

ABSTRACT

Turn on the light of motorcycle in the day or the term is DRL (Daytime Running Lights) is a government regulation which has been established since 2009. The aim of this rule is to reduce the high number of accidents caused by motorcycles. The lamps on motorcycles in addition to work for lighting when driving in the dark, it can be used as a marker on the road that there is a motorcycle passing by. If viewed from the side of the car driver that rule is very useful, but if viewed from the side of the motorcycle driver say that turn on the lamps in the day is a waste of energy. To manage the condition we need a system that can control automatically the intensity of lamps that adjust the intensity of the environment and condition of the time, so as to reduce a waste of power.

In this study created a system that can control the intensity of light of motorcycle lamps, the control method using fuzzy logic. For the light of environment using the LDR (Light Dependent Resistor) and to declare the condition of the time using RTC (Real Time Clock). In the system uses a microcontroller Atmega32 for fuzzy logic programming and to program components required.

In this study show that the fuzzy control can adjust output the power of the lamp according to the environmental conditions and condition of time. So that the problems felt by driver of motorcycle can be solved with the control system to regulate and lower the power is not required in to reduce waste of energy. Controlling using fuzzy logic can reduce usage the power. Of the four experiments showed that the three of experiments can reduce biggest usage the power by having average difference of power using fuzzy with no fuzzy at 24,19 watt.

Key Words: DRL (Daytime Running Light), Microcontroller ATmega32, LDR (Light Dependent Resistor), RTC (Real Time Clock), Fuzzy Logic.