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WAR FIELD SPYING ROBOT WITH NIGHT VISION CAMERA

Mrs.Megha Deotale, Ms.Shruti Mokal, Mr.Abhilash Gondkar,   Mr.Akshay Kuckian
Department of Electronics and Telecommunication,Lokmanya Tilak College of engineering,India

ABSTRACT

This is kind of robot can be helpful for spying purpose in war fields. An Atmega8 of microcontroller is used for the desired operation. At the transmitting end using push buttons,commands are sent to the receiver to control the movement of the robot. At the receiving end two motors are infaced to the microcontroller where they are used for movement of the vehicle. The RF transmitting acts as a RF remote control . A wireless camera is mounted on the robot body for spying purpose even in complete darkness by using infrared lighting. Futher the project can be enhance using DTMF technology.

KEYWORDS:ATmega8,RF module,HT12E,HT12D,L293D.

INTRODUCTION

Act of war has always been a threat to the sability security, welfare of any country so they must be prevented to the lowest level as posible. Many governments in the world have thus turned to technoloy to aid them in the fight against war. Since information gathering is a major component in this war, spying devices play a very vital role here. The Moscow Theatre siege carried out by the chechen rebels in the winter of 2002 furter highlighted the necessityand importance of having and deploying the right kind of spying devices whenever such circumstances arise. As proposed by A/P Gerard Lng, a spying contraption in the form of a mini robotic surveillnce platform that can travel in ventilation installations may be employed during such hostage situations. The use of such a platform is of course only restricted to this single purposeof spying on war. It may also be used for reconnaissance mission such as inspecting hazardous rooms that has been contaminated by nuclear radiation.

MATERIALS AND METHODS

Subheading

ATmega8

The ATmega8 is a low power CMOS 8bit microcontroller on RISC architecture.
The features of ATmega8 are flash which is 8kbytes, pincount is 28, its maximum operating frequency is 16MHZ, its operating voltage is between 2.7 to 5.5 vcc, EEPROM is 512 bytes, it has internal SRAM of 1kbyte
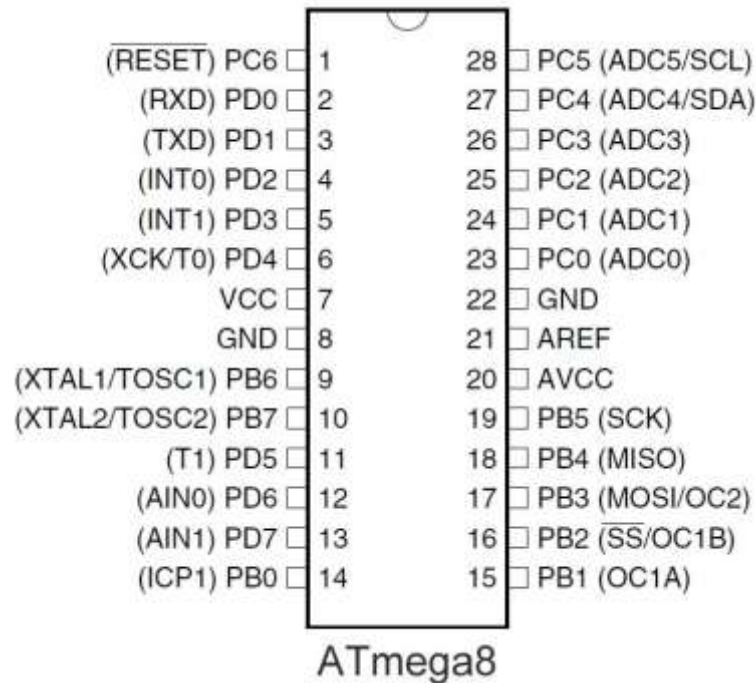It is fully static operation and has high endurance non-volatile memory segments.

FIG.1: PIN DIAGRAM

HT12E

HT12E encoder converts 4bits data to serial output which is then fed to the RF module for transmitting.
It is mainly used in interfacing RF. HT12E converts the parallel inputs into serial output
The features of HT12E are low power consumption, high noise immunity. Its operating voltage is between 2.4v to 12v.

HT12D

HT12D it converts serial input into parallel outputs. It decodes the serial address and data received and output is fed to controller. The decoder receive the serial address and data from its corresponding decoder transmitting by carrier using RF transmitting medium and give output to the output pin after processing the data.
The features of HT12D are low power consumption, high noise immunity.

