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Training Manual

Wasatch

SoftRIP AE 6.0

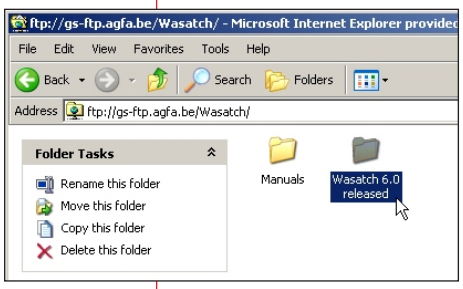
AGFA

1. Installing the Wasatch SoftRIP AE.

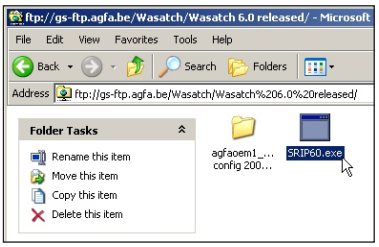
Before installing the software, obtain your registration codes from www.wasatch.com or fax the form, included in the software box, to 001 801-575-8075. The serial number of the Wasatch SoftRIP is displayed on the front side of software box. When you obtained the registration codes, the installation can be started.

Make sure that the Wasatch version you've received is in fact the Agfa Edition (AE) of the SoftRIP. Check the CD-rom: if an Agfa label is present, you can use the CD-rom for the installation. If there's no Agfa logo on the disc, you should download the Agfa version from ftp://ana:purna@gs-ftp.agfa.be/wasatch. Execute the SRIP60.exe file that you can find in the "Wasatch 6.0 released" folder. After the installation, the Wasatch SoftRIP will be launched and the registration window will pop up. Enter the registration codes. The software will confirm the validation of the codes and it will ask you to restart the program. Re-launch the application and select your correct type of the :Anapurna engine (L or XL).
The last step to complete the installation, is to copy the Agfa standard settings into the Wasatch SoftRIP folder. You can find these settings in the Wasatch 6.0 released folder. Copy the agfaoem1 folder into x:\wwrip6\configurations and restart the RIP.

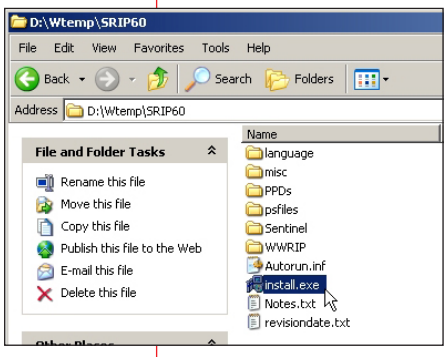
1.1 Step by step.



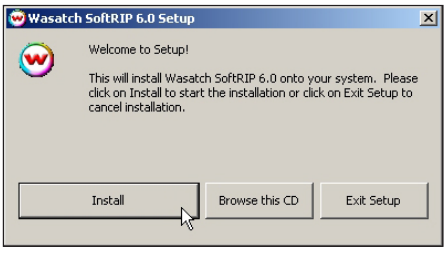
- Insert the CD-rom or download the software from ftp://ana:purna@gs-ftp.agfa.be/wasatch.
- If you download the software, you have to execute the SRIP60.exe file. Winzip will ask you for a location to unpack the zipped file in a /Wtemp folder.

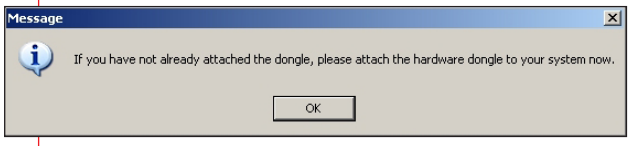


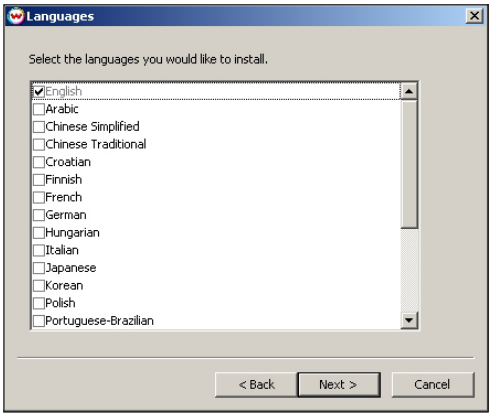
- When the files are unzipped, you will find an install.exe file in the /Wtemp/SRIP60. If you run this file, the Wasatch installation window will pop up. When you're using the CD-rom, this window will automatically pop up.

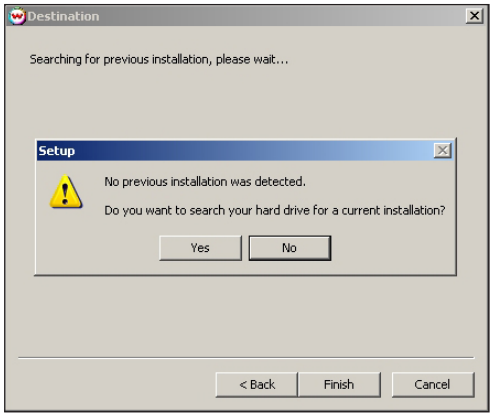


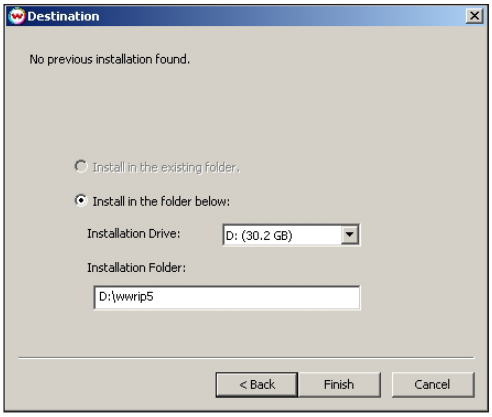
- After clicking on the install button, a message window will open asking you to attach the hardware key (dongle). Select 1 or more languages in which you want Wasatch to run. After you've chosen the right language, Wasatch will tell you that there was no previous version of the SoftRIP found and will ask you if it has to search for one. Choose 'no', otherwise the installation software will start scanning your entire hard drive.



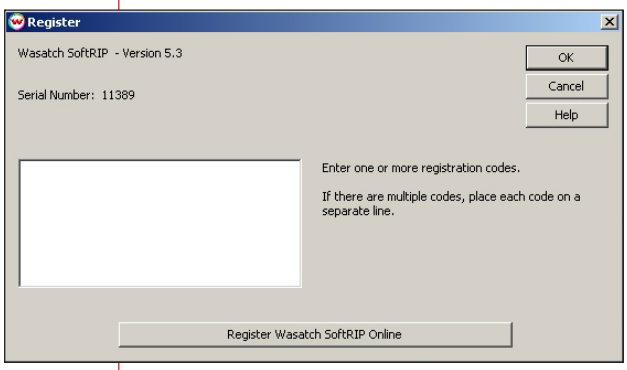


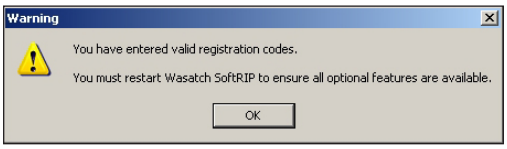




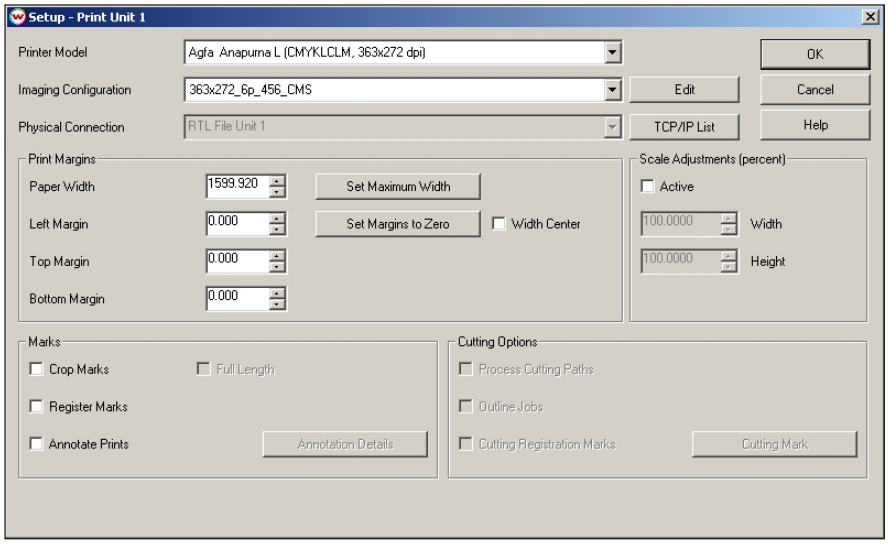


- Select a destination folder and drive. The installation will start, copying files onto the destination drive and into the destination folder. You will also find two new folders on the root directory of the defined drive: 'incoming' and 'psfiles'. The second one contains postscript files for various calibration tools: dtp41, eyeone,...
- Run the Wasatch SoftRIP for the first time, choosing the Wasatch SoftRIP icon in the start menu of Windows.
- The SoftRIP will ask you to enter the registration codes that you obtained from Wasatch.



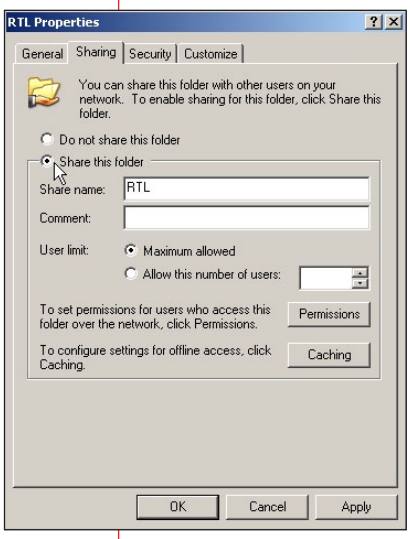


- If correct codes are entered, a window will pop up with the message that valid codes were entered and the Software has to be restarted.
- When you start the Wasatch SoftRIP for the second time, the setup will automatically appear asking you to initialize your engine : Anapurna L or XL. Choose the right engine and exit the software.
- You will see that Wastach will have generated a new folder 'configurations' in the destination folder 'wwrip6'. In the 'configurations' folder you can find the 'agfaoem1' folder. This is the place where the imaging configurations are saved. You will see that only the 'none' configuration will be present. Copy the Agfa standard configurations, available on the ftp-server, in this folder.
- Restart the Wasatch SoftRIP.

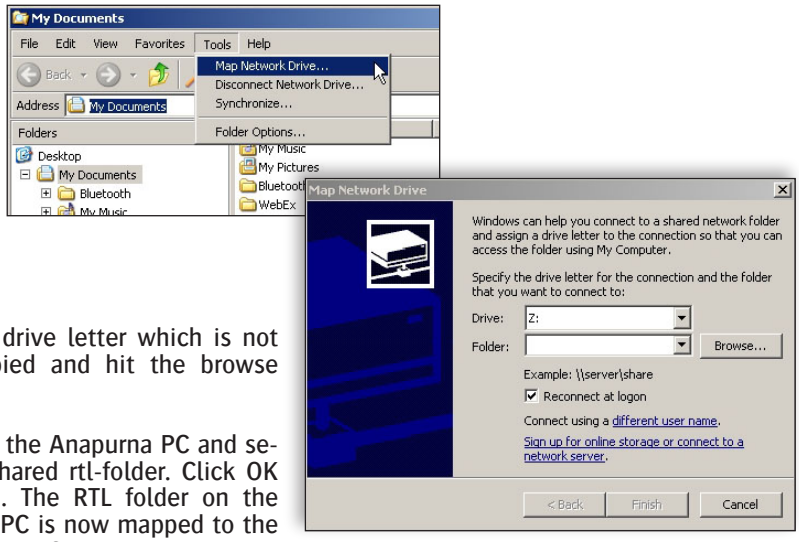


1.2 Mapping a network drive.

The Wasatch SoftRIP will not directly communicate with the :Anapurna engines. RTL-files will be sent to the :Anapurna Control Panel, which will operate as a print queue. The easiest way to work is to generate a shared network folder on the :Anapura PC, which will be used as an output folder for the Wasatch SoftRIP.



- Create a folder called “RTL” on the Anapurna PC. Right click on the folder and choose Properties. The properties window will pop up where you can share the folder.
- On the Wasatch RIP PC you have to create a mapped networked drive to the RTL-folder on the Anapurna PC: open windows explorer and go to “Tools\Map Network Drive”.



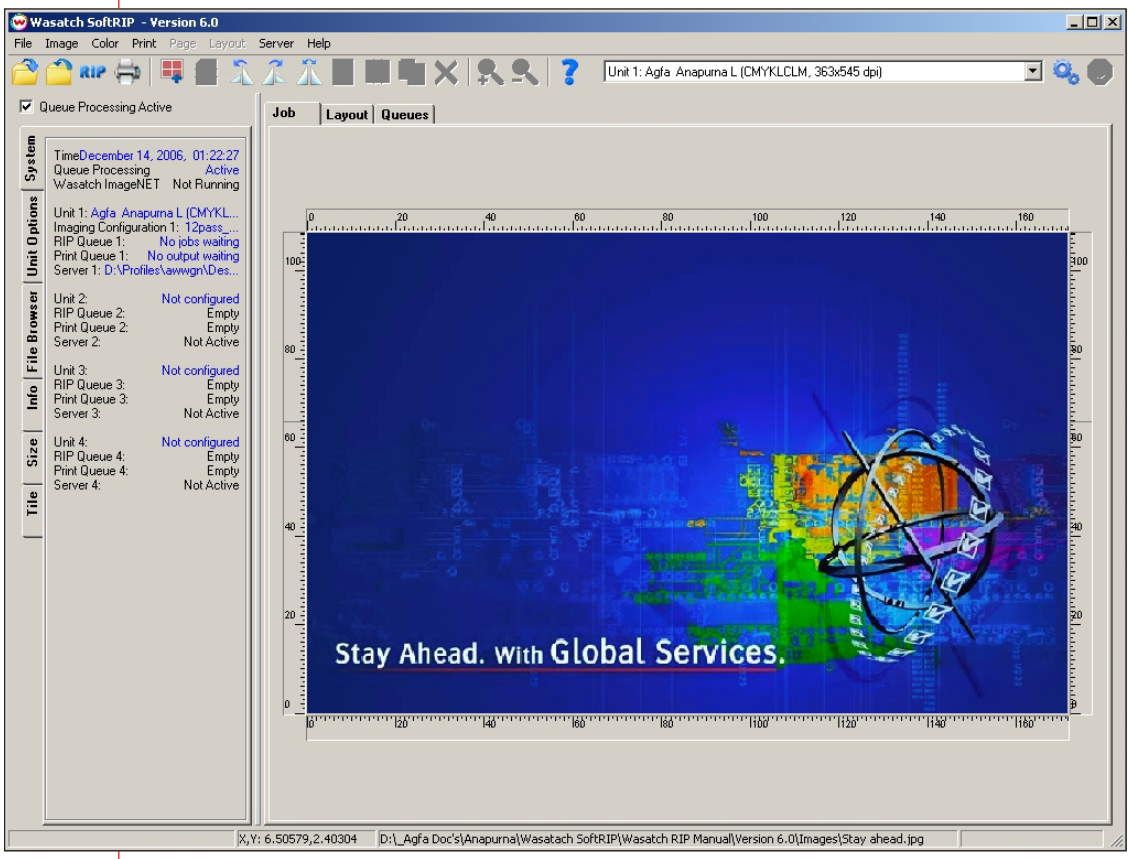
- Choose a drive letter which is not yet occupied and hit the browse button.
- Browse to the Anapurna PC and select the shared rtl-folder. Click OK and finish. The RTL folder on the Anapurna PC is now mapped to the Wasatch RIP PC.

- As an alternative you can also enter the IP address into the folder drop down list. eg. \\10.232.173.20\RTL.
- Start up the Wasatch SoftRip and choose “Setup” out of the print menu. Select an imaging configuration (it doesn’t really matter which) and click the edit button beside it. The Imaging configuration window will pop up where you have to select the option ‘properties’. On the bottom of this window, you can select the mapped drive volume. Choose the mapped drive and close all open windows. Wasatch will automatically set the same output drive for all the different image configurations (see 5.2.2).

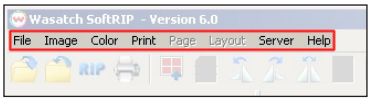
2. Main Window - overview.

2.1 Different parts.

SoftRIP's Main Screen is briefly described below. These menus and controls are covered in more detail throughout the manual.



a. Menu items.



File: Use the File menu for opening files saved on disk or network. Files opened here are automatically displayed as screen previews when the Job tab is active, or imported to the current layout when the Layout tab is active. This menu also provides access to the Print Archive tool, and the Preferences window for changing optional settings.

Image: The Image menu contains tools for modifying the image currently open in the Job tab, or currently selected in the Layout tab.

Color: The Color menu contains key SoftRIP color tools for managing spot colors, color gamut, correction curves etc.

Print: Access to printer and Imaging Configuration set up, RIP/processing options and job queues.

Page: When active, enables switching among different pages of a multi-page PostScript file.

Layout: The Layout menu accesses automated Smart NestingTM tools, and other features to speed the process of creating efficient layouts.

Server: Set up and activation for Hot Folders and Wasatch ImageNET.

Language: When enabled, the Language menu selects among non-English languages.

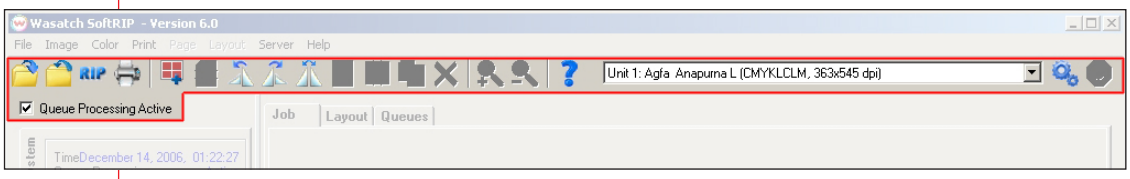
Help: Accesses online Help, program info, Service Data Uploader and online product registration.

b. Universal Controls.

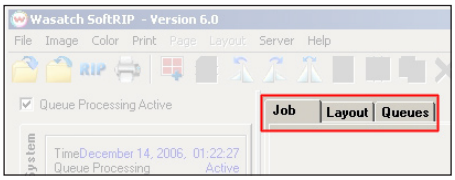
Unit Window: Selects the printer to use for current job or layout processes. SoftRIP drives up to four printers.

Queue Processing Active: Unchecking this checkbox will completely shut down all new jobs from processing in the queues! Under normal conditions, this box is checked. When unchecked it flashes red. All processing stops when Queue Processing Active is unchecked. Uncheck the box to stop all printing in order to change system configurations or re-prioritize jobs.

Tool Bar: Buttons on the tool bar are active or grayed-out depending on various selections of the tabs found below them on the main window. All tool bar operations can also be accessed from menu selections within the program, and all are documented with tool tips.



c. Top tabs.



The tabs along the left and upper edges of the main window include many of the key file preparation and workflow tools in SoftRIP. Based on your top tab selections, tabs along the left of the screen may appear, disappear, or modify.

Job Tab: When the Job tab is selected, you can open an individual input file, or job, to be prepared for printing. With the Job tab selected, a full set of options for sizing, cropping, scaling, and tiling appear.

Layout Tab: When the Layout tab is selected, you use the full width of your media as a digital canvas upon which you can prepare images to print as part of your complete production run. With this workflow, you can easily drag and drop images into the layout, manipulate them, and nest them to fit efficiently as part of your overall print run. The entire Layout can then be submitted to RIP and print.

Queues Tab: When the Queues tab is selected the view becomes the master production control station of the RIP. On the Queues tab, all RIP and Print queues are displayed with the status of each job updated in real time.

d. Left tabs.

System Tab: Displays the status of all printers and job queues.

