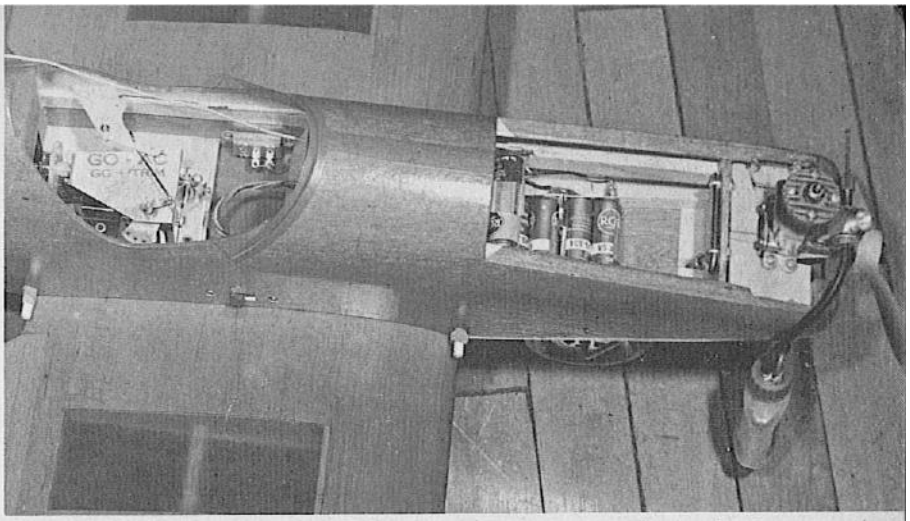
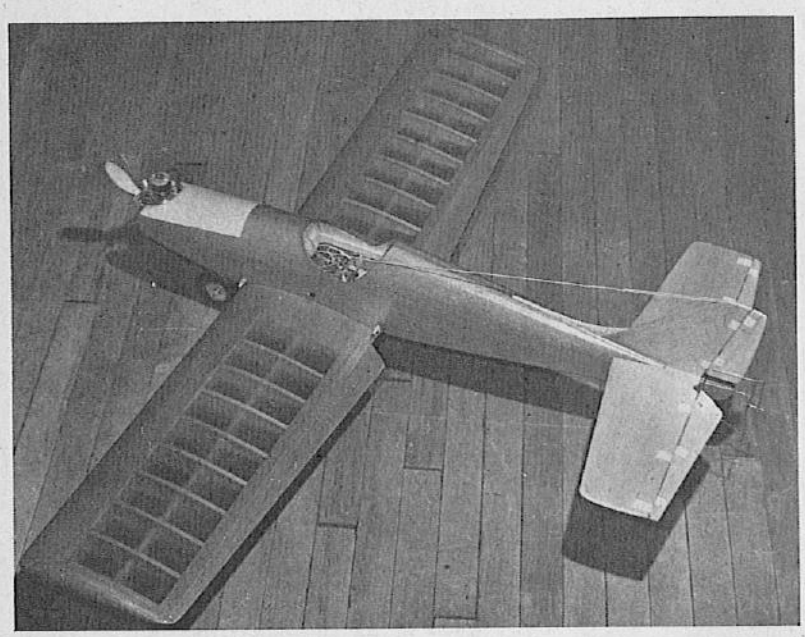
Go-Ac in cockpit, batteries up front. Excellent access to equipment. Easy sheeted streamliner.



Trim low-winger for all-round flying.

Translucent silked wing shows the structure beneath. Long moment arm, adequate wing areas.



"GO-WIND"

Low-Winged Galloping Ghoster Coaster

by Ted Strader

FULL SIZE "SPECIAL EDITION" PLAN AVAILABLE

Go-Ac's . . . K&B .15 . . . Bramco Throttle . . . 9/4 Prop . . . F&M Saturn Receiver

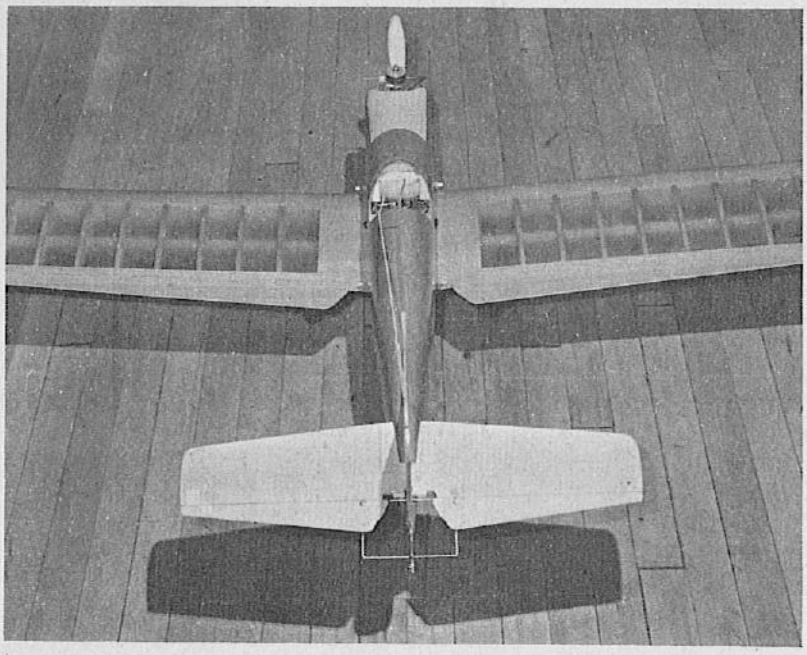
Good, smooth, fast transitional ship for Galloping Ghost rigs.

