

This plane was destroyed by an overzealous St. Bernard before it could be flown.

# Miss Foxy Lady

by Rick Kent

**H**aving been involved in drag racing for the past 10 years, it was only natural that I got involved with racing model airplanes after learning to fly radio control.

After flying in a 1/2A race recently, I became hooked on these little bombs. However, being basically a scale builder, I decided that 1/2A racing could use the color and excitement of scale type planes. This was when I drew up the preliminary drawings for "Miss Foxy Lady."

## CONSTRUCTION

It is best to start construction with the wing as it will be needed for alignment of the wing saddle and the empennage shortly after fuselage construction begins.

Make a root and a tip rib template (two each) out of 1/16 in. plywood and drill 3/16 in. alignment holes for the jig rods. Now cut 1/16 in. balsa rib blanks to length so that you have a balsa blank for each rib template. Align templates and rib blanks into position above the plan and glue on the leading and trailing edge pieces.

You should now have a wing assembly made of shaped root and tip ribs and unshaped balsa intermediate ribs.

To bring wing to proper contour, make a sanding board about 18 in. long and an inch wide. (I use the edge of a small carpenter's level with sand paper cemented to it.) Sand the balsa blanks with the board all the way from root to tip until rib contours match properly cord wise and from tip to root. When the top half of the ribs are completed, sand in the spar notches and install a 1/8 in. by 3/16 in. spruce spar. Turn the wing and the jig over and repeat the process on the bottom of the wing. Repeat this process for the opposite wing panel.

With both sides of the wing ready, join with 1/2 in. dihedral under each tip. To join the two panels together, place a 1/16 in. balsa rib between the two panels and glue to one panel. Now, sand this rib at an

angle until the proper amount of dihedral is obtained. Next, glue both panels together. A strip of light glass cloth should be placed around the center joint to keep the wing from folding up during the high G turns experienced on a two pylon course used in 1/2A pylon racing. On my plane the glass was bonded to the wing with Zap or Jet instead of epoxy.

## TAIL SURFACES

Both the vertical and the horizontal surfaces are made from firm, but light 1/8 in. balsa. The vertical fin and the rudder are cut out in three sections and glued together, then sanded to shape. They can now be laid aside until needed.

The stabilizer is similar to the fin, except that the elevators need to be hinged. The center piece of the stabilizer is laminated from one piece of 1/16 in. and two 1/32 in. pieces of balsa.

Next, bend the elevator joiner and silver solder on the elevator horn. When the horn is cool it can be installed in the stabilizer filler and then the filler glued to the stabilizer. This assembly should now be ready for installation in the fuselage.

## FUSELAGE

Begin by cutting out two identical fuselage sides from firm, but reasonably light 3/32 in. balsa. Mark the locations of the bulkheads and the firewall. Glue the upper longerons in place. Next, mark a centerline on the 1/2 by 2 in. balsa top block. Cut the top block almost through at the back of the hatch so that it can be easily cut through once the top block is shaped. This will make the radio hatch.

Tack glue the firewall and F-2 to the top block and permanently glue F-3 in place. When the bulkheads are dry, glue the fuselage sides to the formers and the top block behind F-3. Be sure the sides come together on the centerline of the top block. Next, the 1/4 in. triangle stock and the

1/4 in. tank compartment floor is installed. While this is drying, cut out the slot between the top and the fuselage sides for the stabilizer, and it can be installed—being careful to align it properly.

The elevator pushrod should be made now and installed on the control horn. Be positive that this is strong because it can't be reached when finished.

Next, glue a 1/16 in. cross grain to the fuselage bottom behind the wing saddle.

It is now time to drill the firewall for the motor mount and install it. I used a Tatone long beam radial mount. After the mount is installed, mount the engine to the mount with a spinner mounted. (It is best to remove the cylinder and the piston during this process.) Now glue in pieces of 1/2 in. soft balsa between the firewall and the spinner.

This whole cobbled mess can now be shaped using knives, razor-plane, and sandpaper to blend the top and the bottom blocks into the cowl. It is also a good idea to open the cowl for the cylinder and the needle valve clearance and the air outlet at this time.

## FINAL ASSEMBLY

With the major components finished, they can be joined.

Place the wing in the saddle and align it very carefully. This is very important, as adjustments cannot be made once the wing is glued in place. The fillet between the wing and the fuselage is made with narrow strips of Sig celastic.

