Subject: abandon hope all ye who enter.....!
Posted by BillEpstein on Sat, 22 Dec 2001 10:50:40 GMT
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O.K., 2- 32 ohm 10 watt resistors joined in parallel form 1- 16 ohm 20 watt, errrr thingy. 2 thingy's joined in parallel make 40 watts power handling but only 8 ohms. So there must be a formula for joining 4 resistors into 2 parallel thingys that are then connected in series that sums the wattage but maintains the ohmage? i.e.,1- 32 ohm 10 watt parallel pairs + 1- 32 ohm 10 watt parallel pair connected to each other in series equals 1- 16 ohm 40 watt network?Can I infer that while parallel circuits halve the resistance and sum the wattage, series circuits maintain the resistance and also sum the wattage? That would make sense out of using 4 resistors of 32 ohms 10 watts each to achieve a circuit resistance of 16 ohms with 40 watts power handling. Am I getting warm?Now, highly verbal lowly math person that I am, let me try this parallel/series thing with the nicely visual drawing in front of me. I imagine schematics have been around a long time and I really should learn to read one before I die. After all, I managed to read and understand the discourse between Newton, Linus and Hook in the "Transactions of the Royal Society" in the original script where all the S's looked like F's! I feel like Linus, unable to understand that Newton has invented a new branch of physics to explain the refraction of the light into it's spectrum so I fall back on what I do know and posit a little guy, a "homonculous" that does the job.But I digress.It looks as though parallel in the schematic represented by R1 and C1 is joining their respective leads to each other with the bodies of both elements lying side-by-side. 2 resistors are lying on the sand at the beach with their feet and hands joined. Kinky, yes?That's what I did with my 1- 16 ohm resistor and 1- .47uF Cap. Conversely, then, connecting two elements in series would be like links in a chain, verdad? Now the beach blanket resistors are joined at the hands only with their feet stretched out in other directions, who knows where.I would imagine also that if the schematic shows R2 across the + and -leads of the tweeter output then the upper line coming from the tweeter must be the positive side of the circuit and the lower line the negative. Correct? Now I seem to remember something being written about the relationship between R1 and R2. One leg of the R1 is joined to a leg of R2. The other leg of R1 connects to the other leg of R2 through D1 (whatever that is) so are R1 and R2 connected in parallel?If so would'nt that make the circuit at C3 8 ohms?Another way of looking at R1 and R2 (this empirical stuff is great, you have no idea whether or not your right or wrong, but you can talk about it anyway) is that one lead of R1 is joined to one lead of R2 and the other lead of R2 continues down the negative side of the circuit to the woofer. Ignoring that the other R1 lead runs through D1, this looks like a series connection: the current flows through R1 and then R2.So which is right? Are R1 and R2 joined in series or in parallel? Or is there a third relationship?R3 and C5 are within the boundaries of the + - legs so they have to be in series even though one lead of C5 joins with R3 by going through D2. Does that mean that the positive and negative sides of the schematic keep series from becoming parallel? That the local junction of R1 and R2 being on the positive side and the other junction occuring on the negative means that the connection is in series? Is anybody suffering vertigo yet? Wayne, can I seriously propose that you build a great big crossover with great big parts on a 4X8 sheet of plywood, get in front of a camera and make a video explaining all this? I wonder what the break-even would be on the production costs? An initial run of 1,000 would probably sell out on the Asylum and at parts Express in a few weeks!The going rate for How-To videos I'm familiar with from Taunton Press is $29.95 to 39.95. Let's say a pro cameraman gets $1000 for a day's work; the lab get's another $1,000 and it costs $10 to package each video. Then you wholesale them with a 50% discount and net $11,500.I'd buy one. Make it a series and create an annuity for yourself.