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## Macintosh AV Series: Floppy Drive Performance (5/94)

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TOPIC -----

I have been experiencing performance problems with floppy disk drives on Macintosh Quadra 840av and 660av systems. Tasks such as formatting floppies, duplicating files on floppy disks, and copying from the hard drive to the floppy drive take almost twice as long on the AV systems as compared to other Macintosh units.

I understand that these systems have a different floppy disk drive controller chip. Can this be causing the problem? Is there a known fix to this? Can this problem be expected with PowerMac systems which have the floppy DMA on the new SWIM chip?

DISCUSSION -----

### GCR (800K) Performance

This microprocessor (the new integrated floppy controller), while taking over all of the timing-critical floppy control functions, does not have the computational speed of the main processor, or the speed of the 68000 used in original Macintosh systems. The result is that for GCR formatted disks (800K), the additional computation used in GCR coding and decoding makes accesses to and from an 800K floppy slower than on previous macintosh systems. Our tests show that it usually takes about 50% longer to read and write to an 800K floppy on the AV systems as compared to other Macintosh systems. Currently, there are no plans to change the floppy controller for an increase in performance. The performance of the floppy drive in 1.44M mode is comparable to other Macintosh systems.

The 800K read/write performance is a compromise in order to provide the additional functionality of those products based on the current technology, cost, and time to market constraints.

There are some extensions (created outside of Apple) that may improve the read/write performance when using 800K floppy within the DSP based AV products. This is only mentioned as a possibility, as they are not tested by nor can be recommended by Apple.

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