

# TWIN PUSHER

**OLD TIMER Model of the Month**

**Designed by:** Ralph Kummer

**Drawn by:** Al Patterson

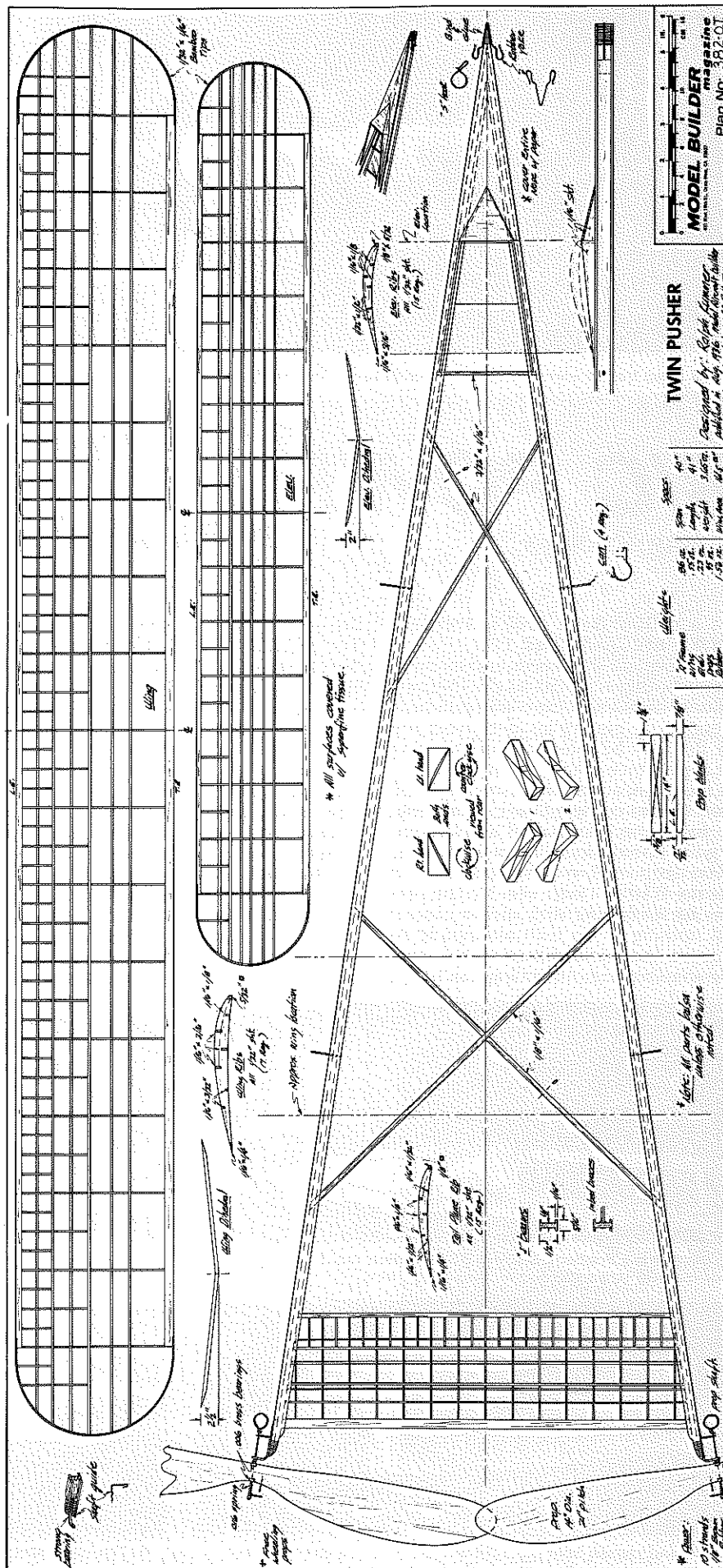
**Text by:** Bill Northrop

● On June 16, 1934, this twin pusher was launched on its third flight at a contest in St. Louis, Missouri, and managed to stay within sight of timing officials for 20 minutes, 54 seconds, setting a new N.A.A. record that stood for more than a year. The modeler was Ralph Kummer, and the design was published in the August, 1936 issue of *Model Aircraft Builder*, one Irwin S. Polk, editor. Incidentally, we have no doubt that this magazine's name was subconsciously on our mind when we were picking a name for our own magazine, 35 years later.

