

► If you're going to wreck one, you might as well do it in slow-motion with this lightweight, and we've even named it for the occasion.

To make the transition from Free-Flight to R/C would seem like a natural progression, to all except the flyer as an individual. Though he may be thoroughly familiar with structural techniques, high power and trim adjustments, the sudden switch to heavy-weight wing loadings and instant thinking required at the transmitter deters many a competent modeler from swinging into Radio Control.

Ship can be flown gearless. This saves ounces in weight, greatly decreases the drag.

Tapered wing, simple airfoil. Spars are internal, do not adhere to covering. To strip ribs, slice from sheet, guided by template. Trim ends to fit, strip balsa on bottom.

The new miniaturized radio equipment in a lightly-loaded sport craft, makes a fine transitional ship, bridges the gap from free-flight to variety of controlled maneuvers.

by Don McGovern

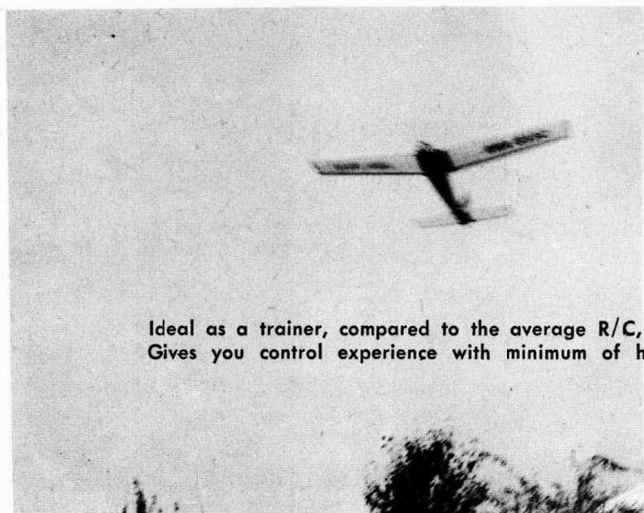
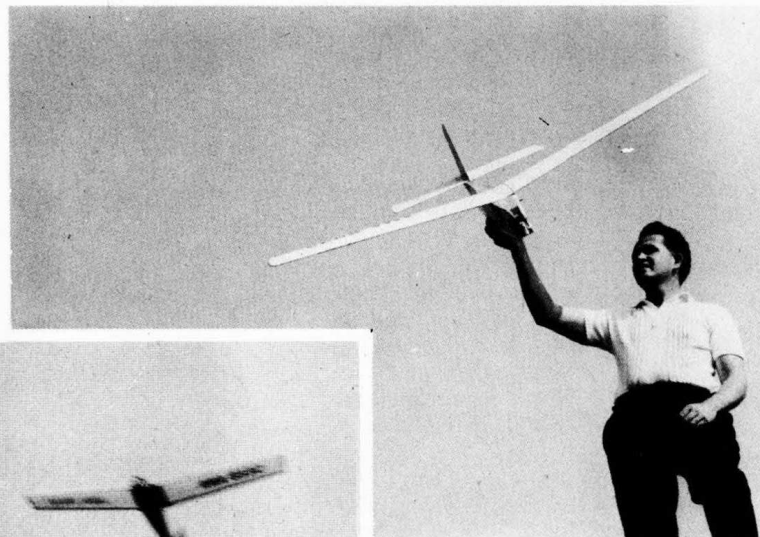
"THE DISASTER"

No need to armor-plate, throw nerve-fits. This one is a calm-air ship for low power, does well even free-flight. Odds are some will soup-up, slab-plank and clip wings!!!

Actually it is a long way from a V.T.O. take-off, to that of a Multi R/C, which required an extended hi-speed run to lift off. In some ways R/C flight is closer to Controline flying, where area loadings are quite similar, as is the response to control motions. But here too, the strictly "ukie" flyer may feel lacking in the free flying aspects of a Radio ship.

The slight hesitation is understandable, every flyer in Radio has experienced it . . . and still do, as they face each new challenge of intermediate, multi, twin engine . . .

