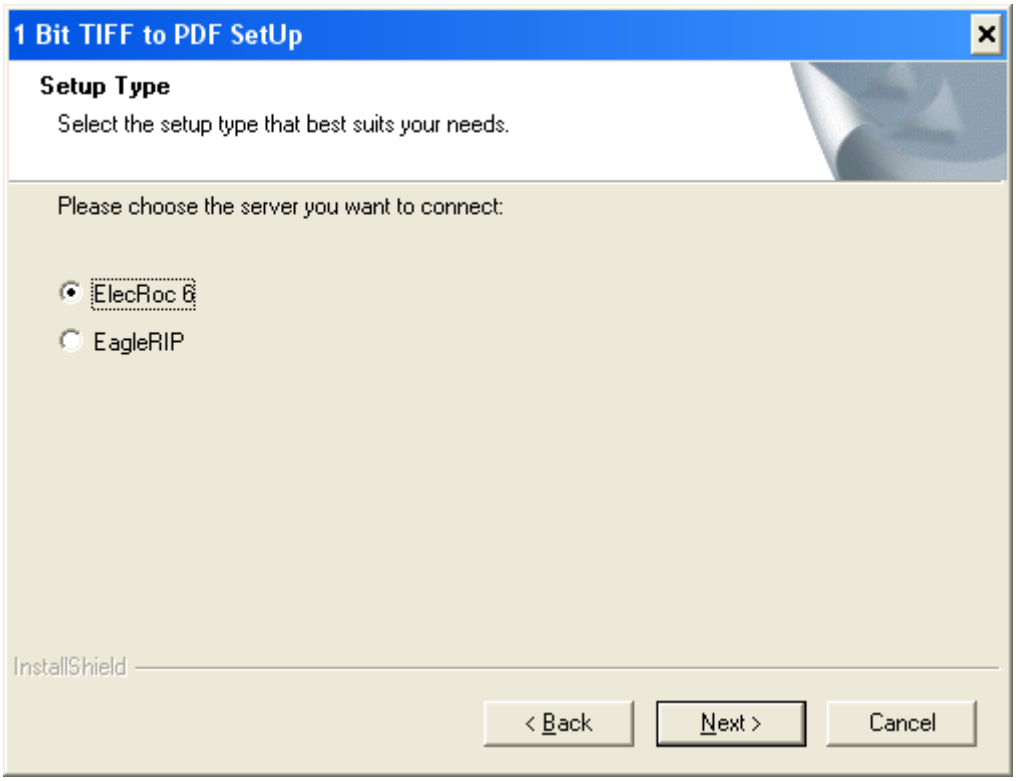


Figure 4-33

6. Specify the program folder.

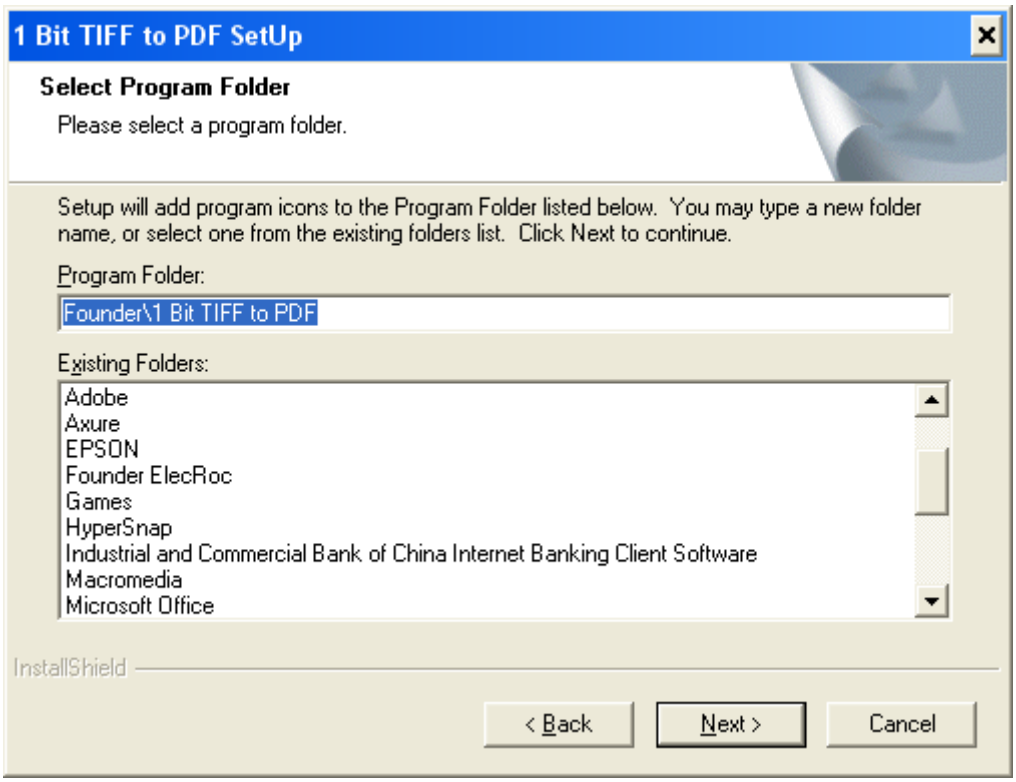


Figure 4-34

7. The program prompts that it's ready to begin the installation. Click **Install**.

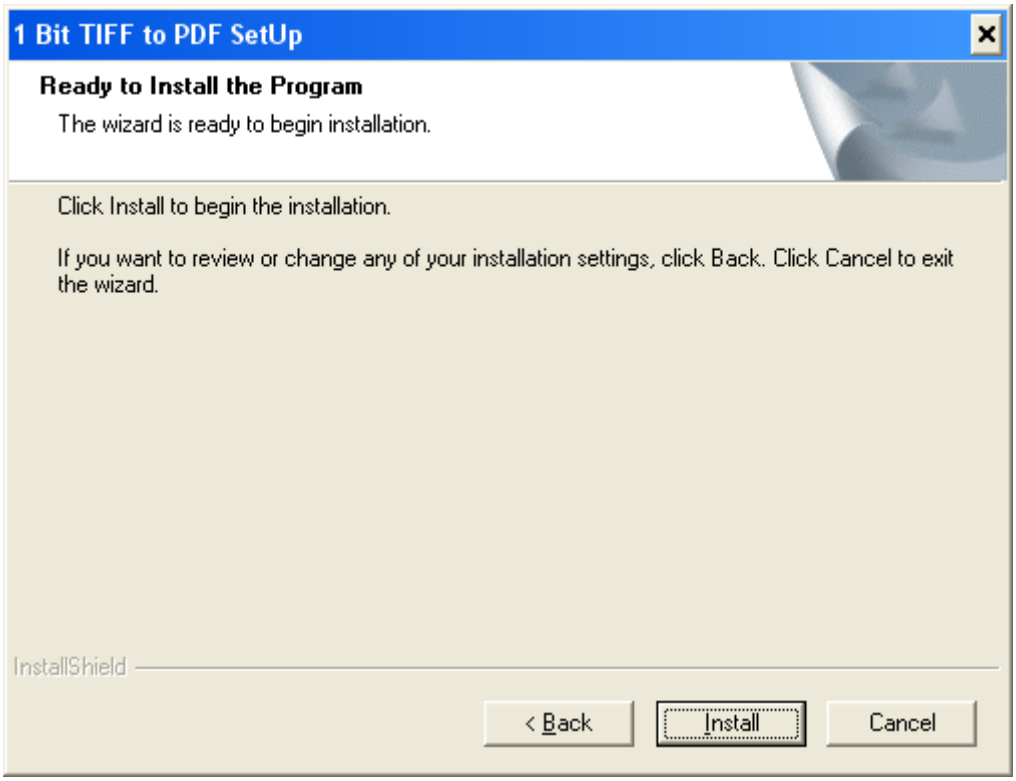


Figure 4-35

8. It starts the installation. The bar shows the progress.

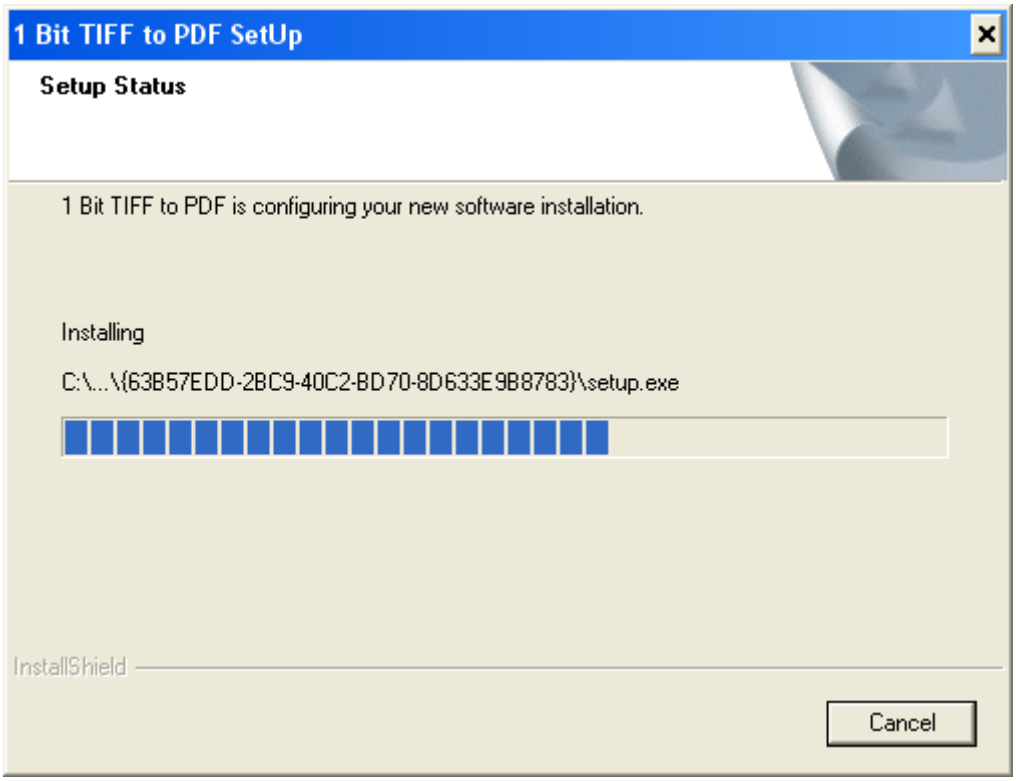


Figure 4-36

9. When the bar reaches 100%, it shows that the installation is completed. Click **Finish**.

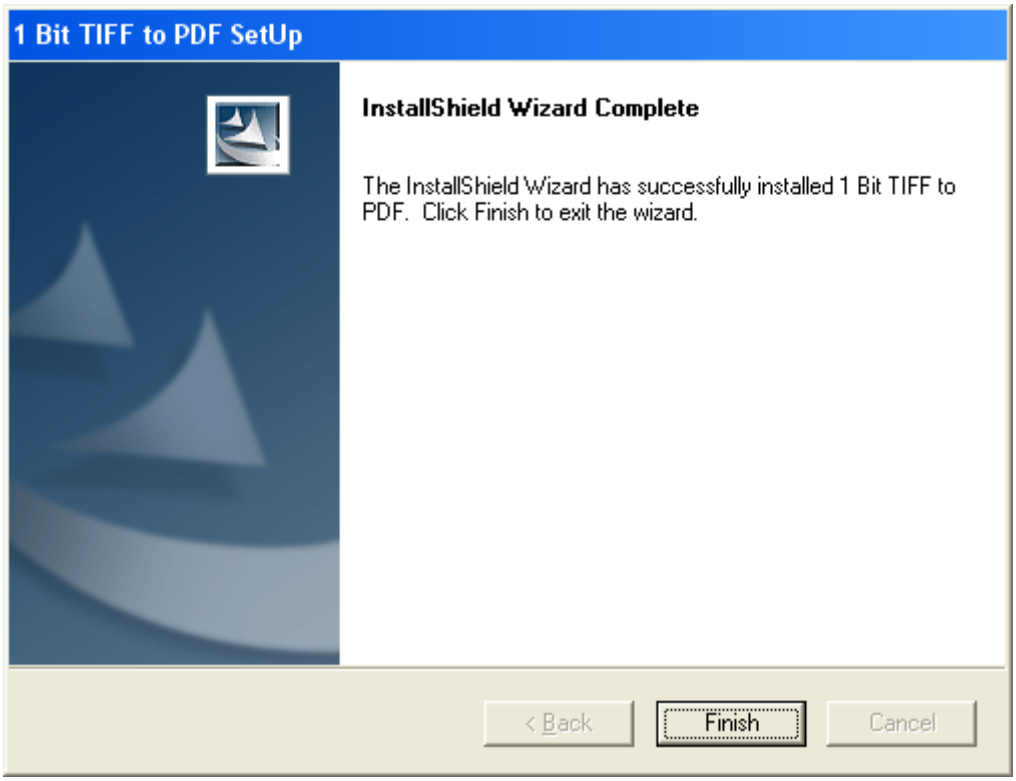


Figure 4-37

D.1.2 About the tiff files

This tool accepts the 1 bit tiff files from Founder ElecRoc. In ElecRoc, you can use the 1 Bit TIFF Export processor to generate 1 bit tiff files under a specified directory. The output directory can be defined in the processor's parameter setup window.

