

Dear Friend,
Thanks for purchasing the All Season Solar Cooker Camper.

This is the 14th year of development for the ASSC Camper. Your Camper model has gone through many improvements over the years.

I am constantly trying to improve the design and to help fellow cooks. To that end, I maintain a website (www.allseasonsolarcooker.com) where you can read about the latest improvements and link to all the videos regarding this design.

You can also visit YouTube and search for the All Season Solar Cooker.

Please enjoy your cooker. If you have any questions please contact me at jimjola@gmail.com, or find more contact information on the site.

I am a one person company and did not grow up using computers or the internet. As such, I am not particularly good at advertising in the digital age.

But I do have many happy customers and many good reviews.

I believe that word of mouth is the most effective advertising. If you are satisfied with your cooker, please tell your friends. If you are not satisfied with your cooker, please tell me.

And stay up to date. Visit the All Season Solar Cooker website. I try to post at least once a month regarding new discoveries that are shared by fellow users. Or join the users group at www.allseasonsolarcooker.com.

Thanks again for purchasing my design

Happy Cooking

Jim La Joie
Designer
All Season Solar Cooker

P.S. Be sure to **read, and heed**, the information on the reverse of this page. It will help with your first cooking experiences.

Got all your parts?

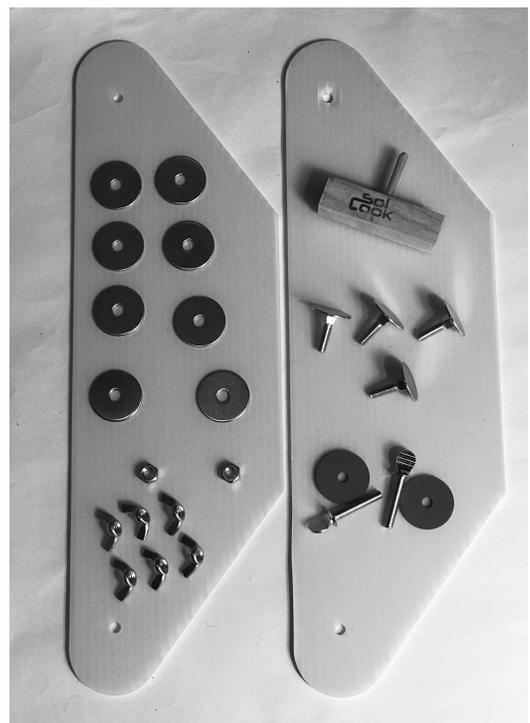
The kit includes:

Cooker body

Elevation bars (2)

Rack

Parts bag: 2 Hex nuts, 2 rubber washers, 8 metal washers, 4 elevator bolts, 2 thumb screws, 6 wing nuts, 1 Sunlight

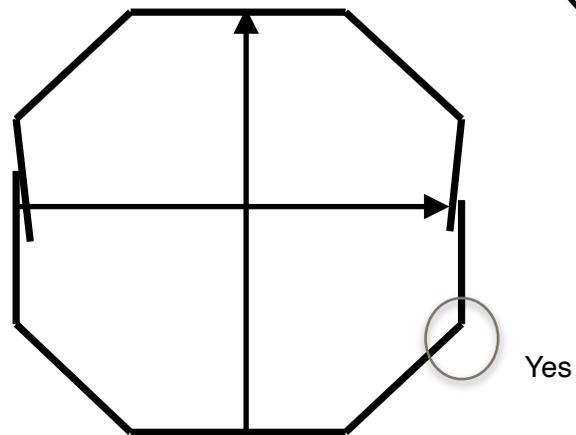
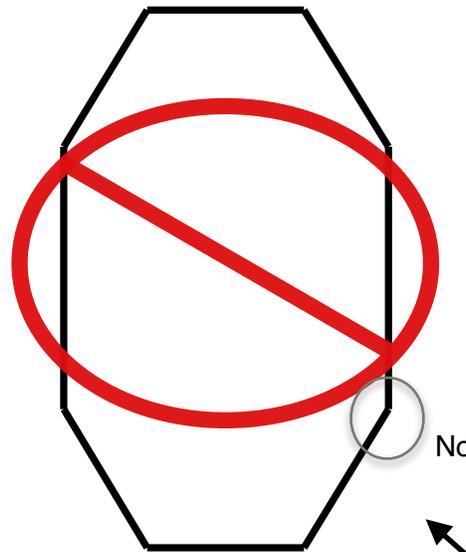


For proper performance it is important that the cooker be "broken in". The top image shows the typical shape of the reflectors when the cooker is first assembled. This is because the plastic has a memory and will try to lay out flat - resulting in the top shape. The cooker is elongated and will perform poorly.

The bottom image shows the correct shape for the cooker's reflector array. To achieve this shape, spend some time folding and refolding the scores. Flexing the folds, then flexing the entire array when assembled, will achieve the proper shape.

