
Subject: Back to the Aikido

Posted by [Bill Epstein](#) on Mon, 10 Nov 2008 14:40:28 GMT

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Finally worked up the courage to build the power supply from the schematic (first time for me to build from a schematic) Steve Brown designed for me. The HV is a CLC to a tube rectifier, the filaments a full-wave bridge with voltage divider. Almost done, just have to wire up the CRC smoother after the bridge. The 4Pis should really sing with the added gain from my 2 watt 45 amp. Check the middle switch at the rear: it enables switching between a Russian K-40 .22uF PIO, a 2.2uF Obligato or both in parallel for the output. A cap shoot-out with the turn of a dial! I just had to sneak a peek at all those 6SN7s. I don't know if I'll use the 5R4 rectifier but it looks cooler than the little 5AR4 spec'd...Stay tuned.

Subject: Re: Back to the Aikido

Posted by [Norris Wilson](#) on Mon, 10 Nov 2008 17:16:53 GMT

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Looking good Bill, I haven't looked at the Aikido design lately. I was wondering if the second 6SN7 is a cathode follower? If it is, it might be fun to somehow install a switch where you can switch out the first 6SN7 gain stage. I owned a VAC preamp several years ago that had switchable gain stages that used 12AX7's for the gain, and a 12AU7 for cathode follower. Switching out the gain stages all together was my preference, but had a slight negative gain. As with all components in the signal path, they introduce their own signature. Keep us informed of your progress? I am very curious of how well your 2 watts will go towards driving the Four Pi's? I will be building a 2.5-way version of the Four Pi using 2226J's with Beyma CP-385ND 1" CD and TD-250 horn. I am hoping two watts will be enough to get them a rocking at 100db efficiency. Have fun!NW

Subject: Re: Back to the Aikido

Posted by [Bill Epstein](#) on Mon, 10 Nov 2008 17:42:17 GMT

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With just a passive volume pot, 2 watts gets loud enough for Dire Straits but not for the Who. Loud enough for Count Basie but not the Cleveland Orchestra, w/o serious clipping. The Aikido is described by Broskie as "a 2 tube cathode follower with the first tube a voltage divider of 50%, so that 50% of the PS noise is presented to the CFs grid; at the same time the 100k resistors also define a voltage divider of 505 so the bottom triodes grid also sees 50% of the PS noise. Since both of these signals are equal in amplitude and phase, they cancel each other out, as each triode sees an identical increase in plate current." I have no idea what any of that means....

Subject: Re: Back to the Aikido
Posted by [Wayne Parham](#) on Mon, 10 Nov 2008 19:26:30 GMT
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Oooh, that's sweet, Bill! Keep us posted!

Subject: Re: Back to the Aikido
Posted by [GarlandGarland](#) on Tue, 11 Nov 2008 20:23:52 GMT
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Do let us know your impressions! I've always been intrigued by the circuit.G.

Subject: Re: Back to the Aikido
Posted by [Wayne-o](#) on Tue, 11 Nov 2008 21:31:39 GMT
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All that work for 2 watts, It does look nice though. Hope to see pics of it when its completed.

Subject: Re: Back to the Aikido
Posted by [SteveBrown](#) on Tue, 18 Nov 2008 00:23:25 GMT
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Bill, your transformer 5v winding is only good for 2A, and I think the 5R4 is hotter than that. Check it out.
