Fire fighting robot

ABSTRACT

With the development in the field of robotics, human intrusion has become less and robots are being widely used for safety purpose. In our day-to-day life, fire accidents have become common and sometimes may lead to hazards that make it hard for the firemen to protect human life. In such cases, a fire fighting robot is used to guard human lives, wealth, and surroundings from the fire accidents. A fire fighting robot is capable of detecting fire if a house catches fire while someone in the house is either sleeping or not present in the house. By means of this fire fighting robot, people and properties can be saved from fire accidents.

Working

There are several possibilities of fire in any remote area or in an industry. For instance, in garments godowns, cotton mills, and fuel storage tanks, electric leakages may result in immense fire & harm. In the worst of cases & scenarios, fire causes heavy losses both financially and by taking lives. Robotics is the best possible way to guard human lives, wealth and surroundings. A Firefighting robot is designed and built with an embedded system. It is capable of navigating alone on a modeled floor while actively scanning the flames of fire. The robot could be used as a path guide in a fireplace device or, in normal case, as an emergency device. This robot is designed in such a way that it searches a fire, & douses it before the fire could spread out of range & control.

This bot will be controlled with RF communication and have water pump to pump the water it will also have sensor to read the intensity of fire and pump amount of water accordingly

In case of more water required it can also ask help from other nearby bots to bring fire in control.

Components

- Arduino Uno
- Motor driver
- Motor
- batree
- Switches
- Charging circuit
- Wheels
- Chassis
- Rf module
- Encoder decoder

Circuit Diagram

5V relay

DC Motor (Fan) Highly recommended to use DC Motor with less than 1Amp.

Remember that this Motor Driver shield is attached to gizDuino + LIN

Usage of 7V DC Supply is required upon execution.

These are" Paralleled DC Geared Motors"

fritzing