

FUSELAGE ASSEMBLY

Saran Wrap (or similar) spread under frame will prevent frame from sticking to Plan. Fuselage is built on flat surface directly on Plan. Pin parts in place as shown, cementing #6 between #4 and #5. Flush with rear.

STEP 1

STEP 2

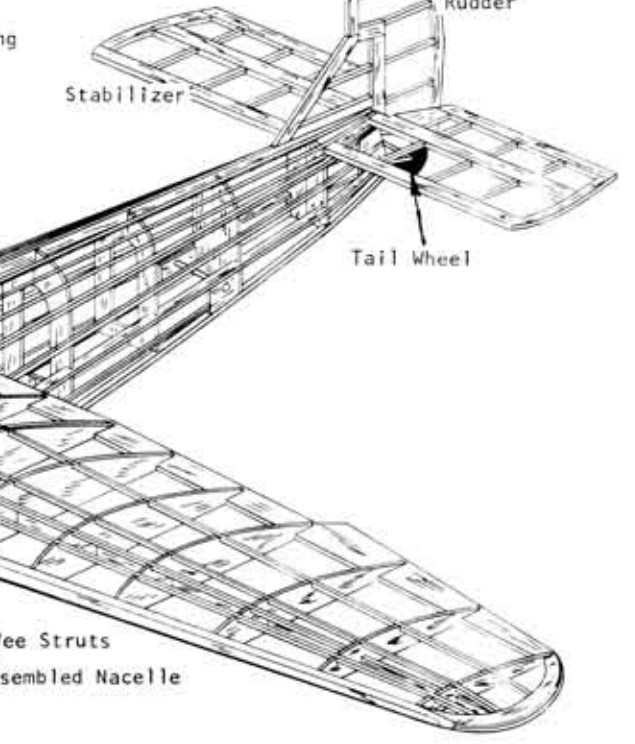
Step 2 and Step 3 must be done one after the other to prevent glue from setting before keels are installed. Cement all Bulkhead halves from #7 thru #17 vertically in place, being certain that Bulkhead #9 is cracked on crease and angles as shown on full size Center Frame Assembly Drawing. Place coat of cement over crease.

STEP 3

Keels #18 & #19 are inserted into their respective notches in sides of Bulkheads. #18 runs from #7 to rear, and is cracked at crease mark behind Bulkhead #13. #19 runs from #7 to #13. Cement Cockpit former #20 into notch in Bulkhead #9. Flush with front and bottom of #2, then cement bottom former #21 into notches between Bulkheads #8 & #9, followed by Wing Saddle #22. Bottom stringer #23 is cemented in place between #7 and #10 as shown. Bottom corner stringer is 1/8 sq. and is now cemented in place from front to rear. All other stringers are 1/16 sq. and are installed as shown, either into their respective notches or crease mark locations. Stab slot is formed by cementing #26 & #27 into notches in #17 against keel #4. Cement #28 in place as shown. Allow frame to dry thoroughly. Note that keels (as well as stringers that will be installed) are in many cases past edge of Bulkheads, as shown on sketches and Typical Cross-Section Drawing.

STEP 4

Remove frame from flat surface and cement Landing Gear Bulkhead #29 into Fuselage frame-half, against front of #9, sandwiching wire Landing Gear between them. Complete opposite side of Fuselage as described in Steps 2 and 3. (DO NOT MAKE ANOTHER FUSELAGE CENTER FRAME ASSEMBLY; these Bulkhead halves are cemented to the Fuselage frame you have just removed from the flat surface.) If model is being built for gas engine, Plywood Firewall must be installed along with other Bulkheads. Location is shown in Engine Installation Drawing. Cement cabin roof parts #31's, #32's and #33's in place into their respective notches as shown. Flush with front of #20. Cement #24 across bottom of Fuselage between corner stringers as shown. Cement top stringers #30's between Bulkheads #7 & #8. Cabin window formers #71's, #72's and #73's are cemented between #18 & #19 as shown on sketch and Side View. Cement Bulkhead #34 to front of #7. 1/8 dia. dowel used for rear hook of Rubber Motor is shown for clarity. It is installed in Final Assembly. Bend Tail Gear as shown in Detail, and cement securely into Fuselage as shown in sketch and Side View. Bottom portion of each #11, as indicated with crease marks, is now removed for Landing Gear Strut clearance.



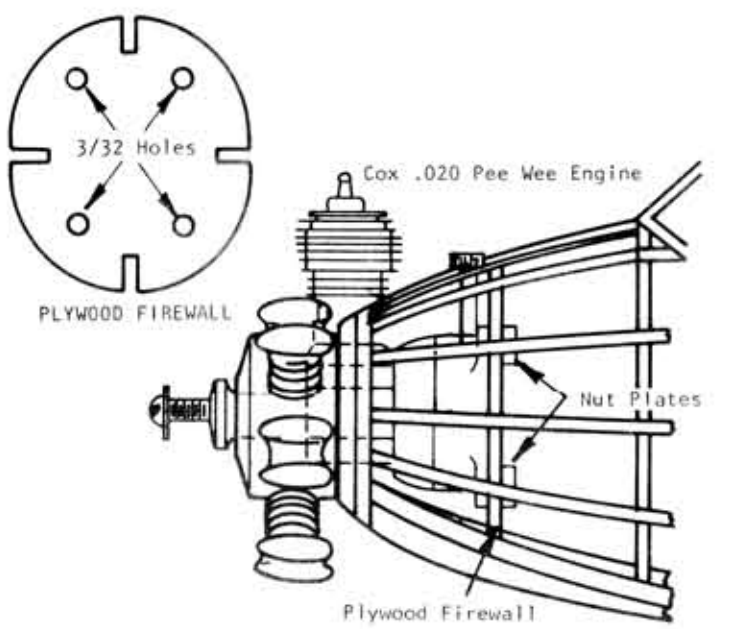
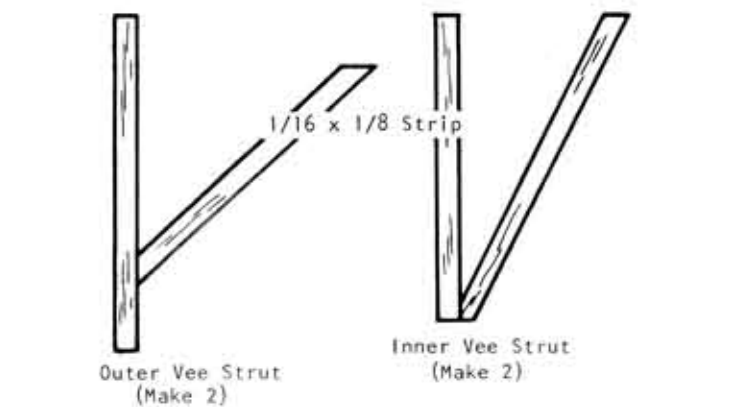
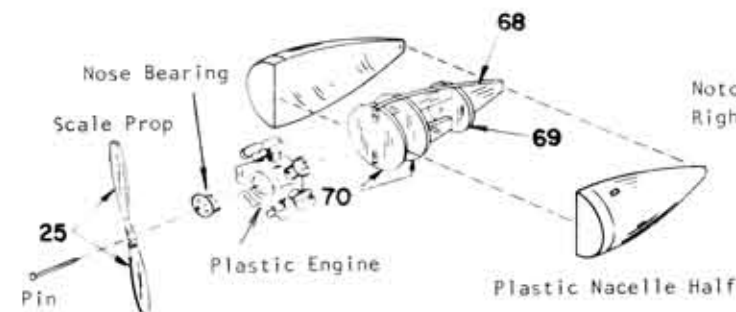
STEP 5 - FINAL ASSEMBLY

