

## ABSTRACT

In the Eid season, everyone in Indonesia has always back to their hometown. Often times the house was left empty so it can trigger crime of theft. Thieves also have increasingly sophisticated, easy doors open at unloading or even just with a small screwdriver.

Because of that, authors would like to make a home security appliance or home with a detection key word to open the door so door in the house is no longer using physical locks but use sounds or words. With this tool , we no longer need to fear forgetting missed or lost keys because the key to unlock the door always we bring, the sounds or words.

By using the method of Linear Predictive code (LPC) and Hidden Markov model (HMM), and component-konponen microcontrollers that support to make this tool. Work of the tool is started by giving a human voice or a word then processed by electronic circuits after that will be processed by the algorithm Linear predictive code (LPC) and Hidden markov model (HMM) in the microcontroller. Then the shaking motor can mikrontroler key slot to right and left. Performed testing on the instrument to ensure all hardware and software components to work with perform testing on the instrument and there is some damage has been repaired. After that, system testing done and found that the tool is able to work well around 70% if using a normal man's voice. So the tool has worked, it can detect our voice with key word "right" and "left". .

Key words: Linear Predictive Code (LPC), Hidden Markov Models (HMM), microcontroller, words, sounds