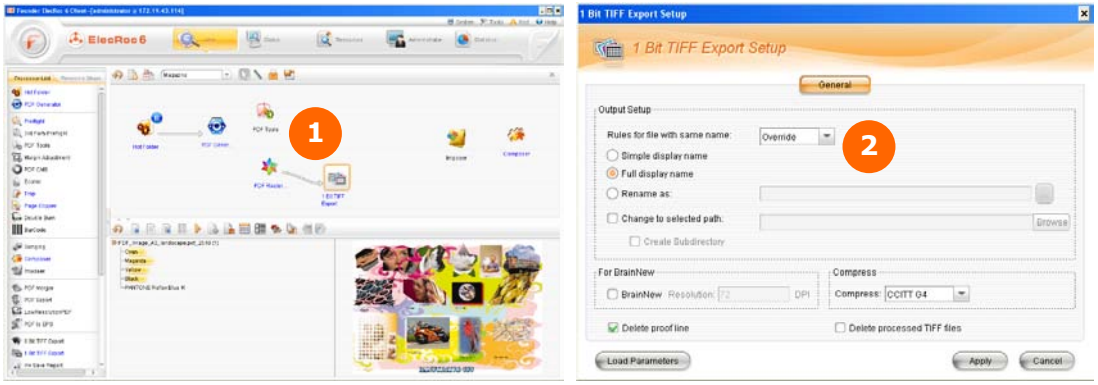


Figure 4-38

1. An ElecRoc workflow containing the processor 1 Bit Tiff Export;

2. The 1 Bit Tiff Export processor parameter setup window.

Note: *The 1 Bit Tiff Export processor can name the output tiff files in 3 modes, by way of the 3 parameters,* ***Simple display name****,* ***Full display name****, and* ***Rename as****. Please note that, when you choose* ***Rename as****, the output tiff files must be in such a format: <JobName>_<Resolution>_<FullSepName> for the 1 Bit Tiff to PDF tool to accept.*

D.1.3 Start the tool

Double-click the shortcut icon for the tool on the desktop, or choose **Start** > **All Programs** > **Founder** > **1 Bit TIFF to PDF** > **1 Bit TIFF to PDF**, to start the tool.

