

TEQUILA SUNRISE

Second in a Series of Lesser Known Aircraft from Aeronuttical History

By Peter Miller

The Golden Age of air racing in the USA from 1929 to 1939 is full of incredible stories. Winning races on a shoestring budget, aircraft designed by marking them out in chalk on a hangar floor, in one case a sponsor put up two million dollars for a complete airfield and aircraft plus racing aircraft. This was the Wedell-Williams concern and it paid off with many wins.

A Rum Idea

One of the most intriguing stories concerns an aircraft ostensibly designed to win the Bendix and Thompson Trophies but never even placed in either race and yet it made more money than all the others put together.

In 1931, Maxwell H. Hominy, the blacksheep son of a wealthy Southern family persuaded his parents that he had turned over a new leaf and had become interested in air racing. His parents were so pleased that they agreed to finance the construction of an aircraft.

Maxwell formed Louisiana-Mexican Aircraft and hired S. Bruce Stringer to design and build the aircraft to his specifications. Some of the specifications were so unusual that the designer smelled a rat, the plot came out and the designer squeezed Maxwell for a share in the profits.

The next and most important part of the plan was to hire a pilot but he had to be Mexican. They found the perfect pilot in Alberto Cochon, the son of a wealthy bandit, Alberto had been thrown out of the Mexican Air Force for consistent low flying as evidenced by the wheel tracks of his aircraft on rooftops all around the airfield. One day he removed the entire latrine block while the Commanding Officer was inside.

His excuse that he was afraid of heights was not accepted. His C.O. could have had him shot but showed great leniency as he found that his chronic constipation had been completely cured, and so Alberto was dismissed from the service which did nothing for his employment prospects.

Maxwell's plan was simple . . . "prohibition" was in full swing in the USA, and Maxwell was going to use his aircraft to fly in large amounts of liquor in the tanks, the cover story being that it was planned to fly the coast to coast Bendix race non-stop. The aircraft had four tanks in each wing plus one in the fuselage. For normal short races only the fuselage tank would be

used, for the Bendix all tanks would be full. Obviously, the aircraft had to make a showing in the races to avoid suspicion.

Alberto had an extra small tank fitted in the headrest, he didn't like "Gringo" drinks and he kept his tank topped up with tequila.

The aircraft was a low wing design with a fabric covered fuselage and wing. The wing was extremely thick to take the tanks which were in the leading edge. The thick wing allowed the designer to use a fully cantilevered arrangement, thus avoiding struts or rigging wires. This was revolutionary for the day and the saving in drag did actually compensate for the thick



section. Undercarriage was a single leg arrangement rather similar to the Hall Springfield Bulldog. Originally spats were fitted, but Alberto's liking for low flying made them rather vulnerable and they were not replaced after the fourth time of being forceably removed. The wheels were large to permit landings on rough fields. Power was provided by the Wright Pratt

TEQUILA SUNRISE

Designed By:

Peter Miller

TYPE AIRCRAFT

1/12 Spool Scale

WINGSPAN

34 Inches

WING CHORD

6 3/4 Inches

TOTAL WING AREA

220 Sq. In. (Approx.)

WING LOCATION

Low Wing

AIRFOIL

NACA 0015

WING PLANFORM

Constant Chord

DIHEDRAL, EACH TIP

1/4 Inch At Last R2

OVERALL FUSELAGE LENGTH

26 Inches

RADIO COMPARTMENT SIZE

(L) 7" x (W) 2 1/4" x (H) 2 1/4"

STABILIZER SPAN

11 Inches

STABILIZER CHORD (incl. elev.)

4 Inches (Avg.)

STABILIZER AREA

44 Sq. In. (Approx.)

STAB AIRFOIL SECTION

Flat

STABILIZER LOCATION

Top of Fuselage

VERTICAL FIN HEIGHT

3 Inches

VERTICAL FIN WIDTH (inc. rud.)

4 Inches (Avg.)

ENGINE SIZE

.09-.15 Cu. In.

FUEL TANK SIZE

1 Oz. Plus

LANDING GEAR

Conventional

REC. NO. OF CHANNELS

2-4

CONTROL FUNCTIONS

(2) Ail. & Elev.

