Subject: Re: Update: Audio Note power transformer
Posted by Wayne Parham on Tue, 01 Jun 2010 15:12:33 GMT
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The problem was actually a little more complicated than that, or maybe I should say the symptoms and cause/effect analysis were a little more complicated. I believe, in the end, the problem and its solution were relatively simple.

First, I should start by saying I am happy with my Audio Note Kit 2. It is used daily for several hours each day. Being a SET amp, a lot of heat is generated and these things are pretty reliable, all-in-all. I've owned the amplifier for several years, so it has been used for literally thousands of hours.

Over this span, I've had three major parts failures other than tubes or fuses. First was the power transformer failure, subject of this thread. The amp worked fine for a while after replacing that. Next, I became frustrated by repeated blown fuses, so I measured voltages in the circuit and found excessive quiescent current in the output stage. This caused the cathode resistors to get very hot, so hot, in fact, that the solder would melt.

I noticed the coupling capacitors on the inputs to the power tubes were leaky (both physically and electrically) and allowed DC to pass, unbalancing the tube bias and causing excessive quiescent current. The bad coupling caps were Audio Notes, by the way. After fixing that, I thought all my problems were solved. But the fuses kept blowing every few months, and occasionally the cathode resistors would still get very hot. So I eventually decided to fuse the cathode path. Now, the cathode fuses will blow every few months, but at least I'm not chewing up any other parts. Seems a worthwhile mod.
Fused cathode mod for Audio Note Kit 2