Subject: Funky Project
Posted by gofar99 on Thu, 24 Mar 2022 02:11:03 GMT
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Hi Everyone. This is a project I started a while back and finally am getting around to finish. A push-pull 832 amp. I love the way the tubes look but they are certainly not mainstream audio ones. Typically used for really high frequency radio power amps. Still the current price for such a cutie is only $10 from Antique Electronic Supply. Since I already had them and the amp was at least started I figured it was something to keep me out of trouble. I am actually running the tubes well below their ratings and really just at the bottom of the linear range 250 Volts and 51ma each side. In class A pentode mode I figure on about 7-8 watts. Driver is a 5751 in SRPP mode. The photo is what it looked like when I set it aside. More to follow as I work on it. It was barely operational at the time (hum, noise and so-so sound). I figure I can make it sing with some changes.

File Attachments
1) 832 B with CXPP Transformers.jpg, downloaded 351 times

Subject: Re: Funky Project
Posted by Wayne Parham on Thu, 24 Mar 2022 14:30:49 GMT
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Dude, that's so cool! The tubes look like little glass minions!

You have to think of a fun name for that amp. It's so unique!

Subject: Re: Funky Project
Posted by Rusty on Thu, 24 Mar 2022 14:45:47 GMT
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I think you've just named it. That really is unique. Very creative.

Subject: Re: Funky Project
Posted by gofar99 on Sat, 26 Mar 2022 02:47:54 GMT
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Actually I'm thinking of Quercus. That is the genus for Oak trees which naturally are the source of acorns. The 832 has lots of names but the one that comes up frequently is an acorn tube. :roll:

Subject: Re: Funky Project
Posted by Wayne Parham on Sat, 26 Mar 2022 13:48:28 GMT
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Very cool. Those tubes do look like glass acorns. Love it!

Subject: Re: Funky Project
Posted by gofar99 on Fri, 06 May 2022 17:44:33 GMT
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Hi Everyone,
Well.....some things are not quite as expected. This amp is one of those. First you would expect a pair of beam tetrode RF sections to deliver a bunch of power in push-pull. Even if it is class "A" operation. Well 4 watts clean and a max at 5% distortion of 6.5 isn't exactly a lot of power. A pair of EL84s can do that in a similar circuit. Granted the 832s are really neat looking though. On the brighter side of things the response, signal to noise and sound are all good. Except for some 60HZ at -75 db the rest of the range is nearly -90db. Not too shabby for a small amp. Response is equally good. -0.9db at 20HZ and -0.5db at 30HZ. Everything from there up to past 30KHZ is within 0.1db. To me the sound is well rounded. No obvious anomalies. The "color" of the sound if you want to use such terms is largely determined by the driver tube choice and the coupling capacitors. If you fiddle with them then you can alter the sound from warm to cool. Your choice. I used Auricap capacitors and JJ ECC802S driver tubes. Sensitivity is around 1 volt for full output. You can use ECC803 types and get more gain at the expense of a higher noise level. Since nearly any decent source can deliver 1 volt I figure that this is not really an issue. So while really cute and a worthy project, I figure there are better ways to make sound.

File Attachments
1) 832 Consolidated Schematic May 6 2022.jpg, downloaded 212 times

Subject: Re: Funky Project
Posted by Wayne Parham on Fri, 06 May 2022 19:12:21 GMT
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But dude, it's so unique looking!

Subject: Re: Funky Project
Posted by Barryso on Sat, 07 May 2022 13:29:05 GMT
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Like Wayne said, it's a great looking amp. Those tubes are exotic, at least in the looks department.

Subject: Re: Funky Project
Posted by gofar99 on Sun, 08 May 2022 19:15:21 GMT
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Hi, The tubes were pretty cheap about three months ago. One site had them for under $10 each NOS. BTW the amp is a pretty good heat source on cold days. This one seems a bit less efficient that most of my other similar designs. As class "A" U/L amps they are not efficient to start with.