

Bulldog clamps around the frames' perimeter.

Connect the vacuum cleaner hose to the check valve and turn on the vacuum cleaner. If the seal from the hose to the valve isn't perfect, seal the leak with duct tape.

Lay the master on the vacuum table. If you'd like, use loops of tape to hold it loosely in place.

Place two blocks of scrap 2x4 in the oven to support the frame, **10**. Preheat the oven to 300 degrees and place the frame on the supports. Watch the styrene carefully – it should wrinkle around the edges, then tighten like a drum skin. Finally, the styrene will begin to show a noticeable sag in the center. This is the

moment of truth; start the vacuum cleaner!

Wearing oven mitts, *quickly* pull the frame out of the oven. Starting at one flanged end of the vacuum table, place one edge of the frame securely on the flange. Then quickly roll the frame downward until the opposite end meets the flange at the other end of the vacuum table, **11**. Hold the frame in place for about five seconds, then turn off the vacuum.

Presto! You've got an instant kit. Now all you have to do is cut the parts from the sheet and release the masters. Don't forget to turn off the oven and remove those 2x4 blocks before you start building.

FSM

MATERIALS

2 11" x 17" jelly-roll pans (aluminum)
 12" x 18" aluminum window screen material
 24 (approx.) 1/8" pop rivets
 2' 1/4" PVC pipe
 1 1/4" PVC sump pump check valve
 1 1/4" threaded PVC (or metal) pipe flange
 4 nut and bolt sets (3/4" length)
 48 1/8" flat washers (optional)
 1/2" barrel spring or length of elastic
 1 aluminum window-screen frame kit (30" x 36" or larger)
 4 window screen corner pieces
 10 "Bulldog" paper clamps
 1 tube multipurpose silicone sealant (Dow Corning Trade Mate II or similar)

- Ensure that the check valve and flange will thread together.
- Size nut and bolt sets to fit bolt holes in pipe flange.
- The frame kit provides enough aluminum channel for both frames, but you need to buy a second set of corner pieces.

TOOLS

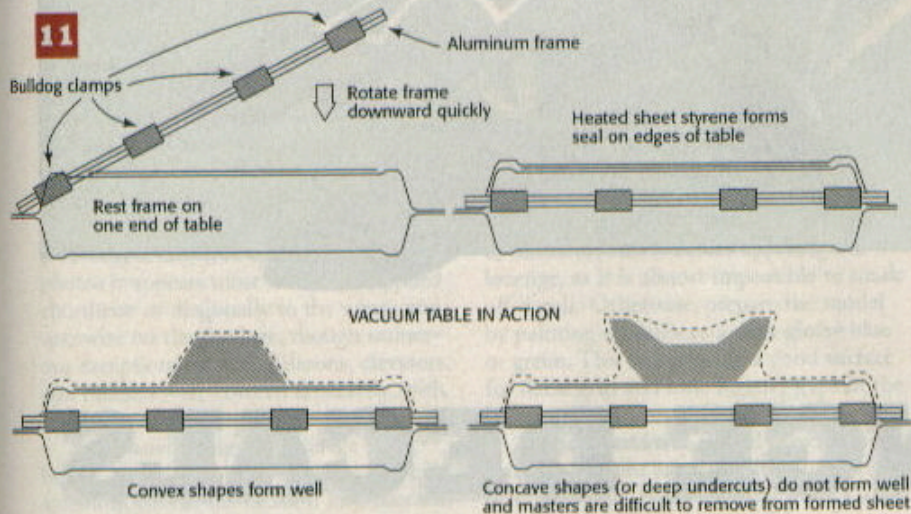
Electric drill with 1/4" and 1/8" bits
 Hacksaw
 Pop riveting tool
 Tin snips
 Scissors



Meet Bill Lenches

Bill Lenches is in the midst of an enjoyable career in the U.S. Air Force. Stationed at Dyess AFB, he lives in Abilene, Texas, with his wife, Beth, and two cats. Bill's diverse hobbies include writing, restoring antique cars, flying, and carpentry. He is building an 87-percent-scale Nieuport 11 ultralight airplane in his garage.

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Bill's Martian war machine was made by vacuum forming sheet styrene over wood molds using this machine.