▸ Now that I have a chance to think it over, it seems a bit ridiculous to have become so elated over as simple a maneuver as an R.O.G.!

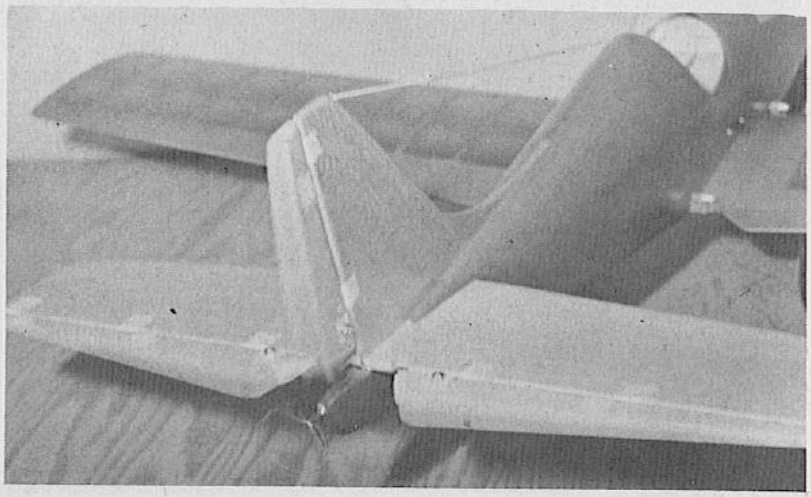
Maynard Hill, DC/RC club president and AMA veep recently set a new FAI R/C altitude record of 13,320 feet. Modelers all over the country are performing difficult aerobatic maneuvers on practically any sunny afternoon with almost detached concern. Yet I went into an elliptical orbit the other Saturday eve when our much discussed and now finally finished "Go-Wind" made two of the smoothest take-offs we've ever witnessed—let alone performed.

Why should such on old "fire horse" as this writer get this elated? The

. . . over:



Fuselage is wide, roomy, sheet tail surfaces, angular planforms. Flys smoothly, stunts well.



GO-WIND

...continued...

story behind it may be of interest . . . if not somewhat embarrassing!

The model featured here is a transitional design we've been wanting to finish since the time I was the unwilling guest of honor at a "crow eating" banquet served up by a very good "friend". Up until the time Bill Baldwin of Waterloo, Iowa proved I don't know as much about my designs as I'd like people to think, I was positive the basic W-W configuration was not a good candidate for Galloping Ghost. Bill, who had never even seen a G-G setup prior to our meeting, decided this was for him and the wild and wooley W-W would have to be the ship.

About three minutes of humiliating aerial chicanery took place that day. And three minutes can seem like an eternity when you're trying to look unconcerned while searching for a place to hide!

We all learned quite a bit that afternoon. Bill learned that with the right combination, even a beginner to G-G can execute some awe-inspiring flights. I learned that I should continue to expermient in this field rather than accept some of the old theories as the only course to follow.

Perhaps others have had similar experiences, but that day I saw the first G-G flights that didn't gallop. Heretofore, the majority of ships with this coupled rudder-elevator system had shown good flying characteristics but also had a tendency to gallop when flying into the wind and a decided gallop during any climbs. Bill's flights with the W-W showed none of this, even during the extremely slow speed of a dead-stick landing. Right then and there it was decided to take this basic design and smooth out as many ripples as possible.

