



Field & Bench

"The moment of truth"; R/C Editor was honored with Gere Sport's first venture into the "wild blue." Author holds as check is made.

BY ED WELSH . . . Quarter-scalers have taken modeldom by storm, and much of this has been caused by the "marvelous machines" from Bud Nosen. The Gere Sport showed us why: great project with MRC/Suevia engine and MRC electronics.

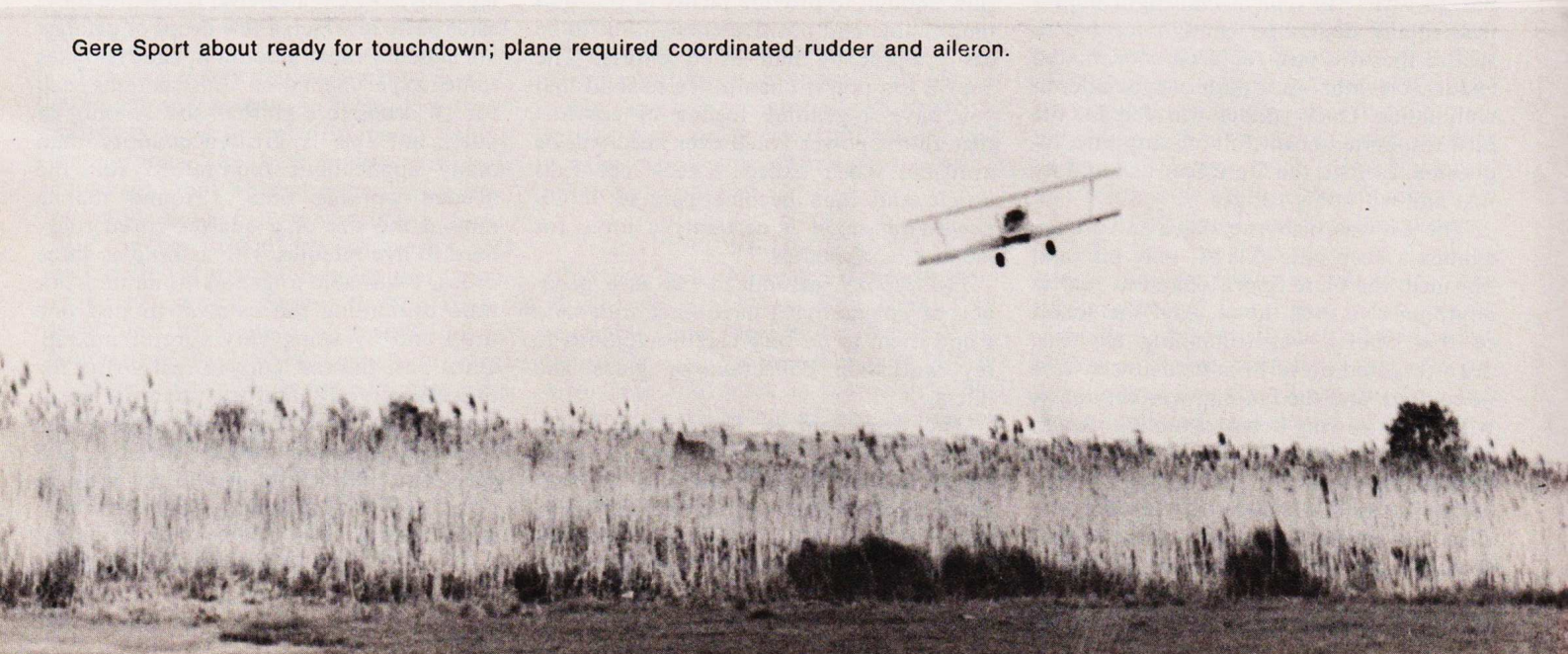
• Let me begin this article by stating that the building of one of these outsized models is very satisfying, thoroughly enjoyable, but not a project to be undertaken lightly, particularly by the faint-of-heart or less experienced modeler. Bigger is NOT easier. None of the aforementioned is meant to be other than a positive statement of fact and, possibly, a warning to some. Having completed the Gere, I plan to build another large one (a Span Aero J-3 Cub), but I have no intention of start-

ing immediately—48-in. wings will do for a while.