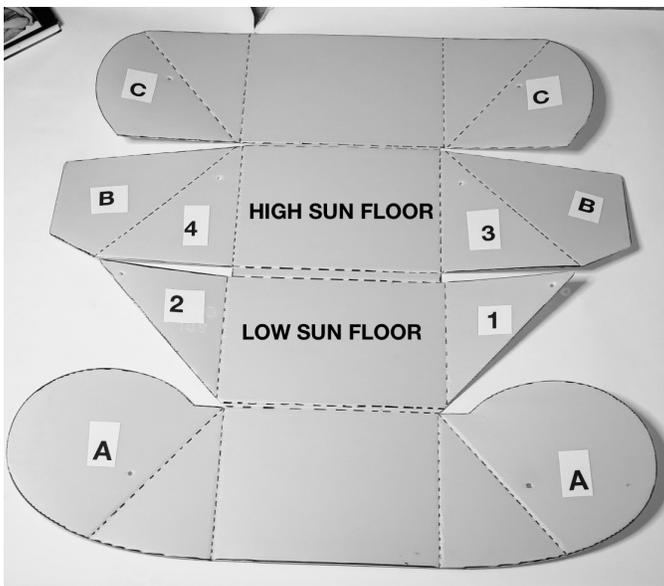
Improper shape is almost always the cause for poor performance of newly constructed cookers. Proper shape will increase cooking temperatures by about 100 degrees.

If you are not getting the temperatures that you expect, check the shape then try again

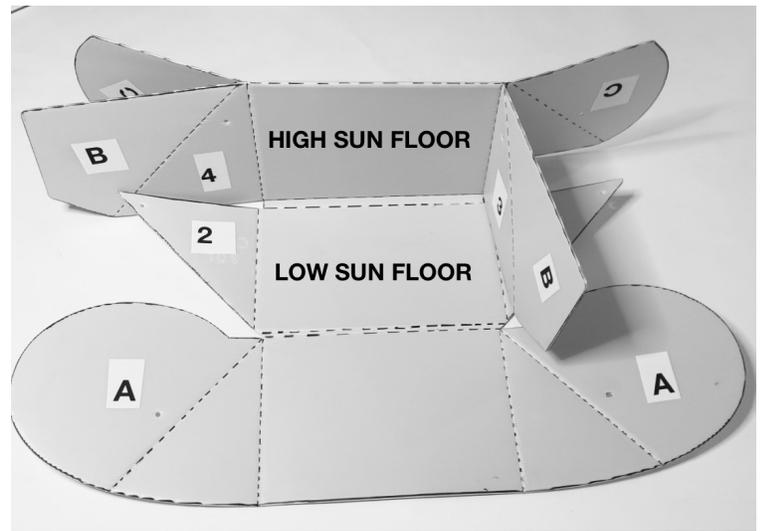


28" tall and 28" wide, approximately

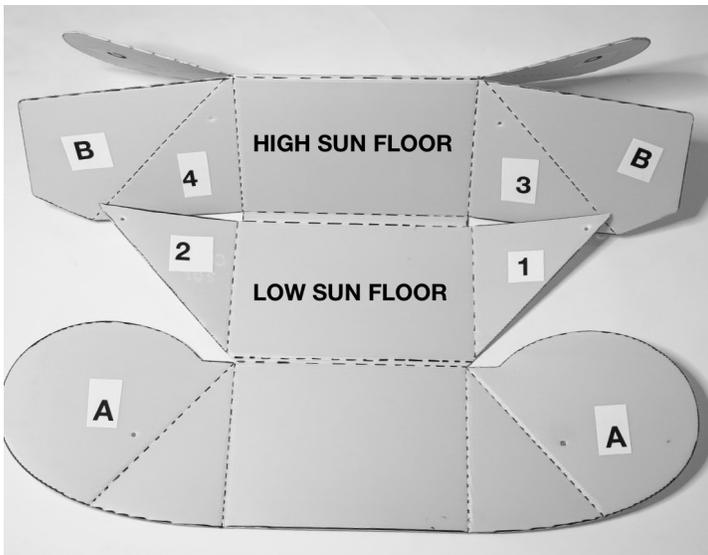
The fold that needs the most work is shown in the top diagram, circled. This fold should be bent back and forth several times. Fold it all the way in each direction. Do this before you assemble the cooker. Press down with the palm of your hand against the fold. The more time you spend here, the better your initial results will be.



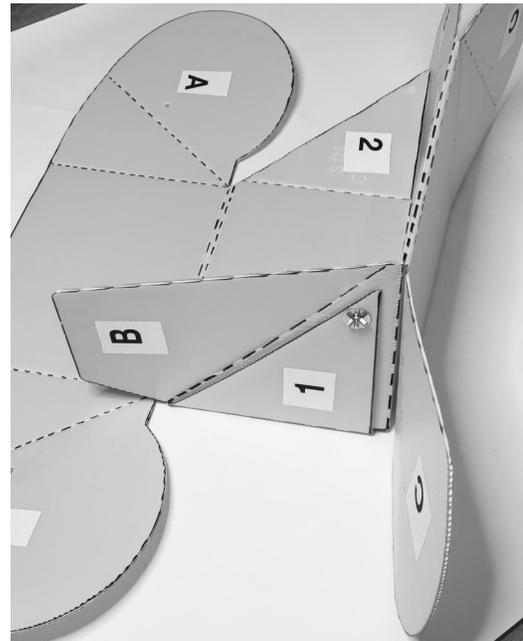
Step 1 Lay out your cooker shiny side up. Use this image to identify the panels and reflectors. Before you begin assembly, make sure that you have folded all the panels thoroughly. Panels A, C, 1, 2, 3, 4 all fold inward. Panels B fold outward. The more time you spend on this step, the better the end result.



