

## **ABSTRACT**

Growing technology, consumers increasingly look for convenience in terms of operation of a product or service. Operation of a household electrical devices are still using manual method is that we must press the on / off electrical devices to switch on or off. This of course would be troublesome when electrical devices are located place that is somewhat remote.

Final project entitled "Automation System for Household Electric Tool Based on Sound" This has created a tool that can be used to activate / deactivate an electric device automatically, with excerpts and clapping sound. So that the Active Band Pass Filters are used to pass the voice frequency and pat the strings. If there is other than the filter frequency specifications are used, it will not cause reactions in electrical devices. This filter will be strengthened by the voltage Operational Amplifier will be compared by the comparator. Then, the comparator output will be forwarded by the transistor as a switch. Then the microcontroller will detect the voltage of the output transistor so that it can run programs on the microcontroller. And will be forwarded to the microcontroller output relay will be turned on and off switches for lights. Overall results of this final project, to be able to receive input pat frequency sound pretty good from the closest distance (eg. 10cm) up to a distance of 150cm, but for the frequency has not been able to get output strings is expected.

Keywords: Active Band Pass Filters, Automatic, Microcontroller.