(4) Ail., Elev., Rud., Throt.

BASIC MATERIALS USED IN CONSTRUCTION

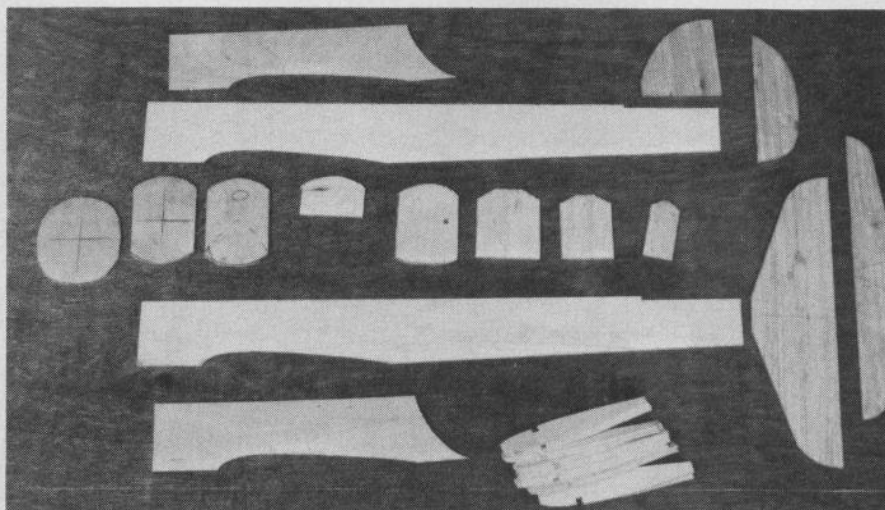
Fuselage Balsa & Ply

Wing Balsa & Ply

Empennage Balsa

Wt. Ready To Fly ... 31 Ozs. (1 Lb. 15 Ozs.)

Wing Loading 20.3 Oz./Sq. Ft.



Model has few parts to cut out in spite of complex shape.

attributes had been deliberately designed in to help the pilot evade any Government aircraft on its many trips back into Mexico to "refuel" as Maxwell put it.

A Bender on the Bendix

"Tequila Sunrise" made its debut in the 1931 Bendix race and it would have had a good chance of finishing in the money if Maxwell's organization had been running smoothly. The plan was that the aircraft would arrive at the starting point and the ground crew would drain the wing tanks and refill them with petrol. Unfortunately, the crew failed to arrive and a refueling crew dipped the tanks, found them full, and so just topped off the fuselage tank.

Alberto took off in the race and made good time for the first two hours, but as the "fuel" from the wing tanks started feeding through, the engine began to run rough, it finally cut near the small town of Hicksville, and Alberto made a dead stick landing at the local airfield.

Realizing what had happened and knowing that the carburetor and plugs must be fouled and the fuel system needed draining and flushing, Alberto persuaded a couple of mechanics to help him.

