



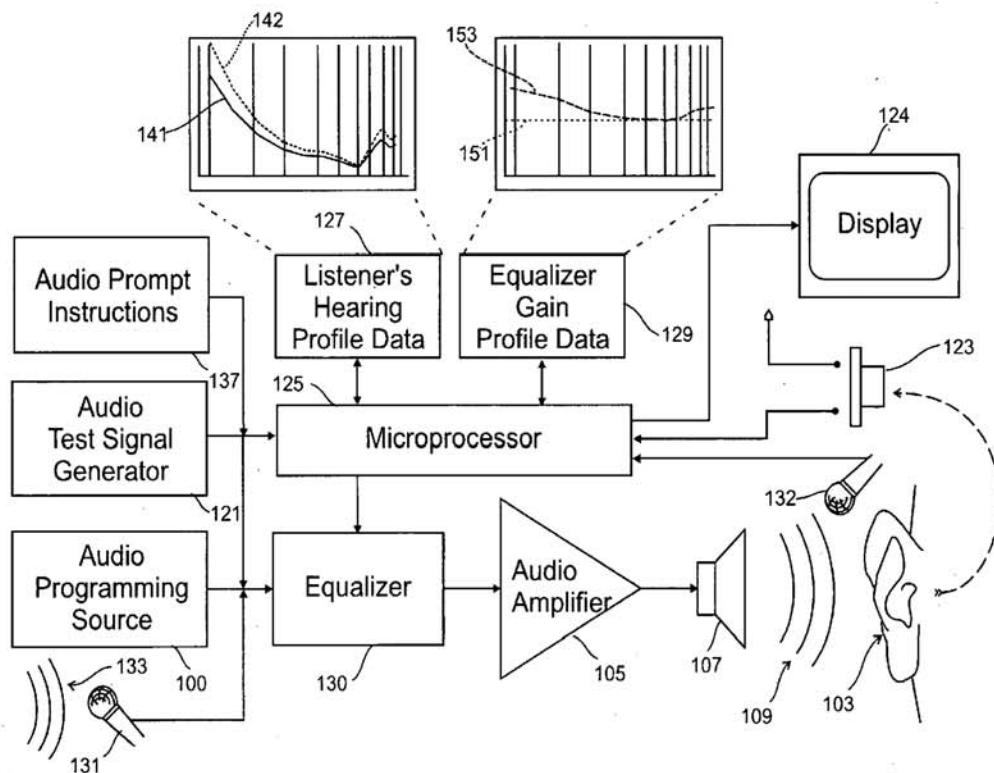
US 20050094822A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2005/0094822 A1****Swartz**(43) **Pub. Date:****May 5, 2005**(54) **LISTENER SPECIFIC AUDIO
REPRODUCTION SYSTEM**(52) **U.S. Cl.** **381/56; 381/60**(76) **Inventor:** **Robert Swartz, Highland Park, IL (US)**

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CHARLES G. CALL**68 HORSE POND ROAD****WEST YARMOUTH, MA 02673-2516 (US)**(21) **Appl. No.:** **11/032,367**(22) **Filed:** **Jan. 8, 2005****Publication Classification**(51) **Int. Cl.⁷** **H04R 5/00; H04R 29/00**(57) **ABSTRACT**

A system for use with an audio reproduction system that corrects for distortion caused by the system as well as any hearing impairment suffered a listener. Test signals are introduced into the input of the system to produce test sounds that are perceptible by the listener. Using a pushbutton, the listener indicates when a test signal of progressively increasing volume reaches an audible level. The resulting measured values of the listener's threshold of hearing at different frequencies is compared with comparable data for a normal listener to generate correction values that are used to program an equalizer which compensates for not only the listener's hearing impairments but also any distortion produced by system components or room acoustics.



