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**Subject: Using Maxtor's Power Diagnostic Utilities (PowerMax v 4.22)**

**Summary:** Guide to diagnosing hard disk problems on Maxtor/Quantum hard drives utilizing POWERMAX

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**Overview:** The POWERMAX utility performs diagnostic read/write verifications on Maxtor/Quantum hard drives. These tests will confirm hard drive integrity. Maxtor recommends this utility for troubleshooting any potential hard drive problem. These problems include, but are not limited to the following:

- Potential hard drive surface problems (e.g., bad clusters, bad sectors, partitioning/formatting problems, etc.).
- Drive recognition problems (e.g. hard drive that is not recognized by the operating system).
- Data removal for security purposes or software corruption.

**Maxtor recommends that you run PowerMax on all hard drives before considering warranty replacement.**

### Guide to diagnosing Hard Disk problems

The first step to returning a disk drive is clear confirmation that the drive is truly defective. Many disk drives we are asked to replace are not, in fact defective. It is in your best interest to perform some basic troubleshooting first. You will avoid the inconvenience, expense, and unnecessary effort of replacing a working drive. Often a faulty cable, file corruption, virus, or wrong jumper settings can be interpreted as a drive failure.

1. Try a different cable.
2. If the disk drive is not "seen" by the motherboard's ATA/SATA hard drive controller or add in (PCI) ATA/SATA controller, isolate the offending drive as the only device on the bus. If this does not work, try the drive with another ATA or SATA controller, motherboard, or cable. Do symptoms continue? If not, the problem is with the controller, motherboard, or cable.
3. If the disk drive passes all tests, the problem remains elsewhere in your system. You could have a system Hardware problem or a corrupted file. Programs in the operating system such as Scandisk and Defrag show only corrupted file structures not true media damage. If you are receiving errors in Windows, copy and paste the error message to a Web browser search engine (Yahoo, Alta Vista, Excite, Google, et al.), and search the internet, for articles relating to the error. You may try reloading the operating system or application program software. You can also use other (third party) diagnostic utilities that test beyond the hard drive for viruses, file system issues, and registry integrity.
4. For more information diagnosing hard disk, software and system problems please visit our Knowledge Base at <http://www.maxtorkb.com>
5. PowerMax can identify defective hard drives, but may not identify drives with intermittent errors. These drives usually function well, and only occasionally report errors. If you feel the drive may be failing intermittently, run the PowerMax extended tests.
6. The best test for a drive with intermittent problems is a 'low level' format routine. **!! Warning !!** This test will erase all your data, but the drive will be restored to a 'factory re-certified' condition. Be sure to make a full backup of all critical data before proceeding. If your computer has more than one hard drive, be sure to choose the correct drive. If a drive fails this test, it usually indicates a drive failure.



