ABSTRACT OF THE DISCLOSURE

METHOD FOR DETECTING SERVO ERROR, APPARATUS THEREFOR, DISK WHICH MAINTAINS QUALITY OF SERVO ERROR SIGNAL, METHOD FOR CONTROLLING SERVO OF DISK RECORDING/REPRODUCING APPARATUS, METHOD FOR DETECTING TRACKING ERROR, AND METHOD FOR DETECTING TILT ERROR

A method for detecting a servo error, an apparatus therefor, a disk which maintains quantity of a servo error signal, a method for controlling the servo of an apparatus for recording data on and reproducing data from a disk, a method for detecting tracking error, and a method for detecting tilt error are provided.

The apparatus for recording data on and reproducing data from a disk in which a recording area is divided into sectors, each sector has a header for notifying an address, a header has a first header and a second header which are recorded to deviate from the center of the track in opposite directions, and the first header and the second header have address areas in which the addresses of sectors are recorded and synchronous signal areas in which synchronous signals for detecting the address signals recorded in the address area are recorded, includes a reproducing signal generator for generating a reproducing signal including sum signals V1 and V2 of radial pairs, a sum signal RF_sum, and a push-pull signal RF_pp from an optical signal reflected from the disk, a header area detector for generating a header area signal including a header area from the reproducing signal received from the reproducing signal generator, a first synchronous signal level detector for receiving the output of the reproducing signal generator and detecting the magnitude Ivfo1 of a synchronous signal in the first header by being synchronized with the header area signal received from the header area detector, a second synchronous signal level detector for receiving the output of the reproducing signal generator and detecting the magnitude Ivfo3 of a synchronous signal in the second header by being synchronized with the header area signal received from the header area detector, and a balance calculator for calculating the balance of the magnitude Ivfo1 of the first synchronous signal detected by the first synchronous signal level detector and the magnitude Ivfo3 of the second synchronous signal detected by the second synchronous signal level detector.

It is possible for a recording/reproducing apparatus to stably control a servo therein and maintain an optimal recording/reproducing state since the apparatus for detecting the servo error according to the present invention correctly detects the servo error state of the disk.

FIG. 6