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(54) Title of the Invention: **Amplifier offset cancellation using amplifier supply voltage**  
Abstract Title: **Power supply rejection and audio amplifier offset cancellation using power supply feedforward**

(57) System and method for implementing power supply rejection and offset correction of an amplifier 9A (e.g audio amplifier) comprising generating a correction signal CORR by multiplying a quantity indicative of a power supply voltage VSUPPLY of the amplifier by a transfer function F(z) defining a response from the power supply voltage of the amplifier to an output signal of the amplifier VOUT and subtracting the correction signal (combiner 24) from a signal within a signal path of a circuit comprising the amplifier. The system/amplifier may also comprise a digital-to-analogue converter DAC (14 fig 3). The correction signal may be an analogue (figures 4, 5, 7-9) or a digital correction signal (figs 2-3 and 6) operating in the analogue or digital domain of the signal path respectively. An analogue correction signal may be applied via a multiplying digital-to-analogue converter (multiplying DAC fig 5). The quantity indicative of the power supply may also be a predicted estimate of the supply voltage. Subtraction of the correction signal may occur from an input or an output signal of the amplifier. Embodiments also disclose correction of offsets due to component and feedback resistor mismatching in a fully differential operational amplifier 16.

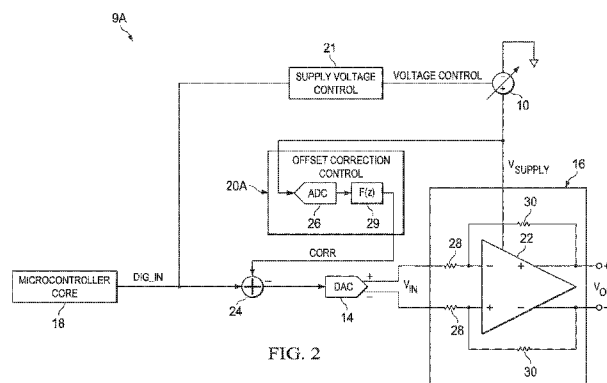


FIG. 2