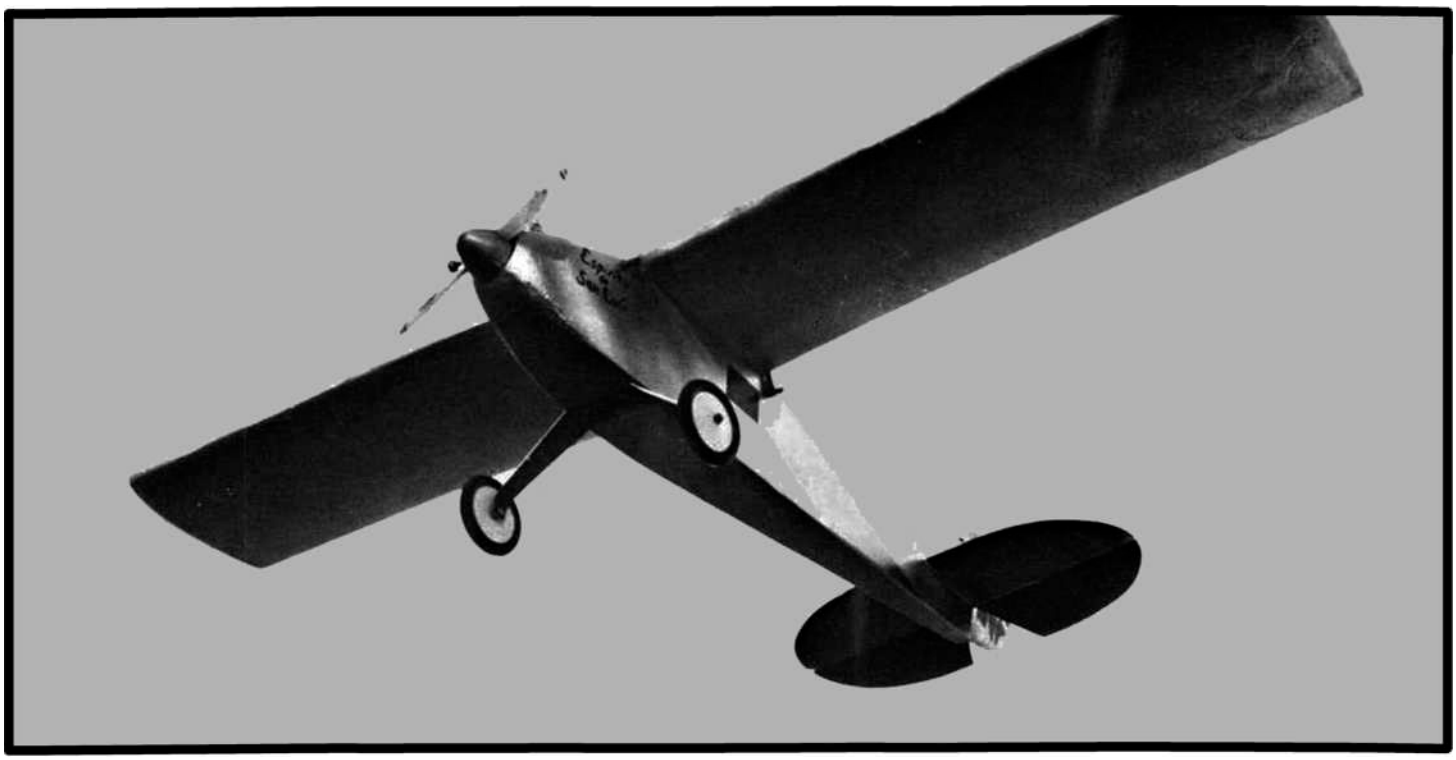


ESPIRITU DE SAN LUIS

DAVE THORNBURG brings us the little-known story of a famous south-of-the-border aeroplane of yesteryear. Lines of the small craft may look vaguely familiar, but scale is scale, and never the twain small meet.