For use in ElecRoc environment you will need to provide the name or the IP of the computer where the ElecRoc dongle is installed.

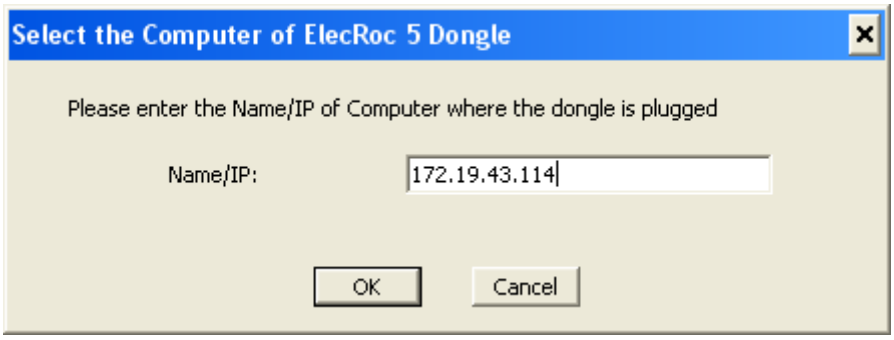


Figure 4-39

Click **OK**. The main window of the tool appears.

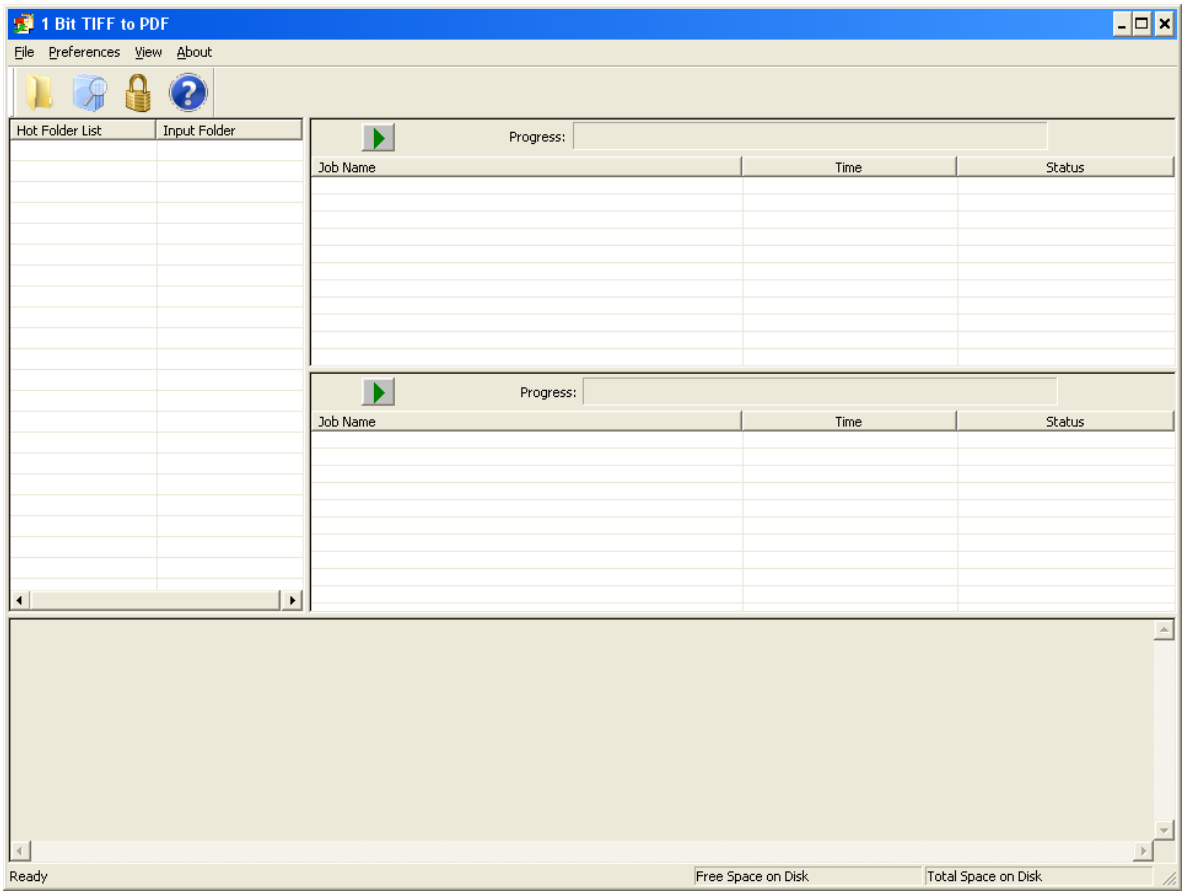


Figure 4-40

D.1.4 Submit tiff files

There are two ways for you to submit the tiff files to this tool.

1. Use the Open command

Click the toolbar icon, or choose from the menu **File** > **Open...**. In the follow-up dialog box, locate the tiff files and open them.

The opened files are then shown in the upper-right queue of the main window, i.e. the **Waiting...** queue.

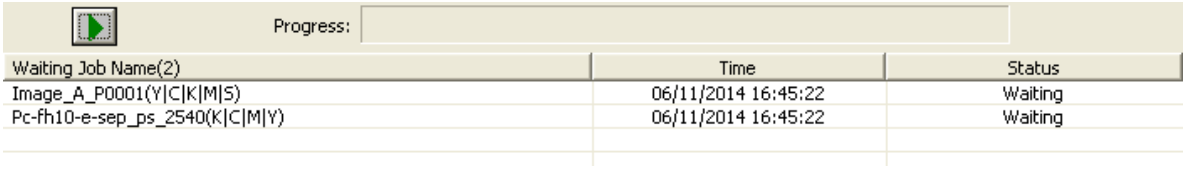


Figure 4-41

Note: *In case that the till file name contains characters such as *, which is not supported by this tool, you need to manually delete such characters.*

2. Use a hot folder

Define a hot folder and put the tiff files into the folder. The tool can automatically detect and process the tiff files entered into the hot folder.

To define a hot folder, perform as follows:

1. Click the toolbar icon, or choose from the menu **File** > **Add Hot Folder**.



Figure 4-42

Input the name for your hot folder setting, and click **OK**.

