4850 EP (250-5143)

Cache Memory

Faxback Doc. # 1019

Your computer includes 8 KB of cache memory. Data that is reused frequently during a program is stored in cache memory. Because cache memory is very high-speed memory, correct use of cache memory can dramatically decrease processing time.

A cache conflict occurs when any system component, either hardware or software, attempts to use memory for some other purpose. Cache conflicts are rare. If a cache conflict occurs, the cache utility, CACHE485, enables you to diagnose and resolve the conflict.

Read the following directions carefully before running the cache utility. If you believe that the computer has a cache conflict:

- 1. Run the cache utility, making a note of the current cache state (the shaded area).
- 2. Select the NONE option and press F2 to reset the computer.

If the problem still exists, it was not caused by a cache conflict. Run the cache utility again, and select the original cache state. Then, reset the computer.

If the problem is resolved by selecting the NONE option, identify the component causing the conflict and the memory address involved. The documentation for your system components should identify the memory addresses they use. Run the cache utility again and select the original cache status and deselect the memory range that includes the address that is in conflict. When you are finished, press f2 to reset the computer.

RUNNING THE CACHE UTILITY

To run the cache utility:

1. At the MS-DOS prompt (A> or C>), type:

cache485

and press ENTER.

The program displays a list of memory address selections. If you toggle an option that is already highlighted, it will be designated non-cache. If you toggle an option that is not highlighted, it will be designated as cached.

- 2. Use the up and down direction keys to highlight the selection you want. Press ENTER to activate the selection.
- 3. Press F2 to save the selections and reset the computer. Press ESC to cancel the utility.

MEMORY MANAGEMENT

The following diagram illustrates the arrangement of memory in your computer:

Up to 32 MB (32768 KB)

Extended Memory (Up to 32 MB)	
Shadow RAM (384 KB)	1024 KB (1 MB) 640 KB
Base RAM (640 KB)	
L	0 KB

Base RAM (Conventional Memory) -- Memory below 640 KB; used by MS-DOS and all MS-DOS applications.

Shadow RAM--Memory from 640 KB to 1024 KB (1 MB); use by the system BIOS, and other BIOS extensions.

Extended Memory--Continuous memory above 1 MB; CAN BE ADDRESSED DIRECTLY BY 80286, 386SX, 386DX, and i486 microprocessors. Often used for software disk caches, RAM disks, and software print spoolers. Extended memory can also be directly used by software like Microsoft Windows or MS-DOS software through the use of a DOS extender. Other operating systems such as OS/2 or UNIX can also use extended memory manager called HIMEM.SYS. Refer to MS-DOS 5.0 documentation for information about HIMEM.SYS.

(smm 08/05/93)