7805 IC VOLTAGE REGULATOR

7805 is a voltage regulator integrated circuit. The voltage source in a circuit may have fluctuation and would not give fixed voltage output. The voltage regulator IC maintains the output voltage at constant value.
It has 3 pin Input Ground and Output. An unregulated voltage in regulation is given to input pin.
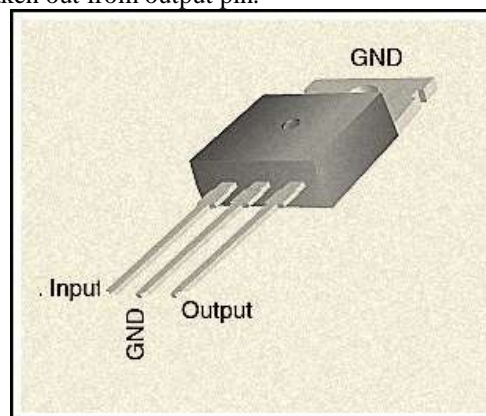Ground pin is grounded. Output is taken out from output pin.

FIG.2: 7805 IC

L293D
L293D is a dual H-bridge motor driver integrated circuit. Motor drivers acts as current amplifier since they take
a low current control signal and provide a highly current signal. This higher current is used to drive to motors.
In its common mode of operation two DC motors can be driven simultaneously both in forward and
reversed direction.

WIRELESS CAMERA
Wireless camera detects and scans all the common video frequencies, usually somewhere between 50MHz and
30GHz. It then allows the user to monitor what is being broadcasted on those frequencies, if the signal is strong
enough, the wireless camera detectors usually display the images.

RF MODULE
TRANSMITTER SECTION
There are four push buttons whose output is being fed to HT12E. Then the output of HT12E is given to the RF
transmitter. The RF transmitter then converts the given data into radio waves and transmits over air.
RECEIVER SECTION
A RF receiver is present which detects the radio waves. The output of RF receiver is fed to decoder HT12D. Then
this output is given to the controller and controller takes the decision on received data.

WORKING
The robot is a moving vehicle remotely controlled by one transmitting unit and a receiving unit motors for its
movement.Push buttons are arranged and fed to motor controller which in turn help the robot to move in a direction.

