

FIELD & BENCH REVIEW

HOBBY SHACK'S

PILOT J-3 CUB

by Donald R. Raab

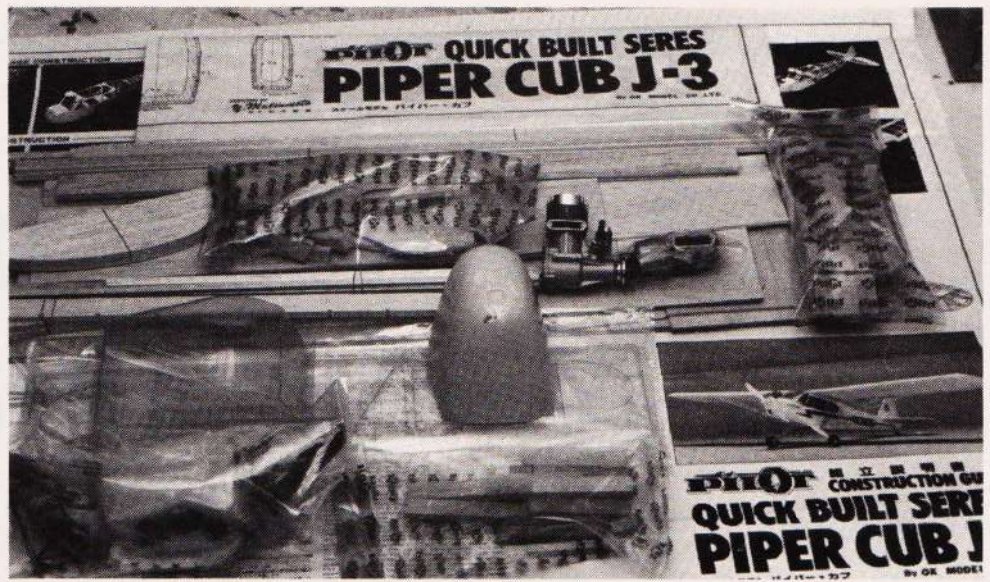


Our kit reviewer took a slightly different tack, he turned Pilot's J-3 into a true family project and found it easy to build and fly.

AS A RESULT of Paul Bender's personal involvement in modeling, Hobby Shack has had success in retailing model aircraft. I recall flying in the Los Angeles area and seeing Paul at the field many times, so I knew right from the beginning that good flyable products were uppermost in Paul's mind.

"I asked my 3 sons to build the plane for me."

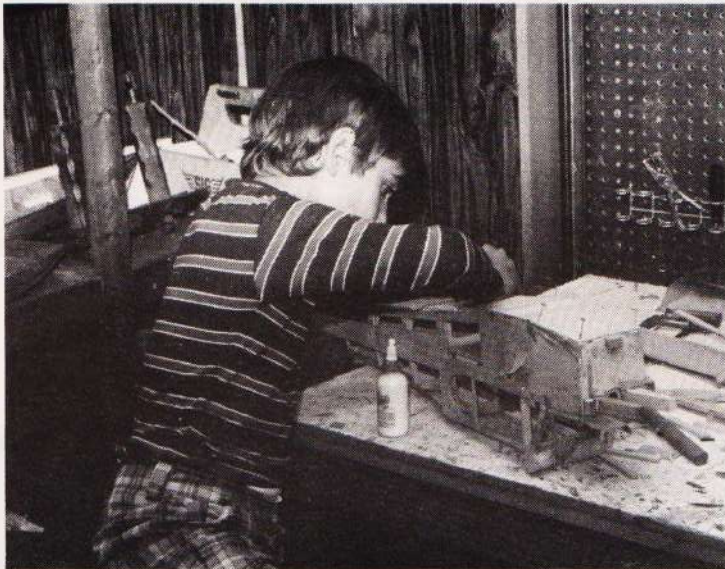
Recently, Hobby Shack has been importing kits from Japan made by Pilot. The Pilot kits are known worldwide for quality, so I really became enthusiastic when one of them was offered to me to prepare a Field & Bench article. Soon after my discussions with the editor of *M.A.N.*, a Pilot Quick-Built J-3 Cub arrived at my door, along with an O.S. 20. Hobby Shack also sent their Aero Sport 4 radio. This radio is offered with models in the Quick-Built



The Pilot Quick-Built Series J-3 comes with virtually everything except engine, glue and covering. Materials of excellent quality are included with fine prefabrication.

from the photos, the wing was built in my son's lap. I would like to have a wing built that straight on my jig!

Since my sons did most of the work, I'll let them tell you about the parts they each built:



To check out the J-3's ease of construction, our reviewer had his children build the components; it was easy to build.



Mrs. Raab and child handled the covering chores. Ship was covered completely with MonoKote; quick and good looking.

