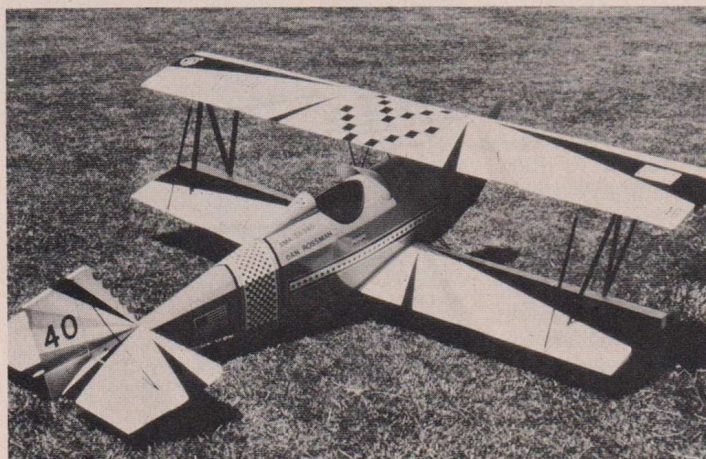


RCM PRODUCT TEST

Bud Nosen's GERE SPORT BIPLANE



Sitting on the flight line on its 6" Du-Bro balloons, or in flight, Bud Nosen's 1933 8' (5.42" = 1") Gere Sport Biplane is a show stopper. It was uniquely tailored just for you if: F-4's and F-86's are flying things, but biplanes are flying machines - - real airplanes.

The Gere's flight performance is scale-like, and so is the visual impact of this almost 'half-size' airplane. Start thinking in terms of large, awesome, cavernous, outside, etc., and get ready to understand what it's like to build and handle a 'half-size' airplane. We built cradles out of 2" thick foam to hold the fuselage for work on radio installation, covering, etc. And if you cover your current project with what's left from the last one — plus one new roll — forget it. We did an analysis to decide how much MonoKote was needed, didn't believe it, re-did it - - and then bought 9 (nine) rolls.

The kit is excellent - - a real pleasure to build - - but not for beginners. An instruction sheet (printed on both sides) is more than adequate for the experienced builder — with one top wing exception to be covered later. An accurate bill of materials is also provided. If the instructions and bill of materials are followed carefully, there is no need to add any materials. Although, when you first open the box, you will think there is enough wood to build a squadron of planes.

The Gere was built as kitted except for the addition of Interplane N struts, upper wing ailerons (same size as lower wing ailerons), and provisions for attaching the lower wing with leading edge dowels and trailing edge nylon 1/4-20 bolts, instead of the kit provided rubberband hold-down. And, since bipes have short nose moments and the fuselage is voluminous, the radio installation was made immediately aft of the plywood firewall (1/4" x 6" x 9") and the forward bottom section of the fuselage was converted to a removable hatch for access to the radio system and fuel tank.

IMPRESSIONS	E	G	A	F	P	IMPRESSIONS	E	G	A	F	P
Packaging	●					Pre-Shaped Parts			NA		
Plans			●			Parts Match to Plans	●				
Written Instructions		●				Overall Parts Fit	●				
Quality of Hardwood	●					Ease of Assembly	●				
Quality of Fiberglass			NA			Fidelity to Scale			●		
Other Materials	●					Flight Performance	●				
Accessories		●				Overall Appeal	●				
Die-Cutting		●									

E=Excellent / G=Good / A=Average / F=Fair / P=Poor

SPECIFICATIONS

Name	Gere Sport Biplane
Aircraft Type	Stand-Off Scale
Manufactured By	Bud Nosen Models Box 105-C Two Harbors, Minnesota 55616
Mfg. Suggested Retail Price	\$129.95
Available From	Both Mfg. and Retail Outlets
Mfg. Recommended Usage	Sport or Stand-Off Scale
Wing Span	96 1/4 Inches
Wing Chord	14 7/8 Inches
Total Wing Area	2790 Square Inches
Fuselage Length	71 3/4 Inches
Radio Compartment Dimensions	(L) 18" x (W) 9.5" x (H) 8"
Wing Location	Biplane
Airfoil	Flat Bottom
Wing Planform	Constant Chord
Dihedral	1.75" (lower wing)
Stabilizer Span	32 1/4 Inches
Stabilizer Chord (incl. elev.)	13 7/8 Inches
Total Stab Area	412 Square Inches
Stab Airfoil Section	Flat
Stabilizer Location	Top of Fuselage
Vertical Fin Height	14 1/2 Inches
Vertical Fin Width (incl. rud.)	13 3/4 Inches
Mfg. Rec. Engine Range	.60 & larger
Recommended Fuel Tank Size	Depends on engine size
Landing Gear	Conventional
Rec. Number of Channels	4
Recommended Control Functions	Rud., Elev., Throt., & Ail.
Basic Materials Used In Construction:	
Fuselage	Balsa and Ply
Wing	Balsa, Ply & Spruce
Tail Surfaces	Balsa
Hardware Included In Kit	Very complete
Plan Size	81" x 36" (2 sheets)
Building Instructions on Plan Sheets	Yes
Instruction Manual	Yes (2 pages)
Construction Photos	No
Kit Includes	Die-Cut Parts
Mfg. Rec. Flying Weight	232 (14.5) ozs.
Wing loading based on rec. flying wt.	12 oz./sq. ft.