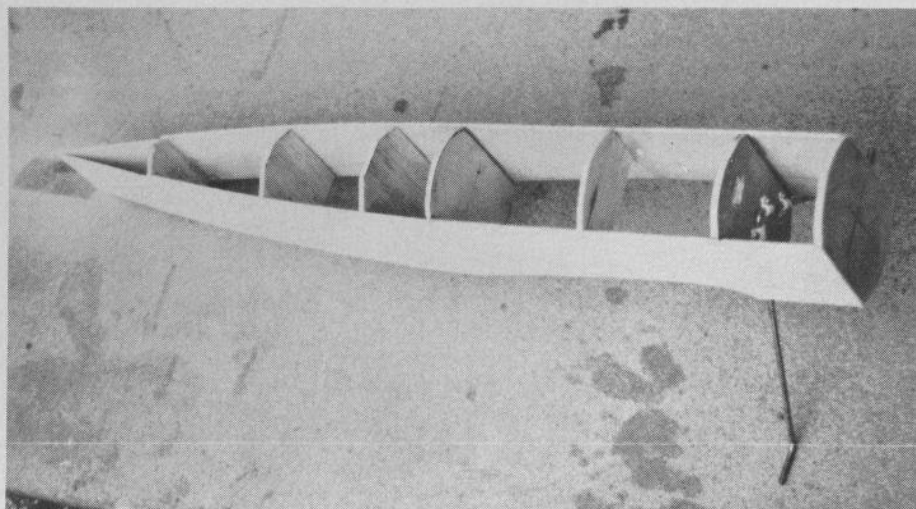
As they worked, word spread to the town

and Alberto spent most of the time selling the contents of his wing tanks. As night fell, Alberto found himself alone with a dismantled engine and the entire population of the town snoring all over the hangar and airfield. He reassembled the engine, filled the tanks with petrol from a tanker and took off. The delay had put him out of the time limit for the Bendix race, but his takings in cash were a little bit more than the prize money. As a footnote in history, the town was known after this as Hic'shville.

Cheers

The Bendix Trophy race always ended at the National Air Races and the main event of these was the Thompson Trophy Race. Tequila Sunrise was entered, but did not take part as the engine was still suffering from the effects of alcohol poisoning and Alberto was suffering from the effects of his personal fuel tank, but he did put on the first of his aerobatic shows which became legendary.

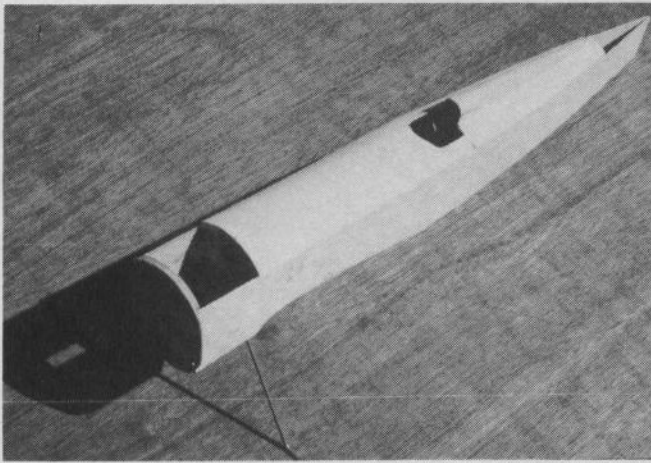
The National Air Races were the big event of the year, but there were innumerable smaller races and air shows around the country, and Alberto and the Tequila Sunrise attended most of these. Occasionally, he even raced the aircraft and



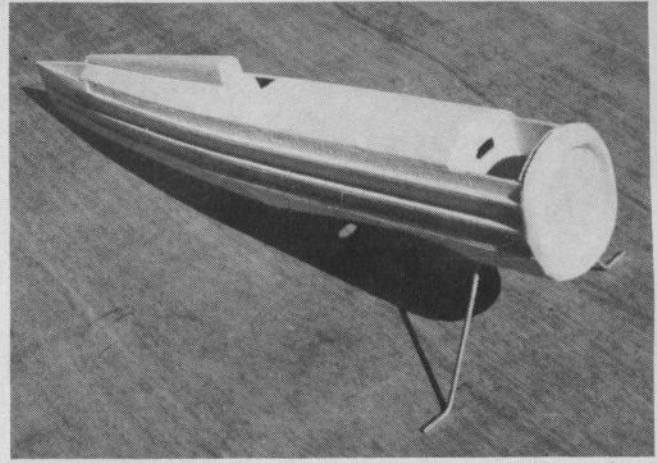
Basic fuselage assembles just like any other model.

BE50/100H. The aircraft was known as "Tequila Sunrise."

Performance of the aircraft was very good, a little on the slow side to have any hope of winning races, although it did win one or two small events. It did have an excellent aerobatic performance due to the large wing area and generous tail surfaces, also was very steady in normal flight. These



Top deck and head fairing, and the shape begins to emerge.



Stringers and fire wall ring, and the main structure is complete.

usually won at these smaller events, having supplied the rival pilots with free samples from his tanks.

In the early days, each tank was filled with a different beverage but it was found that some were more popular than others, and when the aircraft took off for its final display, it would be out of trim, one wing low, not that Alberto was in any state to notice this.

