

DESIGN OF ENGINE START SYSTEM ON MOTORCYCLE BASED ON ARDUINO USING ANDROID SMARTPHONE

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ABSTRACT

The development of mobile phone technology from year to year continues to grow, many people use smartphones. On the other hand, the use of motorbikes will also increase due to the increasing number of motorbike users. Many people tend to be careless when putting away their motorbike keys because they are busy with the activities they are doing, so quite a few people find it difficult to find lost motorbike keys. So, this research offers a solution in the form of designing an engine starting system for a motorbike by utilizing components such as Arduino Uno, Android Smartphone, Bluetooth HC-05, 5 volt Relay, Buzzer, and Stepdown LM2596. The method used in system design is the prototype method. This prototype uses two types of design, which are hardware design and software design. Hardware design is done by assembling components with each other. Meanwhile, software design to create applications is done online using MIT App Inventor. The results obtained from this research are that the system design can function in accordance with the commands made in the form of control using buttons and voice commands to turn the ignition on or off, turn on the starter dynamo, turn on the warning sign and turn on the ignition, or turn off the engine cut off to cut off the ignition electrical current for motorbike safety. In system design there are still shortcomings that can be overcome with several developments such as adding GPS, adding handlebar lock security using a metal gear servo, adding a battery stabilizer and adding a seat lock using a central lock.

Keywords: *Android Smartphone, Motorcycle, Arduino, MIT App Inventor.*