

RCA-845

A-F Power Amplifier, Modulator

For illustration, refer to 838 on page 62

RCA-845 is a three-electrode power amplifier tube of the thoriated-tungsten filament type. It has a maximum plate dissipation rating of 75 watts, for class A modulator and a-f amplifier service. In class AB modulator and a-f amplifier service two 845's are capable of delivering over 100 watts of audio power.

CHARACTERISTICS

Filament Volts (a-c or d-c)	10.0	Grid-Plate Capacitance	13.5 μ f
Filament Amperes	3.25	Grid-Filament Capacitance	6 μ f
Amplification Factor	5.3	Plate-Filament Capacitance	6.5 μ f

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

As A-F Power Amplifier and Modulator—Class A

D-C PLATE VOLTAGE	1250 max. Volts
PLATE DISSIPATION	75 max. Watts

TYPICAL OPERATION AND CHARACTERISTICS:

D-C Plate Voltage	750	1000	1250	Volts
D-C Grid Voltage [§]	-98	-155	-209	Volts
Peak A-F Grid Voltage	93	150	204	Volts
D-C Plate Current	95	65	52	Milliamperes
Transconductance	3100	2800	2500	Micromhos
Plate Resistance	1700	1900	2100	Ohms
Load Resistance	3400	9000	16000	Ohms
Cathode Resistor	1030	2385	4020	Ohms
Undistorted Power Output	15	21	24	Watts

As A-F Power Amplifier and Modulator—Class AB[♦]

D-C PLATE VOLTAGE	1250 max. Volts
D-C GRID VOLTAGE	-400 max. Volts
D-C PLATE CURRENT	120 max. Milliamperes
PLATE INPUT	130 max. Watts
PLATE DISSIPATION	75 max. Watts

TYPICAL OPERATION:

Unless otherwise specified, values are for 2 tubes

D-C Plate Voltage	1000	1250	Volts
D-C Grid Voltage [§]	-175	-225	Volts
Peak A-F Grid-to-Grid Voltage	340	440	Volts
Zero-Sig. D-C Plate Current	40	40	Milliamperes
Max.-Sig. D-C Plate Current	220	200	Milliamperes
Load Resistance (Per tube)	1150	2200	Ohms
Effective Load Res. (Plate-to-plate)	4600	8800	Ohms
Max.-Sig. Power Output (Approx.)	75	105	Watts

[§] Grid voltages are given with respect to the mid-point of filament operated on a.c. If d.c. is used, each stated value of grid voltage should be decreased by 7 volts and the circuit returns made to the negative end of the filament.

[♦] No grid current flows during most positive swing of input signal.

INSTALLATION AND APPLICATION

The base pins of the RCA-845 fit the standard four-contact socket, such as the RCA type UT-541A. The socket should be installed so that the tube will operate in a vertical position with the base down.

In cases where the input circuit of the 845 is resistance-coupled or impedance-coupled, the resistance in the grid circuit should not be made too high. A resistance value of 0.5 megohm is recommended when one 845 is used with cathode bias; without cathode bias, the grid resistance should not exceed 0.1 megohm.

In push-pull class AB amplifier service, each 845 should be provided with individual adjustment of grid-bias voltage. Each bias supply should be by-passed by a suitable condenser to minimize degenerative effects.

The plate of the 845 shows no color at the maximum plate-dissipation rating for each class of service.

For additional information, see chapters on INSTALLATION and APPLICATION.

