
Subject: What about those flashing lights????
Posted by [Chris R.](#) on Wed, 14 Sep 2005 03:17:33 GMT
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I don't get it... I cranked up the 4-Pi's and the ports lit up. What's going on? OK, so I know, but I still have questions. These are huge, oversized 4 Pi's (~7cu ft) with Kappa 15's and PSD2002's on Selenium horns, 10db padX-overs. So, these are hooked up to a mixer, CD player, and a Berhinger EP2500. Without cranking all that loud, the lights on the X-overs are flashing. I mounted them on the back wall behind the ports, so it lights the ports up. It's kind-a cool. I'd expect to be able to get a LOT louder before the lights turned on. Any clues about what might be happening? I'm reasonably sure things are wired correctly. BTW, they sound really nice. These were made to be PA speakers so the finish is truck bed liner (Hurculiner), so the WAF is pretty low. My wife is a good sport, so as long as I make up some grills I get to leave them in the "music room" in the house. I'll post pictures when I can get some decent ones. Thx, Chris

Subject: Re: What about those flashing lights????
Posted by [Wayne Parham](#) on Wed, 14 Sep 2005 06:25:53 GMT
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That's cool, Chris. I always like seeing the insides light up too. You might check your tweeter cable assembly, if you think the light is glowing prematurely. If you have the wrong resistance values, that might be the cause. I guess it couldn't hurt to check the other components in the tweeter circuit too.
Then again, you might be just cranking it.

Subject: Re: What about those flashing lights????
Posted by [Chris R](#) on Wed, 14 Sep 2005 23:51:46 GMT
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I'll re-check a few things when I get home. For a 10dB, 8 ohm driver pad, what are the series and parallel resistor values supposed to be? I may have those wrong (too big). That wouldn't explain the blinky lights, but I'm a little worried I whacked the X-over freq. thx, Chris

Subject: Re: What about those flashing lights????
Posted by [Wayne Parham](#) on Thu, 15 Sep 2005 03:14:44 GMT
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Subject: Re: What about those flashing lights????
Posted by [Chris R](#) on Thu, 15 Sep 2005 04:14:49 GMT
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Humm.... I've got 16 in series, 8 in parallel. That sounds like extra padding. I can't see the cap value 'cause of the tape holding it to the brace. I checked the wiring and it measures as expected, so that doesn't seem to be it. I'll try the o'scope next to see what voltage the lights come on. Maybe I was just cranking'... As for the R values, don't these make the impedance around the X-over freq about 24 ohms and decreasing to 4 (in my case) as freq. rises? What I'm worried about is that the X-over is spec'ed at 1.6KHz at 8 ohms. Does the higher impedance at the lower end skew the actual x-over freq? Seems like it would. Overall sound is still impressive. Didn't try any other CD's, but hooked up the Korg organ. Sounds really nice. Thx, Chris

Subject: Re: What about those flashing lights????
Posted by [Wayne Parham](#) on Thu, 15 Sep 2005 09:36:48 GMT
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The increased resistance placed across the crossover does two things. It shifts the crossover frequency slightly, making the crossover asymmetrical. And it makes the circuit slightly underdamped at the crossover frequency, making a plateau for the first octave. If resistance is too high, the circuit will be underdamped too much. It might even be so much that resonance in components L1 and C2 might drop circuit impedance quite low around 2.3kHz. That would increase current flow in the tweeter circuit and may cause the protection bulb to light earlier than expected.

Subject: Re: What about those flashing lights????
Posted by [Chris R.](#) on Sat, 17 Sep 2005 01:24:21 GMT
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Well, I hung my scope on the outputs of the x-over and cranked it up again. Nothing too noteworthy, so I cranked the amp full on, plopped in Yes, Big Generator and let 'er rip. Once really going, I checked the lights and the clip indicators, and both seemed to come on at about the same level. On the scope, things were dancing 2-3 divisions at 20v per, so I guess they are wired properly. My conclusion is that the clip lights and the x-over lights should be kept dark. Also, that loud and clean don't seem nearly as loud as crappy and loud. Nice work, Wayne! Thanks for putting up with us. Chris
