

SLIDER CLEANING METHOD AND APPARATUS FOR DISK DRIVES WITH
LOAD/UNLOAD TECHNOLOGY

ABSTRACT

The present invention provides a method and load/unload structure for implementation in a disk drive, whereby debris is prevented from accumulating on the surface of an air bearing slider (13) by moving the slider ABS across a stationary cleaning pad (61, 61') formed integrally with the ramp structure (41) during loading and unloading. As a first aspect of the invention, space at the disk perimeter is used efficiently by providing a stationary cleaning surface integral to the ramp structure. As another aspect of the invention, cleaning may be enhanced by dithering the slider across the stationary pad, e.g., at selected resonant frequencies, to remove a larger volume of debris. As yet another aspect of the invention, baffling (93) may be provided in the disk drive interior to channel the airflow generated by the disk (12) such that it is directed over the cleaning pad in the direction of an air filter.

Fig. 5