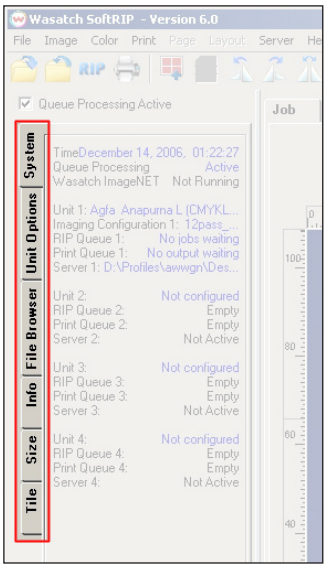
Unit Options Tab: Includes settings for immediate or delayed nesting printing, annotations, crop marks, and registration marks.

File Browser Tab: Lets you quickly drag and drop files into the Job, Layout, or Queues windows.

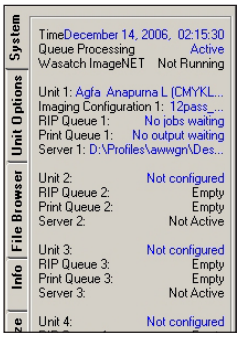
Info Tab: Displays information about an open job, including real-time values for input and output color at any point on the previewed image.

Size Tab: Controls sizing, cropping, rotation, and mirroring for the current image on the Job tab.

Tile Tab: Provides controls for “paneling” or “tiling” print jobs that are too wide for the current printer.



3. Left Tabs.

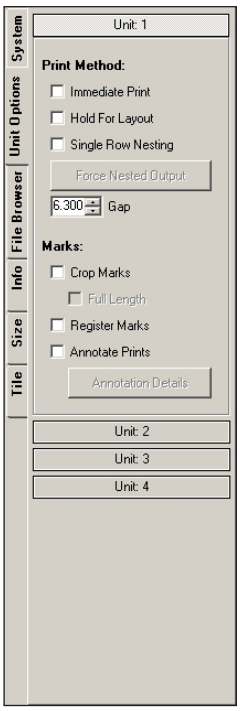


3.1 System tab.

The system tab displays the status of all printers and job queues. You can define up to 4 different engine units in the Wasatch SoftRIP. You can, for example, generate a new printing device for every quality mode on the :Anapurna engine:

- 6 pass printing mode
- 8 pass printing mode
- 12 pass printing mode
- 16 pass printing mode

3.2 Unit Options tab.



a. Unit Options

Some key print unit settings are located on the main window Unit Options tab to for easy access. These settings are print unit specific, and you can change between units by clicking the unit number buttons on the tab itself. The controls on this tab are detailed below.

b. Immediate Print

Checking the Immediate Print box will start sending output to the printer as soon as the RIP begins producing dots. When this box is unchecked, printing will begin only after the entire image has finished RIPing. With immediate print, the device may pause during printing while it waits for data from the RIP. With some printers this may cause problems with print quality. Immediate print is not an available option when printing layouts.

c. Hold For Layout

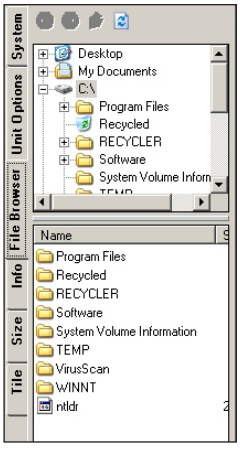
When Hold For Layout is checked, jobs will not begin printing from the Print Queue until they are sent to print as part of a layout. Jobs held can then be included in layouts individually, or you can click the Layout Queued Job(s) button above the Print Queue to send all jobs listed with quantities to print to the layout screen. Learn more about SoftRIP's time and media saving nesting options in the layout section of online help. Note that checking this control will only suppress printing of individual jobs; layouts will not be held from printing.

d. Single Row Nesting

This automated nesting feature helps to save media without requiring the user to trigger the printing process. Jobs sent to print will be held until enough images have been queued up to fill the width of the media. Setting a value in the Gap window will determine the distance left between nested images. To trigger jobs nested in the row to print before the full width is achieved, click the Force Nested Output button.

e. Marks and Annotations

The settings in the Marks section are also located on the Setup screen, and are detailed above.



3.3 File Browser tab.

Using the file browser tab, you can quickly search and open images. You can simply select an image in the file browser tab and drag onto the preview window. If an image does not require any file preparation, you can drag and drop it directly from the file browser tab to a RIP Queue. You will be asked whether or not you would like to generate a preview. If you select not to generate a preview, the image will display as "Preview not available" when added to a layout.

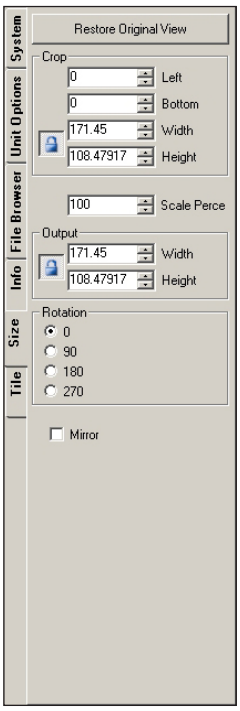
3.4 Info tab.

The info tab provides information about an open job. It displays: the path & name, size & creation date of the file. The Input/Output lines show color values at your cursor position on the preview image; it changes continuously as the cursor moves. The Input line shows exactly what type of input file is embedded at any specific point in your image. Wasatch SoftRIP can correct incoming Raster RGB, Raster CMYK, Vector RGB and Vector CMYK images independently, even when they are mixed on the same image. The Output line shows the equivalent values in the color space of the output device.
PostScript allows a single input file to express colors in several different ways. For example, a QuarkXpress page may have graphic design elements and spot color defined in Vector CMYK, but also contains embedded images from Adobe Photoshop defined as raster RGB images.

The Input/Output display tells you instantly what color spaces your incoming files contain or which parts of any one mixed-color model file are which. The Input line shows you the exact color specification in the original file prior to being touched by Wasatch color management, whether it is CIE, RGB, CMYK, or other. The Output line shows exact color at that point, which will result from the current Imaging Configuration.
If you are using ICC device profiles (the normal color management method within Wasatch SoftRIP), the "PCS, D50 CIE Lab" display shows the value of your color in the ICC "Profile Connection Space". This can be valuable for isolating color reproduction problems due to input and output ICC profiles.

Out of Gamut warning.
SoftRIP's Out of Gamut warning alerts you when a color simply can't be reproduced on your current output device. The Gamut display indicates "In Gamut" when a match is possible; it shows the expected Delta E error in red when a color is outside the printer's color range.

3.5 Size tab.



The Size tab contains several key features that scale and otherwise transform images prior to printing. The Size tab automatically appears on the Main Screen whenever a file is opened. These utilities are found on the Size tab: Sizing (or scaling), cropping, rotating and mirroring.

a. Scaling.

To enlarge or reduce an image, enter a new value in the window next to the Scale Percent heading. Your ENTER or TAB key activates the change. The new dimensions are displayed in the Width and Height windows in the Output area, while the original dimensions are displayed next to Width and Height in the Crop area. If your scaling percentage will produce an image larger than the printer's maximum output format, SoftRIP alerts you by marking the surplus area with a red and black flashing crosshatch. You must either reduce the scaling percentage, or use the Tiling feature.

Computing Scaling Percentage Automatically: SoftRIP will size an image if you enter the desired width or length of the final print in either the Width or Height windows in the Output area. For example, you can enter the printable width of your print media or one dimension of a light box or display hardware. Make sure the Constrain Proportions box to the left of the Width and Height boxes is checked, then press ENTER or TAB to activate the change.

The new percentage appears in the Scale Percent window, while the other dimension (either Width or Height) is displayed in the appropriate window. A cropping marquee also appears around the entire image (see Cropping, below). You only need

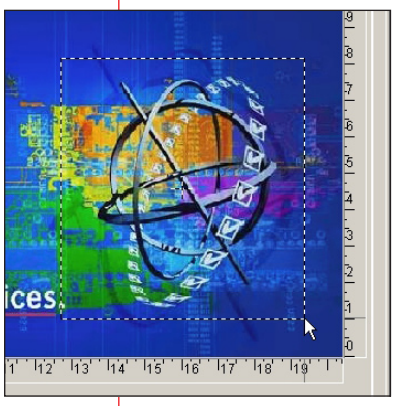
to enter one dimension in an Output window (Width or Height); if you attempt to enter a value in the other, SoftRIP activates the automatic scaling process. For automatic scaling to work, the Constrain Proportions box next to the Output windows must be checked.

b. Cropping.

This tool defines a smaller area of the original image and prints only that area. This is true cropping, because only the selected area will be RIP'd. This saves RIPing time and is an excellent tool for printing test strips for color evaluation. The cropping tool can also be used to magnify selected areas of the image (see below under Zoom into Crop Box).

Adjustment modes: There are two options for adjusting marquee borders: free or proportional. Free means that the marquee edge you select moves independently of other edges. Proportional means the width and length stay proportional to the original dimensions of the marquee. The mode of marquee adjustments is selected in the Constrain Proportions boxes, the same way that image width and height are locked during scaling. Check the Constrain Proportions boxes to select a proportional mode; uncheck them for free mode. You may also right-click inside of the marquee, which will open a popup menu (the other selections on this menu are described below). Selecting Constrain Proportions On corresponds to the proportional mode, and automatically places check marks in the boxes.

Left-click on the preview image: activate crop area.



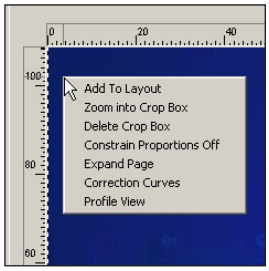
Activate the crop area by left-clicking anywhere in the image and dragging your mouse to create a dotted line "marquee" box. The marquee defines the area to print, or an area to zoom into. Re-position the borders of the cropping marquee by holding down the left mouse key and dragging. The Width and Height windows in the Crop area display the size of the marquee dimensions on the original image. The Width and Height windows in the Output area display the size of the crop marquee dimensions. Only the area inside the marquee will print.
Matching specific display dimension requirements: For more precise adjustments, enter new dimensions in either the Width or Height windows in the Output area. This must be done in the Free mode (Constrain Proportions turned off). The dimensions of the marquee will not change until you press ENTER or TAB.

Changing marquee position manually and numerically: The entire marquee area can be re-positioned by clicking in the centre of the marquee and dragging the marquee box. The position of the marquee's left and bottom edges are displayed in the windows labeled Left and Bottom in the Crop area. The numbers shown represent the distance in inches or centimeters, measured from the respective edge of the original image to the outside border of the marquee.

Change the marquee position more precisely by hand-entering new values in these windows. When you enter new numbers to position the marquee, the marquee will not move until the ENTER or TAB key is pressed.
When a crop marquee is "live" on an image preview, right clicking within the marquee launches the popup menu.

Right-click on the preview image: pop up menu.

Right-clicking on the image, will open a pop up menu which offers you the next options:

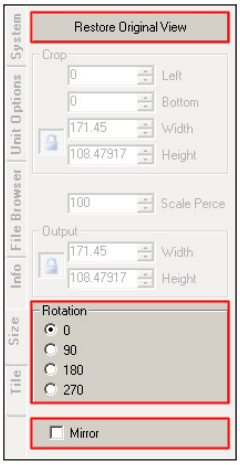


- Zoom Into Crop Box: eliminates areas outside the marquee and allows you to zero in on specific elements of the image. Especially useful for color correction and spot color replacement.
- Delete Crop Box: makes the marquee go away and resets the Crop and Output dimensions.
- Constrain Proportions On or Constrain Proportions Off: toggles between free and proportional repositioning of the marquee borders.

- Expand Page: places a white border around the edges of the image.
- Replace Spot Color: launches the Special Colors menu and spot color management features.
- Correction Curves: launches the Correction Curves menu.
- Profile View: launches the Profile View Utility.

c. Restore Original View.

This option takes you back to the original view of the image.



d. Rotating.

Rotating a landscape image 90° into a portrait format may allow you to print the image in a larger size without tiling. The other rotation degrees allow you to re-position an image that is upside down or otherwise incorrectly oriented. To select a rotation value, click the corresponding radio button. The effect is immediate (does not require pressing the ENTER or TAB key). Rotation in SoftRIP always works counter-clockwise and is not cumulative. Whatever value you select will be applied based on the original position of the image.

e. Mirroring.

This feature flips the image over. It is used primarily for printing backlit transparencies or other second surface applications. It is also used for images to be transferred to another substrate, such as fabric.

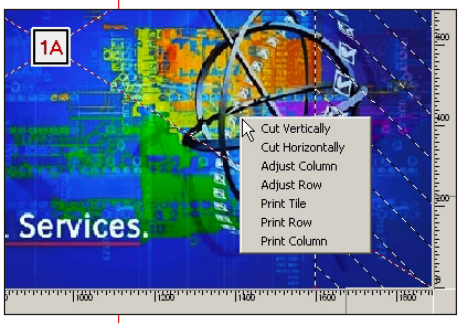
f. File Preparation Using the Layout Workflow

The Size tab is not accessible when the Layout tab is active. If you right click on an image on the Layout tab and select Size/Crop SoftRIP will transfer the image to an “Image from Layout” tab. In this view, the Size tab is enabled and file preparation tasks can be carried out. To accept changes and return the image to the Layout tab, click the Update Layout button. The image returned to the layout will automatically update with the changes.

3.6 Tile tab.

This tool is used to produce multi-page (multi-panel) enlargements of prints, where the desired output is wider than the width of the media or the printer.

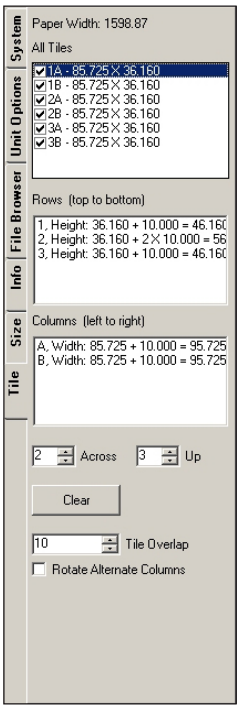
If the image is wider than the output device can print, the area that is unprintable is indicated on the screen by a flashing red hatch mark. The width of the output device depends on the kind of engine that’s installed: the :Anapurna L has a width of 1600 mm (63 inches) and the width of the :Anapurna XL is 2500mm (98,43 inches).



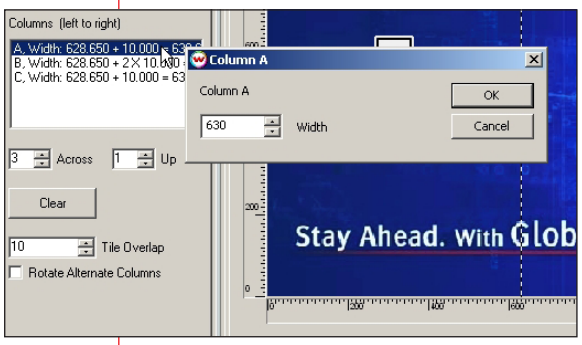
By selecting the Tile tab and by then right clicking on the image, you can launch the popup menu. When selecting ‘cut vertically’ or ‘cut horizontally’, you will split the job in the selected direction. A dotted line will appear, indicating the position of the tiling.

Precise numeric values for the width and height of columns and rows can be entered by selecting Adjust Column and Adjust Row.

If you want to reposition a tiling line, you can left-click and drag it on the preview. Right-clicking on a tiling line, will give you the option to delete it. You can also determine the tilling parts by using the settings in the tile tab.



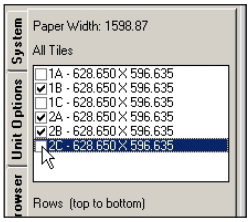
You enter the amount of tiling parts you want to become in the ‘across’ (horizontal) and ‘up’ (vertical) box. The ‘tile overlap’ box will determine how much the different tiling parts will overlap. This overlap represents the overprint of each tile, providing a safety area for later trimming and alignment of the prints. Note that the centre tile has two overlaps added (one for each side), while the other two tiles only have a single overlap, which will be printed on the edge that abuts another tile.



Above these settings, you get a read out of the actually width and height of the tiling parts. You can always alter these values by left-clicking on them. A measurement adjustment window will pop up that allows you to enter a precise width for that column of tiles.

If the ‘Rotate Alternate Columns’ box is checked, alternate columns of tiles will be rotated by 180 degrees. This is valuable with print modes that produce slightly different colors at right and left edges, reducing the visibility of this effect when tiled jobs are assembled. After tiles have been added to the RIP Queue, individual tiles can be opened for adjustment of their overlaps. The overlap adjustment controls are found at the bottom of the RIP Queue window for the individual tile (see 5.1).

You can select or deselect individual tiles to print by simply clicking on individual tiles with the left mouse button or on the corresponding check mark under All Tiles. Full rows or columns can be toggled by clicking the right mouse button on a tile, and selecting Print Row or Print Column. Tiles marked with a red X will not be printed.

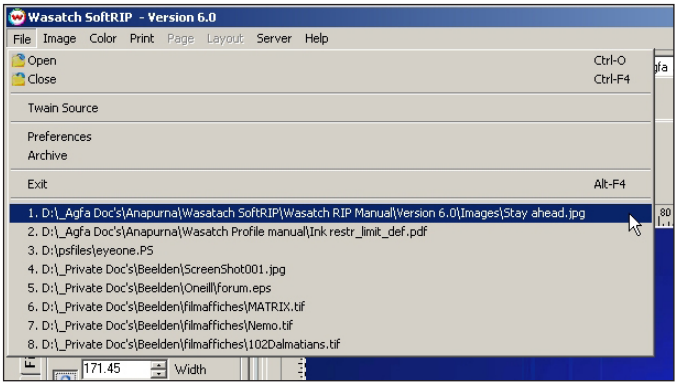


4. File Menu.

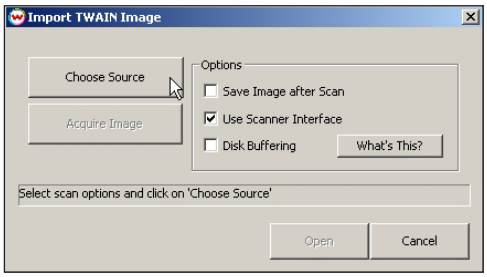
Besides opening and closing files, the file menu also gives you the possibility to :

- open a twain source;
- define preferences;
- archive jobs.

The previous 8 jobs are displayed at the bottom of the menu.



4.1 Twain Source.



With this feature, you can capture images from Twain-compliant scanners and digital cameras directly from within Wasatch SoftRIP. Twain Source is located under the File menu of Wasatch SoftRIP. Clicking on Twain Source will launch a window from which you can import scans.

- Save image after scan.
  This allows you to save the scanned file to a TIFF file in a directory of your choice. (Default is off.)
- Use scanner interface.
  If your scanner allows it, this option forces the scanner to start scanning using its default settings. In most cases, you will want to use the scanner's interface to setup the scan. (Default is on.)
- Disk buffering.
  If your scanner allows it, this option allows you to scan in images that are larger than may fit in your physical memory. This increases the scanning speed for large images. Scanners which do not support this feature may fail when trying to scan using this option. (Default is off.)

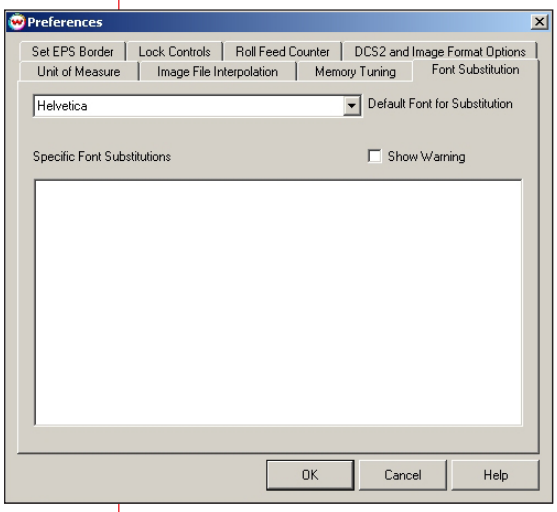
Click on Choose Source, to select your scanner/digital camera. After you select the source file, click on Acquire Image. If 'Save image after scan' is checked, you will be asked to provide a filename into which the scanned image will be saved.

