SIMITAR DEUCE

SIMITAR DEUCE
TYPE: R/C Sport Flying Wing
WINGSPAN: 54 inches
WING AREA: 588 square inches
LENGTH: 25½ inches
ENGINE: 3.5cc
RADIO: 3-channel

Our author has been working on this configuration for years. The latest Simitar is for 3.5cc engines, giving spectacular performance.

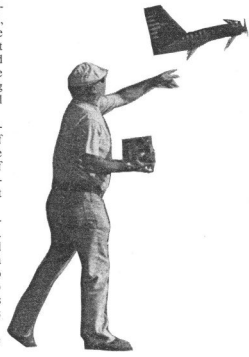
by Bill Evans

• The Simitar Deuce is a much improved, updated version of the Simitar XV that proved so popular as a plans feature in *Model Aviation* several years ago. Improvements include the addition of a landing gear, a removable wing, larger radio compartment, more power and, consequently, higher performance levels. These modifications were incorporated as a result of input from many R/Cers who built and enjoyed the original Simitar these past five years. Indeed, Simitar XV was a top-selling plan at *M.A.* for three years. I think you'll like what we've done to the bird!

All aspects of the Deuce's flight performance actually make it easy to fly even if you are not the hottest pilot. By the same token, it can be spectacular in the hands of a real "showman," as evidenced by demonstrations at the Las Vegas Tournament of Champions.

Simitar Deuce stays where you put it—straight flight out or in a bank, it stays put. It is truly a flying machine with neutral stability. It will not stall and roll off on a wing as do conventional aircraft. If you do try to stall the Deuce, the nose will drop and flight is automatically resumed. This characteristic is particularly advantageous on landing approaches.

If you do manage to vertical climb the aircraft until it stops and then apply full aileron and elevator, you may put the Deuce into a flat spin from which it may not recover. I have flat spun the design from as high as 200 feet and the most damage has been a broken propeller and a bent landing gear. Indeed, a 9 pound, 60-powered Simitar in an inverted flat spin from 200 feet sustained no damage at all—not even a broken prop. Sound incredible? Well, that's what they all say when they first see the Deuce fly; so let's get to building one for you.



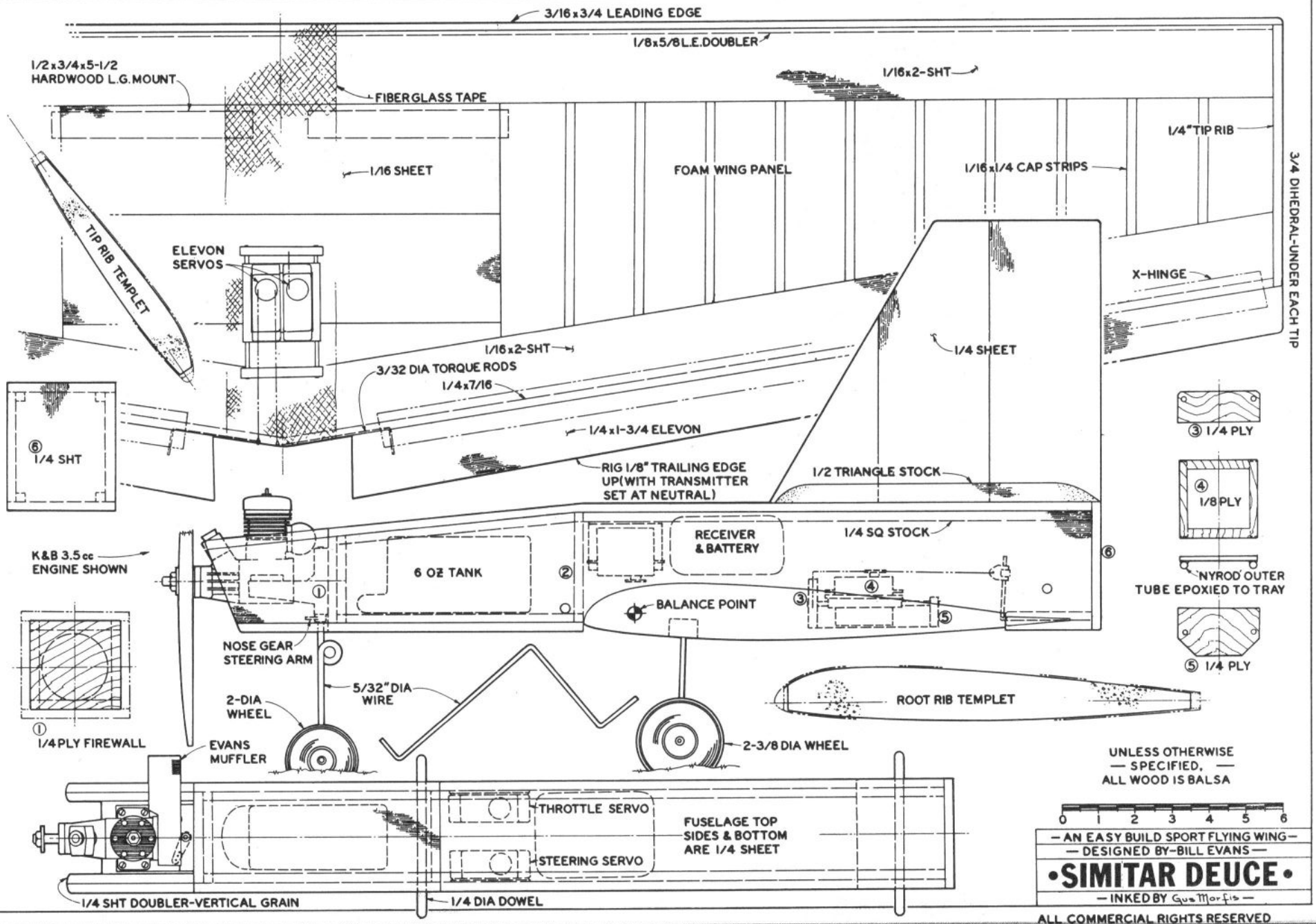
Construction is very simple utilizing a hot-wire-cut foam wing and a basic balsa box for a fuselage. Fin and elevons are shaped balsa sheet. You will need 5 sheets of ¼" x 3" x 36", 10 sheets of 1/16" x 4" x 30", and a few ¼" square; all material for building is balsa with the exception of the firewall, some formers and the landing gear mount.

