

[54] CONTROL CIRCUIT FOR VARYING POWER OUTPUT OF PUSH-PULL TUBE AMPLIFIERS

[76] Inventor: Dennis L. Kager, 217 Regina St., Iselin, N.J. 08830

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References Cited

U.S. PATENT DOCUMENTS

2,253,942	8/1941	Rath	330/142 X
2,462,452	2/1949	Yates .	
2,462,849	1/1949	Dishal	330/123 X
2,562,476	7/1951	Rado	330/123 X
2,590,104	3/1952	King .	
2,647,174	7/1953	Maron	330/123
2,716,162	8/1955	Pearlman	330/142 X
2,721,907	10/1955	Jacobs	330/142 X
2,777,018	1/1957	Russell	330/123 X
2,782,266	2/1957	Belar	330/123

2,802,069	8/1957	Weber	330/142 X
2,844,777	7/1958	Ross	330/123 X
3,005,162	10/1961	Leslie	330/123 X
3,119,970	1/1964	Thompson et al.	330/123
3,129,388	4/1964	Lang et al.	330/123

FOREIGN PATENT DOCUMENTS

425696 3/1935 United Kingdom 330/123

Primary Examiner—James B. Mullins

Attorney, Agent, or Firm—Morgan & Finnegan

ABSTRACT

A biasing and control circuit for varying the output power delivered by the push-pull output stage of a power amplifier is disclosed. The biasing and control circuit incorporates both fixed and cathode biasing to allow output power to be varied without introducing distortion. A negative fixed biasing voltage is applied to the control grids of the vacuum tubes comprising the push-pull output stage, while the cathodes of such tubes are varied between ground and selected voltage levels above ground. To vary the voltage levels, the cathodes of the tubes are joined together by a common connection and coupled to ground through a variable impedance which when varied changes the conductivity of the output tubes, and thereby, the output power delivered by the amplifier.

8 Claims, 1 Drawing Figure

