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Project Report
On

"Remote Controlled Detect & Destroy Vehicle"

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ABSTRACT

With the growth of terrorism all over the world, the threat to the lives of civilians and the army has increased to a great extent. This project is a small step towards protecting the precious lives of our brave soldiers who lay down their lives countering terrorists. The main feature of this design is that it is economically feasible, user friendly and completely remote controlled.

This vehicle can be used in places where there is a high risk of loosing human lives. This robot can be implemented in the following areas

- Patrolling the borders where the terrain is inaccessible for humans.
- In Guerilla warfare, which is an unconventional warfare where the enemy uses mobile tactics like ambushes, raids etc
- For manning sensitive areas during riots
- City warfare

The Remote Controlled Detect & Destroy Vehicle is a remote controlled shooting vehicle. A video camera and a gun are mounted on the vehicle (In this project to simulate the gun shooting, a laser has been used). The camera captures images of the operation site. These captured images are streamed with minimal delay to the control room, which is at a distance from the operation site, from where the vehicle is being controlled by an operator. The images are displayed on a LCD monitor or on CRT monitor depending upon the need. The movements of vehicle and the gun are controlled remotely with high accuracy. A pair of RF trans-receiver is being used for data transmission.

The operator can monitor the received images and gives appropriate commands to the vehicle for further actions. If the operator finds any suspicious object/person, he can point the gun accurately at the object/person with the help of two motors, which are placed on the vehicle. These motors are highly accurate and have a step angle of 1.8 deg and are responsible for the horizontal and vertical movements of the camera and gun.