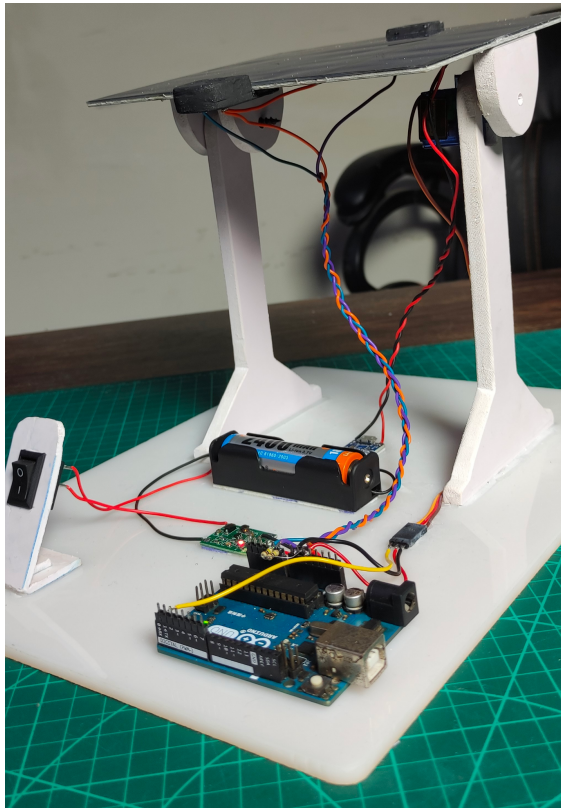


## Sun tracking solar panel examples

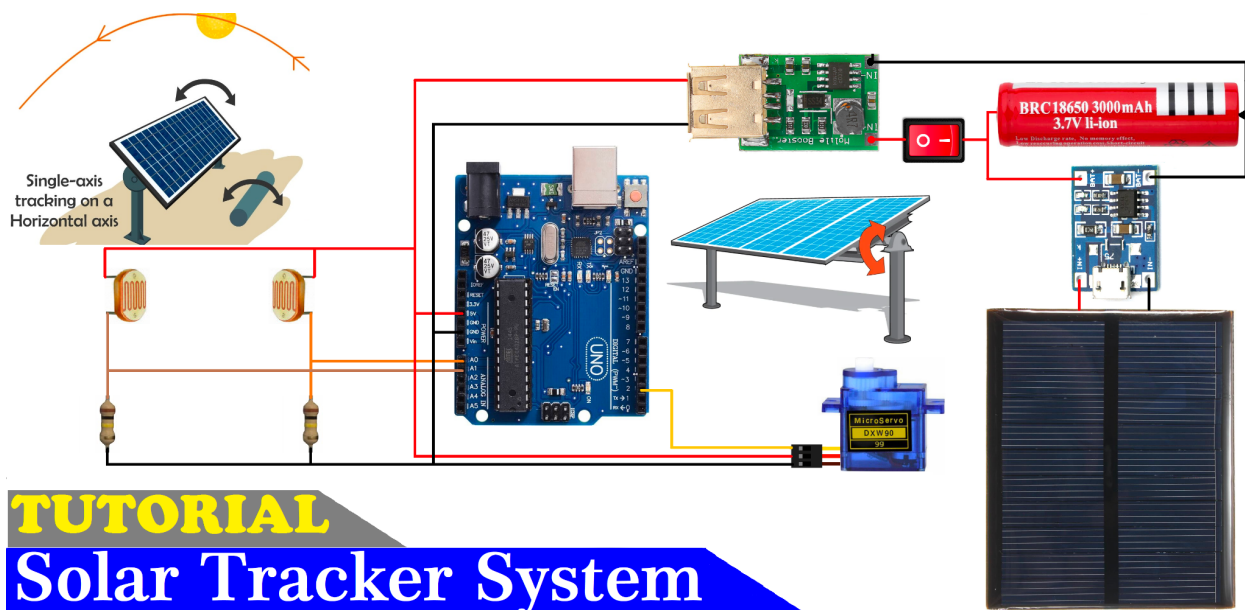


### Arduino based Sun Tracking Solar Panel

#### Components:

- LDR (photoresistor) --decreases resistance with respect to receiving luminosity (light) on the component's sensitive surface
- Arduino UNO -- microcontroller board
- Micro-servo motor -- 180 degrees rotation
- Battery + solar panel
- Resistor
- Arduino code on flash drive