The lack of gallop during up and slower speeds seemed to indicate that smooth ROG's would be possible if trike gear replaced the two-wheeled gear. Yet, I still had misgivings that the take-offs would boil down to a series of rocky girations pivoting on the two rear wheels. Only time and testing would give us the answer to this puzzler. The main aim was to develop a smooth stable performer. If realistic take-offs were also accomplished then we would consider this as an added bonus. In the final analysis we were rewarded, not only with a ship which takes off like an airplane should, but by spacing the rear wheels rather close together it is possible to steer the ship gently during take-off

(*Continued on Page* 31)

ly, this airplane held a nice angle of climb with no tendency to fall off or stall out and had a hundred or so feet of altitude in short order. The air speed, also, seemed quite respectable and, in order to keep the ship within a reasonable distance, another left turn was called for. The ship again responded well and, as the one hundred eighty degree compass heading was reached, we found, or rather, lost *"Shiner"* in the bright afternoon sun. It was impossible to follow the airplane visually and, instead of neutralizing the controls and hanging on, correction was made for the left turn. When the ship didn't make an appearance further correction was made with more right rudder and up eleva-

(*Continued from Page* 35)

"GO-WIND"

(*Continued from Page* 12)

to correct for wind and rough terrain. For the moment, these little added features were just enough to give us a large charge.

The "Go-Wind" has a few similar features, but on the whole it is a completely different ship from its predecessor. Prior to powered flight, and with much apprehension, we decided to see if successful test glides were possible as a prelude to firing up the engine. The W-W never was successfully test glided. Most of our attempts wound up under-powered and the ship responded accordingly. Seven times the "Go-Wind" was launched into the tall grass and seven times it settled into a flat glide, each of which was surprisingly gentle for a ship of this weight and size.

Our regular flying field is a well mowed patch in a pasture—paradise compared to some flying sites, but still not conducive to ROG's. After three or four attempts it was decided to seek out a patch of "hard top". This accomplished, we were able to witness the type of take-offs all modelers hope for. Now that we are sure the model has no mean streaks, it's ready for hand launches at our regular base of operations . . . that's right, I'm chicken!

I've found that most model accidents occur during or shortly after a hand launch, if it's not done exactly right. With a new and untried ship the odds are even greater. By being able to ROG, the model has a chance to seek its own speed and usually the test flight damage is kept to a minimum. In our case, it was a good idea as we had neglected to charge the pulse box batteries and they went sour during the first and second take-off. The waiting period prior to each of these flights had allowed the nicads we use to rejuvenate. (This is often referred to as a false sense of security!!) UP control is the slowest pulser speed and both times the pulser ground to a stop. Luckily, unlike using just a motor with stops for galloping ghost, the Go-Ac has neutral and low speed fail-safe. The engine settled down, the plane recovered from its steep take-off climb and landed. Rule to remember is always make sure your batteries are up to par!

The rudder and elevator linkages used are a composite of several ideas used by John Worth, Tom Telesca and myself. Where one idea stops and the other begins, I don't really know but the arrangement is very flexible and can be easily adjusted for more or less UP or DOWN elevator.

The extended trailing edges are not meant to overwhelm a prospective builder. These give an additional wing area without drag and because they are deflected down by 1/16" at the root, give a slight flap action resulting in additional lift. This item is added after the basic wing is completed and simply aligned by the jig pattern shown on the plans. Aside from this, construction is relatively simple and should not offer the experienced builder any insurmountable problems.

FUSELAGE: The fuselage sides are cut from medium grade 3/32" sheet balsa. The 1/8" x 1/2" lengthwise strip should be used whether the sides are

(*Continued on Page* 39)

"GO-WIND"

(*Continued from Page 31*)

cut from a piece of 6" stock or two pieces of 3" stock. When using two pieces of 3", this strip acts as a good joint reinforcement as well as a general stiffener of the entire fuselage. Be certain it is positioned correctly on each fuselage side assembly as alignment of formers depends upon its correct location.

Cement corresponding doublers in place and then add 3/8" sq. strips in the nose area and the 3/8" x 1/2" hardwood engine bearers. Set up fuselage sides by cementing the firewall, former 2 and floor piece "A" in place. Cement the firewall and former 2 only along their flat edges, the remaining portion of all curved formers are cemented later.

When certain the fuselage is in alignment, install the remaining formers and floor piece "B". Again, cementing each former only along flat areas or from 1/8" x 1/2" strip to the bottom.

When this much of fuselage construction has dried you can begin to draw the fuselage sides to their final shape. Some modelers shy away from this—mainly because they've never tried it and only think it's difficult. A small sponge with hot water applied along the outside areas to be curved will cause the balsa to curve to the outline of the formers quite simply. Don't be afraid to use hot water and a lot of it. Try to keep the inside areas of the balsa sides dry. While still wet, wrap some rubber bands around the curved sides at the former location and in sufficient numbers between formers to keep the curvature constant. When completely dry, remove the rubber bands and sand the top edges smooth. Cut a soft piece of 1/2" sheet to the general outline of the fuselage turtle deck and cement in place. Insert pins along the fuselage top outline, into the 1/2" sheet piece to keep the fuselage sides constant. If done carefully, this top piece will sand smooth with the sides and appear almost as one piece.

