

## HEAD LOADING/UNLOADING POSITIONING CONTROL SYSTEM FOR USE IN A DISK MEMORY DEVICE

### ABSTRACT

A head loading/unloading positioning control system and method for use with a disk memory device having two reserve power sources, a rectified power source and a charged power source to unload the head holding mechanism away from surface of a magnetic disk. The rectified power is supplied by back electromotive forces generated by the inertia rotation of a spindle motor (SPM). During the normal operation of the disk memory, the charged power is generated and stored in a condenser that is coupled to a boosting circuit of the power source voltage. When a shutdown of the power source occurs, the head holding mechanism is automatically unloaded from the surface of the magnetic disk by supplying the rectifying power from the back electromotive force rectifying circuit to a voice coil motor (VCM). After a predetermined time interval has lapsed after the shutdown of the power source has occurred, the power source for the unloading operation is switched from the rectifying power to the power supply of the charged condenser. The power supply of the charged condenser lifts the head holding mechanism up onto a ramp block into a retracted position. The disk memory device, which is designed for use in a thin, compact computer, includes a small condenser to perform head unloading operations when a shutdown of the power source occurs.

Figure 3