Trim and assemble all Plastic Parts as shown and described in Detail Note. Although sketch above shows model uncovered; Wing, Fuselage and Tail surfaces must be covered before assembly is made (unless R/C or Control Line is being installed, in which case see respective Detail Note). Cement Rudder vertically in place to rear and top of Fuselage. Be certain that stabilizer is horizontal & Rudder is vertical. Cement the 1/16 sq. windshield frame members in place as shown on sketch and Side View, beveling ends as necessary. Install Wing by cementing into top of Fuselage between Bulkheads #9 and #12. Center rib #57 is centered over center keel #3 and Wing must be seated down on #22's to assume proper angle of incidence, otherwise model may not fly well. Set model on a flat surface and check that both tips are the same height and stab is horizontal. Allow to dry thoroughly before moving. Cement #35 to rear of #9, and against top of Wing Leading Edge. #35 should be 1/2" lower than #9 to allow for plastic thickness of Front Fairing, which is now cemented in place. #36 is installed in same manner against front of #12. Rubber Motor is now installed. It is engaged on 1/8 x 1/8 strip wood, cut the Front Landing Gear Strut to length and cement to rear of Landing Gear wire. Rear strut is cut to length and cemented to back of front strut at axle and allowed to ride up thru notch in #24 in bottom of Fuselage, and thru area removed from bottom of Bulkhead #11, to provide shock travel. Assemble Nacelles and their Vee struts as described in Detail Note. Nacelles are installed by cementing #74 into inner slot cut into Nacelle; and outer Vee strut into outer slot, then cementing top of #74 and outer strut into notch in ribs #60. Inner Vee strut is cemented from rear of #74 at Nacelle to rib #59. Nacelle struts are completed by cementing a strip of 1/16 x 1/8 from rear notch in #60 to back of Nacelle as shown on sketch and Side View. Do likewise

with inner rear strut from Nacelle to rib #59. Landing Gear struts are completed by cutting two pieces of 3/16 dia. dowel 2-1/8" long. Bevel top to fit against side of Nacelle and cement in place from axle to Nacelle as shown in sketch and Side View. Wrap doweling with a 3/4" wide strip of paper to simulate scale Shock Absorbers and allow to dry thoroughly. Model is now painted. Scale color scheme as shown in picture on kit box is Red, White and Blue. For best flight performance use a minimum of color dope. Apply Decals by dipping in water and sliding off into position. Slip Tailwheel on axle. Hold in place with drop of cement on end of axle. Windshields and side windows are now installed. These are cut from celluloid provided and are fitted to your own model for perfect fit. Cut Instrument Panel from plan and cement to #8. Outlines of Scale Control surfaces may be drawn in place with India ink. Cement finished scale Engines in place, followed by the assembled scale Props. Insert straight end of propeller shaft through hole of Nose Bearing. Slip on two washers and insert shaft through rear of propeller, then bend front of shaft to "U" shape as shown on Side View. Rubber Motor is now installed. It is engaged on 1/8 x 1/8 strip wood, cut the Front Landing Gear Strut to length and cement to rear of Landing Gear wire. Rear strut is cut to length and cemented to back of front strut at axle and allowed to ride up thru notch in #24 in bottom of Fuselage, and thru area removed from bottom of Bulkhead #11, to provide shock travel. Assemble Nacelles and their Vee struts as described in Detail Note. Nacelles are installed by cementing #74 into inner slot cut into Nacelle; and outer Vee strut into outer slot, then cementing top of #74 and outer strut into notch in ribs #60. Inner Vee strut is cemented from rear of #74 at Nacelle to rib #59. Nacelle struts are completed by cementing a strip of 1/16 x 1/8 from rear notch in #60 to back of Nacelle as shown on sketch and Side View. Do likewise

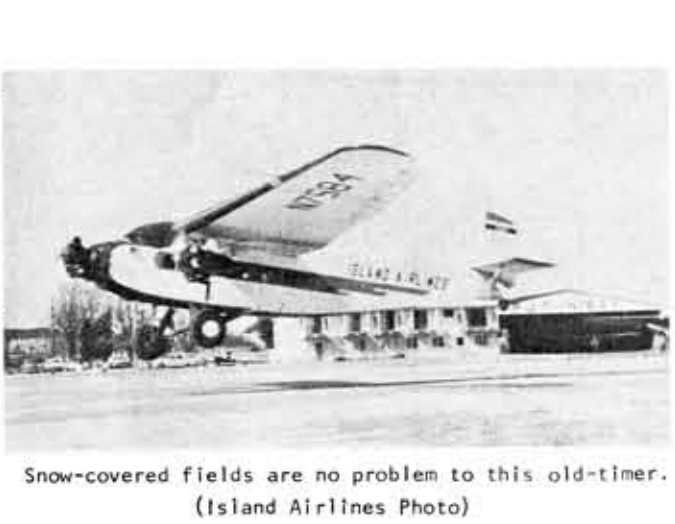
FUSELAGE CROSS SECTION

Fuselage Cross-Section above is at Bulkhead #14. Note that there is only one Fuselage Frame Assembly in center. Bulkhead halves are cemented directly to it. See Step #3.

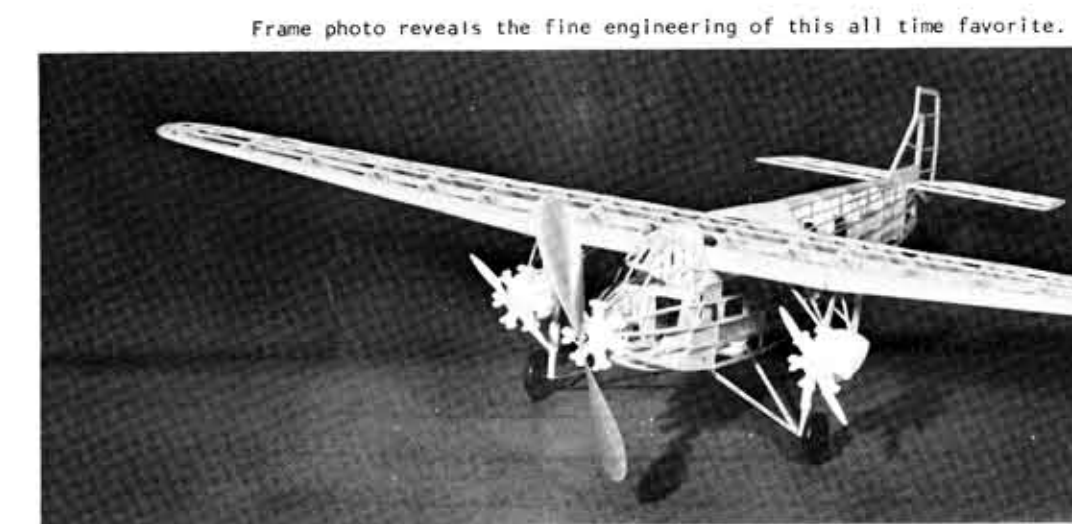


ENGINE INSTALLATION

Single Engine mounted on Fuselage (others remain dummy) is used if model is being built for R/C, Control Line or Free-Flight Flying. Engine is not provided in kit. Drawing shows the installation of a Cox .020 Pee Wee Engine. Cement die-cut Plywood Firewall in place, as described in Step 4. Drill 3/32 holes at punch marks and mount engine to Firewall with #2 nuts and bolts (not provided) and tighten nuts securely. Top of Fuselage as well as Bulkheads #34 & #7 will have to be cut out for Engine clearance. Cut plastic Nut Plates from molded sheet, trim to 1/8" around nut itself to provide gluing surface, then cement to Fuselage. Drill 3/32 holes, drilling hole through so that bolts can protrude. Use cement generously. Nut Plate keeps nuts from turning so that Engine can be removed by just unscrewing bolts. When dry remove Engine. Fuselage should be covered at least back to #9 with 1/32 or 1/16 sheet Balsa. Engine is then installed after model has been painted. Cut out front and top of Plastic Dummy Scale Engine for Engine clearance. Scale Engine can either be cemented in place, breaking glue joint each time Engine is removed, or it can be made removable by using tiny wood screws (not provided) through scale Engine into front Bulkheads.