The scanner/digital camera interface unique to your scanner/digital camera should then be launched. For guidance on using this interface, consult the user manual for your scanner/digital camera. After the scanner/digital camera is finished transferring the image, click on Open to open the scanned image directly into SoftRIP.

4.2 Preferences

The Preferences window gathers control of a variety of system settings under the File menu. Below is a listing of the settings included in Preferences. Note that prior to SoftRIP version 6.0 these controls were located in the Options menu.

- DCS and Image Format Options
  This control allows you to specify how certain file formats (DCS2, PSD, and TIFF) will be interpreted.
- Edit Plate Color Table
  This tool allows you to reassigning the mapping of PlateColor when making color separations in application software. See the Color Separations section of online help for more information on this setting.



Font Substitution

This window controls the way the RIP performs substitutions for unrecognized fonts requested by a PostScript file.

When a font request is unresolved, the RIP looks first in the Specific Font Substitutions window. If the font is found there, the specified substitution is performed. If the font is not found there, the font specified in Default Font will be used. The Default Font can be chosen from all the fonts installed on Wasatch SoftRIP.

It is particularly important that fonts using large character sets, such as Japanese, are always substituted by other fonts that contain similarly large character sets. If you allow Helvetica to be substituted for an Asian font, you will lose a lot of characters.

Anytime the RIP performs a font substitution, a line for that substitution is placed in the Specific Font Substitutions window. This is done whenever SoftRIP previews a file or processes for output. After previewing, clicking on any line in the Specific Font Substitutions window allows it to be edited.

This window displays the current substitution and a list of all the fonts installed on Wasatch SoftRIP. You may select a new font to be substituted or delete a specific substitution by clicking that button.

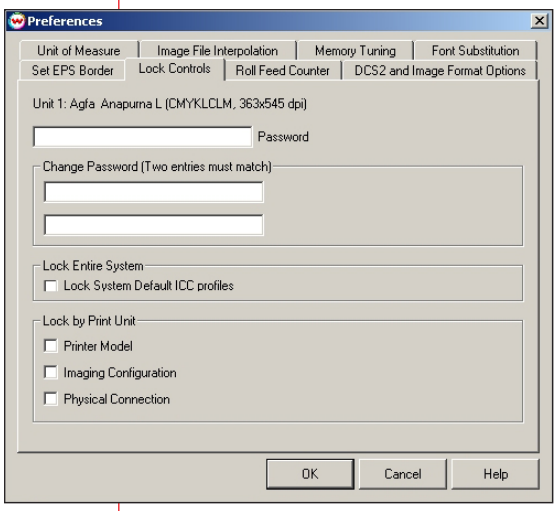
Important note for Asian typesetting users: When choosing substitutions, try to match the Encoding extension of the original. That is -83pv-RKSJ-H in most Japanese files from Macintosh.

Image File Interpolation

When bicubic interpolation is enabled, incoming raster images (such as TIFF and PSD) are average point-sampled, to help reduce jaggy edges.

Lock Controls

Lock controls allows you to password protect setup and color settings in SoftRIP. SoftRIP's Set Up menu allows you to select multiple print modes for most printers, as well as multiple combinations of inks and substrate. This creates the potential for wide variations in color and image quality behaviors, especially in shops in which many users share SoftRIP. SoftRIP's locking key controls provide some control for this problem.



Checking Lock System Default ICC Profiles locks that window. This lock can also be enabled or disabled with the Lock button on the System Default ICC Profiles window.

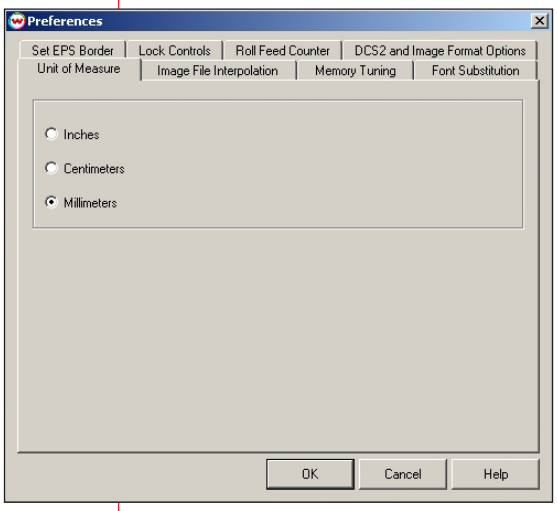
Checking Lock by Print Unit boxes affects the current print unit as follows:

- Printer Model locks both the Properties button and Printer Model on the Set Up screen.
- Imaging Configuration locks the Imaging Configuration selection on the Set Up screen.
- Physical Connection locks that control on the Set Up screen.

Changes to these settings can only be made if a valid password has been entered in the password field. Otherwise, the OK button will issue a warning, with no other effect. If a valid password has been entered, and a new password has been entered identically in the Change Password box, the new password will take effect.

When Wasatch SoftRIP is installed, the password is 'pass'. If you lose or forget your password, contact Wasatch customer service at 'wct@wasatchinc.com' for instructions on resetting to 'pass'. This password protection will discourage casual resetting of the controls, but it is not secure against even the most casual 'hacking'.

The password set in this window also controls the Lock Imaging Configuration window which is launched from the Lock/Unlock button on the Imaging Configuration screen.
Imaging Configurations are shipped “pre-locked”. You will not be able to make changes to the Configurations shipped with SoftRIP. When you modify an Imaging Configuration and rename it, you create a new Configuration that can be Locked or Unlocked.
NOTE: Imaging Configurations are shipped “pre-locked”, meaning that you will not be able to make changes to the Configurations that ship with SoftRIP. When you modify an Imaging Configuration and rename it, you are creating a new configuration that can then be Locked or Unlocked.



- **Memory Tuning**
  This control allows you to specify the amount of system resources given to each RIP process and set the number of RIP processes that can be launched simultaneously.
- **Roll Feed Counter**
  This tool helps you to keep track of how much media has been printed through the RIP, and determine if you have sufficient media to complete queued jobs.
- **Set EPS Border**
  Since EPS images do not have a defined PostScript page size, you can add a (white) border to these images by specifying a value here.
- **Unit of Measure**
  Set the unit of measure as Inches, Centimeters, or Millimeters. This setting is global for all settings in SoftRIP, unless specified otherwise.

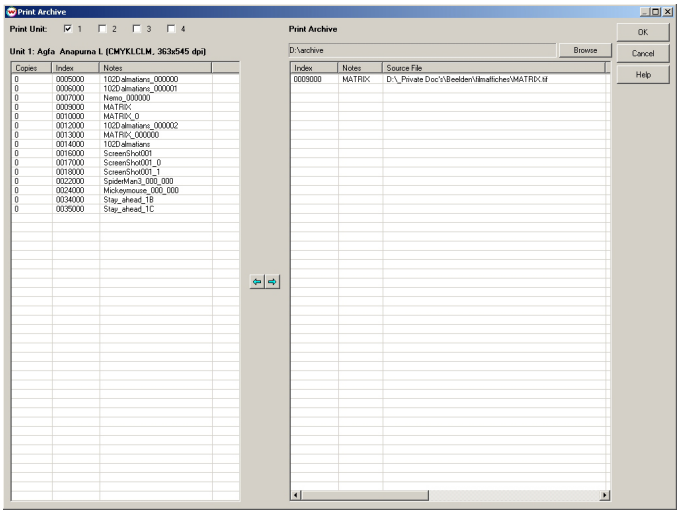
4.3 Archive

a. Introduction.

The Print Archive is a utility designed to back up RIP’d files to other drives. Rip’d images are very large files and can take up a significant portion of your hard drive. Since the RIP process can be time consuming, it is often desirable to keep the RIP’d files so that reprinting can be done quickly, without the need to re-RIP the image file.

b. Running the Print Archive.

The Print Archive is accessed by selecting Archive undcer the File menu. When you click on Archive, the main Print Archive screen will be displayed.



c. Window Layout.

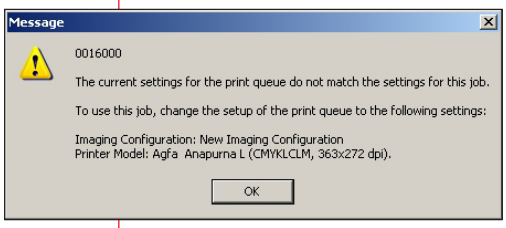
The check buttons in the upper left corner of the window correspond to each of the 4 print units. Check only the units you want displayed. The four tables on the left side of the window correspond to the four print units and shows the jobs currently in

each queue. The tables on the right side of the window show the jobs in the archive folder. The window above the archive table shows the folder where the archived jobs will be stored. The Browse button allows you to select the archive folder.

d. Operation.

Select the jobs you would like to copy by clicking on them. If you hold down CTRL while you select a job, multiple jobs will be selected. To select a range of jobs, click on the first job, hold down SHIFT, and click on the last job.

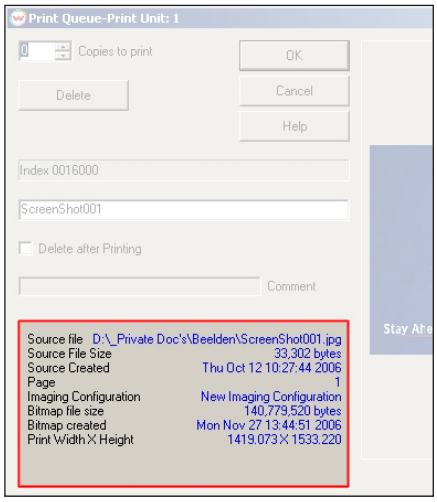
To copy jobs to the archive, click the right-pointing arrow next to the print queue you would like to copy from. To copy jobs from the Print Archive, click the left-pointing arrow next to the print queue you would like to copy to. You can also drag-and-drop items between the print queues and the archive.



When you copy jobs from the archive back to a print queue, you may be presented with an error message. This indicates that the Print Queue is no longer set up as it was when you originally copied the files.

Before you can re-copy the job for use, you will need to set up your Printer Model and Imaging Configuration to the same printer model and configuration that was used when the job was originally RIP'd.

To aid you in doing so, the original printer model and imaging configuration are displayed in this message.



To remove jobs from either the Print Archive or the print queues, select the jobs you would like to remove. You can either press the Delete key on the keyboard or click the right mouse button, then click on Delete Jobs.

To view a job's properties, double-click on the job in the rip queue or click the right mouse button, then click on Job Properties. The job properties window shows you a preview of the job (if available) and file information. It also allows you to Delete the job or rename the job. If the job is in a location that is read-only (such as a CD-ROM), the Delete button and the notes field will be grayed out. After you have organized your jobs, click on OK. The jobs will then be copied to the appropriate locations. A progress bar will show up while the copy operation is taking place.

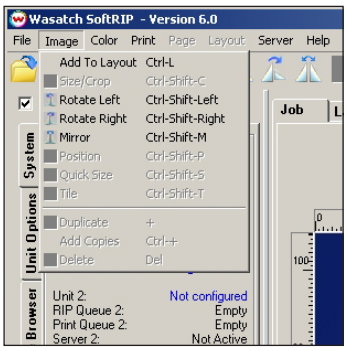
WARNING: RIP'd jobs can be huge, and may take several minutes to copy! Do not attempt to close the window while the progress bar is present (even if it may not appear to be moving). Doing so risks corrupting your files!

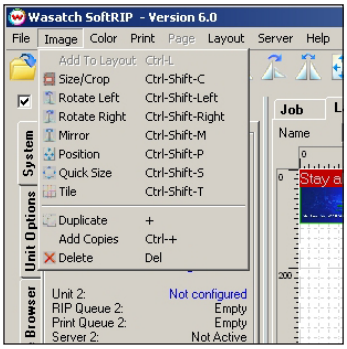
e. :Anapurna archive.

When printing on the :Anapurna, RTL-files will be generated and copied unto the Anapurna's hard-drive. Making a backup of these RTL-files, is also a way to archive your RIP'd data.

5. Image Menu.

Depending on the modus (Job or layout) where you're in, different kind of features will be enabled or disabled. The job mode will enable the features 'add to layout', 'rotate left', 'rotate right' and 'mirror. When you're working in a layout and you've selected an image, only the 'add to layout" option will be grayed out.





5.1 Add to Layout (job mode).

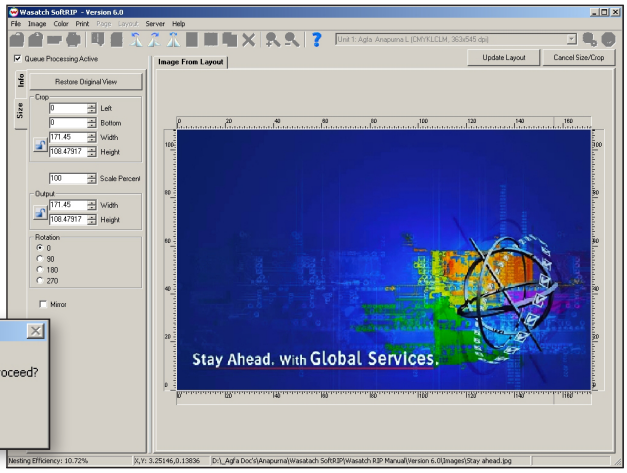
When you're editing an image in the job modus, you can choose to add this image to a manual layout. You will see that the image will appear onto the layout grid, that you can access by selecting the layout tab.

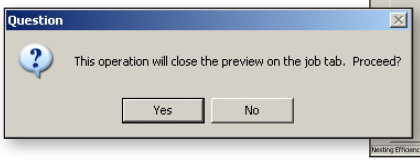
Use this feature if you want to combine multiple images into one ripping job. The usage of the manual layout settup will be further discussed in the chapter Manual Print Layout (see x.x).

5.2 Size/Crop (layout mode).

When you're working the layout mode, the size/crop feature will give you the possibility to alter an image that was already added to a layout.

When you select the size/crop option when there is still an image open in the job mode, Wasatch will ask you to close this image. A new 'image from layout' tab will pop up and the rescaling settings will become accessible on the left side. After editing the image, click 'update layout' and the new settings will be applied on the selected image.



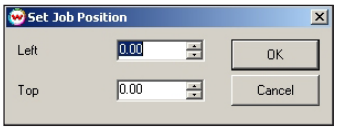


5.3 Rotate and Mirror (job and layout mode).

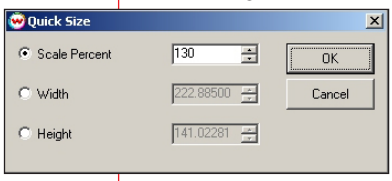
The features 'rotate left', 'rotate right' and 'mirror' will you allow to change your image as such. In the job mode, the image that is open will be altered. If you're working in a layout mode, you will change the image that has been selected.

5.4 Position (layout mode).

Allows you to position your image onto the layout grid, using the 'set job position' screen.



5.5 Quick Size (layout mode).



The quick size window will pop up if you select this feature. You can quickly change the dimension of your selected image in a proportional way, using scale percentage or changing the width or heigth of your image. The preview of your image will automatically be updated by clicking OK.

5.6 Tile (layout mode).

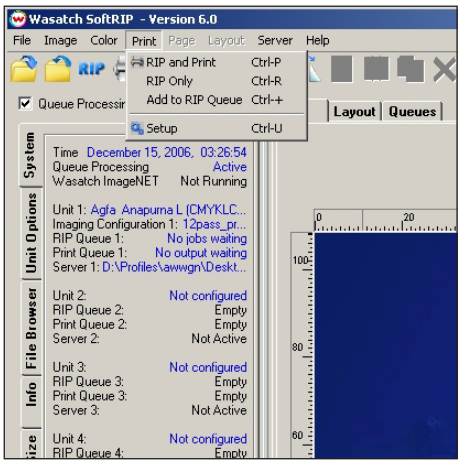
When you've already added an image to a layout, you still can apply the tiling function by selecting Tile in the image menu. The 'image from layout' window will pop up, displaying the tile option in the left tab. The usage of tiling is discussed in the Left Tabs chapter (see x.x).

5.7 Duplicate, Add Copies, Delete (layout mode).

If you use the duplicate feature in the layout mode, an exact copy of the selected image will appear in the preview screen. If you want more then one extra copy, you can select the 'Add Copies' option. You will be asked to enter the number of copies you want to add. Delete, will delete the image that has been selected.

6. Print Menu.

The Print Menu gives you the choice between different output options:

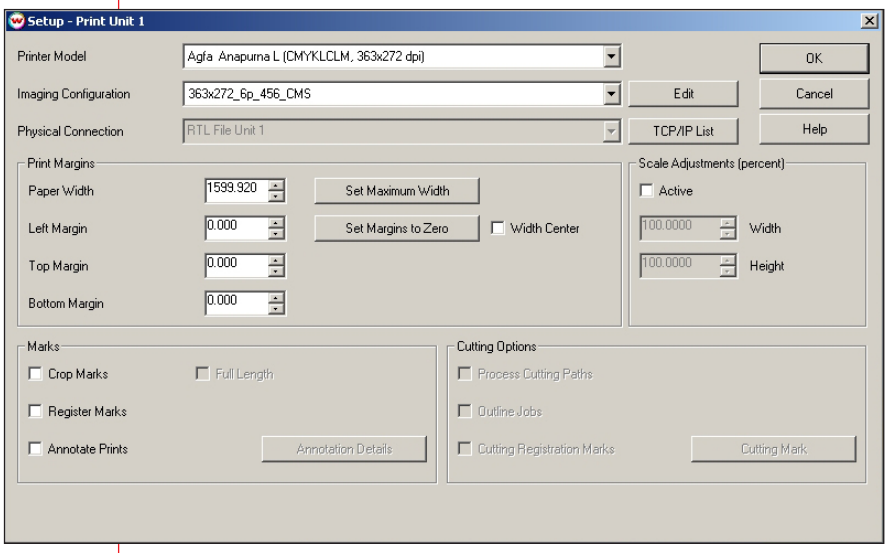


- RIP AND PRINT.
  A PostScript Interpreter bar launches on your task bar during RIPing, then a Print Spooler bar. Clicking on these bars opens windows that provide information regarding the progress of the job.
- RIP ONLY.
  To RIP a job without printing it, select RIP ONLY from the Print menu. The job will be RIP'd and added to both the RIP and Print Queue listings on the Master Queues screen (more below).
- ADD TO RIP QUEUE.
  To add a job to the RIP Queue to be RIP'd later, select ADD TO RIP QUEUE from the Print menu. It will be added to the RIP Queue but not RIP'd.

6.1 Setup (the setup screen).

The Setup screen is the window where you select the Printer Model and Imaging Configuration. Further controls related to both the printer and the Imaging Configuration are accessed from the Edit button next to Imaging Configurations. Those features are described in Imaging Configurations.

Launch the Setup screen from the Print menu at the top of the Main Screen. After selecting the printer model (:Anapurna L of XL), you can choose the correct Image Configuration. Working with an :Anapurna engine, the Physical Connection box will be grayed out and will display 'RTL Files Unit x'. You don't have to define a TCP/IP location, because the :Anapurna is not physical connected to the Wasatch SoftRIP. You can define the path of the output folder in the properties option of the 'Imaging Configuration' window. You should share a network folder on the :Anapurna PC so the RTL-files will be written directly to the engine's PC.
Several other important controls are found on the Setup screen:



a. Print Margins.

