

GATEWAY CONTROLLER USES BLUETOOTH BASED ON THE ATMEGA 8

Oleh: Teguh Arif Gustaman
NIM : 09507131029

ABSTRACT

The purpose of making a "gateway controller uses bluetooth based on the ATmega 8" microcontroller is to realize the design of hardware and software and discover the performance of the control gate.

The working principle of a gateway controller uses bluetooth based on the ATmega 8 microcontroller which sends character codes via bluetooth and are then processed in the microcontroller to form a decision. Then the electrical energy is converted into mechanical motion produced by the servo motor. The method used in the manufacture of these tools is an experimental method. By using this method there is obtained a design technique that consists of (1) identification of requirements, which is helpful to recognize what elements are needed in the manufacture of the mentioned tools. (2) Analysis of needs, which is to analyze all the elements needed in building the tool before the process of designing, (3) designing hardware and software, which is the activity of designing and preparing any material used to build the tool (4) The manufacture of toolsm, which is a process to integrate all of the elements to build the tool and (5) Testing tools, which is the testing of the performance of the tool.

The hardware used is a smartphone as a character code generator which is then routed through the bluetooth module into the microcontroller. The code then is processed into decision received by the servo motors to be converted into mechanical motion that drives the gate. The softwares used are Arduino, Amario and Eagle. By using the programs contained in Arduino, which are in the forms of Initialization Program, setup program, scanning programs and inputprogram, the tool is able to work as instructed. It has been shown at the gate can be controlled from a distance. The gate can be opened and closed in accordance with the instructions given. The gate knob is moving semi-circular or forming an angle of 90 ° from its axis. The lock is also able to lock automatically, and the password can function properly.

Password : ATmega 8, *Smartphone*, *Bluetooth* csr bc417143, Servo Motor