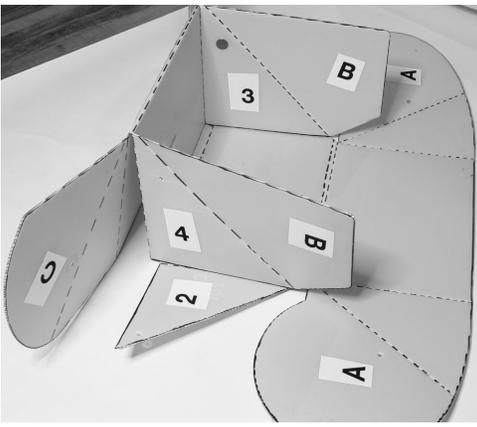
Step 3 Fold panel 3, B inward, as shown, and insert an elevator bolt from the inside of the cooker to the outside using the hole in panel 3



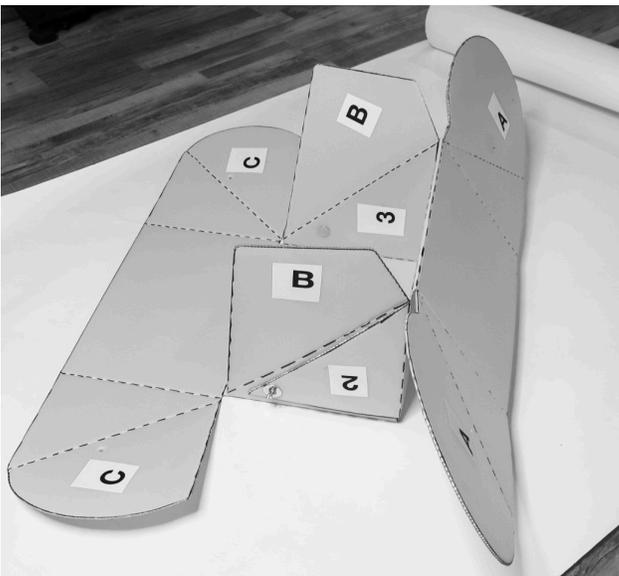
Step 2 Lift the Low Sun Floor as shown. Panels B, 4, the Low Sun Floor, 3 will all lift together. Study the picture. Do this correctly and everything else will be easy.



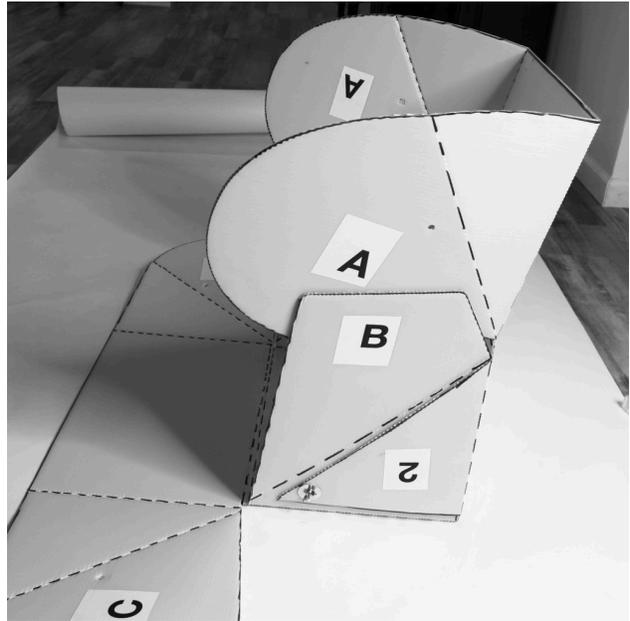
Step 4 Turn the cooker so that panel 1 is visible. Fold panel 1 upward against panel 3. The hole in panel 1 will line up with the elevator bolt in panel 3. Insert the bolt through panel 1 and secure with a metal washer and wing nut.



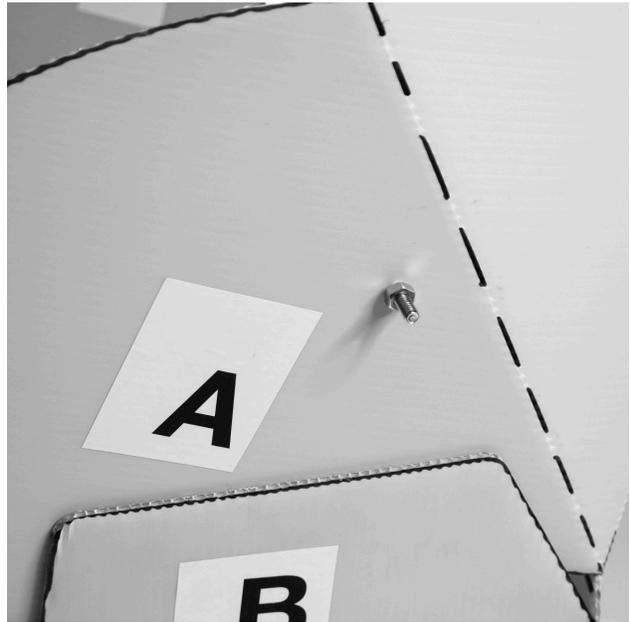
Step 5 Now repeat steps 2, 3 and 4 on the opposite side of the cooker using panels 4 and 2. Align the holes in the panels, insert an elevator bolt from inside to outside and secure with a metal washer and wing nut, as shown in the photos above.



