## Thoughts on M-field for sustainer drivers



1. Open-air driver cross spread out into space, decreasing as the inverse of the square root of the distance from the magnetic magnetic source, salmon



2. External shunts added. The shunts suck in the exterior field, warping the far field into the exterior shunt. The shunts are soft iron, and have a permeability of several thousand compared to free space, so the field prefers to be in the shunt by a factor of several thousand.



3. Top view of a driver coil with external magnetic shunt. The shunt gathers up spillover from the driver and helps cut down on the field that gets to other pickups which may be mounted parallel to the driver coil.

The outer shunt is a strip of iron or steel wound around a spacer form to be 5-10mm away from the driver coil.



4. Focused field plus shunt. Putting the magnet and center laminations into a "U" of soft iron or steel which encloses the driver coil focuses the magnetic field into the space above the opening. If the strings are close (second illustration) they grab onto most of the external field. Shunts further away clean up residual field. External shunts should be significantly lower than strings.