

## **IEEE Reference:**

# **Bluetooth based Robot for Metal Detection Applications**

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References Cited: 6

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Title of the project : Bluetooth based Robot for Metal Detection Applications  
Domain : Robotics, Wireless Communication  
Software : Embedded C, Keil, Proload  
Microcontroller : AT89S52  
Power Supply : +9V, 500mA Regulated Power Supply  
Display : Television  
Crystal : 11.0592MHz  
Communication Device : RF Module  
Transmitter : STT – 433MHz  
Receiver : STR – 433MHz  
Applications : Industries, Process Control, Domestic and Automotives  
Developed By : M/S Wine Yard Technologies  
Phone : 040-6464 6363,  
www.WineYardProjects.com



## **Bluetooth based Robot for Metal Detection Applications**

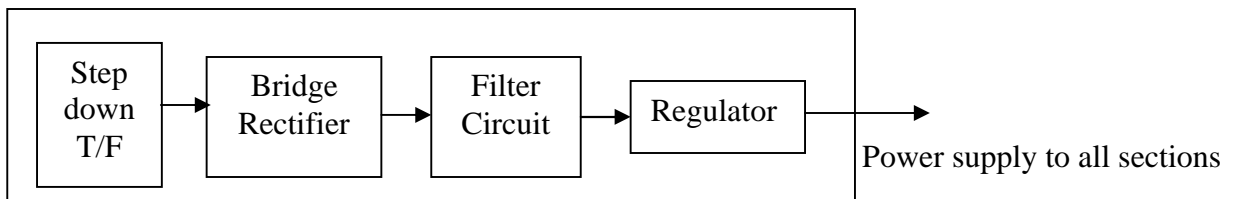
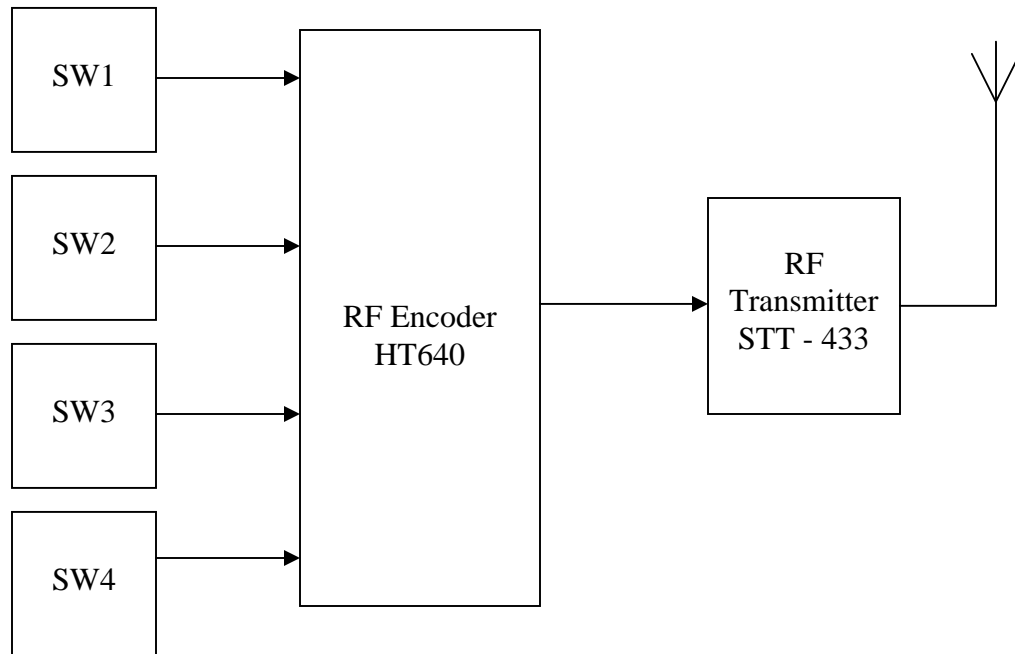
Path Finder was sent to Mars in 1998. This was a great achievement which detected the secrets of “Mars”. This project deals with RF controlled robot. This robot is prototype for the “Path Finder”.

This robot is controlled by a RF remote. 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. Also a wireless camera with voice is interfaced to the kit.

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. Simultaneously the images around the robot will be transmitted to remote place. User can monitor the images and metal detection alarms on Television.