For your convenience, Soaring Research (20825½ Roscoe Blvd., Canoga Park, CA 91326, 213-709-0894) can supply Deuce wing cores at $12, plus shipping (California residents add 6% sales tax).

To begin construction, pin and glue, with an aliphatic, the ⅛" balsa leading edges and ¼" balsa trailing edges to the wing cores. Set this aside to dry and proceed to cut all fuselage parts; sides, top, bottom and firewall.

Pin the fuselage front bottom piece down on a flat surface, and pin and glue the right fuselage side to the front bottom. Be sure the fuselage side bottom edge rests on top of the piece pinned down and that it is flush with its edges. Affix the left

(Continued on page 109)



pains to do a good job in assembling and covering this beautiful machine.

Should you wish to paint the fuselage, a special surface passivating treatment in an oxygen-rich flame is required. I did not feel that I was skilled enough to do this without spoiling things, so I left the fuselage as it came out of the box. If you do resort to the surface treatment prescribed, you will then need a special lacquer made by Carrera to paint it . . . probably worthwhile for the ultimate in appearance, but—frankly—beyond my needs or desires.

A bit of practice with rudder and aileron coordination is desirable before you fly this four-function sailplane. If you don't wish to bother with ailerons or spoilers, the kit also has wing rods to provide the greater dihedral needed for rudder-only steering.

In short, the SB-10 is a glorious machine. It is elegant and sleek, and it flies like a dream; BUT, it must be treated with great respect and care, leaving nothing to chance. Pay attention to details and proceed carefully, and you will have a sailplane of appearance and performance matched by very few in the world.

The author wishes to express thanks for the fine help and spirit of cooperative fun offered by Jim Martin, Art Schroeder, Don Clark, and—last but not least—my OFB Ken Fields, who built the model, took the pictures, and provided his radio.

For more information on the Carrera SB-10, contact Hobby Lobby International, 1 Franklin Pike Circle, Brentwood, TN 37027, (615) 373-1444, and be sure to tell them that you read about it in Model Airplane News. ■

SIMITAR DEUCE

(Continued from page 24)

fuselage side in the same manner. Then glue and pin the rear fuselage bottom piece in place, followed by the firewall.

Place the 1/4" square balsa along the bottom inside edges where the fuselage sides meet the bottom fuselage pieces as well as along the inside edges of the top. These latter pieces start at the back edge of the firewall and run to the rear of the fuselage.

Apply the fuselage top front and top rear, and then glue and pin the rear cover in place. Next the 3/16" balsa doublers are bonded to the front insides of the fuselage. These doublers extend from the firewall forward. Let this assembly dry completely before shaping and sanding.

