
Subject: Crossover parts upgrades

Posted by [Wayne Parham](#) on Thu, 17 Mar 2005 00:54:37 GMT

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I'm getting ready to do some experimentation with crossover components. What prompted it is that I've been buying parts for an amplifier, and found myself obsessing about component quality. Before I knew it, I had ordered every brand of boutique part available, so I could A/B them all. Now I have several hundred dollars worth of small and medium value capacitors. I started out buying polypropylene components, film/foil for the little ones and metalized film for the larger ones. That's a no-brainer for me. A long time ago, I switched to using those types because I could hear the difference. Take a 10uF polypropylene and a 10uF electrolytic, and you'll notice it right away. But frankly, I tried some boutique parts and couldn't hear the difference between them. Things have changed since then, some new companies have sprung up and others have gone away. Some have sprung up, gone away and come back again. So now I think it's time to

tried to make good designs that were both highly optimized and also highly modular. Those two approaches are sometimes at odds with each other, but not in this case. Most of my designs have certain similarities, and that has allowed me to optimize them while keeping many of the same components. Most of the crossovers use one or more of these components: Capacitors: Inductors: Resistors: 0.47uF 0.5mH 16 ohms 8uF 0.6mH 20 ohms 10uF 1.0mH 30 ohms 22uF 5.5mH The components used in the stock crossovers are pretty good. They have polypropylene capacitors, non-inductive resistors and air-core or low-hysteresis laminated core coils. But I'm going to try an assortment of some of the premium components, and if I find any that are truly spectacular, I will provide them as upgrade parts. The first batch is already on their way.

Subject: Re: Crossover parts upgrades

Posted by [GarMan](#) on Thu, 17 Mar 2005 13:45:23 GMT

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I'll be very interested in hearing your findings. In the past, I've automatically gone for Solen Fast Caps and Coils for crossovers. I'm sure higher grade premium parts would provide an improvement, but I've found that Solen parts gets you to a very good place for very little money.

Subject: Re: Crossover parts upgrades

Posted by [Wayne Parham](#) on Thu, 17 Mar 2005 14:58:35 GMT

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Yes, I have some Solens here. Pretty good bang for the buck. I also use Erse coils. But I'm going to try several others too.

Subject: Re: Crossover parts upgrades
Posted by [markn](#) on Thu, 17 Mar 2005 15:33:55 GMT
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Wayne, The Sonicaps (available from GR-Research) are really good sonically and pretty reasonably priced!mark

Subject: Re: Crossover parts upgrades
Posted by [Wayne Parham](#) on Thu, 17 Mar 2005 15:39:39 GMT
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Thanks, I'll look at them.

Subject: Re: Crossover parts upgrades
Posted by [spkrman57](#) on Sun, 20 Mar 2005 14:03:55 GMT
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Wayne, Have you tried "oil" caps for crossovers? Since I do a lot of 1st order crossovers. I did a experiment using a PP cap of 4 ufd and a oil in metal 4 ufd cap and had a paper cone tweeter as the test dummy. When I ran the PP cap the top end was okay, nothing special. I then swapped the "oil" cap in place of the PP cap. The entire top HF response opened up like no tomorrow. I remeasured the 2 caps and they were "dead on" with the same 4 ufd readings. The oil caps are pretty much "motor start caps", but they make a big difference. I have been collecting all the oil caps I can get my hands on. 1st off, they are not cheap (compared to PP), second is the scarcity of finding them. I have found them in old tube amps, heavy duty high power regulators (like in engineering workshops), and some old speaker systems. (don't tear apart a classic like the Klipsch Heresey's or Altec's just to get these). I found old Heathkit speaker system that was shot (a peek inside at the crossover and I saw the oil caps), so the seller thought he got one over on me. LOL Just my overactive imagination gone wild again. Ron

Subject: Re: Crossover parts upgrades
Posted by [GarlandGarland](#) on Sun, 20 Mar 2005 14:14:34 GMT
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Hi Guys, Happy Spring!!! FWIW, I've got some motor run oil caps in my Pi crossovers and think they sound great. I've gotten to where I prefer them in almost all locations in my Bottlehead tube electronics as coupling caps and power supply caps. -just a question for Ron: do you mean to say

motor run instead of motor start? I thought motor start caps aren't appropriate for such use. I may be wrong.Garland

Subject: Re: Crossover parts upgrades
Posted by [spkrman57](#) on Sun, 20 Mar 2005 14:53:17 GMT
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Garland, You got me there. I'm not sure if "start or run". I just know when I see those metal cans somewhere and start looking around, my GF starts rolling her eyes and talks about bring more junk home.Honestly, I don't know which is the proper term here. But they DO make a audible difference to me!Ron
