



CENTAURI I

By JIM LaBARGE . . . A profile twin-engine control liner that's fun and inexpensive. Try a pair of Cox .049s or G-Mark .06 engines and fill your weekends with some cheap thrills and the sound of twin engines!

• There is nothing like the sound of a twin aircraft in the air. There is also nothing like the terror that most twins evoke in pilots of model aircraft. Centauri I was designed as an inexpensive, docile, first

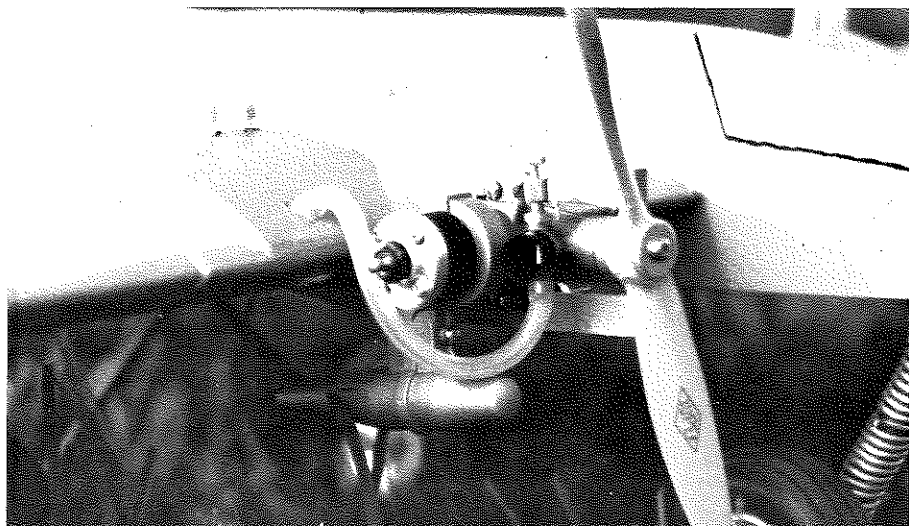
time twin in a classy profile package capable of using .049's to .066's with equal success. It is light and responsive. It is also capable of most of the maneuvers encountered by a scale or carrier pilot. Using

Centauri I as a base, a novice twin flyer can learn setup, starting, and flying techniques that become valuable when the "got to build it" dream model comes along. Twins also have a point advantage in AMA competition that becomes well worth the extra work when the points are close. Twins also are great for exhibition flying and are just plain fun, so give Centauri I a try. Okay, enough prop blast from me, let's make some balsa dust.

