

Border Guard Spy Robot with shooting Gun

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Abstract : *The main aim of the project is to build a border guard spy robot using ARM-7 LPC2148 microcontroller and IP camera. These robots consist of ultrasonic sensor to detect the motion and 5laser guns represent shooting indication.*

The advent of new high-speed technology provided realistic opportunity for new robot controls and realization of new methods of control theory. This technical improvement together with the need for high performance robots created faster, more accurate and more intelligent robots using new robots control devices, new drivers and advanced control algorithms. This project describes a new economical solution of robot control systems. The presented robot control system can be used for different sophisticated robotic applications.

The main controlling device of the whole system is ARM-7 LPC2148 micro controller. When the user switches on the robot, the robot moving on predefine path.SR04, 5laser guns are interfaced to the ARM-7 micro controller. When the motion is detected by sr04 sensor this data is fed to the microcontroller. The microcontroller gets on the laser guns for shooting automatically. We can check the IP camera video in mobile phone.

Keywords: *ARM-7 LPC2148 Microcontroller, IP Camera, Robots Control Devices*

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1. INTRODUCTION

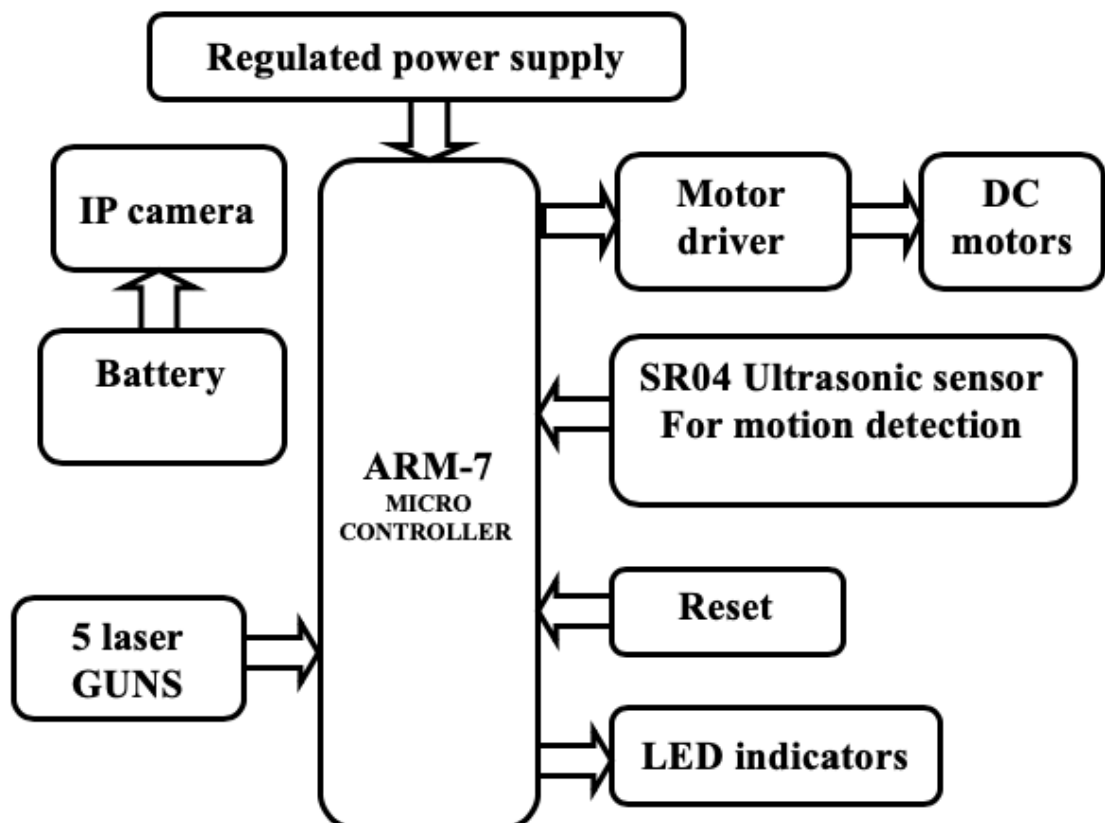
The main controlling device of the whole system is ARM - 7 microcontroller. When the user switches on the robot, the robot moving on predefine path. SR04, 5 laser guns are interfaced to the ARM - 7 micro controller. When the motion is detected by sr04 sensor this data is fed to the ARM - 7. The ARM - 7 gets on the laser guns for shooting automatically. We can check the IP camera video in mobile phone. To perform this intelligent task, Microcontroller is loaded with a program written in embedded 'C' language. These robots consist of ultrasonic sensor to detect.

