

Time Controlled solar tracking system

ajay_bhargav, Mon Jan 21 2013, 04:34 am

[Time Controlled Solar Tracking System \(Assembly\)](#)

Hi Friends, Its been a long time since I've been to website. But There were few main things that I was suppose to do a long time back. Here is a new year surprise for you all. Viktor has share another project with us a great design with practical use. An 8051 based Solar tracker with source written in assembly language. Viktor explains basic operation of this project.

PRINCIPLE OF OPERATION

The circuit comprises of three sections:

- » light controlled circuit
- » counter for timer
- » switching circuit

1. Light controlled circuit:

This particular circuit controls other circuits. It puts the other circuit on or off depending the nature of the day. It comprises of LDR and transistor representation of smith trigger configured using two npn transistor(BC377) such that when there is a small potential difference across the LDR and variable resistor, The relay will be triggered to switch on other circuit. This circuit monitors day and night. The main function of this monitor is put off the device at night and turn it on in the morning again.

2. counter for timer:

Since sun start from the east at 6:45am and set at exertly 12:45pm, the light controller circuit put on the whole circuit automatically making the timer to initialize its 6hrs counting sequence.

3. switching circuit:

This circuit is mainly used to control the direction of panel using a DC Actuator motor. Microcontroller AT89C2051 gets input from east and west Light control circuit and adjust panel to face sun direction.

Type of motor used:

24-36v d.c Actuator from super jack used in tv satalite dish polar adjustment

You can download project here:

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