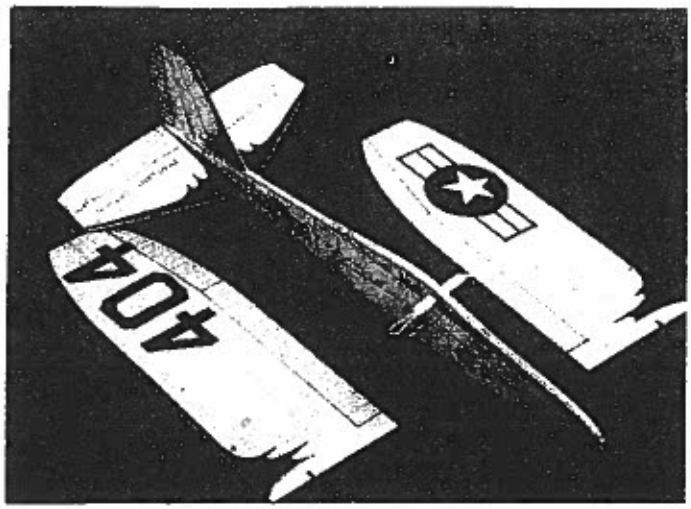
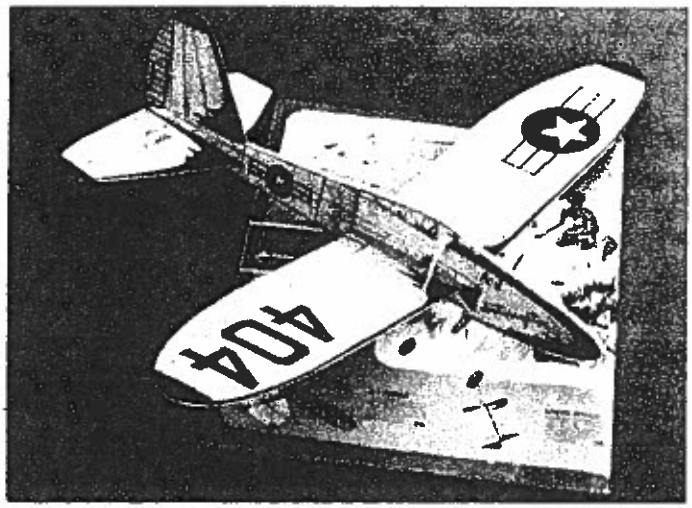




THORNBURG AT LARGE

By DAVE THORNBURG . . . Building a replica of the A-J Interceptor, a model that separates the men from the boys.

• Only a madman would squander eight dollars and eleven hours of his precious modeling time to reproduce a 50¢ airplane. Unless it happened to be a very special 50¢ airplane. Like, say, one of Jim Walker's old A-J Interceptors.

Now I'm not prepared to argue about whether or not Walker invented the folding-wing Interceptor. But I am prepared to argue that the Interceptor taught more kids about thermals than any other model ariplane ever designed.

Walker's American Junior Aircraft Company, up in Portland, Oregon, pumped out Interceptors by the thousands during the long decade following World War II. They came assembled but folded up in a narrow cardboard box. Slide them out, hook up the wing rubbers, slip the stab in place and your Interceptor was ready for flight. A launching stick and catapult rubber were provided.

To fold an Interceptor for launching was a simple matter. Two fingers under the wing trailing edges; lift them up simultaneously and rotate them both forward. Then fold the wing panels straight back until the tips meet each other just behind the rudder.