Bud Nosen is to be commended on producing an excellent and well-engineered kit. The pieces fit, the wood selection was quite good, the prefab work evidenced real care. Ribs were cleanly sawed and required no sanding, wire cabane and gear legs fitted perfectly, and the instructions, although brief, were clear and adequate. I must admit that I did lose out on the 18-hour assembly time, but I'm sure I could

have framed out the monster in 18 hours without finish-sanding and fitting some of the smaller parts. Where I really got into a time bind was in falling in love with the airplane and deciding that I'd add a few goodies, such as "N" struts, panel markings, a dummy Chevy engine, and wire bracing; all this, as a pretest of my willingness and skill in moving toward a large future full-scale project—a matter of sampling the water before jumping in, feet first.

Gere Sport about ready for touchdown; plane required coordinated rudder and aileron.





BUD NOSEN MODELS, INC.'S "GERE SPORT" KIT MRC'S MASTERS' MK. VIII DIGITAL SYSTEM MRC'S SUEVIA 1.5 CUBIC INCH R/C ENGINE

There is nothing more realistic in R/C'ing than a big aircraft in flight; Gere Sport proved a very easy aircraft to fly, very stable.

The ole R/C Editor really did a job on me this time, beginning with a gentle statement of, "You like biplanes, particularly old ones. I've got a large one for you." A quick bargain was struck, in that I agreed to do the "Field and Bench" on the Gere Sport if the editor could procure either a large engine (gas or glow) or a speed reducer of suitable reliability. Although others have done it successfully, I just could not see a tiny 60's flailing away at 12,000 RPM with an 11- or 12-in. prop that would look ridiculous, even though the plane got up and down O.K. The MRC Suevia turned out to be a very fortunate choice.

The Suevia is a 1.5 cu. in. engine that anyone loving fine machinery will marvel at. The machining is flawless, the castings are clean, and there is nothing fussy about it. The carburetor and all adjustments are easy to reach, and the muffler is well made, effective, and not overly large. It was necessary to change a few items on the engine with the aid of a neighbor, John Lohnes, who is the world's best and most tolerant machinist. He was able to drill and retap the rear of the crankcase for a backplate mount (the magnesium mount itself was a work of art) and fashion a steel driver washer almost $\frac{3}{8}$ " thick, to enable handy use of a Top Flite 20/6

prop, which is rather thin. All this was done promptly because old John fell in love with the engine as a fine piece of machine work. Setup of the Suevia produced no problems, and the backplate mount works well. The engine, despite its rather awesome size, is a real pussy cat. It has not "bitten back" so far and is the only thing, other than several .051's, that I own that I feel free to start without my trusty red rubber hose. This one is very mild; the only problem is one of technique. It's necessary to develop a good flip with a lot of follow-through, as there's a difference in swinging a 20-in. prop. Interestingly, elec-

Lift-off occurred after a very short run; Suevia engine proved to be potent mill.



FIELD AND BENCH

tric starters did not work out too well in initial attempts to start the Suevia. Following the first experiments with needle settings, prime combinations, etc., a few flips by hand were enough to fire up the throaty, yet unobtrusive, chatter of the Suevia. In short, a very solid engine—expensive, but worth every penny—with care, it should last forever—a very good answer for those needing a large glow engine.

