

Title (en)
ELECTRONIC SIMULATOR OF NON-LINEAR AND ACTIVE COCHLEAR SIGNAL PROCESSING

Title (de)
ELEKTRONISCHER SIMULATOR VON NICHTLINEARER UND AKTIVER COCHLEAR- SIGNALVERARBEITUNG

Title (fr)
SIMULATEUR ELECTRONIQUE DE TRAITEMENT DE SIGNAL COCHLEAIRE NON LINEAIRE ACTIF

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Application
EP 94900476 A 19931101

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Abstract (en)
[origin: WO9410820A1] A model simulating cochlear spectrum analysis (Fig. 3) is disclosed which includes a pair of matched all pole lattices interconnected by a plurality of tip couplers providing non-linear distributed bilateral signal processing. One of the lattices along with the tip couplers corresponds to the organ of Corti found in the cochlea and the second lattice corresponds to the basilar membrane also found in cochlea such that the model provides a striking resemblance in structure to the physical properties of the cochlea itself. With the cochlea model disclosed, distortion products and oto-acoustic emissions are simulated. An intermediate model (Fig. 10) is also disclosed which provides non-linear bilateral signal processing and additive directional wave amplification. The present invention also implements the cochlear model using analog electronic technology in closer agreement with the cellular biophysics of the human ear.

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H04R 25/505 (2013.01 - EP US); **H04R 25/356** (2013.01 - EP); **H04R 25/606** (2013.01 - EP)

Citation (search report)
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• See references of WO 9410820A1

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