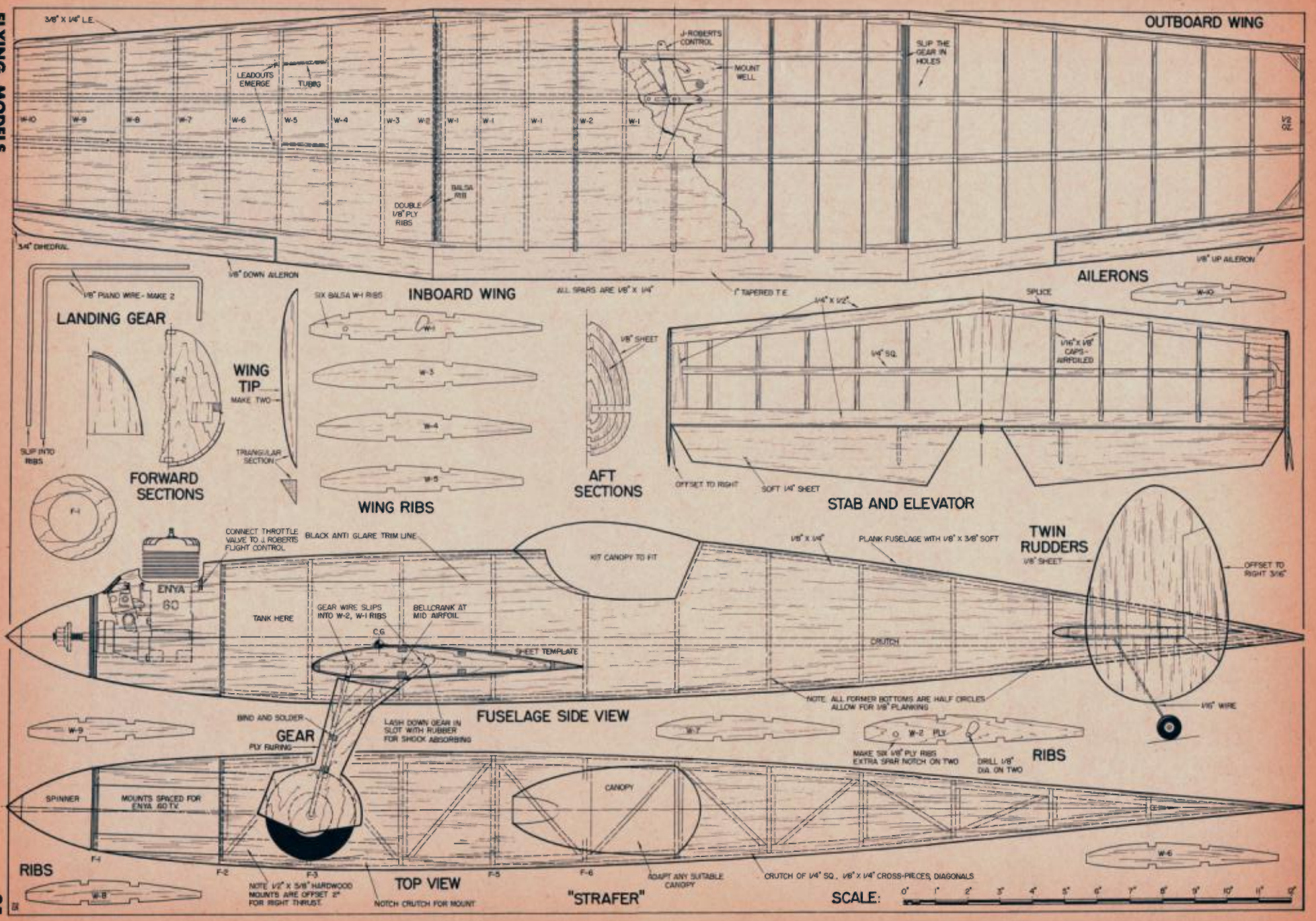

OUTBOARD WING
3/8" X 1/4" L.E.
LEADOUTS EMERGE
TUBING
J-ROBERTS CONTROL
MOUNT WELL
SLIP THE GEAR IN HOLES
W-10
W-9
W-8
W-7
W-6
W-5
W-4
W-3
W-2
W-1
1/2 OZ.
DOUBLE 1/8" PLY RIBS
BALSA RIB
3/4" DIHEDRAL
1/8" DOWN AILERON
1/8" UP AILERON
AILERONS
INBOARD WING
SIX BALSA W-1 RIBS
ALL SPARS ARE 1/8" X 1/4"
1" TAPERED T.E.
1/8" PIANO WIRE - MAKE 2
LANDING GEAR
SLIP INTO RIBS
F-6
WING TIP
MAKE TWO
TRIANGULAR SECTION
FORWARD SECTIONS
WING RIBS
1/8" SHEET
AFT SECTIONS
1/4" X 1/2"
SPLICE
1/4" SQ.
1/16" X 1/8" CAPS - AIRFOILED
OFFSET TO RIGHT
SOFT 1/4" SHEET
STAB AND ELEVATOR
F-1
CONNECT THROTTLE VALVE TO J. ROBERTS FLIGHT CONTROL
BLACK ANTI GLARE TRIM LINE
KIT CANOPY TO FIT
1/8" X 1/4"
PLANK FUSELAGE WITH 1/8" X 3/8" SOFT
TWIN RUDDERS
1/8" SHEET
OFFSET TO RIGHT 3/16"
ENYA 60
TANK HERE