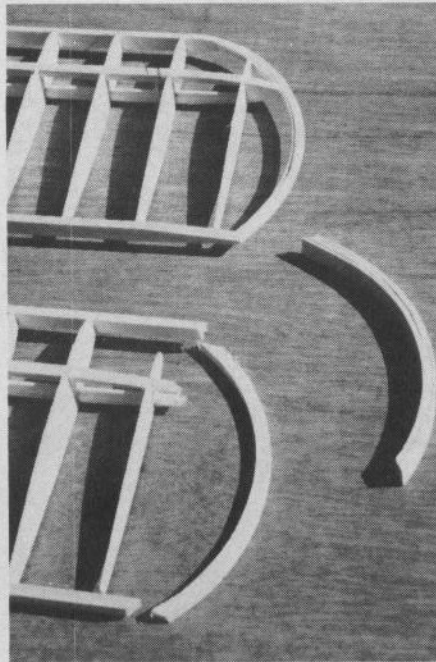
One For The Road

Mention has been made of Alberto's aerobatic displays. These took place at the end of the meeting and consisted of one of the finest, craziest flying displays ever seen. This would start off with the aircraft careening wildly around on the ground between parked aircraft, cars, spectators, and anything else. Eventually, the aircraft would leap into the air, do a vertical half roll and 3/4 loop, sometimes it was a 3/4 outside loop. After this, Alberto would string together loops, rolls, and low passes upright and inverted with crossed controls and he normally managed to fly through a hangar until airfield managers learned to keep hangar doors closed.

Once Alberto had managed to get the worst effects of his Tequila intake out of the system, he would line up on a compass heading and go home.

Trouble With Some Hard Stuff

1932 was not as successful as the



Laminated wingtips are strong, light, and easy to fit.

previous year, and in fact, saw the end of the scheme. The authorities were becoming very interested in the activities of Tequila Sunrise and her pilot, but even more

serious, the Chicago Mob began taking an interest.

The Mob decided to lean on Alberto in his home village. Alberto lived in a small Mexican village called Huevos de Gato (Cats' eggs, a type of cactus with small spiky balls which attach themselves painfully to the unwary). This village was so tough that the police had erased it from all their maps so they would have an excuse for not going there. Even the scorpions didn't sting the residents as they had found this was instant suicide.

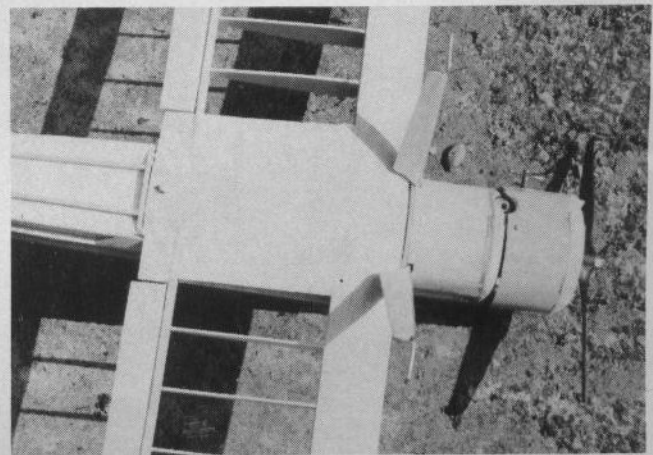
Four gangsters in snap brimmed Fedoras and double breasted suits drove into Huevos de Gato in a big black Cadillac, and walked into the bar where Alberto was tanking up before heading for the National Air Races. They suggested that it would be healthier if he delivered his load to another destination; one made the mistake of producing a gun to emphasize the argument and the four sprouted 17 knife handles in assorted places, normally it would have been more but the bar was almost empty at the time.

The climax came at the races, where the police and the mobs converged on Alberto and Tequila Sunrise. This started a full scale shooting match and Alberto, who had his engine running prior to departure took off in a straight line for once, as the gun battle had sobered him completely.