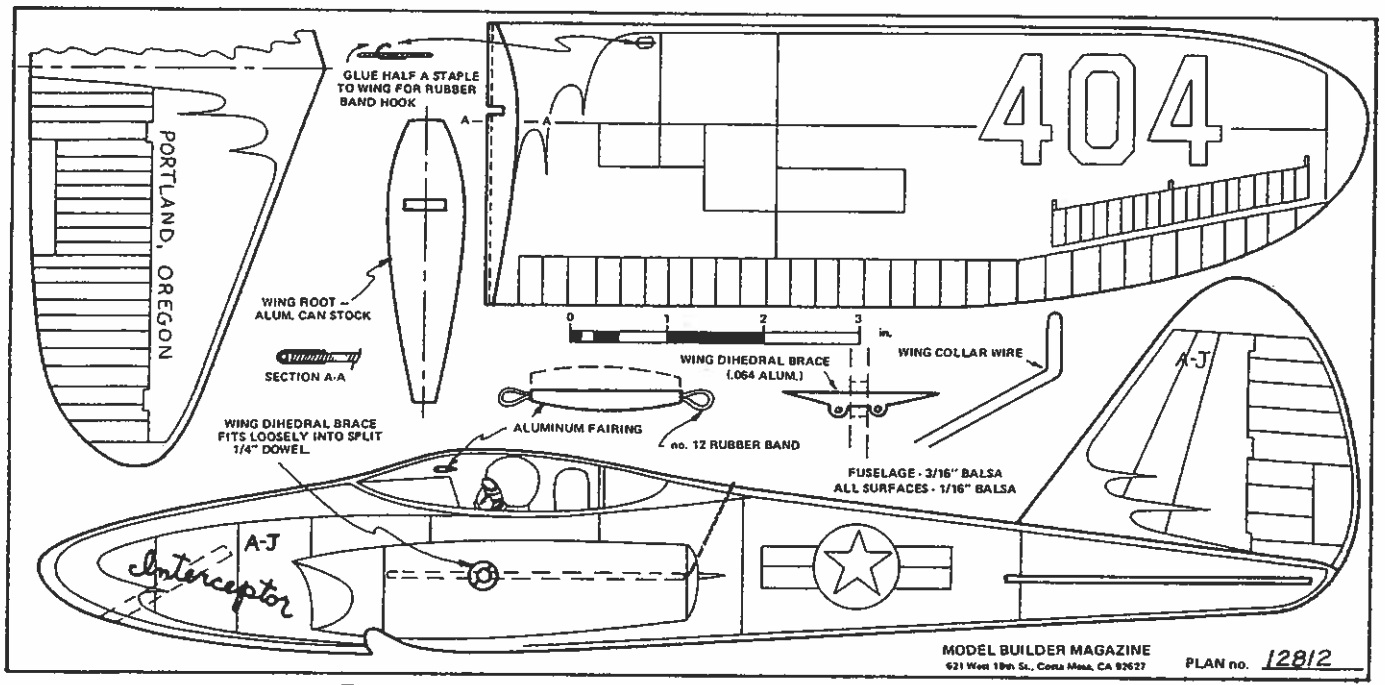
You'll notice a notch like a shark's mouth down under the nose. Slip the catapult rubber into it and aim the model . . . now more like a rocket than an airplane . . . straight up. Stretch the rubber and release her with your best slingshot follow-through. The rest is automatic.

The Interceptors of my youth would arc swiftly upwards to incredible heights . . . higher than you could throw a corncob, higher than a phone pole, even! . . . before their wings snapped magically open and they began their long soaring descent back to earth.

Only sometimes . . . and this is what made the Interceptor so special . . . sometimes they didn't descend. Sometimes they began circling, and they circled UP instead of down! Hey, hey! In my mind's eye I can still see my first lost Interceptor, spiralling off into the summer sky above the now-defunct South Dakota (Ohio) Airport. The year was 1952, and up till then I had only read about thermals in magazines. Long after the model disappeared, I could still catch an occasional flash of sunlight off its aluminum wing roots. Two weeks' allowance, gone with the wind! Ah, but the price, the glory of it; first kid on the block to thermal out!

And it seems that my story isn't unique.

Steps in launching the Interceptor. Hold fuselage under wing. Lift up trailing edge of wing with fingers of other hand. While holding wire support, fold wing back along fuselage.