Snow-covered fields are no problem to this old-timer. (Island Airlines Photo)



Frame photo reveals the fine engineering of this all time favorite.

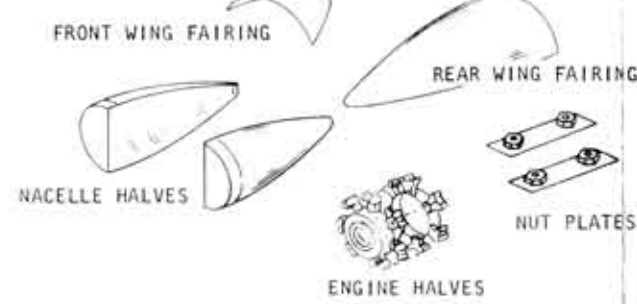
FUSELAGE CENTER FRAME ASSEMBLY

RADIO CONTROL INSTALLATION

Because of the relatively small size of this Ford TriMotor model, it is recommended that only the lightest Radio equipment be installed (not more than 3 oz. including battery). The Ace Pulse Proportional System or Cannon Miniature equipment are good examples of lightweight equipment. None of the Radio Control Equipment or Installation material is included in the kit, it must be supplied by the model builder. In order to maintain the balance point shown on Side View, mount the Radio equipment in the Cabin area. Access to this equipment is made through a Trap Door, which is fitted in the center section of the Fuselage directly behind the Landing Gear. Trap door, should be of substantial strength and hinged on the front end. Opposite end can be held in place with a rubber band stretched across hooks on each side of Fuselage, or tiny screws into hardwood blocks to receive them. Mount Rudder with cloth Hinges (see Detail), making sure that it swings freely. Location of Hinges is shown on full size Rudder drawings. Since R/C equipment is varied, no specific installation directions can be given. Install the R/C equipment according to the R/C Manufacturer's instructions. All installations for securing R/C in Fuselage should be made before covering Fuselage. When model has been completely finished, it must balance as shown on Side View. If necessary, add weight, but DO NOT ATTEMPT TO FLY UNTIL BALANCE HAS BEEN ACHIEVED. Check Wing and Tail for warps. If any have developed, remove with steam method as described in Covering Instructions. Wait for calm weather for test flights. Field test R/C equipment before flying, as described in manufacturer's instructions. Start Engine and THROTTLE DOWN TO LOW SPEED, then Launch model with Nose pointed slightly down at a point 50 to 60 ft. in front of you, and release at approximate flying speed. Model should fly in straight line and either maintain or slightly lose altitude. If model turns to either side, Rudder or Engine may be off set to opposite side to achieve a straight flight, which is how it should glide and fly. If model glides well, but stalls under power, point front of Engine down (down thrust) by placing Shim under top of Fuel Tank. Increase Engine RPM as adjustments are made, checking R/C controls before each flight. GOOD LUCK!! GOOD FLYING!!

NACELLE DETAIL

Engine Nacelles are assembled by cementing #69 into #68 as shown, followed by two #70's. Allow to dry thoroughly. Cement the trimmed Nacelle halves (see Plastic Parts Detail) to framework with seam over #68. Sand seam smooth when dry, then locate and cut out notches for struts and #74 at locations shown on Top View sketch and Side View. BE CERTAIN TO MAKE 1 LEFT AND 1 RIGHT. SOLID NOTCHES ARE LEFT, DOTTED IS RIGHT. Using 1/16 to 1/8 strip wood make two assemblies each of the inner and outer Vee struts directly over drawing on plan. Nacelles and struts are installed as described in Final Assembly. Scale plastic Engines are assembled as described in Plastic Parts Detail and installed as described in Nacelles and #34 after model and Engines are painted. Scale props are assembled as described in Detail Note and held in place to Nose Bearing with straight pin as shown. Dummy props should rotate freely.



PLASTIC PARTS DETAIL

For best results, follow instructions carefully. FAIRINGS: Cut from sheet, sand edges smooth with fine sandpaper and install as described in Final Assembly. NACELLES: Cut from sheet leaving about 1/16 of material for trim. Excess material may be trimmed with knife or razor blade and then sanded with fine sandpaper. Nacelle halves are cemented together over Nacelle framework as described in Detail. ENGINES: Scale Plastic Engines are molded in pairs with a front and back. They must be kept together to assure a matching assembly. Also note that the matching center cylinders are identified with a scribe line in the plastic. Cut Engine halves from sheet and cement front and back together making certain cylinders are aligned properly. Allow cement to dry then trim and sand seam smooth. Engines are painted Grey (piping detail if installed, is painted black). INSTALL as described in Final Assembly. NUT PLATES: Cut from sheet right along trim line and install as described in Engine Installation. PAINTING: Regular plastic model paint on enamel should be used. Model airplane dope can be used only if applied in VERY LIGHT spray coats, allowing paint to dry thoroughly between coats. Excessive use of dope may deform plastic. Parts may be used as provided, or if painting parts, apply a light coat of silver, followed by a light coat of white before painting final color. If necessary, use more than one coat, but DO NOT APPLY A THICK COAT AT ANY TIME! When cementing parts in place on model, use light coats of cement applied sparingly. If necessary, use more than one coat, but DO NOT APPLY A THICK COAT AT ANY TIME!

FLIGHT INSTRUCTIONS

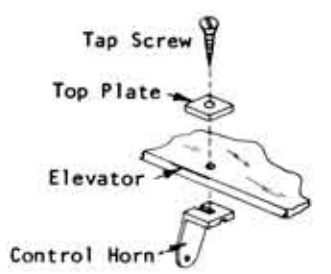
When model has been completed, it must balance at point shown on Side View. DO NOT ATTEMPT TO FLY MODEL UNTIL BALANCE HAS BEEN ACHIEVED, add weight if necessary. Check Wing and Tail. If warps have been developed, remove using steam method described in Silkskin Step. Model is now ready. Pick a calm day for test flying. On Rubber Powered models, wind Propeller clockwise and launch into air by pulling up on the line. Allow cement to dry then trim and sand seam smooth. Engines are painted Grey (piping detail if installed, is painted black). INSTALL as described in Final Assembly. NUT PLATES: Cut from sheet right along trim line and install as described in Engine Installation. PAINTING: Regular plastic model paint on enamel should be used. Model airplane dope can be used only if applied in VERY LIGHT spray coats, allowing paint to dry thoroughly between coats. Excessive use of dope may deform plastic. Parts may be used as provided, or if painting parts, apply a light coat of silver, followed by a light coat of white before painting final color. If necessary, use more than one coat, but DO NOT APPLY A THICK COAT AT ANY TIME!



INSTRUMENT PANEL Cut from Plan. Cement to Bulkhead #8.

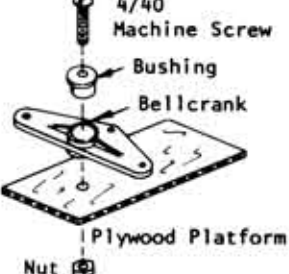
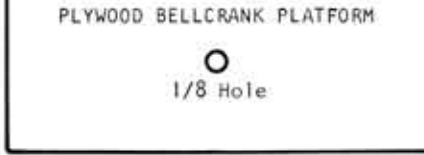
WING GUIDE

Bend to shape of this full size pattern from .045 wire provided install as described in control line installation note.



CONTROL ASSEMBLY

Parts supplied for control system are Nylon - which is virtually indestructible. Drill 1/8 hole thru plywood platform. Insert bushing in Bellcrank as shown, followed by 4/40 machine screw. Assemble on platform, inserting screw thru hole. Secure with nut, closed side against plywood, secure with drop of glue or solder. Be sure Bellcrank swings freely. Install Elevator Horn on Elevator at location shown. Drill 1/16 hole then insert tap screw thru top plate and tighten into hole in horn. Secure with drop of glue.



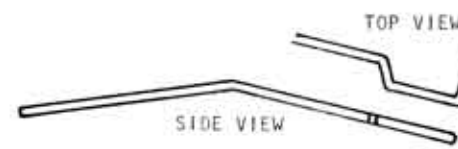
CAUTION:

Do not fly control line models in the vicinity of electric power lines!

