in: Solar cooker plans, Solar cooker designs, Solar panel cooker plans, Solar panel cooker designs

Dual-Setting Panel Cooker

The DSPC is low cost, simple and quick to construct, and it can also be mass-produced easily.

By Teong H. Tan

When I was living in Malaysia, a country very close to the Equator, my homemade CooKit performed less efficiently when the sun altitude was very high. It appears that the sun altitude range, in the Tropics and some Temperate Zone during the summer, may be too large for fixed setting panel cooker to perform efficiently throughout. **The Dual-Setting Panel Cooker (DSPC)** described here is designed to lessen this effect, by using two different settings, to better concentrate sunlight according to the sun altitude.

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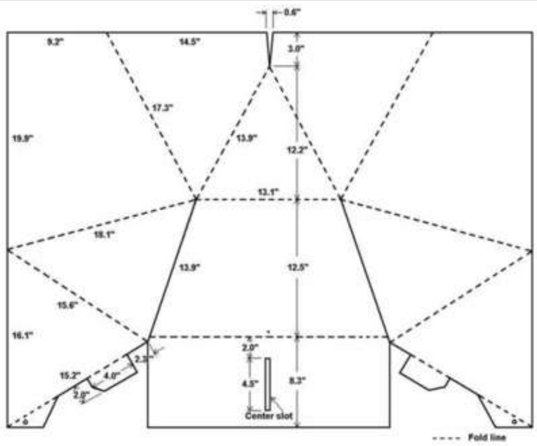
What You Will Need

- A single sheet of cardboard or plastic flute board measuring 4' x 3'feet (1.3 x 0.9 meters)
- Aluminum foil for on one side.
- Glue that will hold the alimunum foil onto the cardboard



Building Plans

First draw DSPC pattern, according to plan, onto a 4' x 3' (1.3 x 0.9 meters) cardboard. Cut along the solid lines, and fold along the dash lines. Make sure all fold lines are well folded so that the cooker can freely assume its proper shape when set up. Make the center slot width equivalent to the thickness of two sheets of cardboard stack together. Next glue on the aluminum foil, and the cooker is ready for use.

Improving Efficiency

- For low-sun altitude cooking, below 65 degrees, the two forward triangular panels, on each DSPC side wing, are placed under the trapezoidal base (see photo). In this setting, DSPC functions and performs pretty much the same as the Cookit.
- The forward rectangular panel can either lie flat or propped up, with a small object, for the proper reflection angle as required.
- For high-sun altitude cooking, above 60 degrees, the two forward triangular panels, on each DSPC side wing, are placed over the trapezoidal base. The two small flaps will fit inside the center slot, on the forward rectangular panel, to hold the cooker shape (see photo on the right). In this setting, DSPC performs more efficiently with extra panels.
- If required, tying the two forward triangular flaps together with a short string will bring the two forward triangular panels even closer.
- To cook, first configure DSPC according to the sun altitude. Face the cooker towards the sun. Put foods inside a black metal pot, and enclosed the pot in an oven bag or a clear glass container/casserole. Place the pot in the middle of DSPC's base. Raise the cooking pot by about two inches above the base, using trivet or wire cage, to bring the pot into the proper focus of the cooker. For high-sun altitude setting, raising the pot allows pot with diameter greater than 7.5 inches to be used because the added reflective panels in the front restrict space available at the base level.

Plans in other languages

- Catalan
- French
- Persian
- Portuguese
- Spanish

See also

Here are some good documents to read to learn more about solar cooking:

- Solar Cooking Frequently-Asked Questions (FAQ)
- The history of solar cooking
- Health and safety

Mayhem Weapons Summer Sci-Fi 5 Shocking Shows That Changed TV

- Advantages of solar cooking
- Solar Cookbooks

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