
Subject: Altec 406 specs?

Posted by [AstroSonic](#) on Mon, 01 Mar 2004 18:03:51 GMT

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I am building 3-4 cf BR's with a high efficiency woofer crossed to a horn tweeter around 2 kHz, and am considering using the Altec 406, a 10-inch with a large alnico magnet and 28 Hz Fs, used by Altec in the late 60's and early 70's. Anybody have their T/S parameters or efficiency (or sensitivity)? Recommendations for other drivers also appreciated. I would prefer something with at least 95db/w/m and good performance up to 3 or 4 kHz. The Altec 414 is certainly a candidate, although it would likely require a larger cabinet than the 406.TIA,Bob

Subject: Re: Altec 406 specs?

Posted by [Wayne Parham](#) on Mon, 01 Mar 2004 23:33:00 GMT

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Funny you would ask that, and great timing. We've been discussing the Altec 406 a lot and Charlie just posted a link:Found Altec 406 Application Data

Subject: Re: Altec 406 specs?

Posted by [AstroSonic](#) on Tue, 02 Mar 2004 01:59:39 GMT

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Wayne,Thanks for the info and links. Enjoyed the Altec enclosure brochure. I used to have one on nice textured heavy white paper, last seen with rusty staples. It's a nice piece of history with some classic enclosure designs. It reminded me a lot of information in a book: loudspeaker enclosure Design by Alexis Badmeif (sp?)whom I think was with Altec. The design advice for BR's was to maximize the radiation resistance of the driver - enclosure combination by choosing the box volume resulting in a vent area that was the same as the drivers piston when tuned to the drivers Fs.I found some info on the Lansing Heritage site:A 1971 Home audio brochure describes the 406 as a 10-inch, cast frame, 3-inch VC, 50 w program, 9 lb 7 oz alnico magnet structure (same as the 414), 28 Hz Fs, 8 ohms and bandwidth of 25 - 4500 Hz. The same brochure shows the 406 was used in the Bolero, a 2 cf passive radiator system, and in the Madera, a 1.9 cf sealed box. These models were replaced by 1974, and the 406 was dropped/discontinued. It was produced for about 6 years. It was only used in the mid-priced home speakers (a lot were sold so many 406's are around). They were not a part of the classic Altec theater speaker product line and seem to be poorly known. The 406B was listed in the 1970 Allied catalog for \$56, the 414B for \$58, and the 416A for \$62.I am still screening candidate drivers , so I have none to measure for T/S or sensitivity. My post on the High Efficiency Speaker Asylum did net a reply stating that the sensitivity was about 93 db/w/m. Strangely, the post was there this morning but had vanished by mid afternoon when I checked again. If the sensitivity estimate (93db/w/m) is correct, the 406

is a little lower than I want to go. I may try the 414. Are any of the Eminence 10 or 12 inch drivers worth considering? I sure don't need multi-hundred watt power handling for use in my home with a 45 SET. Just need good efficiency, decent response to a few kHz, and favorable T/S parameters.Regards,Bob

Subject: Re: Altec 406 specs?

Posted by [Wayne Parham](#) on Tue, 02 Mar 2004 07:01:03 GMT

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Hmm. Using a 45 SET does put you in a position where your midwoofer specs are important. One of the most popular drivers I've found is the Delta 15, but it's a little bigger than you're wanting to go. The box must be very large too. The Alpha 10 is surprisingly good for the price, so you might look at them. The cost is so low you can buy two just to find out if you like 'em or not. If they don't satisfy, you're still only out the price of a tank of gas. And they go real deep and sound pretty good in the mids, so you should give 'em a shake.I'm fond of the 22xx series JBL's, but the under-two-watt situation and the certainty of iron that may not like Zmax fluxuations makes them iffy. Their impedance peaks at resonance aren't real high, but they aren't low either. Same with the newer Eminence Magnums, and with them, only the new Magnum 12 will get you up high enough to consider as a midwoofer. It's good stuff, but you need a little bit of oomph to drive them, and I'm not sure I'd pair them with a 45 amp. It would sure be nice to try these options though.

Subject: Re: Altec 406 alternatives

Posted by [AstroSonic](#) on Tue, 02 Mar 2004 20:33:12 GMT

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Wayne,The Eminence Alpha 10 sound like its worth a try, as you can hardly loose. How about the JBL 2218 and a powered sub. Does the 2218 have a smooth and high resolution midrange or is it more of a driver that is 'hardened for a 1 kw strike'?Bob

Subject: Re: Altec 406 alternatives

Posted by [Wayne Parham](#) on Tue, 02 Mar 2004 22:02:04 GMT

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Sorry, I'm not familiar with a 2218. Are you sure you don't mean 2118? The 2118 is sort of like the 2115, except that it is tuned more as a midrange than a full range speaker. Either one is very suitable for high-fidelity studio monitor applications, but not well suited for high-power, high-output use.

Subject: Re: Altec 406 alternatives

Posted by [AstroSonic](#) on Wed, 03 Mar 2004 03:38:26 GMT

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OOPS! I'm not familiar with the 2218 either. It was the 2118 as you surmised. Checked out the Eminence Alpha and Beta 10's. Both appear to have a sensitivity of 94-95 db/w/m below the raised HF area - a little low. The Altec 412 might be a candidate but I have been unable to locate the T/S parameters. The search continues.Thanks,Bob
