

INTRODUCTION

In general, vacuum-form models are more fragile than their injection molded counterparts. Considerable care must be taken when cutting, gluing, sanding and finishing, otherwise the model could suffer irreparable damage.

One method of avoiding this problem is to internally buttress the individual pieces with sheet or strip styrene or an epoxy putty such as BIGGS A+B.

Epoxy putties such as BIGGS are odorless, non-toxic, water soluble and cure reasonably fast. When set they become rock hard and will not attack the plastic. They can also be used as fillers to eliminate seams and imperfections.

STEP I CUT OUT PARTS

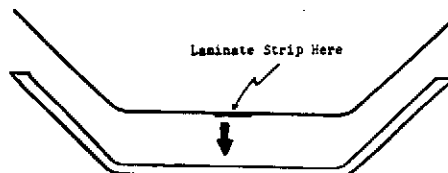
Using a #11 X-acto knife, make a series of light cuts around each part (leaving a 1/8" border) until they can be easily broken away from the sheet:

STEP II SUPPORT PYLON

The Support Pylon consists of two major parts, the larger inner section and the smaller outer one. NOTE: The smaller part has the three horizontal detail strips molded in each side. SEE DRAWING.

Before final assembly, secondary cuts must first be made to both pieces as shown below.

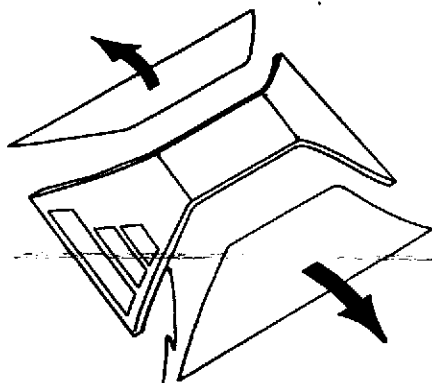
After cutting out both parts, the edges are then sanded smooth. For proper fit, a 1/4" strip must be cut from the center of the inner support. Next the two parts are joined together and a 1/4" strip of styrene is laminated to the underside to strengthen the joint as shown below.



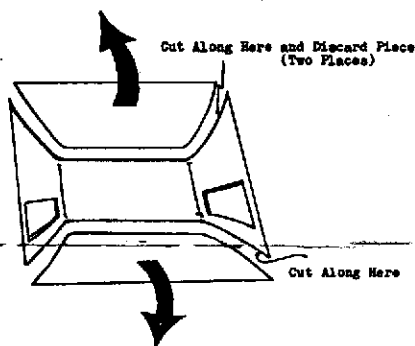
The pylon assembly should next be braced internally with strip styrene before final assembly. After bracing, cement the two pieces together and set aside to dry.

When set, the edges are filled with putty and sanded smooth. The larger upper piece is now sanded flush with the bottom and the 1/4" gap on each end is filled with putty to add strength and provide a good gluing surface.

After curing, the edges are then sanded smooth but not at a right angle to the inner and outer panels of the support pylon. Instead, use an angle of 45 degrees for a more accurate trapezoidal shape.



Cut Along Edge Here and Discard Piece
(Two Places)



Inside Wing Pylon (Looking Down)

STEP III TAIL CONE

The Tail Cone is cut out around the edge leaving about a 1/16" lip. It is then sanded flat (at the open end). SEE BELOW



Cut Along Here and Discard Lower Piece

(Two Places)

STEP III TAIL CONE

The Tail Cone is cut out around the edge leaving about a 1/16" lip. It is then sanded flat (at the open end). SEE BELOW



