COMANCHE "C"

A stand-off scale model for .40 cu. in. engines, the Comanche "C" will hold its own in most any sport or not-too-serious pattern event. Accent is on quick and easy building.

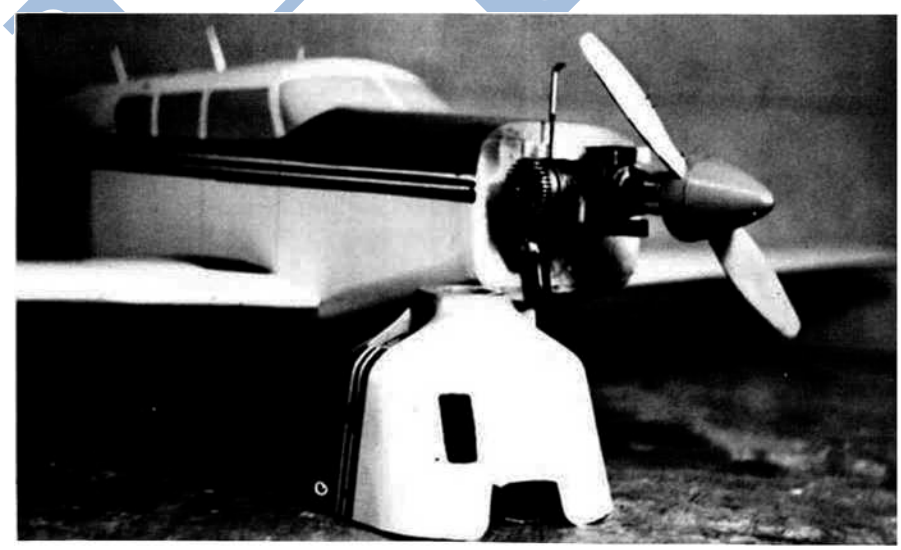
By Jim Sunday

I built the Piper Comanche "C" to satisfy two needs. The first was to have a good stunts that looked like a real plane, and the second was to have a scale plane for the 1st Annual Pioneer FAI Scale Contest.

I did not want to take the time to do a scale job on heavy interior detail and I felt a good flying model would get better points than the loss of performance was worth due to the added weight of detail. As it turned out I feel I was right.

At the contest, the plane out flew all of the competition and was only beaten by a plane that was an exact replica of the owner's full size job. I don't have nearly the time and effort invested in my plane as the fellow who rightly beat me, so I can enjoy flying my plane every day.

This is a plane that can do the entire AMA pattern including all the snap maneuvers. From straight and level flight it can do 1/2, 3/4 or full snap and stay right on heading. My model has a S/T .40 rear rotor ringed engine for power. At 5-3/4 lbs. and 505 sq. in. it moves right along, but even with good stunt capabilities, it will land slow.



Scale width allows plenty of room for cowling rear rotary K & B 40 engine. Cowl is combination of bent aluminum sheet and carved balsa. Veco shaft extension is used to keep engine enclosed.

The full size Comanche "C" was first made available in the spring of 1969 and featured the new extended prop shaft for a cleaner front end and improved performance. A color scheme is available at your friendly local Piper dealer. A good friend of mine, Jack Ulstad, my "friendly local," supplied me with a factory print and a sales brochure. If you have no local dealer . . . heaven forbid . . . you can write to Piper Aircraft Corp., Loch Haven, Pa., 17745 for literature, and maybe you can con them out of the "Owner's Handbook" part No. 753-774. The hand book has a three-view and a beautiful color picture in it.

Now to the work bench, as the big boys say. As you have noted, the fuselage is essentially a box designed to be built from stock standard size lumber. Cut out the three bulkheads, the side sheets and the ply doublers. Apply a coat of will hold liquid contact cement to the proper sides of the doublers and the fuselage. When dry, press them together ... the doubler and the side. Don't forget to make a right and left side with the doubler on the inside. Install the bulkheads and tape the whole

The Comanche just a split second before touchdown. Main wheels are almost on the deck, while nose gear is still high in proper fashion.

The author/designer, Jim Sunday, San Jose, Cal. Jim is proprietor of hobby shop in Mountain View. Sticker on tail says "I Fly Sundays!"

mess together and let dry overnight. Put in the triangle pieces all over and do a good job on the back of the fire wall. You can now get an idea of the width of this thing. Now glue on all the blocks. Don't worry if the top block doesn't come all the way to the edge. Most of it gets ground off anyway.

The slab and fin, rudder and elevator are sheet balsa and are no problem.