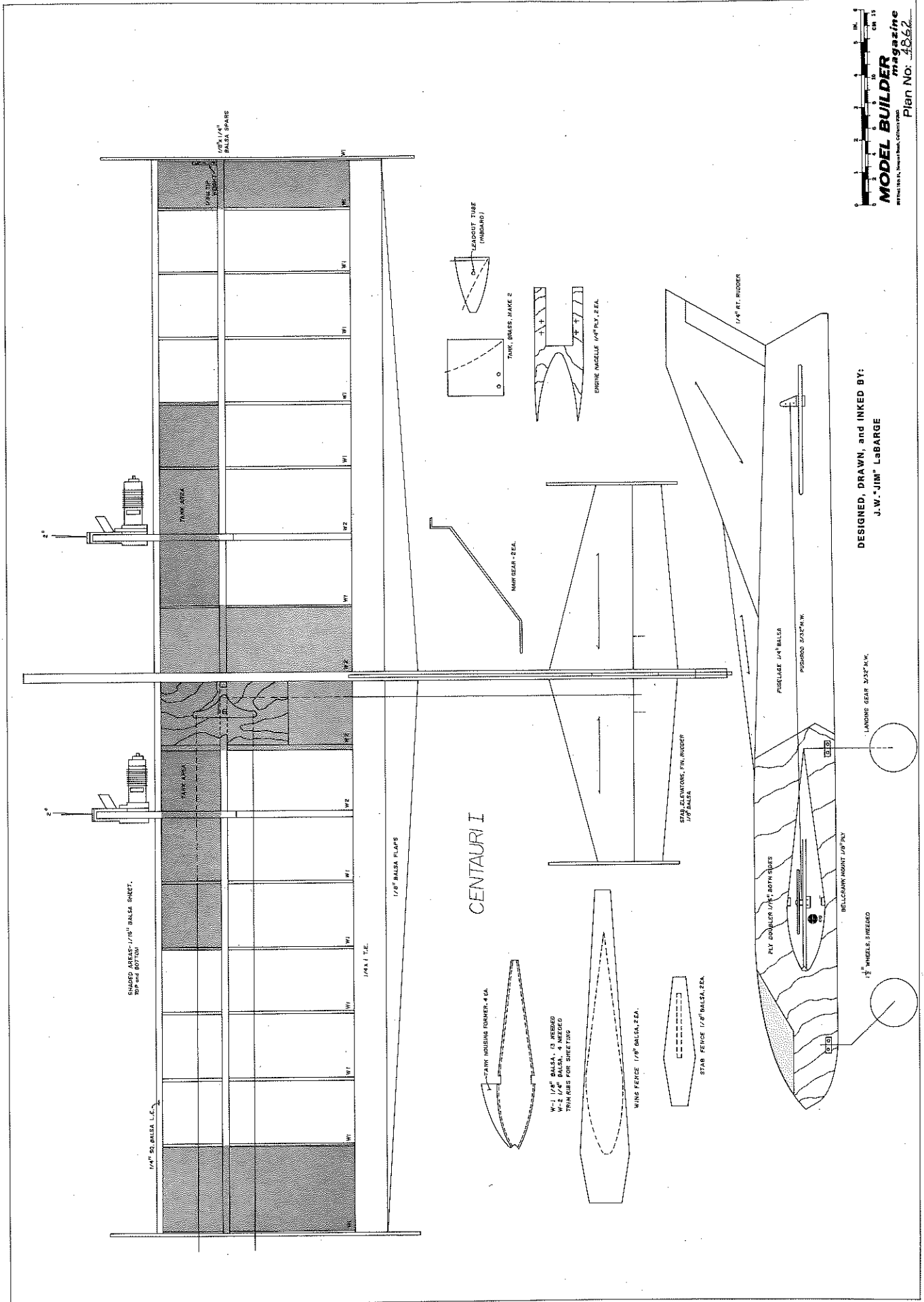
CONSTRUCTION

NOTE: Since no commercial tanks are available for the model, start the whole building sequence by making a pair of tanks. The easiest way to form the tanks is to first make a wooden pattern, then bend the brass around the pattern. Follow the patterns on the plans and remember to add the leadout tube to the inboard engine tank. Always flush and pressure test a homebuilt tank before installing in a model, especially when it is enclosed like the Centauri tanks.

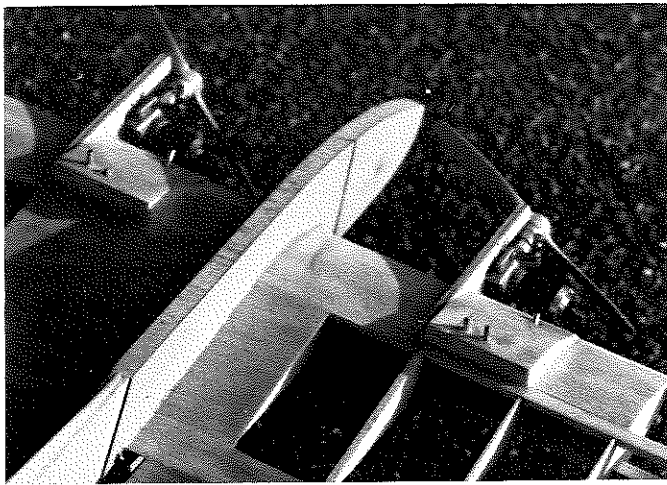
Start the airframe construction by making and accumulating all the necessary parts. Make sure to note the grain direction shown on the plans. The couple of hours spent making a kit will prevent hav-



