

(19) World Intellectual Property Organization
International Bureau



G00002

(43) International Publication Date
28 March 2002 (28.03.2002)

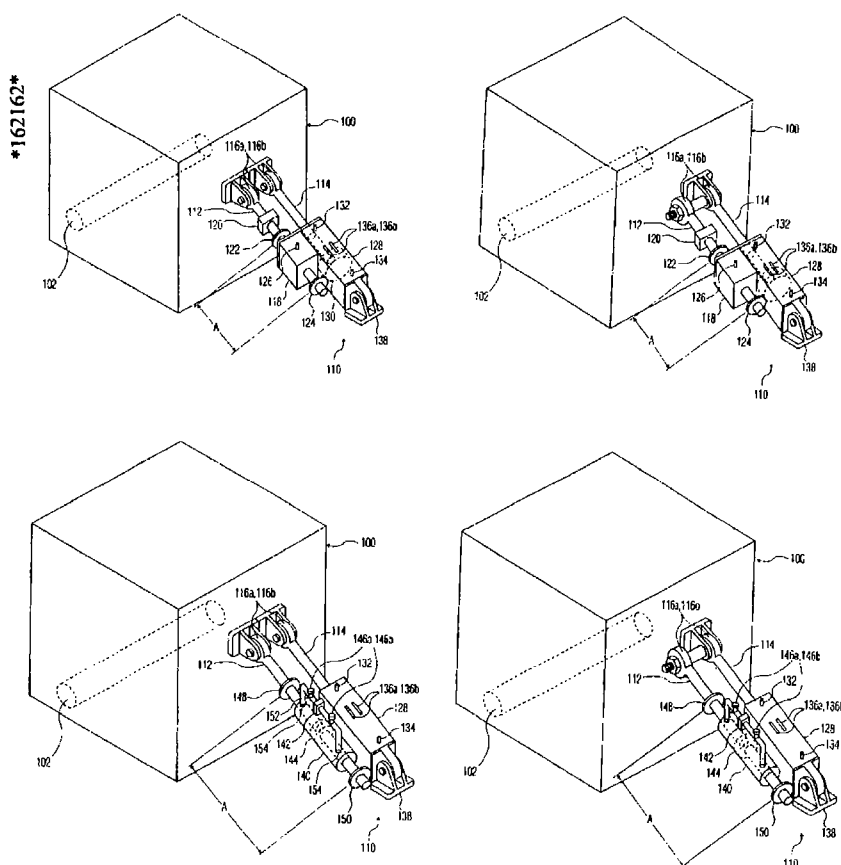
PCT

(10) International Publication Number
WO 02/025292 A3

- (51) International Patent Classification⁷: **G01R 1/073**, **B23Q 1/48**
- (21) International Application Number: **PCT/US01/29530**
- (22) International Filing Date:
20 September 2001 (20.09.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/234,598 22 September 2000 (22.09.2000) US
60/301,228 27 June 2001 (27.06.2001) US
- (71) Applicant (for all designated States except US): **INTEST IP CORP.** [US/US]; Suite 540, 300 Delaware Avenue, Wilmington, DE 19801-1612 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **NY, Nil, O.** [US/US]; 1090 Big Oak Road, Yardley, PA 19067 (US). **AKOUKA, Henri, M.** [US/US]; Apartment 4, 69 East Main Street, Moorestown, NJ 08057 (US). **HOLT, Alyn, R.** [US/US]; 10 Hessian Way, Cherry Hill, NJ 08003 (US).
- (74) Agents: **ASHERY, Lawrence, E.** et al.; Ratner & Prestia, 301 One Westlakes (Berwyn), P.O. Box 980, Valley Forge, PA 19482-0980 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, US, UZ, VN, YU, ZA, ZW.

[Continued on next page]

(54) Title: MANIPULATOR FOR A TEST HEAD WITH ACTIVE COMPLIANCE



(57) Abstract: A load, such as an electronic test head, is supported. A force sensor detects a force received from the load, the force resulting from the load being imbalanced such that a torque is created about a rotational axis of the load. A source of force provides a counter force relative to the load in response to the force detected by the force sensor. A method of docking an electronic test head held in a test head manipulator to an electronic device handler is also provided. The method of docking includes measuring a magnitude of an imbalance force along or about at least one of a plurality of motion axes of the test head manipulator; and providing a counter force to the imbalance force.

WO 02/025292 A3



A3

(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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— with amended claims

(88) Date of publication of the international search report:
3 October 2002

Date of publication of the amended claims: 20 February 2003

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.