

# **RADAR ROBOT**

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## **ABSTRACT**

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The project named as Radar Robot is a robot designed to fulfill a purposes of securing a specific area. The area that must be covered by this Radar Robot is circle with a two meters radius. Within this area, any object is detected and it is supposed to be classified either it is a known object or what is called as a friend or it is an unknown object or what is considered as an enemy. The Radar Robot takes no action against friendly objects and it keeps looking for other objects within the zone but an action will be taken against any enemy and it will be shot down. Beside, announcing the status of the Radar Robot whether it is detecting nothing or detecting a friend or an enemy is one of the characteristics of this robot. The main control unit of this project is the PIC16F84A microcontroller.

The detection method used in this robot is an ultrasonic motion detector while RF transmitter and receiver are used to differentiate between enemies and friends. To have this Radar Robot functioning and rotating, two 360° servo motors are involved in designing this project so that the objectives of this project will be accomplished and the main aims will be achieved.