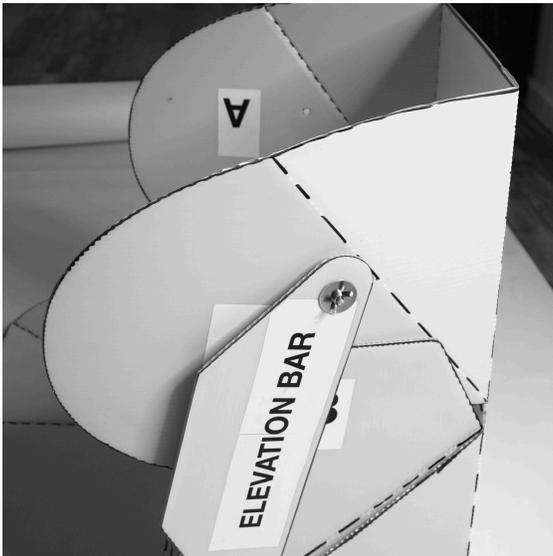
Step 6 Check your work. Your progress so far should look like the photo above. This is a good time to Fold the B panels outward again. The material is very durable. You will not harm it by flexing



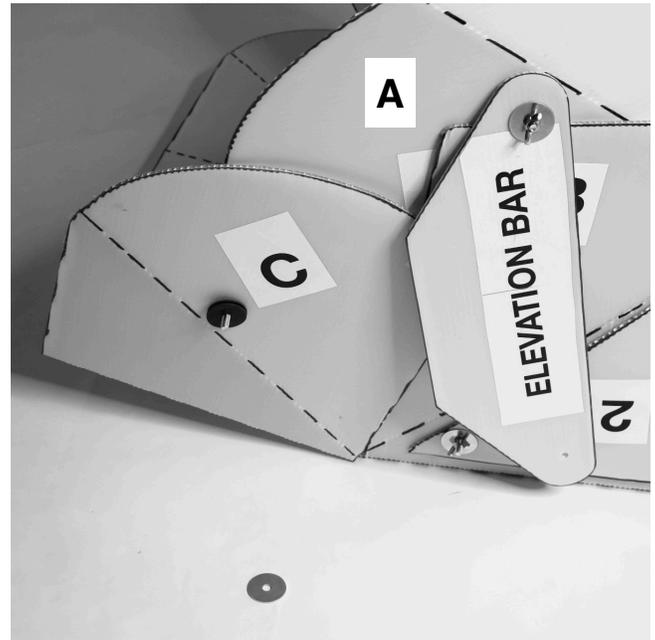
Step 7 Lift panel A and fold it to the inside of panel B. The layering of panels A, B and C is important. Be sure to get them in the correct order. Panel A will fold inside panel B, as shown. Panel C will fold outside panel B.



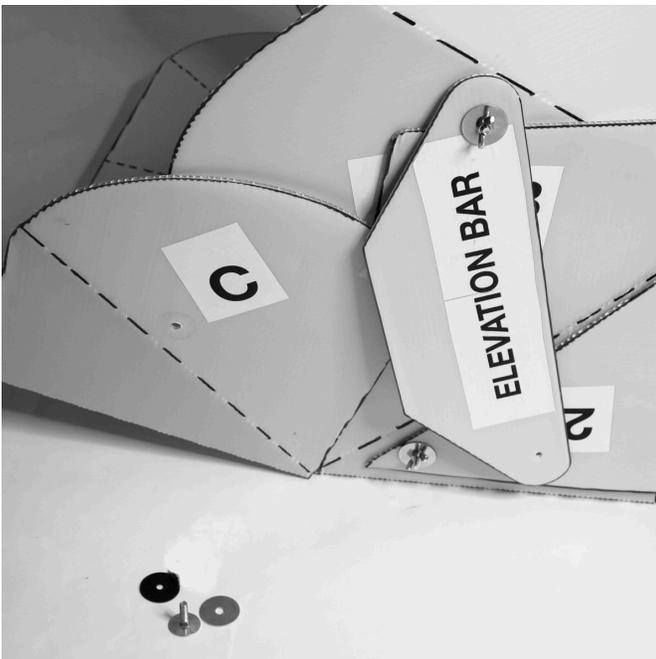
Step 8 Insert an elevator bolt from the inside of the cooker to the outside. Attach a hex nut as shown



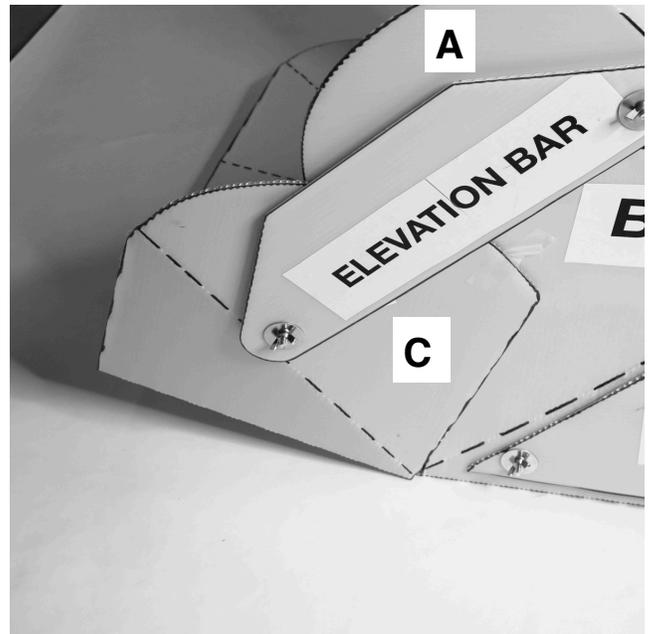
Step 9 Place an elevation bar on the elevator bolt and hex nut on panel A. Add a steel washer and wing nut. This will secure the elevation bar.



