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(54) **Title:** AUDIO DEVICES HAVING ELECTROACTIVE POLYMER ACTUATORS

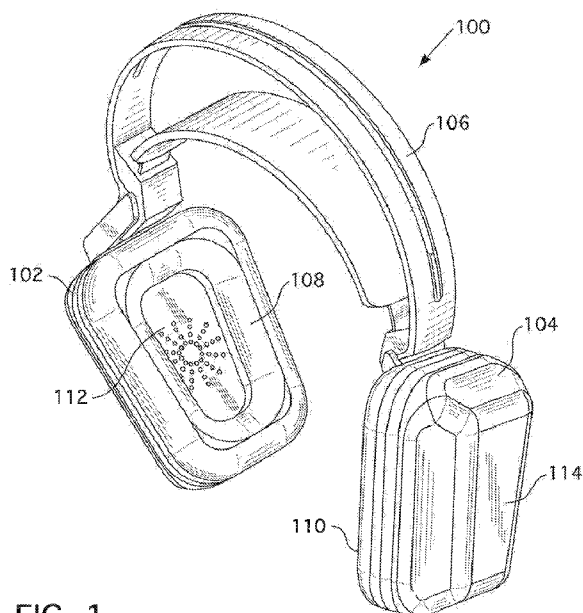


FIG. 1

(57) **Abstract:** Sensory enhanced audio devices containing an electroactive polymer module are disclosed. The electroactive polymer module may be located in, for example, an ear cup of a headphone. The module includes an electroactive polymer actuator array having at least one elastomeric dielectric element disposed between first and second electrodes. A tray may be configured to receive the electroactive polymer actuator array and a mass coupled to the actuator array. A circuit is electrically coupled to the electroactive polymer actuator array. The circuit is to generate a drive signal to cause the electroactive polymer actuator array to move according to the drive signal. The drive signal is preferably in the frequency range of about 2 Hz to about 200 Hz.



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