

## ABSTRACT

Stable recording and reproduction of data onto and from a recording medium that requires precise tracking is provided by using a simple head tracking mechanism. In a hard disk drive (200), a piece of sector data to be written or read is pre-associated with a sector number of a sector where the piece of sector data is to be written or read. A seek control unit (260) corrects first-order run-out relative to a revolution axis of a DTM magnetic disk (100) and permits second-and-higher order run-out relative to the revolution axis, and moves a read/write head (122, 124) gradually in one radial direction of the DTM magnetic disk at a shift pitch smaller than the track pitch for each revolution in accordance with the sector numbers of the sectors where pieces of sector data are to be written or read, within a range of tracks containing the sector numbers of the sectors where the pieces of sector data are to be written or read. A recording/reproducing unit (266, 268) writes or reads, in accordance with a present sector number of a sector where the write/read head is located, a corresponding piece of sector data onto or from the DTM magnetic disk, independently of the order of the sector numbers.

(FIGURE 1)