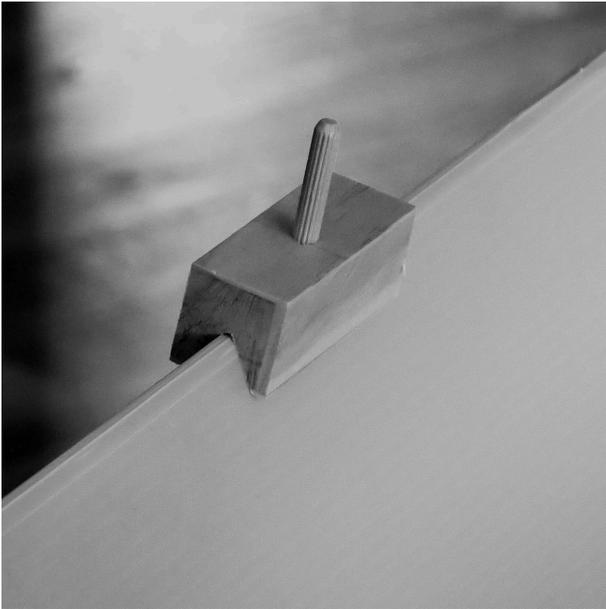
Step 11 Insert a thumbscrew with washer from the inside to the outside of panel C. Install one (1) rubber washer, as shown.



Step 10 Fold panel C upwards. Fold panel C over panel B and under the elevation bar, as shown. The panels should be layered as follows: Panel A inside panel B, panel C outside panel B, Elevation bar outside panel C. Please check your work. This is an important step.

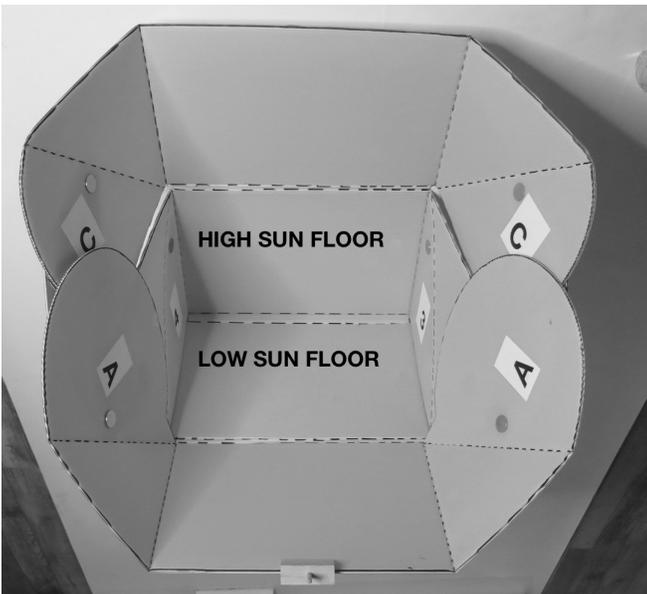


Step 12 Attach the elevation bar and secure with a steel washer and wing nut. Do not over tighten. This combination of rubber washer, steel washer and wing nut will serve as the “brake” to hold the adjustment position of the cooker. Release the wing nut to make adjustments, tighten the wing nut to hold position. Now, attach the elevation bar for the opposite side of the cooker, keeping in mind the A,B,C assembly order of **Step 10**.



Step 13 The sunlight is attached to either the bottom reflector or the top reflector. Either one is fine. The fit will be tight, so work the reflector into the sunlight slot by gently rocking the sunlight side to side until the slot is completely filled, as shown.

The slot is offset. The narrow side of the sunlight base goes to the inside of the cooker. The wide side of the sunlight base goes to the outside of the cooker



Your finished cooker will look like this. The sunlight can be attached to either the top reflector or the bottom reflector.

Final Step

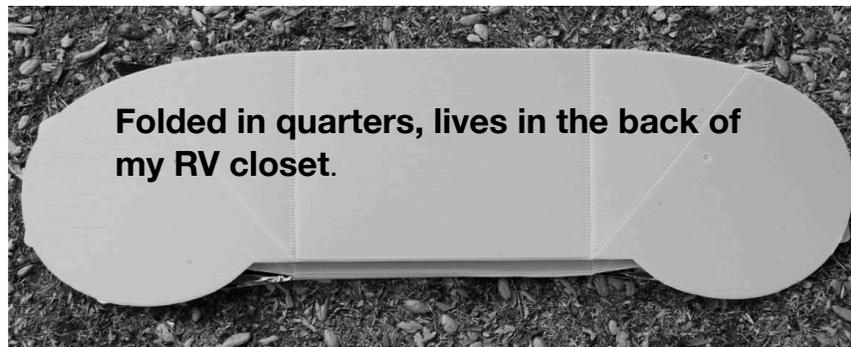
Please review page 2 of the instructions. Make sure that your cooker has the proper shape. It is very common for the cooker, when first built, to be taller than it should be. Folding and flexing all of the joints will help achieve the proper shape. Working in a warm room and allowing the plastic to achieve room temperature will help. Do not heat the plastic. Let the plastic come to room temperature.