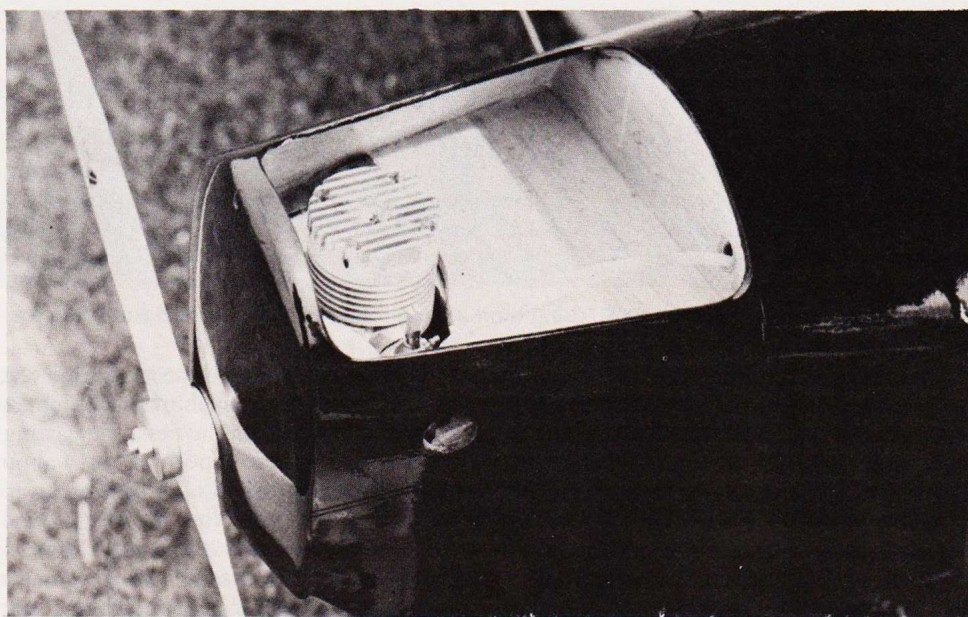
The radio gear used was MRC's Masters' Mark VIII Series, which had been flown heavily for several years and had just been returned from servicing. This set had been used most regularly with MR 60 mini servos. These were changed for a mixed set of MR #30's and 40's, which are larger and look more reasonable in the cavernous compartment of the Gere. The only changes required were longer servo arms on the motor, aileron, and rudder servos to increase surface movement.

Building the Gere was uneventful. There were no surprises in the box (which weighed in at 14½ lbs.), and only one part caused a minor problem! The firewall had a slight warp which was cured by soaking and weighting on a flat surface. All of the wood was of excellent quality and in correct quantity.

The wings were built first and, other than that they were over twice the normal size, they moved along quite well. Believe me, it's not easy to find or devise an adequate, true surface on which to build an 8-ft. wing—can you imagine an 8-ft. wing surface with a warp, bowed trailing edge, etc.? One learns to move quickly when gluing 4-ft. chunks of leading and trailing edge sheeting, as white glue (I used two pints of the stuff) sets up rapidly. Spruce spars and ply webbing result in sturdy, true panels that could always double as ladders for odd jobs around the house. Wing panels are conventional, old-time construction, with no shortcuts. Would you believe 72 ribs, umpteen cap strips, etc.—a lot of manual labor here! I made up a couple of sanding blocks, 28" x 4" and 16" x 3", with #100 and #240 carbide paper, which helped in keeping things flat and true. It's very easy to sand waves into an 8- or 4-ft. leading or trailing edge or between cap strips 3" to 4" apart. I can't underscore the need for CAREFUL sanding, trimming, and alignment on models this size. We can get away with some things on the smaller ones, but NOT on the big boys. The wing ribs come with holes for the aileron rods/cables, or whatever, already punched. I decided to use fiberglass arrowshafts for push rods, as they fit the holes closely and do not flex. The top wing is flat—no dihedral—if



Suevia's 1.5 cu. in. engine is run up, prior to flight; engine was easy to start and adjust.



Huge nose of Gere Sport completely covered the big Suevia; big TopFlite prop was used.



Van was needed to transport Nosen's big bipe; fuselage barely fitted this travel van.



