Subject: Re: Piezo info
Posted by Wayne Parham on Sun, 26 Dec 2004 03:39:49 GMT
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I've used many other circuits for the KSN1038 besides direct-connect but in this case, it's just perfect.I've used high-order and low-order crossovers. I've used series attenuators. I've used series attenuators with and without an attenuator. I've used them with shunt resistance to make them appear resistive and with series resistors to reduce the possibility of ultrasonic oscillation in amps that are so inclined. Some of my speaker designs required crossover components for

Speakers forum and the piezoelectric tweeter datasheet, so you can find other ways to implement the tweeter in those sources of information.Here's the straight scoop. There is no harm using any of these implementations for specific purpose. But there is also no harm removing all of the components and connecting directly. It should not be seen as a lesser implementation any more than seeing the use of a ten dollar tweeter is seen as a lesser implementation. It is a fine part for its cost, one of the best in the under-$20 class, if you asked me. Response of the KSN1038 is good and it is a very durable part.The thing is that the KSN1038 has a small peak aroud 5kHz. Not bad, and not as much of a peak as the response at 20kHz droops. So I don't consider it to be a deal breaker. But if you need crossover at 3.5kHz, you will have to live with this small peak. If you crossover above 5kHz, then you won't have it. But you will still have slightly falling response as frequency goes up, much like any other compression tweeter.When used with an Alpha 8 or an Alpha 10, the KSN1038 is best wired direct-connect. Any increase of the crossover point above the tweeter's natural slope will make a hole in response. Any series capacitance will reduce the tweeters sensitivity, and it is already below that of the Alpha midwoofer. Any series resistance will make the top octave response droop, and the tweeter already has falling response so that will tend to make it worse.In my opinion, there are good reasons to consider using this tweeter with no aditional passive components. It is just as valid a connection method as using it with crossover and/or impedance control components. It depends what you are trying to do. When a KSN1038 is used with an Alpha 8 or Alpha 10 to form a two-way loudspeaker, direct connection of the tweeter is the best implementation that I've found.