

An R/C "Sea Vixen"

by Jack Sheeks

A light and lively
dashing design for a rakish
twin-boom R/C pattern ship that
spans 64" and answers to a Super Tigre
G-60 and a Blue Max Mark II system.

Photos by the Author

You've heard of Scale airplanes and Stand-Off Scale events haven't you? Well, this model is called a "Run-Off" Scale. You run a few feet further and with a little wishful thinking, it looks Scale enough. Technically it's a Pattern type aircraft, designed to a different configuration, but aptly proportioned for flight. If painted in military colors it resembles it's full scale counterpart.

The inspiration behind it comes from the British deHavilland D.H. 110 "Sea Vixen" which holds the distinction of being the first two seat all weather fighter to exceed Mach 1.0. This was accomplished April 9,

1952. Later the aircraft was modified for carrier operations as a strike aircraft and fighter. Also incorporated on the later models was an all moving horizontal tail surface and drooping leading edge in order to carry more stores for air strikes at supersonic speeds.

The model "Sea Vixen" is radio controlled, spans 64" and boasts an area of 800 square inches. The original weighed in at 7-1/2 lbs. which is light for a ship of this size. Power is a muffler equipped Super Tigre G-60.

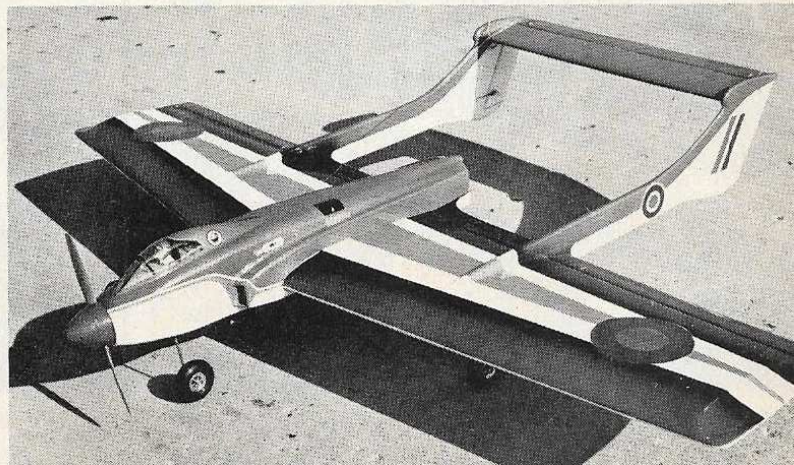
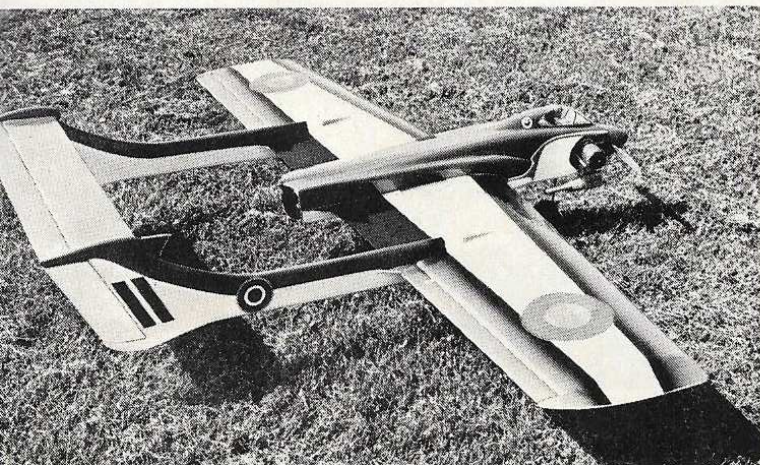
The doorbell went "dingaling" with one model buddy after another coming to view

