



(51) International Patent Classification:

A61B 5/0484 (2006.01)

(21) International Application Number:

PCT/EP2011/050733

(22) International Filing Date:

20 January 2011 (20.01.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant (for all designated States except US): **WIDEX**
A/S [DK/DK]; Nymoellevej 6, DK-3540 Lynge (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIDMOSE, Preben** [DK/DK]; Langballevej 24, DK-8320 Maarslet (DK). **UNGSTRUP, Michael** [DK/DK]; Vestvej 26, DK-3450 Allerød (DK). **RANK, Mike Lind** [DK/DK]; Rørmose Parkvej 25, DK-3520 Farum (DK).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,

CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: PERSONAL EEG MONITORING DEVICE WITH ELECTRODE VALIDATION

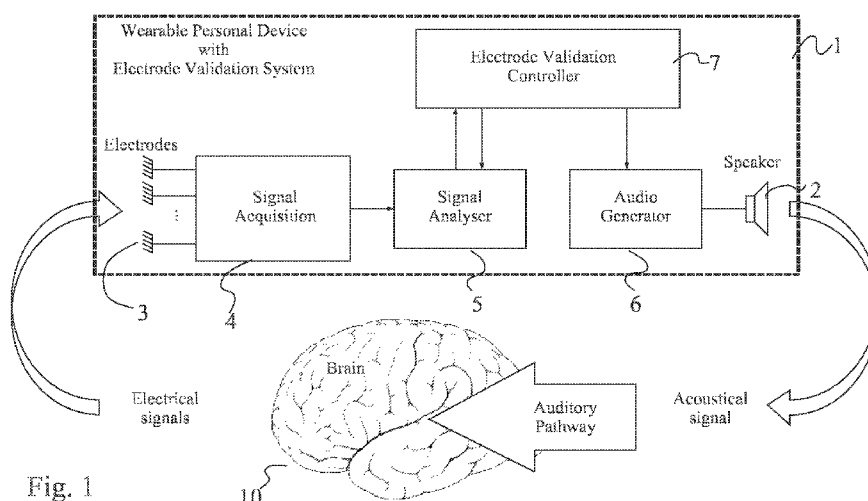


Fig. 1

(57) **Abstract:** A personal wearable EEG monitor (1) is adapted to be carried at the head of a person. The EEG monitor comprises an EEG sensor part having skin surface electrodes (3) for measuring EEG signals from said person. The EEG monitor comprises an EEG signal analyzer (5, 5') adapted for having an EEG signal transferred from the EEG sensor part, and adapted for monitoring the EEG signal. The EEG monitor (1) further comprises EEG stimuli controlling means adapted for performing at least one of the following: providing a stimulus to the person, requesting the person to perform a stimuli creating act, or identifying a stimuli creating ambient sound. The EEG monitor comprises EEG response detection means for identifying an induced response from the EEG signal caused by the stimuli, and a classifier for deciding based on said induced response if the skin surface electrodes receive EEG signals.

