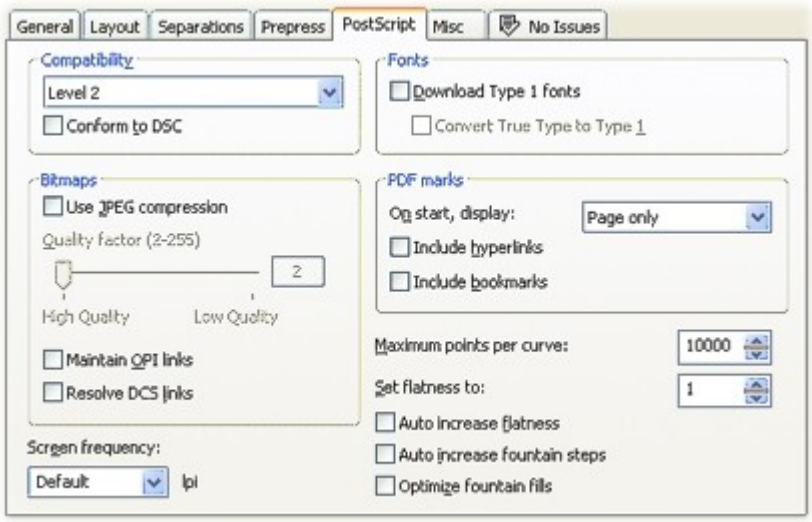
Demystifying the CorelDRAW Graphics Suite 12 PostScript Options

By Steve Bain

As anyone new to printing from a graphics application can tell you, print errors can sometimes be a scary and costly experience. Confusion is often amplified if you're faced with choosing *PostScript* printing options that you have limited experience with. If you don't know what PostScript printing options are, you certainly won't know which to use and which to avoid. Since the terminology seems foreign to many, I'll try to demystify the PostScript language so that it's more easily understood.

When you print from CorelDRAW® 12, you're actually using the print engine to send commands to your printer. Print options use information gleaned from your print driver to enable you to control how various object types are reproduced on the printed page.

It is useful to know that the PostScript tab (shown below) appears *only* when you have selected a PostScript printer. When the CorelDRAW 12 print engine prepares a document for printing, these options enable you to control how the PostScript page description language is prepared for your printer.



Is Your Printer Compatible?

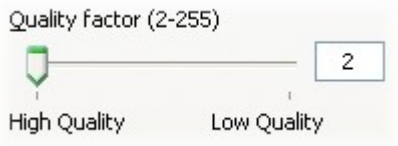
The question of printer compatibility is based on whether or not your selected printer is of the PostScript variety. Designed to make printing more efficient, PostScript printers use specific page description language to reproduce certain aspects of text and objects. Essentially, non-PostScript printer drivers convert the entire contents of your document into a bitmapped image based on your drawing size and the material size onto which you're printing. If you're unsure of your printer's compatibility, check either with your manufacturer or the documentation included with your printer. Generally, deskjet, bubblejet, and inkjet printers are non-PostScript while imagesetters are exclusively PostScript.

Ordinarily, selecting a printer and its device driver—and perhaps even the PostScript Printer Driver (PPD) file—will automatically set the *Compatibility* option (shown below). Compatibility will depend on how recent your printer's PostScript technology is. Along with everything else in the computer industry, PostScript technology has evolved over the years. Older printers may be limited to Level 1, whereas newer printers may be compatible with Level 2, or PostScript 3.

If you're sending your print job through a high-end PostScript "postprocessor" that requires Document Structuring Conventions (DSC), choose the *Conform to DSC* option. Postprocessors can perform complex prepress functions, such as color trapping, page shuffling, and complex signature structures.

Total Power Over Printing Bitmap Images
If your PostScript printer is compatible with *Level 2 or PostScript 3* standards, and either of these is selected from the *Compatibility* drop-down menu, the *Use JPEG Compression* option (shown below) becomes available. By using compression, you can decrease the size—and consequently the time—it takes to send bitmapped images to your printer, especially if they are rather large.