The cowl is not difficult but does take time. I believe the easiest way is to install the engine first with all the holes in it filled with rags, or taped over . . . or both. Install the Veco shaft extension and cut a balsa block to the outline shown on the plan for the front of the cowl. Draw a line around the outside of the block about 1/4 to 3/8 inch in from the back. This line will be where the aluminum sheet will mate with the balsa block.

Using a piece of paper or lightweight aluminum, wrap around the front of the plane, including the cowl, and draw a rough outline to the approximate depth of the finished cowl. If you are satisfied with the shape, use the template and make the finished sheet. I made mine of .007 inch aluminum and used No. 2 sheet metal screws to fasten the ends together on the bottom.

Now with an accurate idea of how the whole thing fits together, get out the epoxy. I did mine with Hobbypoxy Formula II. The new 5 minute Devcon might be better for the initial assembly and later (say, 5 minutes) use Hobbypoxy II to fuel proof and harden the inside and outside of the cowl. What a job! It's more trouble to describe it than it is to do it.

The wing I used was a foam core and it is finished in the conventional way. A built up wing is shown for those who prefer it.

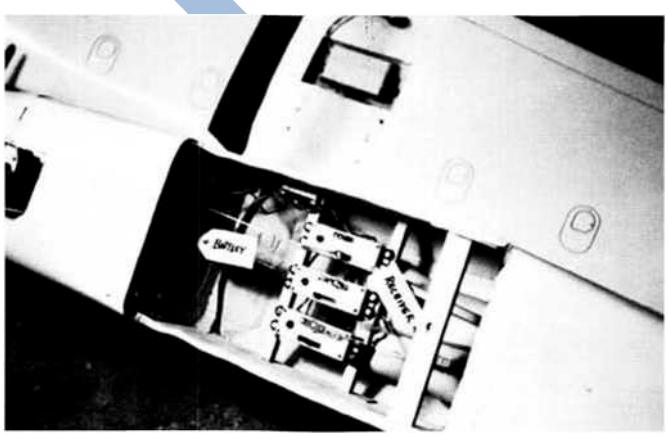
I used Hobbypoxy paint throughout. My favorite method of finishing is to first give the entire model a heavy coal of Hobbypoxy clear and let it dry overnight. Then after a light wet sanding with 220 wet-or-dry paper, I give the model a heavy coat of Hobbypoxy Stuff thinned to brushing consistency, about like heavy cream. Let dry overnight. Now I really start to sand. With 220 wet-or-dry, I sand off all the H/P Stuff that will come without going through the H/P clear. Now it is ready for color. I normally put on two good coats of Hobbypoxy color, but on the Comanche I used three light coats . . . takes longer but it looks good. The red and black are also H/P. Bright red H/P is usually hard to make cover, but over the while it is great.

The numbers on the model are, of course, the same as in the Piper brochure, but after the contest I had to add the "I Fly Sunday's" decal. Now it's a company plane. (Jim is proprietor of a Hobby shop in Mt. View, California).

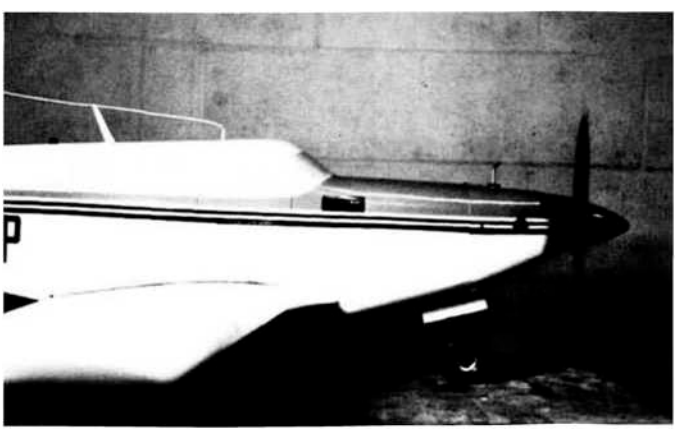
The plane is about 3 years old and has been flown with a Kraft KP6 ever since its beginning.

Another thought for the guy who is a tinkerer or a real scale buff is retractable gear. The small light weight MK gear from Royal Products or Goldberg units would be great for the Comanche and you have lots of room for the mechanics. I had a Mooney with about the same size wing with retract gear and it was great. A low pass with the gear up . . . pure beauty!

Good luck and may your Comanche fly as well as mine.



"In a canyon, in a cavern. . . P l e n t y of elbow room for radio installation here! Receiver is located behind servos.



Profile shot of Comanche reveals long nose and need for shaft extension. Jim used foam wing, but plans show it built up. It's your choice.