CONTROL LINE INSTALLATION

Install controls after Fuselage Step 4 has been completed. Fill in area from #17 to rear with scrap 1/16 sheet Balsa, flush with outside of frame; between 1/16 sq. stringers and cut 1/8 slot for control rod as shown. Cut two 24" lengths of lead-out lines (not provided in kit) and fasten them to Bellcrank. Mount Bellcrank on plywood platform as shown in Detail Sketch. Lead-out lines come through Fuselage at holes drilled for them as shown. Cover Fuselage with Tissue as described in Detail Note. Cut stabilizer through wide main spars, as indicated by dotted lines on full size drawings. Round edges and install Control Horn and Joiner at location shown on drawing, then join together with cloth hinges shown in Detail. Cement stabilizer to Fuselage as described in Final Assembly Note. Tape elevators in neutral position (in line with stabilizer, neither up nor down). Bend 1/4" of one end of 1/16 wire for Control Rod at right angle. Loosen Bellcrank and insert rod from bottom with spur vertical, then secure Bellcrank. Control Rod should be in line with Elevator Horn; if not, bend accordingly so that rod slips through slot freely. Make a right angle bend at

rear end of rod at precisely the location of hole in Elevator Horn, with Bellcrank in neutral position as shown. Clip off excess and insert into horn. Solder washer on end to prevent rod from coming off. Controls are now in neutral position and must work freely and easily. Cut rudder apart on dotted lines, cement fin in place. Cement rudder to fin and rear of fuselage, angled 1/2" to outside of circle flow, as shown. Assemble Wing to Fuselage as described in Final Assembly Detail. Make Wing Guide from .045 wire as shown in Detail. Cement securely to Wing at Wing rib #65 as shown. Reinforce Fuselage holes with washers or eyelets. Thread lines through holes in Wing guide and tie loops in end of lines at least 2" past wing tip. Lines must be of equal length when Elevator is in neutral position. Control system must operate freely and easily. CAUTION: Model must balance (or slightly nose down) at point where front Control Line comes out of the Fuselage. If necessary, add weight. Use regular 1/2A Control Lines when flying your Ford TriMotor. GOOD LUCK!! AND GOOD FLYING!!



TAIL GEAR DETAIL

Bend to shape of this full size pattern from .045 wire provided install as described in Step #5.



Here is the TriMotor operating from grass fields. Passengers don't seem to mind. (Island Airlines Photo)

N7584

KIT E12

SPAN: 34 3/16"

SCALE 1 1/2 = 1 Ft.

ISLAND AIRLINES

FORD TRI MOTOR

Sterling MODELS INC. PHILA PA 19134 U.S.A.



A true classic, and a tremendous advance for passenger aviation, was the appearance of the Ford Tri Motor, affectionately known as the Tin Goose. The first of the Tri Motors made their appearance in July of 1926 and caused a stir in the aviation community. Featuring three engines and designed so that it could maintain level flight with only one engine operating, the Ford was built for safety. Its all-metal construction was strong, tough and rugged, which differed greatly from the wood, wire and canvas aircraft of that day. Built for comfort, the passenger compartment was 16 ft. long, 6 ft. high and more than 4 ft. wide. This

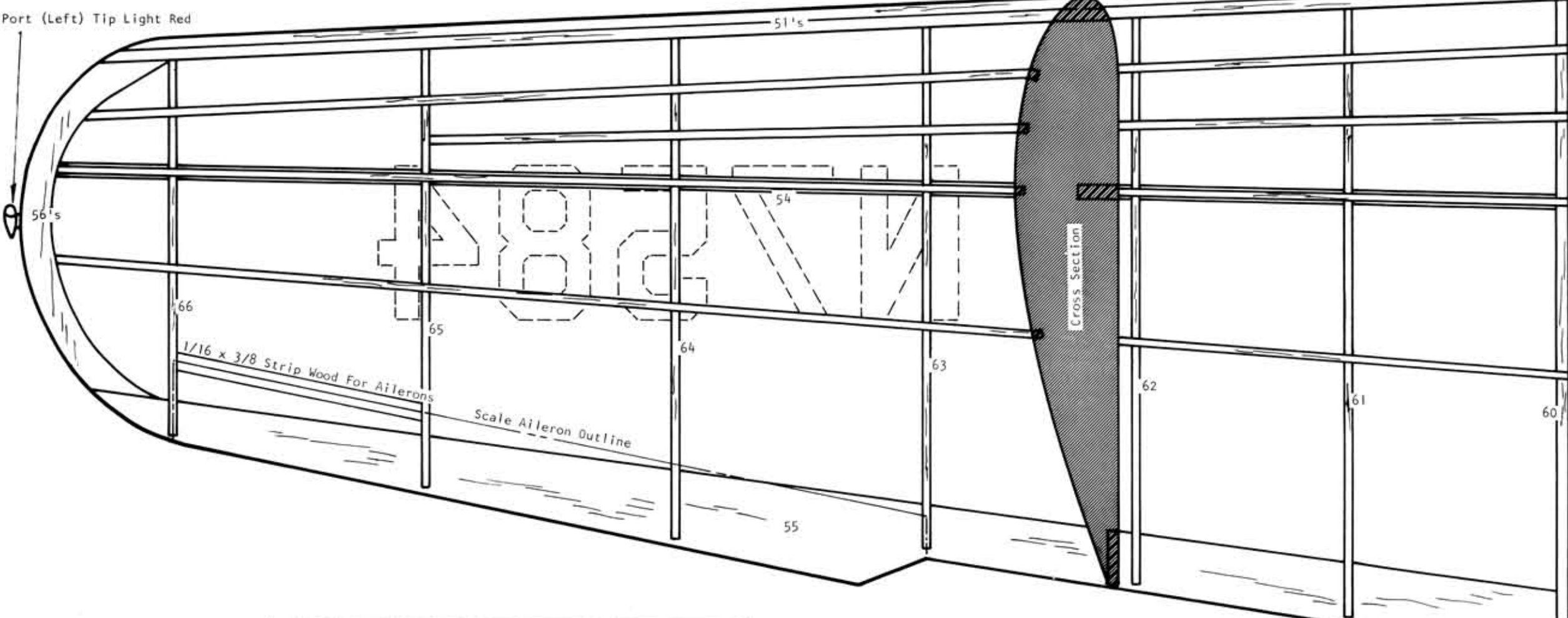
provided ample room for 12 passengers in a row of seats, on each side of the fuselage. Wicker-type chairs with leather cushions, walls of highly polished plywood paneling with decorative panels, curtains on the windows, etc., was truly luxury in flight. Attesting to the excellence of design and construction, there are still Ford Tri Motors flying today and our model reproduces one of those of the Island Airlines, operating from its home-base in Port Clinton, Ohio to the group of islands offshore Lake Erie, halfway between Toledo and Cleveland. Our magnificent Scale Model of the 3-engine classic is authentic in appearance and an excellent flyer.

WING ASSEMBLY

Wing is built on flat surface directly on Saran covered plan. Pin parts in place as shown making sure that #52 and #54 are vertical. Cement all ribs in place vertically by the number as shown. Wing tips consisting of two #56's, are cemented together on flat surface and allowed to dry; then are cemented in place against Trailing Edge #55. Cement Leading Edges #50's and #51's together to form double thickness as shown in sketch and cement in place against front of ribs. Cement the four 1/16 sq. spars into notches as shown. Allow wing to dry thoroughly (overnight recommended) then remove from flat surface. If movable ailerons are desired, see instruction in Scale Detail. Wing panels are cemented to center section by cementing ribs #60 together and inserting joiner #67 into notches in ribs from #59 to #61. Allow to dry thoroughly then sand smooth rounding Leading Edges and tips as shown in Left Panel sketch and cross-section, to prepare for Tissue covering.