What is needed is a lightweight trainer, approximating sport free-flight wing loadings, no worse than if the model was being flown with the added weight of an ignition system. No need then for such a ship to be encased in a coffin of sheet doublers, a gear engineered to withstand avalanche conditions, or engineered to the fine-tuned flight demands of a contest winner. These noteworthy qualities are stacked like loaves of bread at your kit dealers, each representing thousands of dollars



Ideal as a trainer, compared to the average R/C, this is like flying in slow motion. Gives you control experience with minimum of high-speed decisions, low-cost fun.

THE DISASTER

worth of design effort and fabrication to save you time. Trainers are of course included, but cost may be a factor, or you may be planning on buying one, and prefer to build up your own expendable lightweight trainer to gain a little air experience, before launching a kit-built craft.

"Disaster" spans 64", may be later clipped back at the tips for hotter speeds if you like. It is big enough to handle almost any receiver that you like, can carry the ultra-lightweight relayless installations without even knowing its aboard. We recommend nothing but rudder control in the interest of simplicity. The gear may be omitted to save weight, building time, and increase the penetration into the breeze, which is of course marginal on slow flight types such as this. It is basically a light-underpowered, easily built, inexpensive flyer, which will climb, glide and respond to your rudder signals in a forgiving manner. And if you wind it into the hay, so what. Damage will be minimal, and you will have learned what-not-to-do.

Quite a versatile ship too. Power changes are easily made from the .049 through .15 range. With prop removed, gearless "Disaster" is not too bad in the soaring department, and a hillside facing a steady gentle breeze can provide hovering flight and gliding thrills which are strictly enjoyment first class.

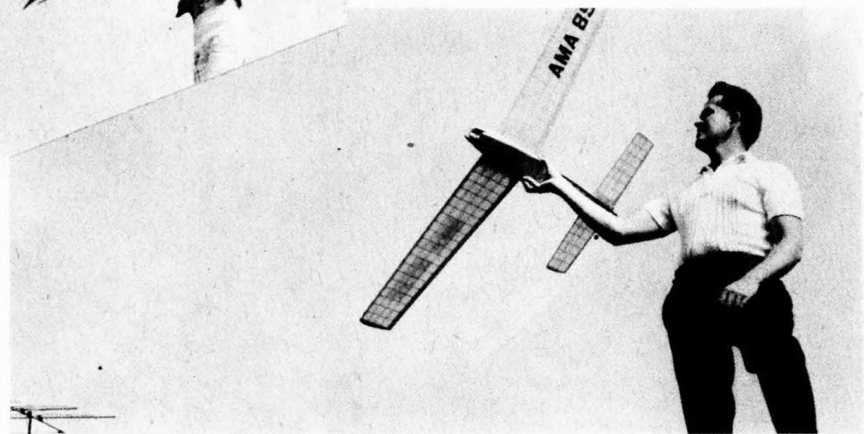
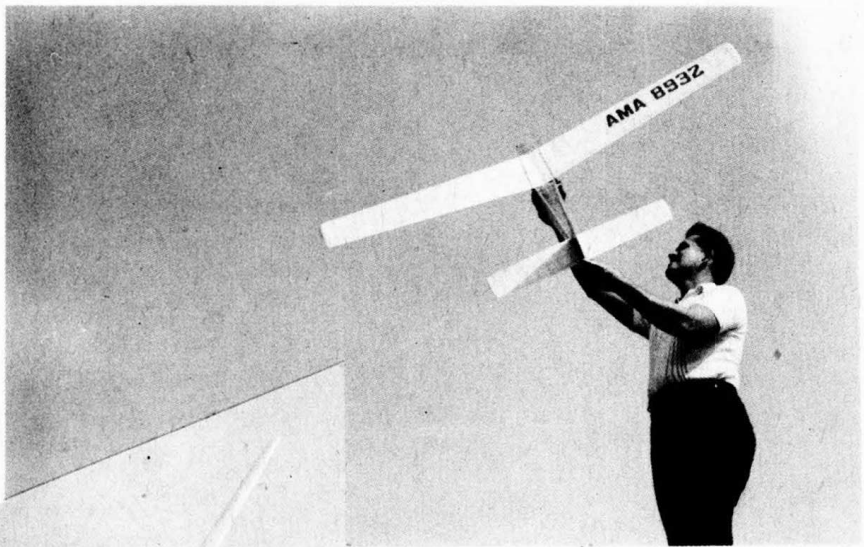
WING: We'll grant you it looks complex. Only it isn't, it is one of the easiest methods of construction available, and if you have never tackled this type rib structure before, try it now. Not only do you end up with a tapered wing, but no ribs have to be stack-trimmed, notched and fitted. Weight is reduced, spars are internal, never touch the surface, and yet are deeper in proportion than would otherwise be practical. The entire wing can be built in a day, from start to finish. A lot less than that if you really push.