RCM PROTOTYPE

Weight, Ready To Fly	264 Ounces
Wing Loading	10.6 oz./sq. ft.
Covering & finishing materials used	Super MonoKote
Engine Make and Disp.	Max. 80 & Roper 1.4
Muffler Used	Max & Roper
Radio Used	Kraft Series '73
Tank Size Used	16 Ounce

GERE SPORT

Building was straightforward, but discount the 18-hour assembly time noted in the kit. Once we get to the field, we can get the Gere together in 15 to 20 minutes. Die-cutting and materials selection were literally perfect, as were parts fit to the plans and each other.

No special tools, other than large wood clamps, were used. All basic framing was performed on the cork coated side of my 6' x 2' hollow building board. Using a 36" steel scale helps assure that everything is built straight.

Fuselage initial assembly (sides and bulkheads) over the plans is a must to assure a symmetrical fuselage. The fuselage is a basic box with two square bulkheads built up from 1/4" ply strips (lengths and widths up to 9-1/2" x 1-1/2") and three aft fuselage bulkheads built up from 1/4" x 1/2" sheet balsa. Wood clamps 6" deep with a 12" throat were used to clamp the sides to the bulkheads.

And now the fuselage sides - - this is another point where you are impacted by the size of this graceful biggie. The vision conjured up by an **eight foot** pipe is overwhelming, the full size plans hammer the impact further in; the amount of wood is unbelievable; but the fuselage sides finally bring you to the full appreciation of the size of the Gere. The 3/16" thick sides are assembled first, end-splicing three 3" x 48" and 3" x 30" sheets, and then edge-splicing the 78" lengths to get a side sheet 3/16" x 9" x 78" long. The sides are then tapered fore and aft of the wing saddle area for final assembly.

The landing gear is a standard configuration, two wires (3/16") soldered together above the axle and mounted to the fuselage bottom in a ply sandwich. I added internal triangular braces to tie the plywood to the fuselage sides. The fuselage top is round with the traditional inset stringer type aft fuselage turtledeck topped by a conical headrest. The round forward fuselage top is sheeted with soft 1/8" sheet (well soaked, of course). A single stringer running longitudinally along the center of each fuselage side breaks up the slab side effect. All in all, a classic, beautiful configuration.

The right side of the upper wing was built first, then moved on the board to allow room to continue building the left side to obtain a one-piece wing (no dihedral in the top wing). Instructions were clear and correct, except that the WT-4 and WT-5 ply braces **should not** be added until the left wing is finished at least one rib bay outboard of the center section. Examine the area carefully before building and you'll see the problem. Because of the excellent parts fit, the wings were assembled "dry", ribs and spars locked in place with Hot Stuff and then, for "safety wire", we brushed the joints with thinned Titebond. Both wings use the same flat bottom airfoil - - chord is over 14". Construction is rugged, utilizing two 1/4" spruce spars top and bottom, and vertical webbing between those spars. The T.E. is made up of top and bottom 3/32" sheeting. The L.E. is made up of 1/2" x 1 1/2" strips with an inset full length of a 1/4" square spruce strip which fits into mating slots in the rib fronts. 3/32" sheeting top and bottom completes the leading edge.

The lower wing is similar to the upper wing except that it is 6" shorter and has 1 3/4" dihedral under each tip.

Tail construction is by conventional framing - - except that the tail is framed with unconventionally large 3/8" x 3/4" strip with 1/4" x 3/8" bracing.

The elevator and rudder control systems are Sullivan .060 braided cable with a wishbone set-up to drive each elevator. The required lengths were made up by splicing and the outer channels are supported at about 12" intervals in the fuselage to minimize deflection. Braided cable is also used for the lower wing ailerons with the upper ailerons driven by tie-rods from the lower aileron.

K & S streamline tubing is a good application for those tie-rods as well as the upper tail braces (kit calls for dowel braces). We omitted the lower tail braces since the tail assembly was removable from fuselage. The Interplane N struts are made from aileron stock, hinged to the top wing (Du-Bro hinges) and pinned to tabs in the lower wing for flight assembly. Radio is Kraft Series '73, Single Stick transmitter - - servos are KPS-14 except for aileron which is KPS-15 II. Fuel tank is a Sullivan 16 oz. Slant Front. A Robart Super Fueler was used, and worked as advertised.

