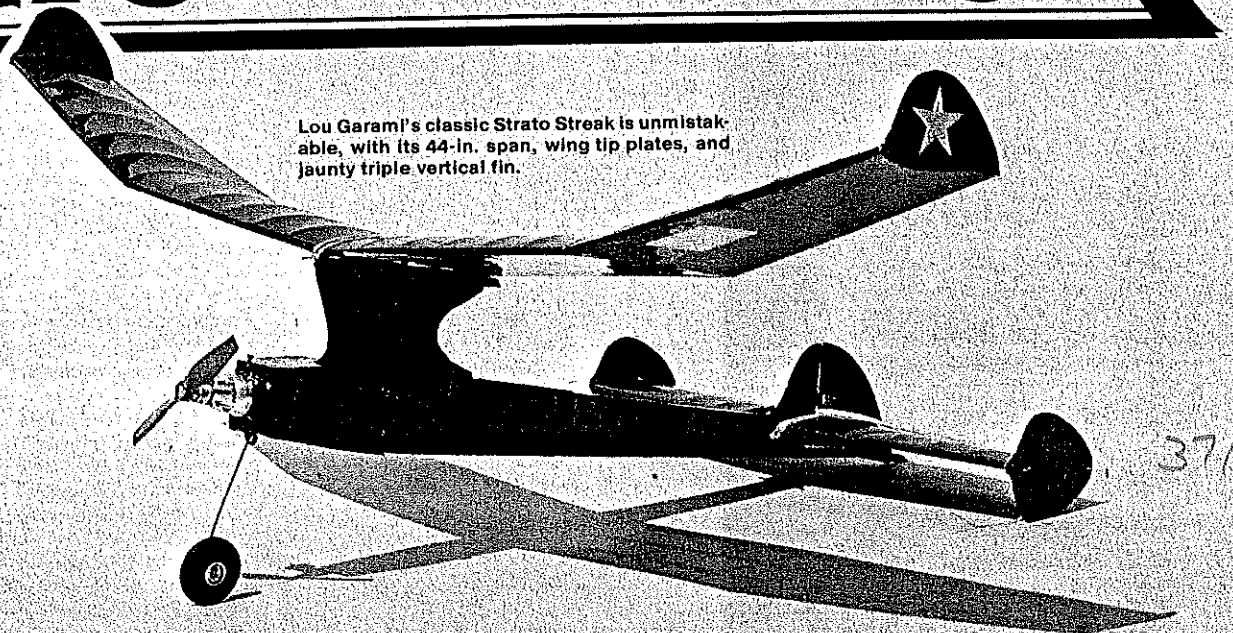


Garami's Strato~Streak



Lou Garami's classic Strato Streak is unmistakable, with its 44-in. span, wing tip plates, and jaunty triple vertical fin.

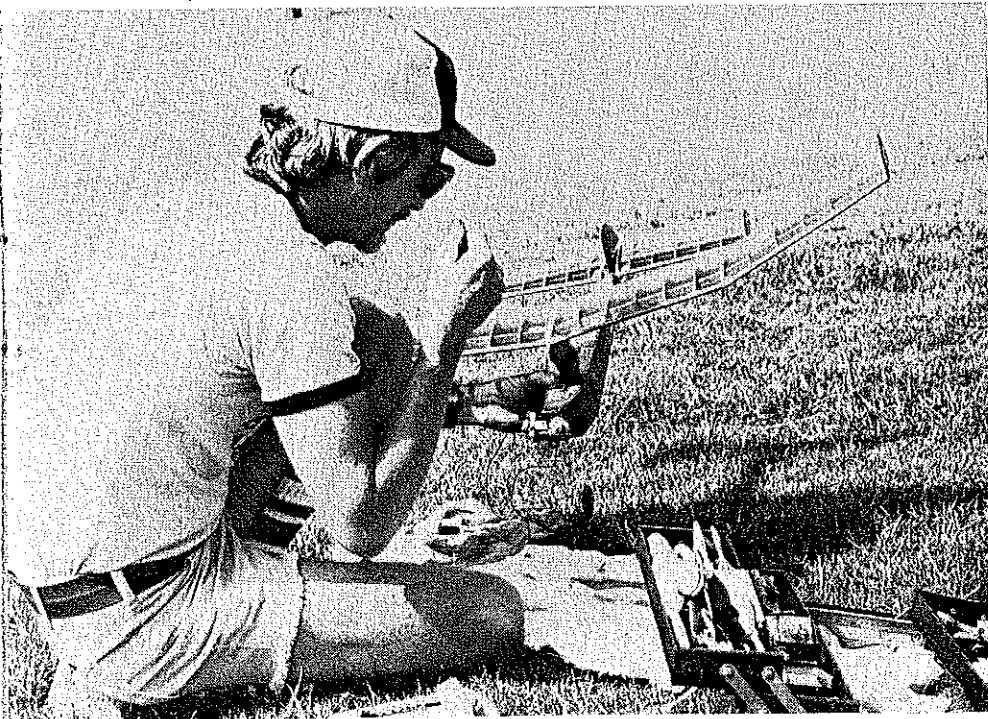
A real winner in 1941, this lovely little ship has since been flown all around the world—by the author! For 1/2A FF or RC, it's a guaranteed good Old-Timer wherever you are. ■ J. F. Andrews

