Subject: Any experience alpha 15 or another for open baffle ????
Posted by Norman Bates on Sun, 02 Nov 2003 03:46:12 GMT
View Forum Message <> Reply to Message

I modded a em alpha 15 on 40" by 48" (2' floor, 5' front wall, 3' side wall) and got pretty good flat bass to 60hz (pretty good for a dipole without eq).Magnetar thinks it sounded bad on dipole and sent it back. Thought of crossing it @ 300hz@24db (for under 300hz).I don't know transient response of dipole, but I would think it would be lousy due to high qts as not much qms to control driver (down low on this baffle)perhaps the ringing @2500 can be fixed also.....Any experience ??????????

Subject: American Graffiti
Posted by Wayne Parham on Sun, 02 Nov 2003 07:03:46 GMT
View Forum Message <> Reply to Message

The Alpha series are Eminence's lowest price offering. But they have some unusual benefits besides their low cost. You mentioned one of them here - Open baffles are a good option for Alpha 15's. When put in a cabinet, the volume must be huge. Another benefit is their nearly perfectly flat impedance curve. They generate practically no back-EMF, and so are well suited for use with tube amplifiers having low damping factors. But again, they really need "room to breathe," and require a cabinet larger than 10ft3.Personally, I think Alpha 15's have a nostalgic sound, probably due to their their relatively small magnet and their cone shape. Reminds me of what was in console stereos in the fifties. Also, they aren't electrically damped as much as most drivers, and so they are ideal for sound systems that can't provide much electrical damping - such as low power tube amps. They already have very high Qes, so low damping factors are pretty much "water under the bridge."All-in-all, they're an interesting part and very popular for Eminence. The most popular 15" woofer here is probably the Delta 15, but the nostalgic sound of the Alpha 15 makes them pretty popular too. Just be sure that you use a Zobel with them and don't run them "wide open." For subwoofer use, crossover below 200Hz; As a midwoofer, don't go above 1.6kHz. And when used as a midwoofer, the Zobel becomes extremely important. This is the

nice tube amp, will take you right back to the 1950's, just like "American Graffiti."

Subject: Eminence spls look 87db, but 103db peak @2500hz.....
Posted by Norman Bates on Sun, 02 Nov 2003 08:57:26 GMT
View Forum Message <> Reply to Message

Low qts, I'd expect this.....Do you leave that spike in there ????????

Subject: Don't push it that far
Posted by Wayne Parham on Sun, 02 Nov 2003 09:10:40 GMT
View Forum Message <> Reply to Message

I'd crossover at or below 1.6kHz. Be sure to use the Zobel too - That will help.

Subject: Re: Any experience alpha 15 or another for open baffle ????
Posted by Adam on Sun, 02 Nov 2003 17:43:16 GMT
View Forum Message <> Reply to Message

I've never used the Alpha 15" personally.Your concerns about driver QTS in dipole applications are understandable, but unnecessary. Anything with a qts below .8 (in some cases even 1) is considered qutie reasonable in closed box/dipole design. These drivers are not ideal for use in ported enclosures, but do fine in infinite baffle or dipole subwoofer configurations. After all is said and done, qts has little to do with the sound quality of a driver (to a certain extent).Having said htat, I don't feel the Alpha is a good option. It's unusual set of characteristics may give it a sweet sound for vocals and midrange, but it doesn't have the stuff to be a subwoofer. It also has very little xmax which is bad for a dipole setup, particularly if you are introducting low frequency EQ (which is generally what is done).Possibly check out thise driver.http://www.partsexpress.com/pe/showdetl.cfm?&User_ID=12695537&St=2137&St2=-81964001&St3=69117267&DS_ID=3&Product_ID=118185&DID=7Adam

Subject: Alpha 15's as subs for SET's
Posted by Wayne Parham on Mon, 03 Nov 2003 11:43:47 GMT
View Forum Message <> Reply to Message

I wouldn't recommend Alpha 15's for prosound applications, but I would suggest them for low-power SET amps. SET owners have an unusual situation where almost nothing is really appropriate below 40Hz. Most subwoofers need electrical damping, and the high output impedance of a low-power tube amp isn't well suited for them. There's just no current source/sink ability, so the motor isn't strong even if the woofer is designed like a tank.One thing you'll notice about the Alpha 15 is that all sealed and vented alignments for cabinets smaller a house generate some peaking. It is within +/-3dB when the cabinet is larger than 10ft3, and if it is tuned very low or sealed. I know the rule of thumb about high Q speakers in sealed cabinets, and 0.7 to 1.0 are a good range for them.But I'd rather run this one ported, and tuned very low, to like 15Hz - and let

me tell you why. Take a sealed 12ft3 box and one the same size, ported for tuning at 15Hz.

f3 of 40Hz, f10 of 30Hz, and output falls below that as you might expect. There is a 3dB peak between 50Hz and 100Hz, a direct result of the high Q of the driver.Now take the same size cabinet, and port tune it to 15Hz. You have almost the exact same curve down to 40Hz, so the ported cabinet hasn't increased the amount of peaking between 50Hz and 100Hz by an appreciable amount. But below 40Hz, you have a lot more energy because of the port. Both f3 and f10 are shifted lower in frequency, and you have usable output down nearly to 10Hz. At 15Hz, output is down 12dB. There is a sort of -10dB shelf in the 10Hz to 30Hz range which then rises to 40Hz f3.This is absolutely subterranean response for these low power tube guys. That's why I've suggested it as an inexpensive solution for SET owners. It is a viable subwoofer option for them, and one that is actually perfectly suited for low damping factor amps. With Q this high, the additional series resistance from the amplifier is only adding more of what is already largely there. And in a very large box tuned down deep, you can literally get bass response in the teens from a 2 watt SET amp. I don't know of many other solutions that will do this, and certainly none for such low cost.

Subject: Re: Alpha 15's as subs for SET's
Posted by Adam on Tue, 04 Nov 2003 20:20:46 GMT
View Forum Message <> Reply to Message

Subterranean response eh? I like that :PAdam
