



CAJUN QUEEN

We don't know if the name for the plane came before Lou found the decal or after, but the plane flies like a graceful beautiful lady. It was the colors that attracted AAM's attention to the model for publication. Watching her fly at the Nats, she was so smooth and effortless. Oh yes, ask Lou where to get the decals. Article starts on next page.





This is the retract equipped version of the Queen. That air scoop below the engine gives ample space for the nose gear unit and access to its mounting bolts.

Cajun Queen? Wondering what it is? Well, looking it up in the dictionary you'll find that "Cajun" refers to a very special group of people of French descent that predominantly reside in the Gulf Coast States. A more hospitable or friendly people you will never meet. Queen means the same in any language—a gracious, beautiful lady. I like to think that this describes this airplane exactly.

When I first started thinking of this airplane, I wanted a plane that would perform in windy weather but wouldn't be a dog in calm weather. Being a genius in aerodynamics, I decided I'd better stay with the proven airfoils and moments of other airplanes. The wing root section is 15% symmetrical tapering to a lifting tip. The first planes were 650 sq. in. with fixed gear and 6½ to 7 lb. but with retracts and FAI Pattern (and weight requirements) the wing was increased to 680 sq. in. Most of the planes have been 7¼ to 8¼ lb. and handled really well in the wind. The stabilizer, which is Diamond airfoiled, does two things. It increases the amount of drag at the rear of the plane which decreases the tendency to tail waggle and also lets the elevator be soft around neutral.

Now for some Balsa Butchering. To start with, select some light fuselage sides. Cut the 1/32 plywood fuselage doubler F-10 and glue them to the fuselage sides. While these are drying, cut out all the remaining parts. Glue

Well proven features and easy handling in any kind of wind make this a frequent Class C or D Pattern winner.

LOU PENROD

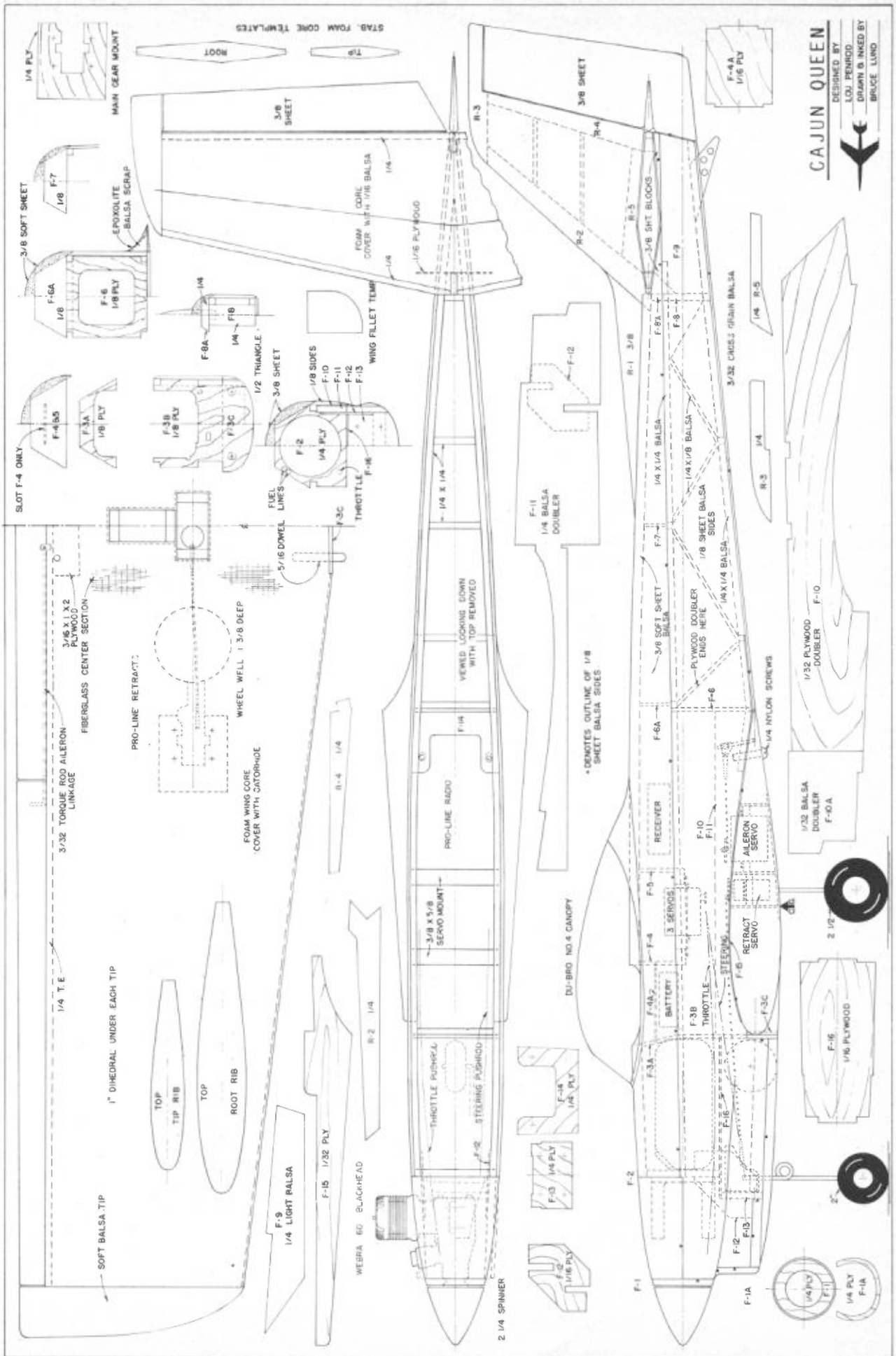
1/32 balsa doubler F-10 A to fuselage sides, glue 1/4 balsa doubler F-11 to fuselage sides, glue 1/16 plywood F-12 to fuselage sides, glue 1/4 balsa doubler F-9 to rear of sides being sure to leave room for the 1/4 sq. on the bottom. Now glue the top and bottom rear 1/4 sq. longerons to fuselage sides; at this time you can glue the 1/8 x 1/4 cross bracing to the sides.