Photos by the author and Eric Hanson

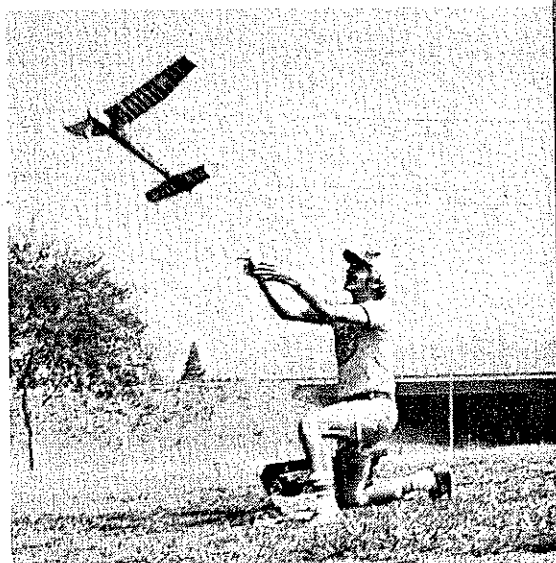
ONE OF THE MOST prolific pre-WW II designers of airplanes was New York's Lou Garami. Known mostly for his small-engined airplanes, using Atom .098 cu. in. engines and slide-out

engine-and-ignition-unit trays, his ships continue to dominate today's contests because of their simplicity, ease of adjustment, and compact size. My favorite of all Lou's designs is the 1941

Strato-Streak. This little (44-in. span) ship, with its distinctive triple tail fins and wing tip plates, was years ahead of its contemporaries. Weighted down with a complete ignition system and super-heavy Atom engines, its spiraling corkscrew climb and rapid recovery from engine-run attitude to a searching slow glide when the engine quit made it a formidable opponent in its day. These same characteristics make it a threat in today's



The author has flown his Strato Streak all over the world. It doesn't take much gear to set up and fly it all day long in any handy field. Eric Hanson photo.



Stable Free Flight characteristics of ship make it possible to launch with both hands, then grab transmitter. Eric Hanson photo.



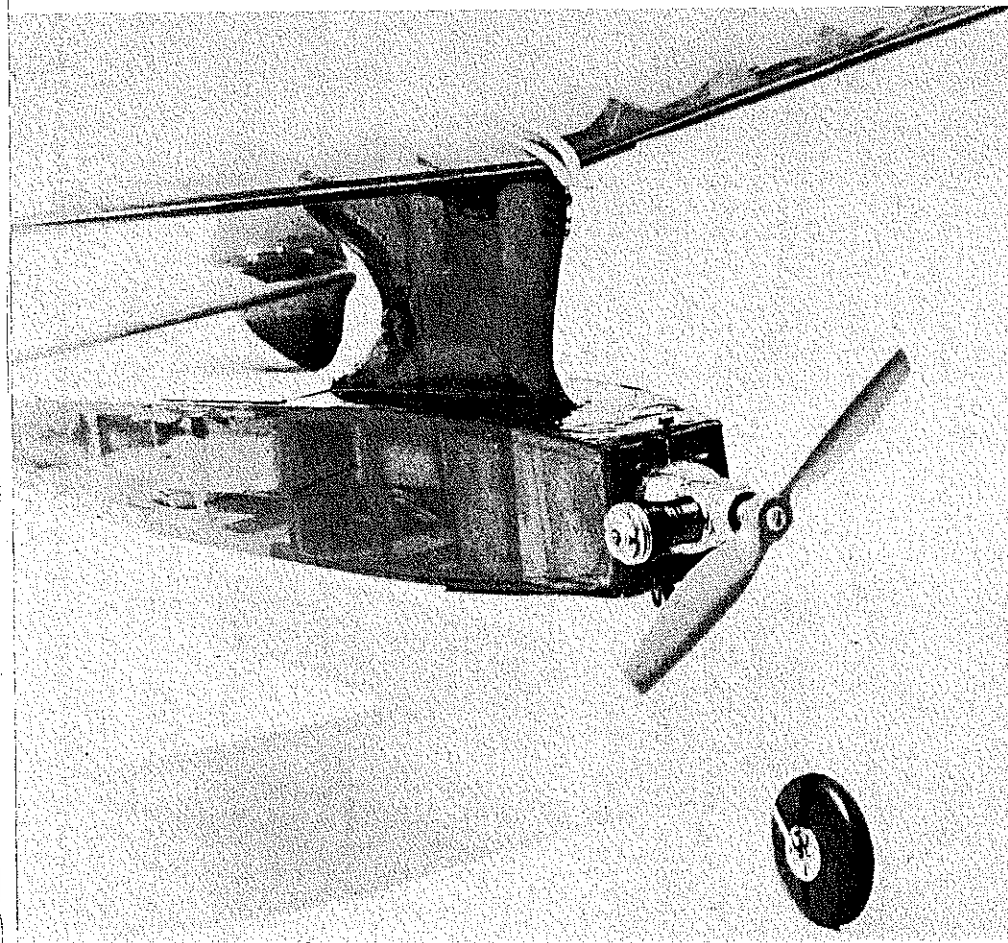
Kids are the same the world over. When they hear a model engine fire up they come running, whether it's in a city park, or like these in American Samoa in the western Pacific!

Old-Timer contests as well.

The model as presented here is shown modified for the installation of two-channel radio gear. However, if you wish to build it as a Free Flight ship, merely omit the hinges and control surfaces. The only other modification made was to move the engine forward by the addition of one bay to the fuselage sides, to help it balance with the lightweight modern glow-plug engine used. If an

ignition engine is planned, then omit this one extra nose section, and the model will be exactly as originally designed. Wood sizes, spars, rib locations, and airfoils are all as shown on the original drawings, as intended by the writers of the SAM (Society of Antique Modelers) preamble.

