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LaserWriter 16/600 PS: Using a Hard drive For Fax Storage 2/95

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TOPIC -----

Page 150 of the LaserWriter 16/600 manual includes the following statement:

"...internal hard disk...provides space for font storage. If you have the LaserWriter 16/600 Postscript Fax Card installed, you can also store incoming faxes on the hard disk."

This article describes what this means and the general advantages of using hard drives attached to PostScript fax equipped printers.

DISCUSSION -----

A hard drive connected to your PostScript fax equipped LaserWriter can also store fax jobs. In addition to all of the normal advantages of having a hard drive connected to your printer for font and print job storage, you can transmit and receive longer faxes with one phone call because there is typically more space available on a hard drive than in RAM. If the destination printer is busy printing a document, the printer saves incoming faxes in memory and/or on the hard drive. When the printer is done printing the current print job, it then prints the stored documents. Therefore, if you are using a hard drive, there is a potential for receiving and buffering more fax jobs.

However, having a hard drive attached to a fax capable LaserWriter does not let you store a fax or printing job for an extended period of time. All print or fax jobs are stored temporarily. When the printer is free to process the documents, they are printed then deleted.

If the destination printer runs out of paper, the printer buffers the queued fax print jobs until paper is provided. The printer continues to accept incoming faxes until its RAM and hard drive buffer are full, at which point it no longer accepts calls.

Faxes sent in the PostScript file format are generally more compact than traditional faxes, thus reducing the transmission time and cost. However, if the file contains complex graphics or images, then the size of the PostScript file can exceed the size of the standard raster fax. File size is reduced because PostScript Fax uses the built-in LZW compression and decompression capability of PostScript Level 2.

The memory required to handle fonts becomes an issue when the recipient's fax device is another PostScript fax device, and a PostScript fax is being sent. The sending fax device has no way of determining if the target PostScript fax device has additional fonts beyond the standard 35 fonts installed. So, if the document being sent requires additional fonts, the PostScript Fax printer automatically sends the additional fonts along with the PostScript file to the recipient's fax printer. PostScript fonts are generally about 35KB in size and require approximately 35 seconds of additional transmission time for each font transmitted.

The reality of running out of RAM is unlikely in most circumstances. Apple has not tested the upper limit. Apple has transmitted and buffered, in RAM, as many as 20 one page PostScript faxes to a PostScript Fax LaserWriter without running out of RAM. Even though 20 print jobs were buffered, additional variables such as these can cause different results:

- The fax job is a PostScript fax file
- Fonts are downloaded
- The job is in Group 3 standard mode (200 dpi by 100 dpi)
- G3 fine mode (200 dpi by 200 dpi)

If raster faxes encounter memory limitations, they can be transmitted in multiple calls. However, if the sender or receiver does not have sufficient storage to hold all of a transmitted PostScript fax, the job fails. In this case, having a hard drive connected to one or both printers may enable the transmission to succeed.

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