



The Symmetrical Totem Pole amplifier. No coupling cap for the top triode's grid is needed as the plate resistor equals the cathode resistor. This results in a gain roughly equal to one half the μ of the triode.

Tube

Tube = 12AX7
 Number = 1
 μ = 100
 g_m = 1,6 ma/v
 r_p = 62500 ohm
 I_{max} = 2,5 ma
 V_{max} = 300 v
 W_{max} = 1 w
 C_{gp} = 1,7 pf

Circuit Setup

R_k = 200 ohm
 R_k unbypassed
 R_{in} = 300 ohm
 R_L = 1 m
 R_a = 200 ohm
 Cap = 1 μ f
 I = 1,5ma
 V_{B+} = 150v

AC Results

Gain = 48,36	Gain dB = 33,7 dB
Phase = inverts	PSRR = -6,35 dB
Z input = 96,8 k	Z output = 30,4 k
F -3dB low = 0,15 hz	F -3dB high = > 1 mhz

DC Results

V_{tube} = 74,7 v	V_{Ra} = 0,3 v
V_{bias} = -0,3 v	V_{g2} = 75 v
V_{th} = 1,25 v	$V_{max out}$ = -38/+60,6 v
Plate Dis. = 112 mw	Total Dis. = 225 mw
R_a Dis. = mw	W_{Rk} = mw

Calculated Part Values

R_k = 200 ohm	Cap_{Rk} = 53 μ f
-----------------	-------------------------