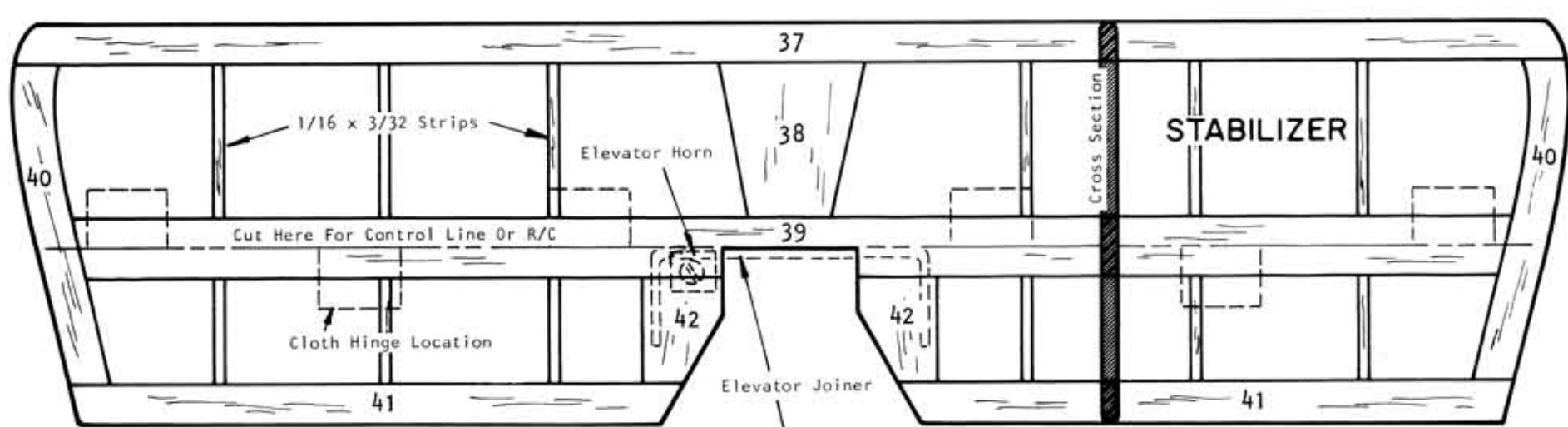
Here is the TriMotor racing the 'Golden Eagle' train, the 'Goose' won hands down. (Island Airlines Photo)



SILKSPAN TISSUE COVERING

The finest grade wet strength Silkspan Tissue provided in this kit permits covering of most compound curves without wrinkling when moistened with water before applying to frame. Wrinkles in Silkspan supplied in kit will come out when tissue is moistened. Tissue shrinks when dry, to a tight smooth surface. Follow directions for a smoothly covered, warp-free flying model. Use clear dope to attach tissue as follows: Apply a light coat to the outside edges of area to be covered, and allow it to dry. Cut tissue to shape needed, plus 1/4" over size. Place tissue on flat surface and dampen with moistened cloth. Apply a second coat of clear dope on frame, then place moistened tissue on frame. Pull tissue gently with fingers, working out all wrinkles. WHEN COVERING WINGS AND TAIL SURFACES, PIN FRAMEWORK TO FLAT SURFACE TO PREVENT WARPS AS TISSUE DRIES. Cut out any wrinkled areas (bound by nearest framework) and re-cover. If model is being built as Non-Flying Scale, see Detail Note before covering is started. COVER WING FIRST: If model is being built

for Control Line, be sure weight is added to Wing Tip (see Control Line Detail). COVER top and bottom with two pieces each. If any problem is encountered with wrinkles on the tips, use a separate piece of tissue. COVER STABILIZER AND RUDDER NEXT: Cover both sides of each in one piece. COVER FUSELAGE NEXT: Cover sides from #7 to rear with 1 piece. Cover bottom from #7 to rear with 1 piece, notching for Landing Gear. Cover top of cowl in 2 pieces joining over center. Cover top with 2 pieces, joining over center. Apply four coats of thinned dope (3/4 dope, 1/4 thinner) to all tissue covering, holding surfaces flat to prevent warpage while dope is drying. Company models required two additional coats of straight dope to fill pores before color or dope was applied. Check Wing and Tail Surfaces for warps before assembly. Warps can be removed by holding over steam (from boiling kettle) and twisting gently in opposite direction. Check again when cool.