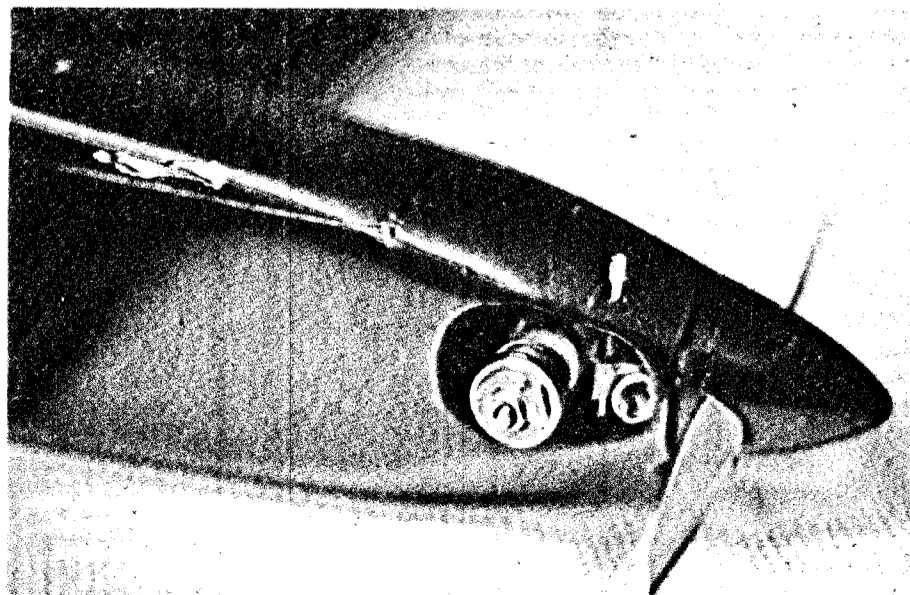
You can now cut the hatch the rest of the way through and remove it for hollowing. Also at this time the hold down screw nut block can be installed along with its locating pins.

When the wing is dry, it is time to add the belly scoop to the bottom of the plane. The sides are made from 1/16 in. balsa, the forward bottom is 1/4 in. balsa and the rear from 1/16 in. balsa. When the scoop is dry, carve and sand it to shape.

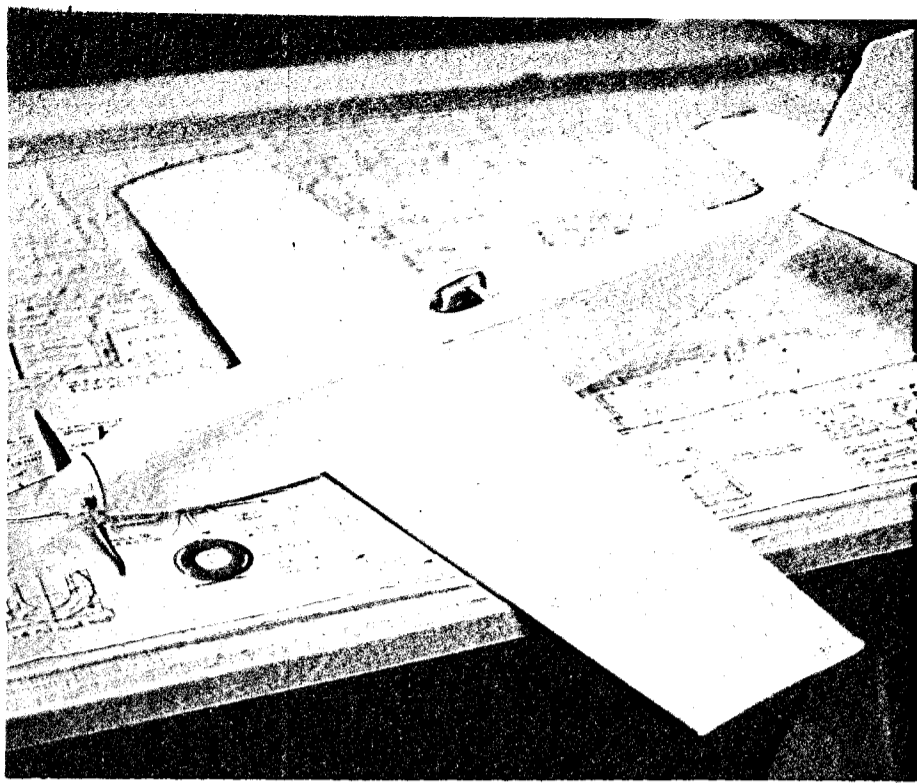
Finally, add the vertical fin, being careful to align it properly.