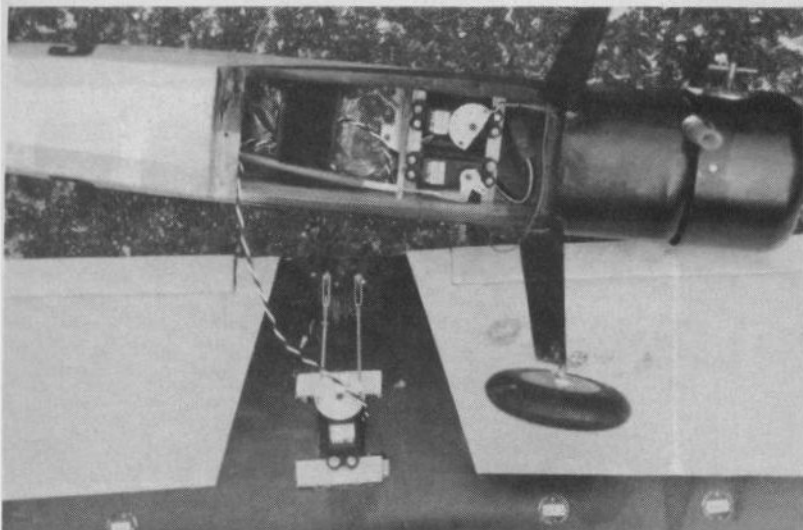
His troubles were not over as the Army



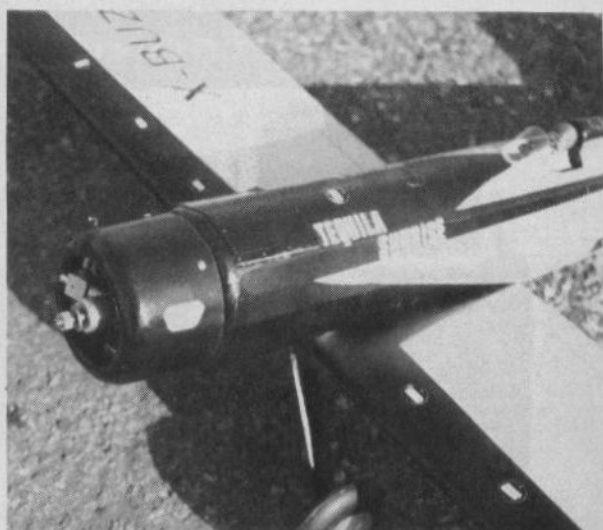
Assembled model ready for covering.



Underside showing wing and landing gear fairings.



Plenty of room in radio bay; those are mini servos, four micro servos would fit with ease.



Nose is clean for reduced drag; battery hatch is held down with spots of glue.

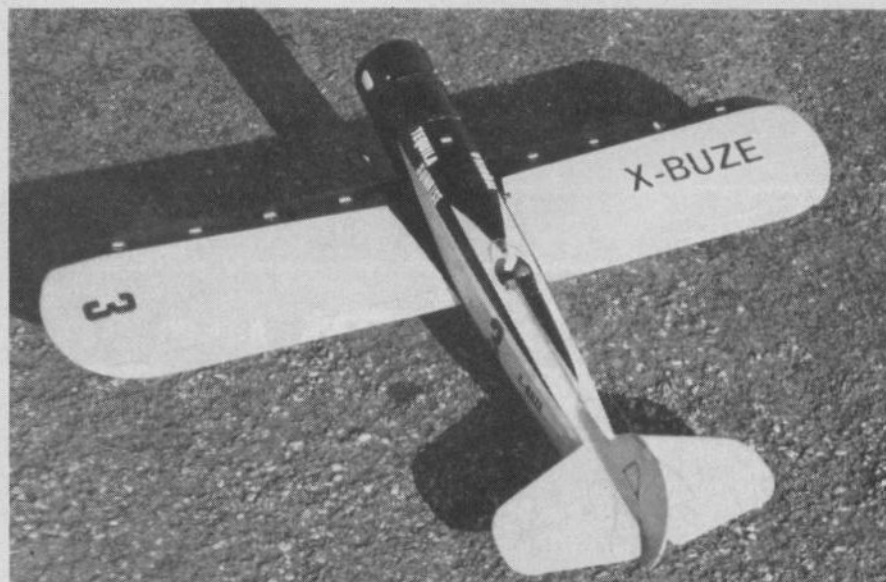
Air Corps had been alerted and relays of aircraft were up and searching for him, but Alberto put his love of low flying to good use. In an epic flight, he never got higher than 10' above the ground and he went in a straight line.

