

MINI SOLAR OVEN
PARTS AND MATERIALS

NUMBER REQUIRED	PART	SIZE		MATERIAL
		ENGLISH "	METRIC mm	
1	Sides	3/4 x 8 5/8 x 10 1/2	20x220x267	Pine
1	Front	3/8 x 3 x 12	10x76x305	Hardboard
1	Bottom	3/8 x 11 1/4 x 12	10x286x305	Hardboard
1	Back	3/8 x 9 3/8 x 12	10x238x205	Hardboard
4	Reflectors	1/8 x 11 x 11	3x280x280	Hardboard
2	Brackets	1 1/2 x 1 1/2 x 6	38x38x152	Pine
2	Hinges			Butt type
1	Cover	1/8 x 12 x 12	3x305x305	Glass
5	Insulation	Cut to fit	Cut to fit	1" sheet foam insulation
4	Reflective material	12 x 12	305 x 305	Aluminum foil, or nylon film
1	Adjusting wire	18-22 gage		Any type

PROCEDURE

BOX

1. Cut all parts to size.
2. Assemble using glue and nails.

BRACKETS

1. Cut brackets to size.
2. Carefully layout and cut a slot in each bracket at a 30° angle.
3. Drill 3/16" (5mm) holes in each bracket for screws.
4. Finish sand, and attach to box with screws.
5. Apply finish to exterior.

REFLECTORS

1. Cut four reflectors to 11" x 11" (280mm x 280mm).
2. Glue aluminum foil (shiny side up) or mylar film to reflectors.
3. Tape edges using masking tape.
4. Drill a 3/16" (5mm) hole in two reflectors as shown in drawing.

INSULATION

1. Cut 1" (25mm) foam sheeting to size and glue to inside surfaces of oven.
2. Use a latex base flat black paint and paint interior of oven.

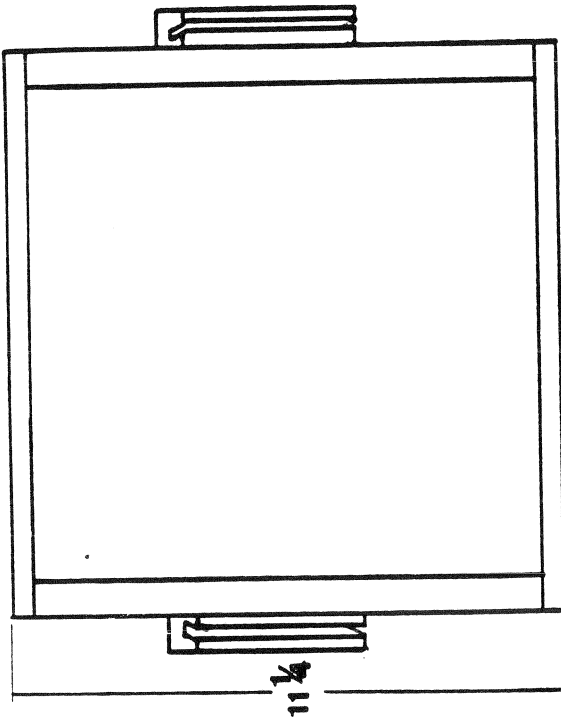
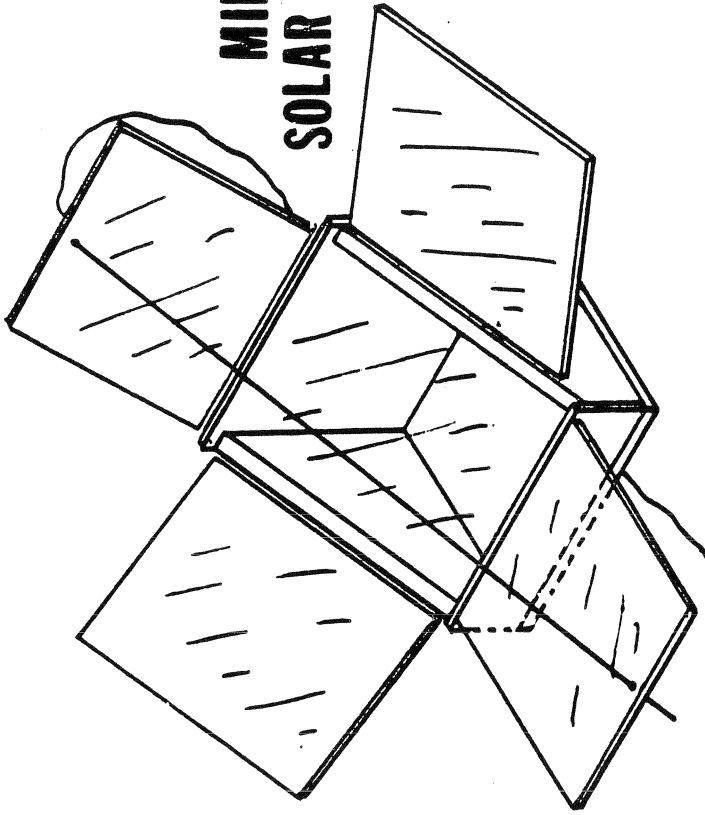
FINAL ASSEMBLY

1. Install hinges to hold top and bottom reflectors or use tape to hold reflectors.
2. Insert side reflectors.
3. Bend in end of wire at a 90° angle and insert into top reflector hole. Other end of wire should pass through bottom reflector hole. Hold position with tape.
4. Tape edges of glass with masking tape. To improve oven efficiency, two panes of glass can be used separated by a bead of silicon around all edges. This is called a thermopane.

USING YOUR SOLAR OVEN

Place your oven in bright sun with reflectors attached. Focus top and bottom reflectors so sun is reflected into oven. Keep reflectors in position using an alligator clip or clothes pin. To keep reflectors in position, tie a piece of string to wire on top reflector and run it under oven to the front. Adjust position of reflectors and oven every 30 minutes.

MINI SOLAR OVEN



STRING

