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# United States Patent [19]

Candy

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[54] **AMPLIFIER HAVING ULTRA-LOW DISTORTION**

2 261 785 5/1993 United Kingdom .

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[58] **Field of Search** ..... 330/156, 255, 330/264, 265, 267, 271, 273

[56] **References Cited**

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[57] **ABSTRACT**

This invention is for an improvement in amplifiers resulting in ultra low distortion. It relates to amplifiers consisting of three stages, an input stage which amplifies an input signal and provides a first signal to an intermediate stage which amplifies the first signal and provides a second signal to an output stage which amplifies that second signal and provides an amplifier output signal, the amplifier further including a power supply to provide power to the three stages and wherein the low distortion is achieved by the output stage including output transistors connected to provide the amplifier output signal and further including an error correction means that comprises an input buffer means, an adding means, a subtracting means and a voltage follower buffer means wherein the adding means sums the second signal with a difference signal to produce an output sum signal the said output sum signal fed to the voltage follower buffer means which then provides a buffered output sum signal, which is then fed to the inputs of the output transistors and to the subtracting means, the amplifier output signal is also fed to the subtracting means which is adapted to subtract the amplifier output signal from the buffered output sum signal to produce a difference signal and a first bootstrap power supply to provide power to the error correction means, the bootstrap power supply closely tracking the output signal by means of bootstrapping.

**20 Claims, 2 Drawing Sheets**