Cut Along Here and Discard Lower Piece

STEP IV SECONDARY HULL

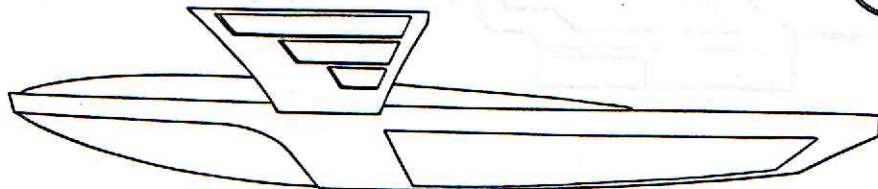
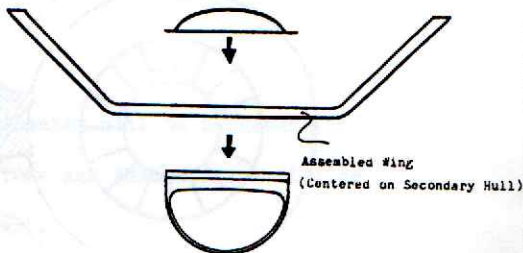
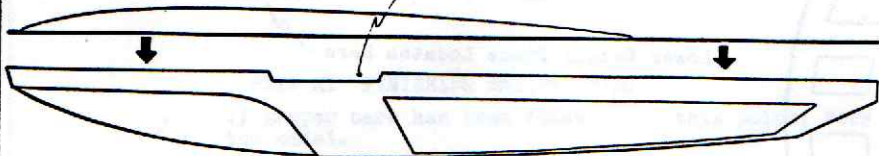
First, sand the hull flat and smooth. Then carefully cut out the scribed oval at the rear of the hull and cement the finished tail cone in place. From the inside, fill in around the cone with putty. This step strengthens the inside for later sanding and finishing.

Trim out the two scribed support pylon locations on either side of the hull. Laminate strips of styrene to the inside of the hull along the open edge. Thicker laminate pieces should also be cemented under the open support locations for extra stability.

The completed support pylon is then centered in the slots and cemented in. Note the direction of the support pylon as shown in the drawings.

Next, take the upper hull piece and trim off the 1/16" flange surrounding the part. Center the piece on the lower hull and cement in place. When dry, the flange is then sanded flush and smooth and the seam filled with putty as needed. Trim off the small section of flange that sits on top of the support pylon.

Wing Locates Here



Assembled Secondary Hull (Side View)

STEP V BRIDGE SAUCER

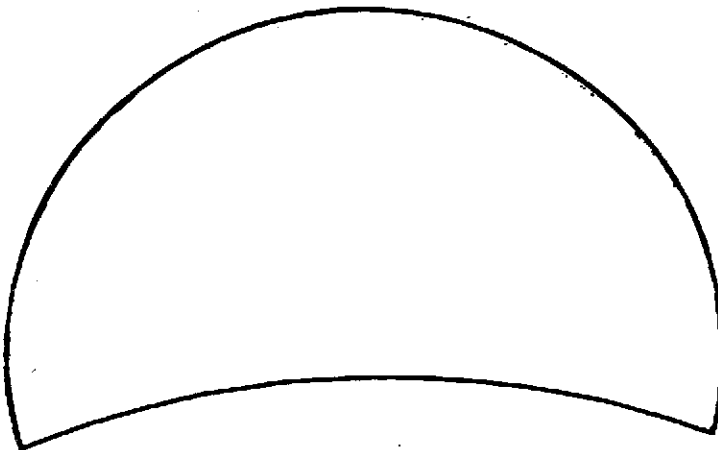
Cut out the three hanger bay door locations and sand the edges smooth. Fill in the now open areas (from behind) with small pieces of .020" styrene.

To prevent flexing of the upper bridge saucer, reinforce the inside with styrene braces or putty. After curing, the underside is sanded flat.

Next, trim away the 1/16" flange on the lower bridge saucer part. Using the template provided, cut out a .020" thick styrene insert. Laminate the insert to the lower bridge piece. This step levels off the part for easy assembly to the upper bridge.

Cement the two bridge pieces together noting that the forward part of the curve on the lower piece should point forward and be centered under the center hanger bay door.

Next, sand the flange flush and fill the area as needed.

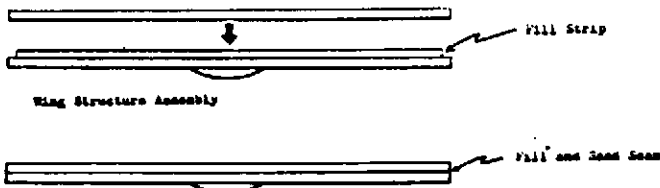


Template for Bridge Saucer.
Use .020" Styrene.

