Subject: Re: One of my favorite little two-way speakers
Posted by Wayne Parham on Fri, 21 Nov 2003 02:01:34 GMT
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I've used this particular model of tweeter since 1977 - literally tens of thousands of them - and I've incorporated them with every conceivable electrical network from none to third order to contoured response-shaping filters. I've also tried many of the other piezoelectric tweeter models in this family, and this one was the hand-down winner for me, although I've not seriously investigated the newer larger, more powerful units. As for the family of Motorola tweeters that were introduced in the 70's, the KSN 1038/1041/1056 is by far the best, in my opinion.Since the tweeter acts like a capacitor, inductance in the output stage of an amplifier can set up an oscillation. I've also had more than one experience where certain speaker motors generated back-EMF that chirped the tweeter. It is always a result of speakers with high mass and extremely low Qes - Woofers that require amplifier damping for "motor braking" control of the cone. If these are connected directly to the piezo, they'll make 'em chirp. So the bottom line is that this device presents a high impedance, capacitive load and if the output circuit requires a low impedance resistive and/or inductive load - as is expected of a motor circuit - then it may become sensitive to such a load. This isn't a problem in most cases, but it is something that an engineer would consider.As for the acoustics of the KSN 1038 device, I find it to be quite pleasant. The KSN 1005, as I mentioned before, is the one that sounds like shattered glass. This isn't a result of the capacitive nature of the device at all, otherwise they would all do it. That sound is due to the shape of the KSN 1005 horn - specific to that horn - which creates a nasty peak in the upper vocal range and overemphasizes the overtones. The KSN 1038 uses a different horn, and so does not share this characteristic.