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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06K 5/00 | A3

(11) International Publication Number: **WO 00/08772**

(43) International Publication Date: 17 February 2000 (17.02.00)

(21) International Application Number: PCT/US99/16697

(22) International Filing Date: 3 August 1999 (03.08.99)

(30) Priority Data:
09/127,812 3 August 1998 (03.08.98) US

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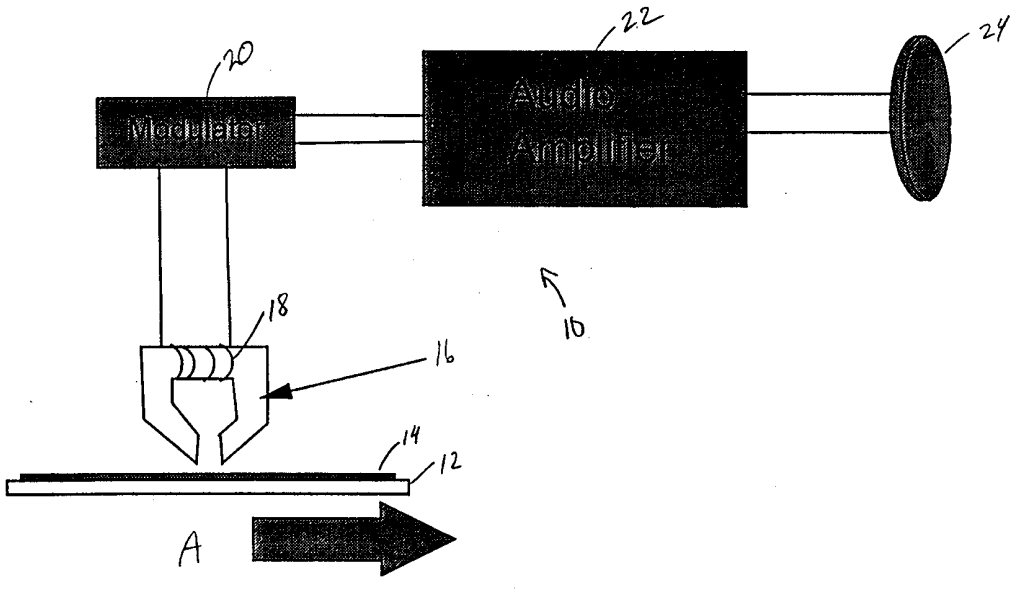
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(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, 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.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(88) Date of publication of the international search report:
23 March 2000 (23.03.00)

(54) Title: CARD READER FOR TRANSMISSION OF DATA BY SOUND



(57) Abstract

A portable card reader is designed to be carried in a wallet or purse. In a first embodiment, the card reader has an electromagnetic head (16) that reads information from a magnetic strip (14) of a card (12). In a second embodiment, information is read from the card by an array of Hall sensors. In both embodiments, information is read from the card is converted to a sequence of electronic bursts of predetermined frequency, preferably in the audible or ultrasound range. The sound signals are output by a speaker (24) to the microphone of a telephone. The signal is then transmitted over the telephone lines to a remote receiver. The receiver then converts the sound bursts into signal pulses which can be read using the computer software of a conventional card reader.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/16697

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :GO6K 05/00
US CL : 235/380, 449

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)

U.S. : 235/380, 449

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 practicable, search terms used)

EAST
search terms: hall sensor array magnetic stripe portable readers

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---- Y	US 5,740,232 A (PAILLES ET AL) 14 APRIL 1998 (14/04/98), col. 3, lines 1-27.	25-26,28- 29, 33 ----- 27
Y	US 5,764,742 A (HOWARD ET AL.) 09 JUNE 1998 (09/06/98), col. 5, line 59- col. 6, line 65.	1-32
A	US 5,636,271 A (PATERNO ET AL.) 03 JUNE 1997 (03/06/97), see entire document.	1-32
A	US 5,561,710 A (HELMS) 01 OCTOBER 1996 (01/10/1996), see entire document.	1-32
Y	US 5,539,819 A (SONOYAMA ET AL.) 23 JULY 1996 (23/07/96), col. 3, line 55- col. 4, line 49.	1-32

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

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Date of the actual completion of the international search 15 DECEMBER 1999	Date of mailing of the international search report 04 FEB 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer MARK TREMBLAY Telephone No. (703) 305-5176

Form PCT/ISA/210 (second sheet)(July 1992)*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/16697

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,524,072 A (LABATON ET AL) 04 JUNE 1996 (04/06/96), see entire document.	1-32
Y	US 4,197,987 A (LAZZARI) 15 APRIL 1980 (15/04/1980), col. 1, line 14 through col. 4, line 22.	13-24, 32