
Subject: Why does flawed vintage amp sound so good
Posted by [hurdy_gurdyman](#) on Tue, 22 Jun 2004 13:48:10 GMT
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I been reading with interest some of the previous threads about what makes good sounding tube amps and the differences in them. Now, I wish someone could explain to my why my old Scott LK-48-B (222D in kit form) can sound so musical and just plain fun to listen to when the circuit is

square wave look horrible. But, after owning many vintage amps of good repute (tube and ss), this

highlights are the filters that I know of. Just one look at that spaghetti-looking mess of circuitry would convince most that it couldn't possibly sound good. Why does it sound good then? Always needing to know why Dave

:^) http://f1.pg.photos.yahoo.com/ph/the_hurdy_gurdyman/detail?.dir=/6d5d&.dnm=5289.jpg
Scott schematic

Subject: Re: Why does flawed vintage amp sound so good
Posted by [Wayne Parham](#) on Tue, 22 Jun 2004 15:21:23 GMT
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Hi Dave, Thanks for the link, that's cool. I couldn't see it very well, but maybe if I downloaded it and put it in an image viewer it is high enough resolution it would be crystal clear. Still, from what I could see, it looked like the basic amplifier was a pretty clean push-pull circuit and the "spaghetti-looking mess of circuitry" was mostly tone control circuits. When set flat or disabled, they wouldn't impact the sound at all. So it may be that the design is actually pretty basic and not alarming even to the low-parts-count purist. Then there is also the issue that a filter isn't necessarily made more pure by having a low parts count. If the components are linear and the load perfectly resistive, that's one thing. But if the load is not resistive, particularly if it is also non-linear, then a simple filter is often horribly wrong. In that case, a more pure filter is one that is more complex and compensates for load variations. I don't see that as being much of the case here, because it's really more of a loudspeaker issue than anything else. It's something to consider when making passive crossover components. But I thought it worth mentioning in the context of "circuit simplicity" verses "response purity." These two things aren't necessarily related. And then there's one more thing. This one makes me wince, but I think it's still important to say. Think about how many people make comments about a sound system they are particularly fond of, saying it sounds better than live, or words to that effect. If something sounds "better" than the original source, then it must be "different" than that source. If the goal is accurate reproduction, then this would seem to be a bad thing. Something was added that enhanced the original, or something that wasn't particularly good in the original was removed. But the enhancement was a change, and kept the reproduction from being true to the original. I really like what Siegfried Linkwitz says about the job of a good sound system being its ability to provide an illusion of reality. For many years, I strived to keep things as close to the original as possible, and I still think that's a worthy goal. But after reading his comments, I realized that he's right - No matter how much effort is placed in maintaining "accuracy," it's all an illusion. And being so, the

fact is that the best facsimile is the one that is perceived as being best. This is where objective measurement and subjective perception meet. I guess the bottom line is that if this amplifier has done it for you, then the engineers have met their goal. Whatever inaccuracies are present don't seem to be noticeable to you, and the things it does right, it must do very right. So maybe it isn't flawed after all. Wayne

Subject: Re: Why does flawed vintage amp sound so good

Posted by [akhilesh](#) on Tue, 22 Jun 2004 17:04:17 GMT

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Hi Dave, YEAh the old stuff is pretty good, even though there is nasty s*** in there. They designed it with enough s*** so that some s*** cancelled out other s***! They just don't build them like that anymore! Just kidding! ;-)-akhilesh

Subject: But seriously, folks.....

Posted by [akhilesh](#) on Tue, 22 Jun 2004 17:08:20 GMT

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The old amps, like yours had a few critical parts right....mainly the transformers and resistors. They also used decent capacitors, and almost always used inductors, since cap technology was expensive. This, along with not using the preamp section (meaning setting all tones & balance to zero) leads to a sweet sounding amp. The way to upgrade from there: build anew amp with high quality transformers, chokes & caps! IT will probably sound a bit better. But good vintage amps, like yours, Dave, will out perform most new tube amps, even if these cheap new amps have "few components". -akhilesh

Subject: Thanks for the replies

Posted by [hurdy_gurdyman](#) on Tue, 22 Jun 2004 19:14:20 GMT

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Thanks guys. Whether this amp is "accurate" or not is not all that important to me at this time. It sounds great, so I'm keeping it. ;^) I just have been curious as to why, as the technical side of me is telling that this isn't the way amps are designed anymore. A nice side effect of those subsonic filters is that I don't get massive uncontrolled woofer flunctuations when playing warped records, even with an open baffle. Not sure why my schematic pic is fuzzy. I think maybe Yahoo photos doesn't have good enough resolution. You'd think that, being free, you should get great quality! Free just isn't what it used to be. Dave :^)

Subject: Re: But seriously, folks.....

Posted by [Manualblock](#) on Tue, 22 Jun 2004 19:25:04 GMT

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owHi AK; I would like to respond to your post since I too am in the process of searching for the "right" amp. Having owned a Scott 222d for many years eventually upgrading and restoring i sold it about year ago. Even though it sounded sweet and musical there was an annoying harshness in the upper midrange that got to me. Now your statement above;"Good vintage amps will outperform new tube amps", has me wondering. Many older amps do sound good, Citation II, Fisher, etc. But why should they outperform new amps that have equally good parts? And upon what information or insight do you hold that belief? Older guitar pickups are valuable for their sound and some say it is because of the oxidation of the copper wire that occurs over many years. Does some physical result like that cause older amps to sound better? I am attempting to pick the brains of the members of this forum in order to build the amp I can live with forever. How do you feel about that search if I may ask along with my other questions?

