CH/DOC/92/04

Comment

Matchstick Calibrations

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Distribution: WNC,NMC,PVD,BRF,GJG,RAH,JSL,WDMR,GT,DLW

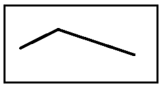
Matchsticks and Gain Matching

I am concerned that we have slipped into the mistake of assuming that all the test input capacitors are matched, and hence that matchstick runs can be used on their own for gain matching. In fact, to do proper gain matching you need to know the relative test input capacitance values. When these pre-amps were first introduced the test input capacitances were measured at the end of runs, but more recently this has not been happening. This is something that need only be done once and the two values for top and bottom could be recorded with the serial number of the pre-amp. All that is needed is the capacitance relative to a fixed test capacitor of which we have several from pre-charissa days. We need someone to undertake this task. People must note the serial number and up/down for each preamp after each run.

W.D.M. Rae
2/6/92

Peter Simmons adds a comment about the 7α data:

After correcting the gains at each end of each strip using the data from the matchsticks, it was found that some of the gold elastic peaks were still like:



when plotting E vertically against P horizontally. This was caused by gain mismatch between the ends of the strip. To correct this it was necessary to multiply by a linear factor in P. This factor was introduced by spline fitting the elastic gold peaks. Normally this fit would only include higher order correction terms in P, but for badly gain matched strips, it also included a linear P term. □