

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 March 2002 (14.03.2002)

PCT

(10) International Publication Number
WO 02/021458 A3

(51) International Patent Classification⁷: G07D 7/00, 7/12

(21) International Application Number: PCT/IB01/02088

(22) International Filing Date:
3 September 2001 (03.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0021680.4 4 September 2000 (04.09.2000) GB

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(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.

(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).

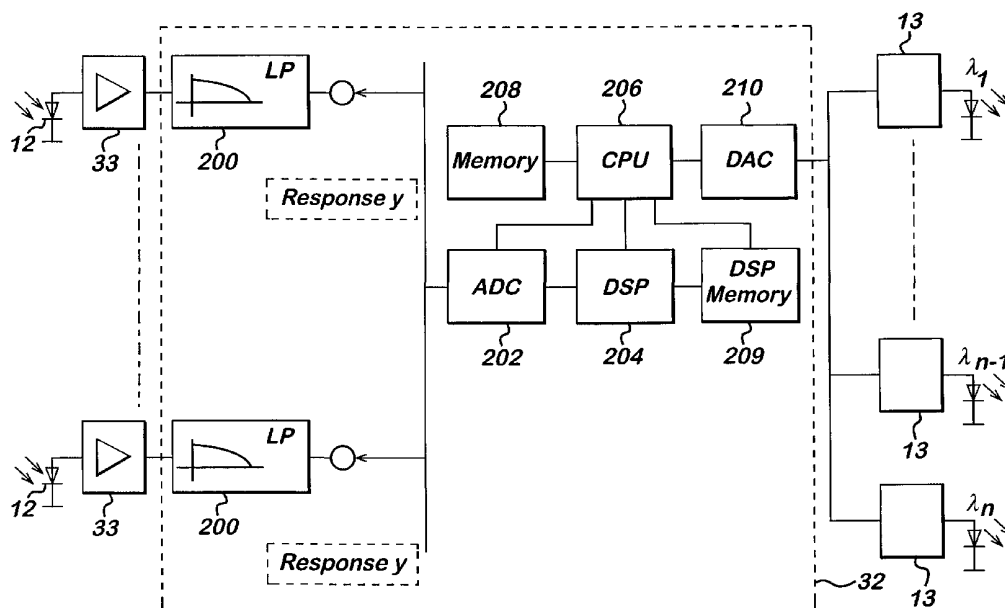
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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

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.

(54) Title: DOCUMENT SENSING APPARATUS AND METHOD



(57) Abstract: A device for sensing currency comprises means for deriving a signal from a currency item and means for deriving values representative of a characteristic or characteristics of the currency item from said signal using an inverse representation of part of the sensing device.



WO 02/021458 A3

INTERNATIONAL SEARCH REPORT

Inter nal Application No
PCT/IB 01/02088

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G07D7/00 G07D7/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, IBM-TDB, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 5 280 333 A (WUNDERER BERND) 18 January 1994 (1994-01-18) abstract	43,52, 55,56,58 1-42, 44-51, 53,54, 57,59
A	column 7, line 16 -column 8, line 41 figures 8,9 ----- US 5 304 813 A (DE MAN IVO) 19 April 1994 (1994-04-19) cited in the application the whole document ----- -/--	1-59

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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P document published prior to the international filing date but later than the priority date claimed

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Date of the actual completion of the international search

5 August 2002

Date of mailing of the international search report

12/08/2002

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 01/02088

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 26626 A (MARS INC ;VOSER CHRISTIAN (CH); ROSSEL DIDIER (CH); BOUCHET BERNAR) 24 July 1997 (1997-07-24) cited in the application the whole document -----	1-59

INTERNATIONAL SEARCH REPORT

Inter nal Application No

PCT/IB 01/02088

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5280333	A	18-01-1994	DE 4022020 A1 AT 185212 T DE 59109157 D1 EP 0466119 A2 JP 3051207 B2 JP 4288697 A	16-01-1992 15-10-1999 04-11-1999 15-01-1992 12-06-2000 13-10-1992
US 5304813	A	19-04-1994	DE 59208542 D1 EP 0537431 A1 ES 2103330 T3 FI 924620 A HK 1007019 A1 JP 3152372 B2 JP 5282432 A NO 923966 A US 5498879 A	03-07-1997 21-04-1993 16-09-1997 15-04-1993 26-03-1999 03-04-2001 29-10-1993 15-04-1993 12-03-1996
WO 9726626	A	24-07-1997	GB 2309299 A AU 1396597 A DE 69704549 D1 DE 69704549 T2 EP 1037173 A1 EP 0875045 A1 ES 2155667 T3 WO 9726626 A1 JP 2001518208 T US 6172745 B1	23-07-1997 11-08-1997 17-05-2001 11-04-2002 20-09-2000 04-11-1998 16-05-2001 24-07-1997 09-10-2001 09-01-2001