GEAR WIRE SLIPS INTO W-2, W-1 RIBS
BELLCRANK AT MID AIRFOIL
C.G.
SHEET TEMPLATE
CRUTCH
NOTE: ALL FORMER BOTTOMS ARE HALF CIRCLES ALLOW FOR 1/8" PLANKING
1/16" WIRE
FUSELAGE SIDE VIEW
W-9
BIND AND SOLDER
GEAR
PLY FAIRING
LASH DOWN GEAR IN SLOT WITH RUBBER FOR SHOCK ABSORBING
W-7
W-2 PLY
MAKE SIX 1/8" PLY RIBS EXTRA SRBR NOTCH ON TWO
DRILL 1/8" DIA. ON TWO
RIBS
SPINNER
MOUNTS SPACED FOR ENYA 60 TV
CANOPY
F-4
F-2
F-3
F-5
F-6
W-6
RIBS
W-8
NOTE 1/2" X 3/8" HARDWOOD MOUNTS ARE OFFSET 2° FOR RIGHT THRUST
NOTCH CRUTCH FOR MOUNT
TOP VIEW
"STRAFER"
ADAPT ANY SUITABLE CANOPY
CRUTCH OF 1/4" SQ., 1/8" X 1/4" CROSS-PIECES, DIAGONALS
SCALE:
0" 1" 2" 3" 4" 5" 6" 7" 8" 9" 10" 11" 12"

No shortage of thrust in this twin-tailed machine.

90 m.p.h. buzz-job adds zest to your outing.

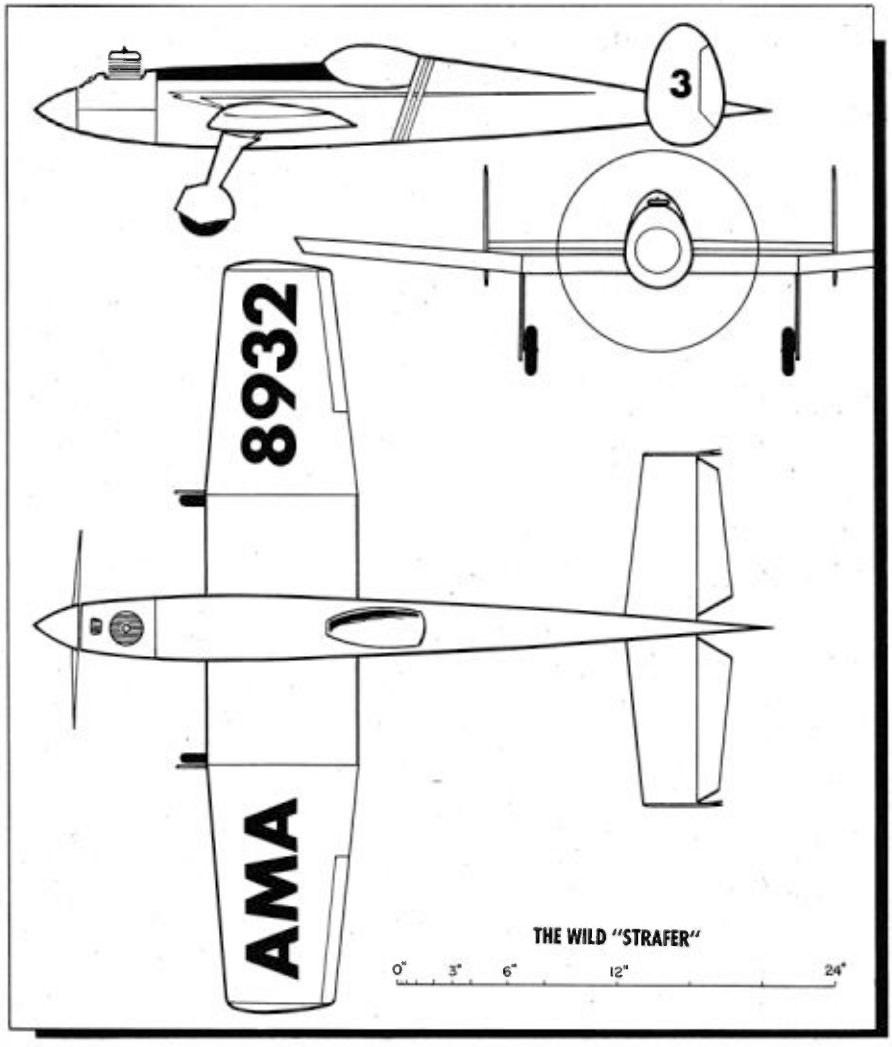
...fly "STRAFER" for wild, wild sport!