- Paper Width : The Paper Width control normally specifies the maximum print width for the current printer, but you may manually enter a smaller number. This practice is recommended to make sure Auto Nesting works properly with narrow media rolls.
- Left, Top & Bottom Margin : Entering values for the Left, Top and Bottom margins moves the image in the specified direction when printing. Printing on

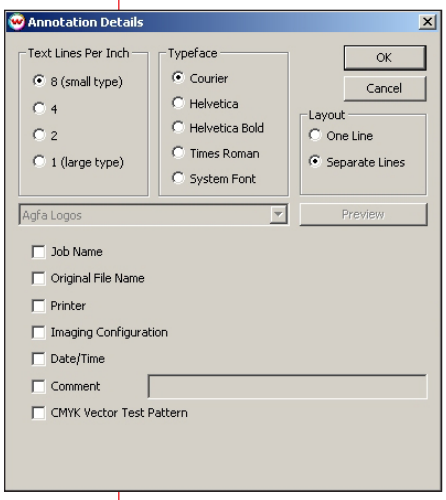
the :Anapurna, these settings are not applicable because Wasatch will be outputting RTL-files. The settings will on be applied when a printer is physically connected to the SoftRIP.

b. Scale Adjustments (percent).

- Scale adjustments : These controls are used to associate small, precise scale factors with given Print Units. These scale factors are intended to compensate for distortions that occur with various specialized printing processes.

c. Marks.

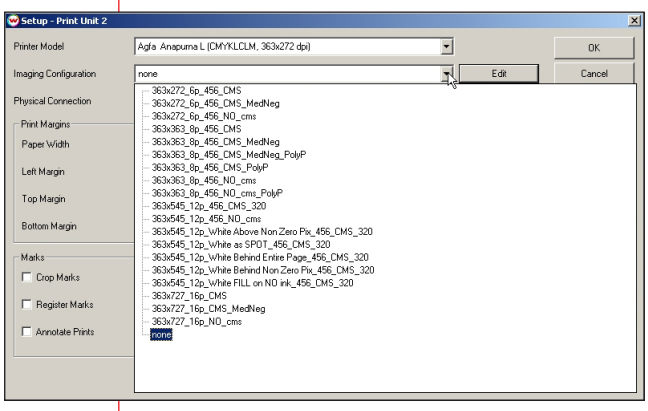
- Crop Marks : Checking Crop Marks places corner marks on all prints, in order to assist trimming. In the case of tiled jobs, these marks indicate the overlap gap and the cut lines. Checking the Full Length option extends crop marks as a hairline across the image to allow easier cutting. For tiled images, the trim is printed as a hairline and the gap overlap is indicated by a dashed line.
- Register Marks : Checking Register Marks will cause such marks to be printed. These can be very useful in situations where Wasatch SoftRIP is used to create color separations.



- Annotate Prints : Checking Annotate Prints causes extra information about your jobs to be printed at the foot of those jobs. Pressing Annotation Details launches the Annotation Details window. For most high-resolution inkjet printers, printing at 8 lines per inch (small type), will produce clear text and also conserve paper. For lower resolution print modes, a smaller number of lines per inch with larger type may be preferable. Up to six lines of information may be printed, in one of four different typefaces. Selecting One Line prints all information on a single line if possible.
  A message may be entered in the Unit Comment window describing job conditions or other information. In addition a Job Comment message can be added in the RIP Queue editing window as described in that section. Both comments will print when text is entered in the respective windows.
- CMYK Vector Test Pattern : Checking this box adds the CMYK test pattern to the printed annotation data. This pattern has been designed so that it is subjected to exactly the same CMYK vector color management as the main image. This is critical to quality assurance for color workflows that involve simulation.
- Cutting Options.
  Cutting Options Settings : The settings in the lower right sector of the Setup screen control cutting functions when SoftRIP's optional Contour Cutting feature has been enabled.

6.2 Editing Image Configurations (The Imaging Configuration Screen).

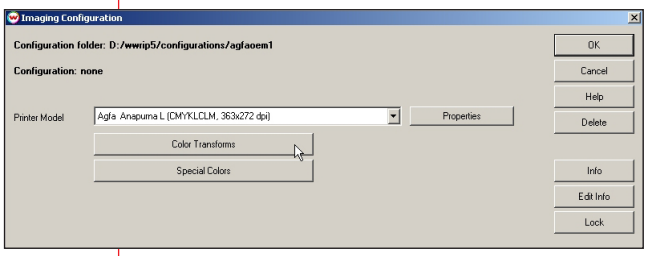
The Imaging Configuration is an important setting that allows you to choose pre-configured profiles that match your ink, media and other print settings. When you access the Imaging Configuration drop down window on the Set Up screen, you will see a list of Imaging Configurations for the printer model you have just selected. If you install the Agfa version of the Wasatch SoftRIP, 20 standard image configurations are enabled.



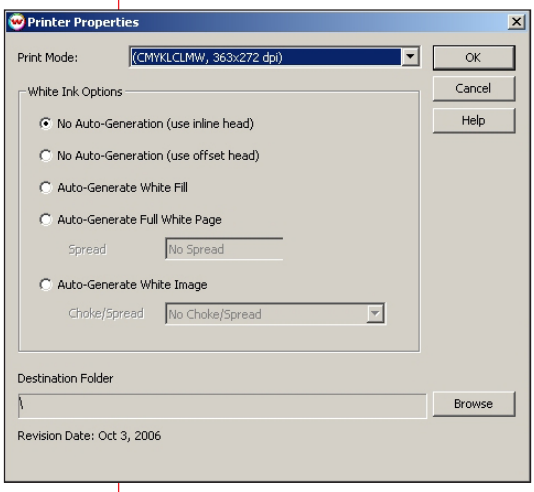
The pre-configured Imaging Configurations can be edited in a number of ways, including key controls accessed from the Imaging Configurations screen.
Choose an image configurations and select 'edit', if you want to make chances to the selected profile. The Image Configuration screen will pop up. It accesses controls for specific printer settings and color workflow controls.

a. Printer Properties.

Pressing the Properties button next to the printer model name launches control panels with additional settings for the printer. You can find 8 different Print Mode settings for the :Anapurna engine. The first part of the print mode name, defines the number of colors which will be used: CMYKLCLM or CMYKLCLMW. The only difference between these two, is the use of white ink (W). The second part displays the resolution in which will be ripped and printed:



- 363 x 272 = 6 pass
- 363 x 363 = 8 pass
- 363 x 545 = 12 pass
- 363 x 727 = 16 pass



If you select a print mode using white ink, the white ink options will become available (CMYKLCLMW).

- No Auto Generation (use in-line head)
- No Auto Generation (use offset head)
- Auto Generate White Fill
- Auto Generate Full White Page
- Auto Generate White Image

To show the difference between the 5 print strategies, a file was designed in Adobe Illustrator CS2 using a Spot White in the logo, the outline text 'FORUM' and the text 'snowboarding'. The file was printed with the 5 different printstrategies onto a red banner media.

No Auto Generation (use in-line head).

This can be used for spot colors and multichannel files. This uses the white print head that is in-line with the other print heads (head n° 7). You will have to pinpoint the white selection in your image, using the "spot color replacement" tool (see 2.4). If you choose this setting, the white ink can not be printed on top or underneath another color. If it would be possible, you will see coalescence occur. The white ink is not cured before the colored ink is placed on top of it so the inks will be mixed and the result will look very dull.
(imaging configuration : xxx_White as Spot)

No Auto Generation (use offset head).

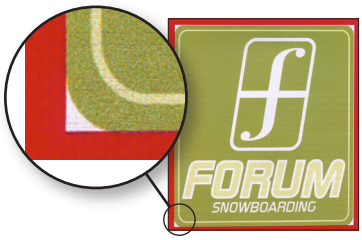
This can be used for spot colors, and multi-channel files. This uses the leading white print head (head n°8). The generation of the white ink separation will be done by selecting the white area via the "spot color replacement" tool (see 2.4). This setting will print white ink next to the other colors. If you want to print white underneath other colors, you have to select an auto-generate option.
The result will be the same as 'No Auto Generation (use inehead)' strategy, but it will be printed with the other white print head.

Auto Generate White Fill.

White is printed at any point where no other color is being printed. The Wasatch SoftRIP will use the pixel info of the image to determine where white ink has to be printed. Pixels containing color information with cmyk values of 0,0,0,0, will be printed with white ink. When one of the color values is 1 or bigger (e.g. cmyk 0,1,0,0), the Wasatch SoftRIP will not generate any white. So the :Anapurna engine will only print white on places where there is "zero pixel info", using the in-line print head (head n°7).

As you can see in the example above, the background color of the image is a mix of white dots and colored dots. The Wasatch SoftRIP will calculate the use of the white ink on raster level. So if you're not using a full tone (100%) in your image, the Wasatch SoftRIP will start generating white dots in between the raster points.
(imaging configuration : xxx_White Fill on NO Color)

Auto Generate Full White Page.



Generates a white rectangle for the whole ripped page size. When the Wasatch SoftRIP has finished ripping your image (with or without layout), there will be a white separation generated with the same dimensions as the bounding box of your file. So if your image has, f.e. round corners, the white area will not be the same as the edges of your image.

If you place two images beside each other in the layout window for e.g. dual board printing, the Wasatch SoftRIP will generate a white selection behind the complete layout. Be aware that the :Anapurna engine will also print white ink between the two images, probably onto your conveyor belt. So don't forget to mask the areas of your conveyor belt between the two substrates.

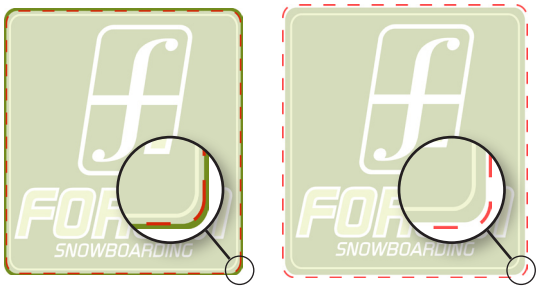
When selecting the "auto generate full white page" mode, the spread option will become active. Choosing a 1/8 inch spread applies a white spread in the margin or nesting gap of the page size. This 1/8 inch spread is only intended to work on jobs sent through the "Manual Print Layout".
(imaging configuration : xxx_White Behind Entire Page)

Auto-Generation White Image.

White is placed underneath every non-zero pixel. White ink will only be printed underneath the pixels containing color information. Areas that are defined as white (cmyk 0,0,0,0), will be left transparent.

When you select this option, the drop down menu of the choke and spread option will be enabled. Choke and Spread allow you to control how the white ink is laid down around the edges in the image. The choke option will retract the white selection underneath the image. So if you've printed your image with the "no choke/spread" option and there is a little white border coming out underneath your image, you can adjust this using the choke option. Choke 'erodes' the white from the edges.

Selecting the spread option, will result in the opposite behavior of the white ink. Instead of reducing the white ink area, it will increase the dimension of the white ink separation. A white border will come out underneath the image. Spread expands the white over the edges.



choke spread

You can choose between different intensities for the choke or spread option (small, medium or large).
(imaging configuration : xxx_White Behind Image)

b. Color Transforms.

Launch the Color Transforms screen by clicking on the Color Transforms button. This screen provides total workflow control for color management (see 7.1).

c. Special Colors.

Launch the Special Colors screen by clicking the Special Colors button. This suite of

utilities includes Spot Color Replacement, the Color Database, Spot Color Capture and other features described in the Special Colors section (see 6.2).

d. Edit Info.

The Edit Info button launches your default text editor (in this case the Notepad window). Use this feature to create and save records of changes made in this screen .

e. Lock.

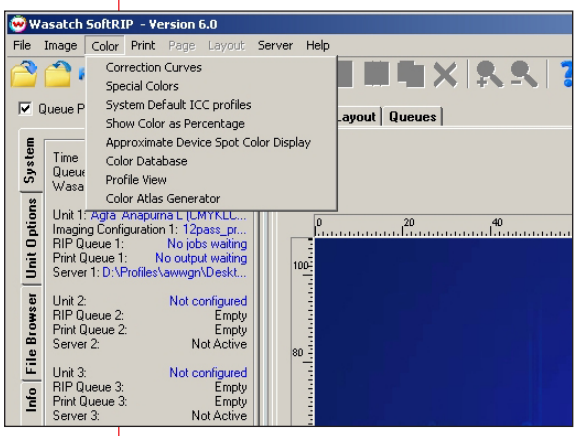
See 8.4

6.3 Saving a new imaging configuration.

Whenever you make changes to any setting that affects an Imaging Configuration, create a new Imaging Configuration by saving it under a new name. This includes changes made in the (Properties) control panels, and changes to settings made in other screens launched from Imaging Configurations (Color Transforms, Special Colors). When a change is made to any of these controls, you must exit the screen using the OK button. Changes will be lost if you exit using Cancel.
When you exit using the OK button, the Imaging Configuration - Save As screen is launched. The name of the current Imaging Configuration is shown in the top window of this screen; previous Imaging Configuration names are shown in the larger window. In the Save As window, enter the new Imaging Configuration name. Click on OK to save the new Imaging Configuration name and settings.

7. Color Menu.

The 'Color' menu provides access to most SoftRIP color functions.
Selecting Correction Curves launches the Correction Curves window, which allows changes to image lightness and hue adjustments for individual jobs.



If you choose the 'Special Colors' option, you get access to the Special Colors screen, to the Spot Color Replacement toolset, Spot Color Capture and the Color Database utility.

The System Default ICC Profiles will let you define the SoftRIP's default input and monitor profiles.

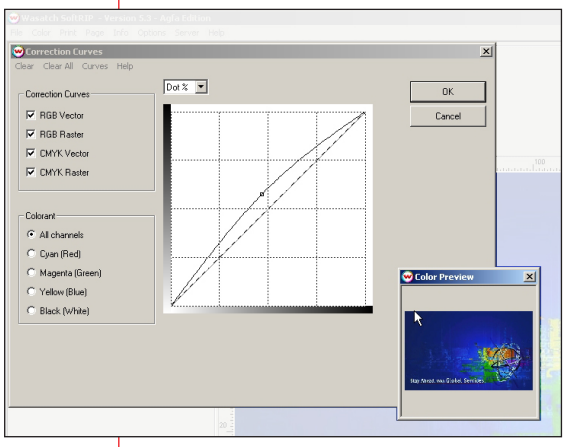
In the standard mode, the Wasatch SoftRIP will always display color values on a scale of 0 to 255. By checking the 'Show Color as Percentage' mode, will change the read-outs to percentage values.

Color Database: Launches the Color Database menu, which allows you to choose and edit an existing color database, or create a new one.

Profile View: The 3D profile viewer helps you visualize your available range of colors in 3D CIE $L^*a^*b^*$ color space, seeing which colors can be reached, and which will be "mapped" by your ICC profiles. It even provides an indication of the shape of the mapping that will be performed by your ICC profiles.

The Color Atlas Generator allows you to create a PostScript file of a set of color patches. This file can then be printed on any fabric or media, allowing customers to choose colors based on how they print on actual materials, rather than choosing from a swatchbook printed on paper. Once a color has been selected, it can be reliably reproduced by simply entering the same RGB value for that color into SoftRIP or your graphics application. Assuming that the imaging configuration and front-panel printer settings remain the same as those used to print the samples, the color output of the printer should match the previously printed color patch.

7.1 The Correction Curves Window.



Color correction curves are used to make adjustments to image lightness/darkness and also to specific color channels (hues). It is generally used to "tweak" individual jobs, but can also be used to make adjustments to specific incoming data on the Color Transforms screen. When you make a color correction, you also create a new Imaging Configuration.

Color Correction is performed using the Correction Curves window. This widow is launched from the main Color menu. It can also be launched by right-clicking on the job image and selecting it from the pop up menu.

a. Color correction basics.

- Menu Components.

  Image Data Type : The Correction Curves area of the menu allows you to select the type of incoming data that will be affected by curves adjustments. When correcting an image, you may select any or all of the four input data categories shown (RGB Vector, RGB Raster, CMYK Vector, CMYK Raster). The changes you make in the curves will be applied to those categories checked.

  Colorant (Channel) Selection : The curves editor can be used for two basic functions, as follows:

  - All Channels : Checking this radio button allows you to lighten or darken the overall image by moving the curve up or down.
  - Single Channel : Checking any one of the individual colorant (or color chan-

nel) radio buttons means that your curve moves will affect only that channel. This option allows you to make changes specific hues.

b. Editing Model.

When using the curves, you have your choice of curve editing models: Light or Dot %. This model is selected above the curves window on the menu. For the sake of simplicity, the discussion below refers to the Light model. Choosing the Dot % model causes the curves to behave in the opposite way as described below.

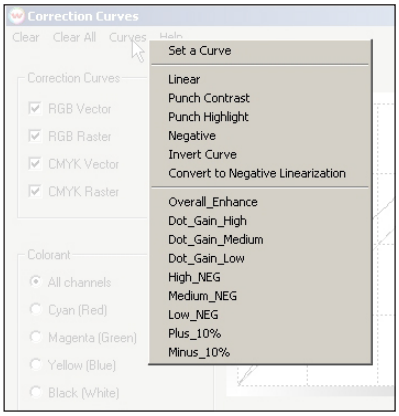
The horizontal axis of the interface (left to right) represents Input values, which are the values of the original image as opened in SoftRIP. The vertical axis of the interface (bottom to top) represents Output values, which are the new values you set. Using the Light editing model, the lower left corner of the box is where both Input and Output values are 0% and represents total black. The upper right corner of the box is where both Input and Output values are 100% and represents white (in other words, the "white" of the media when no ink has been printed). The opposite is true when using the Dot % model.

Lower numeric values indicate higher densities and higher numeric values indicate lower densities (Light model). Simply speaking, for all channel corrections using the Light model, lower values mean darkening the image and higher numeric values mean lightening the image. For single channel color corrections, lower values mean increasing the density (amount) of the specific color (channel) selected, and higher values mean decreasing the density of the specific color (channel) selected. Remember that no action taken in a digital color workflow happens in isolation.

Control points: Prior to editing, the spline curve in the box is a diagonal line running from the bottom left to the upper right of the grid. Control points may be selected at any point along this line and dragged in any direction. You may select as many control points along the curve as you think are useful. Dragging a point up or down lowers or raises output density at that point. The Input and Output values are displayed for the point represented by your current cursor position.

Because the tone range is a continuum, whatever moves you make at one control point affect the shape of the rest of the curve, and consequently, the values at all points along the curve. The advantage of the Curves tool is that you are able to fine-tune a curve shape to affect specific portions of the tone range.

c. Other features on the curves menu.



- Clear : Returns the curve in the window to its linear position.
- Clear All : Returns curves for all colorant channels to their linear position.
- Curves : Launches a menu of pre-configured curves to achieve common affects.

d. Saving Your Color Corrections as New Imaging Configurations.

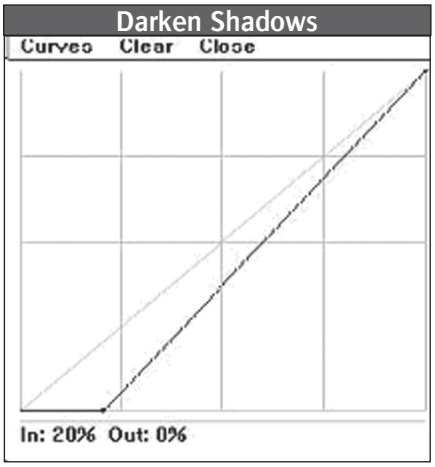
The process of color correction changes the color properties of individual images (jobs) and also specific input data channels on the Color Transforms screen. When you make color corrections using the Correction Curves menu, you will also be creating a new Imaging Configuration that includes your new curves. The new Imaging Configuration can be used with that job or any other job for which that Imaging Configuration is selected. When successful color corrections are made, it is essential that you save a new Imaging Configuration.