#The year 1972 was a memorable one for the small Central American country of Burlazon: it was the year of the Carloston, a dance craze that swept the small republic like a Caribbean hurricane; it was the year that Enrique Ford, father of the country's vast and profitable sandal industry, finally dropped the venerable all-leather Model T (for trasto, "antique") in favor of the radically new Model A (for abaratar, "to improve") a sandal made entirely from used automobile tires. And it was the year that a little-known stunt pilot, Carlos Aguila, captured the imagination of the entire western world by flying his small single engine monoplane, the Espiritu de San Luis, across the Caribbean to San Juan, Puerto Rico, alone and singlehandedly (his left hand was in a sling, having been caught the week before in a hydraulic retreader at the Ford Sandal Works, where he moonlighted.)

Aguila warmed the stout hearts of newspaper readers everywhere by modestly insisting to the San Juan reporters that he had had no intention of performing so celebrated a feat. "I was merely flying formation with a flock of seagulls," he said, "when my omni shorted into my autopilot and ! found myself hopelessly jammed onto a skip signal from San juan. I slept most of the way." Newsmen who heard this explanation merely laughed and dubbed Aguila "The Lone Seagull;" then, stuffing their notepads into their pockets, they pitched in to help the admiring crowd save the airplane from posterity.

And what an airplane it was, before the crowd reworded it! You could tell at a glance that it must have been designed by a modeler. Its tail moment was daringly short, its rudder and stabilizer petite ... it had more area in its maze of wing and undercarriage struts than in its entire empennage. Unfortunately for the exacting scale modeler, no drawings were ever made of this intricate strut pattern, and the originals were claimed by the fans and well wishers of San Juan.

In other respects, however, the model presented here is a roughly accurate copy of the original Espiritu, the skeletal remains of which were destroyed in a museum fire during Burlazon's Glorious Revolution of 1929- 1968.

As a nostalgic, sentimental, history minded, forward to yesterday sort of person, you will probably want to build a model of this famous airplane. The editor will like that; for a trifling sum he will send you full size plans

The Kraft 2 channel brick rests comfortably in the fuselage. Balance was achieved without placing the battery pack way up in the nose, though there is room for it.

(be advised that trifling is now more expensive than it formerly was.) Meanwhile, assemble for your convenience the following materials, borrowed or bought: A 45 inch Sig foam wing;

Two pieces of hard 3/32 x 4 x 36 for the fuselage sides;

A sheet of even harder 1/16 x 2 x 36 for the top and bottom;

A sheet of incredibly hard 1/4 x 3 x 36 for the nose blocks;

A piece of medium 1/8 x 4 x 36 for the empennage;

A scrap of 1/8 plywood for the firewall and two smaller scraps of 1/16 ply for the landing gear mounts;

A foot of 3/16 dowel;

Epoxy and white glue;

A dural landing gear blank;

A pair of 2-1/4 inch Williams Bros, antique wheels;

An appropriate (hot .049 to meek .09) engine;

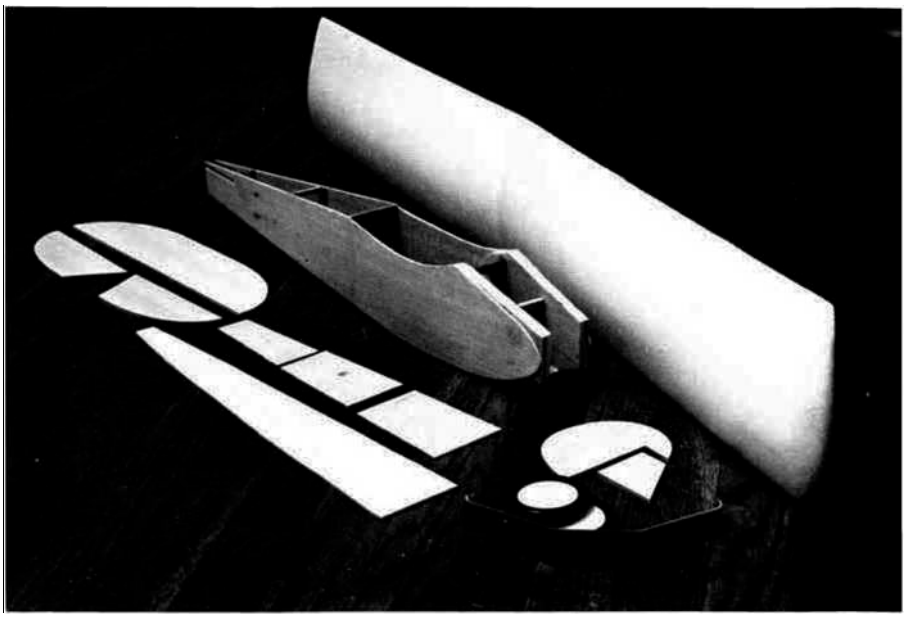
And a couple of hundred bucks worth of radio!

