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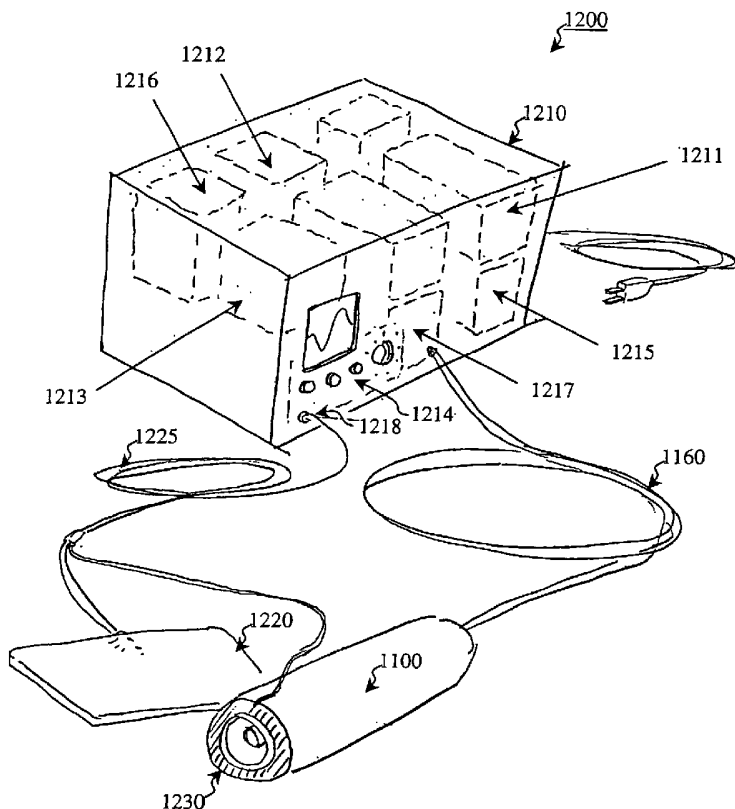
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(54) Title: PREPARATION FOR TRANSMISSION AND RECEPTION OF ELECTRICAL SIGNALS



(57) Abstract: The invention provides a convenient and non-invasive means to prepare cells, tissues, and organs for electrical transmission and reception. In an embodiment of the invention, a control method comprises the use of at least one skin electrode (1220), as a reference electrode, and an electrical sensor (1230) to measure periodically or continuously the skin's electrical conductance at the site of preparation. The dynamic change in the conductance through the skin is measured while the ultrasound is applied. Signal processing is performed on the measurement and the level of skin impedance change is controlled by performing a mathematical analysis and using the results of such analysis to control the application of ultrasonic energy. A desired level of skin impedance can be set at a predetermined value or based on a chosen level of skin integrity, subject's sensation of discomfort, or duration of the ultrasound application.

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International application No.

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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : A61H 1/00  
 US CL : 601/2,3; 606/27,28

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)  
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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)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 6,461,314 B1 (PANT et al.) 08 October 2002 (08.10.2002), see column 4-12	1,16,22,33,41
Y	US 6,234,990 B1 (ROWE et al.) 22 May 2001 (22.5.2001), see column 1-18	1-47
A	US 6,321,109 B2 (BEN-HAIM et al.) 20 November 2001 (20.11.2001), see column 1-11	1-47

Further documents are listed in the continuation of Box C.

See patent family annex.

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