DISK DRIVE SYSTEM

ABSTRACT

A hard disk drive utilizing a combination of thin film recording heads and media allows high density recording through virtual contact recording, while still providing excellent contact start stop performance and low stiction. The air bearing surface of the head has a microscopically fine texture which provides reliable mechanical performance with a constant and very low flying height. A skew insensitive constant flying height over the disk surface can be provided with the use of transverse pressure contour or cross-cut slider designs. The slider air bearing surface is textured by selective mechanical removal of subsurface damaged regions left behind during the diamond lapping of the slider air bearing surface, thereby leaving the slider less abrasive to the disk. A slider with this fine texture on the air bearing surface permits the use of a much smoother texture and thinner overcoat on the disk than currently possible using conventional sliders. This combination of slider and the disk allows the head to fly very close to the magnetic layer of the media without suffering from head crash or high stiction. This combination offers a low cost and simplified method of achieving a high recording density.

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