Subject: Re: RIAA preamp project
Posted by FL152 on Sun, 17 Jul 2011 12:32:09 GMT
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Morgan Jones: "It is difficult to design a pre-amplifier of acceptable noise and overload capability using this network („all in one go" equalization), so this topology can usually be excluded."
Because of this, he used „split EQ" technique, and 3-4 stages preamps.
IMO/IME, it`s not that hard to build a quality 2-stage preamp with passive EQ in between, if we respect some basic things. One of the basics is that we must include output resistance of the 1st stage, as well as input capacitance of both stages into consideration. Ideally, output resistance of the 1st stage „feeding" RIAA EQ must have a very small impedance, at least this impedance must be a small part of the series RIAA resistor. In this case, variations between tubes and change in S/rp during work have a minimal impact on the RIAA accuracy, and „sound" of our preamp. It`s a designer`s „duty" to find workable combinations of tubes/topologies and RIAA RC values...and to check that in practice.
Similarly, input capacitance of the 2nd stage (Miller!) is a part of the parallel capacitor in RIAA network.
Unfortunately, usually we can`t expect those RC values to „fit" into standard values available, and series / parallel combinations of resistors and capacitors are often a necessity...plus measuring its real values with good instruments.