Don McGovern's

Enya .60 TV power in a realistic low-level sport controline

"Strafer" is not designed for inverted flight. Slight dihedral and airfoil rule it out, unless plan is modified. Offers a different type fun.

Oval sectioned fuselage is planked with strips. Sanding blends the edges, smooths all prior to silking. Takes time, but not hard. Worth work.



For .45 to .60 Engines

One slightly thunderous Enya .60, cowled into the front end. No lag to the climb-out when a big engine propels a ship of this size. Feels wonderful in flight, keeps one alert. Or sorry.

Landing gear door fairings are lashed to gear with binding wire, improve appearance of ship.

41" Wingspan

Use heavier gauge controlines on this ship. If a .45 to .60 mill is installed, lines can exceed 100 foot in dead-calm air. We've flown on 125 footers, found it great sport. Pull is reduced on long lines, so we suggest lighter lines. Field must have a smooth surface, free of weeds, stones to snag sagging controlines.

▸ While the average Stunt Controline follows a set formula of marginal power to area, the "Strafer" takes off on quite a different tangent. It is not intended for Stunt competition flying, and could never match the maneuverability of a slow flying symmetrically sectioned stunt design. This is a "lone eagle" type, a sport flyer for everyday use, a 90 m.p.h. variation that will give your nerves ulcers.

On a calm day, it can handle line lengths up to 125 feet, providing the field surface is smooth as silk, free of weeds. (Lines this long tend to drag at the middle a moment before touchdown. Nearly dead calm air is advisable. 100 foot radius lines are a better compromise, and 75 footers are standard for this aircraft, even in a moderate breeze. Its greater speed and clipped wing eliminates that excessive ballooning quality so commonly seen on stunt types. It is more like a P-51 as compared to a light plane in flight.

While shy on maneuverability, it does have other merits, and offers a refreshing change of pace from designs you may have been flying. It is not rigged for inverted flight, though minor airfoil alterations might be made if you desire to try. It cannot corner those squared off loops and such. All loops and pullouts will require much more space, but it is more realistic in their execution. It is more of a high-speed precision flyer, capable of wing-overs, loops, hedge-hopping, balloon busting, limbo-stick flying, and ideally suited to touch and go landings with a J-Roberts 3rd line Control system. Keep your stunt ship for contests, build the "Strafer" for some high powered thrills and chills. A test for your reflexes, one mistake to a customer. If you should slug the mud with this, all the feathers come off so to speak. If this is your first attempt at controline, you're out of your league. Try a trainer or too first, for with this ship you will find the landscape a bit blurred as you rotate, and your reaction time on pullouts must be automatic.

May we advise a safety thong to secure the handle to your wrist. An awkward shape to a loop on a comparable "Pirate" design we flew years back yanked the handle from our grasp, flung it over 100 feet away, and sprained four fingers. Sprained the plane too.