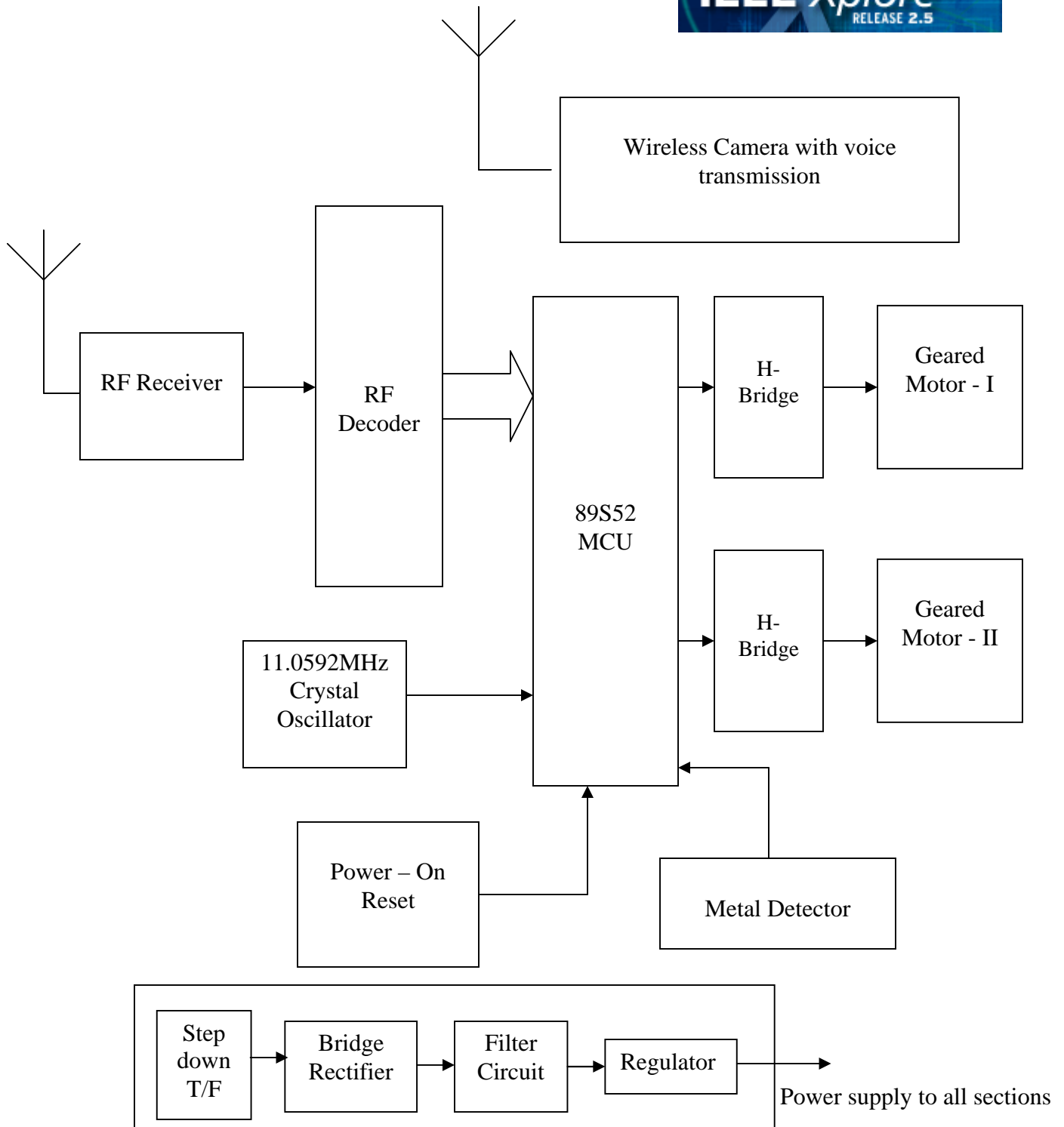
The RF modules used here are STT-433 MHz Transmitter, STR-433 MHz Receiver, HT640 RF Encoder and HT648 RF Decoder. The three switches are interfaced to the RF transmitter through RF Encoder. The encoder continuously reads the status of the switches, passes the data to the RF transmitter and the transmitter transmits the data.

This project uses 9V battery. This project is much useful for mines detection and surveillance applications.



Block Diagram: Transmitter

RF Controlled Robot with Metal Detector and Wireless image and voice transmission (Model Path Finder)



Block Diagram: Receiver

RF Controlled Robot with Metal Detector and Wireless image and voice transmission  
(Model Path Finder)