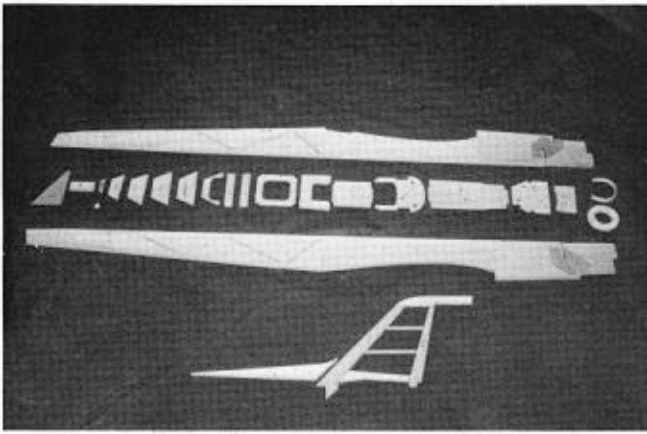
To assemble the fuselage you need a good flat surface. This step is one of the most important steps in building any airplane. If you don't have a building jig, take 1/4 plywood or hard balsa and make eight vertical side braces. These braces have to be exactly square. Now position the sides over the plans with F-2 position just off the building surface. Starting with F-2, glue F-2, F-3 B F-6, and F-8 between the sides. Using the vertical braces at all former locations, align the sides so they are exactly square. Take your time with this and your fuselage will be true. After this has

dried, pull the tail together and glue inserting a 1/2 in. wedge between sides.

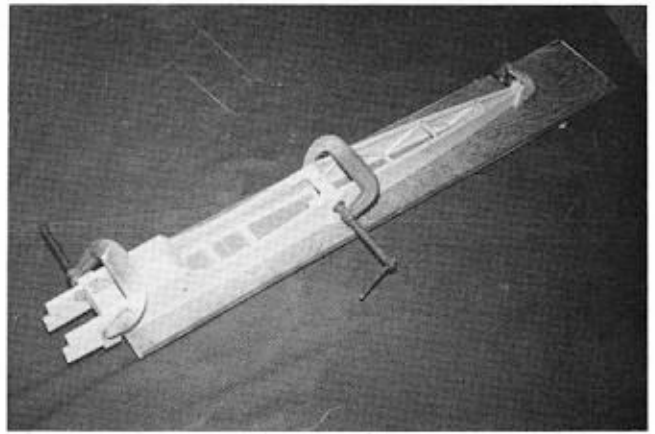
Now install F-13, F-16, F-14 and 1/4 sq. cross braces; after it has dried, remove the fuselage from the board and with epoxy completely paint the tank compartment. Now add top formers F-3A, F-4, F-4A, F-5, F-6A, F-7, and F-8A. Sand the taper into the fuselage top sides to accept the 3/8 sheet balsa for the turtle deck. Glue the two 3/8 sheet balsa sides into place; when dry, sand the top down to the formers and add the top 3/8 sheet. Glue the nose block in place and carve the top to shape. Now install the 3/32 balsa bottom rear fuselage. Glue 3/8 sheet to bottom front adding the triangle stock between F-13 and F-3B. Add F-1, F-1A and carve scoop and turtle deck to shape. Sand complete fuselage. The rudder is conventional built-up with 1/16 sheet on each side of the ¼ stock. Be sure and glue the dorsal fin and rudder onto the vertical fin before sanding to shape.

