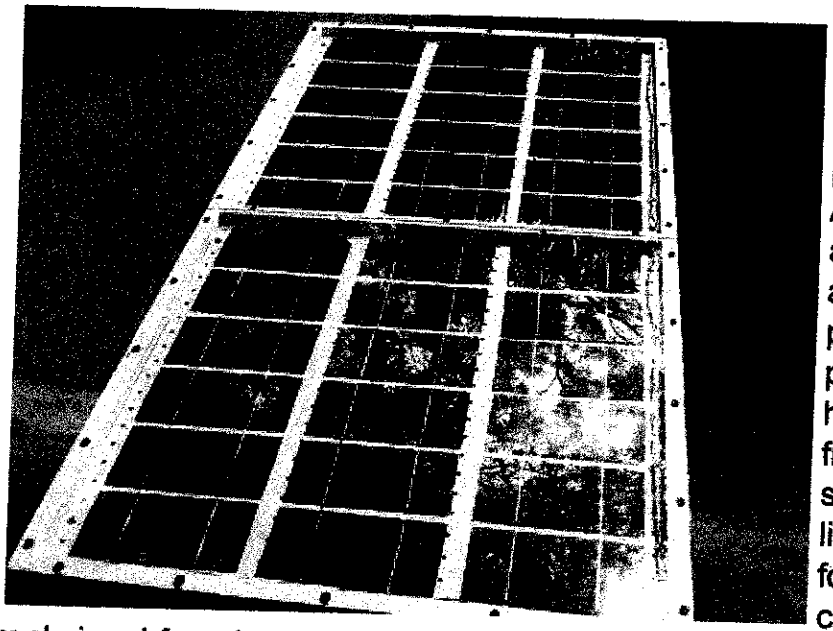
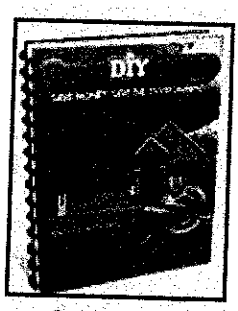
How I built an electricity producing Solar Panel

It was easy. You can do it too.



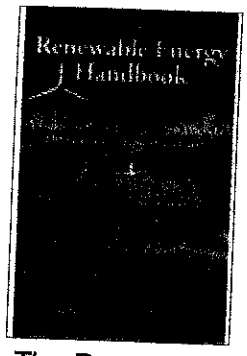
Several years ago I bought some remote property in Arizona. I am an astronomer and wanted a place to practice my hobby far away from the sky-wrecking light pollution found near cities of any real size. I found a great piece of property. The problem is, it's so remote that there is no electric service available. That's not really a problem. No electricity equals no light pollution. However, it would be nice to have at least a little electricity, since so much of life in the 21st century is dependant on it.



Complete Step-by-Step Solar Panel Guide

Video Series Building Homemade Solar Panels

I built a wind turbine to provide some power on the remote property. It works great, when the wind blows. However, I wanted more power, and more dependable power. The wind seems to blow all the time on my property, except when I really need it too. I do get well over 300 sunny days a year on the property though, so solar power seems like the obvious choice to supplement the wind turbine. Solar panels are very expensive though. So I decided to try my hand at building my own. I used common tools and inexpensive and easy to acquire materials to produce a solar panel that rivals commercial panels in power production, but completely blows them away in price. Read on for step by step instructions on how I did it.



The Renewable Energy Handbook

Let me state up front that I probably won't be able to help you out much if you decide to build your own solar panel(s). This web site has become insanely popular, often taxing the bandwidth limits of the server. I get dozens of requests for help each day. I simply don't have time to answer the majority of them. Most of the questions and requests I get are the same ones over and over again. I have crated a FAQ to handle these repetitive questions. Please read it before emailing me. Simple questions, not covered by the FAQ,which only require a quick and simple answer may get replies if time permits.

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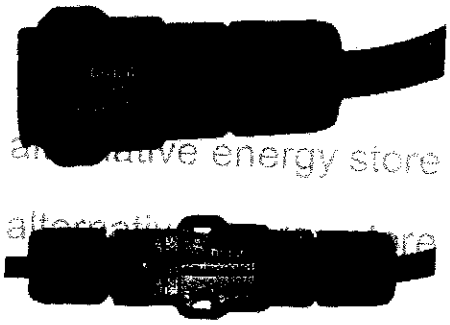
This key is required to disconnect MC Solarline 2 Locking Connectors found on many newer solar modules.



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Did you mean: sky genmc2 **mfa** 6ft

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6' MC2 Connector Extension #10 AWG (6 foot cable) Use these Solarline 2 locking connector cables between PV arrays with Multi-Contact cable outputs, and junction boxes or grid-tie inverters. Use them to extend module output cables or cut anywhere along the wire to obtain the needed length of male...