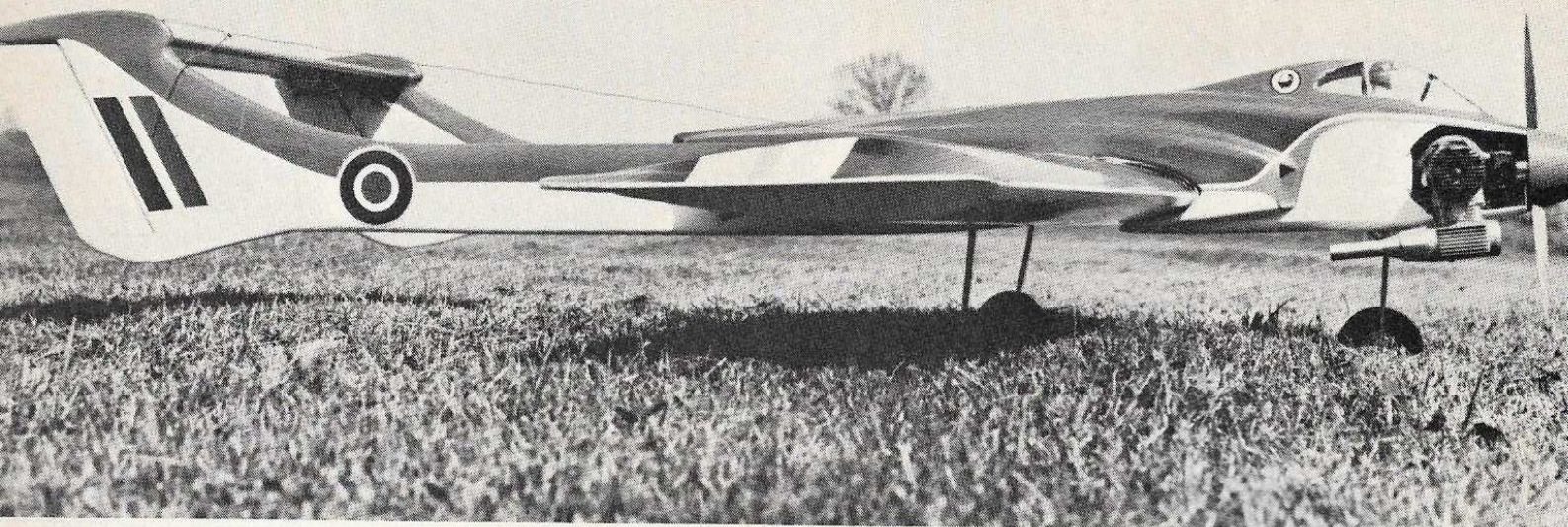
the balsa bonework. I thought of charging admission, but no, what are friends for if not to criticize every strut and glue bump? I think they thought I must be out of my tree for trying such an unorthodox design, but this to me is where the fun is at.

The day of reckoning finally came. Bob Godfrey, Les Pruitt and I headed out to the drag strip at Race Way Park to borrow a paved runway. A great place to fly, but it's hard to set an engine with race cars practicing. Talk about our model engines being loud! My engine did not join in with the noise for a good 20 minutes, I had hooked up the vent to the engine instead of the

Above: Tail mounts on twin booms to vary the diet. No bad flight habits.
Below: The side mounted Super Tigre G-60, well muffled to keep the peace.

It's clean and spirited. The lines flow from spinner to upswept fins, the design lends itself to exotic color schemes. Adequate in planform area.





fuel feed line, which takes smarts. The engine then roared to life.

I tested and fiddled and stalled for time. A new radio, a new engine and an untried design. My buddies nudged me to take-off. What did they have to lose? With apprehension I advanced the throttle and it leaped forward as if it was kicked in the rudders. In scant feet it was airborne and tracking toward the clouds. After a few slight trim changes I began putting it through its paces, loops, rolls, inverted flight, immelman's and a few not yet in the book. It performed flawlessly, as did the Blue Max Mark II system.

The R/C "Sea Vixen" was designed with the intention of putting a little life into Pattern flying. It seems to me the basic aircraft flying in this event are following the one proven concept so closely that little more than the color trim and incidentals change from one aircraft to another. This

twin boomed machine offers something structurally different, yet it excites the eye and performs in a league with the others. I think you will agree, it's a design a bit apart from the ordinary.

The Construction

Light, straight and strong wood stock is a place to begin. Select your balsa carefully, it helps you build true surfaces.

