

Princeton Reverb Power Supply/Bias Check Sheet

Tubes [from rear, left to right]: GZ34, 6V6GT(brown), 6V6GT(blue), 12AX7(1), 12AX7(2), 12AT7, 7025

Knobs: volume=1; treb,bass=5; reverb,speed,intensity=1

Note: use jumper to ground vibrato RCA jack to stop lfo oscillation while taking measurements

Mains input voltage (Vac): 119.4
Mains input source: 1:1 isolation xformer

Power transformer, secondary side	NO TUBES (Vac)	REC TUBE ONLY (Vac)	ALL TUBES (Vac)
rectifier (yellow, GZ34 pin 2 to 8)	5.36	5.2	5.06
heater (green, 7025 pins 4/5 to 9)	6.76	6.76	6.26
1/2 high voltage (red, GZ34 pin 4 to gnd)	335	335	321
1/2 high voltage (red, GZ34 pin 6 to gnd)	335	335	321

6V6 Bias power supply	NO TUBES (Vac)	NO TUBES (Vdc)	REC TUBE ONLY (Vdc)	ALL TUBES (Vdc)
input to 100K resistor	335	-0.016	-0.016	-0.017
input to diode	199	129.4	129.7	122
output of diode		-38	-37.9	-36.7
grid (pin 5) 6V6GT(brown)		-32.3	-32.1	-31
grid (pin 5) 6V6GT(blue)		-32.3	-32.1	-31

DC Power supply	REC TUBE ONLY (Vdc)	ALL TUBES (Vdc)
Node A	466	392
Node B	466	381
Node C	465	310
Node D	465	257

Output transformer resistance (ohms): 142.1 Center tap to 6V6GT(brown) plate, pin 3, while still warm
 159.1 Center tap to 6V6GT(blue) plate, pin 3, while still warm

6V6 plate dissipation	6V6GT(brown)	6V6GT(blue)
Output xformer CT to Plate drop (Vdc)	3.7	4.15
Plate voltage (pin 3, Vdc)	386	386
Screen voltage (pin 4, Vdc)	381	381
Grid voltage (pin 5, Vdc)	-31.3	-31.3
Cathode voltage (pin 8, Vdc)	0	0
Plate current (amps)	0.026038001	0.026084224
Plate dissipation (watts)	10.05066854	10.06851037

9 Pin tubes plate dissipation	12AX7(1)	12AX7(2)	12AT7	7025(12AX7)
Triode 1 (T1) circuit location	vibrato lfo	reverb recovery	reverb	input preamp
T1 Plate (pin 1, Vdc)	227	167	377	164.7
T1 Grid (pin 2, Vdc)	0.008	0	0.01	0
T1 Cathode (pin 3, Vdc)	2.27	1.36	7.35	1.347
T1 Cathode bias resistor (Ohms)	3300	1500	2200	1500
T1 Bias resistor voltage (far end, Vdc)	0	0	0	0
T1 Plate current (amps)	0.000687879	0.000906667	0.001670455	0.000898
T1 Plate dissipation (watts)	0.154587	0.150180267	0.617483523	0.146690994
Triode 2 (T2) circuit location	inverter	mixer	wired to T1	after volume pot
T2 Plate (pin 6, Vdc)	236	165.4		171.7
T2 Grid (pin 7, Vdc)	17.9	0.009		0
T2 Cathode (pin 8, Vdc)	70.6	1.448		1.302
T2 Cathode bias resistor (Ohms)	1000	1500		1500
T2 Bias resistor voltage (far end, Vdc)	69.7	0.0447		0
T2 Plate current (amps)	0.0009	0.000935533		0.000868
T2 Plate dissipation (watts)	0.14886	0.153382561		0.147905464