Subject: Re: But seriously, folks.....

Posted by [hurdy_gurdyman](#) on Tue, 22 Jun 2004 21:36:51 GMT

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I don't know if it really makes any difference or not, but I've heard that after an output transformer has about 20 years or so aging put on it, the iron laminations in the core have "aged" enough to cause what is generally considered better sound then it had new. That's the only thing I can think of that would make a vintage amp any better then the same amp built today.BTW, I've noticed the same harshness in the upper mids on my Scott amp. It's small, but there. It seems to be more noticable on some speakers then others. I've heard it is caused by the cera-caps that are used throughout the curcuitry. Replacing these with good poly caps should cure this. I have replaced just the output coupling caps and have noticed a small improvement. One of these days I'll get around to replacing the rest.Dave

Subject: Re: But seriously, folks.....

Posted by [akhilesh](#) on Wed, 23 Jun 2004 11:49:37 GMT

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HI John, Thanx for the post. What i meant was, older amps that use high quality trannies & chokes will outperform CHEAP new tube amps...with cheaped out output trannies & poor power supplies. BTW, taking an older amp like the scott, and doing mods like: eliminating the preamp section, recapping with high quality caps, changing some key resistors....can lead to a pretty darn good amp. I think there are people on the web who do just this. If you want your final amp (yeah right...you KNOW you have the bug and NOTHING is final), i would suggest an amp that is built new, with high quality parts. Should cost you between \$500-\$2000 in parts, depending on what

kind of speakers you have, what circuit topology you need, etc. I agree with Dave's post below that output trannies sound slightly better after being broken in. This is typically a 1000 hours or so, depending on the iron. After that, in my OPINION, the differences will be almost too subtle to bother about. hope this helps.-akhilesh

Subject: Re: But seriously, folks.....

Posted by [Manualblock](#) on Wed, 23 Jun 2004 14:11:09 GMT

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Hi AK Always a pleasure. The Scott had all those things done to it, re-capped with good poly-props and tweaked phono-stage with 1% matched Rodersteins and etc. The amp I am looking at is a Williamson variation with long-tail phase-splitter, 10 db neg. feedback 6sn7 driver stage, the other one is a SE 211 with mercury vapor rectifier power supply and custom wound transformers. It puts out 20 watts at under 3% distortion across the band. This amp is designed by a guy in New Zealand and the phtos are very comprehensive and detailed. The only thing that has me worried is the ultra-high plate voltages, 1100 volts B+. The trannies are pricey, about 900\$ for the outputs but they arte beautifully built. Keep you posted. I am on the list for the Stoekit so maybe this is all moot anyway if that amp sounds as good as they say!

Subject: Re: But seriously, folks.....

Posted by [akhilesh](#) on Wed, 23 Jun 2004 14:21:43 GMT

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Hi John,One thing you may want to consider isa SET amp, with high efficiency speakers. While they don;t measure well....many folks think of these as their "final amps".-akhilesh

Subject: Re: But seriously, folks.....

Posted by [Wayne Parham](#) on Wed, 23 Jun 2004 16:26:18 GMT

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Just a quick word on the Stoetkit. I'm very pleased with it.I don't want to compare with others, but I suppose its inevitable. I will say this though, for its price tag, I think it's the best value I've seen by a long shot. I'm pleased because one of "our gang" has made it available, and I feel a certain loyalty to the folks that hang out here and help make this place possible. But it's more than that. This amp is really nice.The Stoetkit has lots of power for an entry level tube amp, with much more control of the bottom couple of octaves. The rest of the range is nice too, clean midrange and full, sparkling highs without being over-represented. And when there's no signal, the amp is dead quiet. No hum. I've not seen any entry level tube amps that could do all these things as well. I

think you'll be pleased with it.

Subject: Re: But seriously, folks.....

Posted by [akhilesh](#) on Thu, 24 Jun 2004 05:20:38 GMT

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Hi John, If you already did everything to the Scott amp & it still sounds harsh or bright then here are some more ideas: 1. I could be another component in the system (usually the speakers) 2. A tube or two may be bad 3. Your hearing is sensitive to negative feedback or some such (you have GOLDEN ears) It would be very interesting to see the link on this amp in New Zealand if you have it. Sounds like it would be a lot pricier than any entry level amp. thanx, -akhilesh

Subject: Re: But seriously, folks.....

Posted by [kyle](#) on Thu, 01 Jul 2004 17:22:07 GMT

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>"The old amps, like yours had a few critical parts right....mainly the transformers and resistors."

Subject: Re: But seriously, folks.....

Posted by [Manualblock](#) on Thu, 01 Jul 2004 19:28:52 GMT

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Hi AK, First up the speakers used with the Scott amp were Spondors and no one of my knowledge has ever accused them of being bright. The amp I described that you mention, the 211 tube SE amp from the guy in New Zealand is a homebuilt. You would have to work off the photos of his amp and the schematic. The OPT's are difficult due to very high B+ voltage. They are expensive. He built his version for 1100\$. If you are interested I have a long and very detailed build guide with photos and schematic, it is a very conservative design that puts out 20 watts SE.