He flew down one main street and seventeen saloon cars became convertibles. He flew down a canyon and achieved eight miles of knife-edge flight. He flew under a bridge and left tire marks on the underside of the span, and he flew past a bakery and invented sliced bread.

When Tequila Sunrise landed at Huevos de Gato, the leading edge was covered with cactus thorns, the pilot head had one ladies hat, two Stetsons, and a Mexican sombrero impaled on it, and there were three rather surprised and very angry rattlesnakes wrapped around the undercarriage.

Siestas and Southern Comfort

Maxwell Hominy retired to his family's plantation where he lived on the profits of his venture and one load from Tequila



Sleek lines of racer are enhanced by color scheme; the color scheme varied in the second year of operations to confuse the authorities.



Tanks in wing leading edges carried 200 gallons of booze. Note appropriate Mexican registration.

Sunrise's tanks which had been delivered there for his personal use.

Alberto retired to his village where he was considered a rich man and something of a hero. Tequila Sunrise was given a nice shed which she shared with a big black Cadillac and Alberto would take her out for a flight from time to time. As a result of these flights, the police erased a much larger area from their maps.

S. Bruce Stringer became a well known designer, designing a large number of aircraft for Chicago Models including a nice model of Tequila Sunrise on which this model is based.

The color scheme was bright yellow with black trim.

Building the Model

The model is very easy to build, there are one or two unusual techniques, and one or two areas that may raise the builder's eyebrows and so I shall concentrate on these areas.

The fuselage has 1/16" sheet sides with 1/32" ply doublers. This is quite strong enough because the fuselage is a box and the

side stringers provide extra strength. Construction follows the usual sequence of front formers joining the sides, pull in the rear and fit remaining formers, and then fit the rolled sheet top decking.

At this stage, it is a good idea to fit the pushrods, fit two if you plan to use rudder control as well. Once this has been done, the bottom 1/32" sheeting can be fitted.

Fit the 1/16" ply fire wall and then glue the stringers down each side and on the bottom. The stringers taper off to nothing at the rear. The nose ring 1/2" sheet under the fuselage nose and headrest are fitted and the whole fuselage is sanded. The sheet tail surfaces can now be added.

Wing

The wing is completely conventional with a fully symmetrical airfoil. Remember to mark all the ribs on the top, as it is rare for any rib to be exactly the same top and bottom.

The wing is held to the fuselage with a dowel at the front and a 10-24 nylon bolt at the rear.

The tips are laminated from four strips of 1/16" x 1/2" balsa, these are glued together with CA or Aliphatic resin and wrapped around a 5-liter container which gives the correct curvature.

Cowling

The cowling is quite easy to make and very, very strong. This has been proven on another model when a crash wrecked the engine and the cowl was virtually undamaged.

Take a suitable plastic container 3" in diameter or just over. Cut a strip of 1/64" ply with the grain across the strip, chamfer one end and wrap it around the container and glue the end at the chamfer, leave to dry.

Cut some soft 1/8" sheet to the same width as the ply with the grain across the narrow dimension, and glue this down to the ply, holding it with elastic bands and leave to dry.

Carefully sand the 1/8" sheet smooth and then glue another strip of 1/64" ply around the outside of the cowl and leave to dry. When it has dried out, you should be able to remove the ring from the container and you will find that it is very rigid. Sand both ends of the ring flat and true.

The nose ring is made up of four 90° segments of 1/2" sheet. This ring is glued to the front of the cowl ring and sanded to shape, the rear of the cowl can be sanded inside to a knife-edge and the result is a very neat, very strong radial cowl.