Consider perhaps a variable pitch prop, R/C engine throttles, timers to actuate engine speed in the absence of a third line, or use insulated lines to electrically switch engine speed, or

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bellcrank actuated methods to command your r.p.m. Rig the ship with port and starboard night flying lights, a cockpit light, a tail light, landing lights to flash on for take-off, timed to blink off once airborne, snap on again ten seconds before engine is cut. Works beautifully. No field lights are advisable. The darker the surroundings, the better. Exercise good spectator control however, to avoid a local resident from walking into flight area unseen.

As you mull the design over, other possibilities will cross your mind. We think you will like the way the ship responds. All eager, and never a sagged out feeling in the climb. This ship is for a change of pace. It is a ship you will long remember.

Full Size Plans: Scale up with dividers, pacing off each dimension four times. Study the layout, structure, plan your own variations, and secure the needed materials, equipment to be installed, engine and proper grades of balsa, plywood, hardwood and the like.

The fuselage is oval in cross-section, planked with strips, and nicely streamlined. The twin-rudders are of sheet, while the stabilizer is of built-up structure. Tapered sheet forms the elevator surfaces. The wing is rugged, of ribs and spars and sheet. The landing gear is wing-mounted, and ample to the task. Cabin trim is optional, as are wheel fairings and the like. While not necessary for flight, they do enhance the appearance and your own enjoyment of the model in flight. Feel free to vary the engine to suit your needs, but a bit of power is nice to feel in this ship. While even a .29 can fly the model, be all heart and give it a real blast.

Wing Construction: As the wing must be installed into the fuselage, it is best to start here. It consists of a flat center panel and two outer tip panels wih slight dihedral for appearance. Ribs locating the landing gear are chopped out of ⅛" ply, with holes drilled as indicated. The panel is built flat on the plan, as prone as the airfoil permits that is. Install what leading edge, trailing edge and spar stock you can in this position before removing from the workbench. The remaining spar structure may then be added.

Build the left and right outer wing panels in like manner, with care taken to keep all edges neatly aligned to receive the wing sheeting. Once the panel structure is thoroughly dry, it may be removed from the plan and test fitted to the center panel. Do not join at this time however, as the landing gear must first be installed.

The gear wire is formed in two pieces as per plan details, slipped into the ply drill-holes and bracketed with soldered washers. Rather simple and easy, yet stands up well if you are a capable flyer. Personally we prefer a fairly stiff landing gear that must be greased in for a touch-down, rather than a springy bounce-magnifier, which gives you the effect of a tramboline. In any event, brace the gear-mount-area in every way possible. With slight modification, you can further shock-absorb the landing gear, if this is your preference.

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Back to the wing structure. With gear safely stowed in the center panel, the outer tip panels are now permanently cemented in place, properly gusseted, and made ready for the sheeting.

The bellcrank is now bolted to the indicated pivot point. The ply mount must be extremely well braced within the wing, as the model will generate considerable centrifugal force on this structural member. Make it impossible for it to ever tear free. It is a lethal aircraft on the loose. Check the bellcrank swing for adequate clearance over the full control range, and lubricate the bearing with a speck of vaseline.

With the bellcrank properly mounted, the leadout wires are now neatly connected. Avoid sharp bends and rusty-leadout wire. Bind and solder the connection, cleaning off the joint, washing and lubricating immediately. Pass the leadouts through the ribs at the angle indicated, cut the wing at the position shown. Use tubing to guide the wire clear of the structure.

The ailerons on the wing are fixed in flight, and are never intended to move, other than for banking trim. If in flight you find your "Strafer" is banking inward, or hanging the outboard wing down a trifle, you can easily compensate with a fractional correction on the aileron trim. As a start, we suggest ⅛" up on the outboard aileron, ⅛" down on the inboard aileron to trim the model for level flight in relation to the controlines.

Apply remaining wing sheeting, capstrips and wing tip blocks to complete the basic wing structure. Razor trim the excess balsa away, then sand with medium grit garnet paper. Follow with finer and finer grits to prepare the surface for silking. You may prefer to let the final sanding operation go until the entire craft is assembled, then wisk off all the knicks and construction boo-boo's at once.

Rudders: Two of them. Count 'em. Of ⅛" medium-hard balsa sheet, neatly sanded to a symmetrical airfoil section. Offset each rudder tab about 3/16" to the outboard side of the circle to hold the model tight on the lines. Mark a light line on the inner face of each to serve as a guide when mounting on the stabilizer.