STEP VI UPPER SAUCER PLATFORM

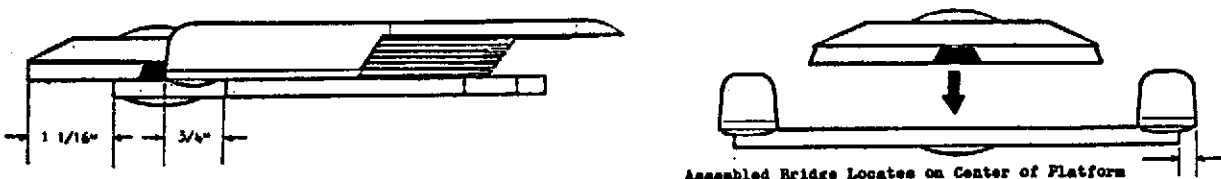
Cement internal support braces to both halves of the platform. When set, sand both halves flat and smooth. Next, cut 1/4" wide strips of styrene and cement along the inside edge of either (BUT NOT BOTH) platform piece.

The upper and lower platform halves are then cemented together and the seam filled with putty as needed.



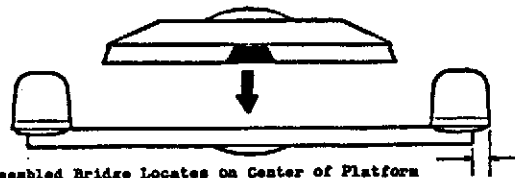
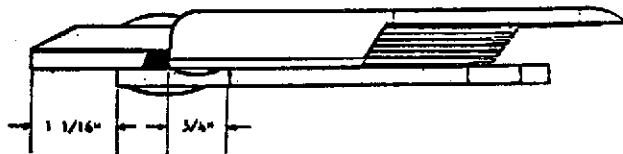
STEP VII BRIDGE SAUCER TO PLATFORM ASSEMBLY

Take the assembled bridge and locate to the platform. Looking from the side, the front edge of the saucer should be 1 1/16" from the front of the platform. SEE DRAWING



STEP VII BRIDGE SAUCER TO PLATFORM ASSEMBLY

Take the assembled bridge and locate to the platform. Looking from the side, the front edge of the saucer should be $1 \frac{1}{16}$ " from the front of the platform. SEE DRAWING



Assembled Bridge Locates on Center of Platform

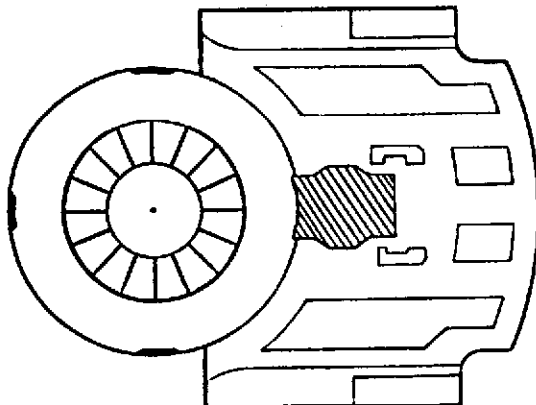
STEP VIII UPPER AND LOWER PLATFORM DETAIL

Take the small upper platform detail piece (the one with the two domes) and sand flat. Locate at the rear of the bridge saucer and cement in place. SEE DRAWING

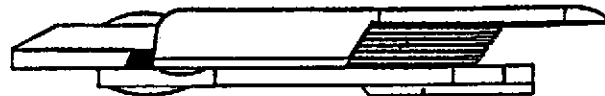
The lower platform detail is the forked shaped piece and is located to the underside of the platform so that its trailing edge is flush with the trailing edge of the platform. The seam is then filled with putty and sanded smooth. SEE DRAWING



Upper Detail Piece Locates on the Shaded Area



Assembled Upper Hull



Lower Detail Piece Locates Here

STEP IX WARP ENGINES

Both warp drive engine nacelles should have been cut out and sanded flat at this point. They now have to be trimmed out a second time.

