

ABSTRACT OF THE DISCLOSURE (FIG. 1)

"MAGNETIC DISK DRIVE INCLUDING READ CHANNEL
FOR PROCESSING DIFFERENTIATED READ SIGNAL"

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A disk drive of perpendicular magnetic recording method including a read head comprising a GMR element and a drive using a double-layered disk medium, is disclosed. In the magnetic field response
10 characteristic of the GMR element, the relationship between the degree of nonlinearity and a pulse width at 50% threshold (PW50) of a differentiated read signal is used. The degree of nonlinearity of the GMR element is adjusted such that the PW50 is smaller than
15 the maximum value. The read channel comprises a differentiation circuit for converting the read signal output from the GMR element into the differentiated read signal.



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