

DESCRIPTION

SpeedRAM increases the speed of your system CPU by changing the refresh rate of your systems 8253 timer chip. All Personal Computers, including the original IBM PC were designed with a very high refresh rate. The rate used by all personal computers is far beyond the rate required by the RAM chips used in these machines. SpeedRAM sets the refresh rate to match closer with RAM manufacturers specifications and in turn frees up CPU cycles. These free cycles can be used by your software rather than going to waste by refreshing the RAM too often. The change in refresh rate matches within specifications of most DRAM manufacturers. Depending on your system SpeedRAM should increase your CPU's performance from 2% to 10%. You can measure this in many ways such as LANDMARK's CPU SPEED Test or Norton Utilities SI program.

WHAT IS A REFRESH RATE AND WHAT DOES IT DO?

The memory in your Personal Computer is called DRAM, or Dynamic Random Access Memory. This memory is made of banks of 9 chips each holding up to as much as 4MB of 1 bit data. Each chip in a bank represents one of 9 bits. In Personal Computers, 8 of the bits store data and the 9th bit is called a parity bit, used to determine if the data bits are holding the proper information. DRAM chips can not hold a charge of electricity for a very long time. In fact, a new charge of 5 volts must be supplied about every 65 micro seconds or it will loose its data. To supply this charge, that is refresh, the memory, the CPU must stop processing data and direct the 8253 chip to send the refresh charge to the bank of memory. Once the refresh is done the CPU can continue processing. By reducing the number of times the CPU has to stop to refresh the DRAM is how SpeedRAM speeds up your system.

NOTES

SpeedRAM does not require any RAM or take any away from your system. SpeedRAM only needs to be loaded once and will perform until the machine is rebooted.

Once SpeedRAM is loaded and changed your systems speed try loading some software to insure that the system is working properly. Run all the programs that you normally run on your system. Do not load any data that isn't already saved in case SpeedRAM causes a problem. If SpeedRAM causes any problem, it will cause memory problems, your system will either hang or you will get a Parity Error type message, if have any problems refer to the Trouble Shooting section that follows for further instructions. If everything works fine then you might want to copy SpeedRAM to your STARTUP group so that it loads every time you run Windows.

If you have any time of Memory or RAM test you can further insure that everything is working properly by running that test. If it reports no problems than it is safe to assume that SpeedRAM has no conflicts with your machine.

TROUBLE SHOOTING

SpeedRAM has been thoroughly tested on many systems before being released but due to the complexity and variety of equipment available we can not guarantee that it will work on every Personal Computer.

If you notice memory errors, parity errors, or that your machine is hanging after running SpeedRAM then the rate that SpeedRAM has chosen for your system is causing the DRAM chips to fail. This is in no way a permanent failure, you will just have to pick a lower rate at which to run SpeedRAM. To use a manual refresh rate with SpeedRAM click on the Refresh Rate down button and lower the rate from 65 until a value that lets your PC run. 18 is the standard value and is the same as if you were not running SpeedRAM.

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