

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

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)	5.33	5.14	4.95
heater (green, 7025 pins 4/5 to 9)	6.73	6.7	6.12
1/2 high voltage (red, GZ34 pin 4 to gnd)	334	332	314
1/2 high voltage (red, GZ34 pin 6 to gnd)	334	332	314

6V6 Bias power supply	NO TUBES (Vac)	NO TUBES (Vdc)	REC TUBE ONLY (Vdc)	ALL TUBES (Vdc)
input to 100K resistor	334	-0.016	-0.016	-0.017
input to diode	195	134.3	132.2	122.8
output of diode		-29.1	-28.8	-27.8
grid (pin 5) 6V6GT(brown)		-28.2	-27.9	-26.9
grid (pin 5) 6V6GT(blue)		-28.2	-27.9	-26.9

DC Power supply	REC TUBE ONLY (Vdc)	ALL TUBES (Vdc)
Node A	457	377
Node B	457	365
Node C	456	298
Node D	455	247

Output transformer resistance (ohms): 138.9 Center tap to 6V6GT(brown) plate, pin 3, while still warm
155.5 Center tap to 6V6GT(blue) plate, pin 3, while still warm

6V6 plate dissipation	6V6GT(brown)	6V6GT(blue)
Plate voltage (pin 3, Vdc)	366	365
Screen voltage (pin 4, Vdc)	359	359
Grid voltage (pin 5, Vdc)	-26.6	-26.7
Cathode voltage (pin 8, Vdc)	0	0
Output xformer CT to Plate drop (Vdc)	4.61	5.33
Plate current (amps)	0.033189345	0.034276527
Plate dissipation (watts)	12.14730022	12.51093248

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)	215	161	357	157
T1 Grid (pin 2, Vdc)	0.008	0	0.01	0
T1 Cathode (pin 3, Vdc)	2.11	1.274	6.9	1.265
T1 Cathode bias resistor (Ohms)	3300	1500	2200	1500
T1 Bias resistor voltage (far end, Vdc)	0	0	0	0
T1 Plate current (amps)	0.000639394	0.000849333	0.001568182	0.000843333
T1 Plate dissipation (watts)	0.136120576	0.135660616	0.549020455	0.131336517
Triode 2 (T2) circuit location	inverter	mixer	wired to T1	after volume pot
T2 Plate (pin 6, Vdc)	226	160		164
T2 Grid (pin 7, Vdc)	17	0.01		0
T2 Cathode (pin 8, Vdc)	67.4	1.35		1.228
T2 Cathode bias resistor (Ohms)	1000	1500		1500
T2 Bias resistor voltage (far end, Vdc)	66.3	0.0418		0
T2 Plate current (amps)	0.0011	0.000872133		0.000818667
T2 Plate dissipation (watts)	0.17446	0.138363953		0.133256011