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Subject: Re: A speaker/earbud setup in a GPS  
Posted by [Wayne Parham](#) on Fri, 24 Feb 2012 00:06:41 GMT  
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Bruce is Bruce Herron at OddWatt Audio. I think you and he have exchanged a few posts on various threads around here.

The "stock" TD12S driver has a conductive Faraday ring, and the Apollo upgrade adds to that. These internal conductive rings stabilize flux and inductance, and they improve thermal dissipation.

Optimization of the three factors - inductance linearity / flux stabilization / thermal dissipation - is done by ring placement and size, and what is optimal for one factor is usually not optimal for another. So multiple rings can be used to optimize each separately. That's what the Apollo upgrade is - using multiple conductive devices to improve all factors, rather than just one.