

# Solar Operated Grass Cutter

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**Abstract:** Automated Solar Grass Cutter is a fully automated grass cutting robotic mover powered by solar energy with solar panel that also avoids obstacles and is capable of fully automated grass cutting without the need of any human interaction. The system uses 10V batteries to power the mover movement motors as well as the grass cutter motor. We also use a solar panel to charge the battery so that there is no need of charging it externally. The grass cutter motors are interfaced to an 8051 micro-controller that controls the working of all the motors. It is also interfaced to an ultrasonic sensor for object detection. The micro-controller moves the mover motors in forward direction in case no obstacle is detected. On obstacle detection the ultrasonic sensor monitors it and the micro-controller thus stops the grass cutter motor to avoid any damage to the object/human/animal whatever it is. Micro-controller then turns the robotic as long as it gets clear of the object and then moves the grass cutter in forward direction again

**Keywords:** Automated Solar Grass Cutter, Solar Panel, Mover Movement Motors, Grass Cutter Motor, Micro-controller & Ultrasonic Sensor