This second cut is made along the raised flange surrounding the rear section of each engine. **NOTE: TRIM CAREFULLY!!! THIS AREA IS FRAGILE.** The edges are then sanded smooth.

Internal braces should next be added with either styrene or putty.

ASSEMBLY NOTE: Each engine consists of five major parts. The main nacelle; the forward domed piece; the rear layered piece; the small filler piece and the rear fin assembly.

Take both the forward and rear pieces and trim off the 1/16" flange around each of the four pieces. Cement the forward domed piece in place noting the location of the dome to the nose of the nacelle. **SEE DRAWINGS**

Next, locate and cement the rear layered piece in place.

Using the template provided, cut and install the filler piece at the open end between the forward and rear pieces already installed.

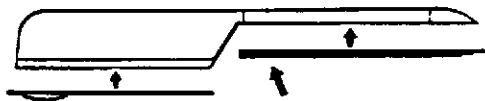
Sand off the flanges around each engine and fill with putty as needed.

At this point, the engines are complete with the exception of the rear fin assembly. These pieces must be scratch built using the .040" sheet provided in the kit. Full size templates are provided for making the required number of fins.

Make up the quantities listed and use the full size side profile shown to assemble the fins together.

The assembled fin units are then cemented to the upper rear section of the engine nacelles as shown. **SEE DRAWING**

The engines are then assembled on to the upper platform as shown. **SEE DRAWING**



Engine Assembly

Assembled Engine Fins'



Completed Engine Assembly
(make two)



Assembled Cooling Fins
Side View (Actual Size)

Full Size Templates for Cooling Fins

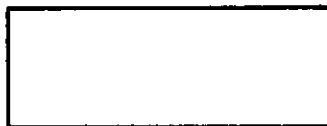
1 7/8"



11/16"

Make Twelve (12) Pieces

1 11/16"



5/8"

Make Fourteen (14) Pieces

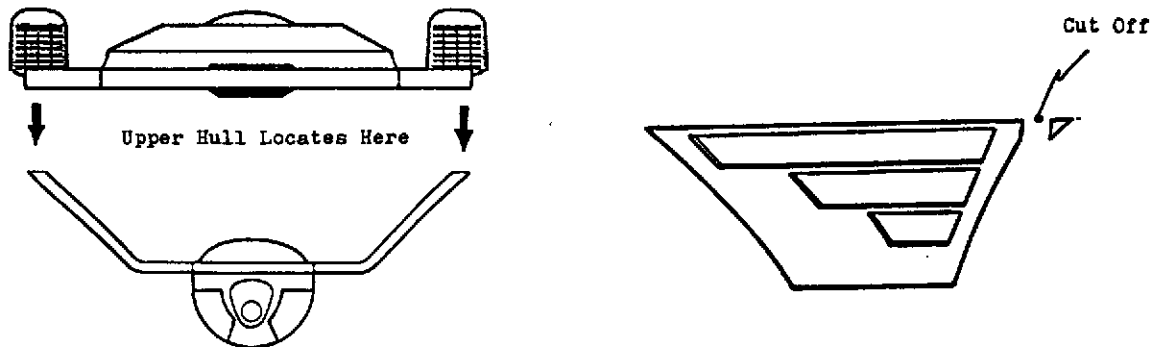
Use .040" Thick
Plastic Provided



Warp Engine Bulkhead
Template (Two Units)

STEP X UPPER BRIDGE PLATFORM/SUPPORT PYLON ASSEMBLY

Take the completed upper platform assembly and locate it on top of the support pylon. Note that the support pylon is larger than the upper platform. A small piece must be trimmed away from the rear of the pylon until the proper fit is achieved. After you are satisfied with the fit of both assemblies, cement together. Fill the gaps as needed and sand smooth. SEE DRAWING



STEP XI FINISHING AND PAINTING

If proper care has been taken up to this point, very little finishing will be necessary to the model.

The model should first be primed with a light gray or white primer and then sprayed flat or semi-gloss white.

Refer to any available photographs or drawings for further detail.