Posted by Wayne Parham on Fri, 08 Jul 2005 19:05:21 GMT
View Forum Message <> Reply to Message

push-pull woofers is to reduce harmonic distortion by improving pneumatic symmetry. When a speaker is pushed hard, its drive force is increasingly non-linear. The causes are mostly due to heat and magnetic flux modulation. The force that moves the cone is not perfectly linear, and its back and forth motion is not perfectly symmetrical. This is because the magnetic field generated by the voice coil deforms the magnetic field of the fixed magnet. This causes eddy currents in the magnetic circuit, literally modulating the flux. Further, the magnetic circuit is made of several parts, the center pole, top plate and back plate, in addition to the magnet itself. These may saturate at different levels, which will also cause force asymmetry. The push-pull configuration corrects for this using two drivers connected as a complementary conjugate pair.