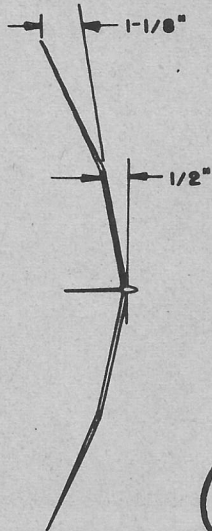


SCALE: FULL SIZE

POLYHEDRAL DETAIL



INDICATES WOOD GRAIN DIRECTION.

RUDDER 1/32" SHEET

STABILIZER POSITION

JOIN HERE

A-A

WING OUTLINE

OR 3/32"
1/16" X 2-1/2" X 11"

STABILIZER OUTLINE

1/32" X 1-5/8" X 5-1/2" BALSA

FUSELAGE

3/16" X 3/8" X 12"
HARD BALSA

C.G.

WING POSITION

POLYHEDRAL JOINT

L.E.

L.E.

T.E.

T.E.

R

FINGER GRIP
1/16" BALSA

C.L.

CLAY

FULL SIZE PLANS



Author's six-year-old son Barry and his collection of trophies kind of makes you wonder.

the DRIFTER

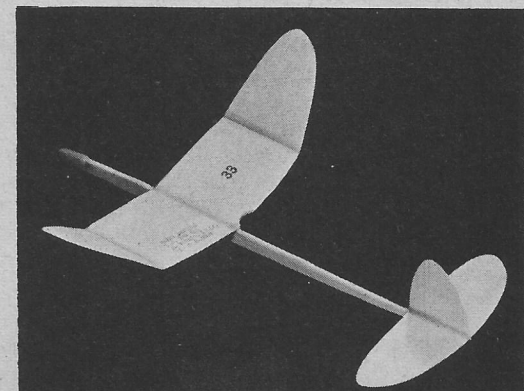
by DAN DANIELI

INDOORS OR OUTDOORS, IT'S A CHAMP. DESIGNED TO MEET THE WAM LIMITED SIZE HAND LAUNCH GLIDER EVENT, IT PERFORMS WELL FOR ALL AGE LEVELS.

► The fastest growing event on the West Coast is limited size hand launch glider. This event has been held during the last contest season at the control-line contests sanctioned by the Western Associated Modelers. Since the flying area available at most control-line contests is rather limited, a ten-inch wing-span restriction was imposed.

A glider this small must have a very light wing loading to squeeze out the longest possible duration. It must be clean and true to gain maximum altitude from the launch. Small designs must be extremely stable to withstand turbulence which might go unnoticed in a larger glider. (Continued on page 40)

They say good things come in small packages, needs work though, finish and polish important.



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to proper C. G. location. This is *important* in this or any control line model. Oh yes, another important feature is the ease of repairing this model. Hope you never get to find this out by experience. Now let's get down to pins and glue.

Begin construction by cutting out all of the required parts. Construct the fuselage by assembling the 1/2" sheet balsa frame, hardwood motor mounts and 1/16" plywood over the top and bottom of the front edge of the fuselage. Note that the 1/16" plywood top stops at the front edge of the 1/2" square wing spar. Make up a spar and doubler assembly of 1/2" square balsa. Glue and screw this to the top of the fuselage using two #4-40 screws and blind mounting nuts. Note the piece of 1/16" plywood used to keep the screw heads from pulling through the spar. Also note that the inside wing is 1" longer than the outside wing. The wing may now be assembled by adding the ribs, leading edge, trailing edge, etc. We did this by holding it in our lap and assembling it. Alignment was done by the "eyeball" method. However, if you prefer, you may lay the fuselage-spar assembly on a flat bench and block up your wing components for alignment. Be sure you use a good grade of glue, Elmer's preferred, on the root rib-fuselage joint. Add the half ribs after the lead-outs are installed.

Assemble the horizontal tail, hinging with a strong cloth or metal hinges. Bend the pushrod to length and glue the stabilizer in place. Add the rudder and other miscellaneous fill parts. The model is now ready for final sanding and finishing. Cover wings with Silkspar or silk and dope to your liking. If the wing warps it is easily straightened by using steam.

The removable landing gear is bent from 3/32" diameter steel wire and held in place by the same bolts that hold the motor in. Bend tin clips and attach as shown.

Flying the model is easy. Take it up, feel it out through several high maneuvers and then go to it. If you have had any flying experience at all you should have no trouble with the "Gremlin."

The Drifter

(Continued from page 23)

The "Drifter" will fill these needs. Although conventional in appearance, it is the result of fourteen previous variations. This glider requires very little weight to balance, is simple to adjust, and recovers nicely from even the poorest launch. It has the ability to "stick" in the weakest rise. My six-year-old son Barry has never failed to place with this design. His wins include the Pacific Coast Jr. Glider Championship.