My work takes me all over the world, and when I do get a chance to fly models, it is usually out of



Spring clips hold Cox Babe Bee in place; light landing gear cushions less-than-perfect landings. Simplicity and stability of the little ship guarantee fun flying sessions.

small and/or overgrown fields, so the ship pictured was modified for RC. It's the third Streak I've built so far. It has been a ship I can take out of its traveling case (an old shipping carton from Sig) and have in the air within 15 minutes. The Cox Babe-Bee is mounted on its side, mainly to keep gunk from spraying the top of the fuselage. Fuel and accessories for this engine are available anywhere in the world that there are model airplanes.

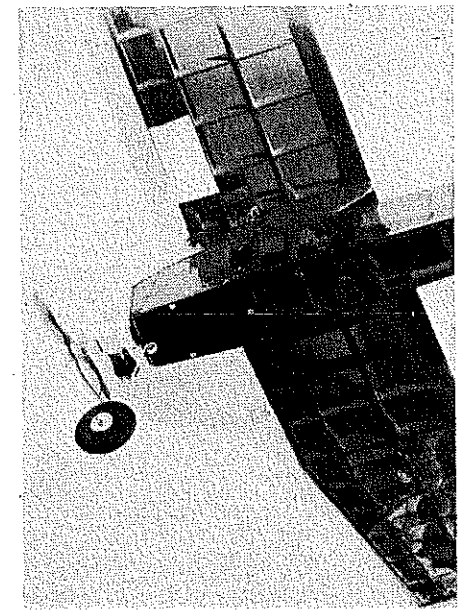
One particular flight stands out in my memory. I had a little time to kill in Whangarei, about 60 miles north of Auckland, New Zealand, but couldn't go too far from the dock. (I'm a helicopter pilot for a tuna boat, and we were scheduled to leave shortly after noon.) There was an auto race track not far from the boat, so I cranked up my faithful Streak there.

The first two flights were about normal—a three-minute engine run and then bounce around in light lift for about 15 minutes before landing. I played a little waiting game before launching for the third flight, feeling that there was more lift around than I had been finding. This waiting period (about 15 minutes) really paid off.

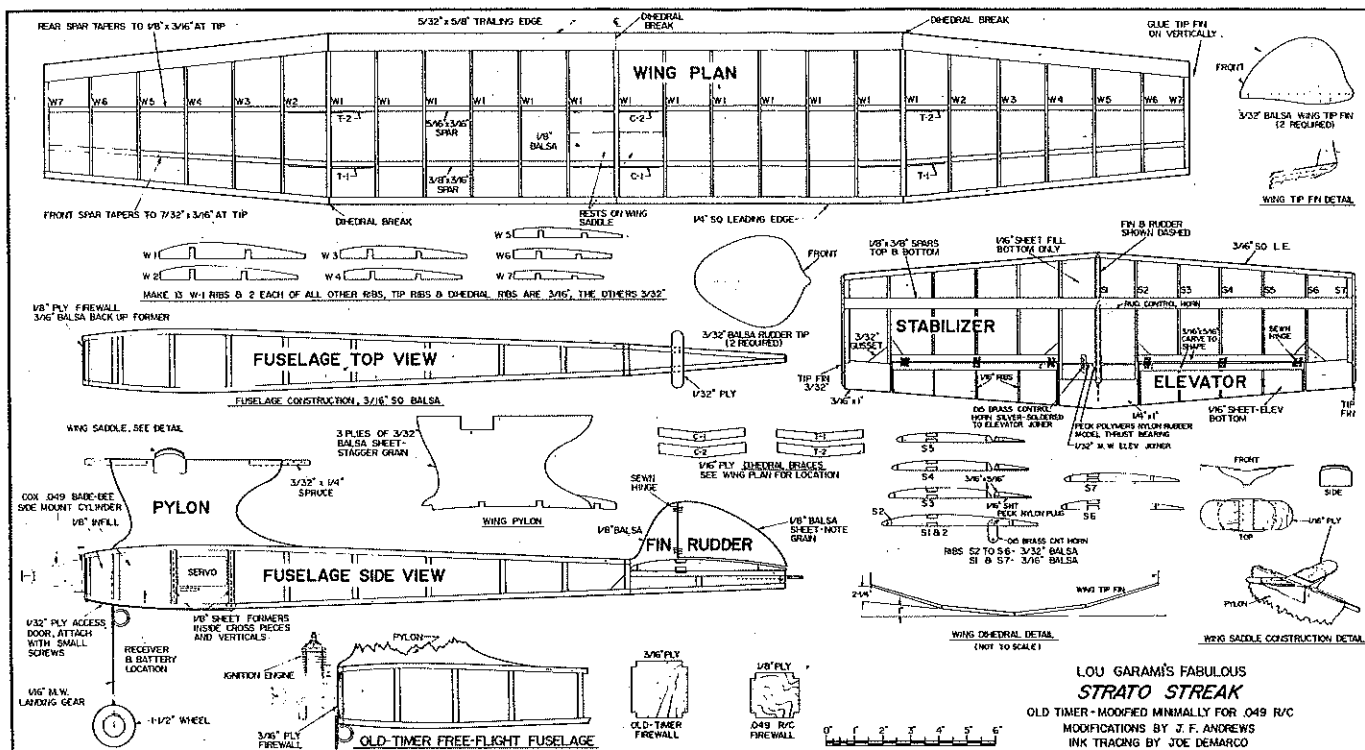
This little airplane has a trait of rocking its wings very noticeably as it goes through lift, and this time it started to rock around almost as soon as I had released it! By the time the engine shut down, I could just barely make out that it was a red airplane. There was virtually no wind at the altitude the airplane was gliding, and it only drifted about a quarter mile from the launch point in the next 45 minutes.

