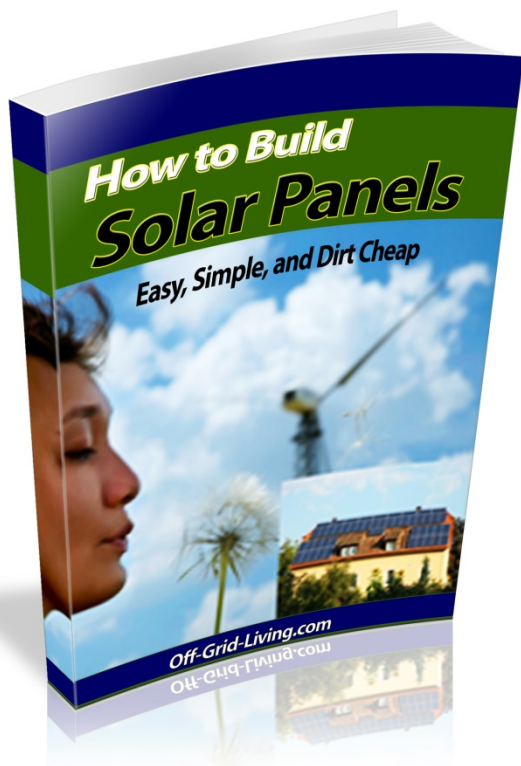




ff-Grid-Living

In An Urban and Suburban World



Lesson #13 ...

Wiring your Solar Panel

The Disclaimers, Legal Stuff and Butt-Covering Section:

Before attempting to build a solar system for your entire house, take my course "Home Energy Made Easy" Go here: <http://Off-Grid-Living.com> I'll give it to you for free for being a member of this course. Understanding the concepts in that course will save \$1000's of dollars when you go to build your system.

This is but one small section of a complete action plan for building solar panels dirt cheap. Which is one small section of a course on going off the grid in Urban/Suburban America. You can learn how to

- Grow your own food year around, no matter where you live.
- Slash your energy and living expenses by 50% or more.
- Create your own fuel
- Finding economical shelter
- Alternative methods of (Legally) making money
- How to live anonymously

Check out <http://Off-Grid-Living.com>

NOTICE: You Have the Right Give This To Anyone You Want!

But You Can't Resell this Report for your own profit!

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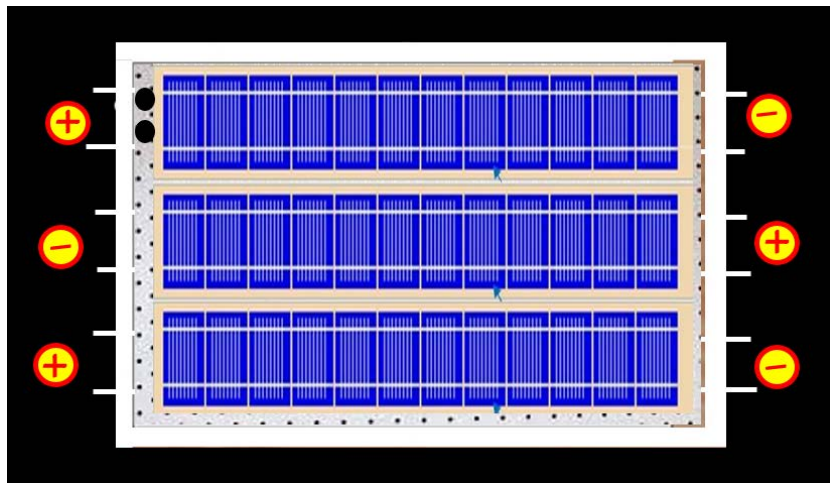
Introduction

The most important thing to take away from this lesson is..

