

# Maximizing RIP Speed

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Many factors influence RIP speed. Following is a list of things you can do to improve your RIP speed as well as the possible effects you might encounter.

## Print Settings

Print settings are set when creating a media or profile or through the **Configure Printer** settings.

### **Lower Print Resolution**

Lowering your print resolution requires fewer calculations and therefore improves RIP speed. However, higher resolutions typically create smoother output and finer detail while lower resolutions tend to be slightly grainier.

### **Dot-Pattern**

Using a Stochastic dot-pattern (as opposed to an FDRP or Error Diffusion dot-pattern) does not require real-time calculations to determine dot placement. Again, fewer calculations improves RIP speed.

**NOTE:** The Stochastic dot-pattern can cause some patterning in certain images. FDRP and Error Diffusion dot-patterns prevent this by calculating random dot placement real-time.

### **Fixed Dot vs. VarDot**

Using Fixed Dot instead of Variable Dot requires a much simpler calculation and improves RIP speed.

**NOTE:** VarDot printing provides increased smoothness and saturation in your output. However, this requires a great deal of calculation and can slow RIP speed.

### **Number of Color Channels**

Using light inks or expanded gamut colors such as orange or green requires additional calculations. Using light inks reduces peppering in highlight areas and provides a softer transition from highlights to shadows, but it will slow your RIP speed.

### **Virtual Pixels**

Using virtual pixels allows RIP-Queue to process the image at a lower resolution and print with a higher resolution. Although this can significantly lower your RIP time, using virtual pixels may raise issues with crisp text or vector components. Raster components typically have fewer issues when printing with virtual pixels.

## Image Type

### **PostScript File Complexity**

More complex files (such as those containing multiple raster images, multiple layers, complex vectors, drop shadows, gradients, or transparencies) require a greater number of calculations to render accurately. This can increase RIP speed significantly. Using files with simpler content requires significantly fewer calculations to render accurately. However, this limits the image design. To make a complex file less complex, you can flatten the image by merging the layers; however, this may introduce other issues such as problems with pixelization when the image is enlarged, or on specific areas like curves on text.

### **Other File Types**

- PDF files share the same functionality as PostScript files along with additional functionality such as transparencies, which require different processing to render them correctly; however, without additional PDF functionality, PostScript files will rip faster.
- Tiff files are most efficiently run and best kept as tiff files.

## Quick Set Settings

To edit Quick Set settings, click **Edit Quick Sets**, then select a printer and click **Edit**. You can edit settings in the dialog that opens, or click **Advanced** to set additional settings.

## **Color Matching Table**

The color matching table uses an L\*a\*b\* formula to closely match your printer's capabilities to a specific spot color. Turning off the color matching table disables this feature and improves RIP speed.

**NOTE:** You may notice color shifts when the color matching table is disabled.

## **Make Copy of Image**

This option creates a copy of the original image file. Turning this option off will not improve RIP speed, but it will help reduce the time it takes for an image to open and go to print.

**WARNING:** If you turn this option off, remember to manually backup the original image files.

## **Halftone Settings**

Custom halftone screen settings increases the number of calculations required to RIP the image. If you want to simulate screen dot patterns, this option is necessary. Otherwise you may disable this option for improved RIP speed.

## **Color Correction (Filters)**

Reducing the number of color corrections applied to your image reduces the number of calculations required to RIP your image. However, reducing color corrections can prevent you from achieving your desired final output. To improve RIP speed and reduce the number of color corrections, apply your color corrections in a design application.

## **Compositing Separation Files**

By processing your image as a whole instead of separations, you remove the need to composite each separation with two-stage processing. This significantly improves RIP speed. Compositing separation files is typically used for press proofing and should not be used in a typical workflow.

## **Two-Stage Processing**

Two-Stage Processing should only be used when compositing a separation file. Disabling this option removes the need to process the image twice and significantly improves RIP speed.