Weight is 17 lbs. - - covering is all Super MonoKote including hinges. Color scheme is a highly visible orange (fuselage) and white (wings and tail) with orange, white, yellow and black sunbursts on the wing upper surfaces and tail. The undersides of the wings are checker-boarded with 4" squares of yellow, orange and black. The upper wing checkerboards are 2" squares of orange, yellow, black and white.

We really enjoyed building the Gere, but we did beat up the basement ceiling while handling the wings. We can man-

age to hit the ceiling a few times with a 'tiny' Kaos wing so these 8' wings were easy to use as bats. One other size problem has to do with the proverbial joke about not being able to get your project out of the basement. Unless you built it in a hangar by the flying strip, you do have a slight problem. Our basement has an 'old-fashioned' outside door. But, once just to see what it would be like, we took the sub-assemblies (wings, fuselage and tail) out through the house. We made it, but the bride will be a long time getting over it - - ". . . watch the cat, . . . hold the door, . . . look out for the lamp, etc., etc . . .

The Gere travels to and from the field (Valley Forge Signal Seekers field at Valley Forge National Park) in my Pinto wagon. The wings ride over the front seat and are secured for transport by bungees over 1/4" foam rubber pads. The fuselage sits on its right wheel and a foam pad under the fuselage side & the tail assembly on its foam carrying pad is tucked under the fuselage. The field box is under the wings and there is still room for a folding chair, thermos, etc.

For flight assembly, the tail is secured on a fuselage mounted 1/4" ply platform with four nylon screws (8/32"). We followed instructions and dropped the T.E. of the horizontal stab 3/16". Even so, we still needed 30 oz. of lead up front with the original Max .80 engine installed. The higher weight of the Roper engine (32 oz.), and its extension from the firewall farther than the Max .80, eliminated the need for the nose weight. The CB Associates tail wheel and elevator and rudder are then hooked up (Du-Bro Kwik Links with fuel tubing keepers). The top wing is mounted on the cabanes through four nose wheel nylon fittings and locked in place by 5/32 wheel collars. The N struts hinge down and are attached to lower wing hold-downs (aileron bell-crank arms epoxied into ribs) using 1" long 2/56" screws and 3/32" wheel collars. The screws pass through brass tubing Hot Stuff'd into the struts.

The Gere ad states "Flying weight 14.5 lbs.," and ".60 Engines Required". We first flew the Gere at a weight of 16 1/2 lbs. (With 30 oz. of lead in the nose) on a Max .80 and 14/6 prop. Performance is realistic for those of us who remember bipes from the 30's and learned to fly PT-19's, BT-13's and AT-6's or AT-17's.

The Gere has over 100 flights to date on two engines - - the original Max .80 and the current 1.4 in.³ Roper engine. A removable cowl was added when the Roper engine was installed. Engine cooling is provided through the use of Kaiser Sun Shade aluminum screening. This "louver" material is intended for screen doors needing air passage while restricting visibility. The rows of louvers are about 1" wide with about 3/16" between rows and provide the desired scale effect as well as a practical solution to air inlet.

Flying the Gere, we quickly learned that a 10-knot headwind was our friend. The airplane flies so slowly that it takes time to work it up to an altitude where there's room to maneuver. With a good headwind, the ground speed decreases; but rate of climb increases and that's good. So, we went to the Roper and a 20/5 prop - - later flights were with a 17/6 prop. Performance was slightly improved, but still dependent on the airplane's innate stability. We may yet modify the Gere to take a gear box unit.

Flying is slow and stable and satisfying to watch. From a short distance, most viewers think they are watching a real airplane in flight. With the enormous, boxy fuselage and 8' wingspan, it almost is a "real airplane". The first flight was made with the control surface throws set as directed in the instructions. For all subsequent flights, elevator throw was increased from the directed 1/2" up and down to 1 1/2" up and down.

Now, the whole purpose of the planning, building, testing and worrying, is to have a good time and fly. And, in flight is where it all pays off. As impressive as the Gere is in cruising flight, we really enjoy it during take-off and landing. Take-offs are easy and smooth. The tail comes up quickly and then it's down field on the mains - - a sight to behold. A bit of "up-elevator" and she's off smoothly. The Gere is flown just like a real bipe - - gently and with lots of rudder in the turns. Approaches and landings are their own thrill. Again, it is the real thing; as the Gere settles gently on the mains for a tail-low 2-pointer, you will really know it was all worthwhile. We've made a number of deadstick landings. They're easy and as graceful as power-on landings - - with a bit of planning.

The **big ones** are here. If you're looking for something new and scale-like, try the Gere - - you'll like it! □