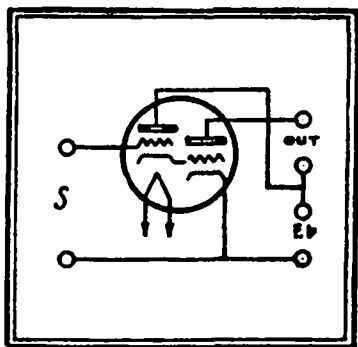


#103

TRIADYNE 6AC6 c

TECHNICAL BULLETIN 110

TRIAD MANUFACTURING COMPANY, INC., PAWTUCKET, R.I.

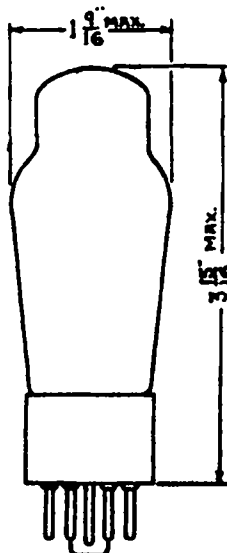


With the rapid increase in the sales of small A.C. sets, there has arisen a demand for an output tube which will operate with a low plate voltage (180 volts) in conjunction with a series speaker field. This demand has been met by the newest member of the Triadyne family, the 6AC6 c, which will permit receivers of this type to be made having more power than conventional sets using a single output tube at this plate voltage.

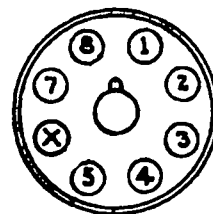
It is expected that a 700 to 800 ohm speaker field will be used as the filter choke, which will give both ample plate supply filtering and ample speaker field power. The first electrolytic filter condenser may well be of only 300 volts rating, and the second condenser of only 250 volts rating. Thus we may make a set with a low voltage power supply having a 70 ma. drain that is capable of giving 3.8 watts, at 10% harmonic distortion, and which, due to the Triadyne overload characteristic, will produce more than 4 watts of audio power. It is readily seen that by the use of the 6AC6 c, important economies may be made in small a-c sets with an increase of quality and power. It should be noted that the maximum plate voltage rating is 180 volts. Operation with voltage in excess of this is not recommended, and for these conditions, other members of the Triadyne family are better suited.

There will be no difficulty in providing sufficient input signal to the grid of the 6AC6 c if the 75 or 6Q7 c voltage amplifier is operated with a plate voltage of 180. The resistance of the grid circuit may be as high as one megohm, which is of importance in resistance coupled audio systems. In some cases, the overall audio sensitivity will be greater than in systems using a more sensitive output tube, which requires a lower value of grid resistance, and thus reduces the gain of the preceding stage.

When used in push pull operation the 6AC6 c will produce 9.5 watts of audio power at a harmonic distortion of 10%. Where necessary to minimize plate current drain the push pull stage may be biased. The bias may be obtained by a common cathode resistor of 50 ohms, which reduces total output plate current to 70 ma. at no signal. Under full signal the current will rise to 100 ma. The system will deliver a maximum output of 9 watts at 12.5% distortion. The distortion can be reduced nearly to that of the unbiased system by adequately by-passing the cathode resistor.



6AC6 c BASE CONNECTIONS



Bottom View of Base

- Pin 1 -
- Pin 2 - Heater
- Pin 3 - Output Plate (p.)
- Pin 4 - Input Plate (p.)
- Pin 5 - Input Grid
- Pin 6 - No Connection
- Pin 7 - Heater
- Pin 8 - Cathode

TRIADYNE 6AC6 G

AVERAGE ELECTRICAL CHARACTERISTICS

Heater Coated un-potential cathode
Voltage 6.3 a-c or d-c
Current 1.1 ampere

AMPLIFIER (CLASS A)*

	Single	Push Pull
Output Plate (P ₂)	180	180 max. volts
Input Plate (P ₁)	180	180 max. volts
Grid	0	0 volts
Plate Current(P ₂)	45	90 ma.
Plate Current(P ₁)	7	14 ma.
Amplification Factor	54	
Plate Resistance	18,000	ohms
Mutual Conductance	3,000	umhos
Load Resistance	4,000	5,000 p-p ohms
Power Output	3.8	9.5 watts
Harmonic Distortion	10	10 %
Signal Volts For Rated Power	18	48 r.m.s.

*Grid current does not flow during any part of the cycle of the input signal.

The total resistance introduced into the grid circuit by the input coupling device should not exceed 1.0 megohm.

DISTORTION VERSUS POWER OUTPUT