2. The setup window for your hot folder appears. Configure the parameters as needed, and then click **OK**.

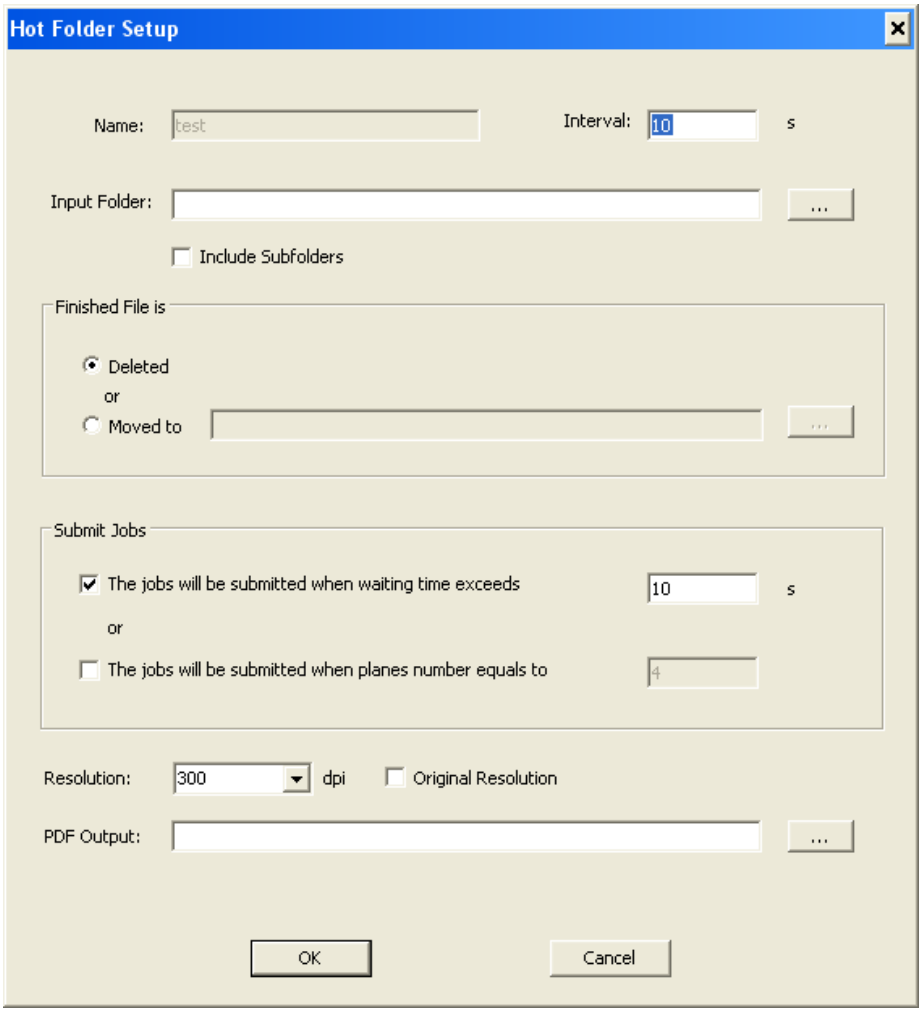


Figure 4-43

You need to specify the input and output folders.

Input Folder: The folder where the tool receives the tiff files. After you put the tiff files into this folder, the tool can then automatically and regularly detect them, and process them upon the detection. If you check **Include Subfolders**, the tool can search for the tiff files in the subfolders (if any). In practice, for example, you can specify the output directory of ElecRoc's 1 Bit Tiff Export processor as the input folder.

PDF Output: The folder where the tool generates, i.e. outputs the PDF files.

Resolution: The resolution of the final generated PDF files. If you want the resolution to be same as that of the input tiff files, check **Original Resolution**. If not, you can choose a resolution from the dropdown list or enter a custom one, ranging from 72 to 1440 dpi.

Submit Jobs: The multiple tiff files screened from a same file may not arrive to the input folder simultaneously. In this case, you can check **The jobs will be submitted when waiting time exceeds**, and specify a time value, when no tiff files arrives within the specified time period (10 seconds), the tool will stop waiting and submit the files, even if some of the tiff files may have not arrived. Or you can check **The jobs will be submitted when planes number equals to**, and specify a number value, when the number of the arrived tiff files equals to the specified number, the tool will also stop waiting and submit the files, even if some files may not have arrived.

You may specify other relevant parameters, if needed.

Interval: The time interval at which the tool regularly detects in the folder.

Finished File is Deleted or Moved to: If you check **Deleted**, the tiff files in the input folder will be deleted after the generation of the PDF file. If you check **Moved to**, you can specify a destination and the tiff files will then be moved to this destination.

Click **OK** when you have defined the above parameters.

3. You will then see the hot folder setting in the left queue of the main window. Check it to run the hot folder.



Figure 4-44

***Note**: When a hot folder is not running, i.e. unchecked, you can use the right-click menu items **Modify** and **Delete** to modify its setting or delete it.*

4. By clicking, make sure that the button in the upper-right queue (i.e. the **Waiting...** queue), has turned from to . Now you can put tiff files under the hot folder, and the tiff files will soon enter into the file queue of the tool.

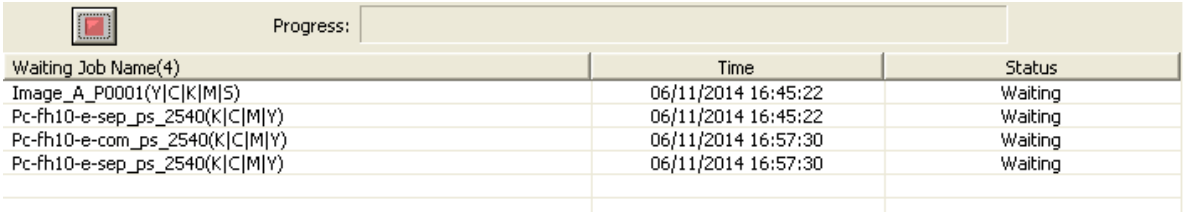


Figure 4-45

D.1.5 Output PDF file

1. Before the output

The submitted jobs are listed in the **Waiting...** queue. The separations it contains are indicated at the end of the job name, such as (K|C|M|Y|S). "S" indicates spot color. Right-click a waiting job and you can get a shortcut menu. The menu items and their functions are as follows.

About Job: To view the detailed information about the job, including job name, submit type, time, tiff files it contains, color names, and job status.

Setting: To define the output setting.

Retry: To output once again in case that the output is failed. For instance, if your job contains a spot color tiff file but you haven't defined the spot color in advance, it would turn back the job (showing the job as **No Setting**) at the time of being output. In such case, you can define the spot color, and then choose this menu item to re-output the job.

Delete Selected Item: To delete the selected job in the queue.

Clear All Items: To delete all the jobs in the queue.

2. Output setting

Right-click the job and choose **Setting**.

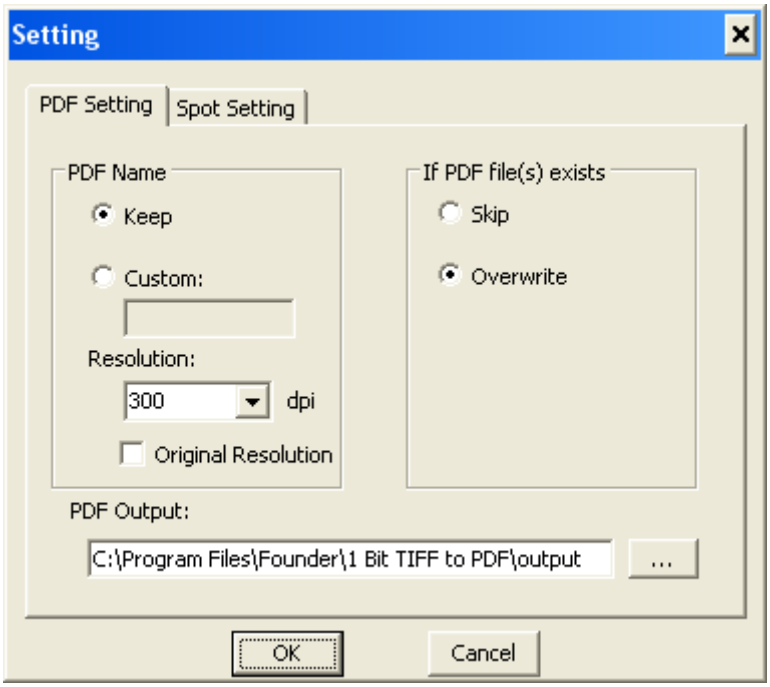


Figure 4-46

Under the **PDF Setting** tab:

PDF Name: If you choose **Keep**, the name of the generated PDF file keeps the same as that of the input tiff files. You can also choose **Custom** to define a custom file name.