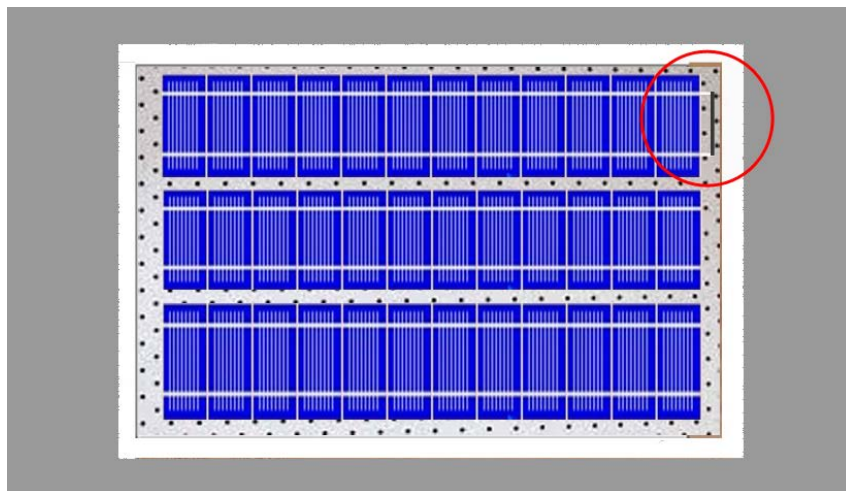
Taking this part step-by-step makes it eas.

Now it is time to connect your strings into a series.

The easy way to determine which end of the string is the negative connection and which end is the positive is, whichever end has strips of tabbing wire FROM BELOW the cells is the positive end. Whichever end has strips of tabbing wire ABOVE the solar cell is the negative end.



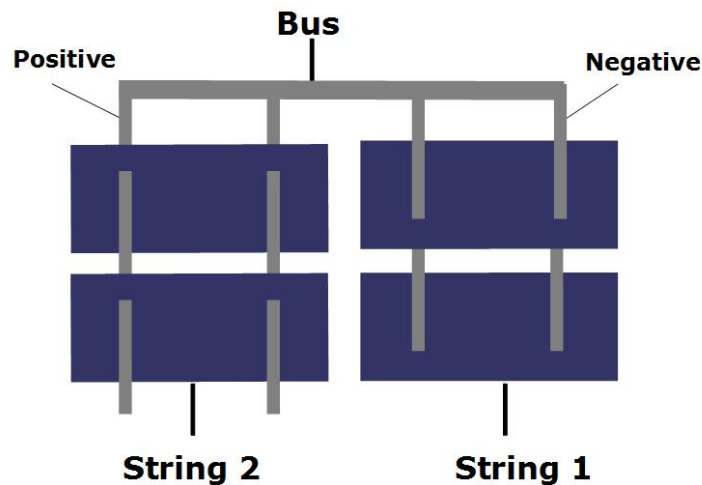
Looking at this diagram, were going to solder the bus wires to the tabbing wire. The horizontal wires across the top and bottom are called the “bus wires” and we’re going to hook them up next.



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To correctly connect the two strings together you will have to use bus wire and you will have to solder them together. Connect the negative end of the first string to the positive end of the second string with a piece of bus wire.

Simply place the bus wire either on top of, or beneath the tabbing wire and apply solder to join the wires together. Trim the free tab wires so that the ends spanned the width of the bus wires but no more. I then applied flux to each bus wire and soldered all the tab wires. What you're basically doing at this point is interconnecting a number of small solar cells and creating one large solar cell. (or solar panel)