Once the proper shape has been achieved, all further assemblies will be easier and the cooker will retain its proper shape.

CONGRATULATIONS

Before we move on to solar cooking instructions and recipes, let's discuss how to care for your cooker.

1. If you use your cooker frequently you can store the cooker face down on a clean surface, for weeks. The idea here is to keep the reflectors clean.
2. For travel or long term storage, remove all the nuts and bolts, and Sunlight. Put all the parts back in the bag. You can refold the cooker and put it back in the box - but I don't. It is easiest (and most packable) if the cooker is folded accordion style, so it is long and flat. It stores and travels very well in this configuration.



How to Solar Cook A Step by Step guide to success

Introduction:

Solar cooking is a skill. It requires both learning and practice. Solar cooking requires specific materials. Pots and pans that you use on your stovetop or in your oven may not be appropriate for solar cooking. This brief instruction will get you started correctly.

All solar cookers must accomplish the following:
C. Collection of light
A. Absorption of light
R. Retention of heat
D. Duration

If you are having a difficult time with your solar cooking, review the basics C.A.R.D

Step 1. Collection of light - getting it right.

Sunlight is your energy source. The Camper, when properly configured as shown below, will accurately reflect sunlight into the cooking area. The shape of the Camper is important. See page 2 of these instructions regarding correct shape.

Step 2. Absorption of light.

Cookware is the heat generator of your solar cooker. The cookware must be dark to absorb the light. The Camper is just an arrangement of reflectors - they concentrate light into a target area. The cook must place a dark pot in the target area. This pot will preferably be flat-black and thin. Cast iron will work but will be slower than thin dark pots. The pot will have either a clear glass lid or a flat-black lid.

Deviations from the black, thin pot will lead to slower cooking.

Mistakes I have seen:

- Black fry pan with a chrome lid, White pans
- Light colored pans
- Shiny pans

The goal here is to have the cookware absorb the sunlight. The sunlight heats the flat black surface, the cookware becomes very hot and transfers that heat to the food inside.

Most failed first attempts have been due to either improper assembly or improper cookware.

Step 3. Retention.

Your ASSC is supplied with two high quality multiple use cooking bags. These bags can be used again and again. They will last for many cooking sessions if cared for properly.

The purpose of the bag is to keep the breeze away from the pot. The pot is being heated by the sun and if left in the open air, a lot of that heat will be robbed by the breeze.

The proper way to use the bag.

Open the bag completely.

Place the pot in the bag,

Close the bag by gathering the open ends together, folding and tucking them into one of the rear corners of the cooking area. The bag does not have to be air tight. The bag should not be wrapped tightly against the pot since this defeats the purpose of insulating the pot from the breeze.

Step 4. Duration

The cook must become familiar with their particular location and the solar cooking opportunities that present themselves.

Long cooking foods such as dried beans or stews should be started early in the day.

Short cooking foods such as rice or baked potatoes can be started later in the day.

Know your cooking environment. This will take practice.

I have customers baking bread in Seattle in the middle of winter. The Camper can do the job but it requires both sun and time.

Additional tips:

The cooking pot should be no more than 2/3 full. A full pot reduces the ratio between the heating surface (sides of the pot) and the food to be heated. More heating area (less full pot) leads to faster cooking. Do not overload your pots. Start small, get some successes, then move up to larger or more difficult meals.

Use the sunlight. The ASSC will help you focus perfectly on the sun and the sunlight is the easiest tool to use to do that. When the sunlight is mounted and aimed so that the pin produces no shadow, the ASSC is in perfect focus. Cooking will be optimal. When you are first starting out, you should try to keep the sunlight in perfect focus. This will mean moving the cooker and adjusting the array about every 15 minutes. After you get some experience and success, you will be able to set the sunlight so you only need to refocus every two hours.

