

---

Subject: Re: 2023 4pi build

Posted by [Wayne Parham](#) on Mon, 27 Mar 2023 16:25:33 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

I suggest measurements to examine the circuit.

Look for two things:

1. Overall response curve
2. Low-frequency content presented to the tweeter

As an academic study, you can measure the inductance of two coils placed in various positions and you can measure the amount of mutual inductance from the coils and signal coupling as a transformer effect.

But if you just want to see how your crossover layout effects the performance of your loudspeaker, focus on the two things I described above. We just want to know the basic transfer functions of the filters, and the things we're most concerned with are making sure the tweeter doesn't get too much low-frequency energy and that the overall response curve is right.

I say this because I had similar worries when laying out my crossover board. I could put the coils at opposite ends of the board, but then the traces were longer and not as organized. Or I could layout the physical circuit similarly to the schematic, making a clean and organized board but putting the coils closer together.

So I used measurements to drive my decision, and I tried various combinations of positions and orientations that kept the transfer functions right.

---