Subject: RIAA preamp?
Posted by Damir on Thu, 03 Feb 2005 17:39:57 GMT
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Hey, just a thought - oversized PS with free 2x300V winding, big chasis - why not put RIAA preamp inside, selectable to the input (100k pot) of the line preamp?I tinkered for a few hours about this idea today - I tried to be as simple as possible ("all in one go" EQ, just one double triode), and without "exotic", hard to find values for the RIAA EQ - R1, R2, C1, C2. The little "trick" is to find the C1 cap with little lower value then standard 10nF, about 9,76 nF (not a big problem actually, most of the standard 10 & 20 % caps I tried are little lower in value). Then, with our RIAA equations: R1C1=2187uS, R1C2=750uS, R2C1=318uS, C1/C2=2,916 we can find:R1=224 kOhms - our Rout from the first stage is about 3k, and we can use standard E96 value, 221k/1% (even E24 value 220k with small selection)R2=32,58 kOhms - little tricky, we can select between some 33k resistors, or use some cobination, or just use E96 value 32,4kC2=3,347 nF - "input" capacitance of the second stage is about 47pF, and just use standard 3,3nF cap of your choice (2,5% tol. if possible)If we want to use this preamp to drive more then few cm of cable, then we can use active DN2540 load for R7=15k, and use low imp. out. Theoretical amplification is about 80 times/1k, more then enough for "normal" MM cartridges + our line stage.Well, this is just some thoughts/computing/simulations (almost perfect, of course:-)). Is not a problem to build it, problem is that I don`t have the quality measuring devices to actually try RIAA accuracy:-(. Maybe...hm...Doug? And, BTW - some other tubes besides E188/7308 can be implemented, probably E180CC, maybe 6N1P or so... Both triodes work with rel. high current, Ia1=10mA, Ia2=9,5mA.Thoughts?