Subject: 12V Space Charge Tubes

Posted by Wayne Parham on Tue, 12 Jul 2005 11:12:21 GMT

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Check out this interesting web page: 12V Space Charge Tubes

Subject: Re: 12V Space Charge Tubes

Posted by colinhester on Thu, 14 Jul 2005 00:40:12 GMT

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I ran across this web site a month or so ago. I'd like to try my hand at a low voltage tube amp. It would sure be a change to the "widow maker" amps.....Colin

Subject: Re: 12V Space Charge Tubes

Posted by Wayne Parham on Thu, 14 Jul 2005 04:01:00 GMT

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I agree. We've got to do our own version of a low voltage SET amp in the Group Build forum. Its name should be Ecstasy.

Subject: Re: 12V Space Charge Tubes

Posted by colinhester on Thu, 14 Jul 2005 14:28:26 GMT

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Not a bad idea. I think this would draw some others in that might be a little gun shy of the high voltages. Do you have a particular schematic in mind?......Colin

Subject: Re: 12V Space Charge Tubes

Posted by Wayne Parham on Thu, 14 Jul 2005 16:15:25 GMT

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I hadn't given it much thought, other than it sounded like a fun little project. Easy enough to do in

a weekend, or maybe a day. It will run on a motorcycle or car battery, so that's kind of different. Just looked like a fun thing to do, maybe something like the schematic below for starters. It came from one of the links in the 12V Space Charge web site.

Subject: Re: 12V Space Charge Tubes

Posted by colinhester on Fri, 15 Jul 2005 01:02:24 GMT

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I like it!!! Give me a week or so to catch up. I saw where Pete Millet is looking at a low voltage tube headphone amp. Is this where you ran across this link? I think he has it linked from his site.....Colin

Subject: Re: 12V Space Charge Tubes

Posted by Wayne Parham on Fri, 15 Jul 2005 07:40:22 GMT

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No, it isn't from Pete Millet's site but thanks for reminding me.Pete Millett's DIY Audio Sitel saw several space charge circuits here and there, and this was the simplest one. They were running it with 12VAC on the heaters, but I think I'll try it with DC, same as B+. Seems like the heaters will attract electrons from the cathode even more than the anode does, but I guess that's just part of the whole space charge thing.

Subject: Re: 12V Space Charge Tubes

Posted by colinhester on Sat, 16 Jul 2005 02:22:09 GMT

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The more I look at the schematic you posted, the more I like it. I think this could be put together for

Subject: Re: 12V Space Charge Tubes

Posted by Wayne Parham on Sat, 16 Jul 2005 08:20:14 GMT

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I believe so, yes. A 650 ohm primary and 8 ohm secondary are the same as a 1300 ohm primary

and a 16 secondary. But we'd probably be wise to run this by the tube circuit gurus to make sure we're not overlooking anything.

Subject: Re: 12V Space Charge Tubes

Posted by colinhester on Sun, 17 Jul 2005 21:38:17 GMT

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Mind if I cross-post over at the Tube forum? I have a pair of Hammond SE TXs sitting around that would be perfect for this.....Colin

Subject: Re: 12V Space Charge Tubes

Posted by Wayne Parham on Sun, 17 Jul 2005 23:28:09 GMT

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That's a good idea. We should probably mention it in the Group Build forum too.

Subject: Re: 12V Space Charge Tubes

Posted by colinhester on Mon. 18 Jul 2005 22:48:21 GMT

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Two questions: How many watts are we talking sbout with this amp, and how easily is this converted to a headphone amp?......Colin

Subject: Re: 12V Space Charge Tubes

Posted by Wayne Parham on Mon, 18 Jul 2005 23:35:15 GMT

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Don't know about the power output. We'll just have to build it and see. But if it's capable of any power at all, it's probably just fine as a headphone amp as-is.

Subject: Re: 12V Space Charge Tubes

What amp-hour 12V rating would you recommend if battert driven. Still scratching my head and wondering if I'm going to have time. My wife and I are expecting a boy in mid-Spetember; so, as you can imagine time is rather limited......ColinPS. Spkrman57 and Zincman are getting together at my house on August 13. I'll be sure and post pictures.PPS. What happened to Cryo Parts as a sponsor? I was going to order some cable and jacks, and they wern't listed.....

Subject: Re: 12V Space Charge Tubes

Posted by Wayne Parham on Tue, 26 Jul 2005 18:50:14 GMT

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I'm sure a motorcycle battery would cover it.

Subject: I'm here!

Posted by guitarplayer on Tue, 26 Jul 2005 19:40:58 GMT

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I'm here, just regrouping a little bit. Take care. Lee

Subject: Re: I'm here!

Posted by colinhester on Tue, 26 Jul 2005 19:53:33 GMT

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Great, I am looking for some chassis-type speaker connectors and wire for my new amp project.....Colin