Stabilizer: Quite easy to make, built up, yet rugged. Layout over the plan, and allow to dry thoroughly. Cap the ribs with airfoiled strips top and bottom. Strips can be roughly trimmed. cemented in place, then sanded to a smooth uniform symmetrical airfoil section.

Elevators: Cut from either ¼" medium-soft balsa sheet, or laminate from two layers of ⅛" medium-soft sheet, grain crossed for warp resistance. Adhere with a contact type cement. The laminated method is best in our estimation, but either is suitable. When dry, trim and sand to a thin trailing edge, rounded slightly at the leading edge.

Hinging: Drill the elevators to receive a Veco type cross-bar and horn. File edges slightly to stab neatly into the drilled hole. A rough edge on the wire might catch and pucker-up the soft balsa on insertion. Hinge material is up to you. Many varied types are on the market Tatone's shim brass type is neat, as are many R/C types. Resort to the antiquated cloth-type over-under method if you like, but this does detract from a neat appearance. Wire and tubing makes a neat deal, but is a bit of work to inset into the balsa. Once the elevators are joined and in place, sight ends to make sure they are both properly aligned. If not, a slight twist here or there will even them up.

Trim and sand the stabilizer and elevators as on the wing. The rudders are now ready to be joined. but it is really best to hold off on this. They tend to catch on everything during the construction process, and therefore should be attached at the latest possible moment. Set them aside till later. Do no install them prior to silking, so

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you get a good strong wood to wood contact. A few pins or 1/16" dowels will further reinforce the butt joint.

The Fuselage: Build it around a central crutch, which is laid out over the top plan view. Cut out all formers drawn, making two halves. These are positioned on the crutch, aligned carefully, and capped with a stringer top and bottom.

Attach the wing at this point. The structure is designed to accurately position it with the correct zero-degree incidence setting. The pushrod should pass up through the fuselage to the elevator horn, and must be tested for the correct length. Position the stabilizer on the crutch, sliding for and aft to achieve a 1/3 down, 2/3 up deflection as the bellcrank is pivoted. The stab is now cemented at this location.

The engine is mounted on rugged bearers, well cemented into the structure. Offset the engine about 1½ to 2 degrees to the right. Carve and hollow the cowl blocks as you proceed.

Plank the body after all controls, fuel tank and extra equipment of your choosing is in place. We suggest 1/8" x 3/8" planking strips, medium-soft. Taper slightly in width toward the front, more toward the rear. Bevel edges a few degrees. Work on about four sides at the same time to keep fuselage from twisting. The planking is time-consuming, but rewarding in that once sanded smooth, it makes a very strong, beautiful fuselage when finished.

Canopy: The cabin area may be modified to your own wishes. A molded canopy from your local dealer, or an idle kit will often fit the bill. Aluminum trim around it will enhance the appearance, and lend itself to customizing your model. A piece of flat celluloid can be used to form an AT-6 type windshield with aluminum strips outlining the window areas.

Silk the entire model, after first applying about two coats of clear dope, lightly sanding with wet-dry paper in between. Next apply several more coats of clear dope, and a couple of coats of wood filler to seal the pores. Spray or brush on thin coats of color to your liking. And trim and decals to complete the job. Decals must be fuelproofed afterwards, or the fuel will ruin them.

The suggested J-Roberts Control System provides a handy third line arrangement to the specially designed bellcrank. A forward pushrod to the Enya .60 throttle valve will control the engine speed from idle to a wild, wild roar. It makes a wonderful deal for shooting take-offs and landings, with the control of the model at your finger tips.

Flying: The old, old story. Wait for calm weather. Pull test your lines, and use a heavy gauge wire for this model. Not less than 60 feet, about 75 feet is best. Test the model for warps, balance, alignment, and all else. Handle should feel like neutral when the elevators are neutral. Take off will be made down-wind, to give the model ample speed to hold tight on the lines as it swings upwind.

Run your engine at a reasonably fast speed. Do not over-control the model initially, by keeping your arm fairly rigid. controlling the model with an up-down arm motion. Once the ship is safely in flight, you can relax more, get the feel of its response to wrist action. Fly away from populated areas. This one is a bit loud. ●