

Wireless RF controlled fire fighting robot with high pressure air blower/water sprinkler

Title of the project	:	Wireless RF controlled fire fighting robot with high pressure air blower/water sprinkler
Domain	:	Robotics, Wireless Communication
Software	:	Embedded C, Keil, Proload
Microcontroller	:	AT89S52
Power Supply	:	+9V, 500mA Regulated Power Supply
Crystal	:	11.0592MHz
Communication Device	:	RF Module
Transmitter	:	STT – 433MHz
Receiver	:	STR – 433MHz
Applications	:	Defense, Navy, mining and fishing applications
Developed By	:	M/S Wine Yard Technologies
Phone	:	040-6464 6363,
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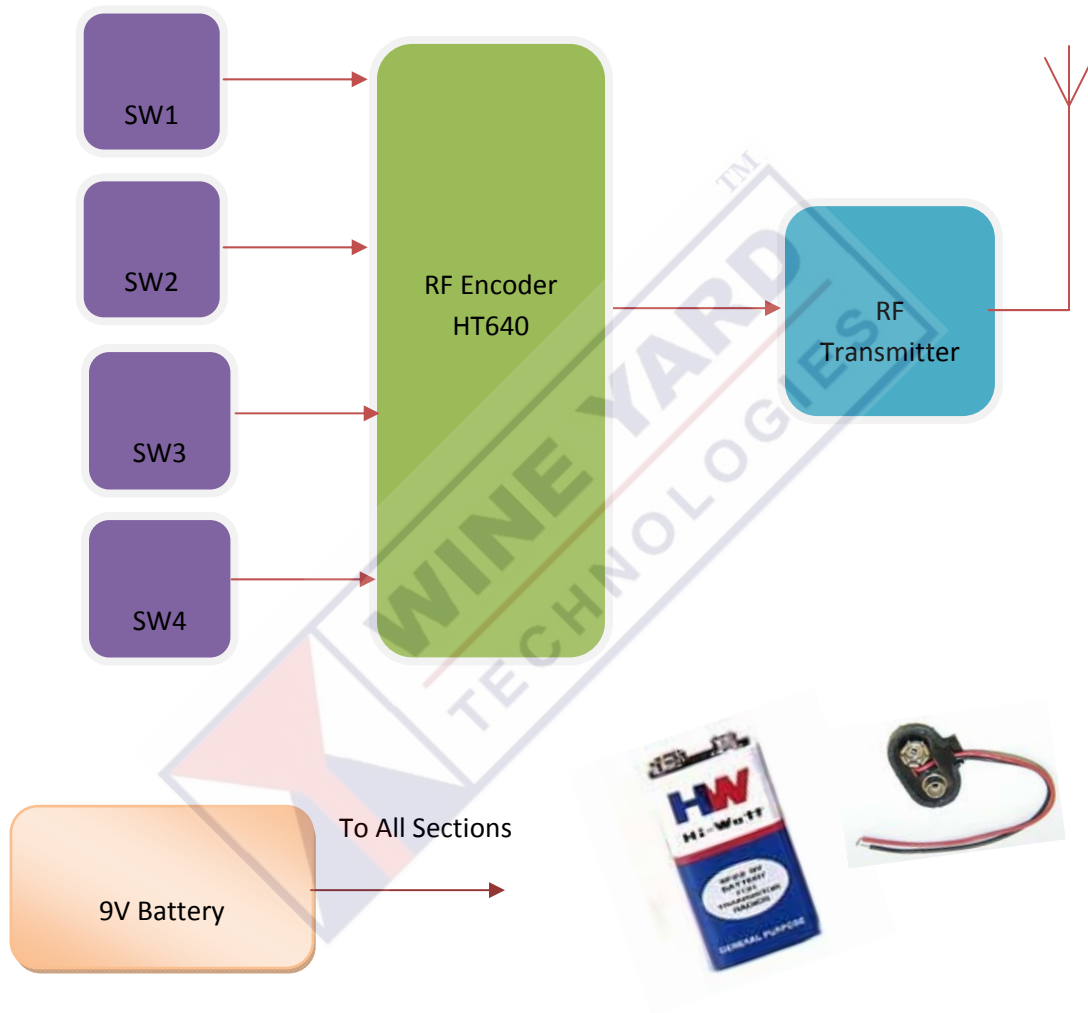
Path Finder was sent to Mars in 1998. This was a great achievement which detected the secrets of “Mars”. This project deals with RF controlled robot. This robot is prototype for the “Path Finder”. This robot is a RF controlled robot. This can be moved forward and reverse direction using geared motors of 60RPM. Also this robot can take sharp turnings towards left and right directions. This project uses AT89S52 MCU as its controller. A high sensitive induction type metal detector is designed using colpitts oscillator principle and fixed to this robot. This Robot is also used as a fire extinguisher i.e. it senses the fire from certain distance; automatically blower gets activated and put off the fire.

When the robot is moving on a surface, the system produces a beep sound when metal is detected. This beep sound will be transmitted to remote place. At the same time even if any fire accident occurs if a switch is pressed then the motor gets switched on which in turn switches on the water blower (pump).

The RF modules used here are STT-433 MHz Transmitter, STR-433 MHz Receiver, HT640 RF Encoder and HT648 RF Decoder. The three switches are interfaced to the RF transmitter through RF Encoder. The encoder continuously reads the status of the switches, passes the data to the RF transmitter and the transmitter transmits the data. This project uses 9V battery. It is also using Conventional power supply by using Lead acid rechargeable battery for 5V regulated power supply for all sections

Block Diagram: Transmitter

Block Diagram: Transmitter



Block Diagram: Receiver