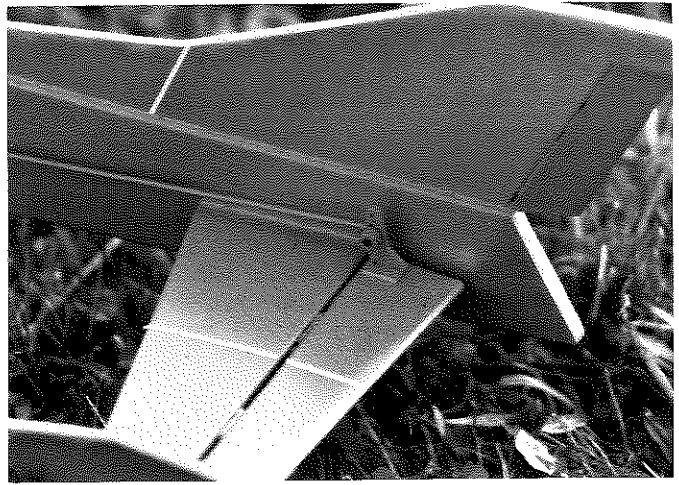
At top, author's daughter Diana holds daddy's Centauri I. Close-up of starboard engine and fuel tank installation. Author used Taifun .06's with factory mufflers. Centauri was designed for .049 to .066 power, which is more than adequate to swing this CL twin.



DESIGNED, DRAWN, and INKED BY:
J.W. "JIM" LABARGE



With both engines mounted on the wings, the fuselage is simply a balsa blank with 1/16 plywood sheeting covering the front section.



Close-up of elevator and control horn. The author used pin-type flat hinges for elevator control function.

ing to stop building because you are missing a part or a piece of balsa. Use balsa as light as possible, consistent with strength, even a twin won't fly if it is a lead sled. Remember to drill the inboard ribs for the leadouts and trim appropriate ribs to accept the sheeting.

WING

Lay out and pin down over the plans, the trailing edge, lower spar and ribs. Add and pin in place the leading edge and top spar. Using a draftsman's triangle, check for straightness, then check again. When you are satisfied everything is correct glue it all together with "Hot Stuff" or equivalent glue. When dry, remove from board, check all joints regluing as necessary. Add the 1/3 oz. tip weight at this time to the outboard rib. Now sheet over the outer to ribs, inboard and outboard and the bottom of the wing as shown, keeping the whole shebang straight. Set aside to dry and go on to the fuselage section.

FUSELAGE

Since no engines are attached to the fuselage, it is a simple blank with 1/16th plywood sheeting contact-cemented to the front section. Follow the contact cement's instructions carefully and weight down the assembly until dry. When dry drill for landing gear and clips for landing gear.

TAIL FEATHERS

As you have cut them all out already, all that is needed is to sand well, glue in the 1/16th music wire elevator joiner and cut

the hinge slots if you use nylon hinges. I used pin-type flat nylon hinges for a no-bind assembly.

FINAL ASSEMBLY

Now for the "fun" part... Install the in-board tank and glue in place. While that is drying, drill the bellcrank mount, bolt on the bellcrank, attach the leadout wires, and bend and install the pushrod. Whew... Glue the mount into position with 5-minute epoxy and remember to thread the front leadout through the previously installed tank. **DO NOT** install the outboard tank yet. Sheet the top of the wing as shown and let dry. Sand and check for high spots before the next step. **NOTE:** The fuselage must be installed next or it will not go on at all and then where do you bolt the landing gear??? Slip fuselage onto wing, align and glue in place. Now add the outboard tank and the tank housing formers. Sheet over the tanks. Drill the engine mounts and install. Make sure there is no built in thrust, up or down, left or right. Add the wing tip fences and leadout eyelets. Next glue on the fixed-wing flaps and make sure they are straight with wing and with each other. Glue on the fin, check for straightness with wing, then glue on the rudder with 1/4-inch right offset. Next slip in the elevators, stab and align. Glue stab and elevators into place. Install your hinges, add elevator horn and connect the pushrod. **NOTE:** The pushrod is a straight shot to the TOP of the stab, although backwards from the