The motion and 5 laser guns represent shooting indication. The advent of new highspeed technology provided realistic opportunity for new robot controls and realization of new methods of control theory. This project describes a new economical solution of robot control systems. The presented robot control system can be use for different sophisticated robotic applications. At present the surveillance of International border areas is a difficult task.

The border guarding forces are patrolling the border seriously, but it is not possible to watch the border at each and every moment. An essential requirement of this situation is a robot which automatically detects trespasser in the border and report nearby board security control unit. Many of the military departments now utilize the robots to carry out risky jobs that cannot be done by the soldiers. In this present work, arduino operating system based spy robot. which will save human live, reduces manual error and protect the country from enemies. This surveillance system using spy robot can be customized for various fields like industries, banks and shopping malls.

2. BLOCK DIAGRA

The block diagram has five main blocks namely ARM 7, IP camera, Battery power supply, SR04 Ultrasonic sensor, 5 Laser guns, LED indicators, DC Motor, Motor driver. ARM plays the role of a micro controller.



WORKING

The main controlling device of the whole system is ARM-7 LPC2148 micro controller. When the user switches on the robot, the robot moving on predefine path. SR04, 5-laser guns are interfaced to the ARM-7 micro controller. When the motion is detected by SR04 sensor this data is fed to the microcontroller. The microcontroller gets on the laser guns for shooting automatically. We can check the IP camera video in mobile phone.

3. ADVANTAGES, DISADVANTAGES AND APPLICATIONS

Advantages

1. This robot act as a companion to our soldier with the sensor based robotic system.
2. If there were something wrong we should only loss the money of the robot instead of losing the soldier life.
3. It replaces the soldier at border.
4. It reduces the loss of life's.
5. It also reduces the effort of one person.

Disadvantages

1. They need a large supply of power.
2. They are needed to be maintained properly.
3. They are very expensive.
4. Malfunction of robot can cause huge damage.