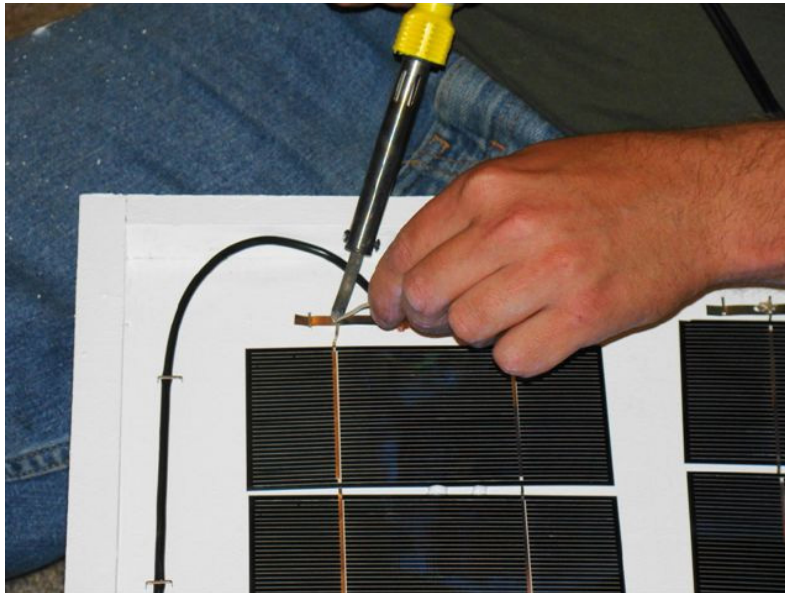


So you're going to connect a long piece of bus wire connecting the first string of solar cells to the second string.

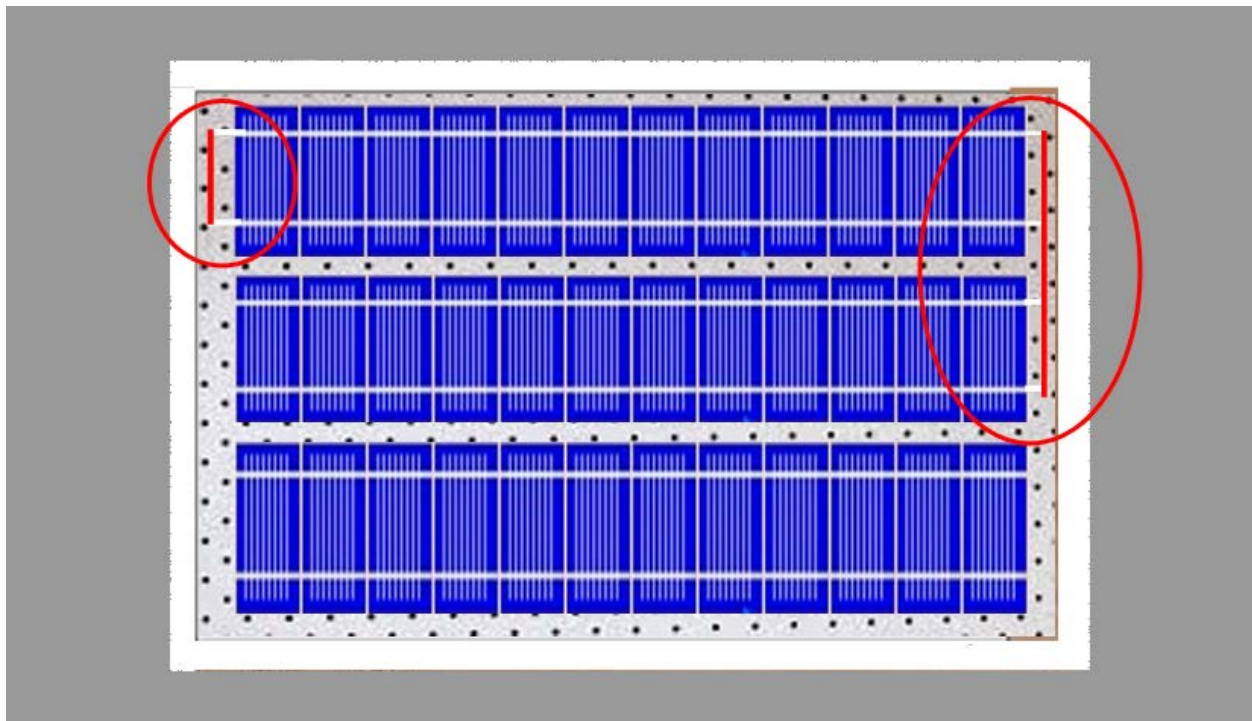


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Here's a close up of connecting the bus wires to the tabbing wire.