The memorable part of the flight was that seabirds, trying to figure out what strange kind of a new bird had invaded their territory, would come over by the ones and twos to check out the Streak. Each time a new bird would join us, I would break out of the normal wide right circle and fly toward the birds, then turn around and center the Streak in the thermal again. The birds, still trying to identify this intruder, would follow me into the thermal and then start circling in it themselves. By the time the Streak had drifted out over the bay and I had to break away and return it to the field, we had (by count) 22 birds circling around the model enjoying the plentiful lift but still puzzled about the identity of their benefactor.

The Streak also has served as a trainer for a number of bystanders and relatives who asked (or were coerced) into trying it. Its small size makes it fairly responsive, especially when the



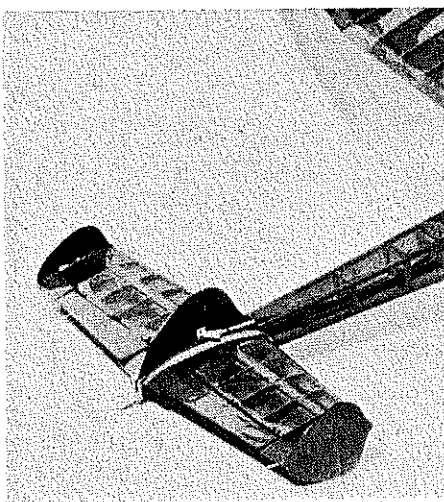
Ply plate covers receiver and battery compartment. Switch is clear of exhaust.



lead thumbs of the beginner exhibit the normal "full-control-and-lock" syndrome. If you plan to use the model this way, or if this is your first attempt at RC, I would suggest moving the center of gravity about a half inch forward of the position shown on the plans.

If you'd like to try a Strato-Streak of your own, you'll find the construction about as easy as any model you've ever encountered. It was designed when attrition rates were extremely high, due to everything from backfires of the engine setting it on fire to fly-aways on the night before a contest on that last "short test hop" in the days before dethermalizers. (Remember those all night building sessions to replace a model lost on the eve of an important contest—and desperately dopping the just-finished plane in the car, with all the windows rolled down, on the way to the flying field? Ah, the good old days!)

Construction. Start with the stabilizer. Take a good look at the way the movable elevator is merged into the rest of the frame, if the RC version is to be built. Since I travel a lot, I made the stabilizer removable, as opposed to the glued-on original Free Flight version. This feature



Old-fashioned figure-eight thread hinges are used on elevator and rudder.

is strictly optional, though, since the model with stab attached is still small enough to transport easily.

Since the leading edge is angled at the middle, and the trailing edge also is spliced, the center of the first stab I built was pretty weak. On the second tail section, which shows on the plans and in the photos, the top and bottom 1/4 by 3/16 are continuous pieces. This seems to have solved the problem.

Assemble all the ribs on the leading edge and the bottom center spar in the normal manner. Lay the top spar into the slots, and glue it firmly. Secure the 3/16 by 5/16 hinge pieces to the rear of the ribs, insert the short sections of tapered trailing edge stock, then add the 3/32 diagonal braces where indicated. Make up the elevators separately, of 1/16 sheet stock.

After the stabilizer has dried, remove it from the drawings and insert the Peck-Polymers nylon nose-plug bearing in S-1. Silver-solder the elevator horn to a piece of 1/32 wire. Bend one end of the wire 90°, and slide it through the nose-plug, positioning the elevator horn about where it shows on the drawings. Note that the center bearing in rib S-1 is the only support for this elevator coupler. The ends are supported by the hinges after the elevators are attached.

Make the second 90° bend in the elevator coupler. Cover the bottom center section of the stab with 1/16 sheet, then sand the 3/16 by 5/16 hinge supports on the stab and elevators until they are smoothly tapered to the ribs and meet accurately. These are beveled to make hinging easier.

If everything looks okay, cover the stab and elevators. I covered the entire model with transparent MonoKote, and came in two ounces over the minimum SAM requirement of 12 oz.

After covering, force the elevators onto the 1/32 wire coupler, and sew them on with figure-8 thread hinges. I use these hinges because they are virtually friction-free, even after being secured to the wood with a drop of Hot Stuff on each penetration point. Since minimum push is required from the servos, a 225 mA battery pack will last for more than four hours of dependable flying in my airplane, plenty for all-day sessions.

Make up, cover, hinge, and install the vertical

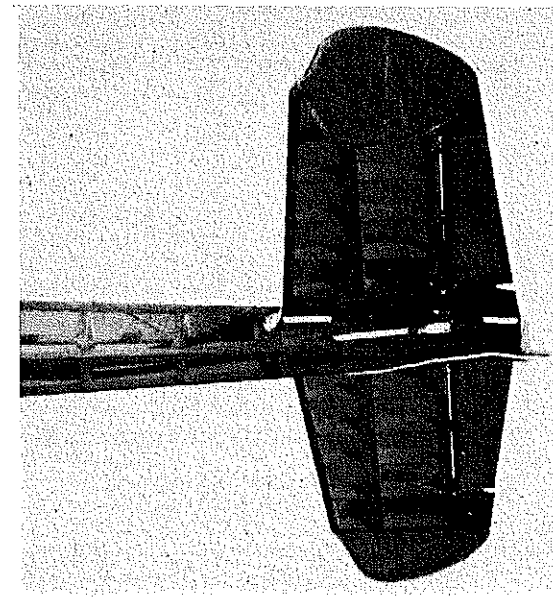
fin, rudder, and the two stab tip plates now, and the tail section is ready to fly.

