ABSTRACT

Filling water in a swimming pool sometimes does not pay attention to the amount of water wasted. For example, every day the hotel or housing that has a swimming pool has discharged water that should be used for something more useful. To minimize wasting water, a study was carried out to overcome this problem. This study uses an SRF02 ultrasonic sensor based on a Bluino-One microcontroller to determine and monitor the height of liquid from 0 cm to 80 cm in a swimming pool that will be monitored through a smartphone or laptop. Measurements are made by placing the sensor at a distance of 28 above the surface of the water due to the safe limit of the sensor so it is not immersed in water. The value of the measurement results will be processed through a microcontroller then displayed on the Liquid Crystal Display (LCD) and will also be displayed on a Smartphone or laptop with the help of Bluino Loader software. At the time of calibration the sensor is done twice, namely water filling and water reduction using a ruler as a reference value then compared with the sensor output value. The results obtained% error of filling water by 0.8% and water reduction errors of 0.2%. As for the radius of the appearance of the data on the Bluetooth features found on the microcontroller that is as far as 35 meters.

Keywords: water filling, Ultrasonic Sensor, Bluino Loader