

Sistem Pengaman Kunci Kendaraan Bermotor Menggunakan Remote Control Berbasis Arduino Uno (*The Security System of Vehicle Lock by Using Remote Control Based Arduino Uno*)

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ABSTRACT

Generally, the security system used a hidden switch and alarm to turn on and turn off the electric vehicle and provide a sound alert through via of connecting cable. This system is less secure and also easily criminals to find the solution. This research aims to find out how to design and control system of motorcycle key control system controller by using infrared control remote as a controller based on Arduino Uno Atmega328 microcontroller as well as added a little vibration sensor attached to motorcycle vehicle as input, and Relay as output. This infrared remote control can replace the switch function commonly used to turn off and turn on the motorcycle without using a connecting cable. And this vibration sensor aims to detect vibrations in motorcycle. The planning of this tool was conducted by using a mini Mp3 remote that had a 36 KHz carrier signal up to 40 KHz. The tool test results showed that the remote control was functioning well with a distance of 1 to 10 meters, but it will reach 11 meters if the remote position is higher than 160 cm. And the results of testing tools with a vibration sensor 10kOhm resistor value (100%), indicating that the 0% to 9.65 Kohm resistor values, sensitivity of the sensor was not sensitive enough, 50% to the value of 4.17 Kohm resistor, sensor works with a stable, and if 100% with a resistor value of 0.00 Kohm, then the sensor is being very sensitive.

Keywords: *Arduino Uno, Infrared, Remote control, Sensor Vibration,*