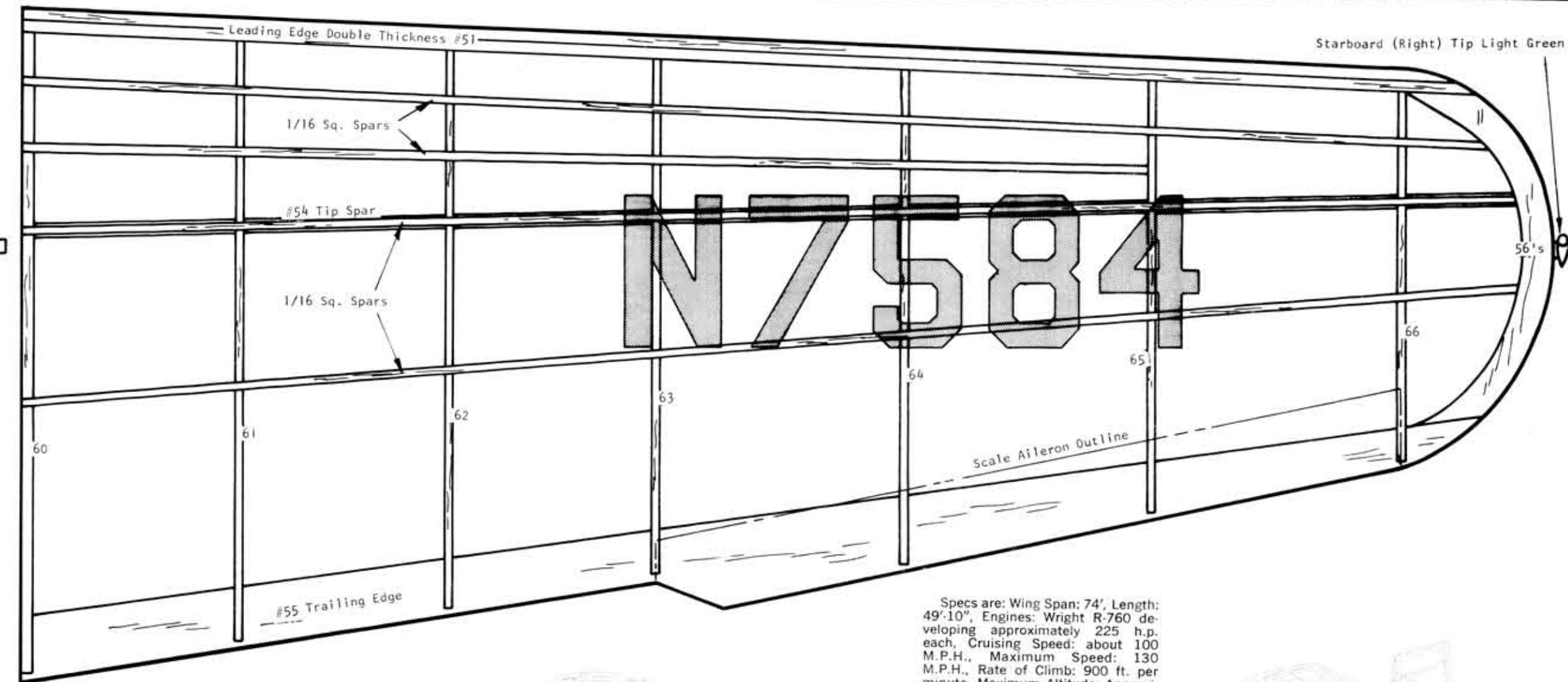
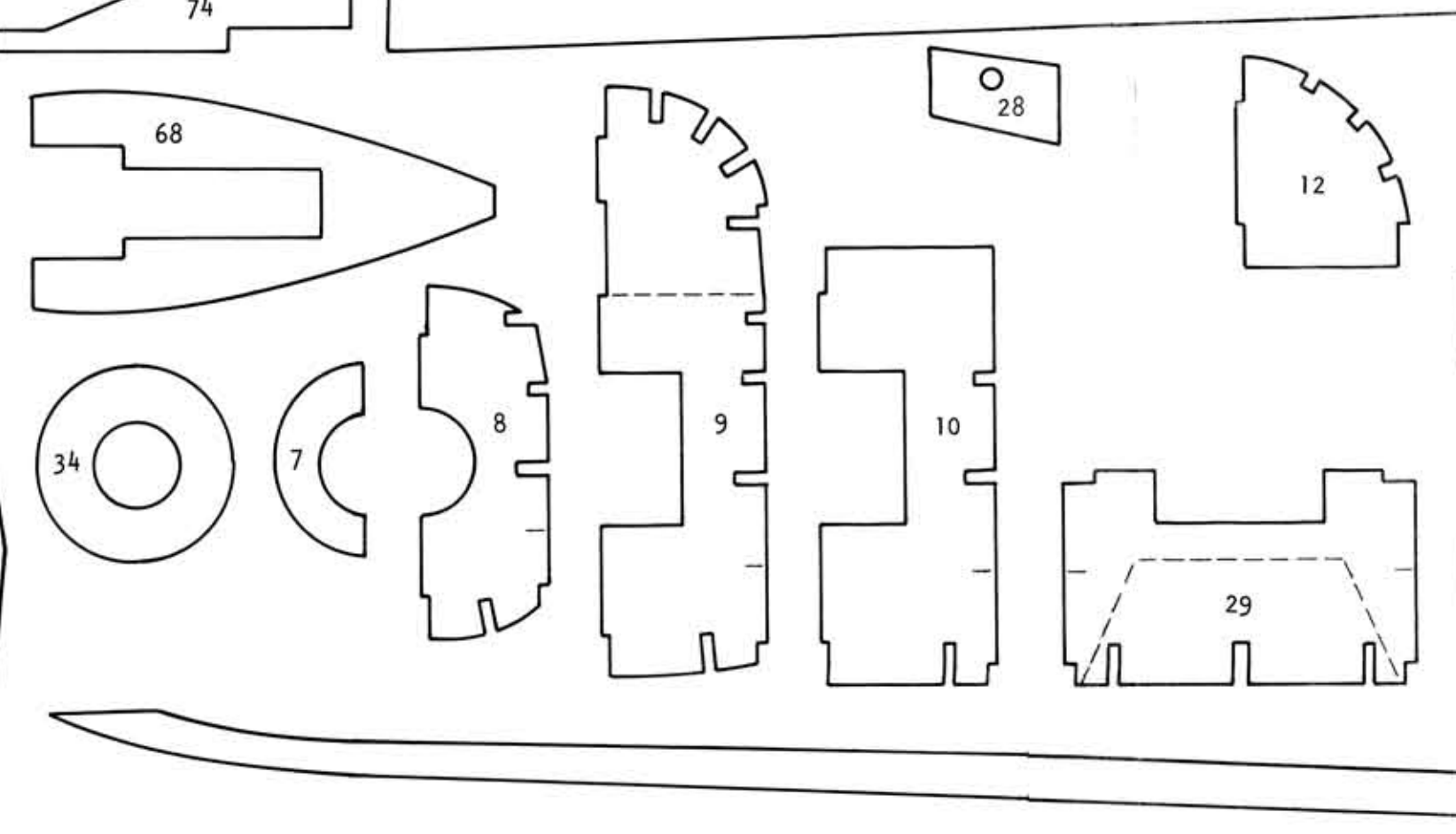
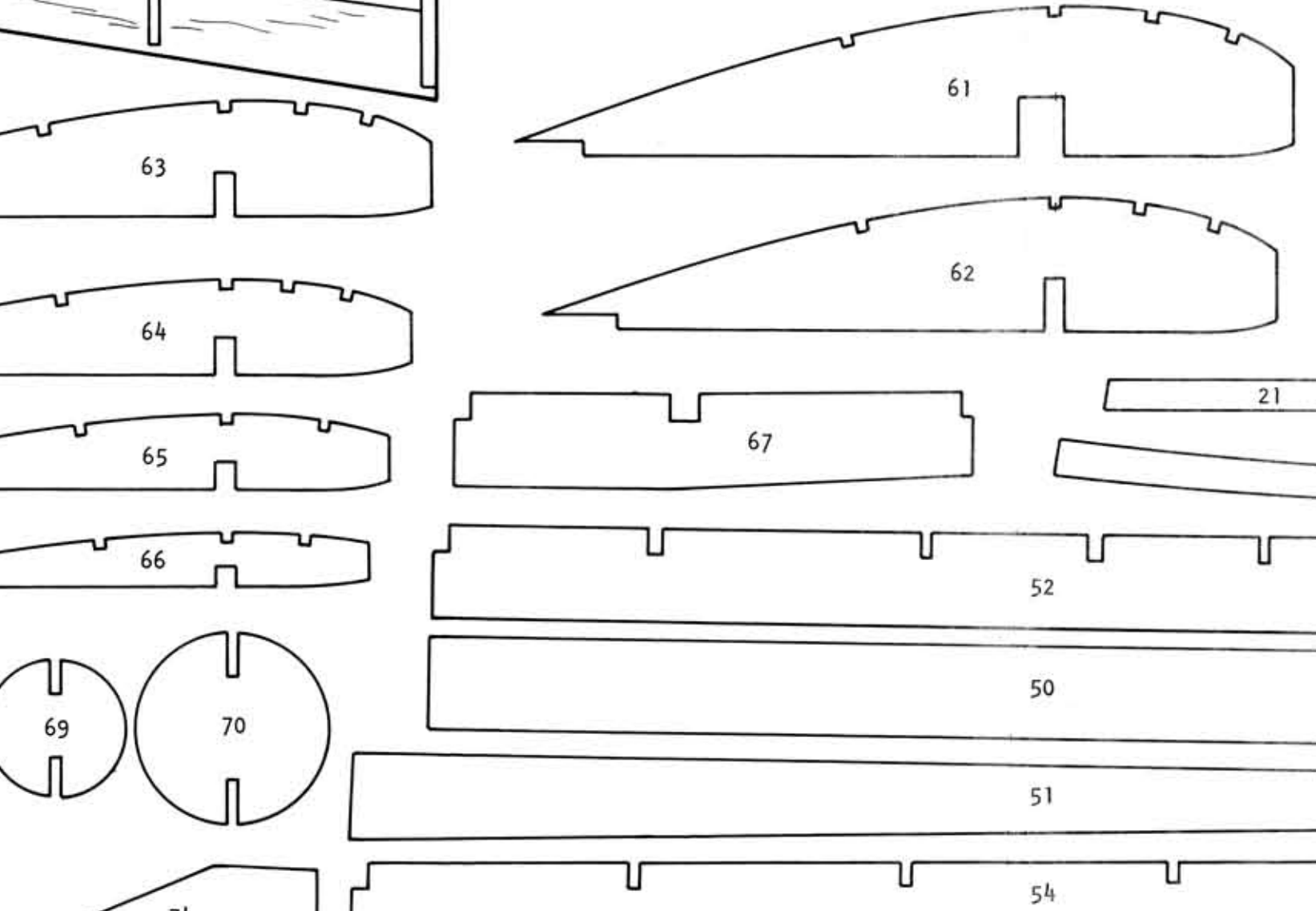
