

ABSTRACT

The motorcycle stealing was more intense in recent years. There are a lot of ways, ranging from using the letter T key, pried open a safety lock, even the most difficult way to lift the motorcycle into the car. Motorcycle owners also have to be more careful to park their motorcycle, because thieves usually pick a target motorcycle that parked in a deserted place. Utilization of conventional security systems, for example lock disc brakes, chained alloy wheels, perceived lack of guarantees for motorcycle security.

In this final project, has designed a security system that uses a minimum system AVR ATMEGA 162 which is connected to a mobile phone and a fingerprint scanner module. When there is a contact on motorcycle, the system will turn on and did the initialization process then waiting for fingerprint. If there is no verification of the correct fingerprint at fingerprint scanner, the system will call the motorcycle owner's cell phone through the mobile phone that has been connected to the system using AT Command, the motorcycle horn sound and the engine will off.

In the implementation, this motorcycle security system is assembled on Yamaha V-Ixion. The average time it takes to turn on a motorcycle is 15.396s. Fingerprint scanner can verify dry finger, moist finger, or there are streaks on finger. But not so accurate in wet finger condition with 30% rate of success.

Keywords: Microcontroller, AVR ATMega, motorcycles, mobile phones, fingerprint, AT Command