



Tech Info Library

Color LaserWriter 12/600: 1-Pass or 4-Pass (8/95)

Article Created: 24 August 1995

* RESTRICTED: Apple Internal and Support Providers Only *
Not For General Public Release

TOPIC -----

How does the Color LaserWriter 12/600 PS distinguish between B&W and Color data? Sometimes it seems the printer will process a page through all four toner cartridges (CMYK) even if printing only black text, or grayscale images.

Does the printer support printing black/grayscale data with just the black toner, that is, having a 1-pass printing process in the printer? How does this relate to use of the LaserWriter 8.3 driver and what is selected in the Options dialog?

DISCUSSION -----

With regard to 4-pass printing, some clarification is required. 4-pass printing (using all the cartridges, CMYK) is not automatic when Color/Grayscale is selected in the "Print" dialog of LaserWriter 8.3 driver.

How the Color LaserWriter 12/600 PS decides whether to switch between 1-pass and 4-pass printing modes is mostly determined by the printer controller which parses the PostScript input stream for any "color information". If found, the printer is placed into 4-pass mode by the controller. The following should help in characterizing how the Color LaserWriter 12/600 PS gets placed into 4-pass mode:

The Color LaserWriter 12/600 PS WILL be placed into 4-pass mode if:

- The document to be printed contains a bitmapped image, B&W or color (that is, if the PostScript "image" operator is used).

It would take an enormous amount of "processing" time in the printer to look at the bitmapped data to check for any color information.

- The document to be printed contains one or more non-black pixels.

If the entire page has only black and white data, but there is one color pixel in the page somewhere, then the printer will go to 4-pass mode.

- An EPS file being printed contains any references to color usage.

Even if "Black and White" is selected in the driver, if the EPS file uses PostScript "color operators" such as "setcmyk", then the printer will go to 4-pass mode.

- The document to be printed is a Legal-sized page and there is only 12MB of RAM in the printer.

There is one exception to this and that is if straight B&W text is being printed, then the printer will use 1-pass mode. Otherwise, the reasoning for going into 4-pass mode is strictly for less memory usage.

- An application uses anything other than the PostScript "setgray" operator.

Support Information Services
Copyright 1995, Apple Computer, Inc.

Keywords: hts

=====

This information is from the Apple Technical Information Library.

19960215 11:05:19.00

Tech Info Library Article Number: 18482