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Subject: Super simple linestage.  
Posted by [Thrint](#) on Sun, 31 Jul 2005 22:35:07 GMT  
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For those who don't need any additional gain I have an idea. It is even all SS, though the development model is completely valve. One needs a high gm, low input capacitance device to act like a cathode follower. Some pentodes work quite well, but a pair of DN2540 mosfets rigged in cascode as in the Guinevere plate loads is even better. No set resistor is needed. Have this device ride on a gooooood CCS. Again the Guinevere plate loads will do well, and this time we \*WILL\* build the complete thing. Set it to sink 10 mA. Attach the volum pot's wiper to the lower gate, and cap couple from its source( as in Guinevere ). Supply a +/- 60V set of rails and we're off...low output Z, wideband response, and no silly high voltage capacitors needed. For parts, a 120V CT power TX, two 10 Hy/100 mA chokes and two good capacitors are all that's required. Figure \$100 max if you don't want a gold-plated box...regards,Douglas

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Subject: Re: Super simple linestage.  
Posted by [colinhester](#) on Mon, 01 Aug 2005 02:27:08 GMT  
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Please O' Great One, tell us more. I should be finishing my current project in a month or so and would like to have something else lined up. Wayne suggested doing an amp based on 12V space-charge tubes (any thoughts), but if there is interest in a linestage, I'm in....Colin  
<http://audioroundtable.com/Radio/messages/243.html>

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Subject: Re: Super simple linestage.  
Posted by [Manualblock](#) on Mon, 01 Aug 2005 18:42:23 GMT  
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So why is it we would want to build this unit? If you don't want gain why not just run a pot?

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Subject: Re: Super simple linestage.  
Posted by [Thrint](#) on Mon, 01 Aug 2005 23:11:44 GMT  
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I did not say that anybody wanted to build this unit. Or that there were no other ways to achieve the results. It is just another way of doing things. If you're suggesting a simple voltage divider pot, the pot and buffer I just laid out ought to run circles around it. Since I have a feeling that there is

substantial prejudice against SS stuff, I thought to show a way it could be used to good effect. Always use the best design to solve the problem. Sometimes it might just be a SS one. FWIW, I don't recall anybody complaining about the performance Guenivere delivered. regards, Douglas  
The suggested PS of 60-0-60 would yeild ~50 volts at the L-C filters.

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Subject: Re: Super simple linestage.  
Posted by [Manualblock](#) on Tue, 02 Aug 2005 08:33:20 GMT  
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I understand but it seems such a radical change of direction that curiosity prevailed hence the question. I agree; whatever does the job. Just that you always seemed to favor and design around tubes so the question becomes what precipitates this new direction. Was there some experimentation that caused you to find this worth pursuing?

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Subject: Re: Super simple linestage.  
Posted by [Thrint](#) on Tue, 02 Aug 2005 09:58:05 GMT  
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I built a similar circuit with tubes, and found it complex to implement. Lots of B+, lots of tubes....I have most of the parts, and need a proper sized box. I will probably try a remote PS and see how that experiment goes. I have a bunch of photo flash caps salvaged from disposable cameras which have done well in audio circuits to try( they're small 330VDC/160 uF ). It is interesting enough, being completely SS to try IMO. There is a certain satisfaction to be gained in favourably comparing to something far more expensive and Off-the-Rack, no? regards, Douglas

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Subject: Re: Super simple linestage.  
Posted by [Manualblock](#) on Tue, 02 Aug 2005 13:19:09 GMT  
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Yes; without a doubt. I have a phono stage built with photo flash caps. Cheap and they sound good. I believe you can never know enough about any hobby; so try everything.

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Subject: Re: Super simple linestage.  
Posted by [metasonix](#) on Wed, 03 Aug 2005 05:34:47 GMT  
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I'd like to see this implemented, tubes or no tubes.

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Subject: Nice Spam. Didn't you nitice this is a TUBES forum? (nt)

Posted by [Rek\\_O\\_Kut](#) on Thu, 04 Aug 2005 19:13:09 GMT

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asdf

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Subject: Re: Nice Spam. Didn't you nitice this is a TUBES forum? (nt)

Posted by [Manualblock](#) on Thu, 04 Aug 2005 19:28:39 GMT

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Spam?? You mean potted meat?

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Subject: Of course...

Posted by [Damir](#) on Thu, 04 Aug 2005 21:20:41 GMT

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...that`s why we build our gear with DN2540N5 tubes...

<http://audioroundtable.com/GroupBuild/messages/1080.html>

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Subject: Dear Mr. Kut...

