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Macintosh SCSI Hard Disk Drives: How Capacities Are Calculated

Revised: 9/29/90
Security: Everyone

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This article last reviewed: 30 March 1988

After a hard disk is formatted, the Finder shows the "available" storage in kilobytes. With a given drive, this number varies with the version of HD Setup software used. For example:

Drive	HD Setup 1.3	HD Setup 1.5
HD 40SC	41,439K	39,333K
HD 80SC	76,911K	76,869K

To calculate the drive's capacity in bytes, multiply the number of kilobytes (K) by 1,024. To calculate the drive's capacity in megabytes, divide the number of kilobytes by 1,024. The capacity of the drives after being formatted with HD Setup 1.5 is:

HD 40SC	39,333K	=	40,276,992 bytes	=	38.4MB
HD 80SC	76,869K	=	78,713,856 bytes	=	75.1MB

The sizes of formatted drives varies between manufacturers, depending on the intelligence of the drive controller. Some drive controllers spare bad blocks automatically or allocate a range of blocks that can be swapped with bad blocks. It is the industry practice to quote the size of a formatted drive even though the size of the drive will vary depending on the operating system with which the drive is formatted.

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Tech Info Library Article Number:2796