Incidentally, on the first (weak) empennage, the two tip plates had moving rudders, also, actuated by pushrods running through the ribs. That looked neat, but rudder control was not nearly so positive, even though the rudder area was greater, as it is with the center fin and rudder combination shown on the drawings.

The wing builds exactly as shown. The only change I made from the original was to use 1/4 sheet dihedral braces rather than plywood. Note that the tip plates on the wing tips are parallel to the wing pylon when installed. I used small pieces of scrap 3/32 stock glued to the outside of W-7 and sanded to support them vertically.

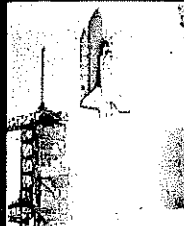
The fuselage is pretty straightforward. Instead of the original 1/4 sheet, I laminated three layers of 3/32 sheet for the pylon. This makes it a lot stronger. The center wing support on the pylon looks pretty involved, but really isn't. It just

Continued on page 135



Elevator pushrod connects to brass horn silver-soldered to connecting rod. Tail is removable.

Free! Space Shuttle Color Photo



This beautiful 8" x 10" color photograph, suitable for framing, was selected as the most memorable, dramatic photo of the launch.

The American Society for Aerospace Education is bringing aviation and space into the classrooms of America. Through its publications and conferences ASAE keeps its members up to date on aviation and space publications and happenings and provides numerous resources for the classroom.

Send for your free color photo

Name _____

Address _____

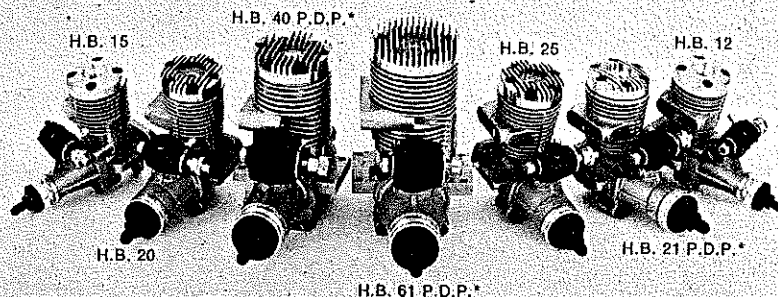
City _____ State _____ Zip _____

Enclose \$1.00 for postage & handling (\$2.00 for Foreign Orders) to:

American Society for Aerospace Education
1750 Pennsylvania Ave., N.W., Suite 1303
Washington, D.C. 20006

It's What's Up Front!

PUT AN H.B. ENGINE UP FRONT!



*Perry Directional Porting

TOP PERFORMANCE on F.A.I. FUEL!

H.B. Engines offer a full line of model engines, a complete choice of accessories and replacement parts.

Write for FREE COLOR CATALOG



HB-ENGINES
Made in W. Germany

BAVARIAN PRECISION PRODUCTS CO. • P.O. Box 6, Dept. E, New Canaan, Connecticut 06840

delphia at Johnsville NAS July 17-18. In northern California, get in touch with Tom Brennan for their MAC monthly contest schedule which includes many Scale events. Their June 6 Joe Ott Day will even have trophies presented by the great Mr. Ott himself! Tom can be reached at 588 Cedarberry Lane, San Rafael, CA 94903. For information on the Flightmasters West Indoor Scale Annual in Los Angeles on June 13, contact Bill Warner.

May your head always glow and your diesel never falter!

(Written by guest columnist Bill Stroman.)

Bill Warner, 423-C San Vicente Blvd., Santa Monica, CA 90402.

When writing advertisers, mention that you read about them in Model Aviation

Strato-Streak/Andrews

Continued from page 69

needs some carving and hacking to fit it to the pylon. Don't glue it in place until after the pylon is secured to the fuselage, though. In this way, any small errors in alignment can be eliminated after the empennage and pylon have been put in place.

If the 1/2A RC version is being built, lay up the fuselage sides with the extension shown. For FF, build it with the nose a little shorter, as originally designed. Tack-glue the second and third bottom crosspieces in place when joining the sides, because these will almost surely have to be removed to stuff the electronics into place.

Install the battery and receiver in the forward-most bay, right behind the engine, and pad it well

with foam rubber. I used two Novak Electronics Micro Servos with a Futaba radio, and installed them inverted directly under the center of the pylon. These servos haven't given any trouble at all, and it's a good thing—major surgery is required to get to them.

Use any kind of pushrods you desire. I used the New Zealand equivalent of Nyrods, to eliminate possible damage to the servos in sudden stops with solid pushrods. The antenna runs through a spare piece of Nyrod housing, and extends out of the tail something like a lightweight dethermalizer fuse. Make sure everything functions without binding before covering it up.

The bottom front of the fuselage is covered with a removable plate of 1/32 plywood, held to 3/16 square doublers by small wood screws. The landing gear is bent of 1/16 wire, with one shock-absorbing loop bent into it. I secured it to the 1/4

★ WANDIT™ ★
PAT. PEN
Dealers Invited
(one year warranty)

Wet or Dry
Stick on Abrasives
A "Keen Machine" that gives exceptional sanding control for an excellent finish.