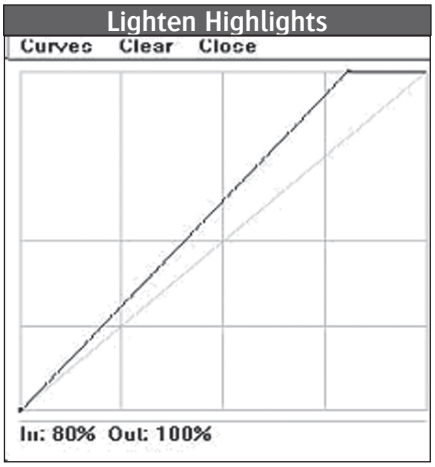
To save your correction curves, make sure to exit the Correction Curves menu with the OK button. If you use Cancel, your corrections will be lost. When you press OK, the Imaging Configuration - Save As menu will launch. The name of the current Imaging Configuration is shown in the top window of this menu, while previously generated Imaging Configuration names are shown in the larger window. In the Save As window at the bottom of the menu, enter the new Imaging Configuration name. You must exit this menu by clicking OK to save the new Imaging Configuration name and settings.

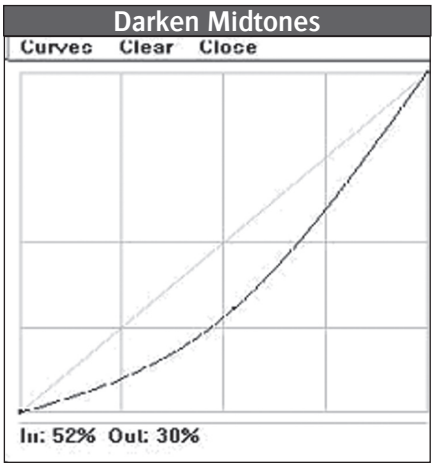
e. More on editing curves.

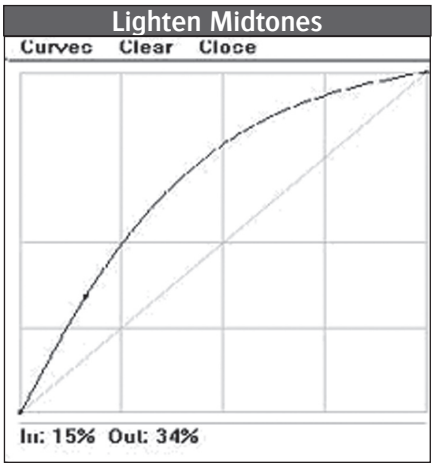
In general, the Curves tools allow you to control the density (amount) of ink output by the printer at any or all points along the tone range of the image. If you are working in All Channels mode, you are adjusting all of the output channels at the same time. If you are in Single Channel mode, you are adjusting only that color channel.

Here are a few examples of curves:









Basic Color Correction with the Correction Curves Tool.

There are a few very simple things that can be done in a service bureau operation to produce pleasing color for a variety of customers in a quick and cost-effective way. By using these basic “tone-curve” methods in conjunction with appropriate color profiles, you can produce pleasing color from a wide variety of input.

A valuable tip!

If you need to do quite a bit of correcting with these curves, concentrate on getting as close as you can by strictly using the All Channels Correction curve. You’ll find that you can get very close indeed and that this is, in fact, the only way you can keep everything straight. Only after you’ve done this, should you make small hue adjustments with the individual color curves.

Here is another valuable tip to keep in mind when you use the color correction curves to adjust hue. If you find that you need to modify one channel a great deal to achieve the desired result, it will probably be better if you modify that one channel less, while modifying each of the other two channels in the opposite direction. This will maximize your hue shift, while minimizing the shift to overall lightness. The interactive color preview on the screen can make this quite clear. It is important to use the Correction curves instead of the Calibration curves for this purpose.

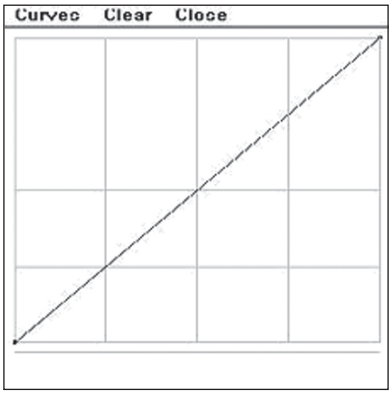
The single most common cause of “muddy” prints is poor selection of the black point and white point in the original scans. With a page containing a

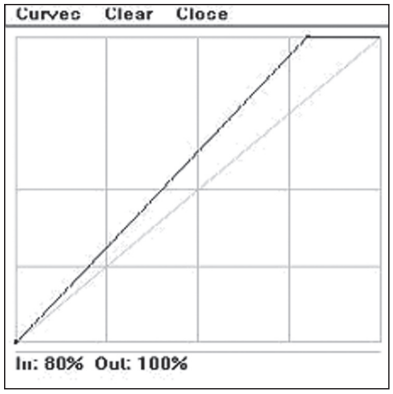
scan open on the SoftRIP screen, move your cursor over one of the lightest highlights. The RGB entry on the information window should show at least one number that is over 90%. If not, you are going to see muddy highlights and colors. Move the cursor over one of the darkest shadows. The RGB entry should show at least one number that is under 10%. If not, your prints are likely to have muddy shadows. The same principle applies to CMYK scans.

If you've been given the job of making a nice looking print from a scan with poorly chosen black and white points, there is still something you can do. Make a note of the lowest R, G, or B that you can find in a shadow and of the highest that you can find in a highlight. In a muddy scan, these numbers might be something like 15% and 80%, instead of the 5% and 95% that you would hope to see in a good scan.

- Select Correction and All Channels.

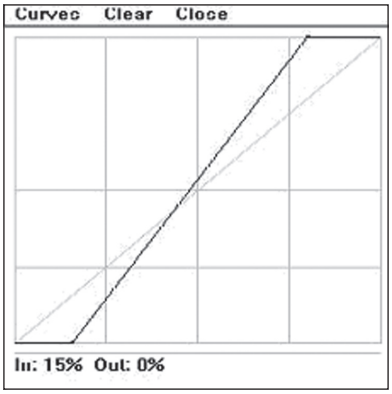
We will use the Lightness editing mode in this example. In the Lightness edi-ting mode, black is in the lower left corner and white is in the upper right corner for both RGB and CMYK curves. Moving a point upward has a lightening effect for both CMYK and RGB images when using the Lightness editing mode. Click on the upper right end of the diagonal line and slide it left until the window looks like the following:





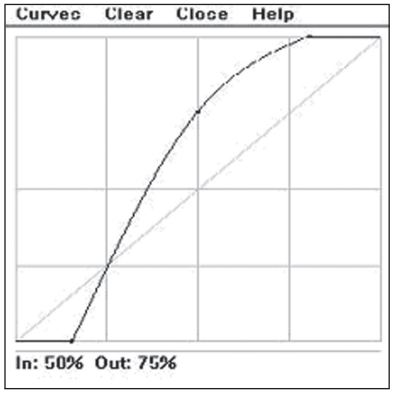
Now your highlights that had only reached 80% in the original will be stretched to reach 100%, or the density of the base media with no ink applied, in the final print.

Click on the lower left end of the diagonal line and slide it right until you see this:



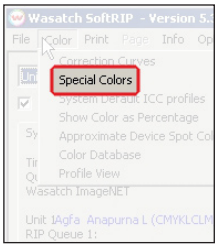
Now you've stretched your shadows from 15% down to 0%, which will cause them to reach all the way to the maximum density available with the media and ink that you are using.

Perhaps you've done this, and your shadows are now nice and dark and your highlights are nice and bright, but the overall density of the picture, of the midtones, is too dark. Click on a point in the center of the diagonal line and slide it upward until it looks something like this:



You've now lightened the 50% midtone by 25% to 75%, while leaving the highlights and shadows where you set them earlier. This is the most common kind of tone correction needed for faulty scans.

7.2 Special Colors Screen (Spot color management).



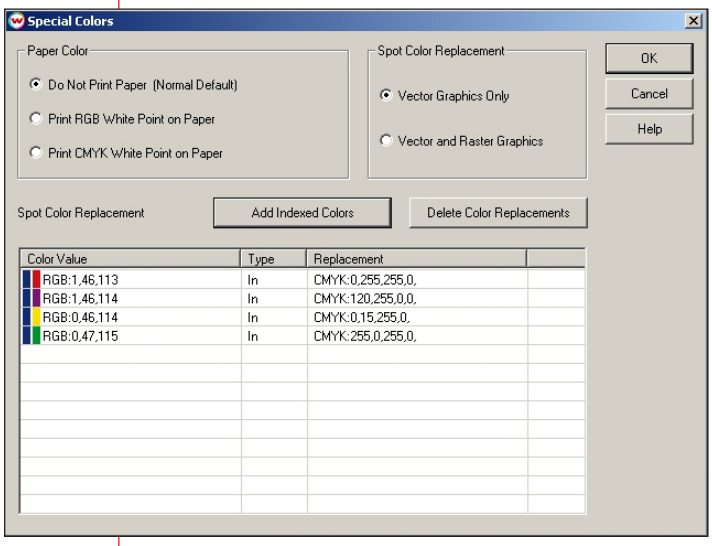
Launch the Special Colors screen from the main Color menu. The following features are found on or accessed from the Special Colors, Spot Color Replacement menu:

- Spot Color Replacement, provides precision control over spot or custom colors
- Paper Color Controls, allow simulation of paper or media background characteristics

This screen also provides access to the Color Database and the Spot Color Capture feature.

a. Spot Color Replacement Toolset.

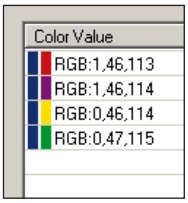
The Spot Color Replacement toolset provides precise controls for spot color printing. Spot colors can be tweaked to correct errors in incoming files, changed to reflect ne w requirements, and used to bypass color management altogether by directing output to individual print heads containing custom formulated ink.



In the 'Spot Color Replacement' area of the Special Colors window select the type of images you wish to affect: Vector Graphics Only, or both Vector and Raster Graphics. Checking the Vector Graphics Only radio button ensures that spot colors (such as corporate logos) are individually color managed with no fear of corrupting embedded photographs (raster graphics).
Checking Vector and Raster Graphics allows you to manipulate the indexed TIFF files common in digital fabric and textile design.

There are two ways to select spot colors from an open preview image:

- When an indexed, or limited-color image is previewed, use the Add Indexed Colors button on the Special Colors screen to read these colors into the window. After a pause, you will be asked if you wish to add the colors to the list. This is a quick way to make entries to the Spot Color Replacement window.

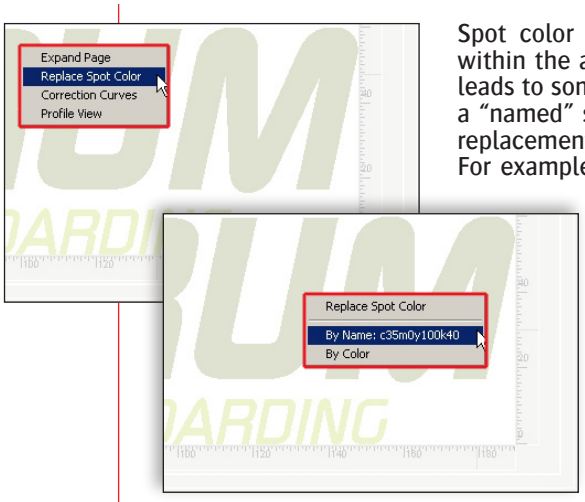
  

  The window on the Special Colors screen shows information in three columns. The Color Value column shows the original color and its color values. All colors are specified using the 0 – 255 range, whatever color space they are in. If no replacement color has been specified, the color square to the left is a solid block. If a replacement color has been specified, the color block is split. The left side shows the original color and right half shows the replacement color.

  The Replacement column shows the values of the replacement color. If no replacement color has been specified, the values are the same as those in the left hand (Color Value) column. In order to specify a replacement color, double-click on the original color in the left hand column. This launches the Spot Color Replacement screen. The operation of this screen is explained in more detail below.

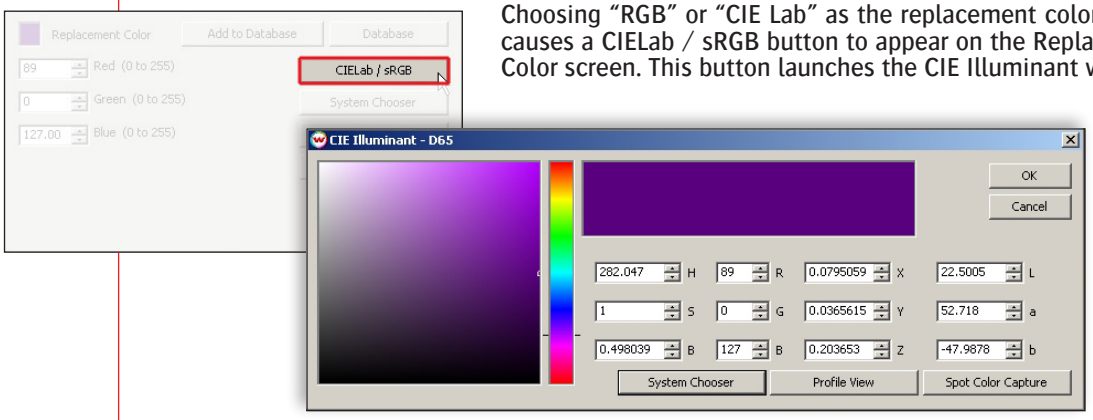
- The other method for making an entry to the spot color replacement list (on the Special Colors screen) is to right-click on any location in a previewed image, launching a pop-up menu. The "color to be replaced" can be "CMYK", "RGB", or "Gray".

  Selecting Replace Spot Color from the pop-up menu launches the Spot Color Replacement screen, as well as the Special Colors screen if not already open. The Replace Spot Color window may also be launched by double-clicking on any color in the Special Colors window, as previously noted.



Spot color replacements can be defined using “named” colors within the application software that drives Wasatch SoftRIP. This leads to some attractive workflow options. When right-clicking on a “named” spot color, Wasatch SoftRIP allows the definition of a replacement that will be applied to all colors bearing that name. For example, the name “White” can be assigned to a print head that contains white ink, and then the use of this print head can be directly specified by the graphic artist running the application software. The “tint”, or “percentage” specifications made in the application software are applied to the replacement color, allowing such things as a “white gradient” to be produced by the artist. (“Tint” information only applies to CMYK and Device color, not to Lab or RGB color.) Enter the values of the replacement color directly into the windows in the Replacement Color area. You may change the Replacement Color space to “RGB”, “CMYK”, “CIE Lab” or “Device” before you enter new values.

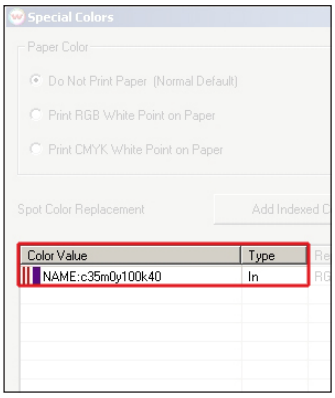
Access the Database button in order to retrieve an existing color previously placed in a Color Database (more later). Name and save either the original or the replacement color using the Add to Database button.



Choosing “RGB” or “CIE Lab” as the replacement color space, causes a CIELab / sRGB button to appear on the Replacement Color screen. This button launches the CIE Illuminant window.

Colors chosen in this window may be specified in several different color spaces. After specifying a color, click OK to add it to the Replacement Color area of the Spot Color Replacement screen. From this window, you may also access Spot Color Capture, which allows you to record colors directly into the Color Database from any color sample or surface using a colorimeter. These colors may then be modified in the Spot Color Replacement screen. Selecting Device as the replacement color space changes the entry in the Type column of the Special Colors window from “In” to “Out”.

An “In” listing in this column means the color preview on the screen accurately displays the expected output color.

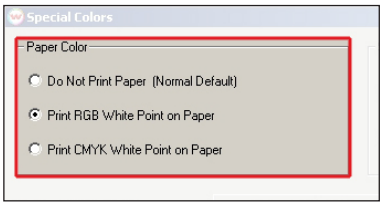


Also, when Device is selected, the replacement color displays as a red hashmark in the selected image area, in the Replacement Color area on the Spot Color Replacement screen and in the Color Value column in the Special Colors screen.

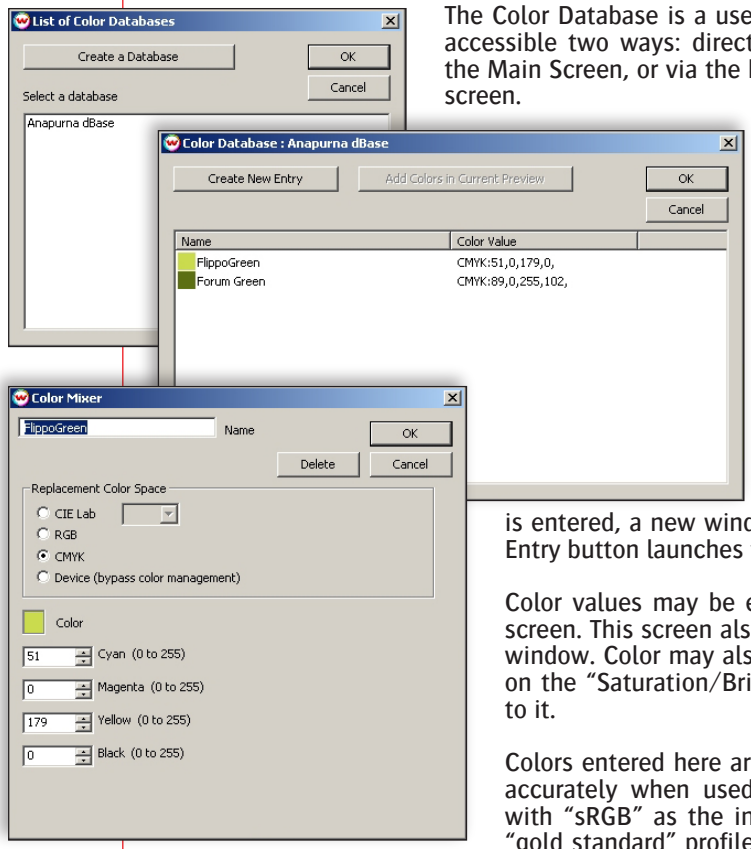
Using the Device replacement option bypasses all color management, enabling you to directly specify ink densities for individual print heads. Use this feature for metallic inks, varnishes, or specially mixed “corporate color” inks.

The Paper Color area of the Special Colors screen allows you to simulate paper characteristics, and is useful for making the paper itself match a particular proofing “white point”. This feature is used along with an Absolute Colorimetric render-

ing intent to produce color match proofs for “off white” papers. To produce match proof simulations of a CMYK device, select your ICC Imaging Configurations in the Color Transforms menu and check Print CMYK White Point on Paper.



7.3 Using the Color Database.



The Color Database is a user-maintained list of named colors. It is accessible two ways: directly from the Color menu at the top of the Main Screen, or via the buttons on the Spot Color Replacement screen.

Color entries in the Color Database can be edited or deleted by double-clicking on the color name. They can also be selected as replacements for spot colors specified in the Spot Color Replacement screen.

Colors may be entered into the Color Database several ways. Selecting Color Database from the Color menu opens the Color Database screen. An existing database may be selected, or a new database may be created by clicking the Create A Database button. When a new database name is entered, a new window launches. Pressing the Create New Entry button launches the Color Mixer interface.

Color values may be entered in any of the windows on this screen. This screen also provides access to the CIE Illuminant window. Color may also be selected by clicking and dragging on the “Saturation/Brightness” square or the “Hue Bar” next to it.

Colors entered here are stored as ‘sRGB’ data, and reproduce accurately when used with an Imaging Configuration built with “sRGB” as the incoming RGB data profile. sRGB is the “gold standard” profile, published by Hewlett-Packard on the internet at www.srgb.com, and also found on Windows XP and 2000 systems in a system folder, with the name: sRGB Color Space Profile.icm.

a. Spot Color Capture.

