

Abstract

ECCENTRICITY COMPENSATION APPARATUS BASED ON FREQUENCY RESPONSE CHARACTERISTICS OF ACTUATOR OF DISK DRIVE SERVO SYSTEM

5 An eccentricity compensating apparatus of a disk drive servo system using
the frequency response characteristics of an actuator for actuating a head to a
position on a disk to read data on or reproduce data from the disk, the
apparatus including: an error detector that detects a position error between a
reference head position and an actual position of the head on the disk; a first
10 compensation controller that receives the position error from the error
detector and changes the actual position of the head in order to compensate
for the position error; a second compensation controller that generates and
outputs a control value to compensate for eccentricity which varies
depending on the phase of a spindle that rotates the disk; and a gain/phase
15 adjuster that adjusts the gain and phase of the control value output from the
second compensation controller according to a disk reproduction speed,
wherein a drive signal of the actuator is obtained by summing together
signals output from the first compensation controller and the gain/phase
adjuster. The eccentricity compensation apparatus can simply compensate
20 for eccentricity at varying reproduction speeds by adjusting control data
estimated for eccentricity compensation at specific reproduction speed based
on the frequency response characteristics of an actuator.

Figure 2

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