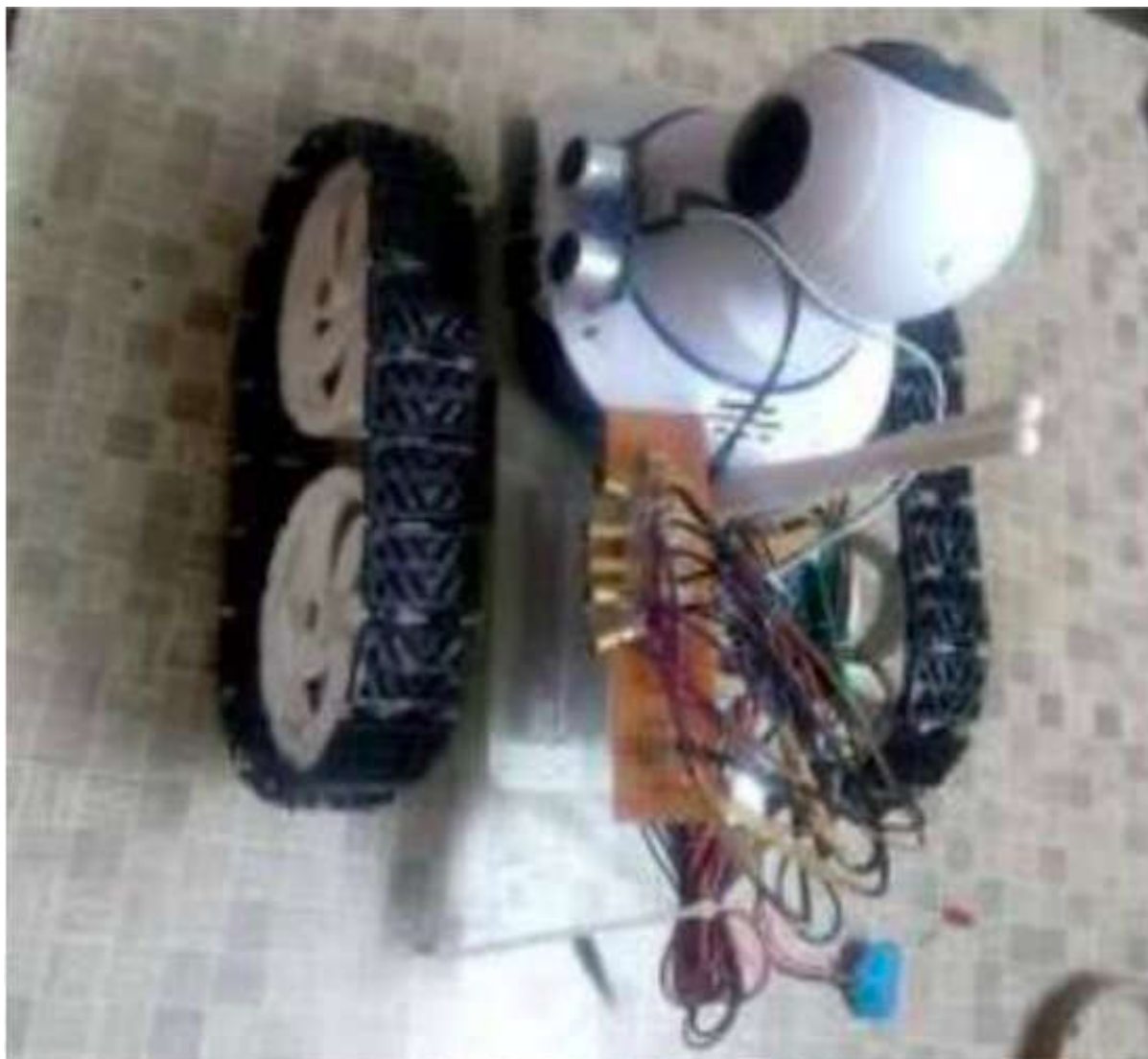
Applications

1. This surveillance system using spy robot can be customized for various fields like industries, banks and shopping malls. Controlling of signal lights.
2. In military and police department.
3. Disaster affected area surveillance and general surveillance.
4. Search and rescue operation.
5. Maneuvering in hazardous environment.
6. Wireless security and surveillance in hot spots.
7. In Mines at high radiation situations where its threatening for a human presence.

4. RESULTS

The main controlling device of the whole system is ARM-7 LPC2148 micro controller. When the user switches on the robot , the robot moving on predefine path. SR04, 5laser guns are interfaced to the ARM-7 microcontroller. When the motion is detected by SR04 sensor this data is fed to the microcontroller. The microcontroller gets on the laser guns for shooting automatically. We can check the IP camera video in mobile phone.

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5. Conclusion

In this project, the framework for making a robot for surveillance purpose is proposed. We can control the robot with the help of mobile manually through Bluetooth. Automatic monitoring can also be done. Our proposed robot is small in size thus maneuvering into area where human access is impossible.

Wireless technology is one of the most integral technologies in the electronics field. This provides highly efficient and a cost effective robot that replaces human work and reduces human labor and performing monitoring works in a well effective manner.

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