

Tung-Sol 7591A Tests in Eico ST-70A

Note-1 Only the ST-70A channel-1 power amp was used. Channel-2 was not driven.

Note-2 DC bias and balance, along with AC balance, were adjusted for each tube pair.

Note-3 7591A pairings were chosen based on max power tests among eight tubes.

Note-4 Gm was a second consideration, used for placing the widow (Note-7) and a same-power swap.

Note-5 The HP8903A 400Hz highpass filter was used for the 8VAC distortion tests.

Note-7 Tube TS-7 was rejected due to its 82% result in lab tests. That also took out a mate, TS-8.

Note-8 The "Syl" tubes are Sylvania, bought as NOS and have been lightly used. Same with RCA.

Output into 8Ω at 1% and 2% distortion. Also distortion at 1kHz, 8Vrms.

		Vrms	Vrms	Watts	Watts	Rel to RCA	Rel to RCA	8Vrms
Tube Pair	Freq	1% dist	2% dist	1% dist	2% dist	1% dist	2% dist	% Distortion
TS-1,2	1kHz	16.1	16.3	32.5	33.4	91	90	0.026
	50Hz	15.9	16.2	31.7	32.8	90	90	
	20Hz	12.3	14.9	18.8	27.9	105	89	
TS-3,6	1kHz	16.2	16.5	33.0	34.1	92	92	0.051
	50Hz	15.4	15.5	29.6	30.2	85	83	
	20Hz	11.6	14.6	16.9	26.5	95	84	
TS-4,5	1kHz	16.2	16.4	32.8	33.6	92	91	0.016
	50Hz	16.1	16.4	32.4	33.5	92	92	
	20Hz	12.3	15.1	19.0	28.7	106	91	
Avg of TS	1kHz			32.8	33.7	92	91	0.031
	50Hz			31.2	32.1	89	88	
	20Hz			18.3	27.7	102	88	
Used Syl	1kHz	16.8	17.1	35.4	36.7	99	99	0.035
	50Hz	16.5	16.8	34.2	35.4	98	97	
	20Hz	12.2	15.5	18.7	30.0	105	96	
Used RCA	1kHz	16.9	17.2	35.7	36.9	(100)	(100)	0.031
	50Hz	16.8	17.1	35.1	36.4	(100)	(100)	
	20Hz	12.0	15.8	17.9	31.4	(100)	(100)	