Posted by [Thrint](#) on Thu, 04 Aug 2005 21:37:11 GMT

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I don't think it was spam. The same circuit can be done with valves or SS. Like I said, I built the circuit which lead to this with valves. I have designed some stuff which was quite well recieved in these parts with a mix of SS and valves( Guinevere and Merlin ).Is there anything else you'd care to take issue with? There is plenty of SS in both of those designs, BTW.regards,Douglas

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Subject: Re: Super simple linestage.  
Posted by [Thrint](#) on Thu, 04 Aug 2005 21:44:51 GMT  
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Which would you prefer? The valve circuit can be done with a +/- 200V supply fairly easily with cheap valves. For the input circuit, a triode strapped 6EJ7 and a pentode rigged 6EJ7 would be great. ~\$3/tube too. Now for the CCS for this cascoded cathode follower to work into. Single pentode perhaps? 6CL6 or an EL84 or any of the similar sized 9-pin pentodes would do. One could get nuts with a regulated g2 supply, but a dropping R and bypass C would be quite good as well. The beauty of the MOSFET sol'n is that we could do it with +/- 30V and DN2540N5's. Or a -30 supply with a MOSFET cathode load and valves on top. This I am going to build soon. I have a request from a very good friend back in PA for just such an item. I think I'll do it with Intact Audio ( Dave Slagle ) Autoformer volume controls if he'll foot the bill... regards, Douglas

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Subject: Re: Super simple linestage.  
Posted by [metasonix](#) on Sat, 06 Aug 2005 19:42:54 GMT  
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I vote for transistor--seen too many tube variations on this.

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Subject: Mine too...  
Posted by [Thrint](#) on Mon, 08 Aug 2005 00:34:15 GMT  
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Went through the shelf of Iron and parts: 1.5A/54.5-0-54.5 volt power TX. Full bridge, CT grounded 2x 15 Hy/75 mA Hammond chokes ( mmmmmh hhhh, matched pair! ) coffee tin of 120 uF photo flash caps 50k, Audio taper Noble pot Sleeve of DN2540N5 Mosfet's 6 uF/220VAC Vit-Q AC caps for output coupling. The PS will yeild about +/- 40V. I think I'll try a 10 mA idle current for less than 1/2 Watt dissipation per top MOSFET and run w/o heatsinks. I have everything but the plate to mount to. Looks like a nice simple job at this time now. I can't wait to get it underway so I can put it In-System and see how it compares to the All-Valve version. See anything I missed? Diodes? Anybody have some nice diodes? 200 PIV/2A Schottkey? mmmh hhhh, no heaters! regards, Douglas

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Subject: Re: Dear Mr. Kut...  
Posted by [Rek\\_O\\_Kut](#) on Mon, 08 Aug 2005 19:16:03 GMT  
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>The same circuit can be done with valves or SS.That's true of most fundamental concepts, but entirely irrelevant. Solid-state designs are inappropriate to this forum.

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Subject: Can you explain...

Posted by [Damir](#) on Mon, 08 Aug 2005 20:14:41 GMT

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...what % of some design/amp can be SS, if any? I must confess that I used SS diodes sometimes, even IC voltage regulators, some transistor here and there (CCS)... But, the worst sin I've ever done was the guitar amp, entirely SS. Preamp 741 op-amps, then 5-band graphic EQ with about 7 other evil op-amps, and output stage with STK025 IC. Even PS for the preamp & EQ was transistors regulated, +/- 10V, BC141/BC161...Then 10-band VU-meter with LEDs, I don't remember what IC...Sorry, I was young - it happened almost 25 years ago...Anyway, I'm glad that I had a chance to confess it here, bye...

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Subject: Re: Dear Mr. Kut...

Posted by [Thrint](#) on Mon, 08 Aug 2005 21:28:00 GMT

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>>>That's true of most fundamental concepts, but entirely irrelevant. Solid-state designs are inappropriate to this forum.Well, you're entirely entitled to your opinion, no matter hwo wrong it appears to me.So where do you draw the line for being Tube PC( assuming that the term is even valid ).regards,Douglas

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Subject: It's not a tube design if it doesn't have any tubes

Posted by [Rek\\_O\\_Kut](#) on Tue, 09 Aug 2005 02:36:24 GMT

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Which is again why your design info belongs elsewhere.

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Subject: mandatory change

Posted by [Thrint](#) on Tue, 09 Aug 2005 09:34:01 GMT

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\*NOT\*....but a +/- 40 volt power suply can be done with a vacuum rectifier diode. A pair of 6AX6 will do nicely. There's another from the Hy-G-300 Red Bank series in 9-pin for building a full wave bridge, the 6754.regards,Douglas

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Subject: Sorry I was young  
Posted by [Old Brown Eyes](#) on Wed, 17 Aug 2005 21:14:53 GMT  
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that is not a valid excuse....LOL. You and Doug spreading vile solid state designs...OMG...the horror of it:)...still laughing my ass off. Glad I stopped by to witness it.Now on to a more friendly and helpful note...maybe I could suggest a preamp idea that is somewhere inbetween? A fet driving a tridoe in grounded grid with a mosfet follower. It is suitably evil in that it even has NFB, 7812, and lm317. But it actually sounds good and has an output Z of 300 ohms and will drive most anything with ease. It isn't my design and I am not at liberty to divulge all the info but a couple of bright guys like you won't have any problem figureing it out.Maybe that other guy is so cranky because his turntable is eating up his precious vinyl? Go get a thorens man...jeez even a dual.You know who

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Subject: Re: Sorry I was drunk?  
Posted by [Damir](#) on Thu, 18 Aug 2005 11:27:18 GMT  
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What turntable, CD is The Law, man... When you think about it, isn`t it funny to build some gear with 50 years old parts?I`m not that "hot" to build anything at the moment, but Doug promised some SS design(s), stay tuned... Who knows who

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Subject: Re: It's not a tube design if it doesn't have any tubes  
Posted by [Forty2wo](#) on Mon, 22 Aug 2005 02:42:50 GMT  
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All of you put your hand out now!Smack, smack...Sister Alice Cathode

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