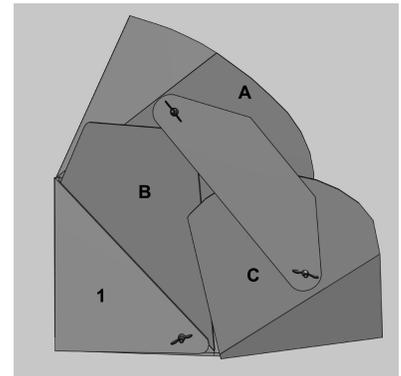
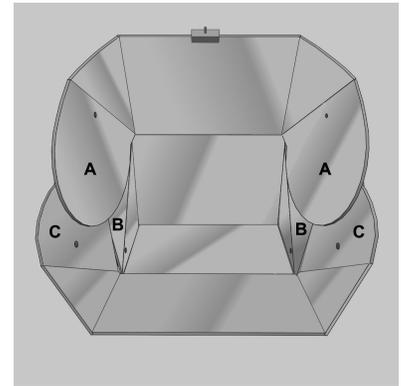
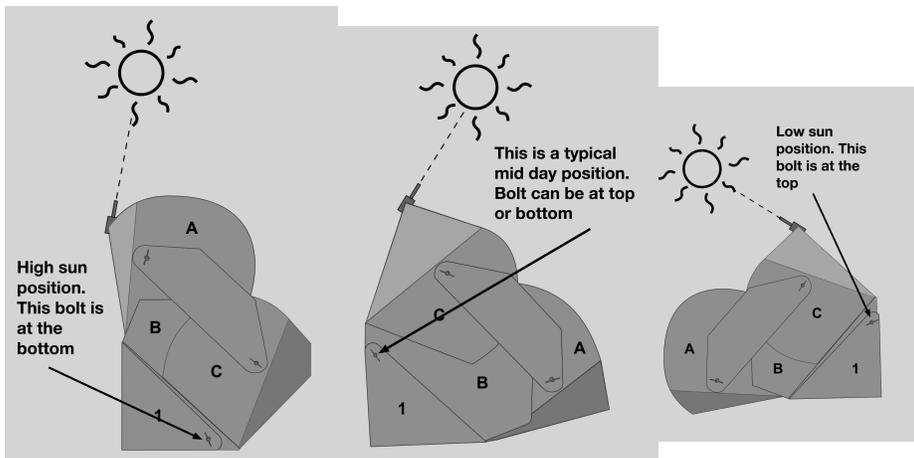
Adjusting the elevation: Loosen the wing nuts on the elevation bar and move the reflector array up or down until the Sunlight pin has no shadow. Tighten the wing nuts. The wing nuts and washers on the elevation bars should hold the elevation adjustment. If not, supplement the cooker with a couple of clothespins. The clothespins (or other small clamps) should be used to hold the elevation bar to one of the reflectors. Do this on each side of the cooker.

To recap: Proper shape, proper cookware, proper retention, adequate duration, don't overload, start small and gain experience.

Visit youtube and search for All Season Solar Cooker. Watch "cookware that fits in the All Season Solar Cooker" for additional cookware ideas.

Write me: jimjola@gmail.com with any additional questions.

Instructions for Using the All Season Solar Cooker



- How to cook with the ASSC

- Materials included in the kit
 - Cooker - Sunsight - Rack - Cooking Bags -Instructions
- Additional equipment you will provide
 - Dark colored pot(s) - Food thermometer
- Optional equipment
 - Glassware that will hold your pots - Recipes

- Cooking order of events

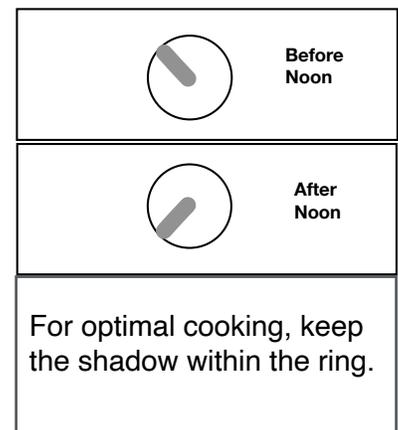
- 1. Rack on floor of cooker 2. Food into pot 3. Lid on pot 4. Pot inside the cooking bag (opt. glassware). 5. Tuck excess bag into corner of cooker (no need to seal the bag) 6. Bag and pot on rack.
- Focus on sun. Tighten the wing nuts
- Set duration (see Sunsight)
- Check for doneness
- Remove pot from bag
- Wipe bag with a clean damp cloth and hang to air dry, fold and store out of direct sunlight

- Using the Sunlight

- Attach per assembly instructions
- Loosen the wing nuts
- Move cooker from side to side and move the reflector array up and down until the pin on the sunlight does not cast a shadow.
- Tighten wing nuts

- Creating cooking duration using the Sunlight (Northern Hemisphere) (Setting a cooking duration is one of the best features of your new cooker)

- Focus as above but do not tighten just yet
- If it is before noon, raise the reflector array a little until the Sunlight pin has a 1/4 inch shadow above the pin.
- Tighten the wing nuts
- Standing behind the cooker, turn the cooker to the right until the Sunlight pin shadow extends 1/4 inch to the right of the pin. The completed shadow will extend upward and to the right, touching the ring.
- Return in about two hours. If your food is not yet done, repeat this procedure.
- For cooking after noon, set the shadow down and to the right.
- For best cooking, keep the shadow within the ring.



- Safety - Cooking

- Solar cookers get very hot. Use all appropriate cautions and keep small children and animals away.
- Solar cooking is outdoor cooking and is subject to dangers not found in the kitchen. Check your cooking environment. Set the cooker on a flat, stable surface.
- When removing food from the cooker, turn the cooker away from the sun, use hot pads.
- Sunglasses are recommended.

- Safety - Food

- Know that your food is safe to eat
 - For any food that is not safe to eat when raw, you must use a food thermometer to check for doneness.
 - Meats of all types - use a food thermometer
 - Any recipe that includes raw egg - use a food thermometer
 - Any recipe that includes anything that is unsafe to eat when raw (casseroles, stews, quiche and other egg containing dishes) use a food thermometer.

- Tips

- Do not overfill your pots. Pots should be no more than 3/4 full. A full pot will cook slower than a partially filled pot.
- Read the “my favorite cookware” section
- Thin dark pots are great
- Cast iron is great - but it will take a little longer to cook
- Ceramic pots - not so great. Thin, high fired ceramic is fine. Thicker, hand crafted ceramic does not transfer heat well. Avoid thick ceramics in your solar cooker.
- Amber colored glassware - not so great. It will work but is slower. (Although I have recently been using some very dark amber mason jars with good results)
- Clear glass bakeware - Ok to use as a cover but not OK for use as the food container. Remember, the dark pot is a key component in the cooking process. Eliminate the dark pot and cooking slows or stops.

