

# Simply Solar

BUILDING YOUR OWN SOLAR PANELS AT HOME

## **Acknowledgment**

I'd like to thank my entire family for their support throughout the years. Alternative energy has always been a passion of mine—and my family's support of my desire to bring affordable energy to everyone—has given me the foundation that I need to be creative, to experiment, and to continually develop new ideas. In this time of global energy challenges, it's that kind of family support that allows new ideas to flourish.

## **About the DVD**

The DVD you are about to watch was developed with the DIY (do-it-yourself) personality in mind. Use this DVD as a starting place for finding your own best method for putting together your own solar panels. As you watch this DVD, I hope you'll feel like, "yes, that's something that I can really do."

## **My Website**

For more information, visit [www.thesolarguitar.com](http://www.thesolarguitar.com)

## **FAQ**

### **Getting Started**

Q. How long will it take me to get the hang of making my own solar panels?

A. Your first panel will be a challenge. Your second panel will be easier

and your third panel will be a breeze. By the time you've built ten panels, you'll have taken a big step forward in developing self-reliance for your own energy needs.

Q. I'm scared of the cost of solar power.

A. Solar can be very expensive—but I can teach you how to build a small system for about \$200.

Q. What kind of panel should I make first?

A. I suggest that you start small. Make one panel—and see what it can do for you. And then keep building.

Q. What can I do with one 36-watt solar panel?

A. You can nicely run a 12 volt fan directly from your panel. You can also slowly charge a 12-volt battery to full capacity.

### **Real-Life Solar Applications**

Q. I want to do more than run a fan and charge a battery—help!

A. When you add a charge controller and an inverter, you can change the 12-volt battery power (DC) to 120-volts (AC.) Then the fun stuff starts to happen—you can plug your drill, cell phone charger, television, or even your laptop charger into the inverter. And you can use them.

Q. How long can I run the items you've mentioned before I run out of power?

A. Well, it all depends. A cell phone charger doesn't use much power at all, while a laptop will need more power. Use common sense—turn your items off when you're finished using them to save battery power.

Q. Can I run my items off stored power at night?

A. Yes, you can. This is why you store the sun's energy in your battery during the day. However, remember: use your electronics gently at night. When the sun's not out, your solar panel/battery is not being recharged.

Q. I love this idea and want more power so that I can run more items, maybe for a longer period of time. What do I do next?

A. You build more panels.

Q. I need to build bigger and more expensive panels, right?

A. Nope. Just keep building the same size panels—but add more batteries, a higher amp charge controller, and a larger wattage inverter. Pay cash as you go, add one item at a time—and before you know it, you'll be working your way to being "off the grid!"

Q. Can a solar panel run my air conditioning?

A. Not by itself—just like your lawn mower engine can't run your car. However, hundreds of solar panels linked together can provide energy needs for a high rise building.

Q. I want to know more.

A. There are all kinds of great resources out there on solar power—go to the library, take workshops from a wide range of people, and experiment. Alternative energy is still a wide open field—no one has even begun to tap into the potential that's available to us.

## **Supplies**

Q. Where can I buy solar (photovoltaic) cells?

A. Google solar cells, and you'll find lots of purchasing options online. eBay is another great resource.

Q. How much should I expect to pay for solar cells?

A. The cost will vary by how much amperage you need. At the time of this writing, I've been able to buy 36 three-amp cells (3"x6") on eBay for about \$100.

Q. How much should I pay for an inverter, and what size should I buy?

A. You can buy a 185 watt inverter (good for a small fan, cell phone chargers, laptop charger) for around ten dollars.

Q. Where do I buy an inverter?

A. Look on eBay. Or, check a local auto parts store or even a truck stop.

Q. How many solar cells should I purchase to make one solar panel?

A. To make one 60-watt solar panel, you'll need about 36 solar cells.

Q. Where do I buy the back board for my panels?

A. Look around your home and see if you have an old board that you can recycle. You'll need a board that's about SIZE. Of course, you can always make a trip to your local lumber yard for a board as well. I always

suggest painting your back board with three coats of sealer or outdoor paint to keep your board moisture free.

Q. Where do I buy my spacers?

A. Look for inexpensive dowel rods at your local lumber or craft store. I use a 1/8"x36" dowel.

Q. Where do I buy glass for the front of my panel?

A. Again, see if you can find a piece of glass to recycle. Or, go to your local glass store (look in the phone book for options in your area) and ask them to cut either a piece of safety or tempered glass to the right size for your project.

Q. Where do I buy clear silicone?

A. You can buy clear silicone at your lumber yard or local hardware store.

Q. Where do I buy the panel framework?

A. There are many different options—be creative! I use pipe insulation (split on one side) purchased from a lumber yard.

Q. Where do I buy electronic items for a panel?

A. Check with your local electronics store—they'll probably have everything you need.

Q. Where do I buy an inverter?

A. Look on eBay. Or, check a local auto parts store or even a truck stop.

Q. Where do I buy a battery?

A. Check at your local auto parts store or any discount store that sells batteries.

Q. Where do I buy a charge controller?

A. eBay is probably your best bet. You'll be able to choose from dozens of different kinds.