

WHOMP

**Tired of more of the same old thing?
Try Doc Tennyson's charge of pace, and come
home relaxed instead of being tied up in knots.**

BY ROGER TENNYSON, D.D.S.

Last Spring, as I aimed my "almost ready to fly" so-called trainer hesitantly toward the runway for my third landing attempt, a thought began to form in my distraught mind. Struggling to keep the wings level, and jockeying the power as though I knew what I was doing, my knees and hands began to shake. As the on rushing model appeared to aim itself right between my eyes, I began to feel that what had, years ago, started out to be a creative and relaxing escape from the tensions of my vocation was, in itself, raising my blood pressure. And, worse than my job (for which I had been extensively and professionally trained), this hobby was a learn by doing extravaganza. And mistakes were usually graphically measured in "long green," as well as in repair time. The very technology that allowed such precise control over the creation, increasingly demanded even more precise control by the creator. In fact, if I

didn't do something precisely creative quickly, the "trainer" would surely hit me squarely in the head. The only thing which came immediately to mind was to duck, since I had been seized by an apparently acute, case of "box clutch." The plane whistled overhead and made a surprisingly good landing by itself on a runway that by now looked distinctly short. My fingers became themselves again, and I had presence of mind enough to shut off the engine as the plane over-ran the edge.

"Hey, Doc, you're getting smoother in your approaches!" someone complimented from the pits. Like hell I was . . . but I guessed that if you aren't flying it, any landing short of a crash looks all right. I'm glad he couldn't see inside my head!

The thirty five minute return from the flying field takes me across the San Francisco peninsula, and it is one of the most picturesque drives in the world.

Leaving the gloom of the Pacific's Summer fog, the road winds through the foothills toward the pass, into the redwoods and pines, and then bursts into the sunlight and vistas of the inner bay — the trip affords an "unwinding" from the morning's activities. I began to reflect upon the direction that my modeling had taken. What had become of the joy and anticipation of gluing together — stick by stick — your own design? Where was the challenge of man and machine against the elements when his "machine" was stamped by some other machine somewhere into a perfect model — no warps, no mistakes to make it personal, and worst of all, no style. Well, it might be R/C flying, but it certainly wasn't modeling. I had been caught up in the wave of "try something new," of gadgetry and plastics, and I wasn't the least fulfilled by it. It was time to go back to basics, and find out whether or not I had learned anything in

thirty-some odd years of modeling. It was time to build that graceful free-flight type of model which that big-eared kid, I used to be, watched as it circled gently into the sky.

Well, balsa was less expensive then, but I get a bigger allowance now, and with the R/C equipment available, and airplane like the "real models" of yesterday could be built and flown safely today, even in our restricted areas. It was time to pay off the debt I owed myself for sitting on that running board, broken prop clutched in my sweaty little hand, wishing, just wishing, that one of those "model airplanes" was all mine.

And so on that whim, "Whimpy" was finally to fly.

CONSTRUCTION

While "Whimpy" is not a difficult airplane to build, it is not a short project. The act of building was intended to give me pleasure, and I hope you approach it in the same light. I have, in the notes on the plan, given the information necessary to construct the frames — what follows here is the assembly procedure that I used, and you may find it a bit less time consuming if you follow the suggestions; but, you don't have to, if you insist, as I do, on doing everything the hard way!

Fuselage

Since I find it extremely distressing to finish up an evening's labors by looking at a crooked fuselage, I suggest that, after you have completed the side frames and have added the 1/32" plywood doublers, you start erecting the fuselage by joining the side frames at the tail posts, and then work directly over the top view on the plans. From the trailing edge of the wing to the tail post, the top stringer is straight, so assemble the frames upside down over the plans up to the R/C compartment. Remember that there are three cross-pieces at each station instead of two (see detail C), then add bulkhead F-3.

Cut out the R/C floor, and the tank floor, and using 5-minute epoxy, spot glue the sides together in the R/C area, use the floors as line-up squares. When the epoxy sets, place the drilled and blind-nutted firewall (F-1) in the same manner, then stop to check the alignment. If all is in order, then punch in the nose to receive the nose block, and glue in F-2. At this point, I use a thinned mix of epoxy glue (for example, Hobbyposy II and Hobbyposy paint thinner) to paint the inside of the entire front end and the R/C area. This acts as a sealant against the "creeping Castor Oilies" as well as a good glue bond. Since epoxy sets by catalyzation and not evaporation, the thinner has no effect on the setting time; it simply serves to keep the weight down — the reduction in strength of the bond you'll never notice. You hit anything hard enough to break the bond, I personally guarantee you'll have a lot more to repair than radio floor . . .

