

GOOD NEIGHBOR

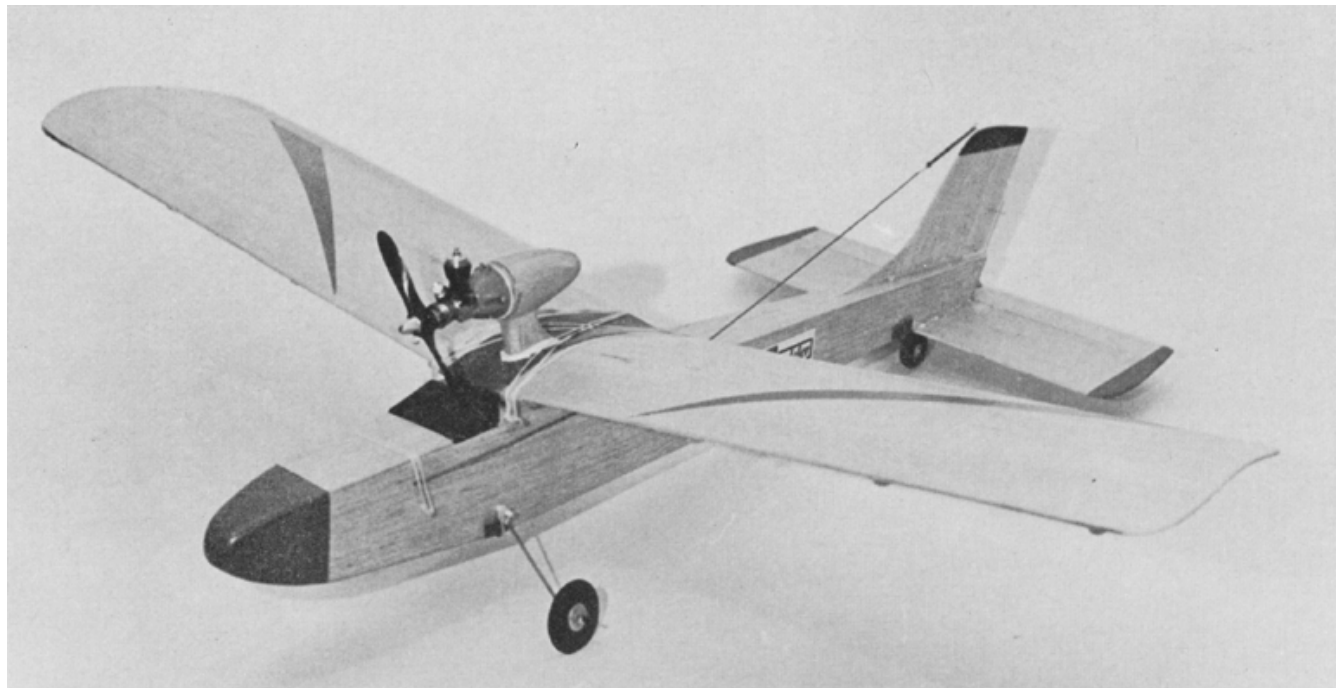
by
Ken Willard

Here's a little rudder only RC model by Ken Willard of 'Sunday Flier' fame. Designed to reduce the chances of damage when flying in your front yard. Read the whole story below that originally appeared in the November 1965 issue of RC Modeler.

RECENTLY one of my neighbors asked if I would entertain a few of his guests with one of my radio controlled models. I had been flying a Schoolboy in my front yard on quiet evenings for some time, and the neighbors seemed to enjoy it, so this was not an unreasonable or unexpected request.

I fired up the .010, launched the model down the street, let it climb out over the houses, then did a few loops and rolls with it. The guests were properly entertained, and everything was going fine.

But just as the flight was about to end — when I positioned the model to land it on the street — some inconsiderate guy on the citizenship band decided to call somebody.



Naturally, since I have a superregen receiver, the Schoolboy responded by going ape. So, instead of landing in the street, the Schoolboy veered off, hit the neighbor's window a glancing blow and fell into the shrubbery. No damage was done; we wiped the window clean, and I was thankful it wasn't broken.

That started me thinking — if the model had impacted straight on instead of at an angle, I'd have a window to pay for — and perhaps the neighbors wouldn't care to have any more demonstrations!

Let's figure out a solution, a simple little job that wouldn't do any damage except under the most extreme circumstances. In other words, a "Good Neighbor." One that can be flown not only from a school yard but from an average residential street.

As it turned out, the design evolved as a cross between the "Schoolboy" and the "Virus" with one added feature, a shock absorber on the nose. It also turned out to be a very fine sport flier. Why don't you build one?

FUSELAGE

This is a standard box type construction, with mostly straight lines for easy construction. The only unusual feature is that a sponge rubber — or styrofoam chunk is used in place of a nose block.

Glue a piece of the sponge, or styrofoam to the nose bulkhead, then trim it to shape with scissors or sanding block. Or, if you're not interested in the shock absorbing feature, use a balsa block. It's a matter of choice.

