Subject: A few measurements
Posted by Forty2wo on Tue, 30 May 2006 00:40:40 GMT
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For what there worth. I am referring to my somewhat sketchy notes. These were done in haste, I don't like to run my 300b's with the filaments sideways. I was mainly just checking that I hadn't just built an oscillator and was not driving any of my expensive bits to destruction.2Vp-p input = 200V output into 16 ohms At @ 225Vp-p I would just start to see a flattening of the negative going wave. I did not stop to check if it was the driver or output stage I ran a few frequency sweeps, mostly to check for peaks, or oscillation. If I remember correctly, (Damir, help me out here) -3db is .707 % of the reference (150Vp-p into 16 ohms) value. If so that corresponds to 12Hz to about 42kHz. The .5 power points are < 10Hz to 85kHz. Square wave response looked pretty good. a good sharp leading edge and almost no overshoot till > 10k or so. Like I said this is not meant to be a scientific evaluation. I just wanted to know if it was safe to hook up…John

Subject: Re: A few measurements
Posted by Damir on Tue, 30 May 2006 12:16:05 GMT
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Huh, something is missing - where did you exactly measured about 200Vpp? It is 100Vp or 70,7Vrms... Is this driver output? Or on (unknown?!) 300B load? This, 70Vrms "across" 16 Ohms means 70^2/16 = 306W... Thanks for the measurements, but please check this and report us again... Converting in dB or vice-vers is simple. This is just the ratio of two AC signals, expressed in dB, log. scale.If we have, say 1Vrms input, and output is 0,707Vrms (attenuation), then we can express this in dB like that:A = 20 * log(V1/V2)First, compute (on calculator) V1/V2 = 1/0,707 = 1,4142Second, press "log" (from 1,4142), and this is 0,15Third - multiply this (0,15) with 20 and you`ll get 3dB.Note that the result would be the same (3dB) if we`ve had amplification, from 0,707 to 1V rms. It is the ratio.Converting from dB to the amplification ratio, backwards:-we have, say 3dB amplification, or A = 20 * log V1/V2 = 3 dB-from that, log V1/V2 = 3/20 or log V1/V2 = 0,15-on calculator, press INV log (of 0,15) and you`ll get 1,41 times

Subject: What? You don't get 300 watts from your amp?
Posted by Forty2wo on Wed, 31 May 2006 03:07:08 GMT
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What, read the x1 scale, rather than the x10 scale? I would never admit to a dumb mistake like that. Well, OK. More like 20V p-p or 7-8V rms, for more like about 4 watts.The test setup, such as it was… Readings taken from the transformer output (a Lundahl 1623, Connected as 5.6k -16 ohms). Into a 16 ohm non inductive dummy load. I use this setup so I can connect to friends, 8

ohm speakers.So, after you so kindly pointed out the gross errors. I see that I need a bit more voltage swing on the driver. I will work on raising Va next. Thanks for your dB refresher course, I guess it's "use it or lose it" …. Or what was the question again ? ...John

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Subject: About 50W with 4xEL34 in UL... :-)
Posted by Damir on Wed, 31 May 2006 10:41:09 GMT
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Hey, tell us something about LL1623 OPT, I have a smaller model, LL1664/80mA. Did you try various primary connections / loads and can you comment on sound?

Subject: Re: About 50W with 4xEL34 in UL... :-)
Posted by Forty2wo on Mon, 05 Jun 2006 01:40:33 GMT
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Like I have said, these amps so far, have never quite done everything I have hoped. It has never been a fault of the transformers. They have great extension. I have had wonderful bass, shimmering highs and liquid mids, just not always at the same time.The Current project is showing good promise. Once (if ever) I get a baseline circuit I will experiment more with the transformers.In the mean time, to answer some of your questions. When I first built these they were a direct copy of the FI primer. As my speakers are 16 ohm, I set the transformers to 3.6k-16. I later changed to 5.6k-16 so that I could connect 8 ohm speakers. At the time, with the rather soft sounding topology, I did not hear much of a difference between the two tappings. As I do not seem to need every last bit of power , I have left it there. I still take it to meetings were 8 ohms is the norm. These amps are once again in a state of change, no thanks to you my friend. It will be some time until I can get back to transformer experiments.But I do have a set of James transformers and maybe a set of ElectraPrint to try. So 'don't touch that dial'…John

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Subject: That`s right, folks...
Posted by Damir on Mon, 05 Jun 2006 12:46:25 GMT
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...don`t touch that dial! Hey, too late now - you absolutely must post to us your sound comparison article - 3 different SE OPTs!
http://www.lyricskid.com/lyrics/frank-zappa-lyrics/i~m-the-slime-lyrics.html

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