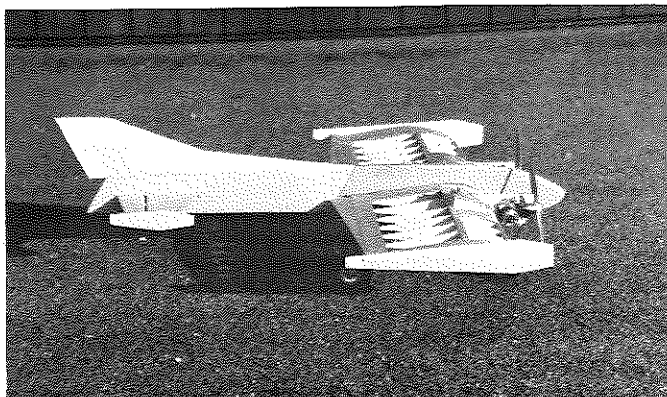
norm it works well. The idea was used on the old Dumas Corsair Carrier kit and is proven. Just double check the controls when hooking up the lines and handle. When the stab is dry add the stab tip fences. Now bend up and install the landing gears. One thing about a trike, sure saves props. Add the wheels and retaining collars and we are ready to cover and finish.

FINISHING

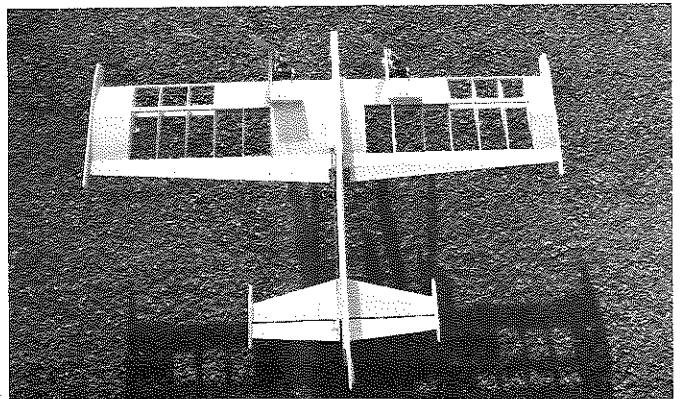
When everything is filled and sanded as well as possible give the whole airframe a good coat of Balsarite to fill the grain and give a good base for whatever type of covering you use. When the Balsarite is dry sand again with 320 grit sandpaper. I used traditional silkspan and dope for this model but any of the lightweight iron on coverings would work as well. Add a color scheme of your choice. The original was coral with silver trim. The panel lines were added with graphics tape and then the whole model was given a couple of good coats of polyurethane spray to seal everything from fuel.

SET-UP

Bolt each engine in place with one washer of right thrust. I used a pair of Taifun .06 engines with factory mufflers. Being stationed here in West Germany mufflers are required as any noise over 80 decibels is outlawed. In any case mufflers are good for keeping your flying field and your hearing. Add the fuel lines and tank vents. Now we are ready to check the



The uncovered Centauri with engines mounted. Traditional silkspan and dope was used to cover and finish the model.



Top-view of the uncovered model. With twin .06 engines, profile fuselage, and built-up wings, this CL twin is quick and cheap!

Center of Gravity. Balance on or near where shown on the plans. Any tail heavy model can be deadly but a twin is even worse. Balance with no fuel in the tanks but with the props installed. The original came out tail heavy, so be forewarned.


