Subject: Cancellation in car trunk
Posted by Adrian Mack on Mon, 22 Nov 2004 11:44:45 GMT
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General thinking would say that you cant get cancellation at subbass frequencies in the trunk of a car because reflections or multiple subs cant really sum to 180 degrees apart (or between 135deg and 225deg to be destructive). However some positions do result in what sounds like cancellation, such as having theh subbox face right up towards the front wall of the trunk with the drivers firing into the wall. However it doesnt seem that phase cancellation could be the source for this issue - anyone know what could cause this in the trunk?

Subject: Re: Cancellation in car trunk
Posted by Wayne Parham on Mon, 22 Nov 2004 12:56:14 GMT
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Hi Adrian,If you're using a pair of subs, you might get an oscilloscope and see if the signals sent to the two are phased. I used to enjoy using the left and right channels to generate Lissajou patterns and I was surprised how many recordings had bass with content phased more than 90o between channels. If your signals are already phased 135o then the distances to create a 180o shift are smaller. And in a small space, two sound sources would be tightly coupled and highly combinative.Wayne

Subject: Re: Cancellation in car trunk
Posted by Adrian Mack on Mon, 22 Nov 2004 13:41:15 GMT
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Hi WayneThat makes sense, good point. Crossover filters etc also add additional phase shift, so I'd guess these would also mean distances to create destructive phase shifts are smaller. Adrian

Subject: Re: Cancellation in car trunk
Posted by Wayne Parham on Mon, 22 Nov 2004 14:14:14 GMT
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Yeah, check all that stuff out. Make some measurements and move things around to see if you can isolate the symptoms to a particular situation. Might model the system with the trunk as a lossy sealed chamber and find something there too. Let us know what you find; Maybe post in the CarAudio forum too for future reference. Might help someone with a similar situation.

Subject: Found this page interesting
Posted by clbeanz on Tue, 23 Nov 2004 19:05:09 GMT
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Placement certainly changes things in a box in a box.
AimingTrunkSubsMeasurements