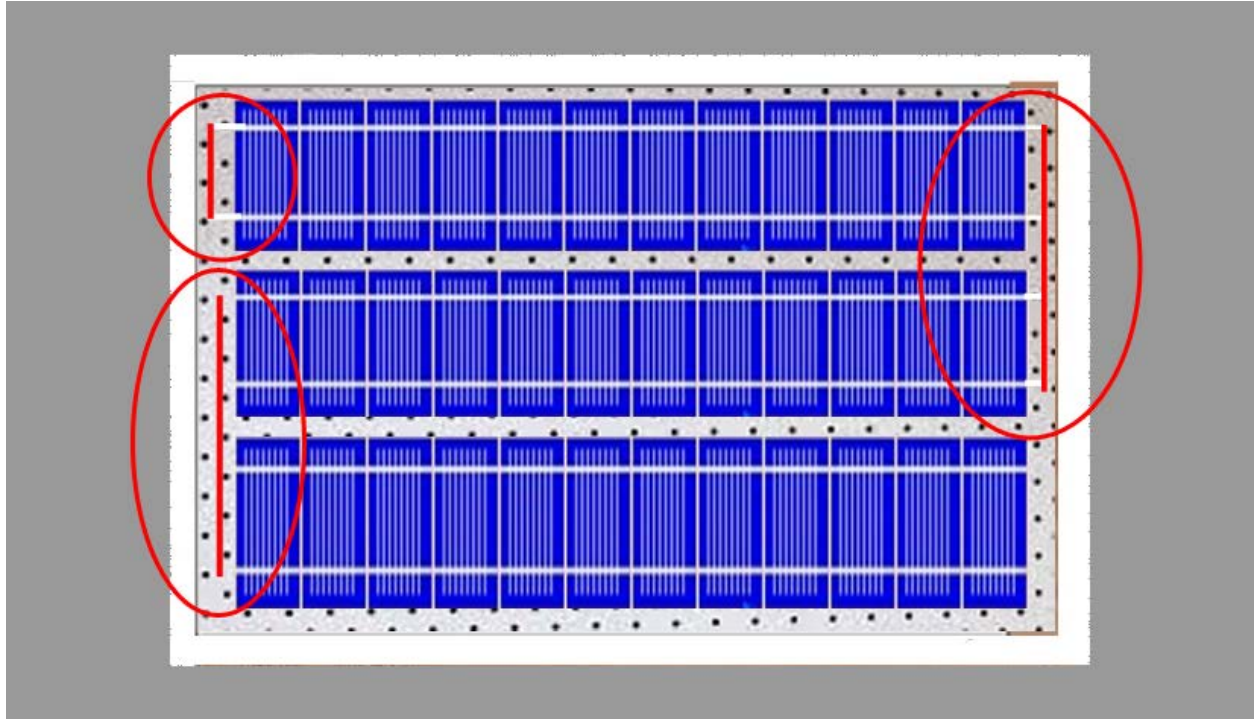


Here's an overview of how to connect them between strings.

