Subject: Re: Pi implementations of quartz piezoelectric tweeters
Posted by Paul C. on Thu, 17 May 2001 19:36:31 GMT
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First, I am a musician, and that leads to playing with MI and PA equipment. Many good quality, moderately priced speakers use these piezo tweeters. I have used both commercially built, and DIY speaker cabs with these CTS/Motorola piezos for many years. The KSN1005 and KSN1001 (same thing but with a different, offset flange for rear mounting) were the first of the piezo drivers that I saw when they were introduced years ago. These, and the KSN1038, all respond from 3.5Khz on up (I don't worry about range reproduced I can't hear!). You can look at the CTS site (link below). All the 3.5 Khz and 4 Khz tweeters use the same motor. (Motor--I like that term, it accurately describes what we are talking about.) There is a horn with a double driver, KSN1177a, molded into one double case, but inside it is the same.All of the 1.8 Khz horns use the same motor. I have the most experience with KSN1025a, and the KSN1141a high power version (but more recently the KSN1165a in my home stereo gear), mostly in musical instrument and PA gear.It is rare to find a MI or PA woofer that will not go up to 1800 hz, so these 1.8 khz piezos work very well.The KSN1188a uses a larger motor, and responds down to 800 hz. This is a screw in driver that requires a horn lens. I have just recently started using these. It was previously labeled as the KSN1086, and I have no ideal what changes were made. So far, these are very promising, I should have used them years ago! Several of these are what CTS calls their "Powerline" series. These have internal protection circuits that provide soft clipping. They can be used up to 400 wts. These include the 1188a, 1165a, 1141a, 1142 (screw in driver), and a few more... they have a 400 W rating.I no longer can find my old KSN numbers, sorry.There is one, KSN1176a... looks like a KSN1142/KSN1025. BUT, even though it has the larger motor case, it only responds down to 3500 hz. It does not sound that good, and opening it shows no protection. Even the 1025 has a resistor internally mounted.Oh, yes... the 1.8 khz motors do not require an external series resistor, as there is one internally mounted. There is a nice piezo application paper on the CTS site.

http://www.ctscorp.com/pzt/ffpzt-home.htm