Subject: Re: Thanks, you make a very strong agument for this driver!
Posted by Paul C. on Sun, 13 May 2001 06:58:54 GMT
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"If you wired a 20 ohm 10 wt resistor in series, wouldn't it attenuate the output of the driver?"The 1800 hz drivers (KSN1025a, KSN1165a, KSN,1141, KSN1142a)already have a 22 ohm resistor already built in, in series...I think that is the value, it has been a while since I tore into one. They need no outboard parts for protection. CTS advises adding a 20 ohm, 10 wt resistor in series with the larger KSN1188a (800 hz horn driver). The piezos have such a high impedance in their response range, 20 ohms is nothing. There is no noticable drop in output in audible range.But what happens is that way up high, 30khz and higher, the impedance drops very low... a piezo acts like a capacitor, not a resistor. A 20 ohm resistor in series gives the amp some load. If you have some stray signal, or occillation, with an amp that can respond up to 100 khz, as modern amps can, then you will have a problem.So, the resistor protects the piezo (and the amp, too) at those very high, inaudible frequencies.The only reason I ever wire a resistor across the terminals... I have used an 8 ohm 20 wt resistor across the terminals to make it act, to a crossover, as if it were an 8 ohm dynamic driver. Then you can put an appropriate cap in series with it, and cross it over at a higher frequency if desired. Or you can put an L-pad between the cap and the now "8 ohm driver".Try this experiment... hook some wires to your amp's output and connect them to the terminals of a piezo driver. No other parts. Put on some interstation FM hiss, white noise, whatever. Now, get your 8 ohm resistor, and touch it across the terminals (parallel)... hear a difference? OK, now wire a 20 ohm resistor in SERIES with the piezo driver, turn on some noise and listen. Use a piece of wire to short around the resistor. Hear a difference? You won't.I don't usually attenuate the piezos... I just chose a woofer that is in the 95-98db SPL range. Plenty of those available.