

carbon composition resistors. The actual value isn't too important, anything from 4.7K to 10 K is fine. There are people who will argue that a carbon comp is not needed, but I have seen some 5842's that require a carbon comp to keep them from oscillating.

R5 only dissipates a few milliwatts in normal operation, but eats a huge surge at turn on. Some cheap resistors have been known to fry.

The reason for R5 is to lower the peak currents seen in the negative bias circuit. Without the resistor the diodes only conduct for less than a millisecond at the very peak of the AC voltage cycle. Even with fast diodes this can generate noise bursts on the HV winding that work their way back through the power transformer and get into the audio.

The usual way to blunt the current spike on power up is to wire an inrush current limiter device in series with the AC line to the power transformer input. These are essentially NTC thermistors that have a high (10's of ohms) resistance when cold that drops to under an ohm when they get warm. I use the CL-90 device on the USA 120 volt AC line, but a smaller (lower current) device would be used in the UK.

One can always add a CL-140 in series with the HV CT wire on the power transformer to blunt the spike in the HV winding itself. I have both on my SSE amps, but they run at much higher power and voltage than the TSE. The Inrush Current Limiters help protect some of today's less than stellar rectifier tubes.

I am using the same Hammond 372HX transformer in my test amp as you and have not seen an issue with my board despite cranking my line voltage into the 140 vvolt range with a Variac.

Where should the motor run cap be physically connected to ?

One lead goes to a terminal in the T1-RED_YEL connector, and the other lead goes to the terminal in the CHOKE connector closest to the T1-RED_YEL connector. If using a choke and a cap, you may need to put two wires in one hole in the connector, or connect the wires together off board.