FULL SIZE PLANS AVAILABLE – SEE PAGE 108

Whenever I take the Interceptor . . . to club meetings, to the hobby shop, to the flying field . . . I hear variations on the same theme. Tales that begin or end with "Wish I had a hundred dollars for every one of then things I've lost . . ." The A-J Interceptor was arguably the best flying ready-to-fly ever to hit the market.

The inspiration for the model shown in the drawings came from a four-color ad on the back cover of a May, 1956 *Model Airplane News.* Let me make it clear that this is only an eyeball reproduction. I doubt that any of the originals still exist. *(That'll get us some mail! wcn)* It's been nearly a quarter-century since production stopped, and at that time the Interceptor sold for a whopping 23¢, wholesale. Model planes, like books. follow the rule that says *the more there were, the fewer there are.* And the Interceptor was once available in practically every drugstore and five- and-dime in America.

But enough prattle. Either you're crazy enough to want to build one of these things, or you're not. If you qualify, read on.

Walker used soft balsa throughout on the Interceptor, to keep the weight down (there are quite a few aluminum parts, remember). If you intend your model for flight and not merely for display, you should do the same.

Note that there's no scale on the drawings. My model spans slightly larger then the original, but the plane flies well, and the proportions are at least close enough to fool almost everyone who sees it.

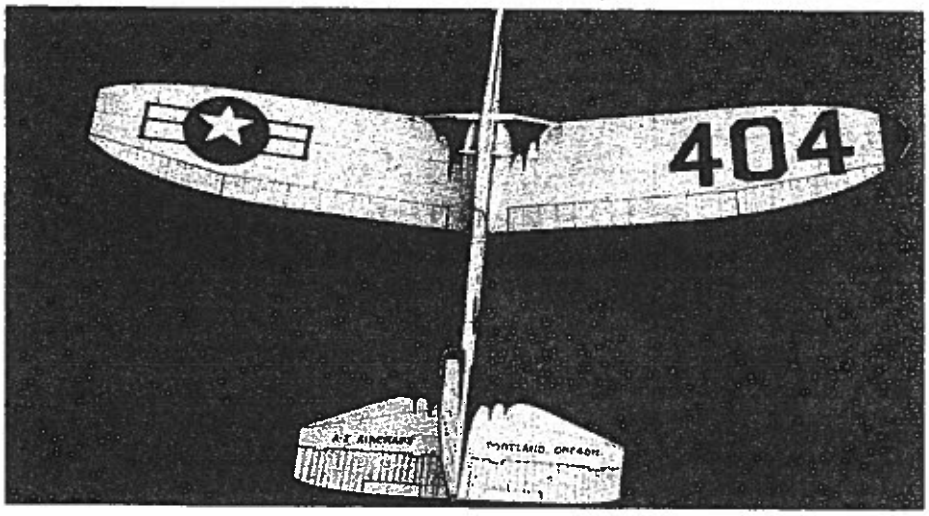
To scale up the drawings, try locating a Xerox Model 2080 copier . . . lots of blueprint houses use them. Just keep enlarging the drawing until you get close to the 13 inch fuselage length. Or shoot the page with a 35mmcamera using slide film, and scale up the drawings on your wall. A third alternative is to use an opaque projector, also known as an overhead projector. School teachers often have access to them. If you have access to a school teacher, you have it made. *(Forget it! This one was too good to pass up as a full-scale plan. Wow! Two full-size plans in the same issue. wcn)*

Personally, I'd just tackle the job freehand. That's how the drawings in the magazine were done, afterall. And, come to think of it, that's how the original Interceptor was done, too. So how can you go wrong?

In case you don't have a copy of *MAN* for May of '56 in your back pocket, I've tried to provide enough photos to allow you to duplicate most of the Interceptor's markings. The originals were

Continued on page 72

Steve (F3B) Work demonstrates proper launch technique. Two No. 64 bands do the trick.



Red and blue marking pens put on the finishing touches. It'll fool anyone who remembers the original gliders.

Thornburg . . . *Continued from page 45*

silk-screened onto the balsa, but this can be reproduced with surprising accuracy using just a ruler and a selection of felt pens. (The eight dollars estimated cost includes over two dollars in pens!) The rudder is done in red; all other markings are blue.

