Subject: Multiple point sources and destructive interference
Posted by Wayne Parham on Wed, 27 Feb 2002 17:31:29 GMT
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It looks like there is destructive interference above 500Hz. This is to be expected from dual woofers operating together in the midrange band. They're really designed to be used as

response appears. It also presents itself at multiples of this frequency. What is happening is dual slit diffraction, and interference patterns form in the listening area. Diffraction effects are present when there is more than one point source separated by distances of this scale. Some places in the room have deep notches in output at certain frequencies.There are several ways to deal with this issue:1. Reduce the number of point sources2. Reduce distance between point sources3. Reduce maximum frequency emitted by point sources4. Reduce overlapping frequency bands of point sources5. Reduce overlapping coverage of point sources using directional controlOK. But that is somewhat academic. So what to do about it?If you want to use dual woofers as mains rather than subs, I would suggest running them as a 2.5-way speaker, basically crossing over one woofer much deeper so it doesn't share the midrange band with the second woofer. Both woofers work together in the deepest bass frequencies but only one covers the midrange band. The natural orientation is to run them vertically, with a large coil on the lower woofer to attenuate output above 100Hz. The upper woofer serves as a midwoofer, and is used through the