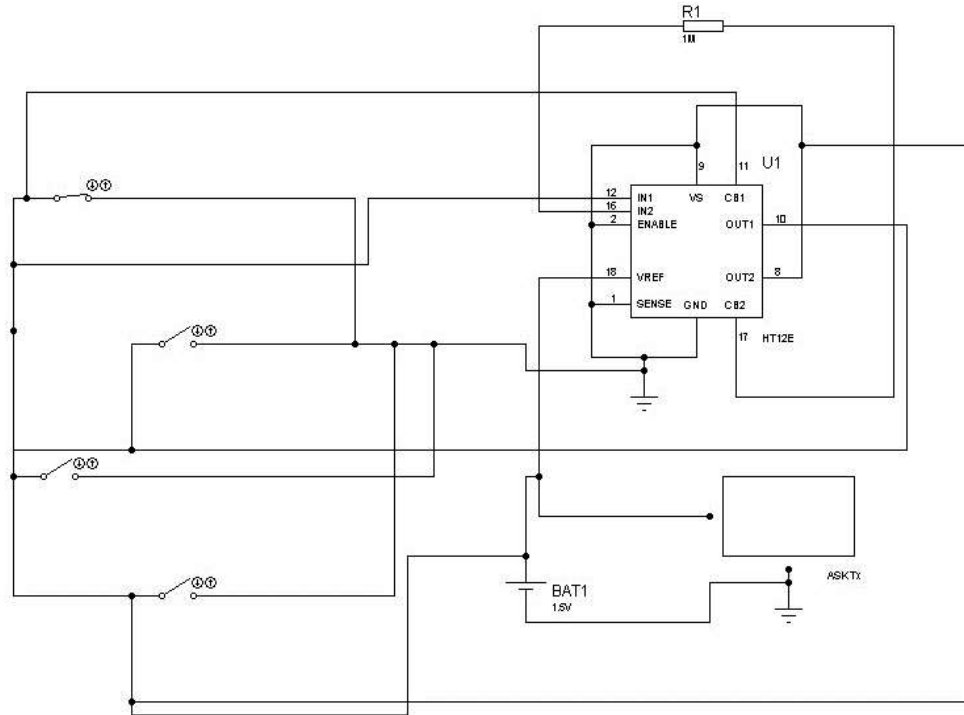**Figure**:
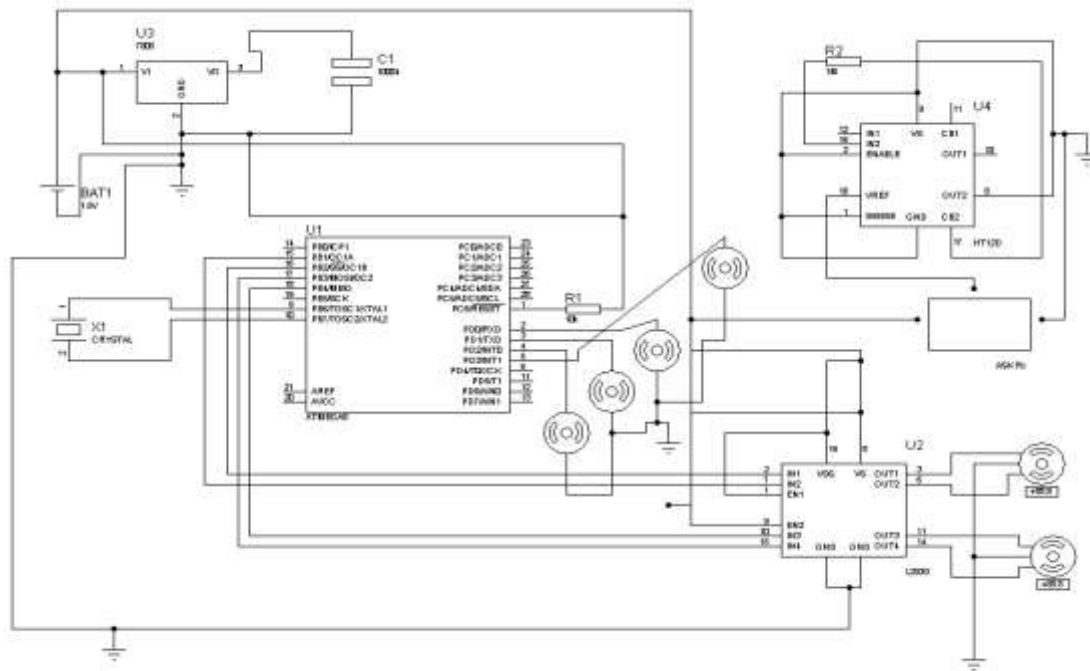
FIG3: RECEIVER

FIG4: TRANSMITTER

FIG 5:WORKING MODEL OF PROJECT

RESULTS AND DISCUSSION
The project focuses the areas to be spyed during the war conditions.The camera module and the operatin of transmitter and receiver used plays a vital role in this project.The output of the camera is obtained on display unit (such as smart phones or PC).The outcome of the project will be depended on how precisely the camera will focuses and captures the situation.

CONCLUSION
This project has come out with intelligent spying using wireless camera.This project is focused on rotating and monitoring robot with video support.With appropriate measures and methodology this project can be used wisely and will make a good result. This project basically used for spying purposes where the humans reaching is difficult.So this is better option in war field.

ACKNOWLEDGEMENTS

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AUTHOR BIBLIOGRAPHY

Mrs.Megha Deotale
She is presently working as a Profesor in the department of electrical engineering,Lokmanya Tilak college of engineering ,Koparkhairane, Navi Mumbai,Maharastra,India.She is currently persuing Phd from Nagpur University.Her area of interest is in DRIVES.

Ms.Shruti Mokal
She is last year BE student in the branch of electronics and telecommunication engineering,Lokmanya Tilak college of engineering ,Koparkhairane, Navi Mumbai,Maharastra,India.

Email:shrutimokal2@gmail.com

Mr.Abhilash Gondkar
He is last year BE student in the branch of electronics and telecommunication engineering,Lokmanya Tilak college of engineering ,Koparkhairane, Navi Mumbai,Maharastra,India.

Email: akg2110@gmail.com

Mr.Akshay Kuckian
He is last year BE student in the branch of electronics and telecommunication engineering,Lokmanya Tilak college of engineering ,Koparkhairane, Navi Mumbai,Maharastra,India.

Email:ashu.dude1991@gmail.com