ATTENTION: ALL 1/4 SCALERS

We would like to take this time to invite you to our second annual Monster Fly-In, which will be held Sept. 28 to Oct. 1 in Las Vegas.

This is not a contest, but there will be perpetual trophies awarded, prizes, and free gifts. There will also be an old-fashioned picnic right on the field while you are flying, so don't forget to bring your family.

Where will the flying site be? We have a 10-square-mile dry lake just 25 miles from Las Vegas (you will also be seven miles from the great Lake Mead where you can fish and swim with your family). So, if you want to plan a real vacation that will be full of fun and flying, try to stay with us a week.

What can you do to help? We need to know if you will be coming and time of arrival. This will help us in making room reservations for you (also what kind of plane you're bringing and what frequency you're on).

Well, 1/4 scalers and bigger, I guess that about winds it up. The only thing I can add is this: We will have over 100 birds in the air. I hope one of them is yours—in the greatest fun-fly ever put on!

And remember . . . big is beautiful.

Field and Bench

anyone can get 3/32" balsa to follow a straight line for eight feet, I want to meet him! The wings were covered with orange Permagloss Coverite, which looks a good deal like full-scale fabric covering and which, if the manufacturer's instructions were followed, works well. There are a few tricks, such as using a very hot iron—hotter than for other plastic-type coverings—the iron is not rubbed over the material—and material must be fitted well to the structure, prior to final shrinking, as shrinkage, although more than adequate, is limited. The most difficult feature to become comfortable with is the high temperature required, as this changed the bright orange Coverite to brown. The original color returns upon cooling. As always, any problems with this material are related to one's not following the instructions. No additional painting or sealing of Coverite is necessary.

The tail surfaces were built next and, again, other than for their size, were not unusual. These are framed 100 percent with 1/4" x 3/8" balsa, and it is fairly soft and light stuff at that but, when completed, it appeared quite strong. For some foolish reason, I did not make the fin and stab removable. This may still be done as a help in transporting and is very simple to incorporate. These surfaces were also covered with Coverite. FIVE rolls were used between the wings and tailfeathers, with wastage amounting to only a few square inches.

The fuse was, for me, the real fun in building this project. Here again, the structure is not unusual—just solid building practice, which gives a light, strong and scalelike structure. The fuse formers are built up, the first three of plywood and the last three of beefy 1/4"-in. balsa. All former material is accurate-

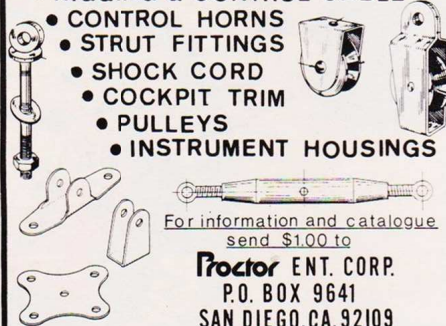
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ly precut and goes together easily. Formers F3 and F4 are predrilled to receive the cabane and assure correct alignment. The sides are comprised of enough butt- and edge-joined pieces of $\frac{3}{16}$ " x 3" x 30" to keep five troops of Boy Scouts in hand-launch glider wings for a year. Again, directions on setting up the fuse sides are clear, and if a little extra care is used, the heavier, stringier, and stronger pieces can be used in the front. The fuse was assembled over the plans and, by the judicious use of a few saw cuts, several yards of masking tape, and some large "C" clamps, the required taper was forced into a stubborn pile of lumber. The thing really started to take on some shape after the top deck was added, $\frac{1}{8}$ " sheeting in front and $\frac{1}{8}$ " x $\frac{3}{8}$ " stringers aft of the cockpit. I *did* deviate from the plans at this point and added a $\frac{1}{16}$ " x $\frac{1}{8}$ " spruce cap to the top of each stringer, as I knew the balsa would be prone to damage, particularly in transport and handling. The $\frac{1}{8}$ " sheeting on the front of the fuse behaves well if soaked until soft and held in place with a good combo of masking tape and a pound of pins. The side stringer of $\frac{1}{8}$ " x $\frac{3}{8}$ ", tapered and trimmed front and rear, is the final touch that transforms the fuse from an ugly box into a homely box. This stringer changes the cross section into something with a round top, diamond sides, and a flat bottom, once covered. The bare fuse was sanded, covered with polyester coat lining, and given a few coats of clear dope. The coat lining is a suggestion from the "grapevine" and works well—the stuff is even shrinkable—I don't know how much—but I applied it dry, much as if using nylon, and then brushed it lightly with a heat gun until drum-tight. Its best features are that the stuff looks like fabric, takes dope and paint well, and is dirt cheap.

