ABSTRACT

APPARATUS FOR SENSING OPERATING SHOCK ON A DISK DRIVE

This invention provides a shock load detection device (24) mounted on a disk drive unit (10). The relatively planar shock sensor (24) is mounted on a relatively rectangular disk drive (10) such that the plane of the sensor (24) intersects the planes aligned with the sides of the disk drive (10) at oblique angles. The detection device (24) is preferably comprised of a piezoelectric polymer film (42) encapsulated and electrically shielded by a metallic or metallic coated package (41). Electrical contacts are preferably provided for on the piezoelectric polymer film (42) and are preferably connected to amplification and comparator circuitry (52, 54) which issues a write fault signal upon detection of external force in excess of a predetermined threshold. The shock sensor (24) may be mounted on the computer disk drive unit (10) in such a manner as to be at a 45° angle to each of the x, y and z axis of the orthogonal co-ordinate system so that linear and torsional forces may be monitored.

Refer to figure 4.

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