A small 3 channel digital and an .09 make the optimum combination; for two channel (one hundred bucks worth), use rudder and elevator and an unthrottled .049.Try to stay under 12 ounces radio weight, to avoid scale flying characteristics. If the entire airplane, ready to fly, can be kept under 27 ounces, then you too will be able to fly it single handedly - - instead of single mindedly, as most small RC's have to be flown. If you're new at this business, begin construction with the wing to gain confidence. Hold a 45 inch Sig foam wing in your left hand and paint on one coat of Sig white Plastinamel with your right *(A brush is neater, WCN).* When this is thoroughly dry (usually 2-3 days) spray it: lightly with aluminum-colored butyrate dope. This completes the wing construction - - don't RC planes go together easily? . . . Wail 'till you see them come apart!

The fuselage is only a bit more complex. Cut out one side by the plans, then use the first side to cut out the second . . . that way, even if they don't look like the plans, they'll look like each other. Whack out two 1/4-inch doublers from good hard stock, and while the wood's handy cut out the top and bot tom cowl pieces as well. Cut the formers from I/8-inch balsa, keeping the grain horizontal for maximum squeeze-prevention.

The firewall is 1/8-inch plywood. It's not really for preventing fires ... it burns very well when it becomes fuel- soaked . . . but it comes in handy for mounting engines. That's why it's called a firewall. If you plan to use an engine without an integral tank, you'll want to cut an additional hole in Former A for a 1-ounce nylon clunk tank, which will almost certainly leak on your battery pack ... . but that's what you gel for not flying sailplanes (If you insist on going through with it, put the battery pack in a Baggie to protect it. WCN).

Plan your engine installation now, drilling the appropriate holes in the Firewall for engine mounting, fuel line, throttle push- rod, etc.