Sticklers for accuracy will notice that I omitted from the wing markings the dive brakes, the wing cannons, and the folding instructions printed back on the trailing edge. (They said something like "Fold up, then back," with appropriate arrows . . . if memory serves.)

Use K & S sheet aluminum for the wing dihedral brace, or cut it from an old dural landing gear scrap. Aluminum beer can stock will make the wing roots. The hardwood bearing for the dihedral brace comes from the same 1/4-inch dowel that provides the catapult handle. Walker used a slightly soft wire for the wing collar, so it could be bent fore and aft along the sloping turtledeck to change the wing incidence. I substituted piano wire, of about paper-clip diameter. The small clips out on the wings, to which the wing-folding rubbers attach, are made from half a staple, superglued in place. How Walker ever built even one of these complex little rascals . . . much less mass produced them . . . before the invention of cyanoacrilates!

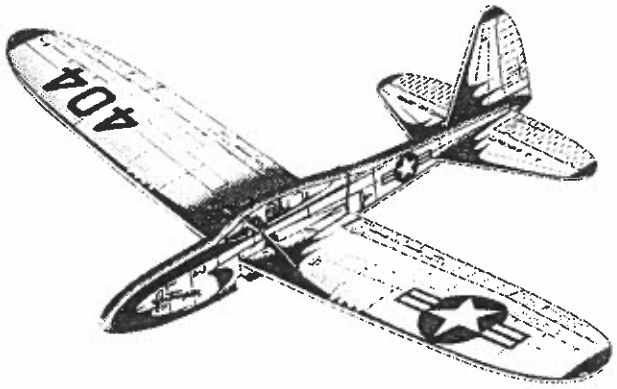
Study the side view of the folding mechanism with care, and stick close to the dimensions shown . . . they were arrived at painfully! On my first Interceptor replica, I got the parts layout right after only two tries, but I made the mistake of gluing the aluminum fairing in place around a #14 rubber band. Too long! It worked OK on the bench, but I had to add a second band to make the wings open under air loads. A good stout #12 is just right for the dimensions shown.

Save the bending of the collar wire until your entire plane is complete. Where you put those 90° bends will determine the angles of attack of your wing, all-important if you want your model to fly. I don't mean to make this bending operation sound tricky: I just laid the fuselage on its side, eyeballed the stab angle, then set the wing a few degrees positive in relation to the stab. This "few degrees" amounts to between 1/16 and 3/32 of incidence at the wing leading edge.

Noseweight on the original Interceptor consisted of a piece of 1/8-steel rod embedded in a slanting hole in the fuselage. Mine took more steel (cut with Dremel tool from the shaft of a 20-penny nail) than seemed appropriate, even to give a 40-45% CG. Maybe it was the light coat of Aero Gloss clear spray dope I gave all the parts, to seal the markings against moisture. Or maybe my nose is a bit short . . . the *MAN* ad does make it look awfully long!

That's about it for building hints, sports fans. If you're old enough to want a replica Interceptor, you probably remember as much about how they went together as I do. Good luck with your new toy. Take it with you to the next gathering of modelers if you want to see grown men near tears. It's one model that really separates the men from the boys, cutting right through all those facelifts and dye jobs and boyish grins, letting you know right away who's forty and who ain't! •

FLYING INSTRUCTIONS FOR A-J INTERCEPTOR



We know you're anxious to fly your new A-J Interceptor, but please read these instructions first. As simple as this model appears to be, it is, nevertheless, a highly engineered model airplane. If you will take the time now to trim and balance it for proper flight, it will give you many hours of incredible flying thrills.

1. Fold and release the wings five or six times to loosen the wing pivot mechanism. Do not fold wings from tips, as this will distort or damage the wing airfoil. Fold only as shown in Fig 3.