- My favorite cookware (sources)

- TexSport Black Ice Hard Anodized Trailblazer cooking kit (internet). You get a large pot, medium pot and a frypan. I have been using my set for a decade and they still look great.
- Any 3 or 4 quart sauce pan that is dark on the outside and has a glass lid. Black interior is also helpful. These are easy to find in the cookware section of most stores. Buy the cheap one where the handle is attached with a screw. Remove the handle and you can fit the pan in the glass bowls seen in some of the videos.
- Turkey Roaster. In addition to roasting turkeys, I use mine to create a baking chamber for breads. Put the bread in the loaf pan, put the loaf pan in the turkey roaster, with lid. Put all in the cooking bag. Works great.

- Your first solar meals

- Rice: 1 cup rice, 2 cups water, Pinch of salt, 1 tsp butter or olive oil
 - Combine all ingredients, place in the cooker, focus just a little bit ahead of the sun, return in one hour. You may want to adjust the amount of water downward for your area.
- Solar Breakfast: Two eggs, beaten, grated cheese, chopped onion and bell pepper, chopped fresh spinach
 - Combine all ingredients.
 - Place in a shallow pan (see “My Favorite Cookware”, above)
 - Done when the eggs are firm and cheese is melted. I use pasteurized egg whites. If you use regular eggs, be sure to consult your food thermometer
- Solar Dessert - tropical fruit compote
 - Combine equal parts of Mango, Papaya, Banana, Pineapple and Nectarine.
- Place in the All Season Solar Cooker for about 3 hours. Your goal is cooked fruit with a thick syrup.
- Serve with pork or chicken or as a topping for cake or ice cream

The real stumbling block is fear of failure. In cooking you've got to have a what-the-hell attitude.

Julia Child

Trouble shooting

If your food does not cook, the cooking event was lacking in one of more of the following:

The most common problem I see is incorrect shape. When you first start out, the shape will likely be elongated. Please review page 2 of these instructions. Proper shape can easily add 100° to your cooking temperatures.

Once the shape is correct, review C.A.R.D. All elements must be present for success.

COLLECTION: was the cooker pointed at the sun? Did shadows pass over the cooker (very common if there are trees or buildings nearby) Use the sunlight and survey your cooking area. Try to estimate any shadows moving across your cooking area. Or plan to move the cooker to a sunny area (I live near a lot of trees and often must move my cooker)

ABSORPTION: This is the job of the cooking pot. Is your pot dark? Is the top of the pot dark or clear glass? I have seen beautiful black cast iron fail to cook when it is covered with a chrome lid. Dark color, thin walls, dark top or glass top.

RETENTION: What means were used to retain the heat? If using a cooking bag, the bag should be loose around the pot, not wrapped tight. If using glassware, you need a top and a bottom. This is accomplished by inverting the top bowl over the bottom bowl. This also works for rectangular glassware. If there is no means of retention, cooking will be very slow, and even slower on cold or windy days.

DURATION: Was adequate time allotted for cooking? The Camper provides more potential cooking duration than any other design. However, planning is still required. If the sun is setting red in the west, it might still warm some water but cooking a chicken or a pot of beans is no longer possible.

ENJOY your cooker. Before you impress your friends, prove the ability of the cooker and your skills to yourself. Know before sharing.

Happy *SOLAR* Cooking

Frequently Asked Questions

Question: How is this cooker different from others?

Answer: From 10 a.m. until 2 p.m. the ASSC is just like any other solar cooker. But from dawn until 10 a.m. and from 2 p.m. until sunset, it is the only solar cooker that can fully capture the sun. The experienced solar cook can start heating food as soon as the sun comes up.

Question: Will this cooker work on cloudy days?

Answer: Yes and no. On days with broken clouds, you will be able to cook at nearly normal speed. On days with solid cloud cover, when you cannot see your shadow, no.

Question: How do I clean the cooker?

Answer: Wipe using a damp soft cloth. Avoid scrubbing. For stuck on food, cover with a wet cloth and wait until the food has softened. Do not use chemicals. Avoid spills

Question: What is the maximum duration I can achieve using the Sunsight?

Answer: About three hours. I usually refocus every two hours, but will go to three hours if I am not in the vicinity. The 1 hour ring on the Sunsight will help you set a two hour cooking session.

Question: Can I adjust the cooking heat?

Answer: Yes, a little. For the very best cooking speeds you may refocus the cooker every half hour. I seldom do this. I get excellent results refocusing every two hours.

Question: Can you recommend a good solar cooking recipe book?

Answer: There are a few. My first was *Eleanor's Solar Cookbook*. I also own *The Sunny Side of Cooking* and *Cooking with Sunshine*. There are many online resources also. One caution: None of these books were written with the Camper in mind. The ASSC is unique and you will be able to use it at times and seasons not specified in the cookbooks.

Question: What is the best way to learn solar cooking?

Answer: Practice. Use your solar cooker. Try different recipes. You will be successful and gain confidence. But if you have a fail, read the troubleshooting section of these instructions.

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No one is born a great cook, one learns by doing.

Julia Child