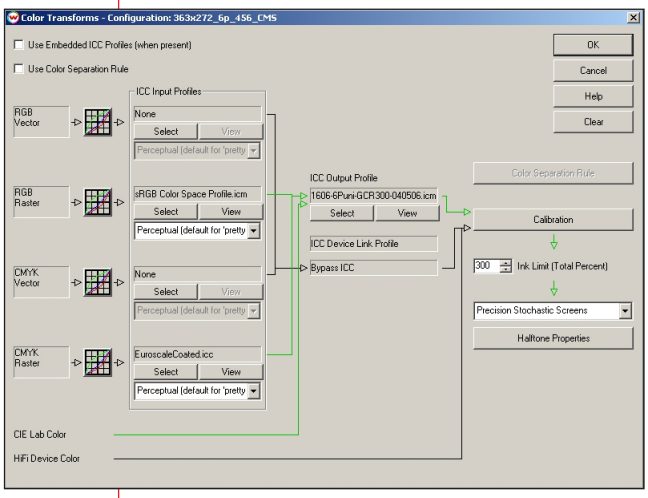
Spot Color Capture allows you to directly record custom spot colors from a swatchbook or other type of color sample...simply by clicking on it with your handheld colorimeter. This process is initiated by clicking on the Spot Color Capture button on the CIE Illuminant menu. This will launch the appropriate wizard for the colorimeter you select. Once the color is read in, the CIE Lab values are entered automatically in SoftRIP’s Color Database utility.

When you are ready to print, the CIE Lab values in your Color Database are sent directly to the ICC color profile for your output device. This streamlined approach bypasses the confusion and loss of accuracy that can result from managing input profiles. The accuracy of your spot color matches will be determined by the quality of the ICC device profile.

8. Color Management Tools.

8.1 Color Transforms Screen.

The Color Transforms screen is launched by pressing the Color Transforms button on the Imaging Configurations screen (Print menu -> Setup -> Edit -> Color Transforms).



Overview: Transforms screen provides ICC profile-based color management across the entire production workflow. The features on this screen allow you to create and apply correction curves for incoming files and select custom ICC profiles for both incoming data and output devices. Whenever you make changes to your color settings, the flowchart on the Color Transforms screen dynamically changes to visually describe the processing that will take place.

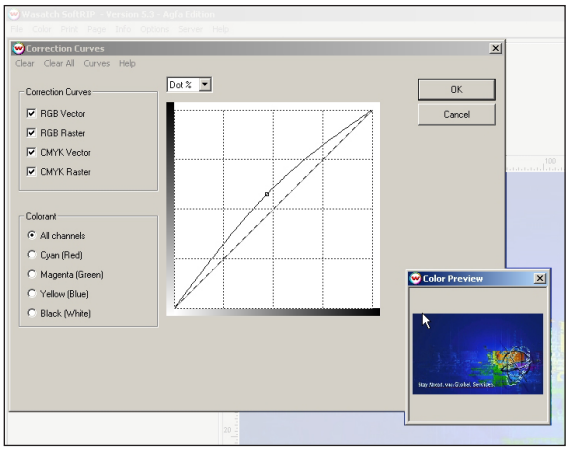
Also on this screen are the controls for Halftone Methods, access to the Calibration utility, access to Color Separation Rules and additional controls for Ink Limiting.

a. ICC Workflow Features.

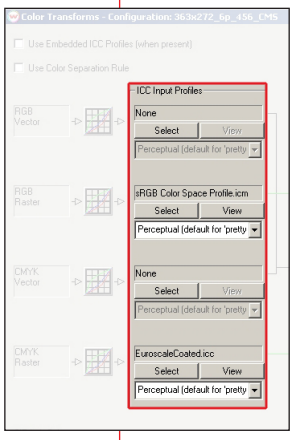
Incoming data is divided into four classes: RGB Vector, RGB Raster, CMYK Vector & CMYK Raster. Separate correction curves, ICC input profiles and rendering intents can be specified for any or all of these categories, as described below.

b. Color Corrections.

Clicking the 'Correction Curves' icon next to any of the four input categories will launch the Color Corrections window. This window is the same as the one launched from the main Color menu at the top of the Main Screen, except that the type of input is already specified in the Correction Curves area. Adjustments to overall lightness and darkness (all channels) or individual hue channels are made using this tool. A more detailed description is found in the Color Corrections section of this document (see 6.1).



c. Replacing ICC Input Profiles.



You may provide custom input profiles for any of the four incoming file categories. This feature is located in the ICC Input Profiles area of the Color Transforms screen. For each input category, the profile in use is displayed at the top of the control area. This may be a default profile shipped with SoftRIP, or a custom profile provided by you. Changing input profiles is a very powerful tool and can have a significant affect on image quality.

To load a new profile, press the Select button. From the new window, select Browse to access your hard drive and load a new custom profile. You may also select None, for no profile, or choose the System Default profile.

Pressing the View button next to the Select button launches the Profile View feature, which displays a 3D model for the color space you have selected. You can select a Rendering Intent for the new ICC profile by using the drop down window in the ICC profile control for each input category.

Changing ICC Output Profiles : The output profile describes the color space of the printing scenario, including the printer, inkset, media, configuration, calibration, and other settings. Custom Output Profiles can be loaded using a control similar to those for the input profiles. Load a new ICC Output Profile by pressing the Select button under the ICC Output Profile header. This will allow you to access whatever custom profiles you have stored on your hard drive. The View button launches the Profile View as in the ICC Input Profile controls described above.

d. Other Controls.

- Color Separation Rules (not used with the :Anapurna).
  This powerful control is most commonly used to allow Hi-Fi color devices with ink sets such as CMYK plus Orange, Green, Red, Blue or other ink colors to be profiled as RGB or CMYK devices. It is also very useful for intelligent ink limiting. On the Color Transforms screen, the Color Separation Rules button is activated by checking the Use Color Separation Rule box in the upper left of the menu. When you check this box, you will see changes in the flowchart arrow in the ICC workflow areas of the menu. When you click on the Color Separation Rule button, the Color Separation window is launched.

- Calibration (not used with the :Anapurna).
  This button launches the Calibration window, which allows you to improve system performance by linearizing the printer and print condition. This process is described in the Calibration section of this document.

- Ink Limiting controls.
  This control establishes a maximum that the total ink may not exceed. On a CMYK printer, the highest available setting will be 400%, (which corresponds to no limit at all). Setting a limit in the range of 150% to 350% can prevent ink acceptance problems on many media. Settings above 200% will typically improve ink acceptance problems without significantly reducing color gamut. While SoftRIP will allow setting below 100% (with 50% the minimum), settings under 150% should be used with great caution.

- Use Embedded ICC Profiles.
  When this box is checked, SoftRIP will apply any embedded ICC profiles found in the four input data categories instead of the selected Input Profile.

- Selecting Halftone Method.
  This dropdown window allows you to change the Halftone Method applied to the Imaging Configuration. Additional controls are launched for most Halftone Methods by pressing the Halftone Properties button beneath the dropdown window.

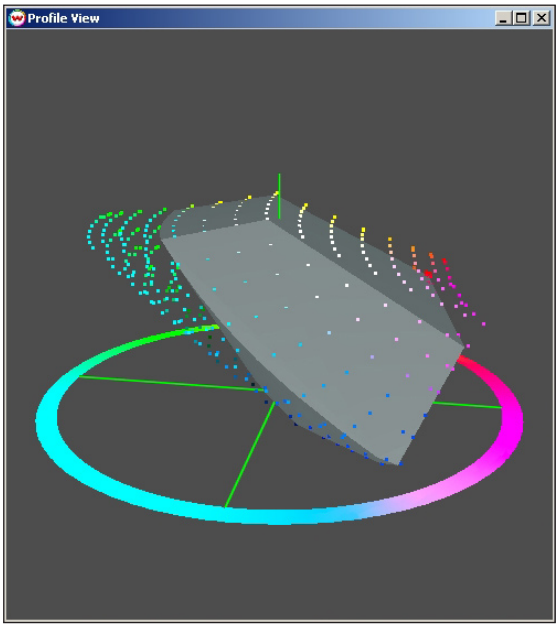
  - Saving new imaging configurations.
    Remember that when you make any changes to the settings shown on the Color Transforms screen (including correction curves), you must save these changes as a new (re-named) Imaging Configuration. In order to accomplish this, you must exit the Color Transforms menu by pressing the OK button. When you exit the Color Transforms menu, you will be in the Imaging Configurations menu. You must then exit Imaging Configurations with the OK button as well, or you will lose your changes.

    When you exit the Imaging Configurations screen, the Imaging Configurations - Save As menu will be launched. The workings of this menu are described in more detail in the Imaging Configurations section of this document.

8.2 The Importance of Input Profiles.

When using ICC color workflows, an accurate device profile of your printer, inks, and paper is essential, but it is only half the battle. Color is also controlled by your choice of ICC input profile, which determines what color device will be ‘simulated’ by your prints. This is more than just a matter of “fine tuning”. Choosing the wrong input profile can cause your color to be wrong by many delta E. If you don’t control your input profiles, it simply doesn’t matter how well you’ve profiled your output devices.

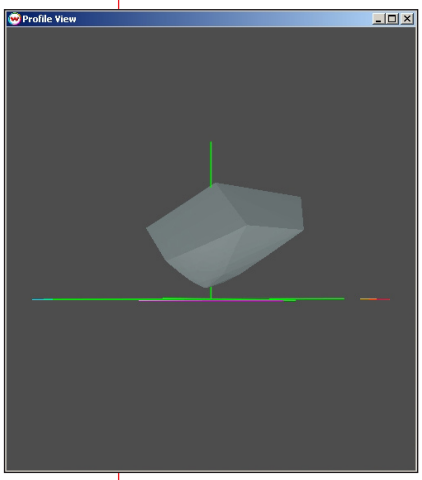
The next illustration uses the Profile View feature of Wasatch SoftRIP to compare the 3D color gamut of an “Adobe RGB” color profile to an “sRGB” color profile (which is nearly identical to the gamut of an “Apple RGB” profile).



In this illustration, the Adobe RGB profile’s color gamut has been rendered as a cloud of colored dots, while the sRGB profile has been rendered as a gray “gamut boundary”. This is done to illustrate that the colors available in the Adobe RGB color gamut extend far beyond those available in the sRGB gamut. (The difference in green, for example, is over 20 delta E.)

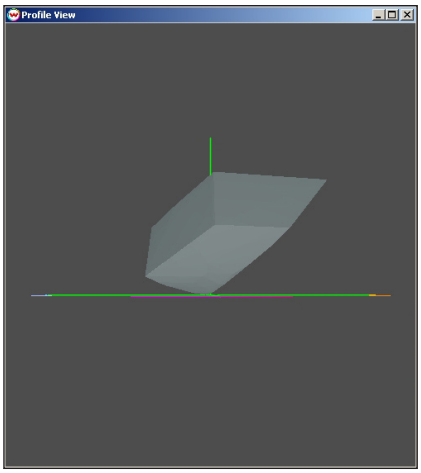
If a photograph taken in Adobe RGB color space is printed with an sRGB (or Apple RGB) input profile, colors will be substantially reduced in saturation, or “muted”. Likewise a photograph taken in sRGB space and printed with an Adobe RGB input profile will be oversaturated, and the print will contain color errors of over 20 delta E. These errors will exist even if your output profile is “perfect”.

The profiles used, are selectable standard working spaces in Adobe Photoshop and can also be downloaded from Adobe and sRGB web sites. Any user of Wasatch SoftRIP can download these profiles and use Profile View to study the issue further. Another common problem is the fundamental conflict between accurately modeling ANSI SWOP CMYK color, and printing beautifully high contrast pictures.



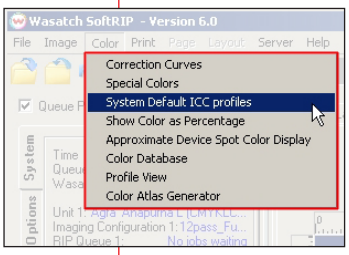
The gamut hull shown on the left side, is from an industry standard accurate profile of SWOP printing, a profile that is often used for ICC managed color proofing. When combined with an accurate output profile (and repeatable ink and paper), it turns your inkjet printer into a highly-standardized color proofing system.

Note, however, that the gamut hull never touches bottom in this illustration - it never reaches the black point. Any accurate profile of SWOP printing won’t visit any point darker than an L value of about 7.8%. Because no black darker than 7.8% can ever be specified through the input profile, prints made this way often exhibit “dusty blacks”, and never show the full brilliance possible with inkjet printing. When beautiful prints are preferred to accurate proofs, a profile such as the “Approximation with stretched L”, shown in the next illustration, will produce better results. (Both these ICC profiles are included with Wasatch SoftRIP.)



There are dozens of different input color spaces in common use as ICC profiles, and the input profiles included with Wasatch SoftRIP are nothing more than typical ‘generic’ defaults. Whether or not you get good out-of-box color depends on how well these ‘generic’ profiles match your needs. If they don’t, Wasatch SoftRIP makes it easy for you to set up whatever you need, and Wasatch Profile View is a powerful tool for analysis of what’s happening.

a. Changing System Default ICC Profiles.

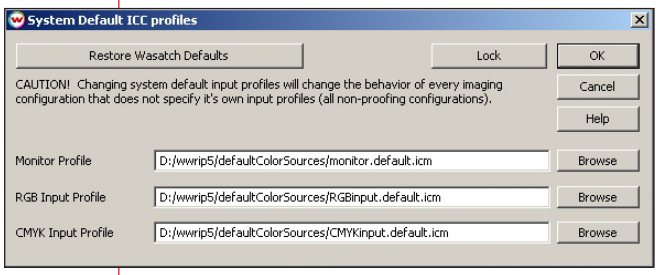


The stock Imaging Configurations used by Wasatch SoftRIP do not contain input profiles. Rather, they refer to the default input profiles which are contained in the /wwrip/DefaultColorSources folder on your hard drive. These input profiles control: Display monitor, RGB input data & CMYK input data.

A full discussion of input profiles and how to change them for specific jobs will be found in the Color Transforms section of this document. The objective of the discussion below is to show advanced users how to change the system defaults.

b. Changing System Default Input Profiles.

Select System Default ICC Profiles from the Color menu to launch the 'System Default ICC profiles' screen. The bottom two windows on this screen allow you to browse your files in order to select ICC profiles for RGB and CMYK input data.



The top window, labeled Monitor Profile, allows you to import a custom monitor profile. This profile will control your display, instead of the generic default profile shipped by Wasatch. Selection of the proper ICC profile will allow you to "softproof", which refers to the process of bringing your monitor screen as close as possible to a representation of the final output.

Substitution of your own input profiles will match all of Wasatch's Imaging Configurations to the behavior you're looking for in your workflow, whether that is a particular SWOP proofing behavior, the RGB space used by a particular digital camera or scanner, or anything else you wish. This behavior is controlled by the new input profiles you have selected.

Remember: Changing the default profiles in this menu will change the color behavior on every job (unless you change the individual input profiles for that job on the Color Transforms screen). It is easy to return to Wasatch's default input profiles by clicking on the Restore Wasatch Defaults button in the upper left of the System Default ICC Profiles screen.

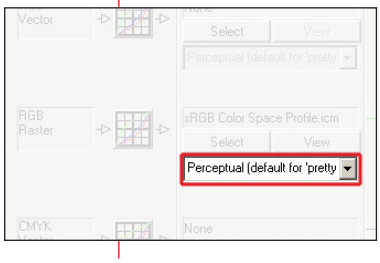
monitors are also limited in gamut, producing accurate reproductions of screen displays, but prints that are less bright than is possible. Small adjustments to this type of profile can produce far greater density ranges and more-pleasing pictures.

c. Out-of-Box Color.

When using ICC workflows, an accurate device profile of your printer, inks, and paper is essential, but it is only half the battle. Color is also controlled by your choice of ICC input profile, which determines what color device will be 'simulated' by your prints. This can be a profile of your monitor, a SWOP proofing system, a particular digital camera or scanner, or of anything else whose color you would like to match.

Different input profiles are key to achieving different goals in color reproduction. For example, a profile of a SWOP proofing, such as the default CMYK input profile shipped with Wasatch SoftRIP, will accurately reproduce process colors, but it can produce "dusty" looking blacks on most inkjet printers. Accurate profiles of display monitors are also limited in gamut, producing accurate reproductions of screen displays, but prints that are less bright than is possible. Small adjustments to this type of profile can produce far greater density ranges and more-pleasing pictures.

d. ICC Rendering Intent.



Different devices have different ranges of possible colors (different "color gamuts"), and often have different paper colors or "white points". This creates special problems for color matching. The four rendering intents defined by the ICC are essentially "matching styles" that address these issues in different ways.
When new input ICC profiles are selected in the Color Transforms menu, Wasatch SoftRIP defaults to the 'Perceptual' rendering intent. This default will be appropriate for most users, but for those with more demanding requirements, other rendering intents can be chosen in

the individual controls for each category of incoming data.

The following describes the four rendering intents defined by the ICC, along with defaults and recommendations for use within Wasatch SoftRIP.

- Perceptual.
  This rendering intent maps color “smoothly”, preserving relationships between similar colors. This prevents gamut clipping with its potential loss of detail and tonal banding problems. Gamut clipping occurs when colors that are different in the input image appear the same when printed. Perceptual rendering intent makes small compromises throughout the entire color space in order to preserve color relationships. It sacrifices some precision of in-gamut colors in order to ensure pleasing results. Perceptual intent will produce the most predictable results when printing from a wide range of image sources, for example, when printing RGB images on CMYK devices, or when trying to match CMYK devices that are radically different from each other. We consider this “foolproof” setting to be best for users who handle the wide variety of images that commonly enter large format printing facilities. It is usually not precise enough for processes where input images are well controlled, such as color proofing and giclee. Perceptual rendering intent is the setting of the default color configurations shipped by Wasatch.

- Absolute Colorimetric.
  When a color is not printable within the gamut of the output device, this rendering intent simply prints the closest match. It reproduces in-gamut colors without compromise, as faithfully as possible. This produces the most accurate matching of spot colors. Unfortunately, it can also result in gamut clipping where two colors that are different in the original are identical on the print. White points may also be clipped, interfering with highlights in images. Such clipping, and the resultant problems, makes this choice most suitable for work involving spot colors, or for work where it is desired to print on a bright-white paper to simulate an off-color paper. Although Wasatch SoftRIP never sets it as default, you can choose it from Wasatch SoftRIP’s user interface.

- Relative Colorimetric.
  When a color is not printable within the gamut of the output device, this rendering intent prints the closest match along with an adjustment that maps white to the paper of the output. This mapping of white point prevents the problems of Absolute Colorimetric when images (or anything other than spot colors) are involved. When producing color match proofs on inkjet printers, which typically have larger gamuts than the printing presses being simulated, this is a superior choice. When a pair of ICC profiles is loaded for runtime linking, one for the device to be simulated and one for the device being used, this rendering intent will provide good precision (minimal delta-E) for the match-proof process.

- Saturation.
  This preserves the saturation, or brightness of colors when transforming them for output. It maps fully saturated source colors to fully saturated target colors. This rendering intent is used where color matching and exact relationships between colors is less important than bright colors. This is a “pretty picture” intent that will produce brilliant spot colors, and although Wasatch SoftRIP never sets it as default, you can choose it from Wasatch SoftRIP’s user interface.

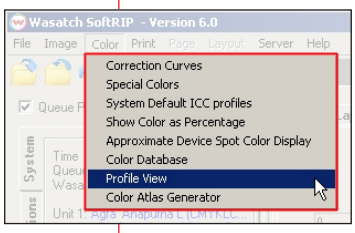
8.3 Profile View.

Wasatch SoftRIP implements the ICC profile standard for color management. This means that color is controlled by your color profiles and profiling software, not by your RIP. Wasatch profile view will help you to avoid letting your color profiles become an out-of-control “black box”.