Resolution: Here you can separately define the resolution. Otherwise, it remains the resolution setting as defined in the hot folder or that defined by choosing from the menu **Preferences** > **System Preferences** > **PDF Setting**.

PDF Output: Here you can also separately define the output folder.

If PDF file(s) exists: In case that a PDF file with same name exists in the output folder, if you choose **Skip**, a prefix will be added to the name of the newly-generated PDF file; and if you choose **Overwrite**, the existing file will be overwritten by the newer one.

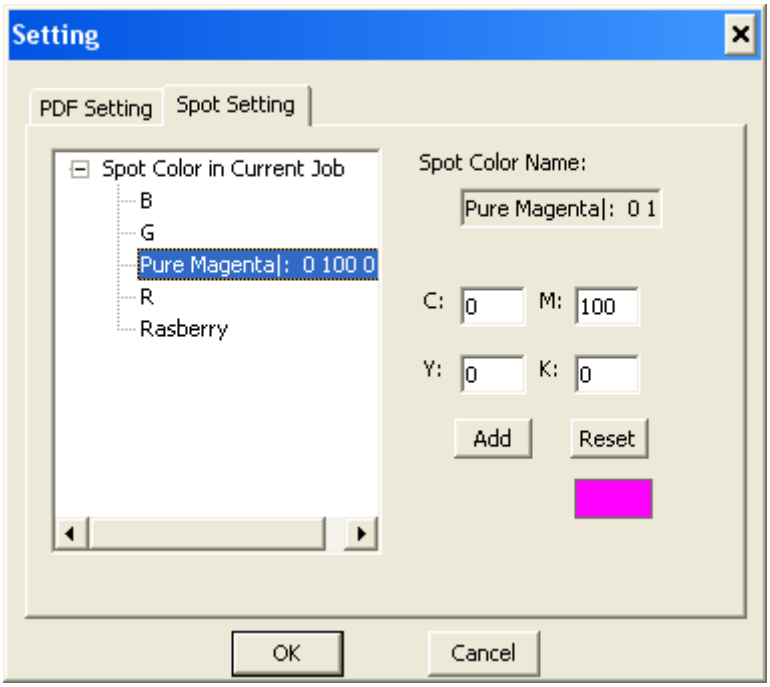


Figure 4-47

Under the **Spot Setting** tab:

If the job contains spot color separation, you need to define the values of the spot color, so that the tool can correctly output the spot color.

Choose a spot color (if any), and manually enter the cmyk values, and then click **Add**. You can also define the spot colors by choosing **Preferences** > **System Preferences** > **Spot Setting**.

3. Output

Click the button in the lower-right queue, i.e. the **Processed...** queue, turning it to. And the tool then starts generating the PDF files.

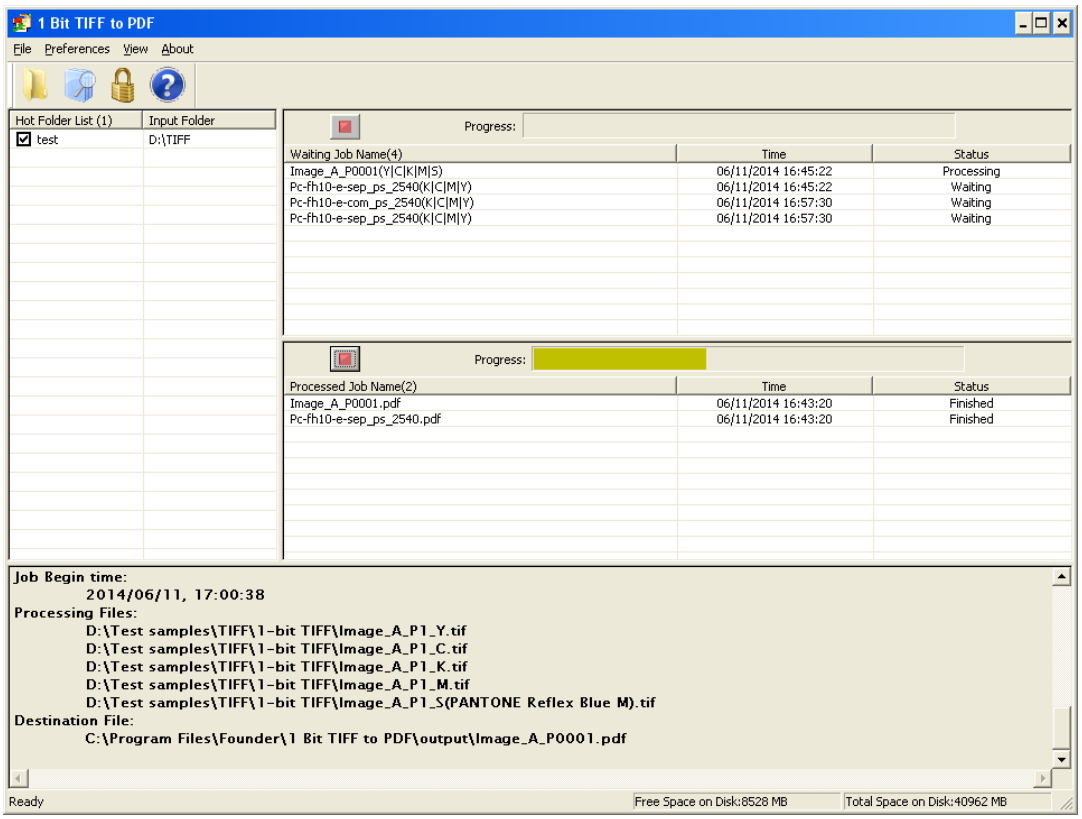


Figure 4-48

4. After the output

Switch to the output folder, and now you can see and open the generated PDF files.

