Subject: Open-Loop and Tone
Posted by PakProtector on Sun, 05 Feb 2006 19:47:18 GMT
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Hey-Hey!!!.Since the Hi-Fi school of valve design likes zero and short-path NFB, how do the musician's uses like it?For a small practice amp, with its speaker used above its low frequency impedance loopiness a high output Z amp ought to work well. One of the first amps I built was an open loop PP amp running KT90's. Down to the upper bass that amp was really nice. Below that, it behaved just like any other low damping factor amp I've ever heard.So, the goal of mine is to build a small amp with minimum fiddling. I have EV Wolverine 8's for the box and want to feed them about a Watt. I would prefer to use pentodes for the gain stages. Can't quite make up my mind on the final. Or how many stages...even or odd number for that matter.cheers,Douglas

Subject: Re: Open-Loop and Tone
Posted by Damir on Sun, 05 Feb 2006 22:03:40 GMT
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Huh, one of the my "must build" projects is a small quality practice guitar amp, probably 8" combo. Front end - ECC35/6SL7 or noval 5751, maybe 12AY7 or even "maybier" 12AX7, two stages with tone controle(s) in between. I`ll certainly try EF86, and some other pentodes I have, say EF184 and E180F. EF86 is suprisingly good sounding in "Matchless" DC30 amp I`m familiar with. This, pentode ch is maybe better sounding then 12AX7 channel.Output tube - two "standard" candidates, EL84 and 6V6GT - maybe to use them both, haha, (cathode switch - 6V6, EL84 and BOTH position), if possible...IME - EL84 overdriven sounds softer and warmer ("VOX" sound), and 6V6 a little cleaner and more dynamic ("Fender" sound), but it`s a subjective experience:-). I have one 2k5:4 Ohms SE OPT, it can be 5k:8 Ohms without problems, with few other primary taps - I`ll try a SE UL, not a "traditional", pentode ("Champ") style... Triode+triode (k2) distortion for the guitar isn`t high on my list, some odd harmonics "roughiness" is essential here, IMO.Power supply - EZ80/81, maybe "traditional" 5Y3 or totally "odd" solution from little AZ... stash I have. CLC + LC, with good (probably MKP) capacitors...B+ about 270-300V.Tweaking with feedback loop in some "Fender" amp gives me the impression that the "level" of NFB is well thought out here, for the "semi-clean" sound they want. When I decreased NFB, sound improves in "openess" and harmonic structure, more "alive" sound, and better, smoother overdrive. But, it can be less controlled, more "boomy" on the LF and amp can be too sensitive. With small speakers/boxes low DF "boomy" sound probably isn`t a problem...Huh, just a few subjective points... Hey, possible interesting new "Group Build" project?

Subject: Re: Open-Loop and Tone
Posted by PakProtector on Sun, 05 Feb 2006 22:34:12 GMT
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Hey-Hey!!!,I am thinking that a pentode with the load line chosen to drive below the g1=0 knee would be cool. Either this or go for a load line dominated by 2nd-HD which would drive through g1=0 to the right of the knee.Perhaps a 10% E-Linear pentode driver with a pentode ahead of that stage. EF184 in two stages perhaps? Tone control between the two stages, and a little bit of E-Linear NFB around the last stage? I thought the 12AX7 in two stages before a 6V6 was the Champ circuit.With a pentode final, there can be a whole lot more resistance to an imperfectly filtered B+. I am thinking 6AX5 feeding an LCLC PS with 10 uF/600B Oilers and lots of inductance. 10Hy-10uF-20Hy-10uF perhaps? Come to think if it, I have some E55L/8233 pentodes that would probably sing with ~150V and 1k5 load. I was just informed that Heyboer has some sweet SE output Iron. That would be just the ticket.cheers,Douglas

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Subject: Re: Open-Loop and Tone
Posted by Damir on Mon, 06 Feb 2006 12:14:42 GMT
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Yes, we don`t need another "Champ" copy. But "new" design needs some experimentations...for example, I`m not sure about microphonic properties of those high-gm frame grid pentodes.Hey, what you think about complete combo-amp project with box...AES has some nice "vintage" tweed tolex and grill clothes, plus some "cool" details - handles, corners...But, probably we must first finish those Merlin/PP 2A3/SE 300B projects...

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Subject: Re: Open-Loop and Tone
Posted by PakProtector on Tue, 07 Feb 2006 01:22:15 GMT
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mmmmhhh...But, probably we must first finish those Merlin/PP 2A3/SE 300B projects... yes, I think that would be best. Let's see what is in my future. My free time may evaporate like a Saturday morning dream. While I would like to finish my wife's 2A3 project with her, doing it in parallel with the 4E27 would be sweet.now I have two very similar power transformers. One 580-0-580 at 420 mA, the other 575-0-575 at 500 mA. Open circuit is less than 5V apart. One is a CG-301, the other an S-44. Must fine a mate for one of them...and I'll be off to the races with the cloned 10k a-a Peerless S265Q outputs. 5k is such a sweet loadline for that valve done 20-30% U-L.500V/110 mA idle for each of those Tantalum-anode TX finals ought to be delicious looking. Hot thoriated tungsten, and the anode itself glowing softly red-orange....sacri-licious.I have the frame grid pentodes running as the active loads in my linestage. They're in a fairly sensitive spot, and there is no microphonics from them. From the old pair of 12B4's a bit, but none from the valves used in the load/CCS circuit.cheers,Douglas

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