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Stochino et al.

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(54) **AUDIO POWER AMPLIFIER APPARATUS**

FOREIGN PATENT DOCUMENTS

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(57) **ABSTRACT**

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The invention concerns an audio power amplifier apparatus capable of providing at low manufacturing cost extremely low non-linear distortion, even lower than -120 dB, comprising a main power amplifying section the output of which is series connected to a secondary of a coupling transformer T1, in turn connected to the apparatus output, the apparatus being characterized in that the amplifying section provides an output signal Vma having a negative feed-back loop non-inverting gain, and in that it further comprises a cascade of one or more sections, the inputs of which are connected to the output of the input section and to the output of the amplifying section, and the output of which is constituted of a secondary winding of the transformer T1, the cascade being capable to very accurately extract the error signal Ve with respect to the amplified signal Vi from the signal at the output of the amplifying section and to provide to its output an exact, but anti-phase, copy thereof in a predetermined very wide frequency band, so as to carry out a feed-forward error correction function that, for the first time, is particularly effective in cancelling the error of the amplifying section without interactions with the same and in a very wide frequency band, and in avoiding in a very stable and reliable way, any risk of stress and overload for the transformer T1.

Related U.S. Application Data

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Foreign Application Priority Data

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(51) **Int. Cl.**
H03F 3/45 (2006.01)

(52) **U.S. Cl.** 330/69; 330/149; 330/195; 381/120

(58) **Field of Classification Search** 330/69, 330/149, 195; 381/120
 See application file for complete search history.

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32 Claims, 3 Drawing Sheets

