

ABSTRACT

Recently, the weather is really uncertain. Sometimes when it is hot, it will suddenly rain hard. Or sometimes when the weather is bad, it will suddenly be bright. This is certainly inconvenient. Moreover when we have a laundry or when we are drying or hanging something. We will certainly be bothered by the uncertain weather. In that condition, it is necessary to have an automatic roof tool which might be helpful. This automatic roof tool is specially programmed in such a way so that can open or close automatically depending on the weather condition whether it is rainy or bright.

Rain sensor and light sensor are used as the input for microcontroller to set the roof's open or close. Then microcontroller is also connected with RTC as timer regulator when the roof is close with the pushbutton as the input. This automatic tool is divided into two parts namely rain sensor and light sensor with pushbutton as the input. The second part is mechanical part for its roof which will be driven by power window motor which is certainly suitable with the input.

Base on the research has been done, this tool will open if the value of ADC ≥ 245 and will close when the value < 45 for rain sensor. For light sensor value for open the roof is < 80 and ≥ 80 to close the roof. This tool also can only be used for a little mounts of laundry but can be maximum as it should.

Keywords: roof, light sensor, rain sensor