Subject: Re: New Production Tung Sol 6550, Penta KT88s
Posted by positron on Wed, 03 Jul 2024 04:41:28 GMT
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Wayne Parham wrote on Tue, 02 July 2024 13:50
I've been meaning to reply to this thread for a long time, but keep forgetting. When a post is made here, I read it, make a mental note to respond when I get time, then eventually forget 'til the next post.

I have an Audio Note Kit 2, which uses a 6550 tube wired as a triode and run Class A. I love it, but it did show some oddities over the years, some of which may have been due to things other than the basic circuit.

One of which was a predisposition to draw excessive output circuit current after a tube had been run for a few years. I use this amplifier often, so a few years means several thousand hours. At that time, it would usually start overheating the cathode resistor. This, of course, raised the voltage across it and its bypass capacitor. After a few years, I installed a 1/8A fuse in series with the cathode resistor, and that was magic. When a fuse pops now, I swap both fuses and both tubes. That makes everything very predictable.

I have noticed, though, that after moving from Tulsa to Bella Vista, the excessive current problem seems to happen less often. Seems like we've gone from maybe every four years to every six or maybe even longer. It just seems rarer now.

But none of that is scientific at all. I haven't measured the voltage in either place, haven't looked at the waveform, nothing. I mean, I've seen both voltage and waveform in both places. From time to time, I've needed to troubleshoot something and on those occasions, I look at power sometimes. But just for a few seconds, just enough to get a reading, and no real deep dive into what's happening. Just noting that I've got 170V peak, sine looks smooth, nothing deeper than that. In fact, I'm surprised that Bella Vista power is "better" than Tulsa 'cause no other utility services are.

Anyway, all that was just a qualifier to show what "m working with when I talk about 6550 and KT88 tubes in my particular setup.

For me - I have tended to really like Tung-Sol and Electro-Harmonix for new production tubes. T hey both sound great and they both behave. They last a long time.

I also have RCA and Tung-Sol 6550 tubes that were manufactured decades ago. They're strong,
almost could be called NOS but they have been used. Just lightly. They're too precious for me to run full-time, all the time.

I like Svetlana tubes too, but for whatever reason, I don't like 'em as much as the Tung-Sol and Electro-Harmonix tubes. It may just be psychological, because without the Cyrillic letter on them,
they're "pretenders" to me. And these days, I'm not sure I'd want the "real thing" if it existed anyway. So that bias may have nothing at all to do with quality.

The one that really stands out as a "bad part" for my amplifier is the JJ 6550. It's a "snap-crackle-pop" tube for me. Many of them actually make strange noises in my Audio Note circuit
and they always fail very rapidly, like in months. Not sure what's up with that, but it has happened
more than once.

This seems to track with many of the KT88 tubes as well. I have a handful of different brands, and
I'm sure some are better than others in my application. But all of the KT88 tubes seem to fail sooner than 6550 tubes. I'm not sure what the actual structural differences are, but KT88s don't seem to fare as well as 6550s in my Audio Note Kit 2.

Hi Wayne,

Increasing cathode current over the years could be caused by excessive Gas causing grid leakage, thus bias changes. This can occur even though the top getters show no gas absorption.

Speaking of gas absorption, top getters are not the best placement for gas absorption. It just does not get as hot as along the sides of the tubes. I noticed that my Tung Sol side getters collecting gas after a few hundred hours. However, the tube's side getters have been getting hotter and connecting more gas than I care to see. By the way, I run my output tubes at ~29 watts plate dissipation, though rated at 35 watt plate dissipation.

Another situation could be caused by fluctuating AC line voltage; higher would cause faster cathode oxide evaporation, some of which settles on the control grid 1. Just a thought.

I have a little plug in AC line voltage meter. Here is a link showing a typical one. My line voltage varies just a volt, maybe 2 volts extreme. YMMV.

Eversame AC Voltage Meter

I compared the Svetlana KT88s vs the Winged C KT88s, they are sonically different in my experience. I have an octet of both WC KT88s and WC 6550, and they sound different as well. Fortunately, I have not tried the JJ 6550s. Thanks for the heads up Wayne.

I am wondering what the idle plate dissipation is with the Audio Note kit 2?

Cheers

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