## FINISHING

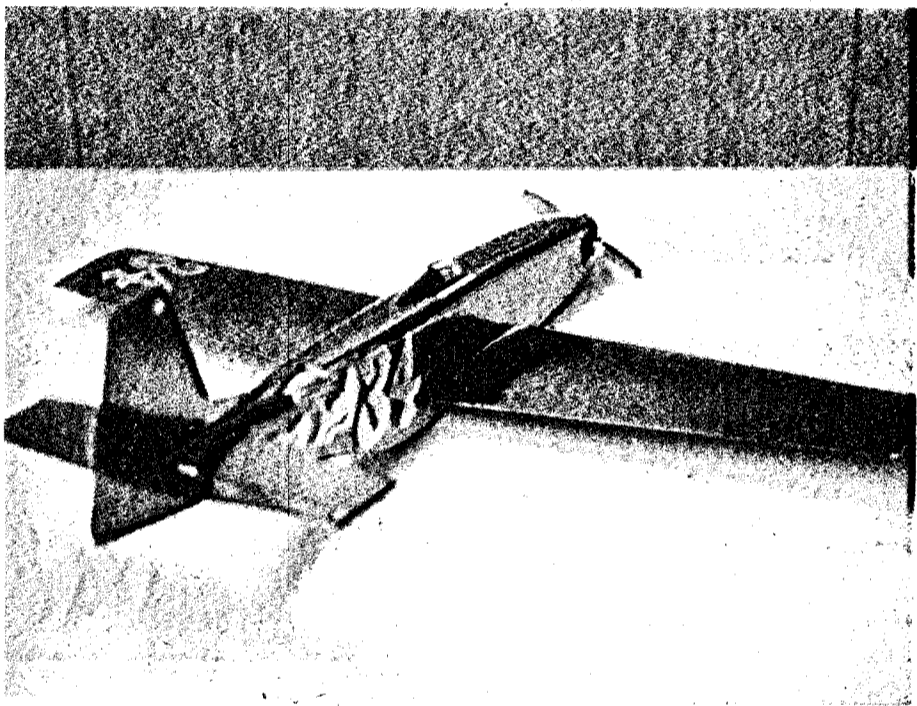
Usually, people will finish a plane according to their own likes and dislikes.



Nose section and Klirn-Kraft Tee Dee .051 pressurized engine and Cox 5-1/2 x 4 grey prop.



ABOVE: Side and (below) quarter view of the Foxy Lady ready to do combat; 1/2A racers do not wear landing gear.



But I will outline the technique I used.

First, the plane is sanded thoroughly with 320 grit production paper, then with 600 grit tri-mite (3M wet/dry) dry. After dusting with a tac rag, I take a damp cloth and wipe down the model. This will raise the grain of the wood slightly. Now, sand again with 600 grit sandpaper and you will have a super smooth base for your dope.

I then brushed on three coats of thin clear Aero-Gloss, sanding lightly between each coat.

Next, I applied lightweight silkspan on the entire airplane except for the moveable surfaces. The paper was followed by one medium-heavy coat of talc and dope, which was sanded smooth after it dried. Two coats of black Aero Gloss was then sprayed on and allowed to dry several days.

After the dope dried, the lettering was applied using gold trim MonoKote. The "Foxy Miss" on the rear fuselage was painted on by hand and allowed to dry several days. Then the entire plane, including the canopy, is sprayed with one coat of clear K&B SuperPoxy. The airplane is then waxed liberally.

#### GEAR INSTALLATION

Foxy Lady has a comparatively large radio compartment, and most any gear will fit as long as the servos are not larger than KPS-11's. With large servos, however, a 250 mA pack becomes imperative. My plane flies with a Kraft KP-7B radio and two KPS-12 servos and a 450 mA ACE battery. All up weight comes to 21 oz.

The best engine for the plane is a Kirn-

Kraft (Clary) Tee Dee .051 on pressure with a pylon SS-2 fuel tank.

#### FLYING

Now comes the fun! With the tank full, fire up the engine and tune for maximum rpm. This is a must as the plane needs good speed during launch to fly, and a slobbering engine will not allow a good launch.

It is a good idea to have a helper launch the plane for you. The best way is to support the plane with your left hand in front of the wing and grip the fuselage under the tail with the right hand. In this way, the plane can be given a very healthy heave with good stability.

If a helper is not available, the plane is best launched inverted by gripping the plane under the canopy.

Once in the air, the plane is a sweetheart; very responsive but not critical, and very fast.

The plane is capable of almost all maneuvers, except spins, hammerheads, and knife-edge; although point rolls have been done.

When landing, the plane is hot and must be flown in at its natural gliding speed and flared only after coming in to within inches of the ground.

#### CONCLUSION

If you are looking for a racer that looks like a real plane, builds easily, flies well, and is fast, this is the plane that can fill that order. RCS