

MARA UNIVERSITY OF TECHNOLOGY



KEU 380

TONE-CONTROLLER PRE-AMPLIFIER

A handwritten signature in black ink, appearing to read 'Muhamad Syakir Bin Yaacob', positioned above a dotted line.

MUHAMAD SYAKIR BIN YAACOB
99043069

A handwritten signature in black ink, appearing to read 'Mohd Reduwan Bin Mustafar', positioned above a dotted line.

MOHD REDUWAN BIN MUSTAFAR
99042995

ENCIK ALI BIN OTHMAN

ABSTRACT

Our project is called Tone-controller Pre-amplifier and it is conventional practice to interpose a versatile pre-amplifier hit between the power-amplifier and input signal. Users can set various kind of sound that they want for example; bass, treble, middle, volume and balance. In this project, we use an op-amp TL 072 Ic's. In general, pre-amplifier is a low-level signal amplifier, which precedes a large signal amplifier on power-amplifier output. That is the reason why we choose Tone-controller Pre-amplifier as our project.

ACKNOWLEDGEMENT

Bismillahirrahmanirrahim, in the name of Allah (S.W.T) the most gracious and merciful, finally, we can finish our project successfully. We also thank to Allah for giving us opportunity and strength to complete this project. Also thanks for our supervisor En. Ali Bin Othman who give a much supporting in this project. Not forgetting to all my friends who have shared their suggestion and opinion about this project and also help us to get a referenced. From this project we can exposed about the application of electronic circuit, function of component and how the operation of the circuit.

THANKS FOR ALL, WASSALAM...

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INTRODUCTION

This tone-controller pre-amplifier is very familiar for home appliances. We must have pre-amplifier to safe our electrical equipment may be damaged because of the high input from AC voltage. Originally, it was three circuits but we decided into one circuit or stage.

First, the tone-controller pre-amplifier is supply by AC 240V. We use the step down transformer to get a small voltage 12V for our project. It is includes two diodes, two regulators and other few components like capacitor and resistor. The diode will acts as a rectifier to convert the AC voltage to DC voltage. The job of the voltage regulator is to keep the output voltages constant.

Second, the output from stage 1 is the input for stage 2. It has two variable resistors that control the volume and balance, and then one op-amp acts as Schmitt trigger, and capacitor act as filter.

Lastly, the voltage from stage 2 go through three variable resistors that control the treble, bass and middle and then go to op-amp act as integrator that can integrate a given signal.