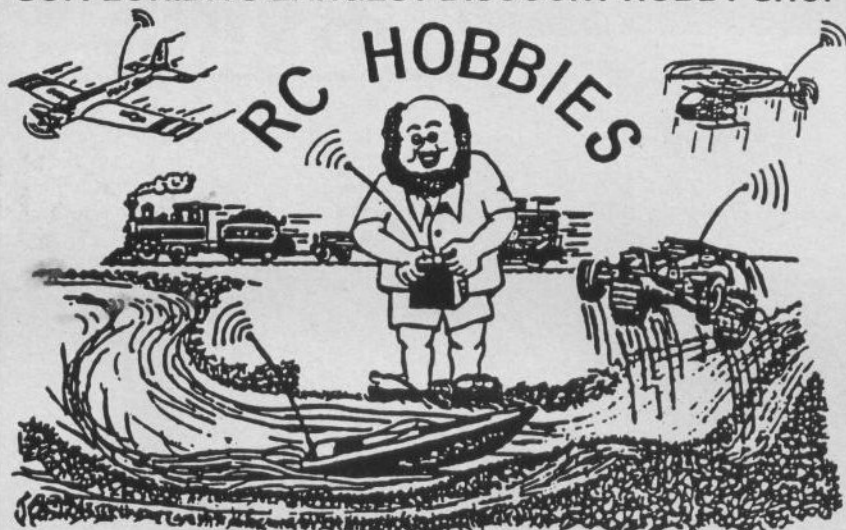
The cowl is mounted on three hardwood blocks which are inset into the balsa ring on the front of the fire wall.

Covering

The model is covered with your favorite covering material. I used Solartex because it takes paint well and can be worked around the front of the cowling without being cut.

The tank access panels were made from thin self adhesive aluminum foil with the screw heads indented from behind before sticking down. When lightly sanded after painting, these panels show aluminum at the

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edges and screw heads. Decals were from decal color film and rub down letters.

I used yellow Solarfilm with black spray paint for the trim. Be sure and use fuelproof paint.

Engine and Radio

The engine used in my original was a PAW 1.49cc Twin ball race diesel, but a standard PAW would be quite adequate. Any good .09 cu. in. to .15 cu. in. diesel or glow engine could be used and the silencer should just clear the cowling; if it doesn't, a small spacer can be made quite easily.

The layout of tank and radio is flexible. I made up a brass tank which fits in the cowling and put the 280 mAh battery in the first fuselage bay. With the tank in the cowl, the model was nose heavy and I had to add lead to the fin.

The servos went in the next bay with the receiver behind them. Fleet FPS 18 mini-servos were used, but there is just room for slightly larger ones. Alternatively, a micro radio could be used with a useful saving in space and weight and rudder control could be included.

As set up on the plan, the C.G. came out on the main spar which is a bit farther forward than I wanted, but is a safe position. If a heavier engine is used, the tank could be fitted in the fuselage with the battery either below it or just in front of the servos. The servos could be moved back to the next bay, but care would have to be taken that they did not interfere with aileron controls. A micro servo for the aileron would help in this case. Control throws are: ailerons, 1/4" each way; elevators, 1/2" each way.

I used Williams Bros. 2 3/4" smooth contour wheels; these being slightly over scale, but are the correct type and as we fly from grass, I felt that this was a good compromise.

The model weighed in at 31 ozs. ready to fly which was acceptable from the wing

loading point of view.

In Flight at Last

The first flight was a bit nerve wracking. The PAW 1.49 TBR needed a lot of time to warm up and set, due to the close cowling and poor exit areas for the hot air.

Once it was set to my liking, a take-off was attempted but the long grass and lack of rudder control made this impossible, so a hand launch was tried. This worked and the model roared away.

Ailerons were too sensitive even for me, and that is saying something, elevators were not sensitive. Rates were switched in and the roll rate became civilized.

The model was nose heavy at this stage and could not be made to stall at low throttle, nor could it be made to flick out of the tightest pylon turns, very good so far. A dead stick landing was made, the model had run out of elevator control but the landing was good, even if off the runway.

Some lead on the tail and the model was much nicer, the stall characteristics remained safe and docile but loops became easier, although too tight a loop resulted and a sort of nodding multisided loop. Possibly the C.G. could be moved even further back. A power on landing is easy but fast.

One thing that has not been said, with the PAW 1.49cc TBR and an 8 x 4 prop, the model is very, very fast as befits a racing plane. It is stable, yet maneuverable, and it looks the part in the air. Any good 1.5cc (.09 cu. in.) engine will fly it nicely. □

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