Subject: Re: Cone Stiffness!
Posted by Wayne Parham on Wed, 12 Jun 2002 04:19:23 GMT
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Regarding mass, the motor and diaphragm are a system that can be expressed in a power to weight ratio, just like any other accelerating system. So if the diaphragm is heavy but the motor is strong, it will act similarly to another motor having a lighter diaphragm but correspondingly less powerful motor. The difference is that the heavier diaphragm has lower resonant frequency.Regarding stiffness, there are two separate issues. One is the suspension, and a stiff suspension raises resonance and mechanically damps the motion. This has an influence on electro-mechanical parameters. The other issue is cone stiffness. This sets cone flex behavior. A stiff cone may remain pistonic up to a higher frequency, but when it begins to flex, the ripples across its surface may be heavily resonant. This kind of breakup causes severe response anomalies. The cone can be made with material that is less stiff, but more well damped internally. This kind of cone will become non-pistonic at a lower frequency but will behave better when it does.