

ABSTRAK

Daniel Ekowibowo:

CUSTOM PASSIVE CROSSOVER FOR CAR AUDIO

Pada masa sekarang ini perkembangan *car audio* di Indonesia sudah banyak mengalami kemajuan. Para pecinta audio mobil berlomba-lomba membuat sistem audio mobilnya lebih dari standar yang ada pada mobil. Pada umumnya mereka melakukan modifikasi pada *speaker box* untuk *mid bass* dan *passive crossover* untuk *speaker two way system* maupun *three way system*.

Dalam tugas akhir ini dirancang sistem *custom passive crossover* pada jenis *speaker two way system* dengan 4 macam bentuk *passive crossover* yang berbeda yaitu *passive crossover* 6 db/oktaf, 12 db/oktaf, 18 db/oktaf, 24 db/oktaf dan dilakukan pembuatan *custom passive crossover* dengan *cutoff crossover point* di 4 kHz. Untuk membandingkan mutu suara dari *passive crossover* antara racikan pabrik dan *custom passive crossover* digunakan indra pendengaran manusia dan juga 2 macam alat ukur yaitu LMS (Loudspeaker Measuring System) dan RTA (Real Time Analyzer). Pada LMS akan didapatkan respon tegangan terhadap frekuensi dan untuk mendapat respons suara yang dihasilkan oleh speaker terhadap ruangan digunakan RTA.

Berdasarkan hasil pengujian dari 5 macam jenis *passive crossover* (termasuk racikan pabrik) dapat disimpulkan bahwa mutu suara yang terbaik adalah *passive crossover* 24 db/oktaf pada *cutoff crossover point* di 4 kHz.

Kata kunci :

speaker two way system, custom passive crossover, bass, vocal, natural, treble, cut off crossover point.

ABSTRACT

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CUSTOM PASSIVE CROSSOVER FOR CAR AUDIO

Nowadays the car audio developments in Indonesia have been many experiencing advances. The car audio lovers makes the audio system in their car more than standard angle blocks of the car. In general they do modification at speaker box for mid bass and passive crossover for speaker two way system and also three way system.

In this final task designed system custom passive crossover at type speaker two way system with 4 kinds of form of passive crossover which is different that is passive crossover 6 db/oktaf, 12 db/oktaf, 18 db/oktaf, 24 db/oktaf and making of custom passive crossover with cutoff crossover point in 4 kHz. To compare quality of noise from passive crossover between mill and custom passive crossover is applied by indra with man as well as 2 kinds of measuring instrument that is LMS (Loudspeaker Measuring System) and RTA (Real Time Analyzer). At LMS will be got strain response to frequency and get noise response yielded by speaker to room is applied [by] RTA.

Based on result of assaying from 5 kinds of passive type crossover (including mill) inferential that quality of best noise is passive crossover 24 db/oktaf at cutoff crossover point in 4 kHz.

Keyword:

speaker two way system, custom passive crossover, bass, vocal, natural, treble, cut off crossover point.

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