

## ABSTRACT

### DESIGN AND DUAL AXIS *SOLAR TRACKER SYSTEM*

BASED ATMEGA 2560

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The use of solar panels is currently very much, the one of use for a street light source. However, the installation of solar panels was placed just facing one direction, it causes the energy generated by the solar panels are not optimal cause only at certain times of solar panels receive sunlight. So that the energy produced and maximized utilization of solar panels over again, then created a tool that is able to follow the movements of the sun and make the solar panel facing towards the sun. This tool uses a sensor 9 and 5 sensors are exposed to the sun-degree position, for the y-axis at an angle of  $30^{\circ}$ ,  $45^{\circ}$ ,  $60^{\circ}$ ,  $75^{\circ}$ ,  $90^{\circ}$ ,  $105^{\circ}$ ,  $120^{\circ}$ ,  $135^{\circ}$ ,  $150^{\circ}$ . On the x-axis sensor 5 is installed at  $50^{\circ}$ ,  $65^{\circ}$ ,  $90^{\circ}$ ,  $115^{\circ}$ ,  $130^{\circ}$ . In this tool there is a current sensor that is used to read the output current is generated on solar panels, and there is a voltage sensor that used to read the output voltage of the solar panel, then the current and voltage read by the sensor then stored on the memory card.

Keywords: Energy, Solar Panel, Dioda Photos , Data Logger.