

ABSTRACT

Flooding is a disaster characterized by a large pool of water in certain areas. This flood disaster caused a lot of losses. One of them is in the field of transportation. A lot of losses caused by flood disasters in the field of transportation, for example: the destruction of vehicles, scheduled departure and arrival to be late, and the destruction of electronic equipment at the airport station, etc.. In order to avoid damage to electronic equipment at the railway station, the researchers created a flood warning system at the railway station.

Flood warning system on this train consists of input systems and output systems. In the input system consists of ultrasonic sensor HC-SR04 as the flood height reader which then the result of the measurement will be processed by Arduino Nano then the flood height data will be sent by module nRF24L01 + PA + LNA to output system, In system output consist of module nRF24L01 + PA + LNA that receives the flood height data from the input system, then sends it to arduino nano and flood height data is processed into multiple outputs. The output is a relay that functions to break the current on vital electronic equipment, LED as the level status of flood height, LCD to display data the height of the flood, and buzzer will sound when the status of the height level of the flood is already a danger.

This system has the value of accuracy on ultrasonic sensor 1 that is equal to 98,961% on water reflection object and 99,087% on solid object reflection object. In the ultrasonic sensor 2 has a value of 99.141% accuracy on water reflection object and 98.963% on solid object reflection.

Keyword : *Flood Warning System, Ultrasonic Sensor HC-SR04, Arduino Nano, Module nRF24L01 + PA + LNA, Relay*