Also, if the PostScript file is greater than 500,000 lines, turning on Two-Stage Processing and setting the Pixel Duplication at 2 or more may increase RIP time.

## **Anti-Aliasing**

Turning off this option reduces the number of calculations RIP-Queue must perform and improves RIP speed. This option helps reduce pixelization in some vector components when printing to a contone device at lower resolutions.

## **Interpolation**

Interpolation is used to increase the size of a low resolution image. Disabling this option prevents RIP-Queue from trying to give the image the appearance of increased resolution. Removing this calculation greatly improves RIP speed.

**NOTE:** This applies only to raster files.

## **Cut Contour**

This option is used to create a cut file for use with a cutter. If you are not using a cutter, disabling this option improves your RIP speed. Also, the more complex the cut paths in an image, the longer it will take to RIP the image.

# **PostScript RIP Options**

To set PostScript RIP Options go to the Setup menu, select PostScript, and Configure RIP

## **Bandhome Location**

Specifying the Bandhome location to use a large, empty hard drive allows RIP-Queue to use a dedicated, physically separate hard drive for temporary postscript processing. This prevents competition with OS and other processes.

## **CCADL (Color Correction After Display List)**

Disabling this option allows RIP-Queue to do all color correction while interpreting a PostScript file, thereby improving RIP speed. This option may be necessary to correctly RIP certain PostScript or PDF effects such as transparencies or drop-shadows.

## **VMSize**

This option is used to dedicate memory to the RIP process. The optimal setting for this option is automatically set at install time based on available RAM. This setting can be manually adjusted in the PostScript RIP Configuration dialog. You may go as high as 256000000 (256 MB) if you have at least 2 GB RAM.

**NOTE:** RIP errors may occur if you go above 256000000 (256 MB).

## **QuickSpotReplace**

Enabling QuickSpotReplace will improve RIP speed, but some spot colors may be rendered less accurately than when it is enabled.

## **Transparency**

Disabling Transparency can improve overall RIP speed, however many PDF elements and effects require this option in order to rip correctly.

# **Optimal System Settings**

These settings are set during installation or initial setup.

## **Hard Drive Hardware**

Using a faster hard drive provides optimum I/O to the drive and allows RIP-Queue to maximize the potential of the hard drive.

## **Hard Drive Space**

RIP-Queue requires a lot of drive space for processing postscript files. The more space available, the easier it is to RIP images. Keep at least 10+ GB free on the Bandhome drive.

## **RAM**

One GB of RAM per CPU provides the optimal amount of memory for the RIP process and ensures top RIP speed.

## **CPU Speed**

Using the highest speed processor available improves RIP speed. PostScript processing is a linear process that prevents multi-tasking and multi-threading. The faster the processor number of cycles per second, the faster it can be processed.

## **Dual Processors**

Dual processors allow you to RIP two images at the same time by allowing separate postscript rips to be run simultaneously.

**NOTE:** You must have multiple RIPs active on your key to do this. For more information contact your local reseller.

## **Optimal Drive Settings**

During installation you choose which hard drives you will use. To change your drive settings select the printer you would like to set and click **Configure Printer**. Then select the Properties tab, click **Change...** and set your drives.

Configuring physically separate hard drives as follows, allows RIP Queue to rip more efficiently due to multi-tasking capabilities of Windows and multiple read/write heads for the physically separate drives:

- C: OS and ONYX
- D: scratch drive (system temp variables and postscript Bandhome)
- E: Printer #1 input / work folder (job file storage and work area)
- F: Printer #2 input/ work folder (job file storage and work area)

## **Anti-Virus or Firewall Apps**

While not advisable, disabling your anti-virus, firewall, or spy ware application can prevent system resources from being tasked elsewhere. It is recommended to disable scanning your Onyx folder, your Bandhome folder, and your printer work folders in your anti-virus application.

## **Other Applications**

Removing unused applications provides greater resources for ripping images. If possible, put other applications on a separate computer and access RIP-Queue through your network.