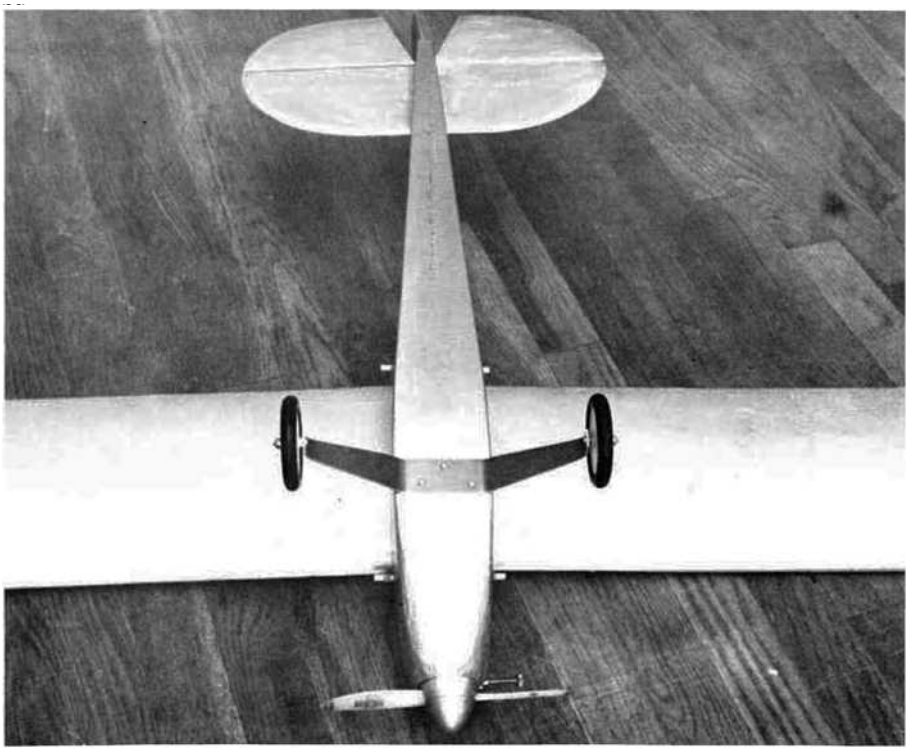


The Sig foam wing contributes a big short cut to the construction. Cutting out all parts prior to the start of building also makes things go faster. Newest silver Monokote would look great on it.

Glue the doublers to the fuselage sides, then assemble the sides around the firewall and Former A, aligning things over the top view on the plans. The down thrust isn't too critical unless you are planning to fly the plane rudder only, but the right thrust is good for everybody. When the firewall is dry, pull the tail together around Formers B and C. Don't omit the doublers in the rear section: the triangle beefs up the wing dowel and the one in front of the stabilizer slot is a must for preventing split fuselages in hard (ie, vertical) landings.

Glue the bottom nose cowl in place and, after checking alignment over the top view again, add the 1/16-inch sheeting to the aft end. Spot-glue the upper cowl block in place (you'll want to remove it later for engine mounting) and carve the nose into a reasonably round- cornered, streamlined shape. Now pop off the cowl block and give the entire nose area, inside and out, a thorough fuel proofing. Clear Hobbypoxy or fiberglass resin is great for this purpose .. . the average plane can always use a little extra weight in the nose. Mount the engine and tank, glue the upper cowl in place permanently, and cover the fuselage with aluminum Monokote ... or a half dozen coats of nasty, smelly, heavy old dope. (Rubbing talcum powder into the grain between coats helps fill the wood with less dope.)

Cut out the rudder and stabilizer from medium 1 /8-inch balsa; Monokote or paint them before adding the hinges. Bolt the landing gear in place; add the tailskid and wing dowels;



Dave says this is the typical landing position of the model. We hope Carlos Aguila was a better pilot. That wouldn't be a very dignified landing position after crossing the Caribbean!

install the radio and start looking for a balance point. Wherever it is now, it’s got to wind up within 1 /2-inch of the point shown on the plans for your plane to fly. If this means adding nose weight, do so - - scrap fire weights glued into the cowl below the engine work well. A spinner helps. Don’t forget the prop, but don’t count on the tank of fuel .. . the stuff has a way of disappearing in flight. Generally speaking, the farther forward the CG lies, the easier the plane will be to fly.

If you're a rank beginner, try to find help at this point. Very few people are able to keep their first plane together long enough to learn to fly it, when they go it alone. I f it’s just not possible to obtain help, here are a few things to check before that first flight: engine thrust line (does it point down and right, as the firewall drawings on the plans indicate?); rudder throw (it should be no more than 1/8 to 3/16 inch each way); elevator throw (1/4 inch each way is enough); point of balance (it should be NO MORE than 1-3/4 inch behind the wing leading edge.)

Don't throttle the engine back for the launch, especially if you’re using an .049. Slow-flying power jobs tend to stall and snap-roll into the ground very easily. Throw her fairly hard and straight into the wind . . . with any luck she should fly off with wings level and climbing. Make those first turns very gingerly . . . Caramba! You are on your own, my friend!