Now for the wing and stab. The cores are easy to cut, but if you can't cut them, they are available through Mercury Hobby Distributors of New Orleans, Louisiana. Cover the wings with as soft a balsa as you can purchase, being sure not to get the panels mixed. (The lifting tip doesn't work too well upside down!) Install the trailing edge of the stab; then cover with soft balsa, using eight pieces and keeping the high

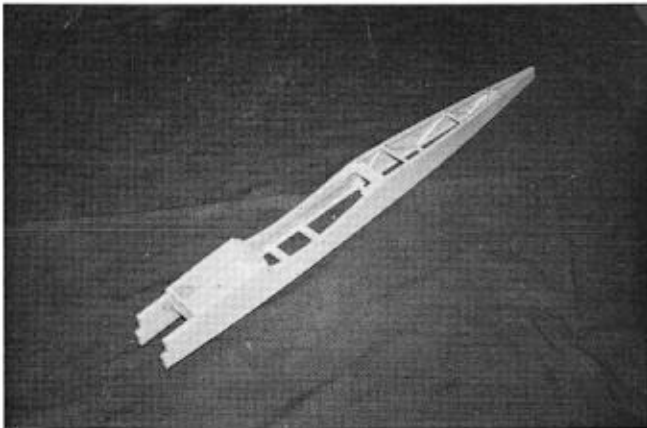




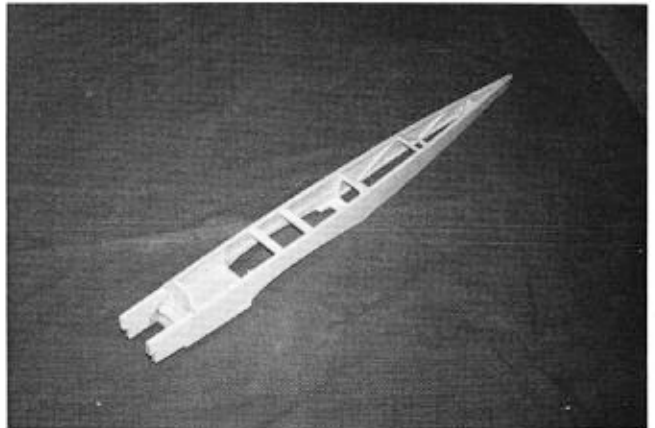
Cut all these parts and assemble the sides and bulkheads first.



On a flat surface start fuselage assembly. Text recommends procedures that assure a true plane throughout, but without a jig as such.



Here's the basic frame. Note generous compartment for the nose gear and the "U" shaped plywood wing attach piece.



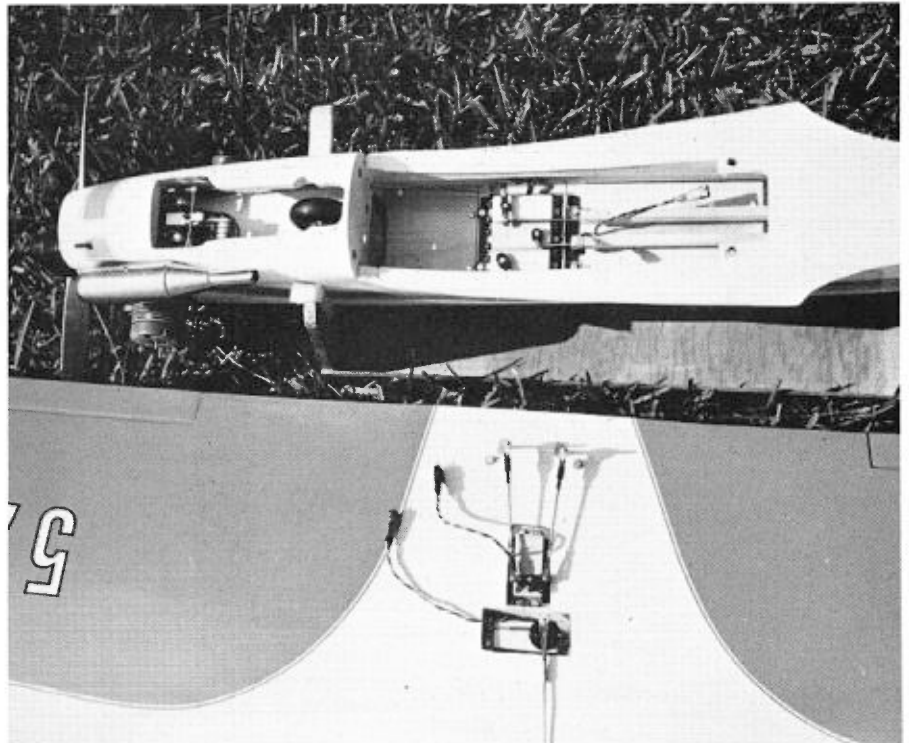
Turn it over for shaping the top deck, canopy area, etc. That diagonal bracing at the rear adds strength without lots of weight.

