

ABSTRACT

The security system is a system that is used to provide a sense of freedom from danger, not to feel afraid, restless, or anxious about abandoned valuables.

In this study, the security system that will be used uses RFID, where the RFID tag has been registered on the system and also monitors the amount of current, voltage and power found on the motorbike. The application of a security system in this final project is to use a motorbike as an object for applying a security system. To start the system, the user must turn the motor contact to the on position to turn on the Microcontroller. Then after a few seconds, the user can tap the RFID Tag on the RFID, but if the RFID Tag is considered wrong 2 times, the motor ignition is not connected and if the RFID Tag is wrong 3 times, the system will sound a buzzer/alarm to notify if the motor is being stolen for 30 seconds. In the monitoring system, the data that has been obtained from Arduino will be serial communication with nodeMCU which will later be forwarded to the IoT (Internet of Things) platform, namely ThinkSpeak and Blynk.

In the tests that have been carried out the microcontroller has succeeded in receiving RFID data and can distinguish between true and false RFID tags. The average time to boot the system when the contacts are on is 6.89, and the average time to activate the ignition when the RFID is correct is 3.05 seconds. The accuracy value of correct and incorrect RFID Tag reading is 100%.

Key Word: RFID, Security System, RFID Tag, Microcontroller