Subject: Klipsch KP-3002 Crossover Mods
Posted by tejaus on Fri, 17 Aug 2012 20:38:43 GMT
View Forum Message <> Reply to Message

Hello,

I have an older pair of Klipsch Professional KP-3002 cabs that I'm trying to mod the crossovers. They're a two way with a 15" 4ohm woofer and Eminence PSD-2002 8ohm mounted on a 60 x 40 Tractix horn. I emailed Klipsch tech support and posted at their forum and haven't heard back.

The pair I have is a very early version with a hand wired crossover board crossed over at 800hz. That makes for a pretty harsh and loud horn to say the least. They both have new diaphragms installed.

Klipsch later revised the xover to around 1250hz by lowering the HF 1.5mH inductor like mine has to the 0.7mH as shown on the schematic. (I scribbled padding mods on it. I think the 15uF should be drawn in before the coil instead looking at in now)

Here are some pics of a PCB version I found that looks to have a 15uF paralleled across the existing LF cap.

I've already swapped out the 1.5mH for the 0.7mH and that made a big difference for the better but it's still hot on the high end.
According to the spec sheet for the woofer it's around 94.40 db efficient vs the PSD-2002 at 106.1db

Tue 12:22PM LEAP Loudspeaker Enclosure Analysis Program V 4.60 May 19,2009 |
| |
| ? TSL Operations Menu (Transducer Speaker Library) |
| |
| TSL Entry Num= 7 SPLo= 95.83 dB|SPLi= 94.51 dB|SPLi= 94.40 dB
| TSL File Name=KLIPSCH1 | no= 2.40 % | ni= 1.77 % |@ Eg= 2.00 V
| Name = K 1548/K 48 K 15" Woofer Rem= 0.00 O, Lem= 1.000 mH @ 1KHz
| Model= Speaker Woofer/ Midrange Rem= 0.00 O, Lem= 1.000 mH @ 20KHz
|
| Znom= 4.000 O Sd= 0.0890 M5 Fi= 34.968 Hz Hvc= 20.477 mM
| Revc= 4.100 O BL= 14.0656 TM Fo= 37.701 Hz Hag= 9.525 mM
| Krm= 0.000 mO Vas= 213.2900 Litr Qms= 4.535 Xmx= 5.476 mM

| Erm= 0.000 Mms= 93.9800 Gram Qts= 0.419 Cmo= 1.000
| Exm= 1.000 Mmd= 78.7131 Gram Pmx= 400.00 W Tvc= 0.625 C/W |
|
| User2=8/5/92 Klipsch

I came across this article written by the owner of PI Speakers and his crossover padding using a PSD-2002
https://docs.google.com/viewer?url=h..._Crossover.pdf

My question could I use the same component values for the tweeter compensation circuit even if the crossover for the HF is a little lower than Waynes schematic? And what would happen adding that extra 15uF cap in the LF side?