A straight edge tapers the spars to end heights indicated. Same for the $\frac{1}{4}$ " x $\frac{3}{4}$ " leading edge. 1" tapered trailing edge stock is notched for rib ends, then pinned flat over the plan. $\frac{1}{16}$ " x $\frac{1}{8}$ " strips form the lower camber of the foil, with a triangular sliver cemented to the forward end as added support for the leading edge, and additional material to allow for sanding and fairing. These lower camber strips are cemented to the trailing edge, extending to the leading edge line, each flat on the plan. Note however, center area strips are installed flat, shimmed up $\frac{1}{16}$ " to allow for sheeting.

THE DISASTER



Optional sheet or a built-up stab. Only rudder control is necessary, though install whatever you wish. Design intended to build up fast, get you in air, to practice.



Fuselage is minimal, as a bulky section would retard forward speed into wind. The equipment is accessible, further emergency field access by trimming away the covering.

Cover with tissue or silk, to suit your wallet. "Disaster" may be glided from a slope, to gain experience in R/C Soaring. Remove prop, test glide, hover into gentle wind.

Ends up a lightweight, even with average single-channel. If you install miniaturized relayless equipment, ship will almost float away.

THE DISASTER

The three tapered spars are next installed, cemented to each lower camber $\frac{1}{16}$ " x $\frac{1}{8}$ " strip. Weight down evenly, to assure a proper contact and joint at rib positions. The pre-tapered leading edge is now cemented to the angled lower camber strips.

The upper camber airfoiled strips are cut from sheet with a single template. They are not $\frac{1}{16}$ " x $\frac{1}{8}$ ", bent into an arc. Cut a plywood, or comparable material template to the airfoil section provided, and sand smooth. Select medium hard $\frac{1}{16}$ " sheet, smooth grained etc., and scotch-tape to workbench. Cut upper camber with the template, then lower template exactly $\frac{1}{8}$ ", using strip wood as a handy guide, and slice again. Trim ends proportionately, and test fit in place on the wing. As you go toward the wingtips, trim more off the ends. This is all there is to it, so slice away to make 38 of them, and a couple more for spares. Six center ribs should be cut just $\frac{1}{16}$ " in height, to allow for the sheeting to cap over this area.

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flyer to control your new ship while under power to a safe altitude, until you can get the feel of it in a rockless-tree-free environment.

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Well, here you go, engine a-splutterin, the whole thing shaking, slippery what with the exhaust blow-by, melting decals etc. With a jaunty air and a practiced hand, you heave it into the blue, limping to a degree from snapping your toe-bone on the transmitter. A simple screw-in connection will re-position the antenna, as soon as the guys straighten it out, so it will un-telescope. Now calmly aim for a 180°, to bring it back in sight. There, that's better!

See the pretty plane? "Yes!" Does the flyer see the plane? "Yes". Does the flyer see the billboard? "Yes . . . I guess!" Isn't it a mess? "Yes!" ●

vice from experienced R/C'ers, for they can teach you more in an afternoon than you thought there was in a book. You might want a competent

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