Series as a package deal.

My first impressions of the kit were mixed. The packaging was outstanding (everything in baggies, etc.), but I took one look at all the parts and thought if they think I can build this quickly, they are out in left field. Because I was skeptical about the quick building claims, I felt this article should take the "worst case" approach. I asked my 3 sons (ages 12, 10 and 8) to build the plane for me, and to make it more interesting, I told them to build it out of the box.

We all remember our first airplane; we were lucky to have the kit at all and certainly didn't have enough funds to buy a board or other device to ensure a straight airplane. Well, the plane does build quickly, as my sons had the basic framework completed in 9 hours. As can be seen



Ready for its first takeoff, the Pilot J-3 is powered with the O.S. 20.

"Hi, My name is Phillip Raab, and I am 12. My job on the airplane was to build the wing. It was pretty easy. I started out by taking the wing ribs and putting them in the notches where they were supposed to go, then I took rubber bands and put them around the wing while my Dad held it. Next, I took Hot Stuff and put dots of it on the joints, and let them dry. I did the same with the other half of the wing.

"After the two parts of the wing were done, my Dad and I put them together at the center. My Dad installed the ailerons while I sheeted the wing. Then, I took Balsarite and twice coated the outside edges of the wing and the center. I sanded the whole thing lightly and my Mom and I MonoKoted the wing. That's how easy it was. This model is for people who dislike

hard to put together airplanes."

"I am Michael Rabb and I am 10, and I am here to tell you about how I built the body of the Piper Cub. When I started building, the pieces popped right out of the plywood. The die-cutting was really very good. After I assembled all the pieces, I took Hot Stuff and glued all the joints. Then I brushed Titebond on all the joints for extra strength. I sheeted the body top and bottom, sanded it all, and then it was done."

"Hi. I'm Donald Raab and I am 8. I'm going to tell you about the tail, body and wing struts of the Piper Cub. Punching and cutting out the pieces was easy. Doing the hinges was pretty hard. I had to take my time putting the tail and rudder on the body, but it was easy. The Piper Cub looked nice. It had everything done. The struts were easy to build and paint, and they fit. I also painted the landing gear plate with Auto Paint."

"I'm Jean Raab and I'm the mother and wife of all these builders. I'm usually the one who gives encouragement and helps quiet yells of anger and frustration. Don and I have 5 children; 4 boys and 1 girl, and another due in June. Since the Cub arrived in our home, we have had a real family project. Of course, you really have to understand model builders if you are going to attempt a project such as this one. Most of the building was done in their workshop, but as the Vermont weather got colder, our living room seemed to attract more work. Even our 4-year-old daughter and 6-year-old son enjoyed helping. They got the fun jobs such as punching out pieces and picking up pins from the floor.

"Because women are supposed to 'enjoy' ironing, I was elected to do the MonoKoting. Actually, MonoKoting is more fun than mens' shirts! Of course, I usually had 2 or 3 extra pairs of hands to help me.

"I did most of the tacking, but the boys and Sara helped shrink the middle parts. MonoKote sticks the best, but EconoKote smooths out the wrinkles more easily, especially on the wing tips. Everyone kept admiring the Cub and how well the MonoKote covered the parts they had built. The reason it looked so great when it was done was because they had sanded and built their parts so well. My spending 2 to 3 hours of very patient care on the wing or body to make sure it looked great really didn't matter. After all, what are Moms for?"

I think the boys and my wife summarized the project very well. The parts were beautifully die-cut, the pieces fit, and the surfaces were straight. However, there are problems even in the best of projects, so I will discuss some areas to be careful of when building the Cub:

The material for the wing sheeting just fits if exactly cut in half. Use a ruler as a guide for your knife, or you will be buying extra wood. There are no blind nuts, so

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you will have to purchase them for the landing gear plate. It's very important when setting up the wheels to make sure some toe-in and toe-down are built into the plate. A vise makes this easy and the ground handling is then a snap. All the screws were Phillips heads so I replaced them. I used sheet metal screws to hold the engine and I used 6-32 screws for the wheel axles. I substituted 10-32 nylon screws for the wing hold downs and caution that you be very careful to leave the

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incidence as is. The plane was slightly heavy, so lightening holes might be a good idea in the elevator and rudder. The plane weighed 4 lb, but flew very well, so finish weight is not critical as long as you keep the center of gravity forward. I used a double-stitched piece of pinking tape glued on the bottom of the rudder and body to help support the nylon hinges.

There were no insurmountable problems in building the kit, it was very well engineered. Most things that would give a newcomer trouble were completed. The tank installations, the aileron setup (even triangular-shaped leading edges on the ailerons), the cutout for the switch and servo trays, all these problems were solved before they could begin.