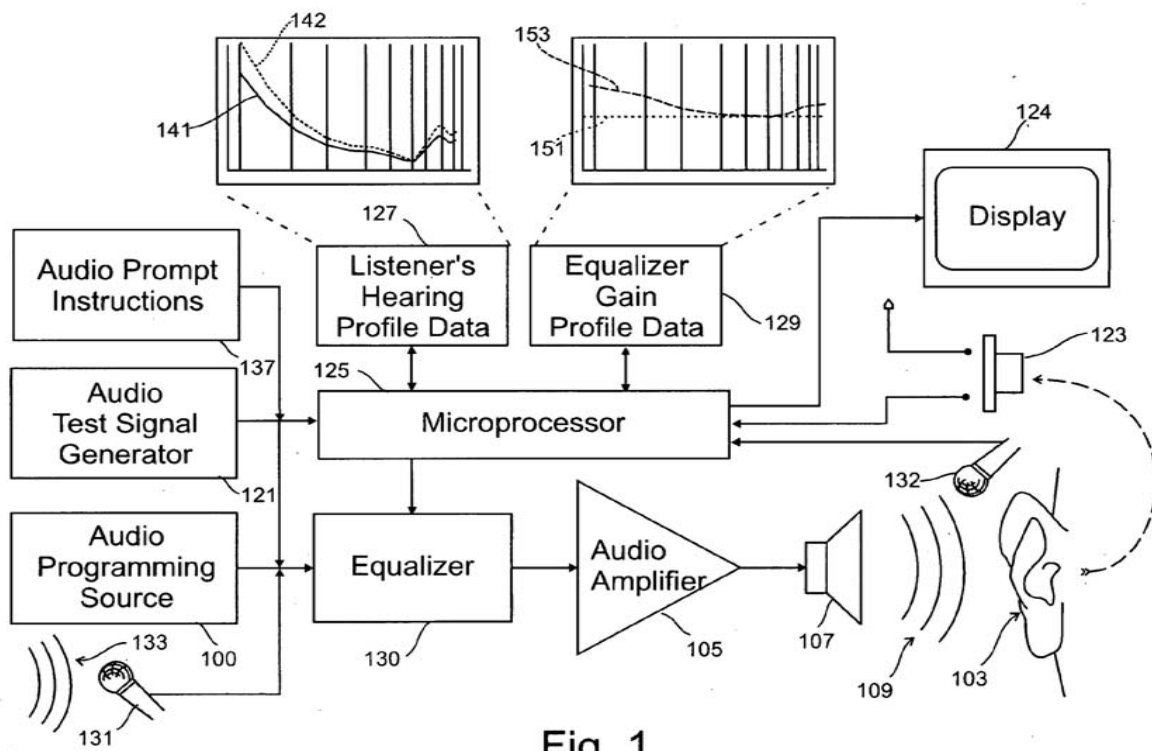


Fig. 1

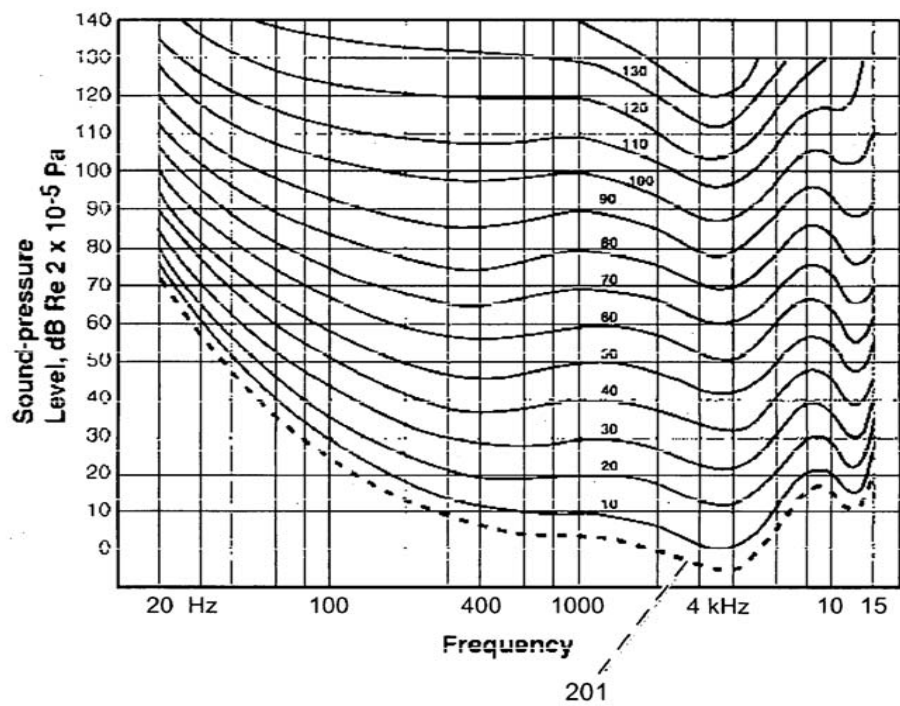


Fig. 2 (prior art)