WING

The wing is actually just a small version of the "virus" wing — a single sheet, curved over the ribs. Use the construction technique as described for the Virus. I've repeated it here in case you don't have the January 1964 issue of RCM.

Before beginning, obtain a sheet of 6" wide, 3/32" sheet, 33" long. If your hobby dealer doesn't stock 6" sheet, get two 3" sheets, selecting two pieces that are similar in weight and grade and which butt together snugly along one edge. Be sure to select your material with care, rejecting those sheets that have a curvature to their edges.

Step 1. Lay a piece of wax paper on your work table, then butt the two sheets together, and tape them with masking tape.

Step 2. Next, pick up the sheets, and using the tape as a hinge, open up the butt joint.

Step 3. Lay a "bead of glue" along the edge.

Step 4. Now lay the sheets down flat on the table, with the tape hinges down. The butt joint will close tight, and excess glue will squeeze out. Wipe it off, then tape the top together, so both sides are now firmly held together in the flat position, and let dry.

Step 5. When dry, cut into two 16-1/2" wing panels, shape tips and proceed.

Step 6. Cut out the ribs from medium 1/8" stock. Note rib length is 1/8" greater than the airfoil curve of the sheet. This makes the ends project out at the leading edge and trailing edge.

Step 7. Pin the ribs of each panel in place on your flat table. Insert the pins at the leading edge so the leading edge of the sheet will fit tight against the pins when the sheet is placed in position.

Step 8. Lay a bead of glue along the ribs, using reasonably slow drying glue. Any of the regular brands will do — just don't use the "extra fast" type designed primarily for on-the-spot field repairs.

Step 9. Pin the leading edge of the sheet in place with a second pin, at all the ribs, then gently press the sheet down to fit the rib curve. Pin the trailing edge down. Let dry.

Step 10. When dry, pick up the wing panel assembly and trim off the ribs at the leading edge and trailing edge.

Step 11. Then make a wedge shaped piece of wood to join the panels together at the center. The angle of the wedge, 14 degrees, determines the dihedral, which is 7 degrees for each panel.

Step 12. Glue this center piece to the center rib of one panel. When dry, trim the top to fit the airfoil curve.

Step 13. Block up the tips to 2-1/2" and glue the other panel to the center piece.

Step 14. To strengthen the center, cover the joint from leading edge to trailing edge on top with a 1" strip of either strong nylon cloth, or preferably, "Celastic," a hobby material available in most hobby shops.

Step 15. For additional strength, cover the bottom of the center section from the center to the first ribs with 1/32" sheet.

Step 16. Wing is now finished, except for sanding and doping, and is ready for the engine pylon.

PYLON

Cut the engine pylon from 1/2" hard balsa, glue two 3/8" cheeks on either side, shape, add the 1/16" plywood firewall, then glue the whole assembly to the center of the wing. Reinforce with strips of celastic at the butt joint.

TAIL SURFACES

Stab, fin, rudder and elevators are all made from 1/16" sheet, with cloth hinges. The fin is reinforced at the base with 1/8" sq. supports, trimmed at an angle of 45 degrees for better appearance.

LANDING GEAR

The strap-on landing gear is still the simplest and best for this size model. Note the celastic reinforcement on the fuselage where the landing gear fits.

ADJUSTING AND FLYING

The Good Neighbor is very easy to adjust, but be prepared for a little surprise. That .010 may look small, sitting up there on that pylon, but the full "thrust disk" of the 3" prop is effective, and the model has plenty of power and speed. In fact, by dropping the elevator slightly, the model flies very firmly even in a relatively strong wind.

Flight trim can be achieved just by hand gliding, since the model is small and light. If you position the C.G. as shown on the plans, longitudinal trim is done by adjusting the aligning spring wire on the elevator.

Because of the relatively long moment arm the elevator is pretty sensitive, so make adjustments of the trailing edge 1/32" at a time.

Start with the elevator right in line with the stab. This is fine for all normal flying. Droop the elevator 1/16" and you'll find the model penetrates the wind right along with the big jobs.

For the "power hounds" the pylon is designed to take an .020 — but be ready for a real zippy flight, particularly if you use the Cox "hi-thrust" prop.

Before you try flying the Good Neighbor in a confined area, take a tip from me and practice at a large field. Set up some stakes, or markers, and practice until you can consistently fly within the markers.

Even so, when you decide to try a flight in a small area, you'll find the boundaries seem to be reached faster than you expected, and you may run into one of the obstacles. But the model is rugged, and the only damage will be to your ego. And you can repair that. So try it.

The cartoons are from the same issue.

Editor's Note - I'll bet a half-size version with electric power and micro RC would make a good indoor flier too. Send us your photos.



"Dad, you better start giving it some up elevator!"



"Oh, shut up!"

"Okay, little boy, stand ba —!"



THE LAST WORD

Bob Bochy looks at R/C . . . and if this cartoon sequence isn't familiar to you, you're probably an HO railroader at heart . . .



"Pardon me sir, but have you seen a —"

"Gee, Dad! You're really doing good!"