FLYING

Hokay, now you have a shiny new Centauri I, balanced and ready to fly. Not so fast... will your engines run their tanks out consistently? If not, do NOT go any further. Balky or new untested engines are not allowed in a twin, period. Make sure your engines start and run reliably, this prevents a lot of heartbreak and rekitting of models. When you have the engine situation under control, then fuel up and start both engines. Get in the habit of starting the inboard engine last, otherwise you may have company in the middle of the circle. When the engines are warmed up, shut them down and refuel. Start outboard engine, then inboard engine. Now keeping the shaky knees and butterflies under control let the Centauri build up good ground speed before taking off gently, at least until you are sure of the model. When you are sure of the model and yourself, then you can pull takeoff wingovers and impress your flying buddies. Use the first few flights to get a handle (ugh) on the model and have fun. When the outboard engine shuts down start thinking about setting up for landing and cool the aerobatics. Remember this isn't a Shrike Commander and you ain't Bob Hoover.

Hopefully you will enjoy Centauri I as much as I do and because it is out of the ordinary it will attract attention. Why don't you get your flying partners to try one? Although control line doesn't get the press or the publicity that Radio Control does, no one can deny that control line isn't fun and a challenge. So instead of grumbling that control line is dying go out and teach a beginner, maybe he/she will build a Centauri I too. Lord knows we need all the friends and control liners we can get. See you at the circle. Keep your lines straight.

Euro Scene . . . Continued from page 15

want to go higher!! Only one time it went nearly wrong. I let one of the glider pilots fasten his own plane on the seat, and, as was found out afterwards, he put the rubber holding bands on in a wrong way. Up we went, but when I hit the release switch on the transmitter, nothing happened, at least not initially. I did not understand at first, and started losing altitude to land and have a look. When the Piper had only a 100 feet between its wheels and our field, disaster struck: the rubber bands over the left glider wing half let go and there I was, flying a large Piper with an even larger 6 lb. glider loosely connected to it, but only on one side! The combination was nearly uncontrollable, and it was only the power of the Zenoah that enabled me to gain some altitude. I started executing the wildest maneuvers (in fact, the Piper did most of them without waiting for

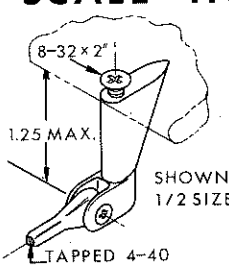


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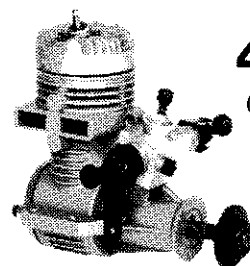
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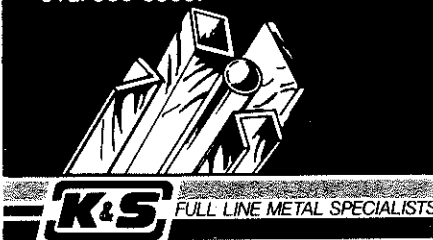
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my commands), in a desperate attempt to shake the glider off the Piper's back. It took a few minutes, but then the rubber bands on the other side gave up, and the planes were saved. Now I always insist on a check before take-off, and that's the logical thing to do anyhow.

Well, I must have used the available space by now; next month I will be back; among other things I'll tell something of my hands-on experience with the new OPS Maxi 1.8 engine.

Hannan's Continued from page 51

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static-judged in the same manner as R/C models, and suggests a stand-off distance of 6 inches!

By far the most active Pistachio producer on the west coast is Richard Howard, of cottage cheese propeller fame. He had this to say regarding Otto Kuhni's first-ever Pistachios, shown in one of our photos this month: "My favorite was the DH-4 of 1/72nd scale with all the details, including spoked wheels on the landing gear and a spare wheel mounted beneath the fuselage. It is covered with tissue air-brushed with color and with all of this, it weighs a scant 1-1/2 grams. Incredible! His model looked like it had been built in Jumbo Scale, then shrunken down to Pistachio size. The other (Bristol Prier) was