

METHOD AND APPARATUS FOR CONTROLLING BIAS LEVELS**Abstract**

An apparatus for controlling the strength of a magnetic field, comprises a first controller (14), a second controller (15), a digital-to-analog converter (16), a current driver (17), and a bias coil (18). The first controller (14) determines the position of the focal point of a lens (29) and passes it to the second controller (15), which provides a digital signal related to the position. The digital-to-analog converter (16) converts the digital signal to a driver voltage and passes the driver voltage to a current driver (17), which provides to the bias coil (18) a bias current related to the driver voltage. The bias coil (18) produces a magnetic field having a strength related to the bias current. The second controller (15) accounts for stray magnetic fields in creating the digital signal. The stray magnetic fields may be constant or may vary in strength based on position of the objective lens (29), circumferential velocity of the storage medium (2, 4), or longitudinal velocity of the storage medium (2, 4). Furthermore, the apparatus may comprise a current sensor (26) for measuring the bias current, and a feedback device for providing to the current driver (17) a feedback voltage related to the bias current.

FIGURE 2

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