Subject: In the proper Tube tradition...
Posted by PakProtector on Sun, 15 Jan 2006 01:55:34 GMT
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Of having more support power in form offilament and plate dissipation, I have another addition:Build a gain/PI stage capable oh higher output power than the finals.I had a few folks over for some listening and one brought an EL84 amp. Nice little amp it was. Soooo, a possible for the PP2A3 amp, a differential front end built with resistive loaded EL-84/6Pi14/7189. The pentode front end has potential to deliver more power than the finals it's driving...heh-heh-heh! So it must be a good idea.The Russian SV83 or the 6Pi15 are other alternatives, pref. given to the SV83 if it is still available. We'll be running a lower g2 voltage than is typical of AB1 U-L designs so it ought to last a long time. Make g2 about 1/3-1/4 the anode voltage and adjust to taste. The g2 will determine what part of the plate curves the straight load line will go. As always for pentodes, this is quite important for best sonics and distortion spectra.cheers,Douglas

Subject: Re: In the proper Tube tradition...
Posted by Damir on Mon, 16 Jan 2006 18:27:25 GMT
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Huh, maybe to "spare" that for PP 845/GM70 or similar? Just looking... "bad" NOS tubes (nobody wants them :-)), like EF184, D3a, E180F, E81L, EL802, EL803S, etc. can be found very cheap...still...

Subject: Re: In the proper Tube tradition...
Posted by PakProtector on Mon, 16 Jan 2006 19:06:16 GMT
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Hey-Hey!!!,For the E-Linear front end, I am exploring the effect of mu g1-g2. Right now Merlin has a faux pentode(the cascode) built with a mu of 39. I think a pair of 6AQ5 with 25% of this mu might be an interesting experiment.The NFB/PFB split between the two phases is determined by this mu. I am going to determine if it should be minimum (as in the 6AV5 with its 2A3-ish mu of 3.9) or maximum like the EF184's 60 mu.I could build a 2A3 pentode, or try 12B4's for mu of 6.5, or go to the small power pentodes for mu of ~10. I also wonder if it makes a difference to go use for the E-Linear eciruit, or to use with a more traditional circuit as in Galahad.I put a proper power TX in my stereo Merlin, and now it can run 100 mA per final and still have a lot of headroom.cheers,Douglas

Subject: Re: In the proper Tube tradition...
Posted by Damir on Mon, 16 Jan 2006 20:01:08 GMT
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"...I am exploring the effect of mu g1-g2..."Now, that`s interesting! Keep us posted about your findings.BTW - can you explain your reasons for using pentodes diff. driver in "classic" PP 2A3 output configuration? I mean, most folks would triode-connected those pentodes, no Ug2/Ig2 supply, and, say - D3a in triode: μ~80, rp~2k.

Subject: back to discussing religion, yes?
Posted by PakProtector on Mon, 16 Jan 2006 20:48:34 GMT
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hey-Hey!!!,I think the pentode can do a better job in the Galahad amp. This keeps the stage count low, and input impedance high(even at HF, unlike Miller-assisted triodes).I discussed a g2 driven triode amp a while ago. Connect g1 to the cathode, and drive g2. Seems that high gm, low mu g1-g2 valves are the best for this. Things like horizontal output valves. There are some *REALLY* beefy examples of this family. The result is high delta-plate current for minimum input signal. Since making the discovery that the E-Linear 2-stage likes this sort of thing, I feel the need to explore further.In the pentode circuit, the common cathode is ref'd to the common g2 node. With an increasing g1 signal, the cathode node moves towards g2 by half the signal magnitude. The other phase, with a grounded grid sees its g2-cathode voltage try to increase while it is trying to decrease its plate current. The capacitor here keeps the two valves behaving like pentodes by keeping this cathode-g2 constant. Picking a valve that is most sensitive to this action might be just the thing...and maybe it won't. I wonder how a twin anode pentode like the 829 would work here.....cheers,Douglas