

ABSTRACT

Robot is area of much used as object research. One of the robot with capability of motion like humans is the robot sumo. Robots sumo is the type robot vehicles taking analogy competition martial arts sumo from Japan. The sumo category robot there are two are , the autonomous and RC (remote control). And heavy category robots there are three of which is , 1KG , 3KG and 5KG.

The robot 3KG RC sumo category , the pilot should have skill in control remote control. In addition, needed a communication system qualitative between robot sumo by remote control. Qualitative system is make a protocol of the data have specific function and has a frequency equal to the submission of the data model handshaking. Qualitative system is use the model TCP/IP because data transmission is one to one so that the submission of the data will not exchange or called model handshaking . A kind of remote that used that is a joystick PlayStation 2 And module of communication that is used the module APC220 and managed by frequency 433MHz. Besides , sumo robot can display voltage capacity with indicators who has 10 LED a strip Bar LED and Buzzer by using a voltage and current ACS712 sensors.

Keywords: Robot Sumo 3KG, Remote Control, joystick PlayStation 2, Voltage Sensor, Current ACS712 Sensor, Handshaking TCP/IP model.