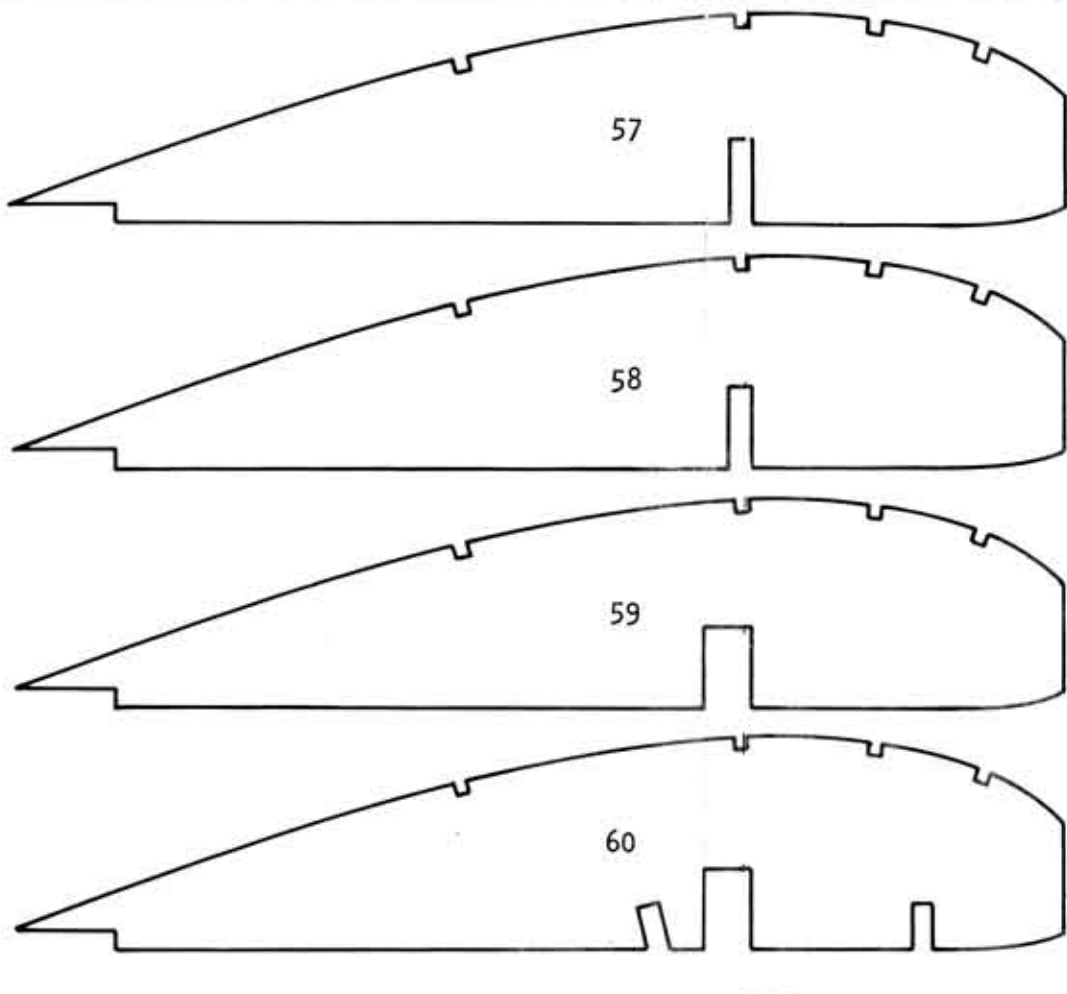
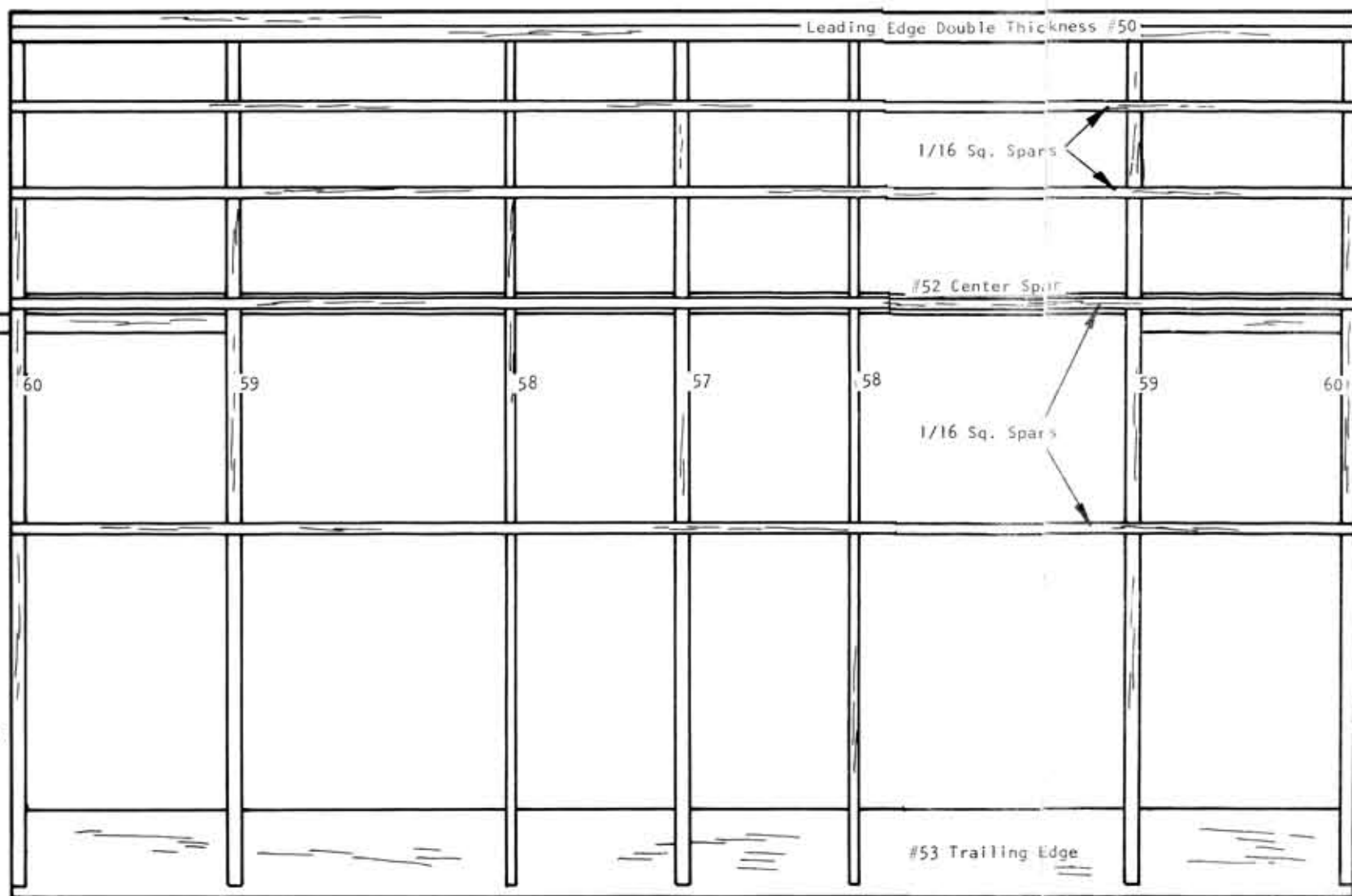