With compression enabled, the *Quality Factor* slider becomes available (as shown below). Since JPEG is a "lossy" compression standard, you can use this to adjust the output quality of the printed bitmapped images. To speed up printing, you can control the print file size by altering quality, which affects compression.



Connecting to Externally-Linked Files
The two linking options (shown below) provide control over how your PostScript printer will handle externally-linked files in your CorelDRAW 12 document. The two varieties—Open Prepress Interface (OPI) and Desktop Color Separation (DCS)—refer to unique printing strategies often used by high-end printers.

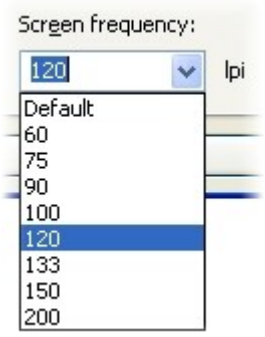
Maintaining OPI Links
While this option is enabled (the default state), the print engine will automatically maintain external links to bitmap images imported using OPI. If you're using OPI, you can store high-resolution bitmapped images in your printer's internal memory and use low-resolution placeholders in your document. During printing, the high-resolution images replace the lower-resolution placeholders.

Resolve DCS Links
In a printing strategy similar to OPI, DCS technology enables you to import into your CorelDRAW 12 document low-resolution placeholder images that contain embedded links to

digitally-separated images for use in process, or multi-ink, printing. While *Resolve DCS Links* is enabled (the default state), the high-resolution images automatically replace the placeholder images. If you deactivate *Resolve DCS Links*, a prompt will appear just before printing occurs, enabling you to resolve the links manually.

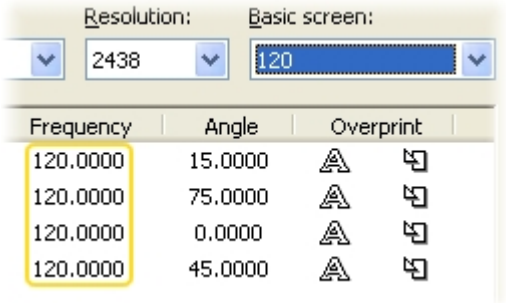
Choosing a Screen Frequency

When it comes to printing separations, controlling *Screen Frequency* is a function unique to PostScript, essentially controlling the spacing of the screen dots which compose tints and halftones. The screen frequency value (shown below) determines the number of lines per inch (LPI) for the entire print operation and is typically used when separating color plates to an imagesetter or a platesetter.



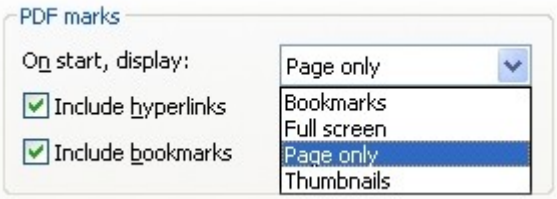
The *Default* setting leaves the frequency function in the hands of the raster image processor (RIP) to which you're printing. Changing to a specific setting enables you to override the RIP settings. It's is useful to know that, when separations are selected, it automatically changes the default frequency settings from the Separations tab (shown below).

You can also customize screen frequency directly from the Separations tab, or in the Advanced Separations dialog (shown below), which you can access by clicking the Advanced button from the Separations tab.

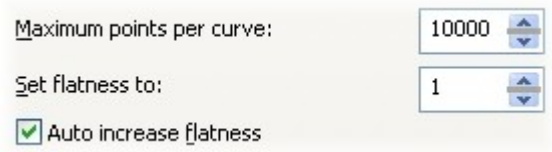


Power Over Font Handling
CorelDRAW 12's print engine provides two options (shown below) for controlling specific font handling during printing. By default, both options are selected. To speed printing, the *Download Type 1 Fonts* option tells the print engine to send Adobe Type 1 fonts to your printer's internal memory before printing. Since Adobe Type 1 fonts are often preferred over TrueType fonts, the *Convert True Type To Type 1* option tells your PostScript printer to replace any True Type fonts with available Adobe Type 1 equivalents. If no equivalents exist, the TrueType font is used.

