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LaserWriter IINTX SCSI Hard Disks: General Information

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Configuring the hardware:

The extended ROM support of a disk-based file system and the 53C80 SCSI controller with a 50-pin external connector allows you to attach one or more SCSI hard disks to the LaserWriter IINTX. The addition of a hard disk acts as "virtual memory", increasing the space available for font storage, font caching, or a display list buffer.

When connecting hard disks to the LaserWriter II, follow the standard SCSI procedures:

- each disk drive must have a unique SCSI ID number
- no more than two SCSI cable terminators in a chain
- no more than 7 devices.

The LaserWriter IINTX controller does NOT provide termination of the SCSI signals or active power for external terminators.

LaserWriter IINTX will NOT recognize any of the attached disks unless they are ALL turned on when you want to use any one of them.

(NOTE: some manufacturer's disk drives do not have the intelligence to report their size. These disk drives SHOULD NOT be used on the LaserWriter IINTX.)

Initialization:

Initialize the disks and download fonts to them with the LaserWriter Font Utility application on the LaserWriter II installation disk.

Initialization allots 20 percent of total disk space to font storage, and 80 percent to font-caching. The LaserWriter IINTX automatically increases the storage percentage as needed. The Font Utility application warns you when the percentage is high enough to threaten font-caching performance.

The LaserWriter IINTX regards all attached hard disks as a single logical unit. Therefore, if you add a disk to the system you will have to re-initialize ALL

your disks and rebuild your font storage. The font cache rebuilds itself automatically. Because you can chain several hard disks, the space available for font-caching is essentially unlimited, and thus the bit-maps are always available.

Downloading:

When you download a font (and you have a hard disk attached,) you can choose to download it either to the disk or to RAM. Downloading fonts to the disk stores them there permanently (until you remove them). This process saves time, because you won't have to download repeatedly over the AppleTalk network.

Start-up Sequence:

Postscript checks the disk device for file-system integrity -- and the disk-based font cache for internal consistency -- each time the LaserWriter IINTX is turned on. If the check for file-system integrity fails, the disk device is re-initialized; for this reason you should ensure that ALL data on the device is recoverable from another source.

If the check of the internal consistency of the disk-based font cache fails, the information in the font cache is discarded, and associated data structures and files are restored to their initial state. If these start-up diagnostics are completed successfully, PostScript searches the disk device for a file named Sys/Start.

Sys/Start File:

A Sys/Start file can be used to set volatile parameters and to load special items into virtual memory before any other job is executed. If a Sys/Start file is stored on the disk device, it will be executed if "dosysstart" is true, right after completion of the start-up diagnostics.

If the file has become corrupt, it is necessary to restart the printer with the disk device turned off. To prevent the file from being run, you need to set "dosysstart" to FALSE -- then the Sys/Start file would not be executed the next time the printer is turned on. (To replace the bad Sys/Start file, restart the printer with the disk device turned on.)

Storing/Replacing the Start-up File:

The procedure used to download your Sys/Start file to the printer's disk device is broken into two PostScript programs to preserve virtual memory, which is consumed when working outside the server loop:

(NOTE: Virtual memory is not recovered until the printer is powered-down and on again. To protect the system files, it is necessary to work outside the server loop when accessing these Sys files.)

- The first job stores the text of your Sys/Start file to a temporary file. It is not necessary to exit the server loop to perform this function.

- The second job exits the server loop, deletes the Sys/Start file if one already exists, and renames the temporary file to Sys/Start.

Actual code is provided in the current Apple LaserWriter Reference manual.

Article Change History

15 September 1993 - Changed the LaserWriter model designators to upper case.

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