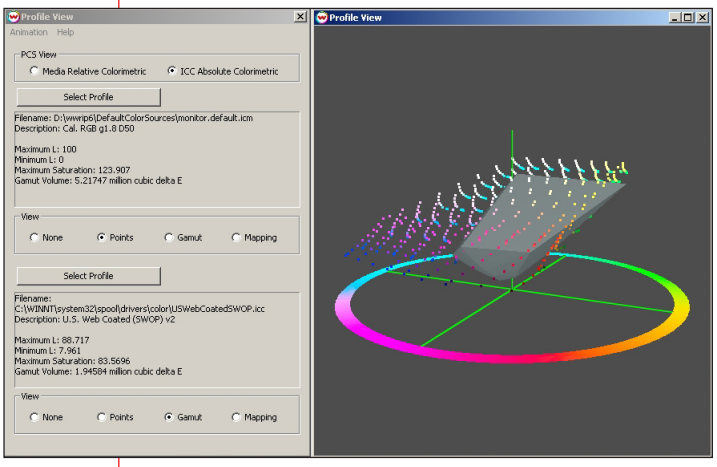
Wasatch provides powerful tools to enable you to import profiles and match color to within all the precision available from your color instruments and profiling software. Even so, not all color simulations are possible, and sophisticated users are familiar with the phrase “out of gamut”. Many problems with color can be understood by visualization of the color gamut of your printer, and of the color spaces you’re trying to match. The 3D profile viewer helps you visualize your available range of colors in 3D CIE L*a*b* color space, seeing which colors can be reached, and which will be “mapped” by your

ICC profiles. It even provides an indication of the shape of the mapping that will be performed by your ICC profiles.

It lets you display three-dimensional, animated, plots of the color gamuts contained in your ICC profiles, allowing you to view two different gamuts at the same time for comparison. You can put a gray wrapper around one while viewing the colors of the other, to see exactly what's out of gamut. You can click directly on the image to spin it just like a video game, for a complete view and visualization of the relationship.



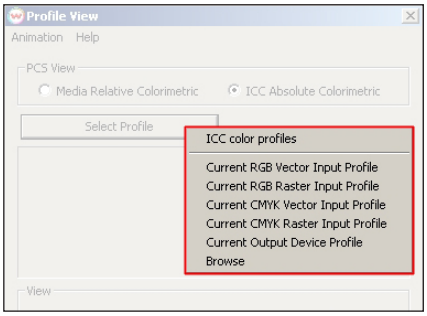
The Profile Viewer can be launched from the main Color menu of Wasatch SoftRIP. The animated view window displays the color gamut information with your choice of either 'ICC-absolute' or 'Media relative' 3D CIE L*a*b space. You can click and drag the animated view to position it for any view you'd like. Right click if you want to change the speed of the animation, and to increase or decrease the size of the 3D data display.



The illustration on the left, shows a 'typical' RGB monitor profile as input profile with color points displayed, overlaid on a 'typical SWOP' CMYK output profile displayed as a 'gamut shell'. Note the display of 'Gamut Volume'. With an RGB input profile whose gamut volume is twice that of the CMYK output profile, we're able to confirm that fully half of the colors viewable on this monitor will undergo gamut mapping during printing. This is a fairly typical situation that is valuable to understand.

The display is in either 'ICC-Absolute' or 'Media Relative' colorimetric space. The ICC display shows Lab values relative to a 'perfect diffuser' or 'perfect white', while the 'Media Relative choice shows Lab numbers scaled such that an L of 100 corresponds to the paper. In this mode, the maximum L is always 100. These choices correspond to the Lab spaces defined in ICC profiles. Maximum saturation shown as an indication of the brightest color. It is the maximum distance of the gamut from the gray scale. Finally, gamut volume is shown to indicate the total volume of colors that are within gamut.

These windows initially launch with a display of your current ICC output profile shown as a gray "gamut shell", and your current RGB input profile shown as colored points. This provides an instant view of all the colors which lie outside of the gamut of your current output profile. To view other gamut relationships, simply click either of the buttons labeled 'Select Profile', to launch a menu of other selections. The Browse selection in particular provides a powerful way of comparing printers, ink sets, devices to be simulated (proofing subjects), and other ICC profiles.



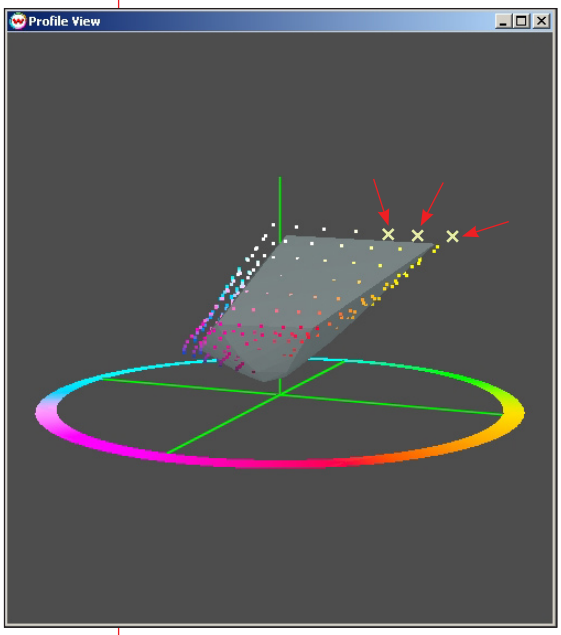
The Profile Viewer can also be launched from two other points within Wasatch SoftRIP. They are: Right-click on any color in a preview and The 'Profile View' button in the Color Mixer (right next to 'Spot Color Capture')

When the view is launched by either of these means, a green 3D cross hair is added to the display, to indicate the position of the color in relation to the gamut displays. The following illustration was produced by clicking on 'pure' RGB yellow, and the green mark can be seen toward the top of the 3D display, which has been rotated by hand to make the mark clearly visible.

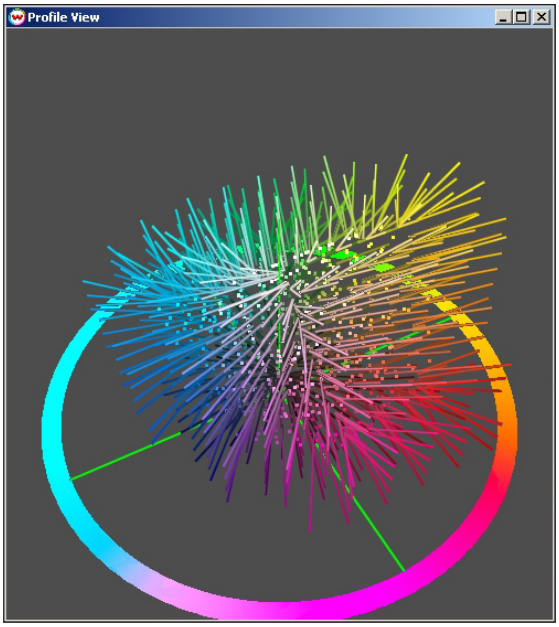
Note that this point, which lies at the 'yellow extreme' of the RGB input profile, lies well outside the gamut shell of the CMYK output profile. This makes it easy to see at a glance when colors can't be achieved by the current output profile.

a. Mapping.

It is common to speak of the four ICC rendering intents as if they are clearly specified, but the fact is that the ICC is very vague about gamut mapping, indicating that details are up to the producer of the ICC profiles. There are a few critical things to understand about gamut mapping:



Out of gamut colors are indicated with an 'X'



Gamut mapping with Absolute Colorimetric rendering intent

- Gamut mapping is important, as suggested by the illustrations, in which fully half of the colors in the input color space will be subjected to mapping during printing.
- Gamut mapping is completely controlled by your color profile, meaning it is determined by your color profiling software. It is not determined byw the Microsoft CMM or by Wasatch SoftRIP. Specification of an ICC rendering intent only selects between different data sets in the ICC profile, nothing more.
- Different software packages for color profiling differ widely in how they set up gamut mapping, a consequence of the deliberately-vague definitions for rendering intents that are provided by the ICC.

The 'mapping' button in the Wasatch profile view provides a view of how values from throughout Lab space will be remapped by any given rendering intent in your color profile.

In the illustrations, the same profile has been selected for both entries, with the left illustration showing the gray 'gamut shell, and the right illustration showing the gamut mapping that will be performed with a 'Absolute Colorimetric' rendering intent. This provides a nice view of how all out-of-gamut colors will be remapped.
The right illustration, the outer points of the lines represent the color being requested, the inner points of the lines represent where the color will be mapped by the ICC profile, while the lines themselves simply connect the points to give some indication of the direction of the mapping. Notice how this particular profile tends to map out-of-gamut colors along lines that are more horizontal than the line to the nearest point in gamut. This tends to increase the accuracy of color lightness at the expense of accuracy in color saturation. This is just one of the myriad mappings that are possible for any rendering intent, even while staying within the ICC specification.

Because the mapping of out-of-gamut colors is so vaguely specified by the ICC, it is a fundamental point to consider when comparing ICC profiling software.

9. Other Menu Features.

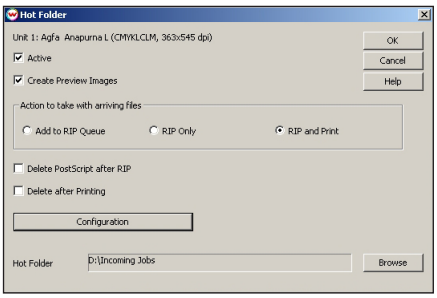
9.1 Server and Hotfolders.

In conjunction with Wasatch ImageNETTM, the Server feature allows you to automate the workflow in even the most complex production environment. You may set up and configure any number of “hot folders” and sub-directories for each printer installed on SoftRIP. When job files are sent to these directories via ImageNET or other network, they are processed according to the “instructions” specified in each directory.
Hot folders can be configured to specify:

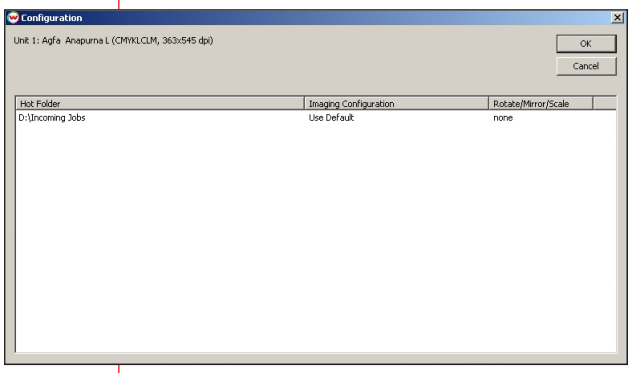
- Processing action for arriving files (RIP and Print, RIP only, Add to RIP Queue)
- File maintenance after RIPing and Printing
- Imaging Configuration applied
- Rotating, mirroring, scaling

a. Setting up and configuring hot folders.

To activate this feature for the current printing unit, launch the Hot Folder screen from the Server button at the top of the main screen . Click in the Active box to activate the controls.



The hot folders you set up will apply to the printer unit currently selected in the Unit window of the main screen. You may set up as many folders and sub-directory levels as you wish and specify separate operating parameters within each one.



Folders and sub-directories are chosen using the Browse feature at the bottom of the Hot Folder screen. When you choose a folder, SoftRIP will automatically include any sub-directories already in the root folder, creating job hierarchies that are multiple levels deep.

In the illustration, the root folder “incoming jobs” has been selected from the D: drive. Once the other parameters have been set up on this and related screens, pressing OK will cause SoftRIP to process any job file transmitted to that folder according to the instructions specified in the Actions to Take with Arriving Files area (Add to RIP Queue, RIP only, RIP and Print).
Checking Create Preview Images produces preview thumbnails for entries made to the RIP and Print Queues.

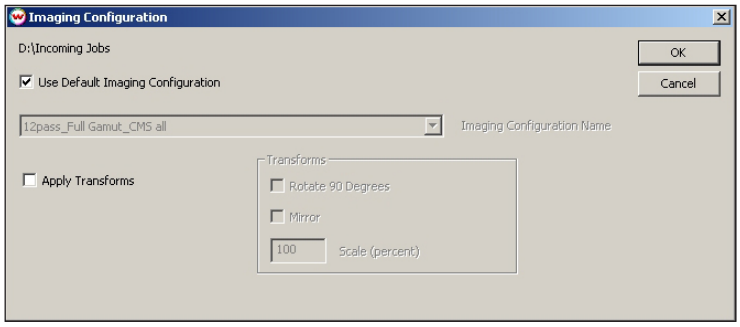
b. If you want to use the rotate, mirror and scale features, you must check the create preview images box.

The Configuration button launches the Configuration screen which lists your folder hierarchy for the current print unit. In the window, the Hot Folder column shows the structure of your root directory and sub-directories. You may set up as many levels as you choose. On the Configuration screen the Imaging Configuration column displays the Imaging Configuration that will be applied to the incoming job file. In this example, the first folder uses the Default Imaging Configuration. The Default means whatever Imaging Configuration is currently specified for the Unit.

On the Configuration screen, the Rotate/Mirror/Scale column displays image adjustments to be applied to incoming job files. The third listing in the window displays “0 1 .085” in this column. This indicates a 0 degree rotation, mirroring on and a 85% scaling factor.

c. Specifying imaging configurations and image adjustments.

Double-clicking any listing in the Configuration window launches the following screen:



Imaging Configurations : If you leave the Use Default Imaging Configuration box checked, the folder will apply the Imaging Configuration currently specified for that unit. When Default is selected, the Imaging Configuration is shown in the grayed out Imaging Configuration window.

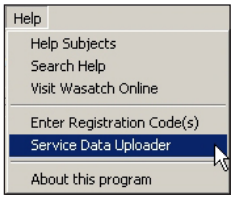
You may also override the current selection by unchecking the Default box and selecting a new one from the drop down window. Imaging Configurations you have previously loaded from the SoftRIP Imaging Configurations CD's will be available in this window.

Image Adjustments : Checking the Apply Transforms box on the screen activates the Rotate/Mirror/Scale controls.

You must click OK in order to active changes you make in this screen. When you send a job file to the folder or sub-directory, SoftRIP will automatically process the job according to the parameters you have set up in these screens.

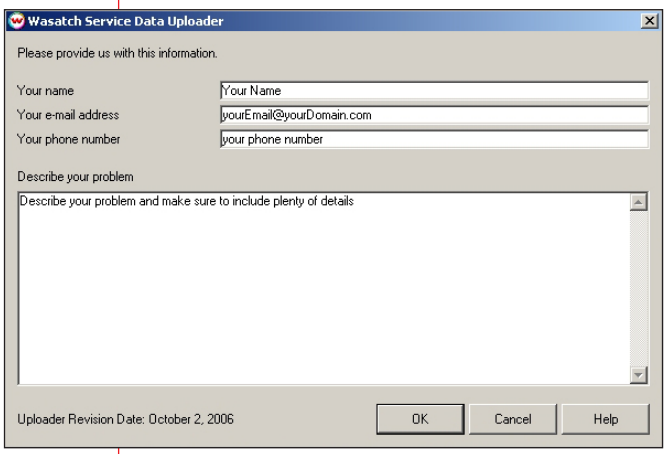
9.2 Service Data Uploader.

The Wasatch Service Data Uploader is provided to speed the solution of problems for customers with a current Service Agreement.



The "Service Data Uploader" is a powerful tool for working quickly with Wasatch Customer Service to get your questions answered. It enables Wasatch to examine your settings and imaging configurations in detail, and it makes it simple for you to upload problem files without needing to deal with email attachments or file compression utilities.

The general settings of Wasatch SoftRIP, and some details of your system are always uploaded. You may additionally request that imaging configurations and ICC profiles for your current printer configurations be uploaded. This can save many rounds of questions and answers when you want a problem solved quickly.



This tool can also be used to upload problem files, or to make an instant "snapshot" of your Wasatch system's status for your own use or for sending to your dealer, without uploading it to Wasatch. Run Service Data Uploader from the main Wasatch Help menu.

The next screen will prompt for your contact information, so that someone can get back to you about your problem, and for a description of the problem. After completing all contact information and a problem description, press OK to reach the next window.

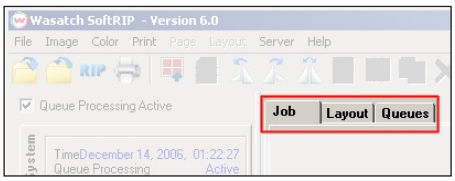
If your problem has anything at all to do with image quality, make sure you check “Full Imaging Configurations”. If you’d also like to upload some small (under 20 megabyte) problem files, check “Problem Files”, and use the “Add” button. When your selections are complete, you can either press “Upload” to immediately send data to Wasatch, or you can press “Make File For Upload” to create the data file and place it where you like on you system.

It can be extremely useful to choose “Make File For Upload” if you are not on the internet, or if you simply want to make a “snapshot” of system data for your own use, or for later transmission to someone other than the Wasatch service department. The “tar” or “Tape Archive” file format created by Service Data Uploader can be opened by most common compression/decompression utilities, making it completely accessible to all service technicians other than those at Wasatch. This also allows you to review exactly what information is being sent to Wasatch, should you have concerns about security.

If you are running tests on someone else’s computer, as often happens during sales calls or at trade shows, attaching a thumb drive and using “Make File For Upload” to place data on that thumb drive is a great way to secure the service information for later analysis or transmission.
Any time you upload data to Wasatch, contact our service department via email to let them know it’s coming.

10. Top Tabs.

The tabs along the left and upper edges of the main window include many of the key file preparation and workflow tools in SoftRIP. Based on your top tab selections, tabs along the left of the screen may appear, disappear, or modify.



10.1 Job Tab.

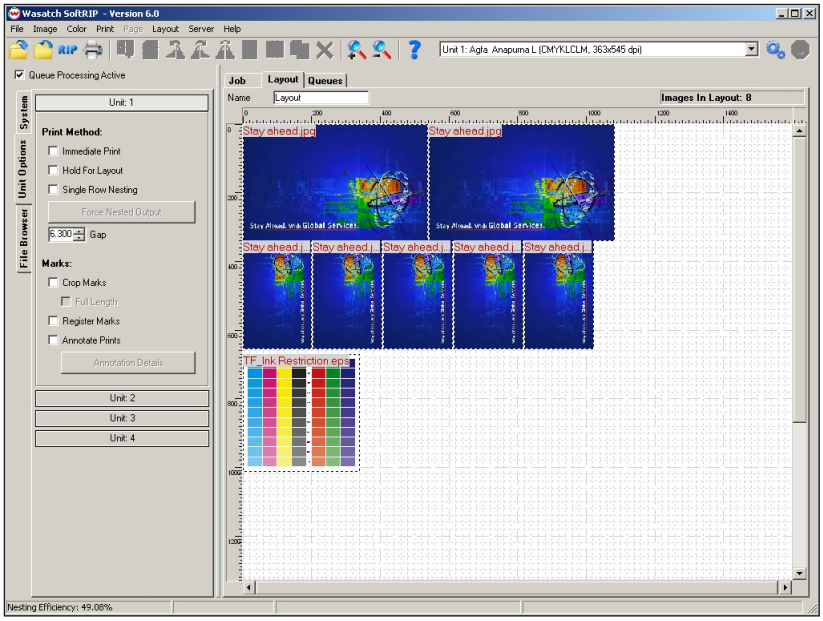
When the Job tab is selected, you can open an individual input file, or job, to be prepared for printing. With the Job tab selected, a full set of options for sizing, cropping, scaling, and tiling appear.

10.2 Layout Tab.

a. Working with SoftRIP Layouts.

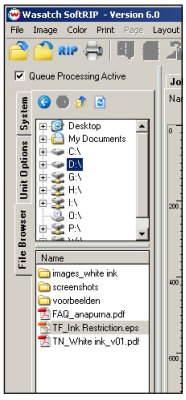
The Layout tab lets you use the full width of your media as a digital canvas upon which you can prepare images to print as part of your complete production run. With this workflow, you can easily drag and drop images into the layout, manipulate them, and nest them to fit efficiently as part of your overall print run. Both new images and pre-RIP'd images can be added to the layout tab for nesting into new production layouts. Pre-RIP'd files will not be RIP'd again when submitted for RIP processing as part of a new layout.

The key layout tools can be accessed through various methods to suit user preferences, including main menu options, right click menus, tool bar buttons, and hot keys.

