

DEVELOP A RAIN SENSITIVE WINDSCREEN WIPER USING PIC16F84A

BY

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MARA UNIVERSITY OF TECHNOLOGY
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CERTIFICATION OF ORIGINALITY

I hereby declare that this research together with all of its contents is no other than those of my own work, except for some information taken and extracted from other resources that have been quoted respectively

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Assalamualaikum w.b.t

“In the name of ALLAH, the most Gracious and most Merciful”

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ABSTRACT

Nowadays, a new type of wiper system is starting to appear on cars that actually do a good job of detecting the amount of water on the windshield and controlling the wipers. The system uses a sensor that uses optical sensors to detect the moisture. The sensor is mounted in contact with the inside of the windshield, near the rearview mirror.

The sensor works by projecting infrared light into the windshield at a 45-degree angle. If the glass is dry, most of this light is reflected back into the sensor by the front of the windshield. If water droplets are on the glass, they reflect the light in different directions. The wetter the glass, the less light makes it back into the sensor. But in our project, we substitute the rain sensor with the motion sensor. The principle of working is still the same where it uses the infrared lights to detect movement.

The system will be controlled by a microcontroller. In our case, we have chosen PIC16F84A. It is a microchip that has been developed by Microchip Technology Inc. Microcontroller is an ideal chip to program any electronic application. Microcontroller can use many languages to as its program such as Assembly Language, C, Basic and many more.