Cut the ribs from $\frac{3}{32}$ " balsa sheet and pin them into position over the plan and on the $\frac{1}{4}$ " square lower spars. Center the trailing edge and block it up to the correct height and pin the ribs in place. At this point, tack glue the ribs in place. The top spars are now installed, followed by the leading edge. Be careful with this and make sure it is aligned.

The trailing edge planking is positioned at this point, along with the bottom rear spar. Plank the leading edge aft to the first

spar only. Leave the center open at this time. The opposite half of the wing is now assembled, following the same basic procedure. Once the two halves are dry, turn them over and join them with the center planking and install the landing gear blocks, but don't plant the top of the wing quite yet.

The Fuselage and Booms

Cut the four boom sides from $\frac{3}{16}$ " hard balsa and slide them into place on the wing. Align them carefully, sighting from every direction. Glue them in position along with the $\frac{1}{4}$ " square balsa former at the rear of the booms. After this has dried, plank the rest of the wing with the exception of the upper center-section where the servos will be installed. This will also let you install the Nyrods easily.

Build the rudders at this point, leaving the planking off until the Nyrods are in-

At top: Competitive in every sense. The booms are easily built, rugged. Below: Framed! Jill hoists Dad's grease sled for the all-seeing camera.

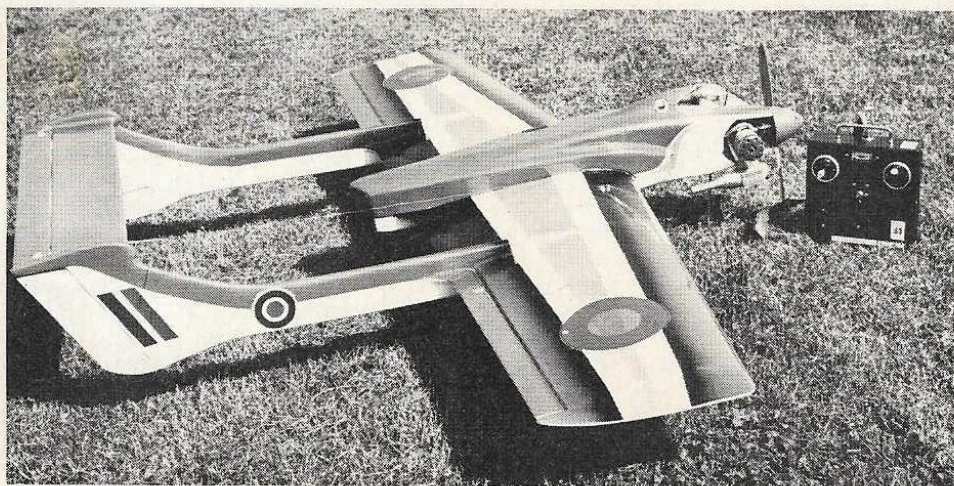


What's this? Donna hauling the framework out to the trash truck? One big demerit! Wives must understand shavings on the rug are a status symbol.

