

ABSTRACT

Car security become a part of very important aspect for owner of car. This aspect will become a big problem if the owner does not notice well. Problem of which often arise is loosing because of robbing. From this problem that often arise, taking out an afraid for the owner when have to leave her car for a long time in public place.

This problem that motivate writer to design an additional security system of car that make the owner's feel relax when must to leave her car. Car security system that will be designed was "*Electronic Key Base on Microcontroller as Additional Security in a Car*". In its scheme, car will only turn on when entered a correct password. The indicator that car have turned on could seen the LED is on. This LED connect with relay of which function as a switch. When the relay turn into position ON, the LED will turn ON too. This position of relay will turn into position on when the password entered was correct. LED will not turn into position on although the owner of car key try to starter the car, before the owner enter the correct password. Before password entered, this electronic key must be turned into position on using the owner car key. This car key useful as a electric switch that connect ration of accumulator with electronic key. When accumulator start to be rationed by car, electronic key will turn on and user must enter a correct password in order to the car can be turn into position on. Password that entered in the form of number – number of keypad 3x4 that attached to this circuit. Password that entered will appear in a LCD 2x16 characters with star (*) characters appearance. Default password is set before, for the next to save in mikrocontroller. This password can be change as user want without have to reload the program. This system also equipped with an alarm when password that entered was wrong as many as three times. The component that used for this alarm is buzzer.

In the process of hardware design, writer use a real accumulator and car key. Accumulator that used by writer have 32 ampere in current and 12 volt in voltage. For reducing the voltage and current from accumulator, writer use volt regulator. The output result from volt regulator are 5,02 volt for the voltage and 1,14 ampere for the current. This result is enough to use as input to Sismin.

Keyword : **Car security system, microcontroller, relay, LED, Keypad, password, LCD, Buzzer**