970532-9

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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G11B 5/48	A1	(11) International Publication Number: WO 96/42080
		(43) International Publication Date: 27 December 1996 (27.12.96)

(21) International Application Number: PCT/GB96/00290

(22) International Filing Date: 9 February 1996 (09.02.96)

(30) Priority Data:
08/489,310 9 June 1995 (09.06.95) US

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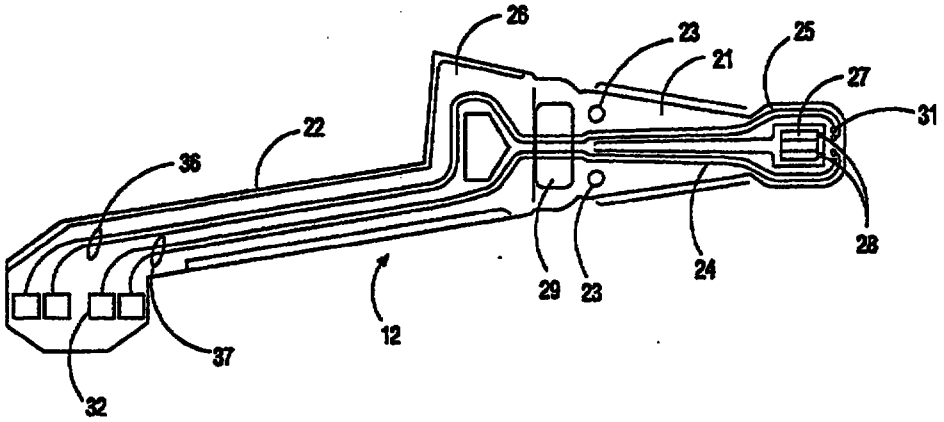
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(81) Designated States: BR, CA, CN, CZ, HU, JP, KR, PL, RU, SG, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

30 MAR 1998

(54) Title: INTEGRATED HEAD-ELECTRONICS INTERCONNECTION SUSPENSION FOR A DATA RECORDING DISK DRIVE



(57) Abstract

An integrated transducer-electronics interconnection suspension (12) for a disk drive having a high data transfer rate generally above (15) Mbytes/sec between the transducer (9) and the read/write electronics. A suspension (12) supports a slider (10) to which a transducer (9) is mounted and maintains the slider (10) in close proximity to the disk surface. An integrated transducer-electronics interconnection suspension is a laminate structure having electrically conductive traces as part of the structure and connecting the transducer (9) with the read/write electronics. It can support high data transfer rates between the transducer (9) and the read/write electronics by providing means for avoiding sudden changes in the characteristic impedance of the traces to minimize signal reflection on them. The width of the traces are shaped accordingly to prevent abrupt changes in the trace impedance caused by trace bonding areas, apertures and other mechanical obstructions in the suspension. Changes in the traces' direction are gradual to avoid signal reflection. Also, a patterned electrically conductive back plane may be provided in the laminate to better control the trace characteristic impedance. Where a trace crosses above a back plane opening, lateral extensions from the trace's side edges are formed to compensate for the resulting impedance change. In addition, the traces and bonding areas are grouped by signal type, with sufficient spacing between the groups, to minimize cross-coupling of the signals.