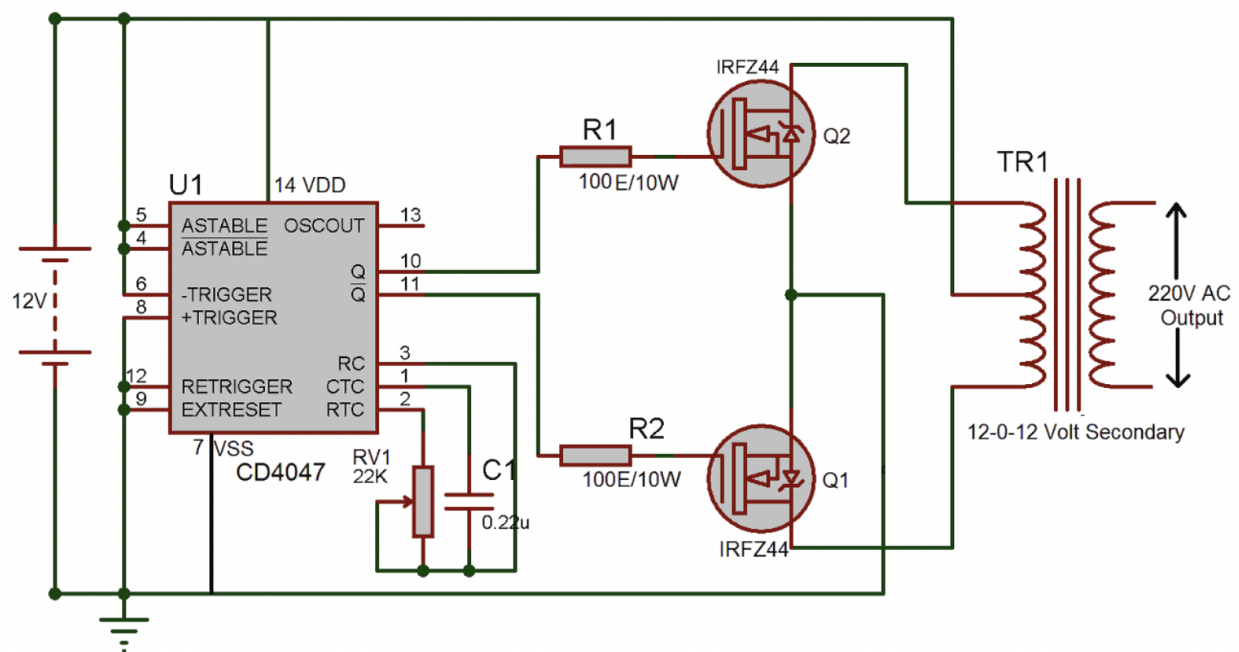
Link: <https://create.arduino.cc/projecthub/embeddedlab786/arduino-based-sun-tracking-solar-panel-03ad3f>



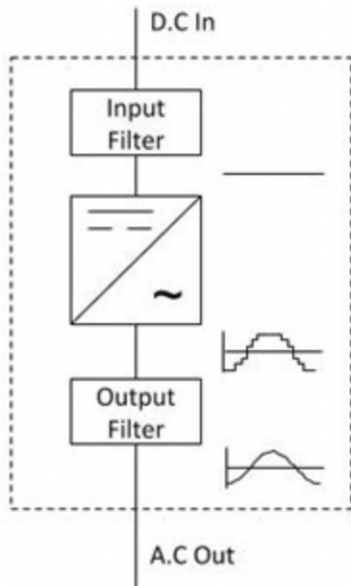
## Inverter circuit

Components:

1. IC CD4047 -- CMOS
2. IRFZ44 Power MOSFET – 2
3. 12-0-12/1A Secondary Transformer
4. 22K $\Omega$  Variable Resistor
5. 100 $\Omega$ /10W Resistors – 2
6. 0.22 $\mu$ F Capacitors
7. 12V Sealed Lead Acid Battery



Converting from DC to AC is more complicated because the circuit needs some kind of oscillator that reverses the current direction at the required frequency. Most inverters rely on *resistors, capacitors, transistors*, and other circuit devices for converting DC Voltage to AC Voltage.



## Why Do We Require Changing from DC to AC?

Most of the vehicles use their power from a battery of 12V. But in some cases, a 24v battery can be used. It is very significant to know the vehicle voltage due to the voltage rating of the inverter we choose must equal the battery's voltage.

In any case, the battery gives DC, which means the flow of current will be continuous from the batteries negative terminal to the positive terminal. In DC, the flow of current will be only in one direction. DC is extremely helpful, however, batteries can normally provide somewhat DC power with low voltage. Several devices require extra power to work correctly than DC can offer.

Thus, this is all about DC to AC converter, how to convert dc to ac. A converter enhances the DC voltage to alter it into AC before transmitting it out to give current to a device. Primarily, these were intended to perform the reverse for converting AC to DC. Because basically, these converters could be work in opposite to achieve the reverse effect, this is called as inverters.