Subject: Re: Fisher 500C-how hot is too hot?
Posted by metasonix on Mon, 05 Sep 2005 18:07:20 GMT
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I have repaired and upgraded SCORES of Fisher receivers. Please let me offer some advice.Yes, your output tubes are running too hot, plate current must be decreased. -26v is not negative enough.Also, the heaters of the EL34s draw a LOT more current than 7591 heaters. This is dangerous. The original power transformer is barely adequate to run the original load. If I had to put EL34s in a 500C, I'd either use an external power transformer or remove/bypass some preamp tubes (or maybe even the tuner) to decrease the load.>) you should change the "bias voltage" Ug1 to about -26V. >If you don`t have adjustable "bias" pot, you can change >the values of voltage divider resistors in "bias" supply >to "enlarge" Ug1.That's good advice. If this were my receiver, I would assume even worse, and modify the output stage to insert a cathode standoff resistor on the cathode of all 4 tubes, to further decrease plate current. I suggest a big 100 ohm wirewound resistor bypassed with a 1000 uF, 25v capacitor. Another advantage to this scheme: the cathode resistor helps limit inrush current at turn-on.Another thing I always do to old tube receivers is to put a large resistor in series with the AC mains input. 5-10 ohms at 10 watts also limits inrush, to help prevent power transformer death. Remember, AC line voltages have crept up over the last 40 years.If modern EL34s conformed to the old data sheets, -26 would be adequate, but modern EL34s NEVER conform. They always seem to need more negative grid bias.