The fuse was finished with several light

coats of Perfect black enamel. Again, this looked to me like 1933.

At this point, we moved a small bench into the middle of the shop, placed the fuse on it, and proceeded to assemble, fit equipment, and add a few goodies which transformed an ungainly series of pieces into a flying machine. There was no problem installing the radio gear. A set of "N" struts was made up, and flying wires were added per the scale drawing in the kit. This really gave the old girl some class and, at that point, I started making full-scale sounds. Finally, all the details were finished, everything worked, and the thing even balanced correctly without—get that, WITHOUT—any tail lightener. I'll give the Suevia some credit for that, as well as giving it to the good wood selection in the kit.

On a Saturday in May, the sun finally decided to shine, and the old R/C Editor and I could get together for the usual picture-taking and test-flight initiation. As the saying goes, she flew right off the board, albeit with full down-trim and a lot of concern for the sound that 21 lbs. of errant model could make. When we appeared at the field, all activity for the day, except for that involved in getting the Gere in the air, seemed to stop. Enough help, advice, and warnings came from the "peanut gallery" to get a 727 preflighted. The Suevia had not been run extensively prior to going to the field, and it took a few minutes to get it going and to make the usual adjustments. As stated earlier, the friendly nature of this 25 cc is a pleasure and, despite the size, the roar is not of the eardrum-shattering type common to the average 60, even without a muffler. We did fly the model without a muffler several times, as a hedge against overheating, which probably wasn't necessary. The engine handled both a 20/6 and an 18/6 prop very well, with the

ship flying at scale speed, and full power required only for takeoff.

The first flight was a surprise in that the ship's tail came up in what seemed to be five feet, the ship was airborne in what seemed to be 15 feet, and it was 50 feet in the air before the edge of the field was reached. A punch or two of down-trim, back on the throttle, and now we had a black and orange thing of beauty. Since the initial flight, the elevator push rod system has been revised, and I'm going to go to cables in the near future. I'll probably reach a point someday where snap rolls, Cuban eights, and all that stuff will be attempted, but for now, gentle circles, shallow dives, and very, very slow rolls are enough. The thing will probably stay together O.K., but the size is still awesome. All controls are responsive, although turns within the county require judicious use of aileron and rudder. Looking at this gal cruise by on a sunny day, 25 feet in the air, about 75 feet away, causes a thrill that makes having slaved over 15 lbs. of parts worth the labor. Bud Nosen, you're a prince!

I stated earlier that one has to put building these large models into perspective, and that extra amounts of the usual talents expected of all model builders are called for. I must stress that, although the basic structures are simple, these models are NOT for the inexperienced; a few minutes' thought will make this clear. Just the matter of safety is a major consideration.

I will heartily recommend large models for the aging crew (of which I'm a member); these are helpful for nearsightedness (building and flying). After a while, they don't even look big and, as a final word, if you live in a cottage or an apartment, forget it! I've been building models for well over 40 years, and I'm sure this one contains as much balsa as all the others combined. Now for the J-3—my most difficult decisions will be—wheels or floats, clipped wings or standard? ■

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