

In the wake of increased use of landmines in high-risk area, an All-Terrain Rover has been designed with the purpose of detecting these mines. The intention is to provide safety through technology, whose worth is much lesser than a soldier's life.

The rover detects landmines with a detector that is placed at a distance of seven centimeters above the ground level. It can detect mines within a range of twelve centimeters with the sensor present on its body. The moving mechanism employed by the rover detects explosives buried beneath harsh military routes and passages

Features

- A six-wheeled rover based on the rocker bogie mechanism to overcome harsh terrain
- Made using light PVC (Polyvinyl chloride) pipes for better manoeuvrability and power to weight ratio. Also, PVC possess enough strength to keep the entire structure and its components intact
- Powered by a LiPo battery and houses six metal gear motors, one for each wheel. The controller interacts with the rover through a pair of transmitter and receiver
- An Arduino microcontroller board connected to the circuit provides varying torque in all wheels for turning the rover
- Solar panel for extra power backup



38 PROJECT

ALL-TERRAIN ROVER TO SAVE LIVES IN THE INDIAN ARMED FORCES

Ajyaz
ECE

Bharath V P
ECE

Akshay D L
ECE