ABSTRACT

Every house often use the fence. Gate has a function as a barrier or the safety at house. Fence consists of several types, one of them is railing door. This type usually made of iron or a large timber. For this reason, they lazy to open or close the railing door. Railing door usually had just a slot for safety key.

Therefore, this thesis made an automatic home gateway systems to open and close the gate. The gate works automatically by attaching the RFID card on RFID reader, and then entering triple password for additional security of the gate. After the password correct, Arduino mega will receive the result of the RFID and keypad inputs to be processed and sound output at the buzzer, LED light is lit, and DC motor was moving. Then the gate will open automatically.

This equipment is able to work as expected with a good system. The motor DC can rotate both directions are unidirectional clock and counter clockwise. The motor DC is able to rotate clockwise is 2.2676 seconds/round while the reverse direction is 2.2650 seconds/round. The DC motor has average response delay when it open is 0.529 seconds. While average response delay when it stop to open is 1.153 seconds. Then the DC motor has average response delay when the close is 0.539, while average delay response when it stop to close is 1.539 seconds.

Keyword : Gate, RFID, password, Arduino, motor DC