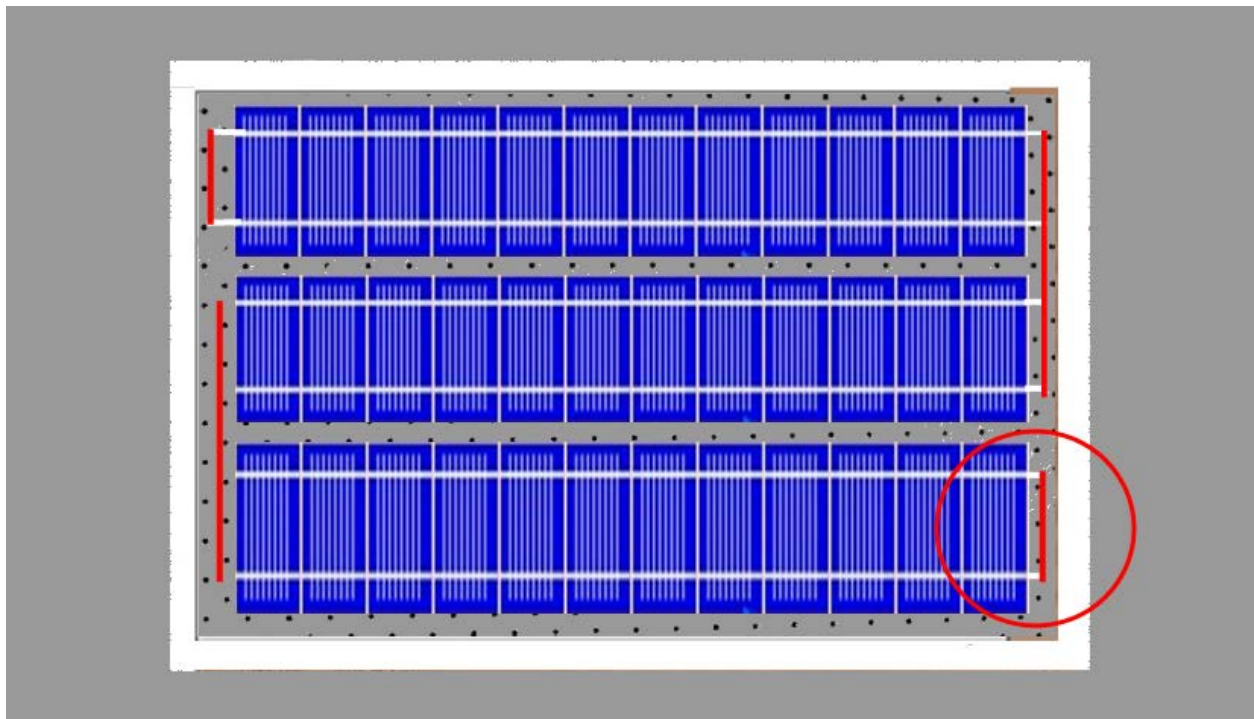


Continue soldering the series together

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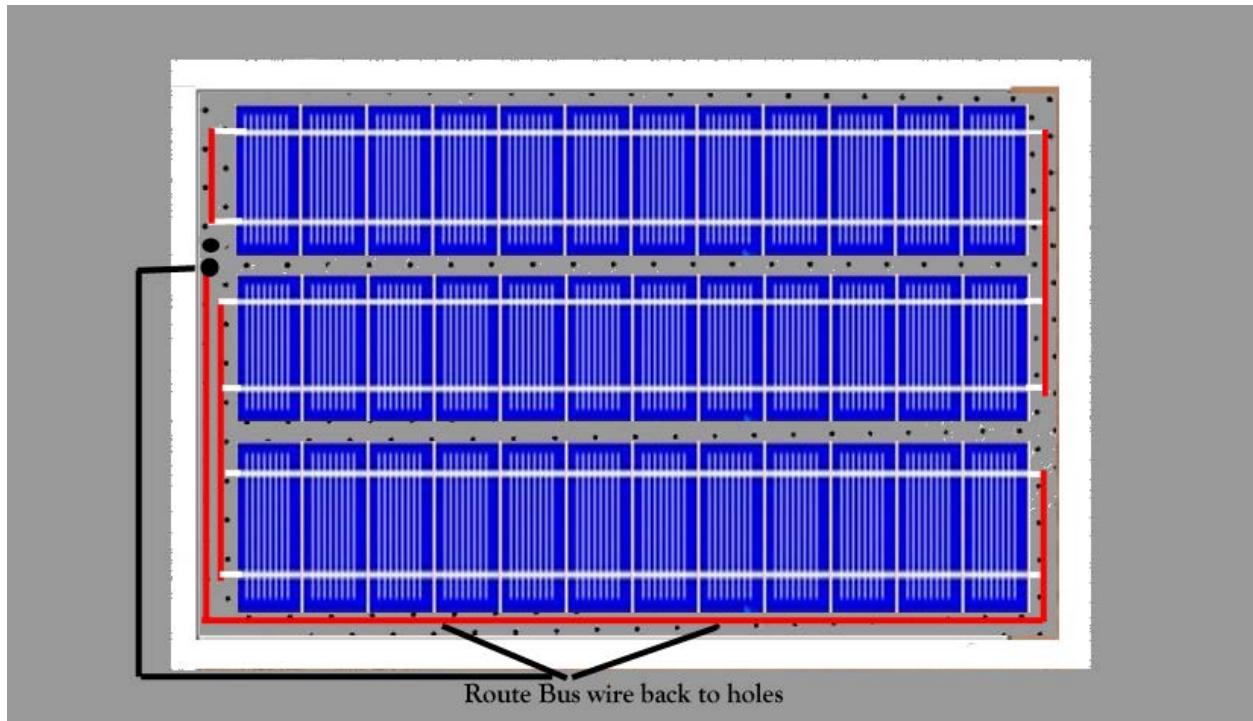
The last bus wire should be negative



