ABSTRACT

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PROTOTYPE OF ALARM SYSTEM FOR EARLY SMOKE AND FIRE DETECTION USING ARDUINO UNO BASED FAN AND WATER PUMP
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(xiv + 67 + Appendices)

Fires often occur in Indonesia, the impact of this is not a few properties and even lives that become victims. Many causes of fires are due to short circuits, human carelessness. Smoke and fire spread very easily, if not immediately extinguished, the smoke and fire will completely burn the room and cause losses. Responses that are not fast due to ignorance of the occurrence of fires, make fires difficult to handle and cause a greater impact. This research aims to design and manufacture a smoke and early fire detection alarm system in everyday life that can warn people through sound to be aware of the presence of smoke and fire, which causes fires to minimize large losses. Based on the results of the tests that have been carried out from the research, the fire sensor which affects the pump output will light up when there is a fire, the buzzer will light up if there is a fire, of <100, that is, for a distance of 2, 3, 4 cm, the LCD will display the Room There is Fire, the value analog, extinguish the fire, and will stop making sound notifications when the value is above 100, namely for a distance of 1, 5, 6 to 30 cm, the LCD will display the Safe Room. For the MQ-2 sensor, the fan output will turn on when there is smoke, the buzzer will light up if there is smoke, of > 300, namely 1 cm – 30 cm, the LCD will display smoke hazard, analog value and will stop making sound notifications and there is no smoke when a value below 300 is for distances above 31 cm – 35 cm, the LCD will display the Safe Room. The fan does not turn on.

Bibliography (2014 – 2023)