These small gliders are just the thing to pep up interest in the old club. You city dwellers can fly them in any playground, park, or ball diamond.

March over to the balsa rack and pick out one sheet of 1/16" x 3" x 36", one sheet of 1/32" x 2" x 36", and one 3/16" x 3/8" x 36" strip. You now have material for three "Drifters" at a cost of 38 cents!

The construction is simple and self explanatory, but one word of caution; take your time, the wood is thin so sand slowly. A finished flying weight of 1/4 oz. is average.

Balance and test glide until you start to get just a slight mush but no stall. Next, put in very slight rudder for turn. Strive for turns of about 30° in diameter. If turn is too tight bend just a little camber into the inner wing panel and that should set you up. Launch up at a 60° angle with 45° bank. If model stalls, use down elevator

(Continued on page 42)

The Drifter

(Continued from page 40)

and remove weight. Always use methods of trim which increase lift first. Add weight only as a last resort.

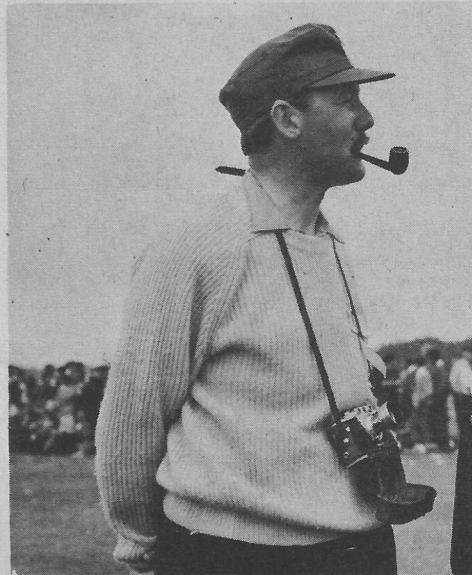
Youngsters should be able to toss the "Drifter" about 50', adults to 85'—100'. Indoor or still air times from these heights will be around 35 and 45 seconds. Outdoors, they do catch thermals, so put your name on them. Last minute flash from the author—The Drifter just set the new W.A.M. record for this event of 2 minutes 47 seconds.

Foreign Notes

(Continued from page 8)

ing as Bosch's at 17.6 oz./100 sq. in., but the only other models having average or above-average loadings in these first sixteen, were those of Van den Bergh (4th) of Great Britain at 14.8, Teuwan (10th) of Belgium 15.8, Bellochio (12th) of Italy 17.0 and Eliasson (15th) of Sweden at 15.2.

It may, or may not, be significant that the remaining (i.e. lowest placed) sixteen models nearly all had higher loadings, but the good showing of the more lightly loaded models does at least agree with the current (American) trend towards lighter wing loadings. On the other hand, present practice in Europe is to use a more powerful motor, relative to both wing area and weight, than we see in the latest trends in the U.S. Of the top six place winners, for example, three used .49's, one a .56 and one a .60 and, in the first 16, 9 were using engines larger than the .45 cu. in. size favored in the U.S. In fact, a light power loading was, interestingly enough, a factor common to all the top models at the 1962 Championships. It is difficult to put these figures into pounds-per-horsepower since engines were being run at different speeds on different fuels and props, but on a lbs./cu.in. displacement basis, the figures for the top eight run as follows: Brett 11.6, Brooks 12.6, Olsen 11.7, Van den Bergh 12.7, Brown 12.8, Bosch 13.4, Malherbe 10.5, Saemann 10.1. This gives an average of 11.9 lbs./cu. in. and compares with an average of 16.2 lbs./cu. in. for the lowest placed eight models. Incidentally, the model with the heaviest power loading was the Russian Velichkovsky's (29th) Super-Tigre powered entry which had a loading of over 20 lbs/cu. in. Velichkov-



Foreign Editor, Peter Chinn at right with Doug

le World Fam

HO MODEL M

MINITA

NEW ITEMS!

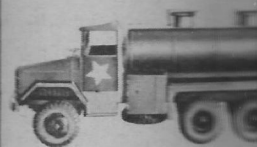
Z-147 2 1/2 TON DU

TRUCK M-342

39¢



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MM Gun-New	...
Z-129 Halftrack Infrared	...
Searchlight New	...
Z-134 German Tank	...
Tiger II/182 New	...
Z-146 Ordnance	...
Maintenance Truck	...
M-109 New	...
Z-98 Howitzer USA	...
Z-99 Patton M-47	...
USA	...
Z-100 Patton M-48	...
USA	...
Z-101 Sherman USA	...
Z-102 Panther	...
Z-103 Stalin USSR	...
Z-104 M-40 Sun USA	...
Z-105 German AAA	...
Z-106 Tank IV/F1	...
Z-107 Tank IV/F2	...
Z-108 Tank IV/H	...
Z-109 German Quad	...



Z-148 WATER 1

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Airways

(Continued from page 40)

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