The article about the twin pusher, entitled "Championship Twin Pusher and Contest Hints", indicated both Ralph W. Kummer and David B. Hecht as authors, so we're not absolutely sure which one designed the model. Our suspicion is that it's Kummer's design, and that David Hecht drew the plans, as his initials are on two of the three plates . . . the way it was originally presented. And the article also makes reference to Ralph, by name, in several instances, suggesting to us that he, Ralph, did not write it. Oh well, if either of them is still around to straighten us out, we'll be glad to give proper credit in a subsequent issue.

The "twin-pusher era" was about coming to its end in 1936, but it dominated contests for quite a few years before "single tractors" gradually took over. For those of us who were not active competition modelers in the early '30s, the twin pusher is often looked back upon as sort of an awkward aircraft . . . with its "A" frame stick fuselage, tail-first flight attitude, and the thought that winding up two rubber motors at the same time . . . in opposite directions . . . could involve as many as four people! However, those who "were there", and

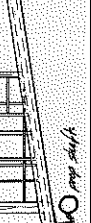
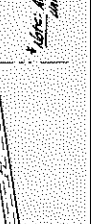
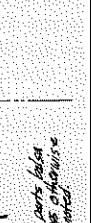
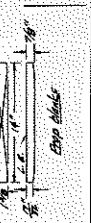
*Continued on page 104*



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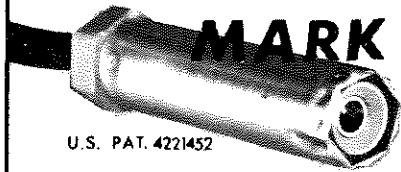
**TWIN PUSHER**  
 Designed by: Ralph Kummer  
 Published in: Aug. 1936, Model Aircraft Builder

Span	41"
Length	21 1/2"
Wing Area	1,036 sq. in.
Wing Loading	44.7 gr./sq. in.
Wing Tip	1/8" x 1/2"
Wing Root	1/8" x 1/2"
Wing Chord	1/8" x 1/2"
Wing Thickness	1/8" x 1/2"
Wing Material	1/16" 1/2" Ply
Wing Finish	Spangite



Al Patterson  
 1/8" 1/2" Ply

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ment used to attach Ceconite R/C to aircraft structures and also a general purpose model cement.

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Also soon to be available will be a selection of R/C plans by Jerry Nelson. First plan will be a 1/4-Scale Super Cub. Other plans by R/C designers from around the world will also be made available. Write to Ceconite R/C, 3510 San Mateo Ave., Reno, NV 89509; (702) 322-0664.

Jerry introduced his new product line at the IMS Pasadena Trade Show in January. The new covering material will be reviewed in a near future product test by Al Alman, on the Sig 1/4-scale Clipped Wing J-3 Cub.

### CANNON GUIDED ROCKETS

Hey, you R/C model airplane nuts, do you know what's going on in R/C model rocketry lately? They're firing rocket-powered model aircraft (Radio Controlled Boost Gliders, in rocket lingo) into the air and staying up for as long as 3-1/2 hours. (Well ... they just happened to fire them up at Torrey Pines, so the duration came about from slope soaring.) However, that was good enough for three new world records, all taken from former USSR records!

Chris Flanigan and John Langford set three new Boost Glide duration records, in Categories S1A (2.5 Newton Seconds power level), S4C (10 ns), and S4D (80 ns). Flanigan's S1A and S4C Boost Gliders stayed up for 2,180 seconds and 7,537 seconds respectively. Beating the Soviet Union records of 1,038 and 1,405. John Langford's S4D glider was up for 12,406 seconds (3-1/2 hours), beating the Russian record of 8,953. All boost gliders used Cannon Super Micro radio systems. Incidentally, the speed during the rocket boost, before the power pod is dropped, can reach up to 400 mph!

The 1980 American Space Model Team also used Cannon Super-Micro's in their FAI 40 newton-second Boost Gliders to win a Silver Medal in the World Championships at Lakehurst, New Jersey.

