

Pseudo-scale Pink Panther waves "hello" to all you sport electric fliers out there who have been waiting for a small (42-inch span), aerobatic sport plane for fun flying at the school yard. If you want a noise maker up front, she'll fly with an .049 to .09 glow engine just as well.

'Lil' WHISTLER

By LARRY JOLLY . . . First of all, this little R/C fun plane is electric powered and is quite a performer with just a simple 05 motor . . . so throw away all those preconceived notions about doggy battery busters. Secondly, the Whistler has a very unusual "history" which we think will stimulate your imagination (and tug at your leg)!

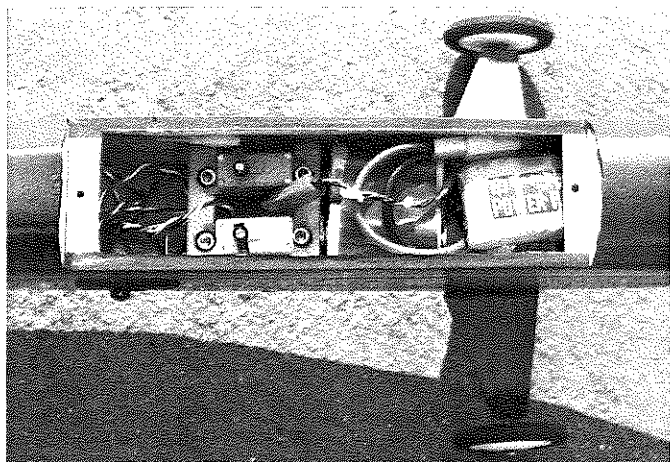
• The Whistler story goes back a long time. My association with the airplane started last year when Clyde Der Taubin sent me a fuzzy photo of his father taken in the early '20s. It seems that Clyde's father was a fighter pilot during World War I; with a name like Clay Der Taubin you can bet he didn't fly for the allies.

Anyway, as history goes, the Germans got a big kick out of sending huge rigid airships over England and dropping bombs on the folk below. As things sometimes go, the zeppelins as they were called, had one very serious flaw, as the United States was the only source of helium, the Germans had to use hydrogen, that's right, the same as in bomb.

Well, the British soon found that all they had to do was place one glowing bullet into one of a zeppelin's gas cells, and instead of an airship the Germans soon had a glowing Chinese lantern plummeting from the sky. The Germans became very serious over these events and started working on ways to give their airships some protection. Clay and his squadron were soon involved in an experimental program involving parasitic fighters that would go with the airships on their raids, and if enemy fighters were encountered, they would be dropped from the airship, engage the enemy and return to the airship for the ride home.

Well as wars usually go, World War I got too expensive, and the Germans decided to call the whole thing off. As part of the treaty, the allies took possession of the remaining zeppelins; these were divided up between Great Britain and the USA. As it went, the US got Clay Der Taubin and his group.

When the US found out what they had, they immediately shipped Clay off to Dayton and slapped a "Top Secret" classification over the entire program. It appears that the Germans didn't want anything flammable in or near their zeppelins. This, of course, left petrol motor powered aircraft out of the running. What the German engineers did was ingenious, in 1917 they designed an electric powered interceptor to be carried in their airships as protection. The picture Clyde sent me is of his father leaning against the wing of his personal aircraft dubbed *Whistler*. Of course, by the time it got to Dayton, it had been refinished in US colors. Unfortunately, the photo is so old that it won't reproduce, but if you could view it, you would see that the mid-wing version is the



Installation details (l to r): Rx on/off switch, rudder & elevator servos (Novak's), 6-cell motor pack, Rx batt. pack, and lots of wires!



"C'mon, it's easy, I've seen daddy do this a hundred times!" Cherie Jolly may be a precocious child at two years, . . . but *this*?!!

spitting image of the full-size aircraft. Clyde told me that after the military tested the little German electric fighter, they decided against further study of electric flight, and his father was made a civilian advisor.

When I received the photo of the Whistler from Clyde, I knew that this was the subject for my first sort-of-scale masterpiece. The area and moments were perfect, best of all, I could even use a scale power source. Plans were quickly drawn and the Whistler soon became legend in Southern California. All the versions presented here have been successfully built and flown. They have all proved easy to build and have been found to be excellent sport fliers. Although the Whistler is an electric powered model, the design is easily changed to a gas powered model for .049-.09 glow motors. Just do two things: make sure the model is fuel proofed so the fuel residue won't rot the nose off, and don't let me find out you did it.

As presented in **Model Builder**, the Whistler is designed to be powered with common six-cell 05 systems. My Whistlers have been flown with both Astro and Leisure systems and have rewarded me with regular eight to ten minute flights. Believe me, this is the sport electric that you have been waiting for.

PREPARATION

Now that you have decided that you want a Whistler of your own, you're going to have to build one. When scratch building, I like to make up a kit before I start construction so that I don't have to take time out from building to fabricate something. Use the drawings as a guide, and form the ribs, the fuselage sides, the formers, and the shear webs. You don't have to be too careful on wood selection, the lighter the better, but don't sacrifice strength for weight. Now is also a good time to get the hardware together. Sig makes the landing gear you'll need as well as the small canopy if you build that version. Got everything cut? If so, then let's grab some Hot Stuff and go!