You may now add the floor supports through the sides of the fuselage, and the 1/8" sheet webs under the R/C compartment. Don't forget the 1/4" sheet

doubled on each side under the gear blocks. The cowl is made of 1/4" soft sheet balsa formed around some convenient shape which only has to approximate the cowl shape. Soak the wood in ammonia water (the wife's "Parson's Sudsy Ammonia" will do just fine) wrap it around the empty Scotch bottle, and let it dry out overnight. It is a good idea to let yourself dry out overnight, too, before continuing if the bottle is empty on your account.

Add the cowl, the triangular gussets, the 1/8" sheet doublers for the aft wing hold-down dowels, the gear blocks, and then sheet the bottom. Add the 1/4" balsa for the rudder support, sand the whole thing, and put it out of the reach of the kids. We'll do the top cabin block and the forward wing dowels after the wing is finished, since it has to fit the dihedral wing bottom.

Wings

In keeping with the "old-time free flight look," I elected to go with a transparent covering material, and in keeping with that, I wanted as much open structure as possible. There is, therefore, no sheeting used in "Whimpy's" wing; rather webbed spars are used for strength. After the knots I've tied aerobatically with "Whimpy," I doubt that I'll ever use sheeted structure again. The spar structure possesses more strength, and one of the rigidity (and associated brittleness) of the sheeted leading edge. The airfoil is designed for slow, easily controlled flight. Roy Meyers, a Pan American captain of thirty years flying experience served as "chief consultant" in its design. As it turned out, his moving of the high point of the leading edge (of both the wing and the stabilizer) up above what would be the normal datum line was sheer genius, as you will see as the first test flight occurs.

The construction is straightforward — place the 1/16" shim along the trailing edge as noted in the plans to supply the continuation of the undercamber into the trailing edge balsa, and go to work. Refer to the photo of the tip which shows the cambering, and then follow the notes on the plans for the tip construction, and I think you'll have no trouble.

After the wing frames are completed, I usually do all the sanding I can before joining them — less cumbersome. Join the wing halves, sheet the center section, and then finish the sanding.

Now place the wing on the fuselage in its proper relation, and you'll get the idea of why we waited until now to do the cabin top block. Just try to carve that one! You're never going to get that to fit snugly, so, as the old saying goes . . . "If at first you don't succeed, CHEAT!"

Carve the block to fit against F-2, and then form the bottom of the thing — that part is easy. Now relieve the area where the wing rests against it, and give yourself 1/8" clearance between the wing and the block. Glue the block into place. Now comes the cheating: Wrap the wing center section with Saran Wrap or MonoKote backing, or the like, and tape it to the top.

Mix up your favorite filler (mine is 5-minute epoxy and "micro-balloons"), and blob it onto the top block. Set the wrapped wing into the mass and wait for a set! Peel off the vinyl film when set, and you have a "custom fitted" wing rest — just like taking an impression in dental school . . .

Now all that remains is to carve and sand the filler, and then drill for the wing hold-down dowels. These are epoxied into place through the block and against the

with the things pre-assembled. The plywood tail wheel support is now fitted and cemented to the fuselage, and you may assemble the tail wheel unit. It is at this point that I cover the whole aircraft, again because it is less cumbersome than working with the whole structure assembled — you could go either way.

The tail unit is assembled by sliding the stabilizer into place, epoxying it in place, and then before it sets, installing the fin. If you have made the line-up slots in the right place, the whole thing ought to be square with the fuselage. As soon as things set up, hook the elevator connecting wire through the notch in the tail post, install the hinges and the tail wheel and then epoxy on the rudder and elevator halves.

Final Things

If you use one of the new film coverings as I do, you would do well to coat all the areas where the wood ends and the MonoKote begins with a thinned epoxy glue, even though the wood has already been coated as we assembled the fuselage. Oil seems to have a great penchant for seeping under even the most careful ironing job. I like to put in all the pushrods and mount the tank and engine, and then shift the R/C units around to get as close as I can to the balance point before putting in the windows. I used Bridi's "Quick Stripe" to hold the windows on, and so far it is quite successful.

"Whimpy" seems to be quite unconcerned about balance. This surprised me greatly, since I have had some unhappy times with some airplanes which were only slightly out of balance. It was only after I had flown the little fellow a good deal that I began to realize that, although it would fly safely with a CG as much as 1/2" aft of the position on the plans, the spin performance and wind penetration suffered immensely. Try to get right on the button, and you'll enjoy it a lot more. All up-weight of the plane runs in the region of 65 ounces, dry, of course.

Flying

The summer weather in the San Francisco Bay area definitely leaves something to be desired. The mornings are foggy, and the afternoons are windy. You can always tell the tourists from the natives by their clothes; the ladies especially, in their thin white dresses and sandals and goosebumps, wondering what month it really is. Those of us who know what to expect usually find pursuits other than R/C flying the the Summer.

There was nothing I could do about it: "Whimpy" was finished and it was Summer. I sat around doing other things until I could stand it no longer and my poor wife could no longer stand me! Wind or no wind, I packed up and headed for the field.

