# DISK DRIVE WITH MODE CANCELING ACTUATOR

A disk drive (11) having an arm assembly (12) equipped with a primary actuator (26) such as a VCM and a mode-canceling actuator (32) such as a PZT mounted at a location selected in such a way that the strain in the mode-canceling actuator (32) is in phase with sway deformations of the primary actuator (26) produced by the vibrational modes of the arm assembly (12). The primary actuator (26) is driven to exert a primary force, $\vec{f}_{mc}$, on the arm assembly (12) while the secondary drive (104) ensures that the mode-canceling actuator (32) applies a mode-canceling force, $\vec{f}_{pm}$, on arm assembly (12) such that the gain and phase of one or more vibrational modes are canceled.

Fig 4