89.95 Basic incl. 1 flat Wand and 1 each of 6 grits.
108.95 Builder Special incl. 2 flat, 1 half-round wand and 5 each of 6 grits.
129.95 Deluxe includes 3 flat, 2 half round wands, 1 buff wand and 10 each of 6 grits.

Additional Wands and Abrasives available. See your local hobby shop.

ADDIS ELMORE Eve. No. (214) 288 5789
P.O. Box 266 • Mesquite, Texas 75149

The *Flight Box*
from
Custom Woodcraft

\$99.00
DELIVERED

- Four Folding Legs
- Wing & Fuselage Holders

* Add \$4.00 Shipping - Calif. 6% Tax

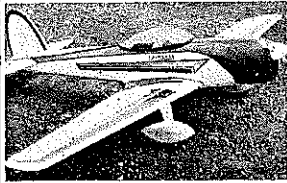
RAC Products (408) 274-1915
3200 Knightswood Way • San Jose, CA 95148

Kite Lines
the international quarterly journal of kiting

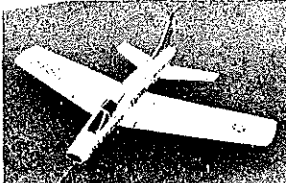
Fly when it's windy! Discover the excitement of kites in the one journal devoted to them—*Kite Lines*. Plans, techniques, reviews, in-depth features—and unusual ads, too—fill its colorful pages. —A valuable contribution to aeronautical knowledge. I have often recommended your magazine.
Paul Edward Garber

\$9/yr., \$2.50/copy 7106-A6 Campfield Rd
(Send for free secrets!) Baltimore, MD 21207

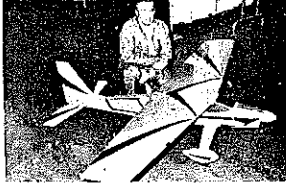
R/C KITS MFG. — FOR THE BEST IN RADIO CONTROL



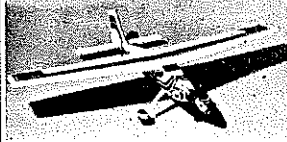
1/4-SCALE CHIPMUNK



F-100 SUPER SABRE



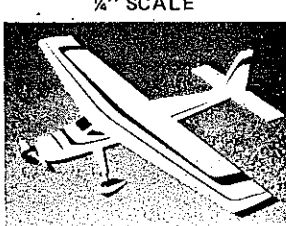
MAXI-ACRO TRAINER
1/4" SCALE



ACRO TRAINER .60 SIZE



THUNDERBIRDS T-38
TALON



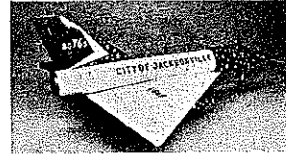
ACRO TRAINER .40 SIZE



F-7-F TIGERCAT



SUPER HUNTER .60 SIZE



DUCTED FAN F-106 DELTA DART



Send 50¢ for catalog.
(216) 499-5323

RC Kits Mfg.
706 Easton, N.E.
Canton, OH 44721

JET HAWK F-4 PHANTOM F-15 EAGLE
HUNDERBIRD REVENGER TIGER TAIL II
TLAS BOOTLEGGER COMPENSATOR ZLIN
-50 L LASER 200 P-38 YAN ST-A P-63 KIN
OBRA P-40 FLYING TIGER PLANE JANE
AGL BOBBY COMBAT BATTLE ALLEY K
FLYER POGO MIDWEST MUSTANG SUPER
UICK RICKET JAT BIG BIRD JET HAWK F-
HAN F-15 EAGLE THUNDERBIRD RI
ENGER TIGER TAIL III ATLAS BOOTLEGGE
COMPENSATOR ZLIN Z-50L LASER 200
YAN ST-A P-63 FLYING TIGER PLANE JAN
AGL E! At Your Local Dealer - Send \$1.00 for Catalog 'V KAT'

Model Merchant
has the Hot Ones!

401 W. Washington, Harlingen, TX 78550 (512) 428-5073

KIORITZ

ENGINES BY GIBBS HOBBY & RESEARCH
The Original Developer - Factory Trained and Authorized Master Service Dealer

One Year Limited Warranty

Deep Fins For Optimum Cooling

Carb Needles & Throttle Accessible Even When Engine Is Running

Pre-Drilled Props Avail.

2 1/4 in Flywheel Small Magneto

Endorsed by Don Godfrey (607) 722-1765

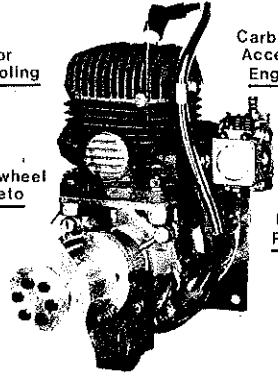
Ask About Our Custom-Built KIORITZ Engines

Points Sealed In Rear Housing

1 5/8 in Six Bolt Aluminum Hub

\$199.95
We pay ship. on pre-paid orders
Mufflers Now Available!

DEALERS WELCOME



2.42 cu. in. (39.7cc)
3.2HP at 8000 rpm
Weight 6 1/2 lb.

