
RIAA EQUALIZATION IN PRE-AMPLIFIERS

Having just read Graham Nalty's and D. Self's arguments on disc RIAA equalization in your March issue, I would like to add a few words.

While I was living in Japan I designed an expensive pre-amplifier for a well known company which has earned good reviews everywhere. Anyway, the RIAA circuit was conventional in that the time constants were in the feedback loop. However, the problem is that at high frequencies the amplifier ultimately becomes a unity gain circuit above about 60kHz so compensation becomes a real problem; therefore in its open loop form the amplifier starts to roll off at a low of 30Hz and t.i.m. never is perfect, although in my case it was lower than that of any of its competitors.

I have for myself designed a totally passive RIAA amplifier with accurate equalization from below 10Hz up to beyond 200kHz. I had succeeded in getting as good an input over load value from 20Hz to 20kHz to compare with feedback methods.

As to listening and also square wave tests, the purely passive circuit always performed better (I always use polystyrene and polycarbonate capacitors as they are more musical!). This went through many hours of listening, with many types of cartridges, power amplifiers and loudspeakers.

I sacrifice 3dB of signal-to-noise since impedances are not perfectly optimum and distortion at 2dB below clip is only 0.03% over 20-20kHz.

But this is the way thoughts are going in Japan.

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