ABSTRACT

To improve the positioning accuracy which has been limited so far due to a vibration mode of an actuator for positioning a head and increase the capacity of an apparatus by raising the density of tracks for recording or reproducing information.

There are provided an information recording/reproducing medium, a head for recording or reproducing information while moving relatively to the information recording/reproducing medium, an actuator for supporting the head and movable in accordance with a command, and a control section for supplying a command to the actuator in accordance with a signal reproduced by the head to control the movement of the actuator,

the actuator has at least one vibration mode in addition to a movement mode as a rigid body, and

the control section is configured by an internal model including at least one vibration mode of the actuator and has a state estimating section for estimating quantities of states of the vibration mode and rigid-body mode of the actuator in accordance with a controlled variable corresponding to a movement command to the actuator and a controlled-variable generating section for generating a controlled variable in accordance with each estimated quantity of state estimated by the state estimating section.