ABSTRACT

Water is a part that can not be separated in everyday life. For that water becomes a thing to note. Given the importance of water in human life, the water must be conserved for its use, to anticipate the usage of water wastage

Of these problems are designed "system hand-washing water faucet automatic spring-based microcontroller and timer" to help users automatically turn off the water faucet. This tool is designed using several components such as servo drive is equipped sensor, microcontroller as control systems, LCD displays the status of each user the amount of water use and total water use and water flow sensor calculates the speed of the water. In the implementation, there are some important parameters needed, such as distance, timer, water capacity and water rates.

Tap water semi-automatic hand-washing that has been designed and tested it already has sufficient accuracy stable, one for Comparison of distance measurement with ultrasonic sensor calibration tool has a 1.401% error. For water velocity water flow sensor, capacity sensor reads the calibrated capacity has error 1.814%. To read the water rate water rate sensor with a calibrated distance sensor has a maximum value of the experimental results is 5.71% and the average error is 2.694%.

Keywords: Servo, microcontroller, Timer, Sensor, Lcd