RCA-831

R-F Power Amplifier, Oscillator

RCA-831 is a high-power, air-cooled transmitting tube of the three-electrode type containing a thoriated-tungsten filament. Each electrode is supported on a separate stem and each electrode lead is brought out of the bulb through a separate seal. The 831 can be operated at maximum ratings at frequencies as high as 20 megacycles. The plate dissipation for class C telegraph and class B services is 400 watts.

CHARACTERISTICS

Filament Volts (a-c or d-c)	11.0	Grid-Plate Capacitance	4 μμf
Filament Amperes	10	Grid-Filament Capacitance	3.8 μμf
Amplification Factor	14.5	Plate-Filament Capacitance	1.4 μμf

MAXIMUM RATINGS

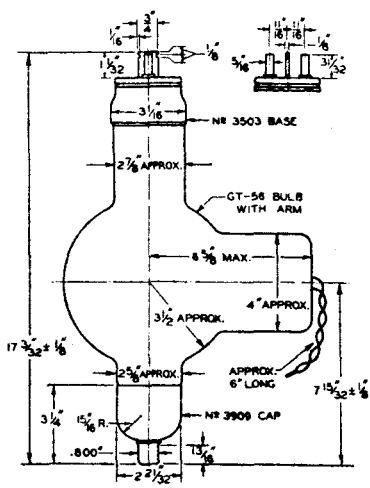
	*Class B Tele-phony**	*Class C Tele-phony**	*Class C Tele-graphy***	
D-C Plate Voltage	3500	3000	3500	Volts
D-C Grid Voltage	—	−1000	−1000	Volts
D-C Plate Current	250	300	350	Milliamperes
D-C Grid Current	—	75	75	Milliamperes
Plate Input	600	650	1200	Watts
Plate Dissipation	400	270	400	Watts

* Carrier conditions per tube with a max. modulation factor of 1.0.

** Key-down conditions per tube without modulation. Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

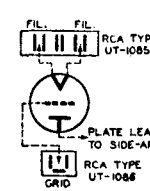
INSTALLATION AND APPLICATION

The **filament base** and **grid cap** of the 831 fit the standard RCA end mountings UT-1085 and UT-1086, respectively. The tube must be mounted in a vertical position with the grid cap down.



The **plate** of the 831 shows an **orange-red** color at the maximum plate-dissipation rating for each class of service.

For **high-frequency operation** above 20 megacycles, see page 144.

For additional information, see chapters on INSTALLATION and APPLICATION.

Connections to End-Mountings