

Making Plastic Canopies from Soda Bottles

Jeff Sorg MMM Meeting Demonstration 01 June 1999

This method of forming your own airplane canopies isn't mine, it's been featured in model magazines before. It's an excellent way to make small canopies with a minimum number of tools, and a little practice.

What you'll need:

- Carved wood form (pine)
- Plastic soda bottle (2-Liter)
- "Make-up" blocks (pine)
- Heat gun
- Modeling knife
- Pen (permanent marker or felt-tipped)



1. The wood form should be made from pine. You could use $\frac{3}{4}$ " thick, or a 2x4, or even a 4x4, and carve it to shape with saws and a sanding belt. If using $\frac{3}{4}$ " thick, you should laminate the required pieces together with glue or screws. What's important is that the length, width, height, and shape of the form should match what you want on the airplane. The surface of the form should be sanded smooth, but it doesn't have to be like glass.
2. Take a 2-Liter soda bottle and cut off both ends, leaving a little of the curvature at each end. The curvature already in the plastic should be used to help make the canopy.
3. Place the canopy form into the center section of the bottle.

4. Place make-up blocks in the bottle underneath the form. The make-up blocks should be several pieces of $\frac{3}{4}$ " thick scrap wood. Their function is to "make-up" the leftover space so that the plastic bottle is tight on the canopy. They should be no wider than the canopy form.



5. Now take the heat gun and begin heating the bottle. Focus at the top of the canopy first, then do the sides. Since soda bottles are thermoplastic, you can shrink them, to a point, around the canopy. If the form and make-up blocks become loose while heating, force the make-up blocks further into the bottle. Try to keep tension on the plastic around the canopy at all times. Other scrap wood wedges may be required to make a tight fit.



6. When the canopy has been shrunk around the form, you may draw a line on the plastic where you want to cut the canopy. Drawing a straight line on a curved surface may be accomplished by carefully applying masking tape to the plastic, and cutting along one of the edges. It's a good idea to keep the canopy a little oversize, so it can be trimmed to fit later.
7. After cutting the canopy, remove the make-up blocks, and discard the remaining plastic.
8. Then just trim the plastic canopy to fit the plane, and attach it.



This method works best for small canopies that fit inside the center section of a soda bottle. It's possible however, to make a two-piece canopy with a seam in the middle. The seam could be covered with trim tape.

Another advantage of this method is that you can use a green soda bottle, if that's to your liking.

If you're first canopy doesn't turn out well, don't worry. A little practice will enable you to produce canopies quickly, and at very low cost.