ABSTRACT

Security is very important for everyone. Theft of two-wheelers are very high. Especially for vehicles parked in the open area. Sometimes a two-wheeled vehicle that has been using an alarm can be stolen because of us need to time to see the vehicle, so that thieves can easily take the vehicle.

The security system that is designed in this final project using ZigBee, Arduino Severino microcontroller , alarms, ignition system on the motor termination and horn as motorcycle alarm. This requires two pieces of ZigBee which will communicate with each other. Security indicator of device based on RSSI (Received Signal Strength Indicator) ZigBee and determination threshold -70 dBm. The determination of limit RSSI is based on experiments have been conducted previously and adjusted to the garage. Ignition system in the vehicle will die and then alarm that installed in the house and in the two-wheeled vehicles will ring if the detected signal strength less than -70 dBm.

The output of this system is a device that can detect a vehicle when conditions are safe or not safe with the response time of the system against displacement an average is 4.34 s. And function of relay as the output circuit produces 100% success. Thus the security system can be implemented on vehicles, especially motorcycles.

Keywords : zigbee, arduino severino microcontroller, alarm, RSSI (Received Signal Strength Indicator)