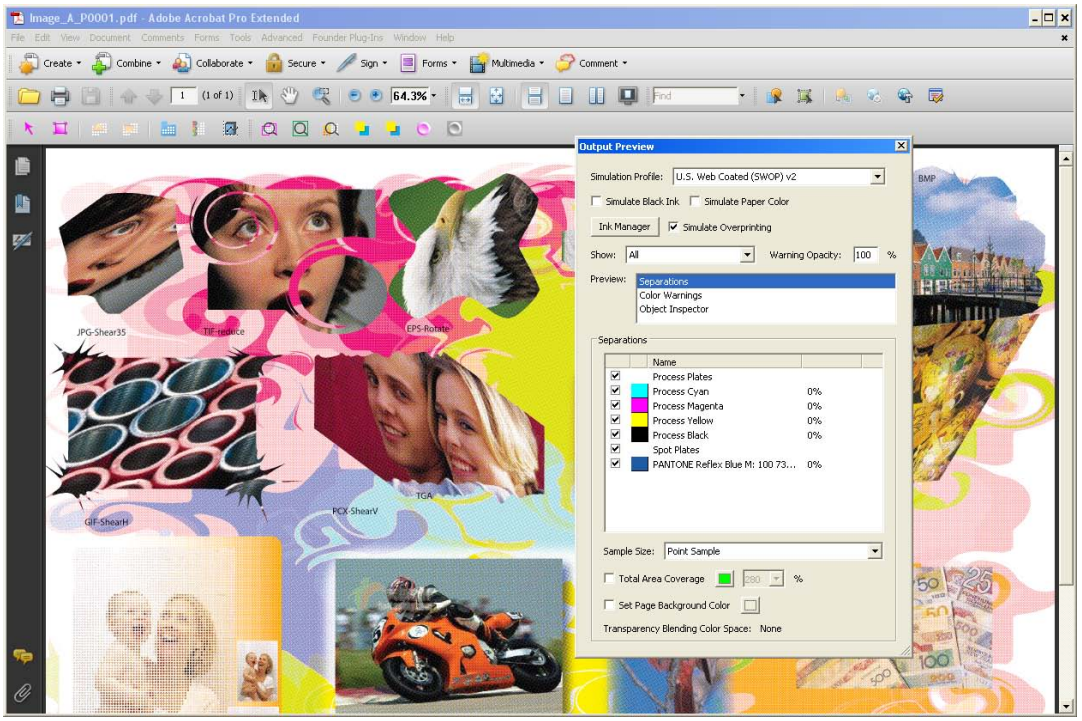


Figure 4-49

In Adobe Reader or Acrobat, when you have opened the generated PDF file, choose from the main menu **Advanced** > **Print Production** > **Output Preview** to show all the separations of the file. If you don't check **Output Preview**, by default, it shows only one of the separations.

In the **Processed...** queue, you can use right-click menu items **Delete Selected Item** or **Clear All Items** to delete the finished jobs from the queue.

D.1.6 System Preferences

Click the toolbar icon, or choose from the menu **Preferences** > **System Preferences**.

1) Under the **System Setting** tab:

Maximum Jobs for Processing: The maximum number of jobs in the two job queues.

Warning Free Space: To issue warning when the free disk space in the partition where the tool is installed is less than the value specified here.

Information Window Buffer: The size of the buffer that stores the messages in the information window.

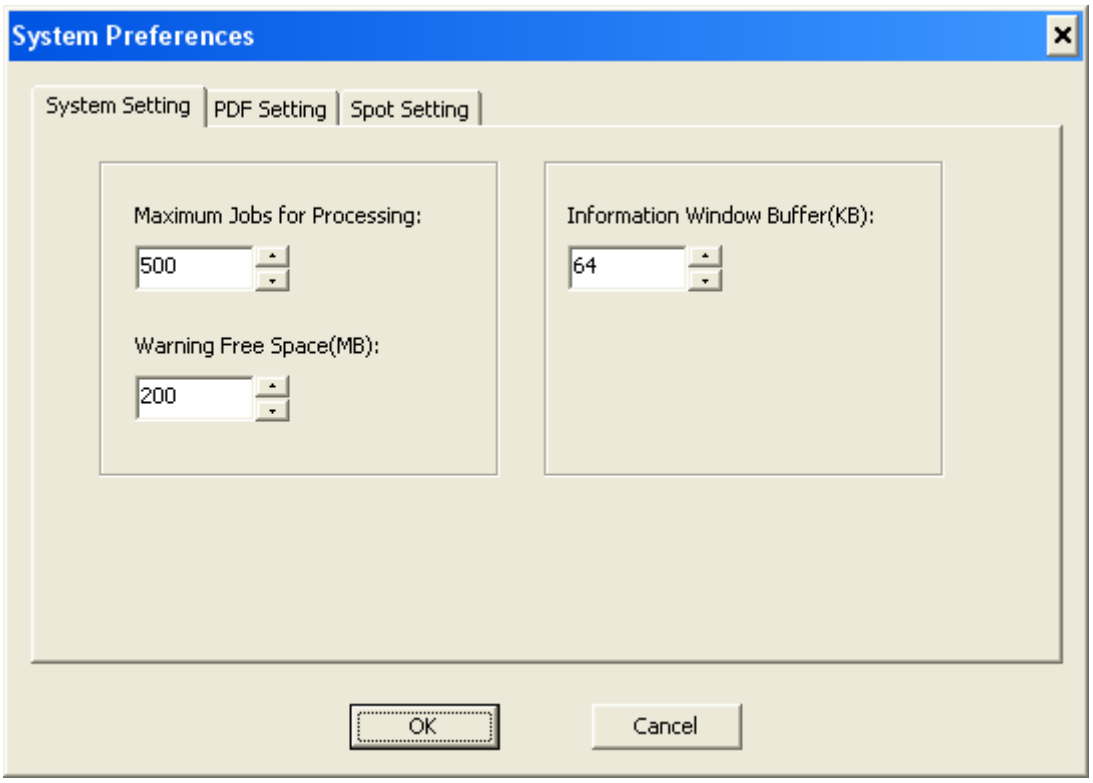


Figure 4-50

2) Under the **Spot Setting** tab:

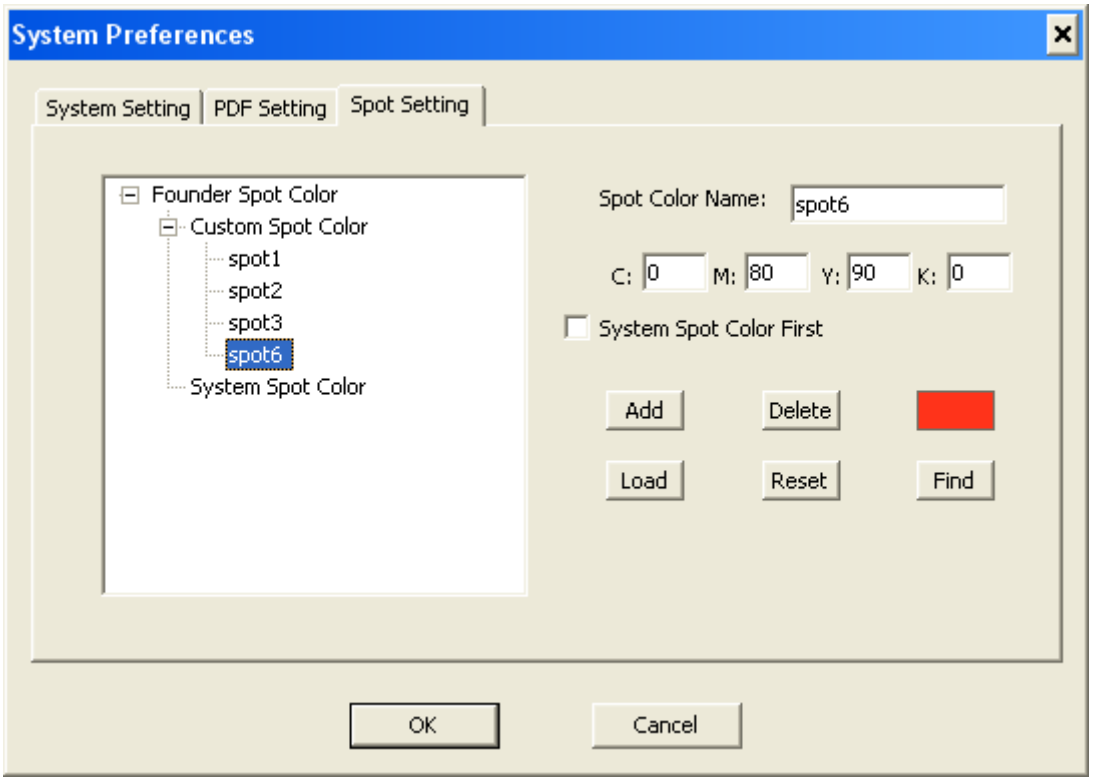


Figure 4-51

Here you can define the spot colors for all the jobs, so that they can be properly output.