The fuselage area above the receiver compartment is covered on the original by forming the 3/32" sheet sides over the curve and joining at the top. This takes a little time in cutting both sides carefully to effect a good joint along the top centerline. If you prefer, formers 2 and 3 can be cut off square toward their top (as shown by dashed lines) and a piece of 1/2" sheet used, similar to the back fuselage portion.

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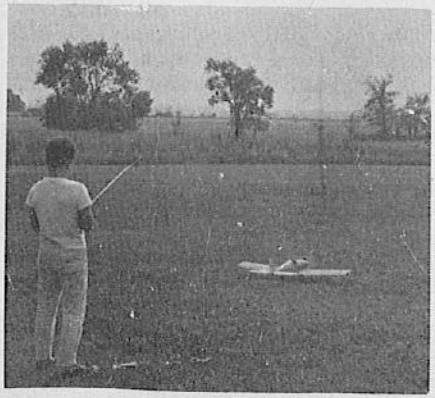

MODEL BUILDERS

(*Continued from Page 25*)

Hi-Point by flying in seven events even though he didn't place in the top three, except in one event. **Bill Purtell** took his ancient rubber job out for its annual outing and garnered another first. He usually only flies the ship once a year—and usually wins!

We are sorry to have missed this meet this year and hence cannot supply details of the other events. We suppose, however, that the ukie events were run to their usual high standards and that the Navy hospitality and services were of their traditional standard. **Ed Dolby** and the NEWG boys do a good job on this one.

● Flying Scale (FF variety) seems to be definitely making a comeback. Contributing factors are, perhaps, the dwindling areas available for flying,

"GO-WIND"

(*Continued from Page* 39)

If G-G control is planned, this is the time to get your torque rod in place and aligned. Before the fuselage bottom is installed, cut all holes and mount all necessary accessories to accommodate the radio gear. We've found that by drilling all holes and cutting switch slots first makes a much cleaner installation later. After the assembly is covered and doped, the covering is cut away around the switch holes and these installed.

Lay on heavily with the sanding block and you'll be rewarded with a better looking finished product.

WINGS: Pin each main spar in place, making sure it is perpendicular. Set the wing ribs in place and position a scrap piece of trailing edge stock (or adequate balsa strip) as shown in rib side view so all ribs are positioned equally. When dry, check to see that all ribs are in correct position and install the back spar-blocking this in a similar manner. Cement the ¼" sq. leading edge in place.

Leading edge cap-stripping is pinned along the main spar and then shaped down to the leading edge. Both top and bottor ading sheets can be cemented simultaneously and checked for warps. Pin wing panel assembly down along the trailing edge and install the sub-trailing edge strips. When both upper and lower have dried, insert and cement extended trailing edge piece. Check, as per plans for alignment. Then fill in remaining trailing edge sheet and sand to shape

Cement cap-strips to ribs, then join panels tobether with dihedral brace. Landing gears can be installed now and then the remaining sheet covering and wing tips. Now where did we put the sanding block?

RUDDER AND STAB: These are both made up of 1/16" sheet outer covers surrounding a 1/16" x ¼" cap-strip material core. The only important point to dwell upon here is for accuracy (no warps) and free moving hinges. The fin is cemented into a slot made in the fuselage turtle deck ½" sheet. The stabilizer is cemented in place as shown. We cemented both in place after the fuselage had been covered but before the final coats had been applied.

FINISH: We use Silkspan on the fuselage and silk on the wings. The stab and rudder were left uncovered. Five coats of hot-fuel-proof dope closed up all the holes.

EQUIPMENT INSTALLATION: For power, we are using a K&B .15 with a Bramco throttle. This arrangement required some machining to match throttle to engine and can be substituted with most any similar arrangement. The .15 is swinging a 9-4 with power to spare.

The forward compartment looks rather bare with only six pencells (two for the F&M Saturn receiver and four for the AGS Go-Ac) plus the two oz. plastic glue bottle fuel tank. But it's better to have a little extra space. Some of you may wish to install multi or some of the larger proportional systems which require two servos and extra batteries. The receiver, wrapped in sponge rubber, has room to spare in its own comparement.

This ship has not been flown on escapement, so we can't give any definite account of what might transpire. However, judging from the test glides and flight pattern, there would not seem to be any reason why it shouldn't lend itself to this method of control. Our preliminary observations show it to be a gentler ship than it's blustery brother . . . even in rather windy weather.

But, again we wish to state that this ship was designed to be hot and maneuverable. It's no Gypsy or Nomad! We wanted a design which would show off G-G and such a plane does not fall in the easy-to-fly-trainer class.

Before you fly make sure your system checks out perfectly and your plane is true with no warps. Good Luck and Good Flying! ●