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	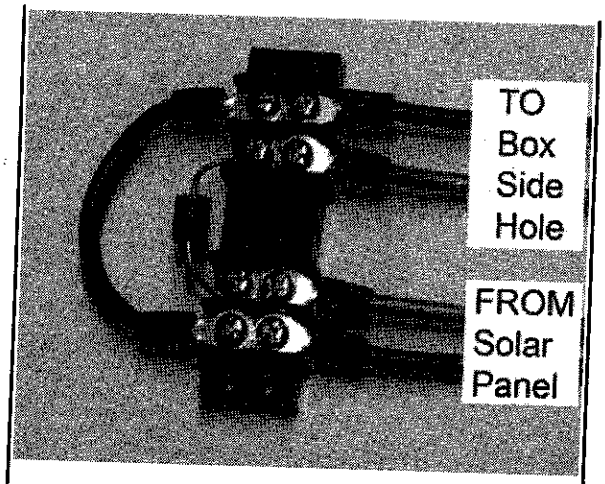 Visual Diagram	Junction Box
STEP 3		1. Finally, apply enough of the Silicone sealant/adhesive to fill in the hole in the bottom and side of the enclosure box. Allow the sealant/adhesive to dry.

References

Abramowitz, M., Davidson, M., Neaves, S. (2003). *The Frequency and Wavelength of Light.* Retrieved from http://micro.magnet.fsu.edu/optics/lightandcolor/frequency.html.
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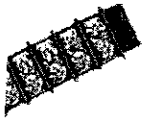

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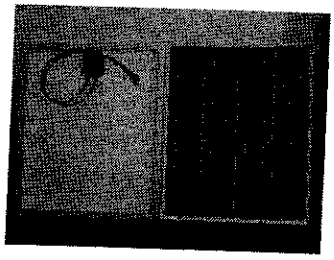

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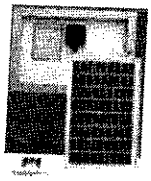
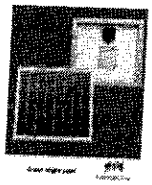


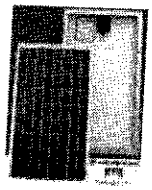
Everbright 5 watt solar panel

Regular price: $47.95
Sale price: $39.45



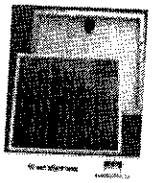
Everbright 10 watt solar panel

Regular price: $81.48
Sale price: $67.90



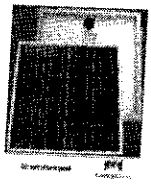
Everbright 20 watt solar panel

Regular price: $142.74
Sale price: $109.80



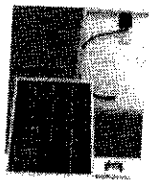
Everbright 40 watt solar panel

Regular price: $218.40
Sale price: $168.00



Everbright 50 watt solar panel

Regular price: $222.00
Sale price: $185.00



Everbright 60 watt solar panel

Regular price: $265.50
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Everbright 120 watt solar panel

Regular price: $430.49

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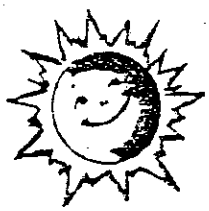

SOLAR COOKING

by Priscilla J. Mays and Dianna Nurczyk
Maricopa County Extension Agents, Home Economics

The southwest is a natural place to use solar cooking. Food that can be cooked in a conventional oven can also be cooked in a solar oven at the same temperatures.

A concern with solar cookery is food safety. The solar cooker must be preheated prior to each use. It is important to maintain adequate temperatures during the cooking process.

There are a variety of solar cookers in use today. These hints relate to all solar cookers.

1) Use a solar oven that will reach and maintain average oven temperature of at least 250 degrees F. The amount of insulation or reflective ability influence the temperature reached in the oven.

2) Preheat the oven to the temperature needed to cook the food. The temperature will probably drop 25-50° when you put the food in the oven and will rise again slowly.

3) Turn the oven and adjust reflectors to concentrate maximum solar radiation; preferably, you should refocus at least once every hour during the cooking process.

4) Consider weather conditions when cooking with solar ovens.

5) Be sure food is properly protected from insects, soil, and wind.

6) Any kind of cookware can be used. However, dark, light-weight cookware heats up faster.

7) Always preheat the solar oven before cooking.

8) Use a thermometer in the oven to be sure it maintains the correct temperature.

9) Use all the sanitary principles recommended for any food preparation.

10) Most recipes used in conventional ovens can be used in the solar oven. However it may take longer to cook.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Roy S. Rauschkolb, Director, Cooperative Extension Service, College of Agriculture, The University of Arizona.
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