
Subject: Pre Compensation Load on X-OVERS and L-Pads

Posted by dB on Tue, 03 Jan 2006 20:28:35 GMT

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Hi to everybody on this great Forum (website) and to Wayne Parham in particular, from Portugal. After reading your great paper on Speaker Motors and passive crossover filters, from http://www.pispeakers.com/Speaker_Crossover.doc, I have a few questions to pose. But most important is about the Pre Compensation Load on X-OVERS and L-Pads you use.

1. What is a pre-compensation load? Is it the same as the R2 on a L-Pad (R1/R2)?
2. Is it possible to have a pre-compensation without the main R1 attenuation? Or is it just a reactance adjustment for the motor? (in some PA speakers I have no R1 and a R2=16.5 Ohms in shunt with the motor / X-over C=3.3uF series and L=0.72mH shunt / What x-over freq. is this and how to find if HF/Motor is of 8 Ohm impedance?)
3. Are the designs you show for L-Pads correct, since they do not show the same connections as for other (standard) L-Pads? As an example from pag.60 a 12dB attenuation R1=25, R2=16, C1=0.47 and from pag.63 a 14dB attenuation R1=30, R2=14, C1=0.33. I am used to see R2 in shunt with the Motor and "after" R1. As an example from another site: <http://www.lalena.com/audio/calculator/lpad/> For an LPad (Driver Attenuation Circuit) with Att=-12 db and Z=8 Ohms => Resistors R1 = 5.99 Ohms R2 = 2.68 Ohms Or for an LPad with Att=-14 db and Z=8 Ohms => Resistors R1 = 6.4 Ohms R2 = 1.99 Ohms How can your design deliver 10.8 Ohm in the HF/Motor side on the first case and 10.2 Ohms on the HF/Motor side of the X-over for the second case? Is this right? Are the BIG resistor values you use better -- as in table of page 23 -- than say the small values for 'other' L-Pads as in Lalena.com. What is the difference, are they of the same effect after all? Congratulations and Happy New Year. da Bastos