Managing PDF Options
If your document is being output as a PDF (Portable Document Format), and you're printing a composite, the *PDF Marks* options (shown below) become available. From the *On Start* drop-down list, you can specify how your PDF initially displays. You can choose from Page Only, Full Screen, or Thumbnail views. You can also choose whether to *Include Hyperlinks* or to *Include bookmarks* in the resulting PDF file.



Controlling Curve Printing
For highly-complex drawings, the print engine's power over vector paths provides very specific control with three options for setting curve printing.



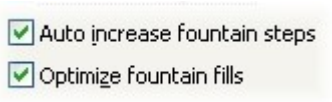
Maximum Points Per Curve Limit
If necessary, you can choose this option to limit the maximum number of points on a printed path. By default, when sending path descriptions to your printer, CorelDRAW 12 automatically uses a *Maximum Points Per Curve* setting of 10,000 nodes per curve. If the limit is exceeded, path descriptions are simply clipped, usually without altering their appearance. The default limit is usually more than enough for printing typical object paths, but you can set this value anywhere between 20 and 20,000 nodes per curve. Be warned though—increasing the limit may overwhelm your printer's memory.

Curve Flatness
The often misunderstood term "flatness" refers to the number of straight vector paths used to

describe a curved path. The more straight vectors in a curve, the less complex the path will be to print—and vice versa. Increasing the flatness setting causes less smooth printing of curves, but also speeds the printing process. The *Set Flatness To* option enables you to set the flatness limit to a value between 0.20 and 100.0.

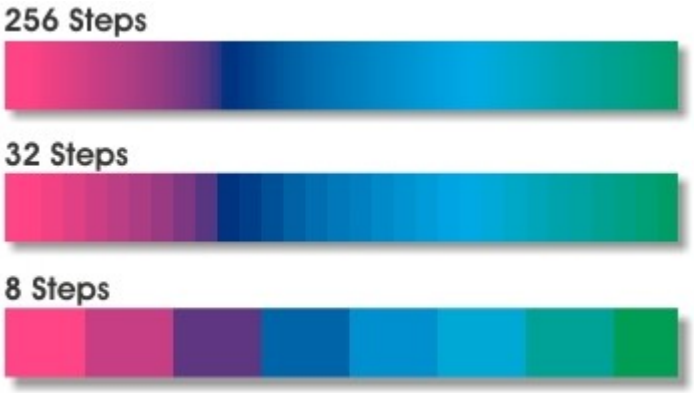
Bump Up Flatness Automatically
For objects that exceed the flatness setting by two, the Auto Flatness option automatically increases the flatness setting until the object prints.

Control Over Fountain Fill Printing
If you've used fountain fills in your CorelDRAW 12 document and you need more control over how they print, there are two available options that will help.



To avoid undesirable "banding", the *Auto Increase Fountain Steps* option tells the print engine to examine your document for opportunities to increase the number of fountain steps toward improving their appearance.

Banding becomes visible when the number of steps in a fountain fill is too low to simulate a smooth color transition (shown below). Increasing the number of steps that describe a fountain fill increases the printing time but achieves better printed results. Up-to-date PostScript printers can often handle higher step values than the default 256 for all fountain fills in your drawing. If this is the case, you can leave this option selected (the default state).



The Optimize Fountain Fills option works in reverse of the Auto Increase Fountain Steps by allowing the print engine to decrease the number of fountain steps for objects in your document to the maximum number of steps your printer is capable of reproducing, the *Optimize Fountain Fills.*

As with any print operation, be sure to scrutinize your document closely before finalizing your options. Give careful consideration to how you'd like the document to print and the capabilities of your selected PostScript printer. Once you've selected the perfect setup, you can avoid the tedium of choosing options repeatedly for a specific printing operation by saving the entire setup as a unique Print Style (accessed from the General tab of the Print dialog box). Using a Print Style, you can include your PostScript printer selection and all of the PostScript-specific options you've selected for instant reuse.