Subject: box dimensions
Posted by Observator on Mon, 24 Sep 2001 06:47:16 GMT
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Hi Wayne,I have a question about your BR box dimensions. The internalbox dimension seems to be important because they could affectthe sound by a parasite resonance.From bibliography -the most common approach is use sqrt(5) "golden" ratios: 1/1.618 : 1 : 1.618 . Another approach is to use - I think- 1^(x/3) ratios (where x=1,2, 4,5, 7,8,...) to add only "agreeable harmonic" resonance.Will another ratios will work fine too ?Thanks in advance,O'Tor

Subject: Re: box dimensions
Posted by Wayne Parham on Mon, 24 Sep 2001 08:24:24 GMT
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You're right to be concerned about standing waves inside the box. They can become a problem if a cabinet dimension becomes acoustically large. Fortunately, this doesn't usually happen at bass frequencies except for the largest boxes.Some cabinets use staggered dimensions and some use non-parallel walls. Both are good ideas, but neither removes standing waves, they just space them out so they are not harmonically related. I think the most important thing is to damp the standing wave modes if they fall in the passband of the loudspeaker.Standing waves usually tend to fall in the midrange, which is attenuated with acoustic insulation inside the box. It is important that the insulation be set away from the panels, so that waves are forced to pass through it. Otherwise, it is just part of the boundary. So use a thick sheet of insulation to line the walls, and if the cabinet is large, span the cross section in one or two places. An easy way to do this is to set a sheet of R13 on braces, spanning the cross section of the cabinet. Bass will pass right through, but midrange will be attenuated.