A typical 40 nt-sec. rocket powered

boost glider, with two-channel gear aboard, weighs less than 240 grams. They climb to approximately 300 meters (over 900 feet) in six seconds (!) before dropping the rocket pod. The duration maximum is five minutes, which ships like this can easily attain in dead air.

### THINGS TO DO

The Westerville (Ohio) Model Aeronautics Association is sponsoring its 12th Annual Radio Control Hobby Show on March 20, 1982, from 0900 to 1600. (Why can't we all use this simple and positive time-keeping system, instead of AM and PM? First we gotta convince the watch-makers. Hah! Lotts a luck!)

The WMAA show is located at 3850 Stelzer Rd., Columbus, Ohio. Site is less than two minutes from the Morse Road exit to the I-270 Columbus outer belt, contains 11,000 sq. ft. of display area, and parking for 1,200 cars. Contact Show Manager Rich Ritchison, 1834 E. Beaumont, Columbus, OH 43224, for more information.

### Twin Pusher...Continued from page 39

those who have been curious enough to give 'em a try, are usually staunch supporters of the concept.

Perhaps all that's needed to invite others to give the T.P. a try, is a set of full size plans, and thus our decision to present this one. A close look at the plans will probably suggest some immediate changes in structural design, but we'd suggest that you at least stick to the basic force set-up. And for equal performance, keep the weight as close to a 4-ounce maximum as possible.

Those "I" beams should present an interesting challenge ... a good exercise in precision table-saw work, or glue them up from three strips. The criss-crossed bamboo braces add lots of rigidity to help the beams carry 10 strands each of rubber. The article suggests only an inch or two of slack, as this will stretch to four to six inches, and any more than that hangs down from the "cans" and kills the glide. Leading edge of the wing should be 14 inches from the thrust bearings ... no balance point is suggested.

Give it a try, and let us know if

doubling your props "doubles your pleasure."

R/C World .....Continued from page 12

★ ★ ★  
While you, the dedicated hobbyist in the midwest and nor'east, are building furiously for the coming flying season, and we, here in Southern California, are able to fly 13 months out of the year (that wasn't nice, was it), we thought that another 'quiz' would be in order for a one-year subscription to MB.

This aerobatic maneuver is not too well known. First performed in 1951, and considered impossible by many experts, especially so considering the aircraft involved, and at the altitude the pilot in question performed said trick, this would explain its lack of fame. At the time, it was considered to be the first completely new and original aerobatic maneuver in 20 years! I have tried it with pattern birds (have you ever tried to explain to someone not familiar with model aviation, what is meant by a pattern bird, or, that you fly pattern?), aerobatic bipes, and various assorted R/C birds, and got close, once. A big heavy bird (inertia!), or a tw-- will be the answer, or lots of rudder ... The maneuver was named after the man. . . Enough clues, now. . . OK, the man's name AND the name of the maneuver, to my attention, c/o MB. . . and I have a few more 'gems' ready for the troops, W.C.N. allowing. . .

Scale model boaters, take notice. We have included a picture of the "Blue-nose" fishing schooner. The model utilizes plank-on-frame construction, white pine planks with glass cloth and resin for strength. Overall length is 83 inches and the beam is 12 inches. Weight with ballast is 40 pounds and two-channel radio handles it all; head sails being preset, with a sail winch handling the main and foresail. Designed by Douglass Henderson of Moscow, Idaho, we hopefully will be presenting a construction article in the future.

★ ★ ★  
R/C off road racing is hitting the country and Southern California by storm. RCH Hobby Marketing sponsored (co-sponsored by MRC) and hosted the Western Championships recently and drew a tremendous group of drivers and spectators alike. One hundred twenty entrants participated in 46 races over the two-day weekend. A specially prepared track was set up to really give the drivers and their off-road bombs a real workout. When 'fine tuning' gets down to the proper weight oil in your shocks, that says a bunch for 'what's happening.' As has been mentioned in the past, RCH and its track is just several doors down the street from MB, and any evening finds a large group running and tuning cars. In this area, electric power equates to co-existence. Fire up a fuel powered car and lose a racing site. The quiet revolution is here. . .