(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 March 2001 (22.03.2001)

PCT

(10) International Publication Number
WO 01/20599 A1

(51) International Patent Classification[7]: G11B 5/02, 5/012, G01R 27/14

(21) International Application Number: PCT/GB00/03445

(22) International Filing Date:
8 September 2000 (08.09.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/395,147 14 September 1999 (14.09.1999) US

(71) Applicant: INTERNATIONAL BUSINESS MACHINES CORPORATION [US/US]; New Orchard Road, Armonk, NY 10504 (US).

(71) Applicant *(for MC only)*: IBM UNITED KINGDOM LIMITED [GB/GB]; P.O. Box 41, North Harbour, Portsmouth, Hampshire PO6 3AU (GB).

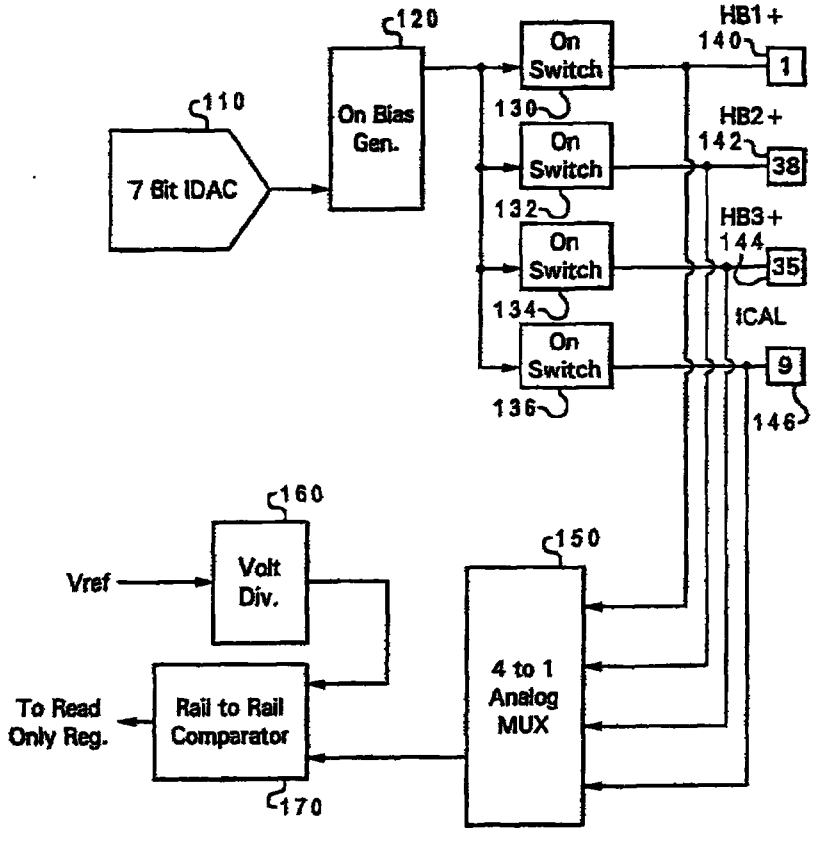
(72) Inventors: TRETTER, Larry, LeeRoy; 9258 E. 42nd Street, Tucson, AZ 85730 (US). MALMBERG, James, Ernest; 9641 E. Baker, Tucson, AZ 85748 (US).

(74) Agent: DAVIES, Simon, Robert; IBM United Kingdom Limited, Intellectual Property Department, Hursley Park, Winchester, Hampshire SO21 2JN (GB).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

[Continued on next page]

(54) Title: RATIO METHOD FOR MEASUREMENT OF MR READ HEAD RESISTANCE



(57) Abstract: A reference current (ICAL) and resistance is used to determine a reference voltage. A variable current is then applied to the MR read head, and is adjusted to produce a voltage equal to that of the reference voltage (V ref). Then, the known current and voltage is used to determine the resistance of the MR read head.

WO 01/20599 A1

(84) **Designated States** *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *With international search report.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.