SPECIFICATIONS:
Walbro Pump Carb
3 Ring Piston

Ball Bearings on Crank
Caged Rollers on Rod and Piston Pin

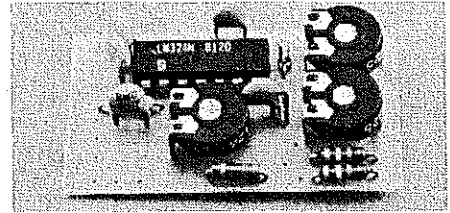
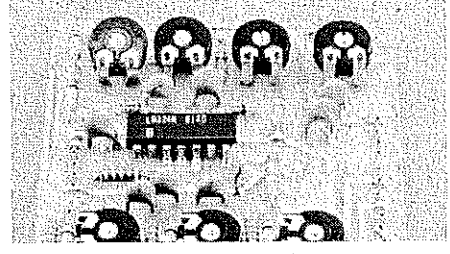
GIBBS HOBBY & RESEARCH
6195 Hillfield St., N.W. N. CANTON, OHIO 44720
Phone (216) 499-8854 (after 6:00 PM)

plywood firewall with heavy thread and Hot Stuff. This is a lighter gauge wire than on the original, but the airplane will still R.O.G., and the springiness has come in handy in less-than-ideal landing situations.

The Cox Babe-Bee on my airplane is secured with wire clips, so it can be removed quickly for service or exchange. Wood screws would work as well if you don't feel you need this quick-change capability. I turned the engine 90° on the tank mount to keep engine gunk off the pylon, and also to protect the switch, which is mounted on the left side of the fuselage where it can be seen as the airplane is held ready for launching.

Flying the airplane is, of course, the best part. The age-old caution to check it all over for warps still holds true, though. Mine is built with no wash-out or intentional misalignments. Under power, it seems to be happier, and will climb

product review product review product review

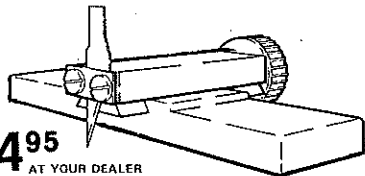


New options for Silver Seven transmitter, from Ace RC, 116 W. 19, Higginsville, MO 64037.

It's getting to the point that you need a college degree to understand all the stuff you can plug into a Silver Seven these days. This has got to be one of the most versatile setups available to the RC flier. Let's see if we can get this straight. The CAR+Dif. Ail. Add-On board gives you coupled aileron and rudder (CAR) when used with the Mixer option previously offered. The coupler can be switched in or out, and the amount of rudder added when you command aileron is easily adjustable. Set up your ship with a servo for each aileron, and you get two more goodies: Flaperons, which allow the use of the aileron surfaces as flaps while still using them as ailerons; and Differential Ailerons, which allows adjustability of the amount of up versus down movement on each aileron. This allows tuning the plane for the best turn without adverse yawing. Dwight Holley used this option in his Silver Seven when he and his Gobbler Sailplane captured the World Soaring Champion title in 1981. The kit sells for \$9.95. Got all that? Now, the CAR+Dif. Ail./EPA Option is not an Add-On board, but an Option that works by itself. It gives you all of the above, plus one: if you have only one servo driving your ailerons, it allows you to make end-point adjustments (EPA) on the ailerons. This kit sells for \$12.95. Boy, these radios are getting smarter and smarter!

product review product review product review

NEW MASTER AIRSCREW
PRESENTS
BALSA STRIPPER



495
AT YOUR DEALER

PRECISION STRIP WOOD TO 1/4 x 3/8 INS. FROM BALSA SHEET. ALSO FOR DRAFTING AND PHOTO MATS. USES TYPE II BLADE.
A SUPER TOOL — GREAT PRICE
WINDSOR PROPELLER CO.
384 Tesconi Ct., Santa Rosa, CA 95401

LEADER IN SMALL AIRFOIL TECHNOLOGY

MASTER AIRSCREW



NEW 10X6!

IMPROVED THROUGH FOUR YEARS OF PRODUCTION, THE G/F SERIES IS UNEQUALED FOR PERFORMANCE & DURABILITY.

AVAILABLE WORLDWIDE THROUGH 131 DISTRIBUTORS

WINDSOR PROPELLER CO.

384 Tesconi Ct.

Santa Rosa, CA 95401

higher, in wide left-hand turns. Pylon models usually are unstable when turning left under power. I don't why this unusual characteristic has shown up on this ship, and frankly I don't care very much—I just let it climb in wide left-hand circles and enjoy the results.

For the first two flights the 6 x 3 Cox Tee-Dee prop was mounted backwards, an old Free Flight trimming trick to cut down on thrust and speed without gross adjustments to the engine. Frankly, after the first flights, the only adjustment required was to turn the prop around.

For the first launches, trim everything to neutral on the transmitter and the airplane. The model is very forgiving and wants to fly, so let it climb away without any control inputs after launching (unless something really gross develops). It will probably take three or four flights before it will be safe to pre-set the trims on the transmitter, then just set the transmitter on the ground and launch the airplane using both hands. This has become normal for my ship now. In fact, after the pre-launch control check, with the antenna retracted, I usually go ahead and throw the thing, then go back and extend the antenna and pick up the transmitter. It sort of looks like I've showing off, but I'm really not; the airplane is so stable it will allow this sort of thing.