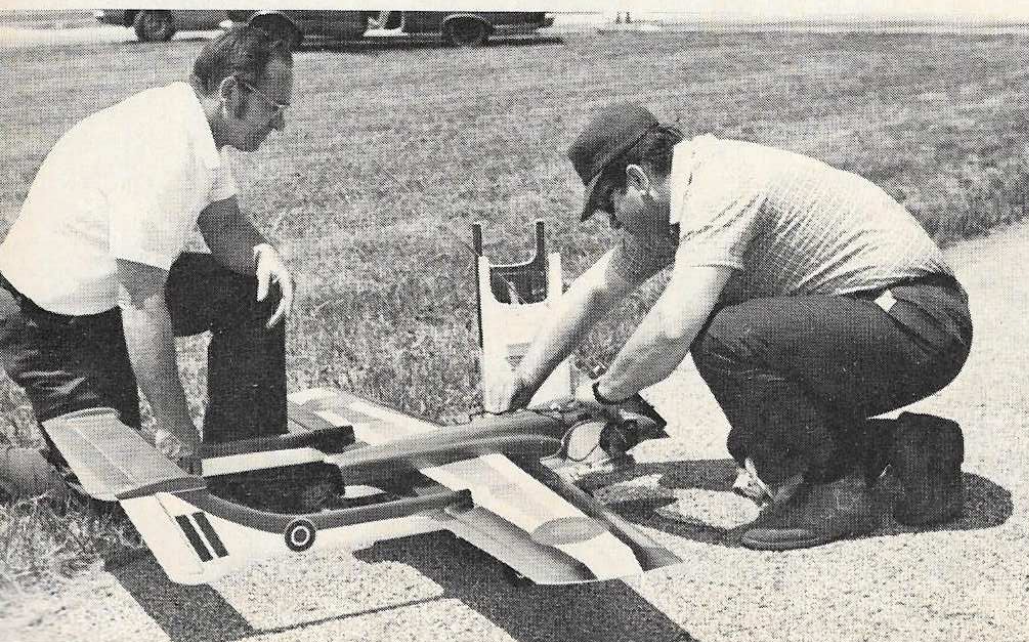




The "E" on the head stands for Empty. Jack, you've done it again. "Far" is spelt all weird like the whole ship. Raceway Park makes ideal field, between heats. "Sea Vixen" is light and agile.



A Nyrod down the boom to the rudder. Another actuates elevator. Blue Max system, ST-G-60 mill. Below: Les Pruitt and Fearless Jack feed the tank, make the beast ready for a test flight.



stalled. Cut the stab to outline from $\frac{3}{8}$ " hard balsa. The center fuselage sides are fabricated from $\frac{3}{16}$ " sheet with $\frac{1}{16}$ " plywood doublers along the entire length. The body formers are $\frac{1}{4}$ " stock and $\frac{1}{8}$ " plywood as noted. The rear formers are cut from $\frac{1}{4}$ " balsa.

Install the four Nyrods in the wing and through the two booms at this point. The elevator Nyrod should be loose. The bottom blocks on the booms are now added, using scrap balsa for the boom formers. Cut the upper boom top blocks so the upper rods go through them and up inside the rudders. Epoxy them in place for a permanent bond. The rudders are installed at this point. Once the Nyrods are extended through the rudders and secured, install the stabilizer. Scrap blocks on top of the rudders secure it. Rudders are planked with $\frac{1}{16}$ " balsa sheet.

All control surfaces are attached and the control action is set up. Temporarily the servos are installed to make the hook-up. Secure the Nyrods in the wing, then remove the servos, while you finish planking the structure. Build the center fuselage up and install the controls for the motor control and steerable nose wheel.

The motor control servo mounts in the center fuselage, while the others are located in the wing. The receiver is also mounted in the forward section of the wing. The receiver is also mounted in the wing, while the battery pack is positioned in the center fuselage. An "L" shaped bracket is made and mounted on the rudder servo in order to hook up the nose wheel. That's the reason for the hatch on the top.

Wing hold-downs are epoxied into place and the fuselage is fitted to the wing. The center fuselage is now shaped to contour. Build up the false intakes from $\frac{1}{8}$ " balsa sheet and after this, turn your attention to detailing the cockpit. I seal the outside of the cockpit and make the frame with $\frac{1}{32}$ " balsa. With a little dampness you can form it any way you like.

While all this is drying, install the wing tips and fillets, including the one that runs between the booms, and final sand the model.

As for the finish, I started out to paint my "Vixen" in military colors, but the more I thought about it, the more hesitant I became. After reading up on aerobatic teams throughout the world, I found that the "Sea Vixen" had been used on a British team. I thought of following these colors, but in the end elected to imagine up my own as it's hardly scale anyway. I was more concerned with visibility for the Judges and in the distance. Follow your own leanings on this.

The original model photoed here has an all white bottom, light blue center span-wise on the wing and white on both sides of the blue. The rest of the model is bright red with black edging around the upper white areas. This was done with an air gun. Roundels are simply decals.

If you want to shave a little weight I suggest Super MonoKote, but the ship is great at 7½ lbs. I had thought of doing some doily painting like Dave Geirke, but the little woman caught me and that shot that idea down! Time now to pull up your socks and get hot on a sweet flying machine. You won't be sorry!