BUILDING THE WHISTLER WING

I like to build the wing first so that I can have it ready to fit to the fuselage. Look at the photos, note that the Whistler has an open structure wing with center sheeting for protection from the rubber bands. You must decide whether you will build the constant chord wing or the wing with tapered tips. If you build the tapered wing, modify the ribs using the method shown on the drawing. Also note that the three center ribs have to be trimmed to accept the center sheeting.

Build the wing tips first. Pin the bottom spar, the trailing edge and leading edge in position. Position and glue the ribs in place. Add the top spar and the shear webs. Glue the wing tip block in place. When both tips are complete, raise the tip up 1-3/4 inches and sand the root flush to form a good joint with the center panel. Now build the center panel using the same sequence. Note that the spars are not

covered by the center sheet, but instead the center sheet edge glues against the spar. When the center panel is complete, check the fit of the tip panels to the center panel. If all looks good, glue the tips to the center panel and add the hard balsa dihedral ties. Now sand the leading edge to shape and finish sand the rest of the wing. Place the wing aside to await covering.

BUILDING THE TAIL SURFACES

Both the stab and rudder are simple, flat structures constructed with 3/16 x 1/4 balsa outlines and 3/32 x 3/16 ribs. Build both the stabilizer and the rudder over the drawing. When complete, gently sand the edges round. It is not necessary to sand an airfoil shape into the surfaces, just sand them to a pleasing contour.

BUILDING THE FUSELAGE

Lay the fuselage sides on the board bottom facing bottom. Make sure that you have them aligned; now pin in position and mark the locations of the two plywood formers. Now glue the 1/8 x 1/4 balsa longerons in position. Remove the fuselage sides from the table and pin them together, longerons to the outside. Sand the edges thus ensuring the sides are the same. Unpin the sides and taper sand the longerons at the rear so that the sides will fit together at the tail. Pin one side to the board longeron side up. Place all the plywood formers in position. Use a small triangle to ensure that they are perpendicular to the sides. When all is square, glue the formers in place. Now you must decide which of the three versions you will build. If you build the high wing version, add the cabane strut assembly, check the drawing for the proper method of assembly. If you build the low wing, you must now relieve the fuselage bottom to accept the wing. When the modifications are finished, align the fuselage sides over the top view of the drawing. When you have a square fuselage, apply the glue to the formers joining the assembly. While the assembly is still pinned over the drawing, join the tail end together. . . . be careful to achieve proper alignment. Remove the fuselage from the board and glue the nose block in place. Now, add the plywood floor. Each of the three versions has a different top assembly. Using 1/8 balsa, form the top assembly for your particular model. Line the noseblock with the 1/64 plywood motor tube. Make the tube using your motor as the form and then carefully fit it to the nose block. Make sure there is no up or side thrust. Place a spinner on your motor and put the motor in the nose block. Carefully sand the fuselage to shape. Put the pushrods in the fuselage from the bottom of the fuselage. Now, apply the 1/16 bottom sheeting cross-grain. Finish sand the fuselage smooth.

COVERING AND FINAL ASSEMBLY

Check the fit of the wing and tail assembly to the fuselage. If nothing needs to be changed, cover the entire model with Monokote. Make the landing gear assembly and decide how you

want to mount it. If you want to use blind nuts and screws, glue the 1/8 plywood landing gear mount in place inside the 1/16 plywood floor. Drill the aluminum mount for screws. Line the landing gear up on the fuselage and mark the location of the holes. Drill the holes and add the blind nuts. When you have the tail feathers covered, hinge the elevators and rudder using Rocket City nylon hinge strip. Put the wing in position on the fuselage and secure it. Remove the Monokote from the bottom of the stabilizer where it glues to the fuselage. Line the stab up with wing and glue in place. Get yourself a Carl Goldberg nylon steering bracket, some 1/16 wire, and a 3/4-inch tail wheel and make-up the steering unit. When complete, assemble the steering unit to the fuselage and rudder and glue the entire assembly in place. Make sure the fin is square to the stabilizer.

Using the plans as a guide, plan the installation of the radio and electric motor unit. If it looks like the center of gravity is going to be within acceptable limits, then go ahead and permanently mount the radio in position. Adjust the servo throws so that the rudder moves 1/4-inch each way and the elevators move 3/16-inch each way; please make sure the rudder and elevator move the proper direction.

Mount the motor into the nose block; if the motor is a little loose, wrap it with some masking tape to increase the motor's diameter until you have a snug fit. It does no good to have the motor spin in the tube, twisting the wire harness in half. Now, place a 1-1/2 inch Goldberg spinner and a Cox gray 6-4 propeller on your motor. Place the motor battery in position and secure the wing. Once again, does the model balance properly? Do the controls move in the proper direction? Does the motor system work properly? Are there any warps? If everything checks out OK, put both batteries on charge, and go get some sleep, your Whistler is going to fly in the morning!

FLYING THE WHISTLER

The Whistler is not too particular as to where you wish to fly it. However, if you are flying from a field that is rough or has high grass, you may wish to remove the landing gear and hand launch the model.

If you are going to hand launch the model on the first flight, it is better if you trust the launch to a qualified helper so that you can have your full concentration on flying the Whistler. Have your helper stand into the wind, position yourself behind him. Give the model one last preflight check. If all is "go," have your helper launch your Whistler into the sky. Let the model climb out gently as you get acquainted with the controls. You will soon find that you have a smooth flying aircraft with excellent response. On this first flight, it's not a bad idea to take the model up a little bit and try a stall both power on and off.

Good luck with your Whistler, I hope you like yours as much as our test pilots have liked theirs.