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Subject: Question re: Values for R-L-C Mechanical Reactance

Posted by [GarMan](#) on Fri, 05 Dec 2003 16:12:02 GMT

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Hi Wayne, I think I understand how to calculate values of L and C to simulate mechanical reactance in SPICE.  $R \text{ of } L \text{ and } C = Z_{\max}/Q_{ms} \text{ at } F(\text{res})$  However, looking at your examples of woofer models in the crossover document on your site, it seems to assume that  $Z_{\max} \sim 10 \times Q_{ms}$  for all drivers. This would be correct for the Alpha8, but does not match the specs available for the other drivers. Can you please clarify? Also, is the R value in the mech reactance model set at  $Z_{\max}$ ? thanks, gar.

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Subject: Answer re: Values for R-L-C Mechanical Reactance

Posted by [Wayne Parham](#) on Fri, 05 Dec 2003 21:46:23 GMT

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You're right about the mechanical resonance values in the Spice files in my distribution file. They are usually close, but some aren't exact. One of these times I may go back and enter exact values, but it really isn't that important because they aren't relevant to analyze behavior near the crossover frequency. They're tuned several octaves below crossover. Most times, the mechanical resonance is commented out because it isn't needed for the crossover calculation.