THE "INVADER"

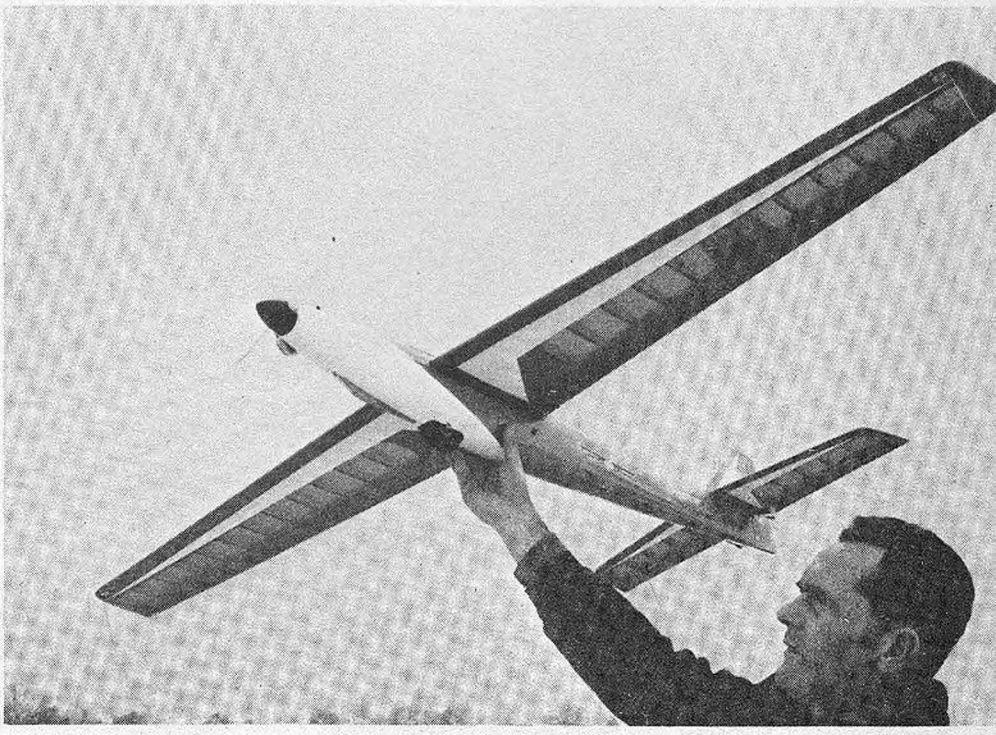
Cross bred from a sailplane and a javelin...

Airborne, it moves surprisingly quickly.

It's sort of a glider in a heck of a hurry. For .09 (enough) to .23's (stand clear) kind of thrust. Super Tigre .23 and Micro Avionics R/C. 73" span, 3 lbs. It's a different kind of animal, pure spirit!

A clean, low drag configuration. Ship climbs at an amazing rate. 9/1 aspect ratio, wing withstands loops, it's mildly acrobatic.

by Gene Rogers



A change of pace is always a welcome feast! Not having done any glider work since my early free-flight days, I'm far from being an expert on R/C gliders. True, I could have built a proven design from one of the many excellent types available. Somehow however, I felt that I was not quite ready for the sudden change of pace, from the rather potent ships I've been designing and building of late, to a slow graceful soarer. The gap seemed immense, hence, the *"Invader."* It was conceived to bridge that gap. While it doesn't have the thermal seeking potentials of the ten foot giants, it will ride a good thermal and offer plenty of action in other areas.

The *"Invader"* needs no towlines, nor slopes to perform its objective. Once a reasonable amount of altitude has been gained, the ship will fly with or without power. The design has much of the grace of a real floater, yet it has the versatility of a powered model. When designing the plane something in the order of a *U-2* reconnaissance plane was lurking in the back of my mind. The *U-2* was not a fighter plane, nor was it a glider; it was however, a very efficient aircraft!

With a wing area of 576 square inches, the *"Invader"* might appear to some, as rather diminutive for an R/C glider. When determining a wing's lifting capabilities, we must not evaluate it solely by the number of square inches of area it contains. We must also consider its airfoil section and how the area is distributed.

The *"Invader's"* wing is long and slender in planform, with an aspect ratio of 9 to 1. This high aspect ratio offers a lifting surface that is 14% more efficient, than a wing having an aspect ratio of 6 to 1, as used on the average R/C powered plane.

When viewing the *"Invader"* from the front, its extremely low drag area becomes the frontal areas of both the wing and fuselage are very small. With its large prop spinner, blended-in cowl, and well tapered fuselage, the drag is cut to an absolute minimum.

The weight of the *"Invader"* is held to a bare minimum by its inherent lightweight structure, and the installation of a featherweight R/C system.

When considering these credentials, the ship possesses a highly efficient wing, it has a low overall drag coefficient and is very effective 576 square inches of wing area.

Test flying the *"Invader"* proved to be a very rewarding experience. Due to an accumulation of snow and ice on the local flying field, the initial flight was made via a hand-launch. Our good editor did an admirable job in this respect. The field was scattered with icy patches, making sure footing impossible. My fears of his slipping, thus squashing my new bird with