ABSTRACT

Vehicle now has become a major requirement for people who live in the city. This makes the demand for vehicles increases, and also make the resulting volume of vehicles on the road is increasing. Directly proportional to the increase in volume, human error on the road are also increasing. One of human error is a collision when trying to change lanes because they do not get to see another vehicle through the rear view mirror, or while looking at the rear view mirror that makes the driver does not focused on the road. Another cause is due when the driver forgot to turn off the turn signal, thus making the other riders confusion. To minimize this, we need a system that can monitor the speed, rpm, and the turn signal with a view still on the road.

The design of head-up display on the motorcycle, was designed by integrating the microcontroller Arduino Uno and a motorcycle. Arduino serves as the brain of the system that regulate performance of the sensor and process inputs into outputs. The input of system is taken from the motorcycle (turn signal, rpm, and speed). Then the data processing produces output that is flame led to the modification of the helmet

Based on test results, input and output functions on the head-up display system is same as the design and the system can be used on a motorcycle. From the test results can be read input system input with average error rate is less than 20%. then, the output of the system can produce appropriate output LED that lights up according to the number of entries and the LED flame can be seen by the user head-up display helmet.

Key Word : microcontroller, arduino uno, head up display.