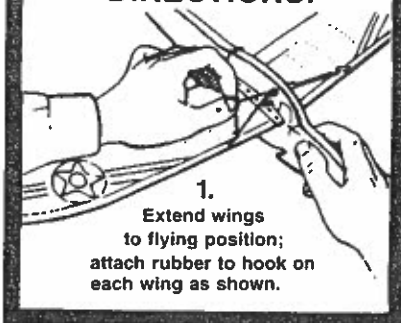
2. Glide the model. This will determine if it needs further adjusting. Glide model from shoulder height, launching straight ahead with slightly nose down attitude. The illustrations shown will help you trim the model, if needed. Due to variations in the weight of balsa wood, it may be necessary for you to add nose weight for a proper glide. Add clay, or tape a small nail or screw to nose if needed.

3. Launching your Interceptor: After establishing the correct glide angle, and making certain the folding wing operates smoothly, your new Interceptor is ready to launch. Important: Launch model **straight up**, not at an angle. It **must** stall at altitude, which allows the wings to open for flight.

Recommended Age Group: 8 Years to adult.

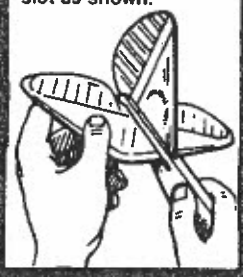
Due to what appears to be a built-in sensing device, the A-J Interceptor still exhibits its famous "homing instinct" for tall trees, high roof tops and threatening thermals. Therefore, we urge you to be mindful of these natural hazards. We issue this warning: let the flyer beware!

DIRECTIONS:

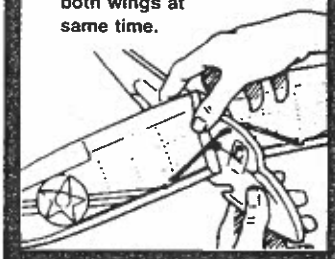


1. Extend wings to flying position; attach rubber to hook on each wing as shown.

2. Insert stabilizer in slot as shown.

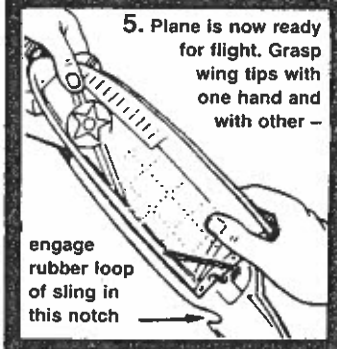


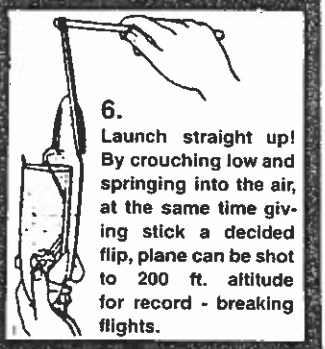
3. TO FOLD FOR FLIGHT: with index and middle finger lift up rear edge of both wings at same time.



4. Pull back fully and start folding wings over tail – using thumb and last two fingers.

5. Plane is now ready for flight. Grasp wing tips with one hand and with other – engage rubber loop of sling in this notch



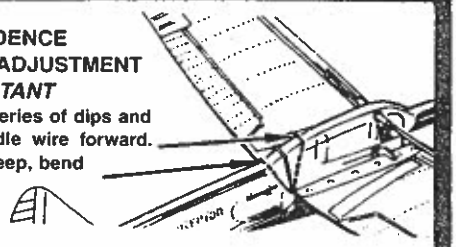


6. Launch straight up! By crouching low and springing into the air, at the same time giving stick a decided flip, plane can be shot to 200 ft. altitude for record - breaking flights.

ANGLE OF INCIDENCE CONTROL AND ADJUSTMENT

IMPORTANT

A. If descent is a series of dips and stalls, bend straddle wire forward.
B. If glide is too steep, bend straddle wire back.



If plane banks too steeply in glide, sight from front to be sure rudder is straight as at "A" – if wings are warped as at "B" they may be trued-up as at "C" by breathing on them and carefully twisting back to shape, or by pulling on rubber braces "D" until tension is same on both sides.