Maximum altitude is gained in the climb if control inputs are kept to a minimum. I try to keep the plane climbing more or less into the wind, at what looks like a good rate of speed. This will be established more by experience than anything else. The only caution—don't let the nose get so high that the airspeed falls off and it starts to hang on the prop. Keep feeding in down trim a little at a time until it under-elevates and starts to nose over. This will be evident by a dramatic increase in airspeed. Then trim just a tad of up into the elevators, and watch it carefully as it recovers and continues upward. Meanwhile, of course, keep twiddling the rudder trim to keep it pointed upwind, and watch it for any wing wobbles which may indicate you are going into an area of lift.

The machine, true to its Free Flight nature, glides slowly and smoothly, so any bounces or wing shakes indicate turbulence. If it wobbles a little as it circles, pay close attention. If it looks like it's going up, make another circle and see if the wings rock again. If they do, you're in a thermal. Tighten up the glide circle with trim, and sit back to enjoy the ride.

If the plane goes into a downdraft, which will be evident almost immediately, get out of that particular area by trimming the nose down and

letting it haul itself to friendlier skies. A downdraft in one spot is a good indication of lift nearby, though, so don't go far without slowing down and feeling around the area.

That's about all the advice I can give you. I sincerely hope you enjoy your Strato-Streak as much as I have mine.

Electrics/Blommaart

Continued from page 75

Electroflight with the places for the battery and the electric motor in mind. Often, they have a "pan" to hold the battery which is fixed under the fuselage and can be removed with one screw. It pops right off in case of a mishap.

The first designs all had ventilation holes—

Tornado PROPELLERS

Made of polyester. do not boil or color.

Go to GRISH... the No. 1 propeller.

True helical pitch and airfoil for more "win-power"

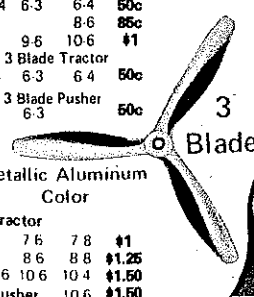
5.3	2 Blade Tractor	each
5.4	5 3/4	5 1/4 50c
	6.3	6.4 50c
7.4	7.6	7.8 60c
8.4	8.6	8.8 70c
9.4	9.6	9.7
9.8	10.4	10.6 85c
11.4	11.6	11.8 \$1
12.4	12.5	12.6 \$1.50

Sizes, pitches, styles, for most needs.

AT YOUR DEALER

5 3/4	2 Blade Pusher	
5 3/4	6.3	6.4 50c
		8.6 85c
		9.6 10.6 \$1
5.3	3 Blade Tractor	
5.3	6.3	6.4 50c
	3 Blade Pusher	
	6.3	50c

Metallic Aluminum Color		
Tractor		
7.6	7.8	\$1
8.6	8.8	\$1.25
9.6	10.6	\$1.50
Pusher	10.6	\$1.50



GRISH

LARGE WOOD PROPELLERS

HARDWOOD... but not too hard, minimizes chance of costly plane and engine damage. True pitch and airfoil fully finished and balanced, ready for coating.

3/8" BORE	ALL SIZES IN	18" \$7
	6, 8, 10 and 12 PITCH	20" 8
		22" 10
RIGHT HAND TRACTOR		24" 13

NEW SIZE... IN 8 & 10 PITCH 26" \$16

GRISH BROS.
ST. JOHN, INDIANA 46373

IN STOCK FOR IMMEDIATE SHIPMENT

New "SUPER QUADRA" \$99.95

with BRISGHELLA FLYWHEEL	\$119.95
QUADRA MARIN engine	\$124.95
QUADRA REPAIR	\$10.00 plus parts
KIORITZ engine (2.44 cu. in.)	\$199.95
Jim Messer ERCOUBE	PLANS \$23.95, KIT \$229.95
Jim Messer TOMAHAWK	PLANS \$23.95, KIT \$239.95
BALSA and BASSWOOD (all sizes)	35% OFF
Concept FLEET	KIT \$179.95, F.G. Cow! \$19.95
QUADRA fuel tanks	16 oz. \$6.95, 32 oz. \$7.95
1/2 VICKERS or LEWIS MACHINE GUN KITS	\$14.95
10" dia. COVERED WHEELS, for USA Pup	\$28.95
PLANS: SUPER STEARMAN, 1/4 (Godfrey)	\$28.00
STARBUSTER TOO, 1/4 (Brisghella)	\$29.95
1/2 scale J-3 CUB (Walt)	\$29.95
VOLKSPLANE, 1/4 (Chicken Charlie)	\$21.95
FLY BABY, 1/4 \$18.95	SE-5, 1/4 (Rausch) \$24.95
COCKPIT KITS: Tomahawk, F4U-1, Spitfire	\$21.95
Ercoupe \$17.95, Stearman \$20.95, Citabria \$24.95	
J-3 Cub \$19.50, ME-109 \$21.50, Fleet \$19.95	
FIBERGLASS ARROW SHAFTS, 5/16" x 32" lg.	6/\$10.00

24-Hour Service... Add \$2.50 postage

Send Bank Check or Money Order to:

JIM MESSER'S QUALITY MODEL PRODUCTS

106 Valley View Dr. Allegany, NY 14706



PERFECT COVERING MATERIAL FOR LARGE R/C MODELS

1.8 oz./sq. yd. Heat Shrinkable
Easy to apply. Extremely strong
Dope doesn't run through like silk

66" Wide
1 yd \$5.95 3 yds \$17.50 5 yds \$27.50
ORDER DIRECT Add \$1.00 for Handling (+ tax in Nevada)

JERRY NELSON & COMPANY
3510 San Mateo Avenue
Reno, Nevada 89509
702-522-0664