ROBOT PEMBERSIH LANTAI BERBASIS ARDUINO

Ricko Agung Satrio
Program Studi Teknik Elektro, Fakultas Sains & Teknologi
Universitas Teknologi Yogykarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail: rickoasatrio@gmail.com

ABSTRACT

Maintaining a clean environment is an effort to maintain health. However, it turns out that the awareness of the Indonesian people in maintaining cleanliness is relatively low. Research from the Ministry of Health shows that only 20% or 25 million of the 262 million Indonesians care about health and hygiene. (CNNIndonesia, 2018). The cleanliness of the occupied house determines the occupant's health. Dirt that often makes the house dirty, especially on the floor, is dust. In maintaining a clean house, the floor must always be cleaned of dust. The dust cleaning activity by sweeping or mopping the floor is often indolent because it requires time and effort. This Robot can clean floor surfaces. This tool is controlled via infrared sensor commands to Arduino, Arduino will use these commands to move forward, turn and reverse on the wheel. Arduino will also process commands for operating on a miniature mopping device or nylon cloth, supported by a 12 Volt DC motor located at the bottom of the Robot, to clean wet or dirty floors are passed by the Robot. In this tool's mechanical design, a box will be made to support the components on the floor cleaning robot, using acrylic material. Here, acrylic is used to make it more practical in the manufacturing process. This mechanical design is still not perfect; over time, changes will be made to make it simpler and more efficient. After going through the stages of planning and testing both in terms of mechanics, electricity, or programs, the author can finally conclude several conclusions: The tool that has been made can automatically mop the floor using electronic components. The Robot can avoid obstacles but is not very sensitive to wall surveillance or new obstacles. It is because it only uses one Arduino to run all the commands on the electronic devices used on the Robot, causing the sensor to be slow to receive the obstruction information. The swapping can rotate from the test results, but the rotation causes the Robot to move unstable.

Keywords*: Automatic*, Arduino, Sensor *Ultrasonic*