



SUBWOOFER AMPLIFIER CIRCUIT

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ABSTRACT

Music has been introduced to the world for a very long time. Year after year, the music getting integrated by filter and nowadays, peoples are looking for a music that has a great bass enhance. The bass in music is affected by the sound system that can produce and enhance the bass in music by filtering the low and high frequency of the sound. Many types of speakers can be used in a sound systems but in order to experienced loud sound with high bass, subwoofer is used in soeakers systems such as in a car and home theater. The design project is a circuit that can produce a high bass volume while driven by low power supply. Usually, the commercial subwoofer in the market is driven at high power with a range of 100W or more. The project aims to reduce the power with the quality of the bass remain. The quality of the bass can be measured by calculating the cutoff frequency at high and low frequency. Basically, a filter like low pass filter will produce an awesome bass and a high pass filter will produce a loud sound like treble sound. Therefore, to produce a loud and high bass sound, those two filter can be combines into one filter that producing a bandpass filter. The design subwoofer circuit have three phase. Firstly, a bandpass filter then go to the tone control and finally the main amplifier or power amplifier. The power amplifier circuit is designed to amplify the input power and give an output power that can drive a speaker with 4 Ohm load. In this project, the power amplifier designed is aimed to give an output power of 14W for 4 Ohm speaker. With a lower power, the tendency for the circuit to produce a high noise is low. That why chose to design a low power subwoofer. Aimed for this project to succeed and can be use for a home theater sytem, integrated into the home theater that are already in market. Peoples will enjoy when listen to music especially when the music is coming with a great bass.

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