point of the diamond constant. After dry, add the leading edge, tips and elevators and sand to shape. Break the point of the diamond with the sanding block just enough to give a small radius.

Join the wing panels and add tips, aileron horns and linkages, aileron and wing center sections and F-3C. Sand to final shape and add fiberglass over center section. Install 5/16 dowels and drill holes for 1/4 nylon bolts. Put the wing on the fuselage and make sure it is going to fit the saddle, checking to make sure there is no incidence and that the fuselage is square on the wing. Use a string and go from the center of the fuselage over the wing to each tip making sure it is equal, then measure from the tail to each tip to make sure it is square. Holding the wing in place, add the wing fillets making certain they contour exactly with the wing. Make the stab seat and install stab, being certain of no incidence and, using the string again, align stab. Install rudder again using string to make sure it is square.

The only retracts I have used are Pro-Line, CAS, and MK. But all three were no trouble to install. You can cut the wheel wells and install the landing

(Continued on page 81)



Only three servos in fuselage. Wing has aileron servo and one 180 degree servo for retracts. Note use of Du-Bro link and its brass fitting for nose gear hook-up. Simple.

gear plywood block before or after sheeting the wing. Either way be sure and make the channels for the linkages plenty loose. I have always used a PL-10 to retract all three gears but there is plenty of room if two servos are desired.

The finishing is done with whatever process works best for you. However, if you would like a fairly easy finishing process with excellent results, follow these steps.

First, do all the final sanding finishing with 180 Garnett paper. Give the whole airplane two fairly thin coats of dope. Sand with 280-400, just removing the wood fuzz. Now one more coat of clear dope to seal all the wood. Now use Skyloft, Silk or Silkspan and cover complete airplane except surfaces. Dope covering surface until all grain is filled (Skyloft three to four coats, Silk six to eight coats, Silkspan four to five coats). At this time I usually fit the canopy and finish the area around and under canopy. After this has dried, glue canopy on. Now take masking tape and tape off around stab and fin, dorsal, wing fillets, and canopy. Using Epoxolite make all fillets, smoothing to shape as close as possible. Care taken here will result in a much easier time sanding after they are dry.

Before removing tape, final sand fillets to shape. Now use 280-400 and lightly sand entire airplane. Spray or

paint two coats of automotive universal primer. After this dries, wet sand with 180 just until the dope shows. (You'll find that most of the primer comes off.) From here on you can either use automotive acrylic lacquer or enamel. I prefer using two coats of acrylic enamel. This is absolutely fuelproof and is much lighter than several coats of lacquer. The beautiful thing about this enamel is it flash dries like lacquer and picks up no lint. If you use lacquer, be sure and plasticize it; the primer and dope should be plasticized whether lacquer or enamel is used. I use an additive to the enamel called polysol which makes the paint like iron when dry, but is not brittle. When trimming, be sure and seal the tape with a thin mixture of the color you are trimming over. This will leave a nice, sharp line when you pull your tape.

Now for the fun. If you have built the airplane true, you should be able to set all surfaces at neutral and never touch the trim. During the first flights, the airplane will stay exactly where you put it. The most common mistake is trying to fly the airplane too much. If it is true, the plane will fly like it is on a string. I set the elevator so I use almost full down on outside loops. The ailerons should be set so three rolls take about five to six sec. The rudder should be set to get maximum throw. On landing, try to keep the nose just above level flight and don't worry about slowing it down—the aileron will work all the way and the wing will hold true.



Note the symmetry of shapes for the wing, stabilizer, and rudder planforms. Lines blend together nicely.

I think that you will agree with me that you can have a pretty airplane and a good flying airplane at the same time.