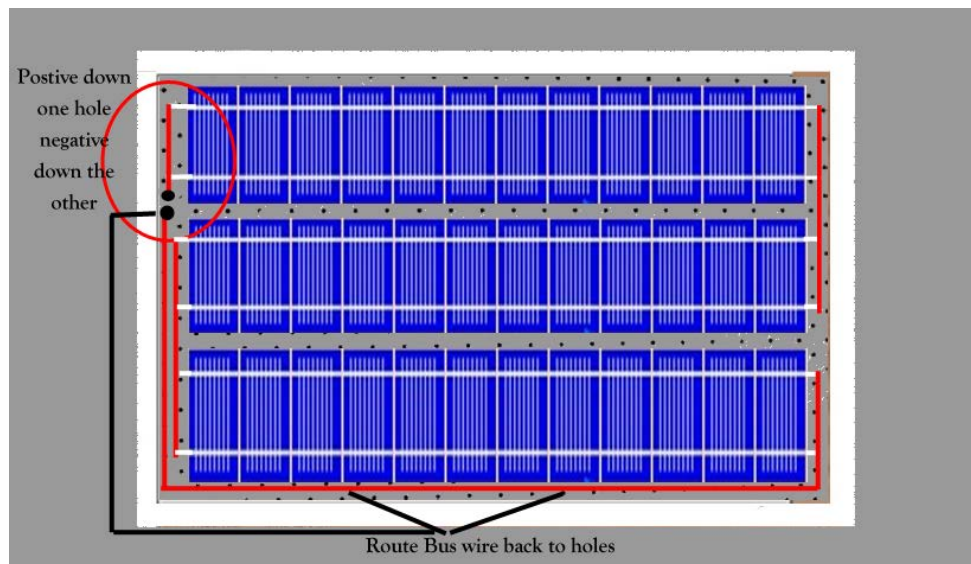
After soldering all the bus wires in place you will need to route the negative ends to the two holes you drilled in the frame in step 1. You might need to solder a longer piece of

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bus wire and run that bus wire back all the way from one end of the panel, along the frame , back across the front, to the two holes.

