

ABSTRACT

The faster development times, the technology used by human beings will also experience a rapid growth. This can be seen from the increase in productivity, quality, and intensity of human activities. All that can not be separated from the means of supporting human activities such as technology-based electronic devices. Apart from the positive impact of the use of these electronic tools, there are still many things which we shall consider. One is the efficiency of electric power in its application, such as the use of lights in the corridors of the hotel.

To increase the efficiency of light in the corridor of the hotel, we need a tool that is able to regulate electric power used by lamps. This is an encouraging writers to create a "prototype of a microcontroller-based lamp setting" appliance is equipped with a sensor and microcontroller. This tool will increase the intensity of the lights automatically when no humans are passing in the corridor. Design using a PIR (Passive Infrared Receiver) to capture the human heat energy that will be sent to the microcontroller. In this case the microcontroller serves to regulate the intensity of light that exist dikoridor hotel. Microcontroller is also connected to an RTC (Real Time Clock) which serves as an activation tool peyesuaian time to get a high level of efficiency. Use of relays in this system allows you to connect the AC current in the lamp. There's also a switch with three options as the manual setting is turned off all the lights, turn on all lights, and the last lights are controlled automatically by the microcontroller.

Based on the test, system design is consistent with expectations, because the system can automatically turn on the lights to work within a corridor that has been designed with a length of 15 meters and 3 meters wide. PIR sensors are used to work up to a maximum length range of 7 meters at an angle of 00 with a wide angle 200.

Keywords: microcontroller, PIR sensor, lamp efficiency, the RTC.