I discovered that my 10-year-old was an excellent builder, and that because everything fit, my family enjoyed the project. The total building time was about 35 hours, which is fast for a realistic scale model. When all the work was done, we were ready to fly.

The plane did not fly off the board. Inadvertently, I cut away too much of the front interlocking piece that holds the wing and fuselage together. This changed the incidence radically and I re-emphasize the need to keep this as shown. To say that the first flight was exciting would not be an exaggeration. It is a credit to the basic design that I was able to dial in enough trim to make the Cub flyable.

The second flight saw some improvement, and we were impressed with the realism of the plane. When I returned home, I added some weight (balance laterally, as those scale wings are long) and added some shims to change the incidence back to that which my sons had first built in. (They followed the directions.)

The next flying session saw a smooth-flying airplane that looped easily, spun like crazy, and did "touch and go's." The plane flies just like the full-size J-3, in that rudder and ailerons need to be coordinated to make the flying really smooth. This

airplane would make an excellent competitor in stand-off scale as it looks very realistic and flies very predictably. It is not an airplane (nor are many presently available trainer types) that can be flown by the rank beginner without some help.

I wrote the above paragraph with about 6 flights on the plane. As I indicated, it did not seem to be a plane for the absolute beginner to fly. My 12-year-old changed my mind, as did a broken propeller. I immediately replaced the 9x4 with an 8x8 and, presto, we had a trainer. Adding some up-trim and 1/8 throttle, my 12-year-old quickly learned to steer the Cub around the sky. Because the ailerons are slow, he was able to fly it without the diving characteristics of most REM trainers. He was easily able to adapt to the plane's flying characteristics. Later, some friends, my wife, and my 10-year-old all flew the plane without help. As our time on the plane increased, we became more and more impressed. The flight parameters are very wide, from 1/8 throttle slow flight (trainer) to loops and spins. The Aero Sport has been extremely reliable and the O.S. 20 was super. I would have to say that this is one of the most fun trainers I've flown or seen. All in all, it is quite a package.

The O.S. 20 is a little powerhouse that idles predictably and has excellent top end. It requires little break-in. At 1/4 throttle, this engine easily pulls the Cub, which

weighs about 4 lb. One can casually take the J-3 out, turn it into the wind, stop, pour on the coal and fly it just like the real one. Hobby Shack makes a wide variety of 20-size Quick-Built kits, and the O.S. 20 is an excellent choice for any one of them.

The Aero Sport radio is an excellent and reliable system. I have had continuous problems over the years with a variety of systems and this is the first that I have really felt comfortable with. I first flew it in a *M.A.N.* Ercoupe and a servo problem

"The parts were beautifully die-cut, the pieces fit, and the surfaces were straight."

developed because of a badly out of balance prop. I was able to disassemble the servo and clean the pots before putting it in the Cub and since then, the radio has worked flawlessly. I am very skeptical of reports of radios that never give trouble—I look for a system that is maintainable.

The transmitter has nice soft, open gimble sticks and comes with stick extensions for those who want them. The airborne system is all Nicad (TX as well) and weighs about 14 oz. It comes with a variety

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of wheels and trays to fit any need. It did not fit the servo tray cutout in the Cub because I suspect a smaller servo option is what was intended. However, there was no great difficulty in mounting the servo, just widen the cutout. The servos have loads of power and are very smooth in operation. I have no hesitancy in recommending this system and, at \$149.99, it is quite a bargain. It is inexpensive and totally reliable.

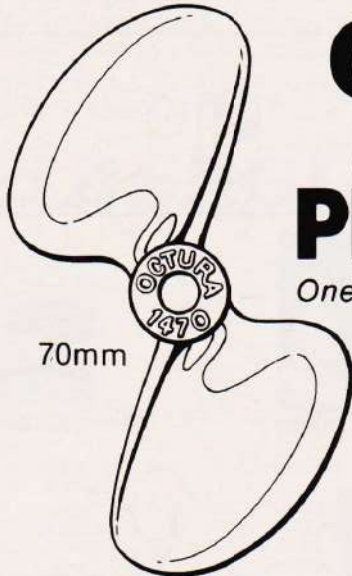
To summarize, the J-3 builds quickly and accurately, and flies very realistically. It is competitive in stand-off scale and would be great for a flier wishing to get involved in competition. The model is a good choice for a Sunday sport scale flier. The Aero Sport radio is also an excellent buy, and when purchased with the J-3 in the often advertised specials, the entire package is just the prescription for fun. I frankly feel that these Quick-Built kits offer more than most kits on the market and I highly recommend the whole package.

For more information on Hobby Shack's Quick-Built kits and other fine products, contact Hobby Shack, 18480 Bandilier Circle, Fountain Valley, CA 92708, and tell them you read about it in Model Airplane News.

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