Trim and sand wing leading and trailing edge stock so that the sheeting will fit nicely over them. Cut wing sheeting to approximate shape. Clean the cores and sheeting with a vacuum cleaner very carefully. Any residual dust will cause a poor bonding of sheeting to core and must be removed. Apply Corefilm sheeting transfer tape to the core. With the tape in place, remove the tape backing and set the wing sheets in place.

After both panels are sheeted top and bottom, trim the edges and glue the 3/16" balsa leading edge in place. While this is drying, cut out and shape the fin and elevons.

Sand the wing panels to shape and join with 5-minute epoxy. Cut out the wing for gear blocks and epoxy them in place per the plans. Trim and sand the fuselage to shape and cut out for the engine and hatch. Construct a sliding servo tray. You'll have to give this a bit of thought; basically it is a tray that holds two servos to provide roll and pitch controls. Outer tube Nyrod is epoxied to the tray and this rides on inner Nyrod tubing that forms a track between formers 3 and 5. One servo imparts roll control to the elevons in the usual fashion. The other changes the tray's relationship to the elevon control horns, thereby imparting pitch control. It all works really slick but you could also accomplish the same thing with a Vantec mixer, which is also recommended.

Final-sand all parts and attach elevons to the wing (an "X" hinge is recommended). Use your favorite heat-shrink covering to finish the Deuce off after you have shaped and smoothed everything to pleasing contours. The airplane could, of course, be painted if you prefer that method. In any event, remember that the final results are most dependent on the preparation you provide before covering. By the way, the original Deuce was red with white trim.

Install control linkage and make sure

that the left aileron control on the transmitter results in the left elevon going up and the right elevon going down. Neutral position of the elevons should be such that the elevons are raised 1/32" to 1/16" above that which you would normally expect to be neutral. This will provide a slight reflex, which is required on flying wing craft of this type.

There are two suggestions with regard to flying your Deuce. First, it may be to your advantage to take a couple of short flights at the beginning to become oriented with the flight appearance. Flying wing aircraft can present unusual visual images that can really foul up your orientation. A bright, multi-colored finishing pattern can help this problem. Also remember, the Deuce will go where you point it, so when making turns, give aileron command to roll on edge and then apply up-elevator command to execute the turn. At the same time give opposite aileron to right the ship and prevent it from going inverted. I mention this because some pilots neglect to give opposite aileron and the ship may invert without the pilot realizing it has. This condition applies to conventional aircraft as well.

Building as shown on the plans and following the suggested construction sequence will make your Deuce a rewarding project. It's a fun machine, easy to build, fly and maintain. Let us hear how you make out. ■

F&B: JUNGMEISTER

(Continued from page 23)

wheel cover, and flight instruments were used to add scale detail. The wing struts were changed from the kit and made out of airfoil shaped aluminum for realism and to save building time.

With all the room available, the radio installation was a snap. I borrowed John's Futaba J Series radio, which has functioned perfectly, and a new O.S. 61 engine, which has been used on all the flights to date.

John and I left two weeks before the Nationals for a vacation trip to Florida, North Carolina, and Virginia. The Bucker was not completely finished, so each night at the motel and whenever we stopped at the homes of modeling friends, I would build. Finally, on August 9 in Virginia on a rainy, misty day, I made a test flight from a schoolyard. We immediately headed for the Nationals with an untrimmed airplane and troubled with new engine problems. It came out tail-heavy and required a lot of lead in the nose to get the CG correct. A word to the wise: Be certain the CG is correct before you attempt to fly!

The Nationals was the highlight of the trip and my modeling career. The excitement, anticipation, pressure, tension, and help from all the adults were unbelievable. I wanted a trophy so badly I could taste it. When I ended up in second place in Senior Sport Scale. . . I was overjoyed!

Since we've been home and have had a chance to trim the plane and correct the engine problem, it has flown all the maneuvers well. It flies both knife-edge and inverted, and performs regular and inverted spins beautifully. The smoothness in flight also allows impressive low and inverted fly-bys. On this particular model, with the added weight of all the scale finish and details, it would have been better to add a bigger engine, such as an O.S. 91 or a Fox Twin, rather than add lead to the nose.

There's no doubt about it, though. The Pica Bucker Jungmeister, like the full-size airplane, lives up to its reputation as a great aerobatic airplane.

For more information on the Jungmeister, contact Pica, 2657 N.E. 188th St., Miami, FL 33180, (305) 935-1436, and tell them you read about it in Model Airplane News. ■