

COMMUNICATION ROBOS

INTRODUCTION

The aim of this project is to transfer the work of human being to the electronic machine so as to reduce the drudgery of human work on one hand and keep the mankind safe from the possible dangers. In order to achieve this aim this electronic machine is devised in such a fashion that it can scan the area where it is rather dangerous to go manually.

Now a days, automation plays very important role in human life. Robotics is gaining more importance in automation and for different services (e.g. commercial service like home application etc) in this project we built up the robot for information exchange. The parameters like obstacles detection heat sensing and light sensing is achieved in this project. The project can extended for many parameters like landmine detection, smoke detection etc.

In this project we built up two robot. One robot for information collection and transmission and second robot is for displaying of the information. For our project these two robot can communicate upto 50 feet distance. This distance can be increased by using RF modules.

We are using microcontroller 89C52 and 89C51 in this project. The three sensors namely as heat sensor, light sensor and obstacle sensor are fixed on first robot using microcontroller 89C52 with ADC 0808 also the LCD display is fixed on second robot by using microcontroller 89C51 with motor drivers 298.

As per our requirement the number of sensor can b e increased on fixed robot. It is very important application for military it may be used as landmines detectors, in this project the communication is wireless.

BLOCK DIAGRAM:

Description of Transmitter Sections (first Robot):

The block diagram of transmitter is consist of Microcontroller 89C52, ADC0808, Motor Driver IC298 , RF Transmitter and Sensors like LM 35 sensor , LDR sensor and IR sensor. These three Sensor are interfaced with ADC 0808.

If any obstacle is detected by IR. Sensor thin it will transmit or forward this information to ADC and if the temp is increased beyond the threshold then regarding information is sent to ADC similarly if there is any change in light regarding information is send to ADC. ADC converts the analog signal received from sensors into digital and forwards this digital information to microcontroller.

Microcontroller is a leader which controller all the operations of peripheral as per the data feed in it by the user and send respective information to the RF transmitter . The RF transmitter transmits the signal to receiver & motor driver controls the motion of robot.

Transmitter Section (First Robot)

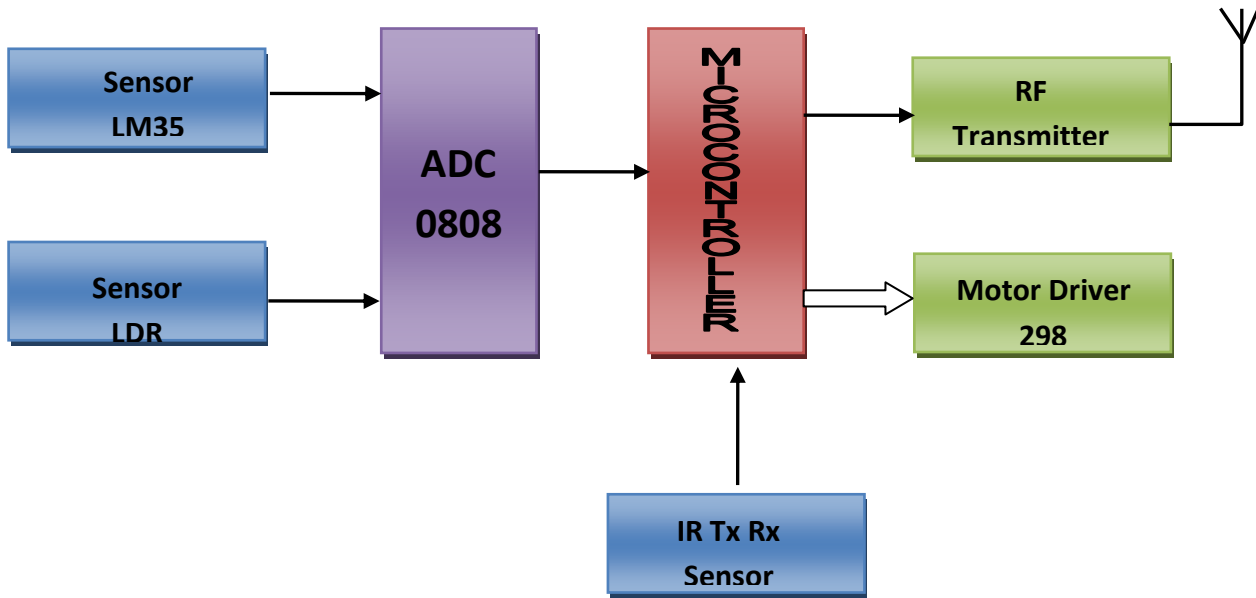
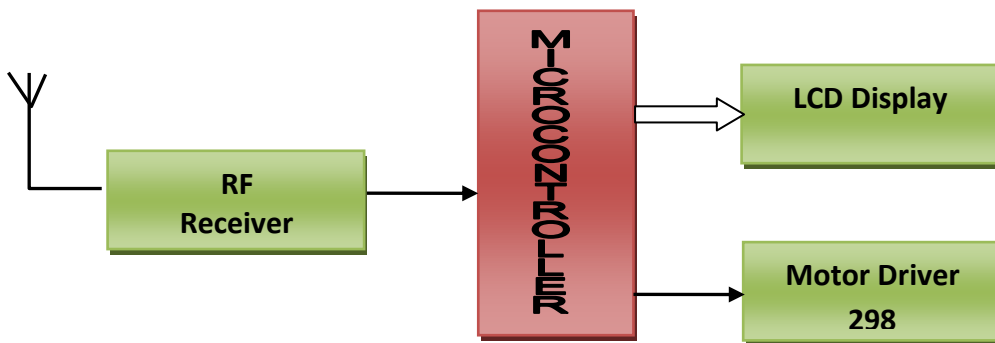


Figure No. 4.2.1

Description of Receiver Sections (Second Robot):

The B.D. of receiver is consist of the (89C51) , RF receiver , LCD Display Motor driver and forwards this information to microcontroller and microcontroller controls all the operations of Peripheral.

The LCD display is used to display the information and motor driver controller the motion of robot.



Figure