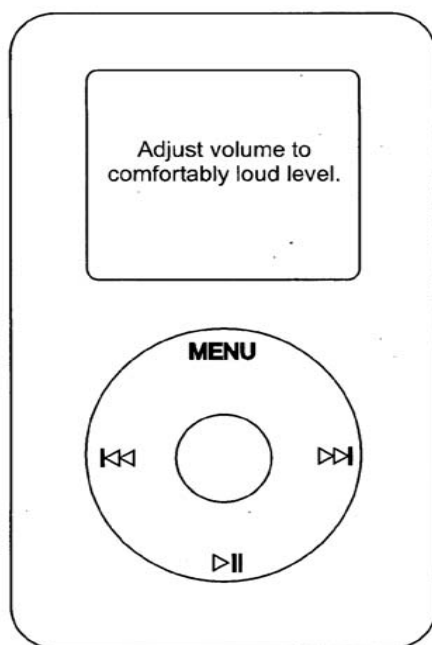


Fig. 3

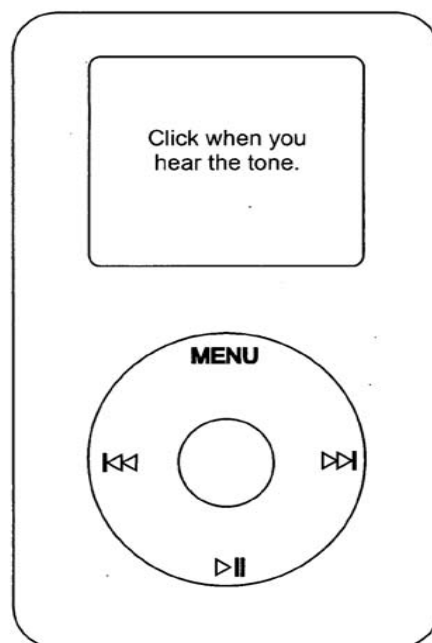


Fig. 4

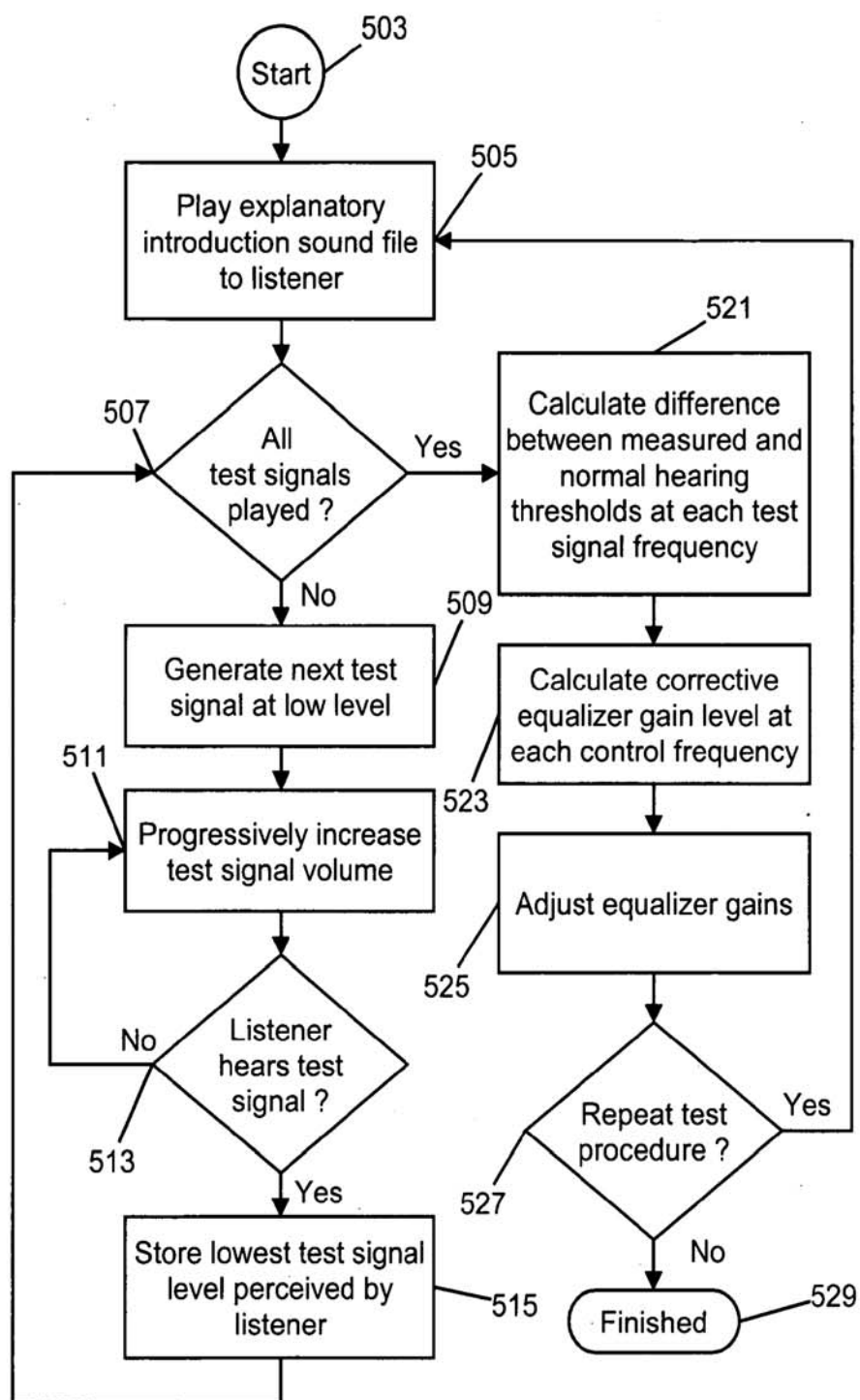


Fig. 5

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