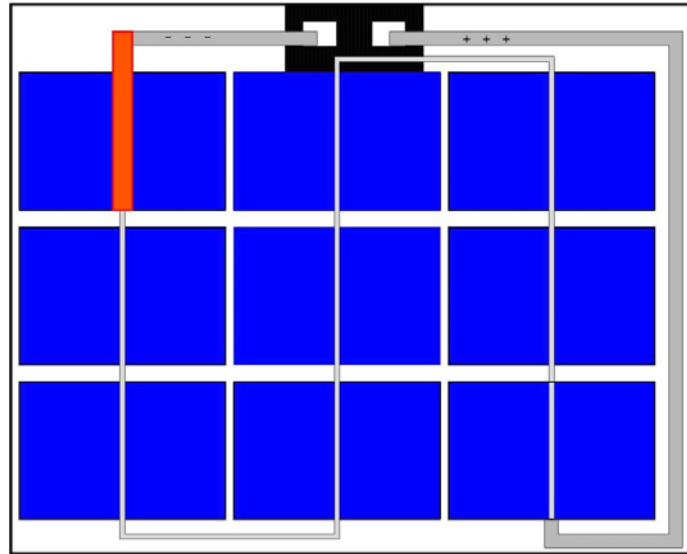


The positive wire runs down 1 hole, the negative down the other hole. Be sure to run about 4.5 inches of bus wire through both holes in the frame. You be using the extra wire later.

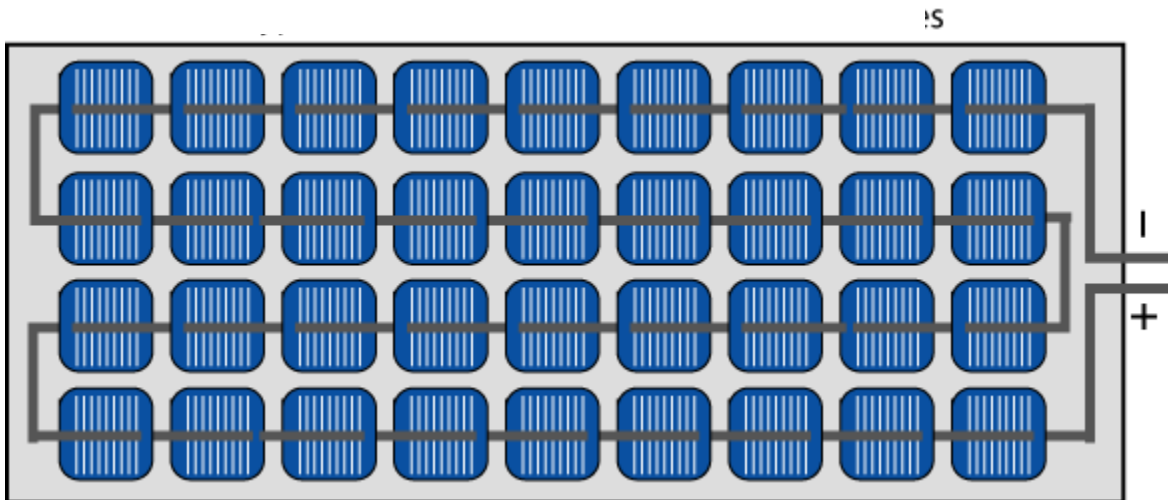


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A close up might look something like this.



An alternative method of wiring the solar cells, which might be easier for some, is like this:



Whichever method you use, save yourself some grief, and plan out your wiring arrangement ahead of time before fitting your 3 solar series into the frame.

That's all there is to it. The hard work is now completed.

Once completed, be sure bring the frame and solar cells out into the sun to check the amount of volts you are getting from the unit with the multimeter. If you checked the cells at regular intervals, there should be no surprises now. If you're not getting the desired voltage, then chances are your tabbing wire came loose from a cell and will

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need to be resoldered. Now is your last chance to get it right before it becomes a major issue down the road.

Remember you can always go to off-grid-living.com, sign up for our free membership and you'll get a ton of free tips, info, and videos on all aspects of living off grid in urban, suburban, and rural settings. There's no need to wait until you out in the wilderness. Start now, no matter where you live, putting into practice all the skills you'll need.

PS...Don't forget you can get personalized coaching at Off-Grid-Living.com/ For some this is the ideal way to get hands on experience as well as personal attention needed to make this work for you.

Coming Up Next ...

Lesson #14: "Installing the Plexiglass"

In the next lesson we'll be installing the plexiglass and finishing up your solar panel.