Moreover, here you can import spot colors as system spot colors. But before this, you need to manually copy the spot color file (e.g. .sts file) into the **System Spots** directory (e.g. c:\Program Files\Founder\1 Bit TIFF to PDF\System Spots). To import system spot colors, choose **System Spot Color**, and click **Load**, and then choose the system spot color in the follow-up dialog box.

System Spot Color First: When checked, if two colors from the **Custom Spot Color** and the **System Spot Color** lists have a same name, the system one will be used first, otherwise the custom one first.

3) For settings under the **PDF Setting** tab, refer to the previous section.

D.2 Load Balancing Tool

This tool is designed to distribute the workload for PDF Rasterizer and Proof processors, so as to avoid any overload on them.

On the computer where you have installed the PDF Rasterizer or Proof processor, double-click the file **LoadBalanceTool.exe** under the install directory \Tools\Load Balancing Tool\ to start up the tool.

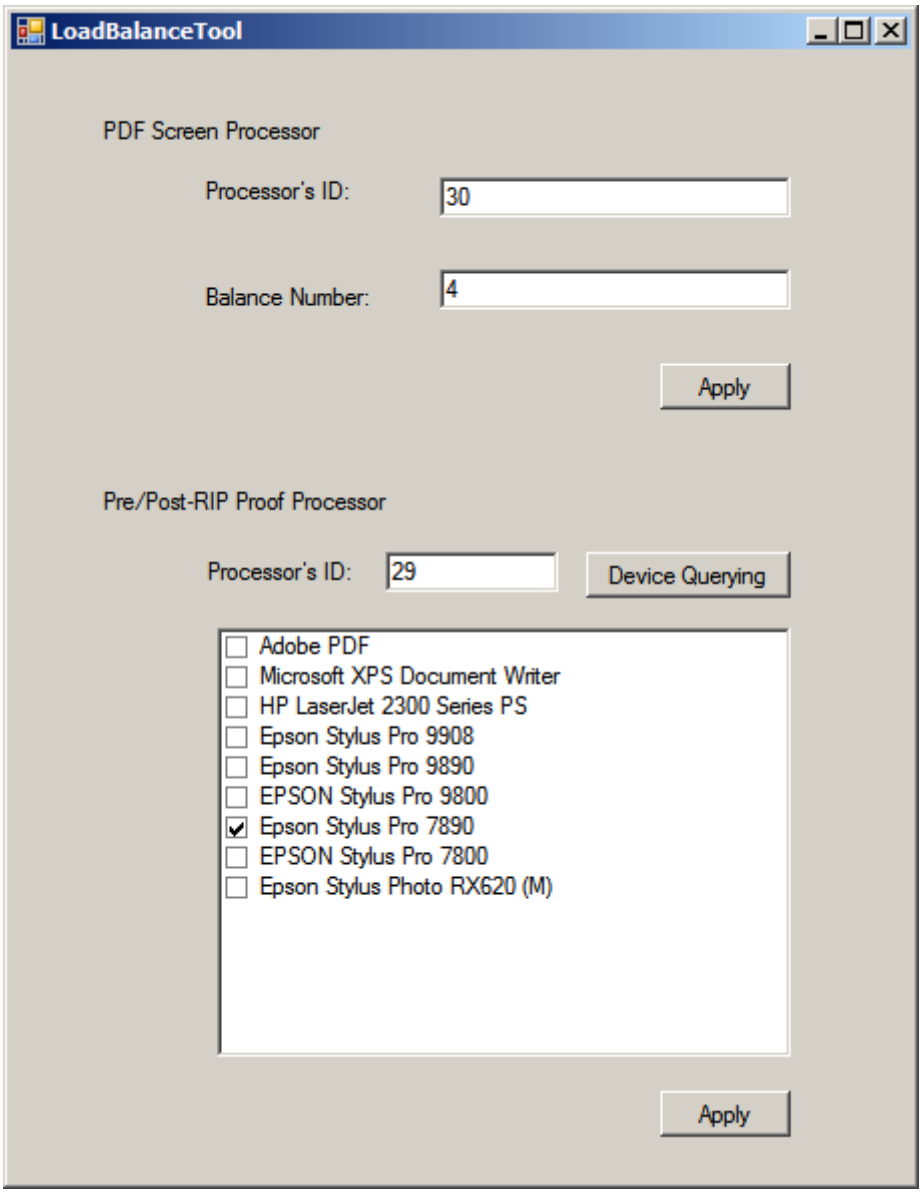


Figure 4-52

For the PDF Rasterizer processor:

1. Stop PDF Rasterizer on ElecRoc Server.
2. Run this tool, and input the ID of PDF Rasterizer in the **Processor's ID** edit box.
3. Specify a proper load balancing number.

On the premise that your computer CPU has enough cores, with this tool, your computer can simultaneously start the specified number of PDF rasterizing processes. And moreover, it can distribute the multiple jobs submitted to your PDF Rasterizer processor to these synchronously running processes, improving the processing efficiency.

4. Click **Apply**.
5. Start PDF Rasterizer.

For the Proof processor:

1. Stop Pre-RIP Proof or Post-RIP Proof on ElecRoc Server.

2. Run this tool, and input the ID of the Proof processor in the **Processor's ID** edit box.

3. Click **Device Querying**, the proof devices installed on current computer will be listed.

4. Check the device that your proof processor is connecting, and the devices of that same model, if any. ElecRoc can then distribute the multiple jobs submitted to your proof processor across these devices.

5. Click **Apply**.

6. Start your Proof processor.

D.3 Unzip Manager

With ElecRoc's remote 3D preview capability, you can email your PDF pages as a single or a series of .zip files to a remote receiver for preview purpose. After receiving these .zip files, the remote user can use this tool to unzip them, so as to realize the 3D preview.

