

ABSTRACT

Rover robot is a vehicle that can move automatically using a remote control based on an Android application. In order to make it easier for users to carry out documentation or research in difficult terrain.

In this final project, the writer implements the mechanical design of the rover robot. The rover robot body will use a passive suspension made of PVC pipe, because PVC pipe has strong characteristics, has an outer diameter of 32mm and the weight of the PVC pipe has a load of 1.1kg so that the robot can run stably in all terrain it will pass.

The results of this final project research are testing the speed of the rover robot without passing obstacles over a distance of 2 meters with a travel time of 5 seconds. Testing the speed of the rover robot through obstacles with a maximum height of 11 CM placed at a distance of 100 CM covering a distance of 2 meters with a travel time of 25.6 seconds. The road straightness test of the rover robot without passing obstacles covers a distance of 2 meters with a travel time of 5 seconds and a deviation distance of 4 CM. The road straightness test of the rover robot passes a maximum height barrier of 11CM which is placed at a distance of 100 CM covering a distance of 2 meters with a travel time of 25.6 seconds and a deviation distance of 17CM. Testing of right and left turns on the rover robot when the robot turns right with a travel time of 11 seconds and a deviation of 2 CM, when the robot turns left it takes 5 seconds with a deviation of 3 CM.

Keyword : Design Rocker Bogie, Rocker Bogie, Stair Climbing on robot rocker bogie