TAIL ASSEMBLY

Tail Surfaces are built directly over Saran covered Plan. Pin all parts to Plan by the number as shown, cementing them together where they join. Cut 1/16 x 3/32 strips to fit, and cement in place upright. Rudder is built in same manner. Allow units to dry thoroughly on flat surface, then sand smooth, rounding edges (except for front of #46 and bottom of #44), as shown in cross-section. If model is being constructed for Control Line or Radio, see respective Detail Notes before covering with Tissue as described in Silkspan Note.

HINGE DETAIL

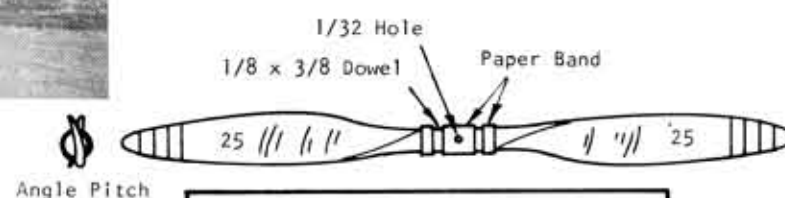
Use cloth tape for Hinges. Cement only on top and bottom, alternating Hinges as shown above. Keep cement out of Hinged area between sections.



Specs are: Wing Span: 74'; Length: 49'10"; Engines: Wright R-760 developing approximately 225 h.p. each. Cruising Speed: about 100 M.P.H., Maximum Speed: 130 M.P.H., Rate of Climb: 900 ft. per minute, Maximum Altitude: Approximately 16,000 ft.

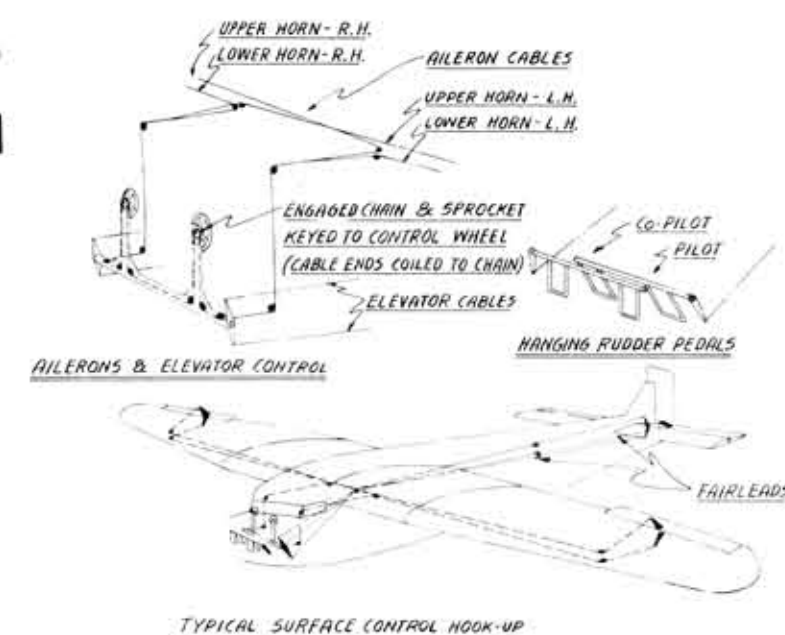


On its 40th Anniversary in 1968 the reliable 'Tin Goose' flying out over her island territory. (Island Airlines Photo)



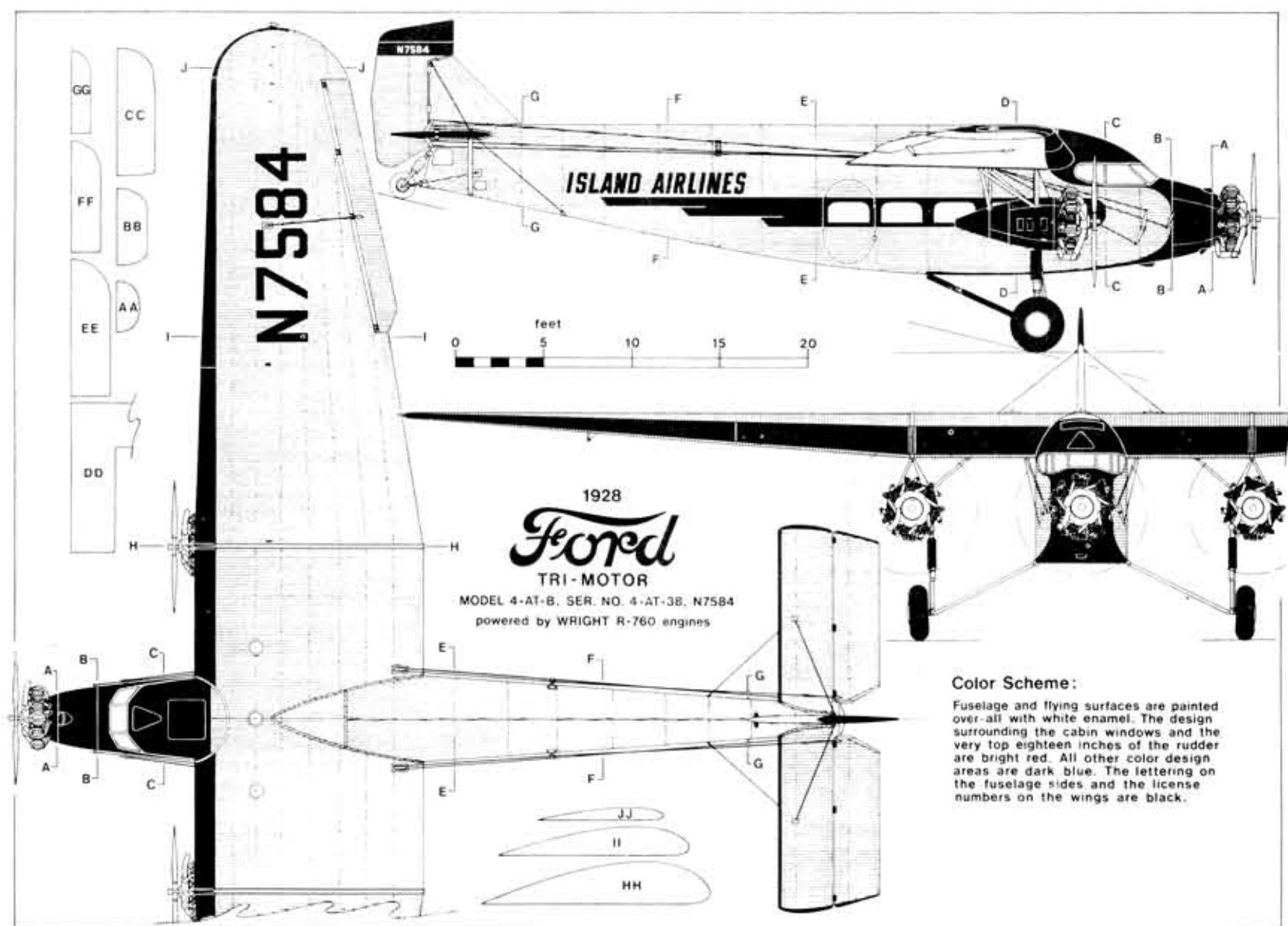
SCALE PROP DETAIL

Scale props are made by cutting a 3/8" length of 1/8" dowel and cementing a #25 prop blade to each end. Wrap doweling with paper bands as shown and drill a 1/32" hole thru center when dry. Carve and sand to angle pitch of scale blades as shown. Two scale props are required on Rubber or Engine Powered Models; three for Display Models. Props are painted silver with Red, White and Blue stripes on tips.



SCALE DETAIL

Multiple view drawings of the Ford TriMotor reveal a wealth of Scale Detail, which can be built into the model, if desired by the modeler. There are definite limitations on details if model is being built to fly; otherwise without the factor of weight involvement, etc., modeler can construct his model as detailed as he wishes. Basically, the scale outline of the full size craft has been followed accurately. Scale outline of Fuselage, Wings and Tail are true and modeler can make whatever changes desired in the structure before covering. Plastic Parts and Decals are authentic and correct. Special overlay sketch shows installation of moveable controls from the Cockpit. Parts are mostly made from scrap Balsa and Nylon thread. Improvisation at this point by the modeler is a necessity. Reinforce area where the lines exit through Tissue covering with thin cardboard to shape shown. Additional structure must be installed so that Ailerons can be moveable. Kit contains 1/16 x 3/8 Strip Wood, which is cut to length and cemented between Ribs on either side of scale Aileron outlines (as shown on left side only of full size Plan) so that when Aileron is cut off of the



Scale Drawings above courtesy American Aircraft Modeler Magazine.

DIE CUT PART NOTE

All diecut parts used in construction are given full size, either on full size plan or individual layout. This will enable you to duplicate any part should it become necessary for any reason. Diecut parts contained in sheet as furnished in kit are also available from the factory as replacements.