Since "Whimpy" was a "tail dragger," it seemed wisest to go with a hand launch — at least I'd have a few feet and a plane pointed into the wind to try to fly rather than a ground loop to fight. After the usual range checks, engine running radio checks and the

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WHIMPY

Designed By: Roger Tennyson, D. D. S.

TYPE AIRCRAFT

General Sport Aircraft

WINGSPAN

66 Inches

WING CHORD

9 1/2 Inches

TOTAL WING AREA

580 Square Inches

WING LOCATION

High Wing

AIRFOIL

Undercamber

(Roy D. Meyers Airfoil)

WING PLANFORM

Constant Chord

DIHEDRAL, EACH TIP

5 Inches

O.A. FUSELAGE LENGTH

40 Inches

RADIO COMPARTMENT AREA

(L) 11" X (W) 3" X (H) 5"

STABILIZER SPAN

24 Inches

STABILIZER CHORD (incl. elev.)

6 Inches (average)

STABILIZER AREA

120 Square Inches

STAB AIRFOIL SECTION

Undercamber

STABILIZER LOCATION

Mid-Fuselage

VERTICAL FIN HEIGHT

9 Inches

VERTICAL FIN WIDTH (incl. rudder)

6 1/2" (average)

REC. ENGINE SIZE

10-25 Cubic Inch

FUEL TANK SIZE

4 Ounce

LANDING GEAR

Conventional

REC. NO. OF CHANNELS

3

CONTROL FUNCTIONS

Rudder, Elevator, Throttle

BASIC MATERIALS USED IN CONSTRUCTION

Fuselage	Balsa, Ply, Spruce
Wing	Balsa and Ply
Empennage	Balsa and Ply
Weight Ready-To-Fly	65 Ounces
Wing Loading	16 Oz. Sq. Ft.

1/32" plywood cabin doublers.

Rudder and Stabilizer

Both the rudder and stabilizer are, basically, of the same type of construction. I prefer to use "rib blanks" instead of cutout ribs because I find that I do not have alignment problems that way. "The only good warp is a missing warp, etc." After the frames are completed, drill for the hinges, and check for freedom of movement

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final look over. I could procrastinate no longer. I was convinced of three things: 1) the radio was working; 2) I was definitely insane to even consider test flying in this gale, and 3) I was going to do it anyway. I took a few steps and let go.

In retrospect I suppose I should have known what to expect; the Goldbergs, Einlings, and Petrides, of the old days must have known what they were doing — their designs fly to this day as well as some of the so-called modern free-flights. I had, almost unknowingly, designed an airplane typical of their style. In the near 20 knots of wind “Wimpy” soared straight out, unswerving, and true as a die — I didn’t even touch the trim levers on the transmitter. I must confess that it was a supreme anticlimax after the years of dreaming.

After I got hold of my senses — and it took a few seconds — I began to get qualms about how to get down. The airplane was fast becoming only a dot in the sky. What would happen when I slowed down an airplane in this wind that I had designed to be slow and stable? Would it back off downwind and be unable to penetrate? The San Francisco Bay was only a quarter of a
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mile away — directly downwind. I pulled back the throttle, and ran in all the down trim I had. And then I stood open-mouthed as “Wimpy” descended in the identical

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although it definitely is not happy in this position, you can get into this inverted flight out of a tight spin much to the chagrin of all the viewers in the pits who fully expected to

ack that it had gone up in, and shortly bounced to a stop at my feet, the engine still purring in the nose. Roy’s wing and lifting stabilizer were the perfect combination.

Since that day, we have logged almost 75 enjoyable flights together. “Whimp” and I, and I can truly say that they have all been relaxing and, well, maybe I should say “fulfilling.” There was only one surprise that the airplane had in store: It was

see it disintegrate in mid-air, or at the very least, fold up its wings.

Aerobatics notwithstanding, “Whimps’s” greatest moment came a few months ago when the president of the club — a superb flier — showed up at the field with something other than his usual “Super Kaos” - - - a “Red Zephyr,” a famous old timer of some many years back. When I asked him what had prompted him to build

remarkably neutral in a bank — it simply holds its turn until you correct it. This certainly was an added bonus, because as all the “hot-rocks” know, you can’t do acrobatics with a stable airplane. On full control deflection “Whimp” will do an extremely tight spin, and inside or outside loops are no problem at all. With a little practice I could fly it upside-down, and
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it, he simply pointed at the little red and yellow airplane sitting in my pit and said, “You were having more fun than any of us with that thing, so I thought I’d join you.”

I think this Winter after I finish an authentic “old-timer” (Ye Gods, what does that make me? We both came out in 1936 . . .), I will build “Whimpy Too.” I’ve been wondering if it would do a Lomcevok if I built it with ailerons . . . □