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Brief 67-10648

NASA TECH BRIEF

Adaptive Control Circuit Prevents Amplifier Saturation

A low-power, low-torque suspension system under development for an electric vacuum gyro required push-pull output amplifiers that would remain unsaturated for all possible rotor displacements from center. Although voltage-controlled variable reactors would, in principle, permit operation at high amplifier efficiencies under all circumstances, previous experience had indicated that these reactors cannot be made to respond rapidly enough without themselves consuming as much power in the bias current circuits as they save in the main amplifiers. The problem was overcome by an adaptive control circuit that senses how near the output amplifiers are to saturation and sets the B voltage in such a way as to keep them just clear of saturation.

Note:

Inquiries concerning this circuit may be directed to:

Technology Utilization Officer
Electronics Research Center
575 Technology Square
Cambridge, Massachusetts 02139
Reference: B67-10648

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

Source: Arnold J. Nordsieck
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under contract to
Electronics Research Center
(ERC-10026)

Category 01