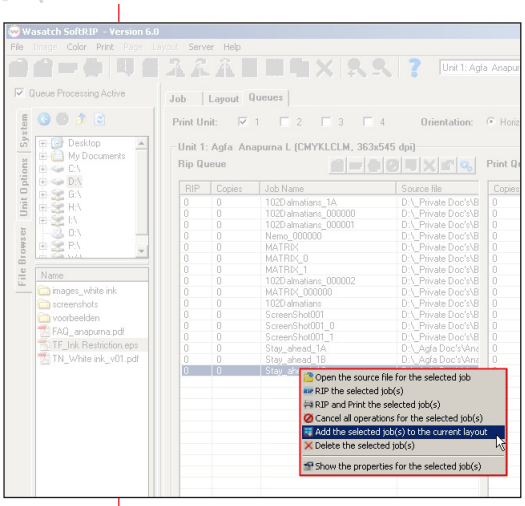


b. Adding Files to a Layout.

To add an image to a layout, you can click the familiar "file open" button on the tool bar, or select Import File from the File menu. You can drag and drop one or more files from the File Browser window on the left side directly into the layout or select a recently used file from the list shown at the bottom of the File menu.



When you add new files to the layout screen, the PostScript Interpreter will launch on your task bar to process the preview of the file. While this Interpreter is processing, you can cancel the import and preview of all jobs by clicking on the "Cancel Preview" button, located on the right side of the tool bar. Images can also be added to the Layout from other workflow tabs across the top of the main screen. To add an image from the Job tab to your layout, select the Add to Layout right click menu option or tool bar button.



To add images from the RIP and Print queues, select the job and click on the Add to Layout button. RIP'd files will show up with a solid blue outline. RIP'd files cannot be resized/rotated/cropped etc unless you choose to re-RIP them. Note that only selected jobs can be added to layouts. Layout entries in the Print Queue cannot be added to other layouts.

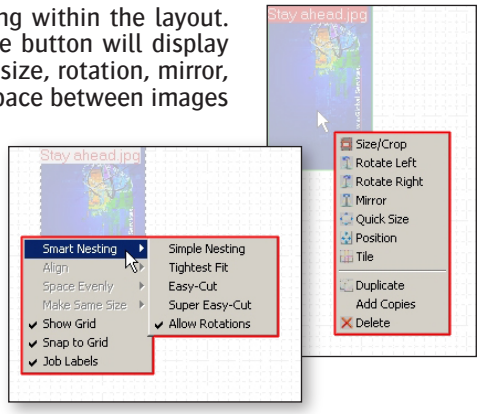
From the Print Queue, you can also click the Layout Queued Jobs button to send all copies queued for print to the layout screen. Using this option with the Hold for Layout option creates workflow similar the to Manual Print Layout workflow from previous versions of SoftRIP.

Note that the Layout Queued Jobs button is only activated when the selected Print Queue matches the printer selected in the Print Unit drop down window at the top of the main screen.

c. Basics of the Layout Screen.

When working within the layout, move images by clicking on them and dragging them to the desired location on the layout. You can select multiple images by dragging a box around the group of images, or by holding down the Control key while clicking successive images.

There are two right click menus for working within the layout. Clicking on an image with the right mouse button will display a menu of options for changing the image size, rotation, mirror, position etc. Right clicking on the layout space between images will display a menu of options for creating automatic layouts, aligning or spacing multiple images, and other tools to assist in the creation of your layout.



At the top of the layout screen, there is a Name field for specifying a name for your layout. This name will be displayed in the notes field of the print queue when the current layout is submitted to the queues.

d. Preparing Images to Print.

You can prepare images to print with tools like resize, crop, mirror, and tile easily with the layout workflow. You can access these tools by right clicking on an image, selecting an option from the Image menu, or using the appropriate tool bar button. If you do not have a file selected, or have selected multiple images you will notice that some tool bar buttons and menu options become "grayed out"

e. Resizing.

Simple resizing can be done directly inside the layout screen by positioning your cursor over the image's outline and dragging it in or out to achieve your desired output size. Select Quick Size from the Image right click menu to enter a scale percent or by entering the image width or height. Note that both of these size options will only resize with proportions constrained.

f. Cropping and Unconstrained Proportion Resizing.

To crop or resize without proportions constrained, select the Size/Crop menu option or click on the tool bar Crop button to launch the Image from Layout tab. This screen occupies the space of the Job tab, and you will receive a warning message that any image previously opened in the Job tab will be closed.

g. Rotation and Mirror.

The Rotate and Mirror tools can be used for one image or a group of images. Select your image(s) and select from the Rotate Right, Rotate Left, or Mirror menu options. Standard tool bar buttons are also available for these functions.

h. Exact Positioning.

To define precise positioning for your image within the layout, select the Position menu option or double click on the image. A position entry box will launch for specifying the location of the image's top left edge.

i. Tiling.

To tile an image that is too wide for your current printer, select the image and the Tile menu option. As with the Crop function above you will launch an Image From Layout tab; in this case with the Tile tab enabled on the left. You will be warned that any images open in the Job tab will be closed. After entering your tile configurations select the tiles to add to your layout and click the Update Layout button.

j. Changing Image Quantities.

The Duplicate menu option will increase the copies of an image by one copy, whereas the Add Copies menu option will allow you to enter a specific number of copies to add. Note that identical instances of an image within a layout will only be ripped once. Duplicates that are then resized, rotated, or otherwise manipulated will need to be RIP'd separately.

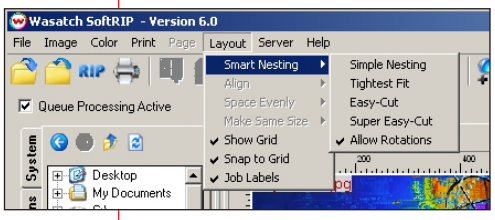
To remove a copy of an image from the layout, select the image and click the delete button on the toolbar or press the delete key on your keyboard. To clear an entire layout, select Clear Layout from the File menu, or click on the "close" tool bar button while the Layout tab is active.

k. Preparing Efficient Layouts to Print.

SoftRIP provides you with a range of tools for creating easy automated or customized layouts. You can access layout design tools by right clicking on the open space between images on the layout. Note that the Job Labels option shown in this right click menu lets you show/hide the filename labels as shown in grey and red in the illustration above. The Show Grid option lets you show/hide the grid lines in your layout window.

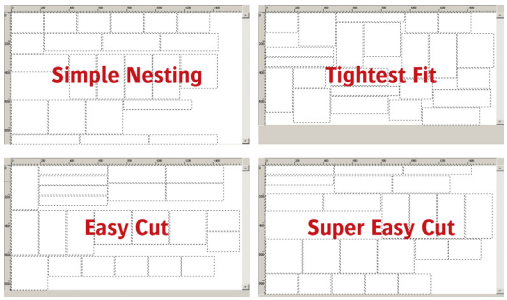
Some tasks can only be performed on multiple images. If you do not have multiple files selected, you will notice that some menu options become "grayed out"

l. Automated Smart Nesting™.



Whether you prepare your images directly in the layout window, or hold single jobs to arrange later, you can use SoftRIP's Smart Nesting™ to create efficient layouts. Smart Nesting™ offers several automated nesting options to balance your priorities for saving media and guillotine trimming time. The Allow Rotations setting saves even more media by rotating un-RIP'd files any time that rotation will make the overall layout more efficient.

- Tightest Fit creates a layout that will save the most media. Layouts made with Tightest Fit typically cannot be trimmed with a guillotine trimmer.
- Super Easy Cut positions images to result in the fewest number of cuts. In this mode, the layout can be trimmed with a single horizontal trim for each row, and then just a series of vertical cuts.
- Easy Cut is a "best of both" option that works to save both media and trimming time. This option positions images to be trimmed with straight cuts making horizontal cuts first, second cuts vertically, then continuing to rotate horizontal and vertical cuts until all images are trimmed.
- Simple Nesting positions images in the order imported, or for RIP'd images the order listed on the Print Queue



m. Customizing Layouts.

SoftRIP provides additional tools to streamline the process of manually manipulating layouts to achieve individualized nesting objectives. For these tools, the pri-

mary selection (indicated by a solid green outline) will be the image that the other selected images (shown with dashed green outlines) are aligned or sized to. Note that some of these tools are only available when multiple images are selected.

- Align Images : Horizontally aligns tops, middles, and bottoms or vertically aligns to left, center, or right.
- Space Evenly : Evenly distributes the images by moving them so that the space between each box is the same—either across or down.
- Make Same Size : Makes all selected images the same width or height as the first image selected.
- Snap to Grid: Snaps an image to the nearest grid point (snap occurs when moved image is released by mouse).

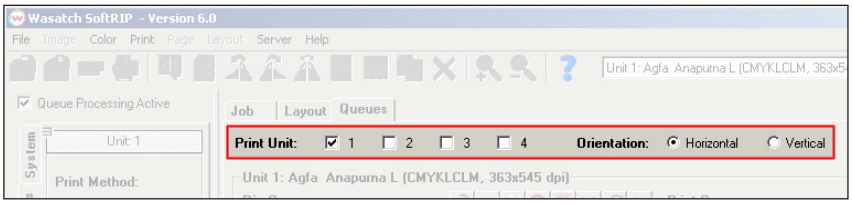
n. Printing Layouts

Selecting RIP or RIP and Print from the Print Menu will submit the layout for processing. Learn about RIPing and Printing Layouts in the Print Controls section of online help.

10.3 Queues Tab

When the Queues tab is selected, the view becomes the master production control station of the RIP. On the Queues tab, all RIP and Print queues are displayed with the status of each job updated in real time.

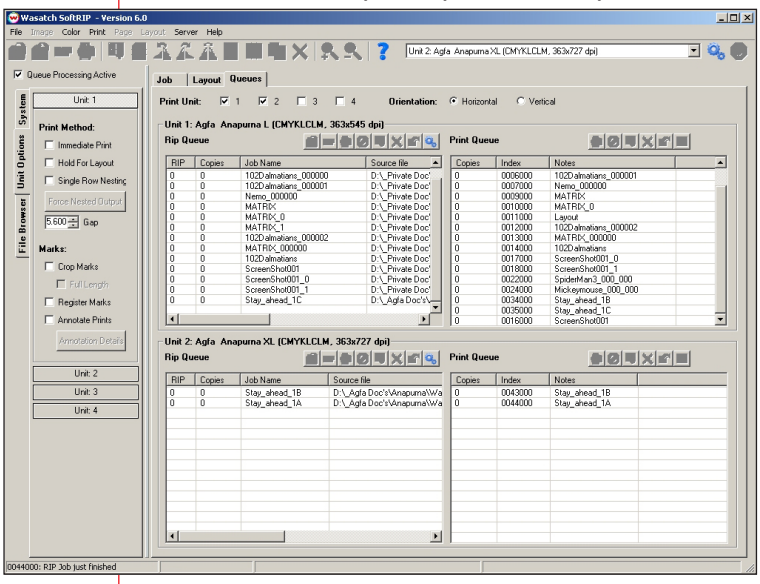
a. View Settings in the queue tab.



Queues Screen Layout Options : Queue lists and related utilities can be displayed for any or all configured Print Units. To display the Queue information for a Print Unit, check the box for that printer. When you check more than one box, the screen will reformat itself to display information for all selected print units. You may also select either the Horizontal or Vertical boxes next to the Orientation listing in the upper left hand section.

b. Working with RIP Queues

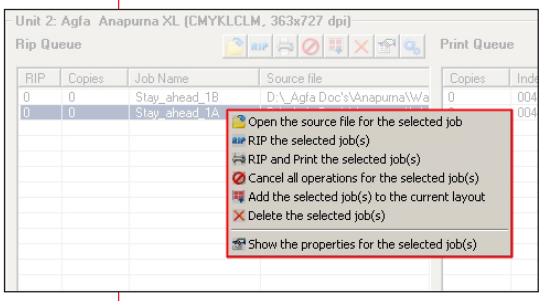
When a job is in the RIP Queue waiting to be processed, it will show an R in the RIP column. If it has been submitted to RIP and then print, it will appear with the number of copies to print in the Copies column. Zeros in both columns indicate that that



the job is not queued to RIP, either because it was not submitted to RIP or has already RIP'd. Note that the queue entry contains information about the source file location and modifications made to the image in SoftRIP. If the source file is moved or deleted prior to RIPing it cannot be processed.

Selecting a job in the RIP queue will activate the other buttons on the queue-specific tool bar. You may change settings for the job using the tool bar or by right-clicking on the job. Multiple jobs can be selected using the standard Windows CTRL and SHIFT buttons. Note that some actions listed below can be launched for jobs individually, while others can be applied to multiple jobs simultaneously.

- **Open the Source File for the Selected Job.**
  Opens the selected job on the Job tab (can only be used with individual jobs). This selection will close any images already open on the Job tab.



- **RIP the Selected Job(s).**
  Initiates the RIP process for job or jobs selected. When RIP process is complete, job(s) will appear in the print queue with zero copies.

- **RIP and Print the Selected Job.**
  Initiates the RIP and Print process for job or jobs selected. When RIP process is complete, job(s) will appear in the print queue with default of 1 copy.

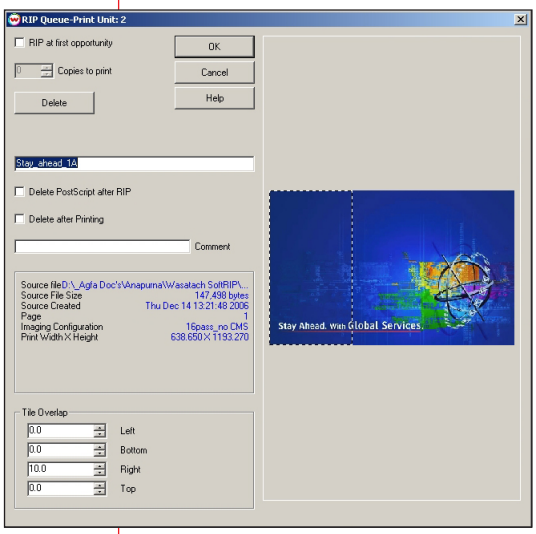
- **Cancel all operations for the selected job(s).**
  Cancels any RIP or Print processes requested for the job, leaving the job in the queue for future processing. Note that this will not cancel processing if RIPing has already begun.

- **Add the selected job(s) to the current layout.**
  Opens selected job(s) on the layout tab.

- **Delete the selected job(s).**
  Cancels any processes requested for the job or job(s) and removes them from the RIP Queue. This option does not delete the source file.

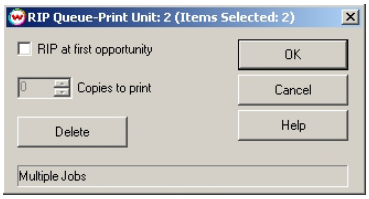
- **Show the Properties for the selected job(s).**
  This operation of this selection is based on the number of jobs are selected. For a single job, Show Properties can also be launched by double clicking the job.

- **Properties for Individual Jobs**
  - Show Properties for a single job will launch the RIP Queue window. Entries made on this screen will not be submitted until the OK button is clicked. If OK is not clicked, changes will not be executed.



  - RIP at First Opportunity will submit the job for RIPing, and enable the Copies to print control. If copies is set to zero the job will be RIP'd only. A quantity greater than zero indicates that the job should be RIP'd with the specified number of copies printed.
  - Delete will remove the job from the RIP Queue.
  - Re-Name Job : The window in the center of the screen displays the name of the job as submitted to the RIP queue. Change it by entering a new name. When you click OK, the RIP Queue's Job Name column will be updated for the Job. When the job is RIP'd, the Print Queue Notes column will also reflect the new name.
  - Delete PostScript after RIP will delete your source file from disk after the file has been RIP'd. This utility is useful for saving disk space automatically.
  - Delete After Printing deletes the Print Queue entry after printing is complete. RIP'd files can be sizable, especially for jobs with high DPI and large output size. Automatically removing these jobs from the Print Queue can be critical if you have limited disk space.
  - Comment allows you to enter a job comment message to be printed below the job. This comment will print along with any Annotate Prints settings selected in the unit Setup screen. Unlike the comments entered in the Setup screen's Annotate Prints window which will apply to all jobs printed with that print unit, Job Comments entered here will apply to this job only. The Annotation box on the Setup screen must be checked in order for messages entered in the Job Comments window to print with the job.

- Properties for Multiple Jobs
  When you highlight multiple RIP Queue entries and select "Show the Properties for the selected job(s)" you will launch the screen shown on the right. Note that only select batch processing options are available for multiple entries.



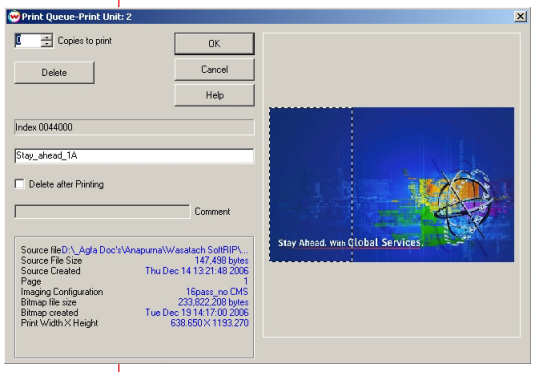
c. Working with Print Queues

Jobs are queued to print when they display a quantity greater than zero. If no functions to suppress printing are selected on the Unit Options tab, queued print jobs will begin printing immediately in the order they are listed in the queue. Units held for future nesting will display a quantity to print without initiating printing.
When job(s) in the Print Queue window are selected, the queue-specific tool bar will become active. As with the RIP queue, some actions can be launched for jobs individually only, while others can be applied to multiple jobs simultaneously. "Cancel all operations for the selected job(s)" and "Delete the selected job(s)" work similarly to the same options in the RIP Queue. Additional Print Queue operations are as follows:

- Print the Selected Job.
  Initiates the RIP and Print process for job or jobs selected, entering the default quantity of one. Clicking the printer button on the tool bar will add additional copies to print one at a time.

- Add the selected job(s) to the current layout.
  Opens selected job(s) on the layout tab. Since jobs listed in the print queue are already RIP'd, they will be displayed on the Layout tab with solid blue outlines. RIP'd images cannot be edited or rotated in the layout without re-RIPing. Learn more about this in the Layout section of online help.

- Layout Queued Job(s) toolbar button.
  In conjunction with the Hold for Layout option this control will add all jobs queued to print to the layout tab and change their quantities in the Print Queue to zero. You may decide whether to add the jobs to a layout already in progress or to clear the current layout tab contents before sending queued jobs to layout.



- Show the Properties for the selected job(s).
  Launches the Print Queues window. The Delete button here will remove the entry from the Print Queue only. Note that the job name entry window will change the listing in the Print Queue only; it will not update to the RIP queue entry for the job. You can also change the job name shown in the Notes column by selecting Edit Notes from the Print Queue right click menu.
  When selecting multiple jobs, only Copies to print and Delete are available options. As with the corresponding RIP Queue properties screens, changes will only take place if you exit these windows by pressing OK.

d. Master Queues Drag-and-Drop Actions

If an image does not require any file preparation, you can drag and drop it directly from the file browser tab to a RIP Queue. You will be asked whether or not you would like to generate a preview. If you select not to generate a preview, the image will display as "Preview not available" when added to a layout.
You can also drag and drop files between Queues for fast processing. Any time you drag a queue entry to a print unit that does not have an identical setup, you will be informed that you must RIP the file with the destination unit's Imaging Configuration. When dragging directly to a Print Queue, the file will be submitted to the RIP Queue, and the RIP Queue Edit window will automatically launch. Check "Print at first opportunity" and select the number of copies to print to RIP the job and forward it to the Print Queue.

e. Important Note

You must always make sure that the Queue Processing Active at the top of the main screen is checked. When this box is unchecked jobs currently in progress will finish but no new jobs will begin processing. This safety setting is useful when you need to stop your production in a hurry, but can create problems if it is unchecked by accident. When the box is unchecked, it will flash red and read “Queue Processing Not Active”. Jobs are not RIP’d or Printed when the box is unchecked.