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## Border Security System

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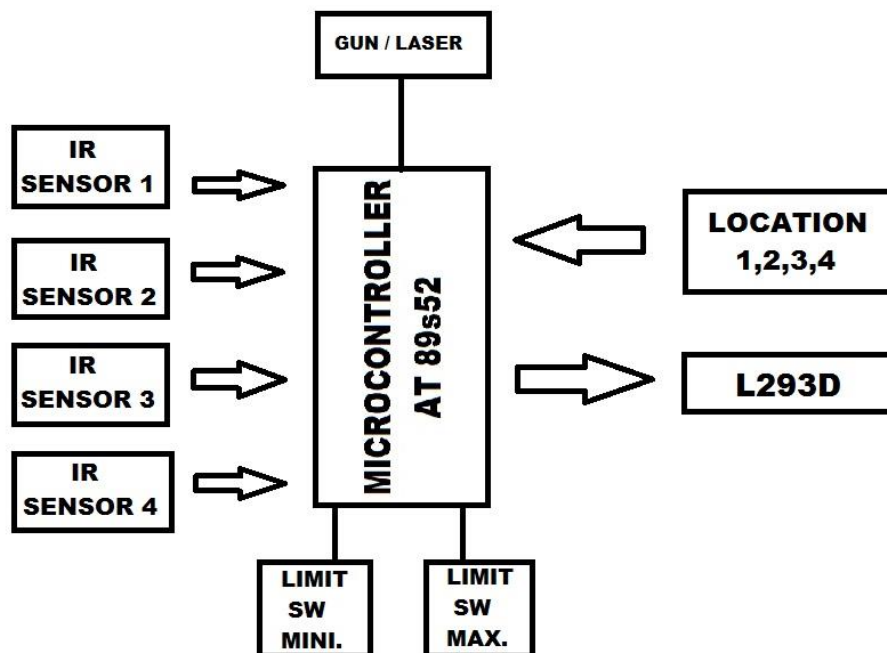
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### ABSTRACT

Cross border terrorism is the central problem our country is facing right now, due to which many disturbances are taking place at the border region. We have no doubt that our country real heroes our soldiers are immensely active at border 24\*7 to stop infiltration and avoiding terrorist from entering our land. Ours soldiers don't even hesitate to give supreme sacrifice for the nation. But due to to place soldier at those extreme points, so we can implement Border security system which is based on IR sensors, which make possible to safegaurd extreme border areas.

**Keywords:** IR Sensor, Microcontroller, Lasergun, Motor Driver, DC Motor.

### 1. BLOCK DIAGRAM



### 2. INTRODUCTION

Border security system is basically based on IR sensors to produce security at the borders of the country. Using this system we can destroy terrorist entering the borders. IR sensors sense the heat and object in front of them, IR sensors basically consists of one transmitter and a receiver, any obstacle coming between transmitter and receiver of the IR sensors, motor driver forces the dc motor to start which in turn initiate the arm onto which the implemented laser as a weapon tool start, and ranging distance and coverage of laser weapon is already set down and the laser weapon destroys the intruder. The motion of laser weapon tool onto the arm is smooth and significant.

## **2. REVIEW OF COMPONENT**

**IR Sensor:** It consists of a transmitter and a receiver, it sense the heat and radiation, it functions by sensing IR radiations and variance of heat.

**Transformer:** Transformer is a device that transfer electrical energy from one electrical circuit to another electrical circuit. In step down transformer winding has more turn than the primary winding, then the secondary voltage is lower than the primary voltage & the transformer is called step down transformer.

**DC Motor:** It is a device which changes electrical energy into mechanical energy, whenever we talk about speed, weight, size and cost, dc motor is preferred over stepper motor, dc motor can accomplish many tasks when it interfaced with a microcontroller.

**Microcontroller:** The AT89s52 has operating range between 4V to 5.5V ,8K bytes of flash memory, AT89s52 equipped with three 16 bit timer, 8 interrupt sources, 32 programmable I/O lines and a watch dog timer, the AT89s52 is manufactured using atmel high density nonvolatile memory technology.

**Laser:** It acronym for light amplification by stimulated emission of radiations. The light emitted from a laser is monochromatic, that is of one wavelength. The light emitted by laser is highly directional. The laser light is said to be coherent.

## **3. CONCLUSION**

In this era, where the number of intruders are growing at a higher rate , this system make use of sensors to provide security to the user which is cost effective and very quick in response, this system helps in security of borders a bit ahead. The average value detection range of IR sensors lies between 8m to 12m. The acuracy and effectiveness of this system is very sharp. The detected intruder between the transmitter and receiver of the IR sensors has no chance to escape and will cutted down by laser intensive beams

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