Subject: Re: 8 inch FRs: Give them a chance!
Posted by AstroSonic on Sun, 04 Jan 2004 22:50:27 GMT
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Adrian,The range from around 200 Hz to 1.5 kHz will come up close in level to the range above about 1.5 kHz when the driver is mounted in an enclosure or on a sufficiently large OB. That rising response up to 1-1.5 kHz is largely due to backwave cancellation. As another example, an old Philips brochure I have shows the 8-inch AD 9710 (a well known full range driver) with a 6db/oct slope in response up to 1 kHz (for a total rise of about 17 db from 100 Hz to 1 kHz), and the AD 7066, a once popular 7-inch woofer, with a 6 db/oct rising response up to about 1.5 kHz (for a total rise of about 22 db from 200 Hz to 1.5 kHz). Your drivers are typical in this respect. Even really good drivers behave this way.The response trends above 1-1.5 kHz is what you will have to deal with. Looks like the range from 1.5 kHz to about 6 kHz is fairly level. Then there is a broad rise centered on about 13 kHz. The latter could be partly resolved by some toe-in. I am unfamiliar with your frequency response measurement setup, so cannot say how much of the ragged response might be measurement artifacts. However, full range drivers often do measure pretty ragged due to their less than perfect implementation of progressive cone decoupling with rising frequency. None the less, they usually sound a lot better than their response curves suggest. If after breakin, they do sound ragged, try some damar. Damar tends to smooth out the sound without loosing extension or detail (unless you put on too much). Frame stiffness and reflections off the frame may also be issues.Mount the drivers in some boxes for breakin so that the backwave cancellation is prevented and they are listenable. No need to overdrive them during the breakin process. When not listening to them, place them face to face and wire out of phase to minimize their loudness. Listen for a while at the start and write down your impressions. Do periodic listening checks. You will know when they are broken in. IME, cone breakin proceeds fairly gradually for hours, then proceeds at a more rapid rate for a few to several hours, then becomes more gradual. Get them past the rapid-change phase before making any decisions. Maybe run another response measurement after they are past the rapid-change phase. The surround and spider will also breakin to some extent, lowering Fs, Qms and Qts. A change in the bass is often audible, the degree depending on the amount of change in Fs. Let us know how this turns out.Good luck,Bob