ABSTRACT

In the current era of measurement of distance, altitude and angle of an object can no longer be measured only by a hardware measuring device such as using a ruler to measure the height of an object the melt can use the ultrasonic sensor utilization technology.

This radar prototype is made with Arduino UNO R3 microcontroller, this type of microcontroler is chosen because it has a medium design and has sufficient PWM output pin required in the final project. This tool uses ultrasonic sensor HC-SR04 driven by 2 servo motors , Selected ultrasonic sensor HC-SR04 is because it has adequate specifications. The results of object measurements are displayed with GUI programming application using java.

From the results of testing tools that are able to detect objects between 5 cm from the front of the radar and a maximum distance of 30 cm and obtained the error rate measurement distance and height of 1 - 2 cm while for the angle of 1º - 5º.

Keywords: sensor ultrasonic, radar, microcontroller, java