1. Double-click the file **UnZipManager.exe** under the install directory \Tools\UnZipManager\ to start up the tool.

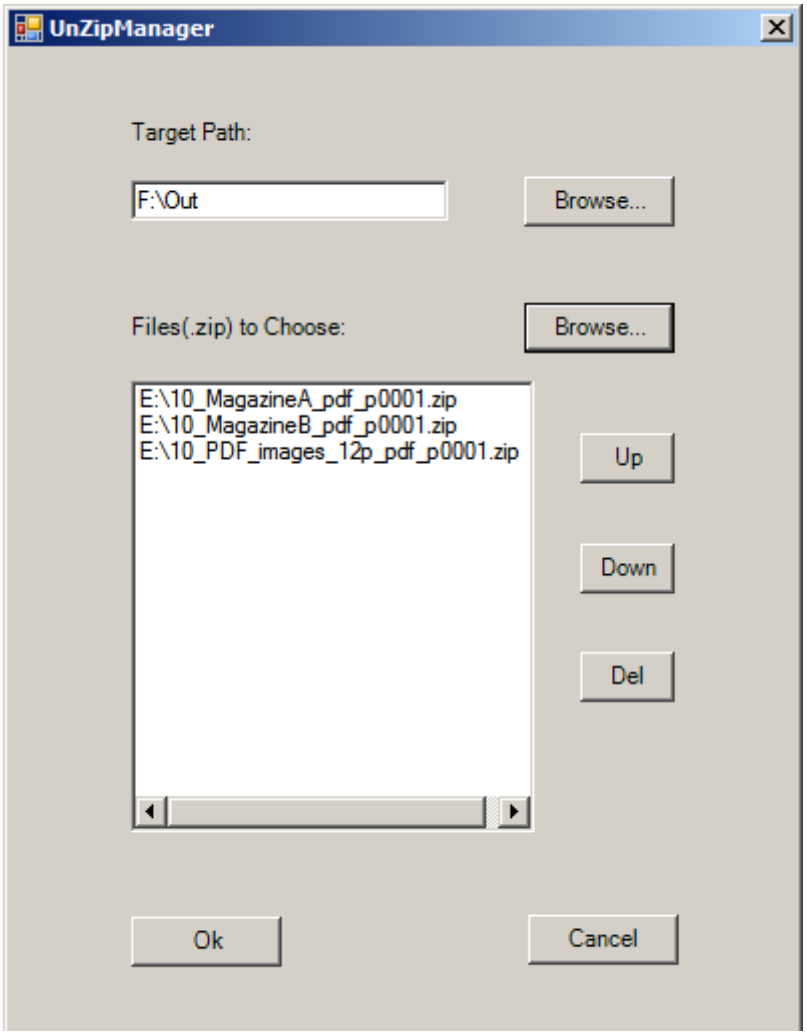


Figure 4-53

Note: *To use this tool, you need to install .NET Framework 3.5 or later version in your computer.*

2. Specify the target path. After the unzipping, a PhotoBook.exe file and related resource files and folders will be generated under this path.

3. Click **Browse** to locate the .zip files. You can open multiple .zip files, and if needed, click **Up** or **Down** to change their sequences, which effect the sequences of the PDF pages in the final preview.

4. Click **OK**.

5. Now you can visit the target path, and click the file PhotoBook.exe to start the preview.

Appendix E: Glossary of Terms

Prepress

In press industry, the prepress refers to the work before printing. That involves every procedure during processing a document generated by layout application prior to its going to the press to be printed.

PostScript

PostScript is shortened as PS. It is a page description language developed by Adobe in US. PS is the universally accepted page description standard in printing industry. So far its latest version is PostScript 3.

PDF

PDF is the acronym of Portable Document Format, which is a document description format rather than a language. The latest version is PDF 1.5 based on PS 3 technology which possesses the same description ability as PostScript 3 and fully meets the requirements of printing. PDF is Cross Platform, Navigational, Ultra-Printable, Ultra-Viewable and Smaller than other conventional document formats.

TIFF

In prepress environment, TIFF is a widely used format for storing image data.

EPS

EPS is acronym for Encapsulate PostScript, which is a standard file format for importing and exporting PostScript files. In many applications, image and text information can be output in the form of EPS. The purpose of an EPS file is to be included in other pages, scaled and moved etc. like an image, but the contents of the EPS cannot be modified. EPS is the subset of PostScript, and is used for describing page contents.

Normalizing

To convert some documents that are not single-page PDF format into documents of PDF. Without particular requirements, the converted PDF documents will have the same printing results as the original documents. The particular requirements refer to requirements such as lowering the image resolution, etc.

NORM

NORM is the acronym of Normalizing Once, RIP Many. A job must first be normalized. The converted PDF has nothing to do with devices. Ripping will be processed for each output operation to ensure printing quality.

Imposition

In producing a publication with multiple pages, each page is imposed on one sheet following a special order. When the sheet is printed out, it will be folded to represent the intention of designer.

OPI

OPI is the acronym of Open Prepress Interface. In graphic design, if the size of some image is too large, user can replace the large image with a smaller one, and in the process before printing, replace the smaller image with the original one to have a good printing effect. The process of replacing the smaller image with the large image is OPI.

Trapping

Trapping is a way to compensate for mis-registration, and it’s also a criterion that many people use to judge "quality" printing. Trapping is the intentional overlapping of colors that adjoin each other to prevent the stock or substrate from showing through when maintaining tight register is difficult or impossible.

RIP

Abbreviation for raster image processing, a hardware and/or software system that translates page description command into bitmaps for output to a laser printer or imagesetter.

Color Management

In prepress environment, color management refers to the transformation from user color space to device color space.

Proofing

Proofing is to preview the effect of the printing material to ensure the effect of the final products. Proofing includes sheet proofing, imposition proofing and color proofing. Sheet proofing is for checking the content on a sheet, such as fonts, figures and images; Imposition proofing is for checking the result of imposition; Color proofing is for checking the color effect on a sheet.

Print

In prepress environment, printing is a special form of sheet proofing.

Output

In printing industry, output refers to the final output, which sends the raster image to output devices. Different output devices generate different results. The output of imagesetter is film, while that of CTP is plate.

Output Device

Output device refers to the device for final output.

Client

Client is the program that uses the functions provided by ElecRoc Server to process a job. A user can accomplish all works related to a workflow through Client. Client may be installed in a PC or Mac that is in the same domain or group with Server. Founder ElecRoc allows more than one Client working at the same time.

Server

Server refers to the service programs on one PC or a group of PC with high configuration. These PCs are networked in a local area network. Server is able to accomplish the prepress output operation of the jobs that are submitted by users. Server has the Internet service function, which enables each Client to communicate with server. Server also has a SQL database, which, on one hand, controls the operations of jobs, on the other hand, saves all the operation information and provides reports for users’ work.

Job Ticket (JT)

Job ticket is a document that describes the process mode and settings of one or a series of operations. Job ticket is global and has nothing to do with a particular job. A job ticket can serve many jobs at the same time.

Job Ticket Processor (JTP)

Job ticket processors provide prepress processing functions. In Founder ElecRoc system,

there are many processors, such as PDF Generator, Imposition, Proofer and Output.

File

A file is the minimum data processing unit. The following types of files can be accepted by Founder ElecRoc workflow management system: PS, PDF, EPS, PRN, etc.

Job

Job is an aggregation of files that will be processed by system. All the operations are about job. In general, each one of the files in a job has relationship with each other. For example, all the files belong to the same transaction.

In Founder ElecRoc system, a job is the object of various processes. All the works are about jobs.

Process

Submitting the data of a job to a JT forms a process. A process is only aimed at the data of one job, while the data of one job can be processed by many processes.

Page

After normalizing, the page description document is divided into single pages. A page is a PDF document.

Sheet

The large piece of paper used for printing is a sheet. The Sheet in ElecRoc TPLEditor is the front side and back side of a signature.

Signature

One side of a sheet is a signature.

Section

To fold the signature according to the page number and content to form a section. Sections need to be assembled and bound to form a book.

DPI

Dots Per Inch describes the resolution of device. DPI refers to precision of laser beam. The higher the resolution, the thinner the laser beams. In printing the resolution of information on the output of a print job is a measure of the density of that information and is measured as dots or lines per linear measure.